



City of Abilene

Planning and Zoning Commission Agenda

Notice is hereby given of a meeting of the City of Abilene Planning & Zoning Commission to be held on Tuesday, November 5, 2024 at 1:30 p.m. at City Hall, 555 Walnut Street, Council Chambers, Abilene, Texas, for the purpose of considering the following agenda items.

CALL TO ORDER

INVOCATION

MINUTES

1. **Minutes:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on Minutes from the Regular Meeting Held on October 1, 2024.

ZONING

Receive a Report, Hold a Discussion and Public Hearing, and Take Action on the following Zoning Cases:

2. **CUP-2024-08:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, To Apply A Conditional Use Permit To Allow Re-Construction Of A 120' Tall Monopole Within General Retail (GR). Located At 920X Westview Drive. Legal Description Being Block 103, Westlawn Addition, Abilene, Taylor County, Texas. **(Mason Teegardin)**
3. **CUP-2024-10:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, To Apply A Conditional Use Permit To Approximately 0.32 Acres Zoned General Retail (GR) To Allow For A Freight Container. Located At 1350 Grape Street. Legal Description Being The Merchant Grape Subdivision, Block A, Lot 225, Abilene, Taylor County, Texas. **(Mason Teegardin)**
4. **OAM-2024-01:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on a Request from the City of Abilene to Amend the Land Development Code to Adopt a New Airport Zoning Ordinance (AZO). **(Don Green)**
5. **Z-2024-31:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, To Change The Zoning Of Approximately 0.44 Acres From Heavy Commercial (HC) To Office (O). Located At 1234, 1232, 1226 & 1218 N Treadaway Blvd. Legal Description Being Lots 1-4, Block 2, T W Daugherty Subdivision Within Original Town Abilene, Abilene, Taylor County, Texas. **(Kera Valois)**
6. **Z-2024-33:** Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, Amend The Terms And Conditions Of Planned Development District (PDD-181) Specifically To Add Approximately 5.9 Acres Of Land Zoned Agricultural Open (AO) To Be Added To Lot One To Allow Heavy Industrial Uses And Light Industrial Uses As

Specified In The PDD. Located At 617 F.M. 2404. Legal Description Being The East 170 Feet Of Lot 1, Block A, Lancium Subdivision, Abilene, Taylor County, Texas. (Adam Holland)

EXECUTIVE SESSION

The Planning & Zoning Commission of the City of Abilene reserves the right to adjourn into executive session at any time during the course of this meeting for consultation with attorney pursuant to Texas Government Code Section 551.071.

ADJOURNMENT

Notice

In compliance with the Americans with Disabilities Act, the City of Abilene will provide for reasonable accommodations for persons attending meetings. To better serve you, requests should be received forty-eight (48) hours prior to scheduled meetings. Please contact the City Secretary's Office at 325-676-6208. Telecommunication device for the deaf is 325-676-6360.

CERTIFICATION

I hereby certify the above meeting notice was posted on the bulletin board at the City Hall of the City of Abilene, Texas, on the 29th day of October, 2024, at 9:10 a.m.

*Kaitlin Richardson, Deputy City
Secretary, TRMC*

**CITY OF ABILENE, TEXAS PLANNING AND ZONING COMMISSION
COUNCIL CHAMBERS, CITY HALL
October 1, 2024, at 1:30 p.m.**

The Planning and Zoning Commission of the City of Abilene, Texas met in a Regular Meeting on October 1, 2024, at 1:30 p.m. at City Hall, 555 Walnut Street, Council Chambers, Abilene, Texas. Chairman Rosenbaum was present and presiding, along with Chairman Pro Tem Brad Benham, and **Commissioners** Zach Sitzes, Shawnté Fleming, Secretary, Mitch Barnett, Kevin Halliburton, Sergeant-at-Arms, and Kristen Dressen-Kyker.

Also present were Mr. Michael Rice, Assistant City Manager, Mr. Tim Littlejohn, Director of Planning and Development Services, Mr. Randy Anderson, Assistant Director of Planning and Development Services, Ms. Kelley Messer, First Assistant City Attorney, Ms. Mason Teegardin, Planner II, Mr. Adam Holland, Planner II, Ms. Clarissa Ivey, Planner I, and Ms. Melissa Farr, Executive Assistant.

Commissioner Halliburton delivered the invocation.

APPROVAL OF MINUTES FOR THE PREVIOUS MEETING

Chairman Rosenbaum opened the public hearing. With no speakers coming forward, the public hearing was closed.

Commissioner Benham moved to **approve** the meeting minutes. Commissioner Fleming seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

ZONING

CUP-2024-09: Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner To Apply A Conditional Use Permit To Allow An Antenna Tower Commercial At 2588 E Lake Road. Legal Description Being Lot 1, Block A, Betty Roses Addition, Abilene, Taylor County, Texas.

Planner Holland presented this request. The applicant is requesting a Conditional Use Permit to install a new 150' monopole tower in a General Retail (GR) zoning district. The subject property was annexed into the City of Abilene in 1980 and has been zoned General Retail

(GR). The east side of the property was developed into Betty Roses Little Brisket in 2016 leaving the west portion of the property vacant.

Mr. Benham opened the public hearing. Those who stepped forward were Mr. Brian Sullivan and Mr. Bruce Bixby. Seeing no one else present and desiring to be heard, the public hearing was closed.

Property owners within a 200-foot radius were notified of this request. There were no (0) responses received in favor nor in opposition.

STAFF RECOMMENDATION: Approval

Commissioner Benham moved to **approve** the request. Commissioner Halliburton seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

TC-2024-02: Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The City Of Abilene To Abandon Certain Portions Of Right-Of-Way (ROW) Along Oldham Lane. Specifically, 10 Feet Of ROW Adjacent The Following Lots: Lots 1-4, Block A, Oldham Farms Addition, Section 1; Lot 1, Block A, Oldham Farms Addition, Section 2; Lots 203, 2, And 101, Oldham Farms Addition, Section 3; Lot 1, Block A, Don Fite Addition; Lots 201 And 202, Block A, Oldham Lane Church Of Christ Addition And; Lot 35, Block A, Bunny Run Addition, Section 2, Abilene, Taylor County, Texas.

Planner Holland presented this request. Oldham Lane is a state-maintained highway known as FM 1750. TxDOT is considering a project south of East Industrial Boulevard to improve FM 1750. Since TxDOT cannot construct any project on property that the State of Texas does not own, TxDOT has requested that the City of Abilene relinquish the subject sections of right-of-way to the State of Texas.

Mr. Benham opened the public hearing. Those who stepped forward were Mr. Stephen Rektenwald, Mr. Sam Walker, and Mr. Bruce Bixby. Seeing no one else present and desiring to be heard, the public hearing was closed.

Mr. Michael Rice was asked to step forward to explain the purpose of this process and answer questions asked by the Commission.

Property owners within a 200-foot radius were notified of this request. There were no (0) responses received in favor nor in opposition.

STAFF RECOMMENDATION: Approval

Commissioner Halliburton moved to **approve** the request. Commissioner Sitzes seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

Z-2024-27: Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, Represented By Law Firm Of Chaile Allen, PLLC, To Change The Zoning Of Approximately 0.49 Acres From Central Business To Planned Development District 189 To Allow The Outdoor Storage Of Freight Containers. Located At 633 And 641 Pecan Street, Abilene, Texas. Legal Description Being Lots 7-9, Block 131, Original Town Abilene, Abilene, Taylor County, Texas.

Planner Ivey presented this request. The owner proposes to rezone the subject property allow freight containers as a principal use. The owner will be using the containers to store materials used for his metal fabrication/mechanic shop at 809 South 7th Street.

Mr. Benham opened the public hearing. Stepping forward was Ms. Chaile Allen. Seeing no one else present and desiring to be heard, the public hearing was closed.

Property owners within a 200-foot radius were notified of this request. There were no (0) responses received in favor nor in opposition.

STAFF RECOMMENDATION: Staff recommends approval subject to site plan and plat approval before freight containers are stored on the subject property.

Commissioner Benham moved to **approve the request with the following conditions:**

An opaque fence will be all around the property

The fence height will be a minimum of 7’.

The freight containers will be set at grade with nothing stacked on top.

Commissioner Fleming seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

Z-2024-28: Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, To Change The Zoning Of Approximately 0.30 Acres From Residential Single-Family (RS-6) To Heavy Commercial (HC). Located At 602 & 610 N 16th Street. Legal Description Being Lots 5 And 6, Block 1, College Drive Replat, Abilene, Taylor County, Texas.

Planner Ivey presented this request. The owner proposes to rezone the subject property to expand the existing business located at 1602 North Treadaway Boulevard to allow the use a freight container to store material/equipment associated with the business. 602/610 has been used for storage since approximately 2003. The only trigger for the zone change cleanup was the addition of the freight container.

Mr. Benham opened the public hearing. Seeing no one present and desiring to be heard, the public hearing was closed.

Property owners within a 200-foot radius were notified of this request. There were no (0) responses received in favor, with one (1) received in opposition.

STAFF RECOMMENDATION: Approval

Commissioner Halliburton moved to **approve** the request. Commissioner Kyker seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

Z-2024-29: Receive a Report, Hold a Discussion and Public Hearing, and Take Action on A Request From The Owner, To Change The Zoning Of Approximately 4.78 Acres From Multi-Family (MF) To A Planned Development District (PDD-188). The PDD Proposes Townhomes With A Maximum Of Two Dwelling Units, And Duplexes. Located At 898-991 Minda Street. Legal Description Being Block 23, 24, And The East 250 Feet Of The South 160 Feet Of Block 25, Williams Estate Subdivision, Abilene, Taylor County, Texas.

Planner Teegardin presented this request. The purpose of this request is to allow the construction of townhomes with a maximum of two dwelling units and duplexes. The subject property was annexed into the City of Abilene in 1957 and has remained vacant. The property was rezoned from Single Family Residential (RS-6) to Multi-Family (MF) in July 2023. The property is in the process of being re-platted, which includes the extension of water and sewer lines and road improvements to Hailey Street.

Mr. Benham opened the public hearing. Mr. Tal Fillingim stepped forward. Seeing no one else present and desiring to speak, the public hearing was closed.

Property owners within a 200-foot radius were notified of this request. One (1) response was received in favor, with none (0) in opposition.

STAFF RECOMMENDATION: Approval

Commissioner Barnett moved to **approve** the request. Commissioner Benham seconded the motion. The motion carried by the following vote:

AYES: Barnett, Benham, Kyker, Halliburton, Fleming, Sitzes, Rosenbaum

NAYS: None

ADJOURNMENT

There being no further discussion, Mr. Benham adjourned the meeting at 2:17 p.m.

APPROVED

Mr. Clint Rosenbaum, Chairman



CONSULTING GROUP, INC.

9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 ★ PHONE 972-231-8893 ★ FAX 1-866-364-8375
www.allprocgi.com ★ e-mail: info@allprocgi.com Firm Reg. # 8242

**Tower Drop and Swap Design for
Tillman Infrastructure, LLC.**



Proposed 120' Monopole Tower with Existing Foundation

Tillman Site Name: TAYLOR Co TX
Tillman Site ID: TI-OPP-18058
Tillman Project ID: P-007939
Carrier Name: Verizon

Tenant Site No.: 16980428

**Site Location: 3309 N 10th Street,
Abilene, TX 79603
Taylor County**

Latitude: 32.460153°
Longitude: -99.761828°

ACGI Job # 24-2694

ANALYSIS RESULTS		
Tower Components	102.0 %	Acceptable with drop and swap
Tower Foundation	82.7 %	Pass

Prepared By:
Ankit Jain
Staff Engineer



07/25/2024
Approved By:
Shiqiang, Zhang, P.E.
TX PE # 137482
Firm Reg. # 8242

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1. ANALYSIS SUMMARY

The proposed 120' Tower and existing foundation located in Abilene, TX was analyzed by Allpro Consulting Group, Inc. (ACGI) for the existing loads and proposed Verizon per Application P-007939 as authorized by Tillman Infrastructure, LLC. Based on the results of the analysis, the proposed tower with below mentioned proposed and existing loading is found to be acceptable with TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2021 International Building Code (IBC 2021).

2. SCOPE & SOURCE OF INFORMATION

The purpose of this structural analysis is to determine whether the existing structure is capable of supporting additional loads proposed loads.

SOURCE OF INFORMATION		
Tower Data:	Sabre Industries Allpro Consulting Group	Existing Tower Design Report by Sabre Towers & Poles, Project # 21-5397-TJH, dated 04/01/2021 dropped and to be replaced with new Tower Design by Allpro Consulting Group Inc., ACGI# 24-2694, dated 7/24/2024.
Foundation Data:	Sabre Industries Engineered Tower Solutions (ETS), PLLC	Tower Design Report by Sabre Towers & Poles, Project # 21-5397-TJH, dated 04/01/2021. Foundation Inspection report by ETS, Project: 21-095407, Dated 09/15/2021.
Geotechnical Report:	Terradyne Engineering, Inc.	Soil data as per Geotechnical Investigation Report by Terradyne Engineering, Inc., Project# D211034, dated 03/19/2021.
Loading Data:	Tillman Infrastructure, LLC.	Existing AT&T loading as per FCDs by Broadus Services, FA# 12677368, dated 07/13/2020. Proposed Verizon loading as per: "TI-OPP-18058_P-007939_Taylor Co TX_ TXAB BARROW_REPL_COLO APP 6-21-24" dated 06/21/2024.
Authorization:	Tillman Infrastructure, LLC.	

3. ANALYSIS METHODS & DATA

The analysis was performed in accordance with Telecommunication Industry Association specification TIA-222-H. The tower was modeled using TNX Tower, a 3-D finite element program. TNX Tower is a general-purpose modeling, analysis, and design program created specifically for communication towers using the EIA-222-C, EIA-222-D, TIA/EIA-222-F or TIA-222-H standards. The 3-D model included the tower, with existing appurtenances and all proposed loads.

SITE DATA	
Tillman Site Name:	TAYLOR Co TX
Tillman Site Number:	TI-OPP-18058
Carrier Site Name/ID:	TX AB BARROW RELHR/ P-007939
City, State:	Abilene, TX
County:	Taylor
Code Wind Load Requirement:	ANSI/TIA-222-H (IBC 2021)
Wind Load Used:	ANSI/TIA-222-H Code: • Basic Wind Speed of 106 mph (3 second gust wind speed) • Structure Class II. • Exposure Category C. • Topographic Category 1. • Crest Height 0.00 ft. • A wind speed of 30 mph is used in combination with ice. • Nominal ice thickness of 1.50 in.
Seismic Check:	Seismic Response Acceleration at Short Period (Ss) is 0.066 g, Seismic check calculations are included as per TIA- 222-H

*This structural analysis is based upon the tower being classified as a class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

TOWER DATA	
Tower Type:	Monopole
Height:	120'
Cross Section:	Triangular
Steel Strength:	65 ksi
Type of Foundation:	Pier foundation
TOWER HISTORY	
Tower Manufacturer / Model:	Allpro Consulting Group, Inc.
Date of Original Design:	7/24/2024
Previous Modifications:	N/A
Original Design Code Req.:	EIA/TIA 222-H with ASCE7-16 wind speed of 106 mph with 1.5" ice.

4. APPURTENANCE LISTING

EXISTING & RESERVED LOAD DESCRIPTION*					
<u>ELEV</u> <u>(ft.)</u>	<u>Qty.</u>	<u>Antenna Description</u>	<u>Mount Type</u> <u>& Qty.</u>	<u>TX. LINE (in)</u>	<u>TENANT</u>
75±	9	Commscope NNHH-65B-R4 Antennas	(3) Comscope MCG23-12M- 9-126 Sector Frame	(2) 0.35" Fiber (6) 0.88" Control Cables	AT&T*
	3	Ericsson 4478 B14 RRU's			
	3	Ericsson 4415 B30 RRU's			
	3	Ericsson 8843 B2/B66A RRU's			
	3	Ericsson 4449 B5/B12 RRU's			
	2	Raycap DC9-48-60-24-8C-EV OVP			

Note: *Existing AT&T Loading calculated w/40k in² EPA wind load with Ka factor of 0.8.

PROPOSED VERIZON LOAD DESCRIPTION*					
<u>ELEV</u> <u>(ft.)</u>	<u>Qty.</u>	<u>Antenna Description</u>	<u>Mount Type</u> <u>& Qty.</u>	<u>TX. LINE (in)</u>	<u>TENANT</u>
113±	6	Commscope NHH-65C-R2B Antennas	(3) PV-SFRGS- MP10M-25-EP- AP1 Sector Mount	(2) Hybrid Fiber Cables 6x12	Verizon
	3	Samsung MT6413-77A Antennas			
	3	Samsung B2/B66A RRH ORAN (RF4439d- 25A) RRU's			
	3	Samsung RF4461d-13A RRU's			
	3	Raycap RCMD-6627-PF-48 OVP			

Note: *Proposed Verizon Loading calculated w/40k in² EPA wind load with Ka factor of 0.8.

- Notes: 1. ACGI should be notified of any discrepancies found in the data listed in this report.
2. Notify Allpro Consulting Group, Inc. of any potential physical and other interference with existing antennas for a redesign.

5. CONCLUSIONS

RESULT SUMMARY			
MEMBER		% Capacity	Pass/Fail
Pole (120 - 81)		49.5 %	Pass
Pole (81-43.5)		67.0 %	Pass
Pole (43.5-1)		74.4 %	Pass
Anchor Bolts		102.0 %	Acceptable
Tower Base Foundation (Pier Foundation)	Download Capacity	21.5 %	Pass
	Uplift Capacity	32.4 %	Pass
	Length Ratio	82.7 %	Pass
Tower Overall Rating = 102.0 % (Acceptable)			

As per the results of the analysis, the existing tower is found to be acceptable for the new and existing antenna loads, after installation of proposed modification.

Upon installation of proposed modifications, Maximum tower member stress is less than 105% making it to be acceptable under the TIA-222-H code and 2021 International Building Code requirements.

6. DISCLAIMER

Installation procedures and related loading are not within the scope of this analysis. A contractor experienced in similar work should perform all installation work. The engineering services provided by Allpro Consulting Group, Inc. (ACGI) are limited to the computer analysis and calculations of the structure with the proposed and existing loads. This analysis is considered void if the loading mentioned in this report is changed or is different as installed. It is assumed that the existing structure is properly maintained and is in good condition free of any defects.

ACGI does not make any warranties, expressed or implied in connection with this engineering analysis report and disclaims any liability arising from deficiencies or any existing conditions of the original structure. ACGI will not be responsible for consequential or incidental damages sustained by any parties as a result of any data or conclusions included in this Report. The maximum liability of ACGI pursuant to this report shall be limited to the consulting fee received for the preparation of the report.

Climbers should not latch or tie their support lanyard or gear on to antennas, radios, antenna mounts etc. without proper evaluation. They should only tie to their support lanyards or gear to or attach to main tower/building structural members that have visible bolting and connection to the larger structure.

7. ASSUMPTIONS

This analysis was completed based on the following assumptions:

- Tower has been properly maintained
- Tower erection was in accordance to manufacturer drawings
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction
- Foundation was constructed in accordance to manufacturer drawings
- Foundation does not have structural damage
- Bolts have been properly tightened according to manufacturer specifications
- Appurtenance, mount and transmission line sizes and weights are best estimates using the tnxTower database and manufacturer information

8. RECOMMENDATIONS

The existing tower is recommended for the final loading listed under Section 4 "Appurtenances Listing", after installing proposed tower modifications.

Modifications Required:

1. Remove and dispose existing 75ft Monopole with all its sections.
2. Stack new 120' Monopole. Reuse existing Foundation and Anchor bolts.
3. Keep the anchor rod projection (distance from top of foundation to bottom of leveling nut) less than 1in.
4. Install new safety climb system.
5. Install new grounding for the new tower.
 - Temporary removal and relocation of AT&T equipment will be required prior to start drop and swap construction.

Contractor bids are pending and will be provided shortly under separate cover.

Modification should be installed by a contractor familiar with the work to be performed.

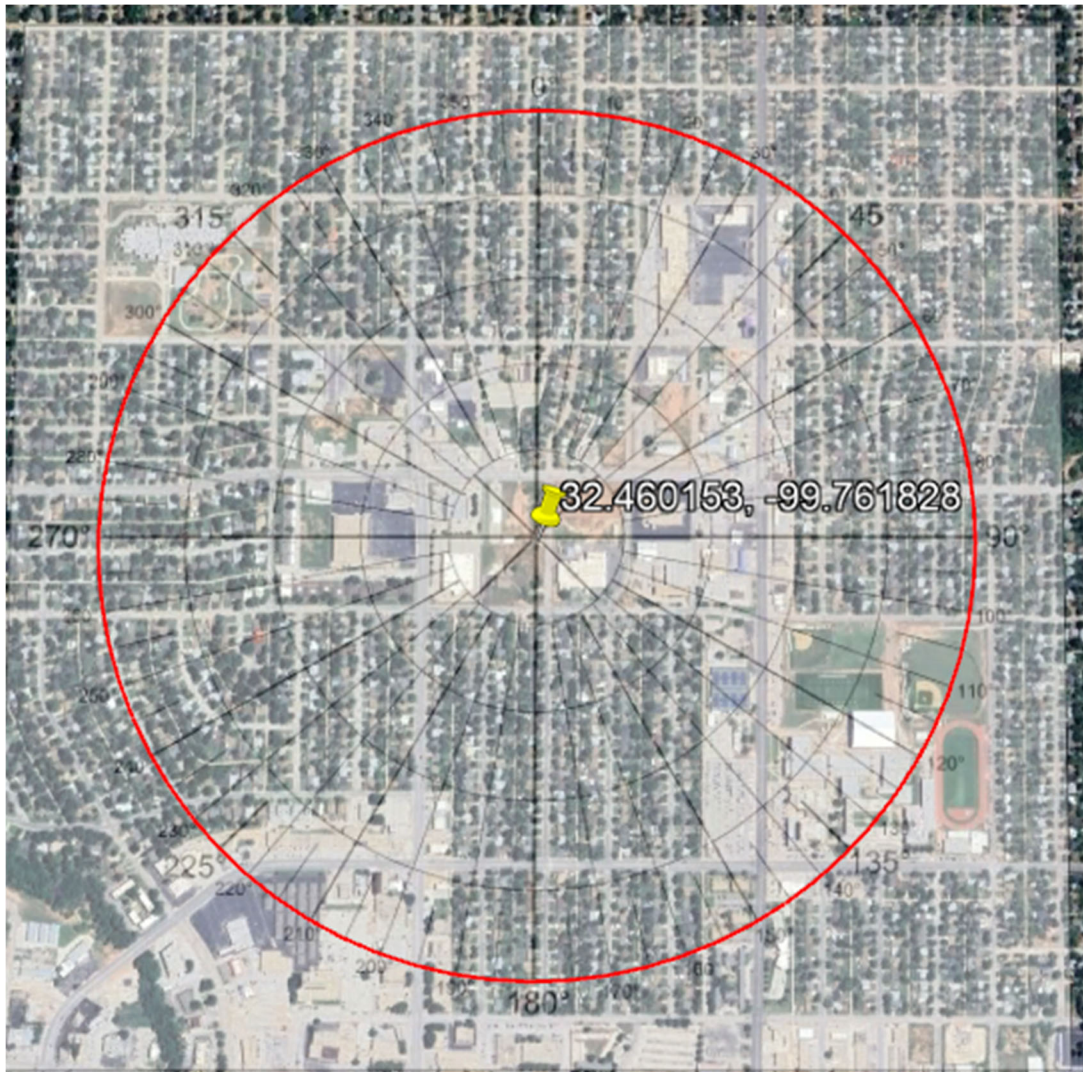
9. SUMMARY OF WORKING PERCENTAGE OF STRUCTURAL COMPONENTS

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	120 - 81	Pole	TP21.55x12x0.3125	1	-9.12	1189.67	49.5	Pass
L2	81 - 43.5	Pole	TP30.1077x20.1904x0.375	2	-21.72	2010.60	67.0	Pass
L3	43.5 - 1	Pole	TP39.77x28.5006x0.375	3	-32.11	2743.06	74.4	Pass
							Summary	
							Pole (L3)	Pass
							RATING =	74.4 Pass

APPENDIX

SITE DATA



Exposure **C**

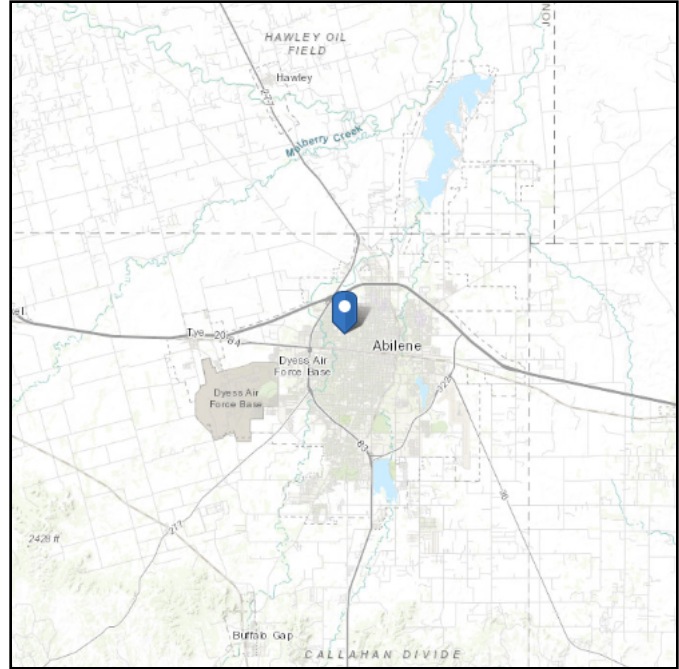
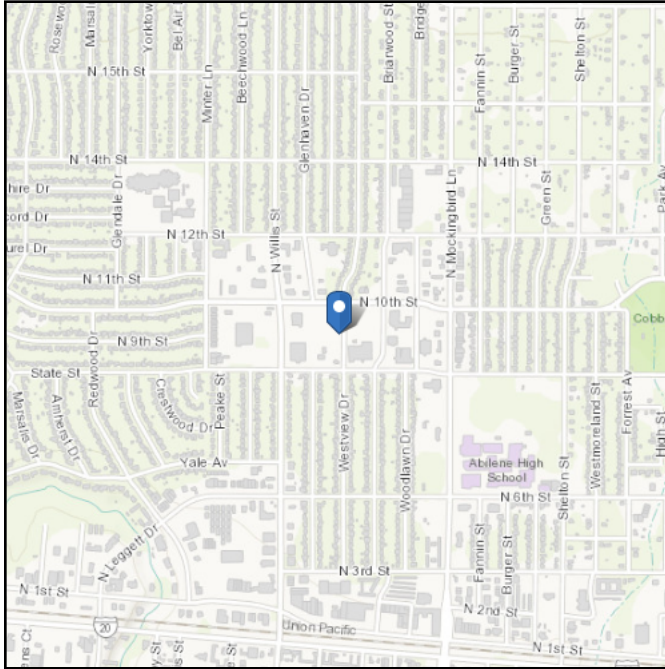
Topography **1**

ASCE Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Latitude: 32.460153
Longitude: -99.761828
Elevation: 0 ft (NAVD 88)



Wind

Results:

Wind Speed	106 Vmph
10-year MRI	74 Vmph
25-year MRI	81 Vmph
50-year MRI	86 Vmph
100-year MRI	91 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Tue Jun 25 2024

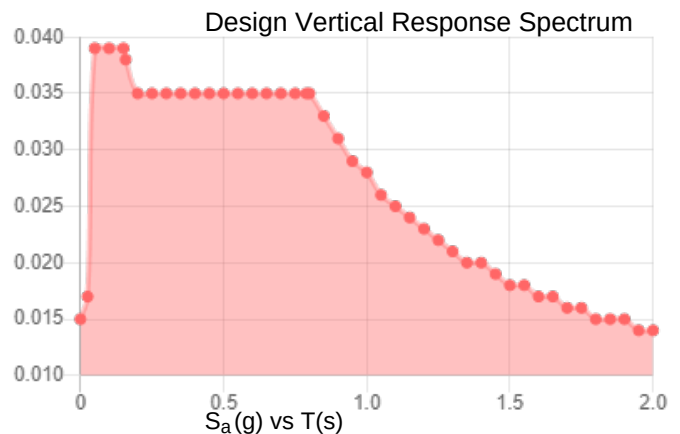
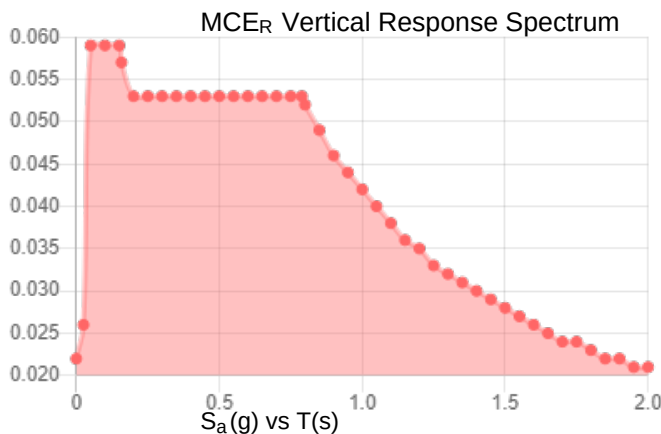
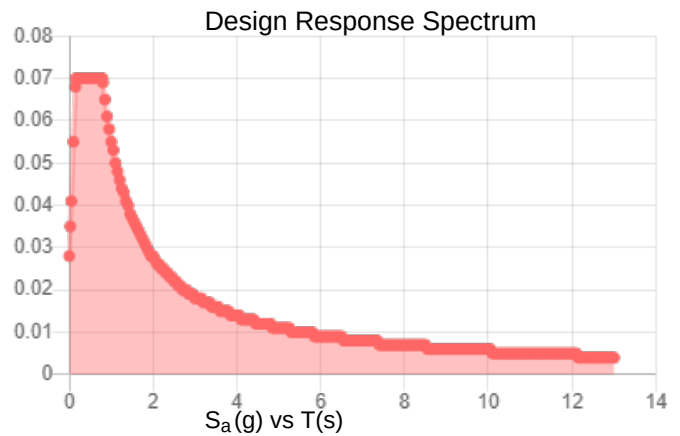
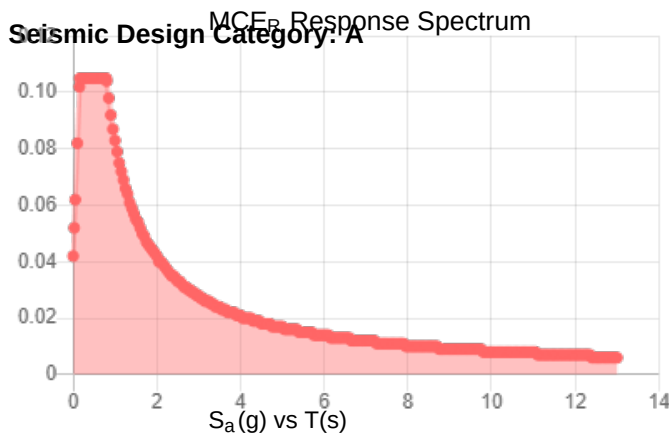
Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	0.066	S_{D1} :	0.055
S_1 :	0.035	T_L :	12
F_a :	1.6	PGA :	0.03
F_v :	2.4	PGA _M :	0.049
S_{MS} :	0.105	F_{PGA} :	1.6
S_{M1} :	0.083	I_e :	1
S_{DS} :	0.07	C_v :	0.7



Data Accessed: Tue Jun 25 2024

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Results:

Ice Thickness: 1.50 in.
Concurrent Temperature: 15 F
Gust Speed 40 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Tue Jun 25 2024

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

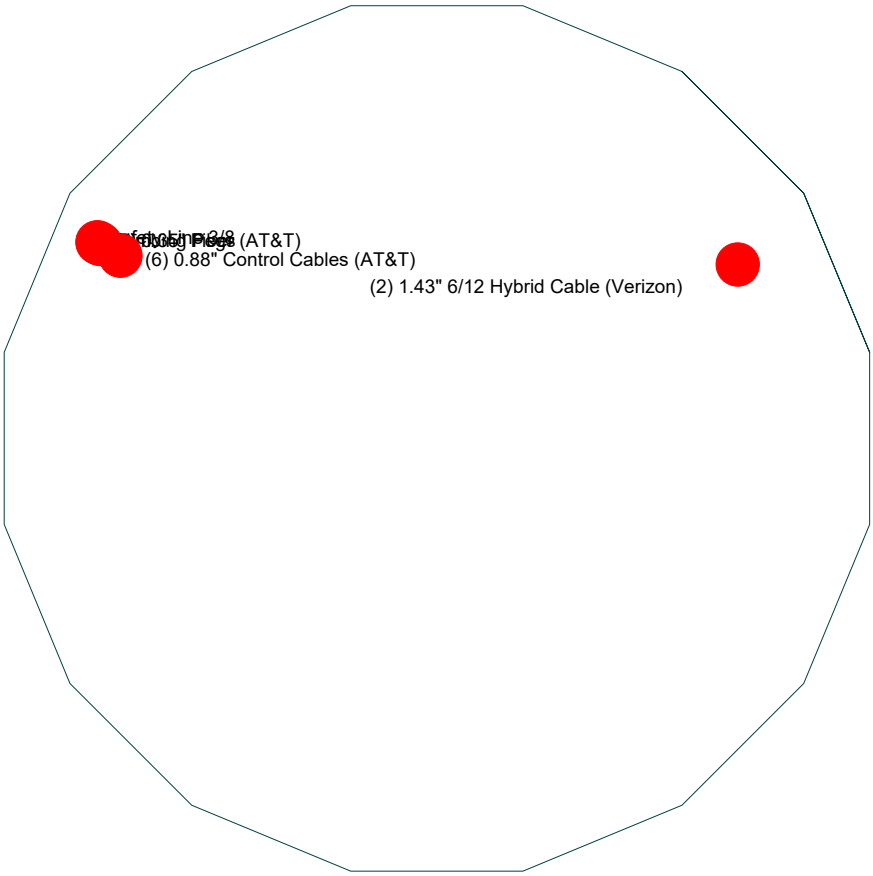
ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

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COAX LAYOUT

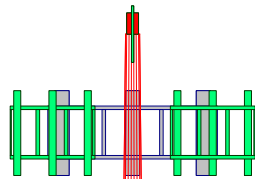
Feed Line Plan

Round Flat App In Face App Out Face



TOWER ELEVATION DRAWINGS

120.0 ft



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
L1	121	L2	82
Beacon	120	Loadings (40K EPA) (ATJ)	75
Lightning Rod	120	L3	44.5
Loadings (40K EPA) (Verizon)	113		

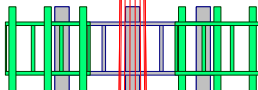
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

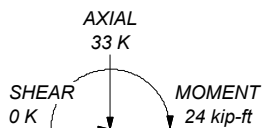
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-H Standard.
2. Tower designed for a 106 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 40 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 74.4%

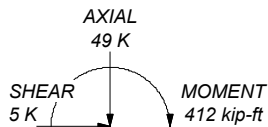
81.0 ft



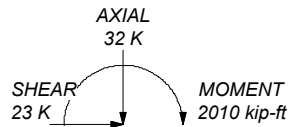
43.5 ft

ALL REACTIONS
ARE FACTORED

SEISMIC



40 mph WIND - 1.5000 in ICE



REACTIONS - 106 mph WIND

1.0 ft



Section	1	2	3
Length (ft)	39.00	40.50	46.00
Number of Sides	18	18	18
Thickness (in)	0.3125	0.3750	0.3750
Socket Length (ft)	3.00	3.50	28.5006
Top Dia (in)	12.0000	20.1904	39.7700
Bot Dia (in)	21.5500	30.1077	
Grade		A572-65	
Weight (K)	2.3	4.3	6.6
			13.1

Allpro Consulting Group Inc.

9221 Lyndson B. Jhonson Fwy Suite#204

Dallas.T.X.75243

Phone: 972-231-8893

FAX: 886-364-8375

Consulting Engineers

Job: 24-2694

Project: TI-OPP-18058_P-007939

Client: Tillman Infrastructure

Drawn by: AJain

App'd:

Code: TIA-222-H

Date: 07/25/24

Scale: NTS

Path:

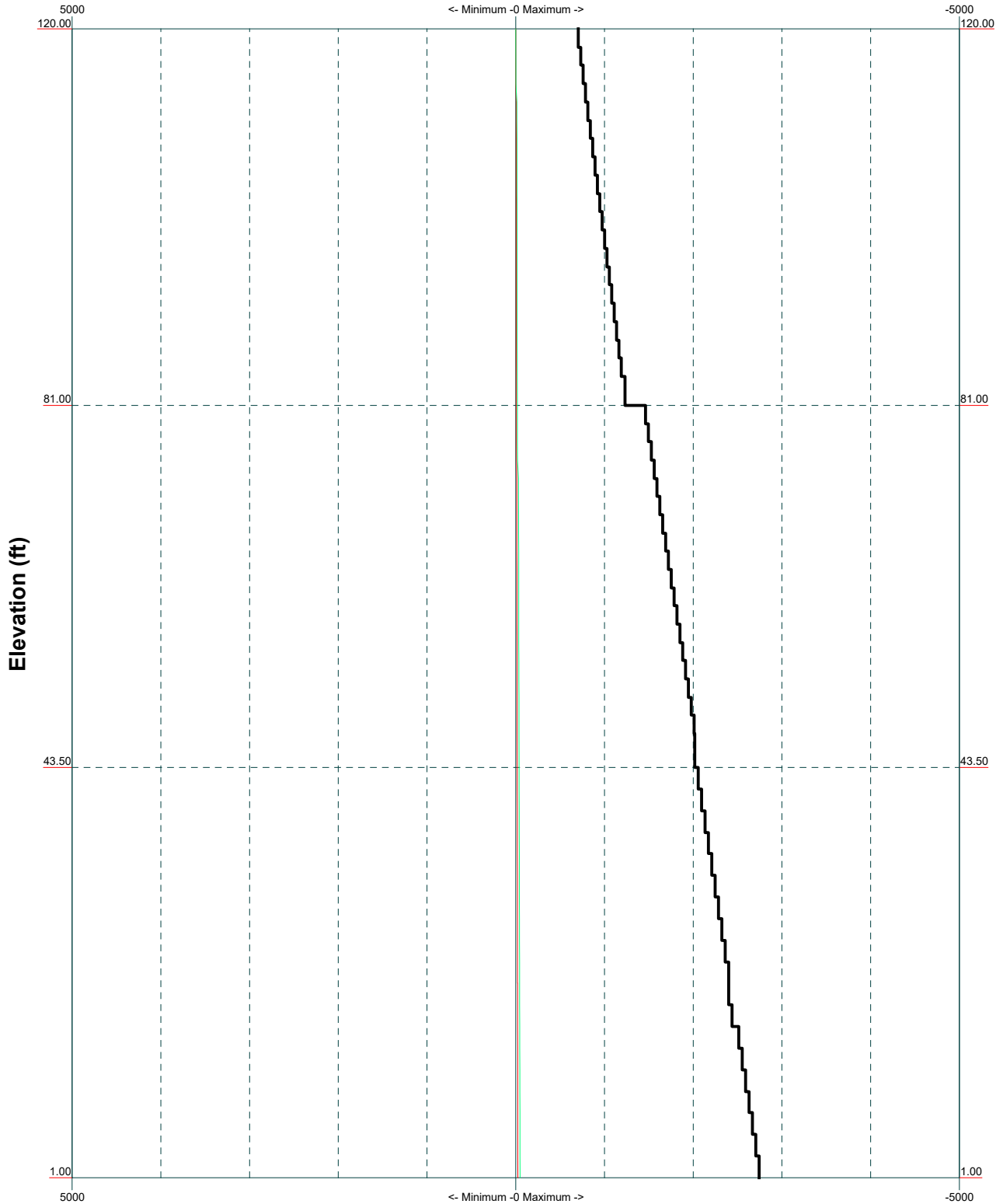
Dwg No. E-1

MISCELLANEOUS PLOTS

TIA-222-H - 106 mph/40 mph 1.5000 in Ice Exposure C

Leg Capacity ———

Leg Compression (K)



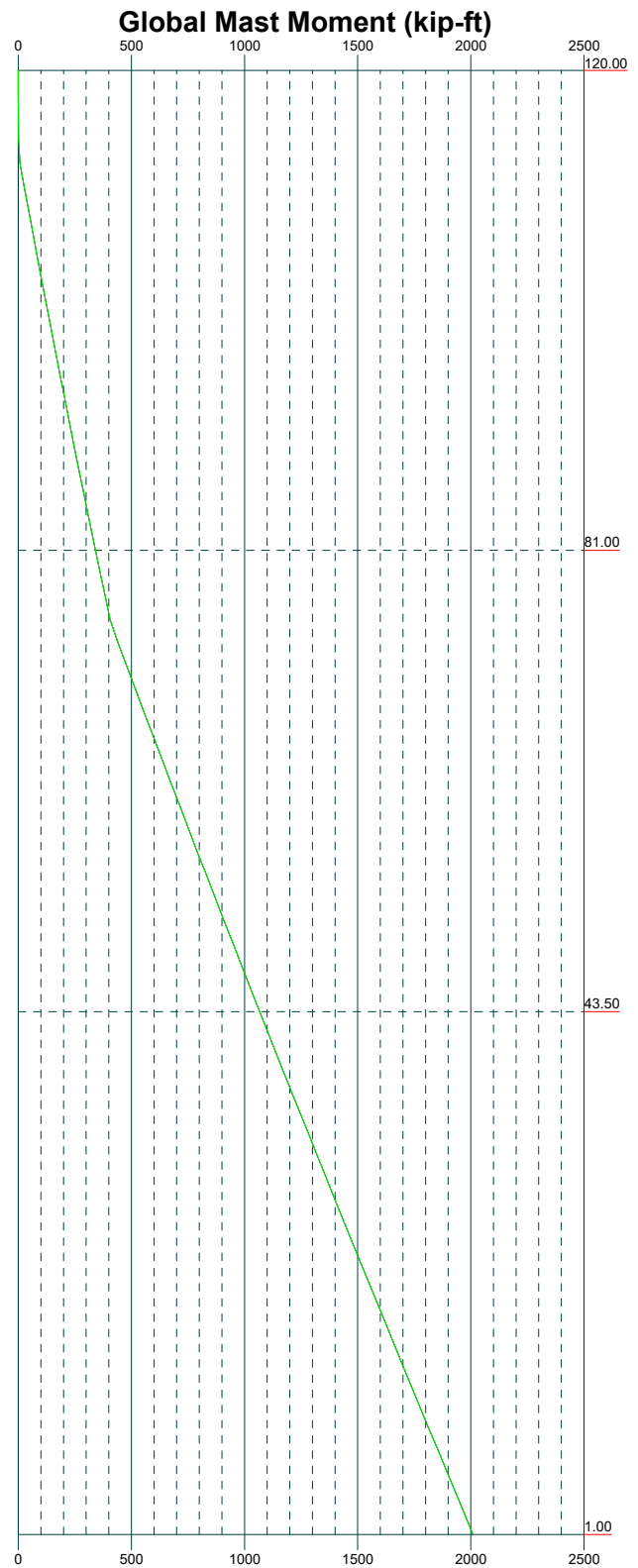
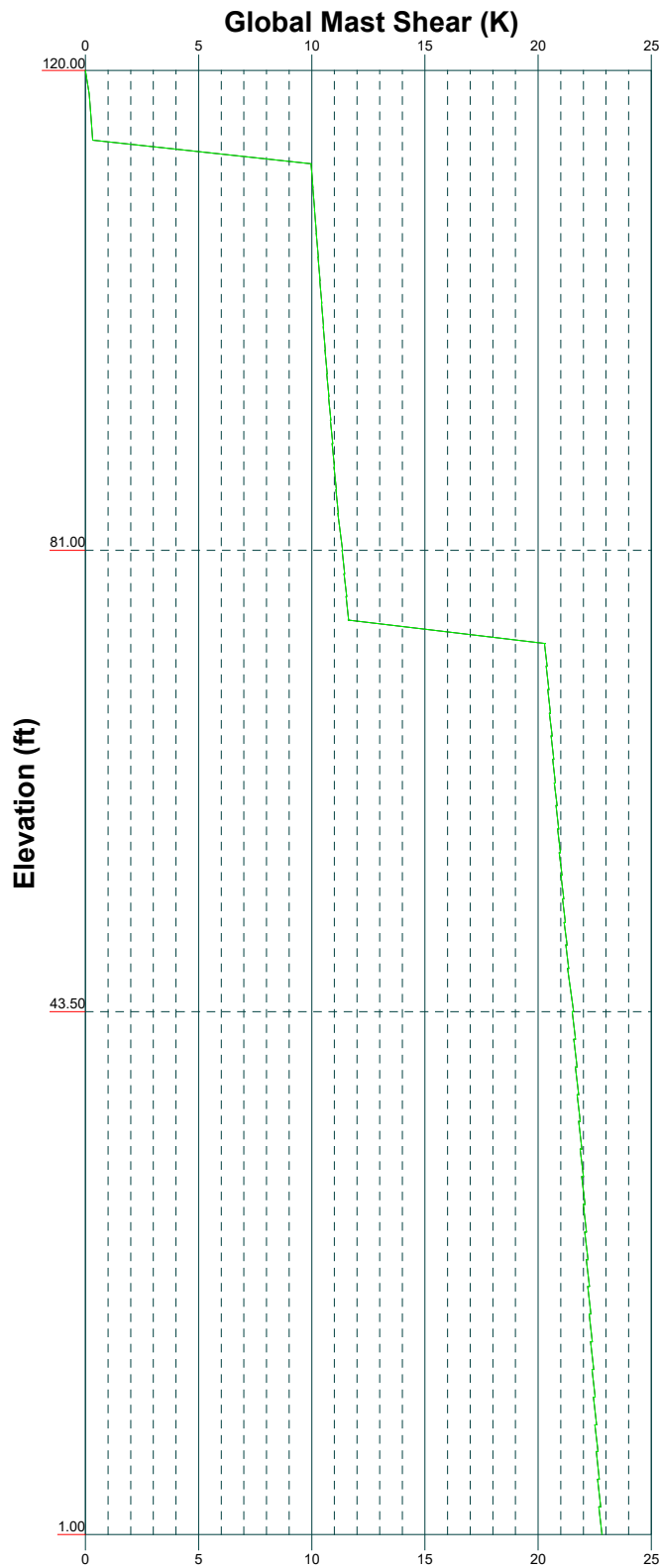
Allpro Consulting Group Inc. 9221 Lyndson B. Jhonson Fwy Suite#204 Dallas.T.X.75243 Phone: 972-231-8893 FAX: 886-364-8375 Consulting Engineers		Job: 24-2694		
		Project: TI-OPP-18058_P-007939		
		Client: Tillman Infrastructure	Drawn by: AJain	App'd:
		Code: TIA-222-H	Date: 07/25/24	Scale: NTS
		Path:		Dwg No. E-3

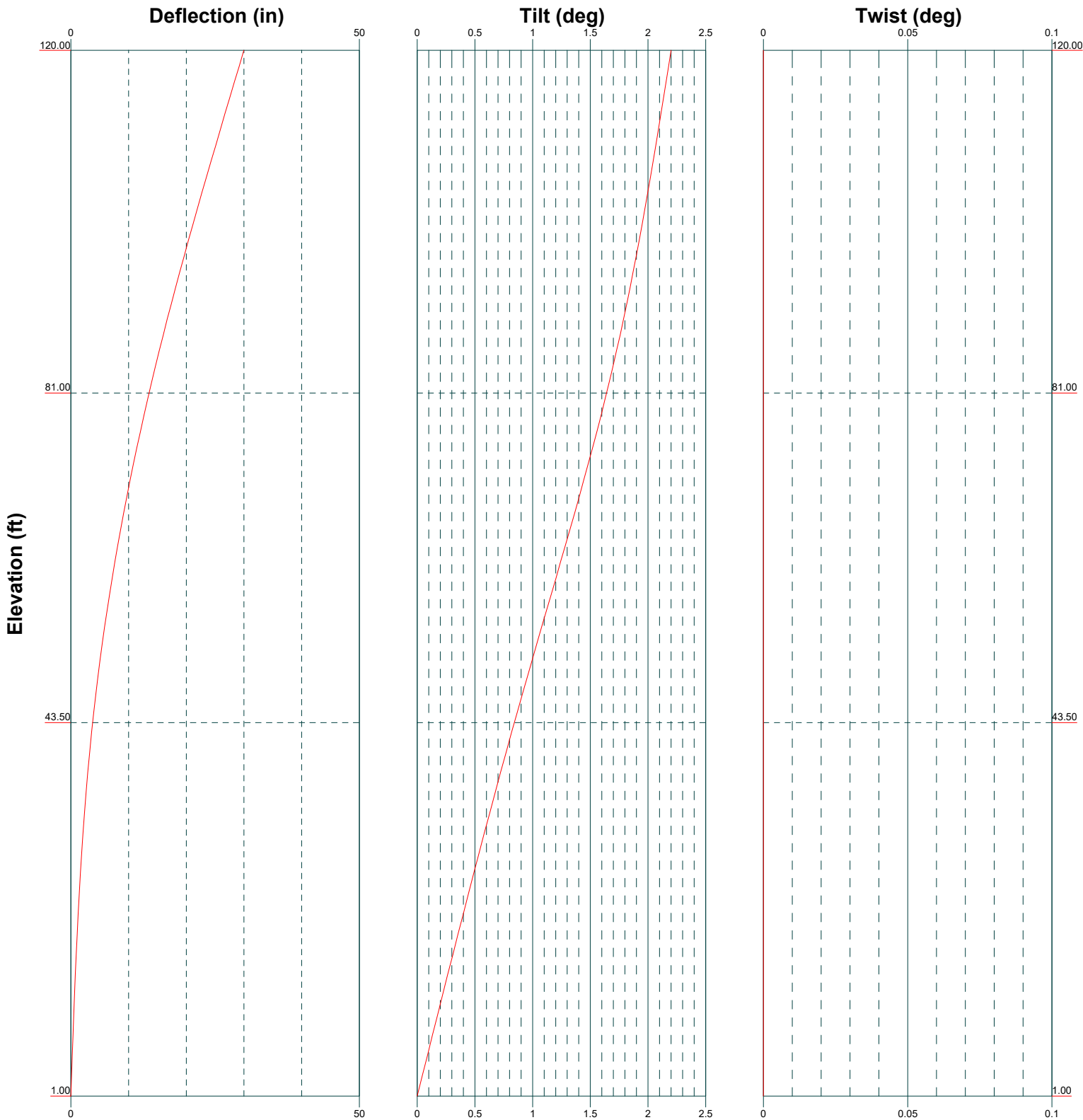
Vx

Vz

Mx

Mz

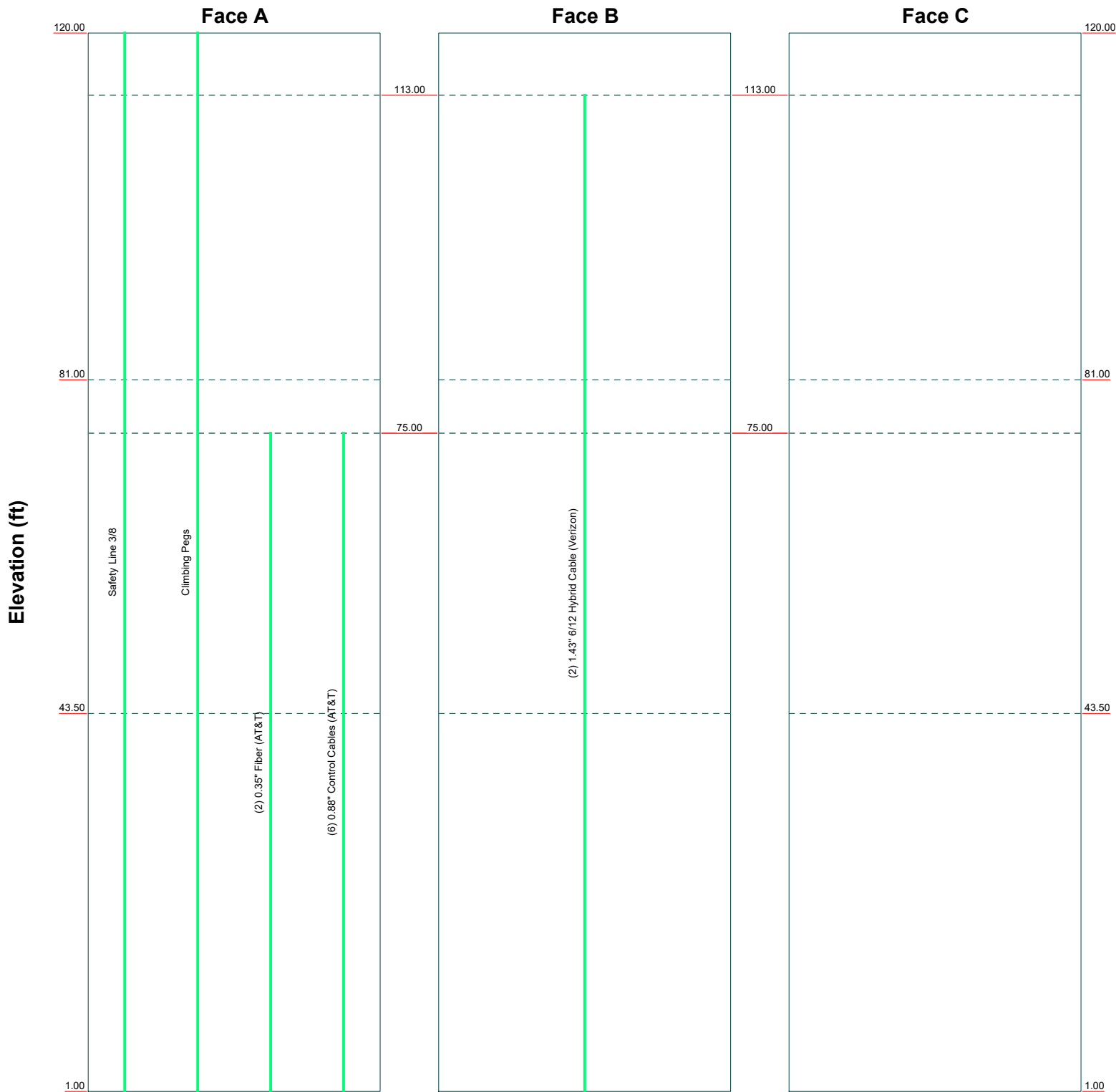




Feed Line Distribution Chart

1' - 120'

Round Flat App In Face App Out Face Truss Leg



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Consulting Engineers		Client: Tillman Infrastructure		Drawn by: AJain	App'd:
		Code: TIA-222-H		Date: 07/25/24	Scale: NTS
		Path:		Dwg No. E-7	

CALCULATION PRINTOUT

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	Client	Tillman Infrastructure	Designed by	AJain

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower base elevation above sea level: 1.00 ft.

Basic wind speed of 106 mph.

Risk Category II.

Exposure Category C.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.5000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 40 mph is used in combination with ice.

Temperature drop of 5 °F.

Deflections calculated using a wind speed of 60 mph.

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, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs	Assume Legs Pinned	√ Calculate Redundant Bracing Forces
Consider Moments - Horizontals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Consider Moments - Diagonals	√ Use Clear Spans For Wind Area	SR Leg Bolts Resist Compression
Use Moment Magnification	√ Use Clear Spans For KL/r	√ All Leg Panels Have Same Allowable
√ Use Code Stress Ratios	√ Retension Guys To Initial Tension	Offset Girt At Foundation
√ Use Code Safety Factors - Guys	√ Bypass Mast Stability Checks	√ Consider Feed Line Torque
Escalate Ice	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Always Use Max Kz	√ Project Wind Area of Appurtenances	Use TIA-222-H Bracing Resist. Exemption
Use Special Wind Profile	Alternative Appurt. EPA Calculation	Use TIA-222-H Tension Splice Exemption
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Poles
√ Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	√ Include Shear-Torsion Interaction
√ Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	Always Use Sub-Critical Flow
Use Diamond Inner Bracing (4 Sided)	√ Triangulate Diamond Inner Bracing	Use Top Mounted Sockets
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Pole Without Linear Attachments
SR Members Are Concentric	Ignore KL/ry For 60 Deg. Angle Legs	Pole With Shroud Or No Appurtenances
Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules	Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	
L1	120.00-81.00	39.00	3.00	18	12.0000	21.5500	0.3125	1.2500	A572-65 (65 ksi)
L2	81.00-43.50	40.50	3.50	18	20.1904	30.1077	0.3750	1.5000	A572-65 (65 ksi)

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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
L3	43.50-1.00	46.00		18	28.5006	39.7700	0.3750	1.5000	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	12.1369	11.5925	200.0595	4.1491	6.0960	32.8182	400.3823	5.7974	1.5620	4.998
	21.8342	21.0649	1200.3408	7.5393	10.9474	109.6462	2402.2610	10.5345	3.2428	10.377
L2	21.1900	23.5853	1169.9928	7.0345	10.2567	114.0709	2341.5251	11.7949	2.8935	7.716
	30.5143	35.3893	3952.5588	10.5551	15.2947	258.4266	7910.3184	17.6980	4.6390	12.371
L3	29.7531	33.4765	3345.6687	9.9846	14.4783	231.0812	6695.7396	16.7415	4.3561	11.616
	40.3257	46.8899	9193.8826	13.9852	20.2032	455.0715	18399.8628	23.4494	6.3395	16.905

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 120.00-81.00				1	1	1.05			
L2 81.00-43.50				1	1	1.05			
L3 43.50-1.00				1	1	1.05			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _A A _A ft²/ft	Weight plf
Safety Line 3/8	A	No	No	Inside Pole	120.00 - 1.00	1	No Ice	0.00	0.22
							1/2" Ice	0.00	0.22
							1" Ice	0.00	0.22
							2" Ice	0.00	0.22
Climbing Pegs	A	No	No	Inside Pole	120.00 - 1.00	1	No Ice	0.00	7.90
							1/2" Ice	0.00	7.90
							1" Ice	0.00	7.90
							2" Ice	0.00	7.90
0.35" Fiber (AT&T)	A	No	No	Inside Pole	75.00 - 1.00	2	No Ice	0.00	0.08
							1/2" Ice	0.00	0.08
							1" Ice	0.00	0.08

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Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		$C_A A_A$ ft ² /ft	Weight plf
0.88" Control Cables (AT&T)	A	No	No	Inside Pole	75.00 - 1.00	6	2" Ice	0.00	0.08
							No Ice	0.00	0.15
							1/2" Ice	0.00	0.15
							1" Ice	0.00	0.15
							2" Ice	0.00	0.15

1.43" 6/12 Hybrid Cable (Verizon)	B	No	No	Inside Pole	113.00 - 1.00	2	No Ice	0.00	2.40
							1/2" Ice	0.00	2.40
							1" Ice	0.00	2.40
							2" Ice	0.00	2.40

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	120.00-81.00	A	0.000	0.000	0.000	0.000	0.32
		B	0.000	0.000	0.000	0.000	0.15
		C	0.000	0.000	0.000	0.000	0.00
L2	81.00-43.50	A	0.000	0.000	0.000	0.000	0.34
		B	0.000	0.000	0.000	0.000	0.18
		C	0.000	0.000	0.000	0.000	0.00
L3	43.50-1.00	A	0.000	0.000	0.000	0.000	0.39
		B	0.000	0.000	0.000	0.000	0.20
		C	0.000	0.000	0.000	0.000	0.00

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²	Weight K
L1	120.00-81.00	A	1.674	0.000	0.000	0.000	0.000	0.32
		B		0.000	0.000	0.000	0.000	0.15
		C		0.000	0.000	0.000	0.000	0.00
L2	81.00-43.50	A	1.596	0.000	0.000	0.000	0.000	0.34
		B		0.000	0.000	0.000	0.000	0.18
		C		0.000	0.000	0.000	0.000	0.00
L3	43.50-1.00	A	1.441	0.000	0.000	0.000	0.000	0.39
		B		0.000	0.000	0.000	0.000	0.20
		C		0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

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Section	Elevation	CP _x	CP _z	CP _x Ice	CP _z Ice
	ft	in	in	in	in
L1	120.00-81.00	0.0000	0.0000	0.0000	0.0000
L2	81.00-43.50	0.0000	0.0000	0.0000	0.0000
L3	43.50-1.00	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	E _v	E _{hx}	E _{hz}	E _h
	ft	ft	°	K	K	K	K
L1	121.00	0.00	0.0000	0.12	0.00	0.00	0.12
L2	82.00	0.00	0.0000	0.15	0.00	0.00	0.10
L3	44.50	0.00	0.0000	0.10	0.00	0.00	0.03

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment	Placement	C _A A _A Front	C _A A _A Side	Weight
				°	ft	ft ²	ft ²	K
Lightning Rod	B	None		0.0000	120.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.25 0.66 0.97 1.49	0.03 0.03 0.04 0.06
Beacon	B	None		0.0000	120.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.00 2.50 3.00 4.00	0.02 0.03 0.04 0.06

Loadings (40K EPA) (Verizon)	A	None		0.0000	113.00	No Ice 1/2" Ice 1" Ice 2" Ice	278.00 300.00 322.20 366.60	6.00 7.50 9.00 12.00

Loadings (40K EPA) (AT&T)	A	None		0.0000	75.00	No Ice 1/2" Ice 1" Ice 2" Ice	278.00 300.00 322.20 366.60	6.00 7.50 9.00 12.00

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Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service
51	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
52	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
53	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
54	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
55	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
56	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
57	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
58	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
59	1.2 Dead+1.0 Ev+1.0 Eh 120 deg

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Comb. No.	Description
60	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
61	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
62	0.9 Dead-1.0 Ev+1.0 Eh 150 deg
63	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
64	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
65	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
66	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
67	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
68	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
69	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
70	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
71	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
72	0.9 Dead-1.0 Ev+1.0 Eh 300 deg
73	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
74	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 81	29.976	39	2.1993	0.0000
L2	84 - 43.5	14.642	39	1.6962	0.0000
L3	47 - 1	4.366	39	0.9151	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
121.00	L1	39	29.976	2.1993	0.0000	18496
120.00	Lightning Rod	39	29.976	2.1993	0.0000	18496
113.00	Loadings (40K EPA)	39	26.805	2.1145	0.0000	13212
82.00	L2	39	13.912	1.6599	0.0000	2551
75.00	Loadings (40K EPA)	39	11.506	1.5240	0.0000	2454
44.50	L3	39	3.933	0.8612	0.0000	2288

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 81	105.500	2	7.7572	0.0000
L2	84 - 43.5	51.555	2	5.9814	0.0000
L3	47 - 1	15.372	8	3.2242	0.0000

Critical Deflections and Radius of Curvature - Design Wind

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<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
121.00	L1	2	105.500	7.7572	0.0000	5399
120.00	Lightning Rod	2	105.500	7.7572	0.0000	5399
113.00	Loadings (40K EPA)	2	94.347	7.4580	0.0000	3856
82.00	L2	2	48.985	5.8531	0.0000	738
75.00	Loadings (40K EPA)	2	40.518	5.3732	0.0000	707
44.50	L3	8	13.845	3.0344	0.0000	651

Compression Checks

Pole Design Data

<i>Section No.</i>	<i>Elevation</i>	<i>Size</i>	<i>L</i>	<i>L_u</i>	<i>Kl/r</i>	<i>A</i>	<i>P_u</i>	ϕP_n	<i>Ratio</i>
	<i>ft</i>		<i>ft</i>	<i>ft</i>		<i>in²</i>	<i>K</i>	<i>K</i>	$\frac{P_u}{\phi P_n}$
L1	120 - 118.105	TP21.55x12x0.3125	39.00	0.00	0.0	12.0527	-0.31	705.09	0.000
	118.105 - 116.211					12.5129	-0.28	732.01	0.000
	116.211 - 114.316					12.9731	-0.40	758.93	0.001
	114.316 - 112.421					13.4333	-6.49	785.85	0.008
	112.421 - 110.526					13.8935	-6.62	812.77	0.008
	110.526 - 108.632					14.3537	-6.76	839.69	0.008
	108.632 - 106.737					14.8139	-6.91	866.62	0.008
	106.737 - 104.842					15.2741	-7.06	893.54	0.008
	104.842 - 102.947					15.7343	-7.22	920.46	0.008
	102.947 - 101.053					16.1945	-7.39	947.38	0.008
	101.053 - 99.1579					16.6547	-7.56	974.30	0.008
	99.1579 - 97.2632					17.1149	-7.74	1001.22	0.008
	97.2632 - 95.3684					17.5751	-7.92	1028.14	0.008
	95.3684 - 93.4737					18.0353	-8.11	1055.07	0.008
	93.4737 - 91.5789					18.4955	-8.30	1081.99	0.008
	91.5789 - 89.6842					18.9557	-8.50	1108.91	0.008
	89.6842 - 87.7895					19.4159	-8.70	1135.83	0.008
	87.7895 - 85.8947					19.8761	-8.91	1162.75	0.008
	85.8947 - 84					20.3363	-9.12	1189.67	0.008
	84 - 81					21.0649	-4.52	1232.30	0.004
L2	84 - 81	TP30.1077x20.1904x0.375	40.50	0.00	0.0	24.4596	-5.23	1430.89	0.004
	81 - 79.1111					25.0102	-9.99	1463.10	0.007

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L3	79.1111 - 77.2222	TP39.77x28.5006x0.375	46.00	0.00	0.0	25.5607	-10.24	1495.30	0.007
	77.2222 - 75.3333					26.1112	-10.50	1527.51	0.007
	75.3333 - 73.4444					26.6618	-17.19	1559.71	0.011
	73.4444 - 71.5556					27.2123	-17.48	1591.92	0.011
	71.5556 - 69.6667					27.7628	-17.77	1624.13	0.011
	69.6667 - 67.7778					28.3134	-18.07	1656.33	0.011
	67.7778 - 65.8889					28.8639	-18.38	1688.54	0.011
	65.8889 - 64					29.4144	-18.69	1720.74	0.011
	64 - 62.1111					29.9650	-19.01	1752.95	0.011
	62.1111 - 60.2222					30.5155	-19.33	1785.16	0.011
	60.2222 - 58.3333					31.0660	-19.66	1817.36	0.011
	58.3333 - 56.4444					31.6166	-19.99	1849.57	0.011
	56.4444 - 54.5556					32.1671	-20.33	1881.78	0.011
	54.5556 - 52.6667					32.7176	-20.67	1913.98	0.011
	52.6667 - 50.7778					33.2682	-21.02	1946.19	0.011
	50.7778 - 48.8889					33.8187	-21.37	1978.39	0.011
	48.8889 - 47					34.3692	-21.72	2010.60	0.011
	47 - 43.5					35.3893	-11.59	2070.28	0.006
	47 - 43.5					34.4971	-11.27	2018.08	0.006
	43.5 - 41.2632					35.1494	-23.28	2056.24	0.011
	41.2632 - 39.0263					35.8016	-23.72	2094.40	0.011
	39.0263 - 36.7895					36.4539	-24.17	2132.55	0.011
	36.7895 - 34.5526					37.1061	-24.62	2170.71	0.011
	34.5526 - 32.3158					37.7584	-25.08	2208.87	0.011
	32.3158 - 30.0789					38.4106	-25.54	2247.02	0.011
	30.0789 - 27.8421					39.0629	-26.01	2285.18	0.011
	27.8421 - 25.6053					39.7151	-26.49	2323.34	0.011
	25.6053 - 23.3684					40.3674	-26.97	2361.49	0.011
	23.3684 - 21.1316					41.0196	-27.46	2399.65	0.011
	21.1316 - 18.8947					41.0196	-27.73	2399.65	0.012
	18.8947 - 16.6579					41.6719	-28.23	2437.81	0.012
	16.6579 - 14.4211					42.9764	-28.95	2514.12	0.012
	14.4211 - 12.1842					43.6286	-29.46	2552.28	0.012

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Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
	12.1842 - 9.94737					44.2809	-29.98	2590.43	0.012
	9.94737 - 7.71053					44.9331	-30.50	2628.59	0.012
	7.71053 - 5.47368					45.5854	-31.03	2666.75	0.012
	5.47368 - 3.23684					46.2376	-31.57	2704.90	0.012
	3.23684 - 1					46.8899	-32.11	2743.06	0.012

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M _{uy} kip-ft	φM _{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	120 - 118.105	TP21.55x12x0.3125	0.33	219.86	0.002	0.00	219.86	0.000
	118.105 - 116.211		0.64	237.19	0.003	0.00	237.19	0.000
	116.211 - 114.316		1.17	255.17	0.005	0.00	255.17	0.000
	114.316 - 112.421		7.41	273.81	0.027	0.00	273.81	0.000
	112.421 - 110.526		26.38	293.12	0.090	0.00	293.12	0.000
	110.526 - 108.632		45.50	313.07	0.145	0.00	313.07	0.000
	108.632 - 106.737		64.76	333.69	0.194	0.00	333.69	0.000
	106.737 - 104.842		84.17	354.96	0.237	0.00	354.96	0.000
	104.842 - 102.947		103.73	376.89	0.275	0.00	376.89	0.000
	102.947 - 101.053		123.43	399.48	0.309	0.00	399.48	0.000
	101.053 - 99.1579		143.28	422.73	0.339	0.00	422.73	0.000
	99.1579 - 97.2632		163.27	446.63	0.366	0.00	446.63	0.000
	97.2632 - 95.3684		183.42	471.19	0.389	0.00	471.19	0.000
	95.3684 - 93.4737		203.71	496.41	0.410	0.00	496.41	0.000
	93.4737 - 91.5789		224.16	522.29	0.429	0.00	522.29	0.000
	91.5789 - 89.6842		244.76	548.82	0.446	0.00	548.82	0.000
	89.6842 - 87.7895		265.52	576.01	0.461	0.00	576.01	0.000
	87.7895 - 85.8947		286.43	603.86	0.474	0.00	603.86	0.000
	85.8947 - 84		307.50	632.37	0.486	0.00	632.37	0.000
	84 - 81		163.68	678.85	0.241	0.00	678.85	0.000
L2	84 - 81	TP30.1077x20.1904x0.375	177.61	760.08	0.234	0.00	760.08	0.000
	81 - 79.1111		362.81	795.00	0.456	0.00	795.00	0.000
	79.1111 - 77.2222		384.51	830.69	0.463	0.00	830.69	0.000

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Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{ux} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M_{uy} kip-ft	ϕM_{uy} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
	77.2222 - 75.3333		406.37	867.17	0.469	0.00	867.17	0.000
	75.3333 - 73.4444		441.78	904.44	0.488	0.00	904.44	0.000
	73.4444 - 71.5556		480.20	942.49	0.509	0.00	942.49	0.000
	71.5556 - 69.6667		518.76	981.33	0.529	0.00	981.33	0.000
	69.6667 - 67.7778		557.46	1020.95	0.546	0.00	1020.95	0.000
	67.7778 - 65.8889		596.30	1061.35	0.562	0.00	1061.35	0.000
	65.8889 - 64		635.27	1102.54	0.576	0.00	1102.54	0.000
	64 - 62.1111		674.38	1144.51	0.589	0.00	1144.51	0.000
	62.1111 - 60.2222		713.63	1187.27	0.601	0.00	1187.27	0.000
	60.2222 - 58.3333		753.01	1230.81	0.612	0.00	1230.81	0.000
	58.3333 - 56.4444		792.53	1275.13	0.622	0.00	1275.13	0.000
	56.4444 - 54.5556		832.19	1320.24	0.630	0.00	1320.24	0.000
	54.5556 - 52.6667		871.99	1366.13	0.638	0.00	1366.13	0.000
	52.6667 - 50.7778		911.92	1412.81	0.645	0.00	1412.81	0.000
	50.7778 - 48.8889		952.00	1460.27	0.652	0.00	1460.27	0.000
	48.8889 - 47		992.21	1508.52	0.658	0.00	1508.52	0.000
	47 - 43.5		554.37	1599.98	0.346	0.00	1599.98	0.000
L3	47 - 43.5	TP39.77x28.5006x0.375	512.86	1519.83	0.337	0.00	1519.83	0.000
	43.5 - 41.2632		1115.50	1578.22	0.707	0.00	1578.22	0.000
	41.2632 - 39.0263		1163.92	1637.72	0.711	0.00	1637.72	0.000
	39.0263 - 36.7895		1212.52	1698.31	0.714	0.00	1698.31	0.000
	36.7895 - 34.5526		1261.27	1760.00	0.717	0.00	1760.00	0.000
	34.5526 - 32.3158		1310.17	1822.79	0.719	0.00	1822.79	0.000
	32.3158 - 30.0789		1359.23	1886.68	0.720	0.00	1886.68	0.000
	30.0789 - 27.8421		1408.44	1951.67	0.722	0.00	1951.67	0.000
	27.8421 - 25.6053		1457.80	2017.78	0.722	0.00	2017.78	0.000
	25.6053 - 23.3684		1507.31	2084.97	0.723	0.00	2084.97	0.000
	23.3684 - 21.1316		1556.97	2153.27	0.723	0.00	2153.27	0.000
	21.1316 - 18.8947		1556.83	2153.27	0.723	0.00	2153.27	0.000
	18.8947 - 16.6579		1606.62	2222.66	0.723	0.00	2222.66	0.000
	16.6579 - 14.4211		1706.80	2357.50	0.724	0.00	2357.50	0.000
	14.4211 - 12.1842		1757.03	2421.05	0.726	0.00	2421.05	0.000
	12.1842 - 9.94737		1807.39	2485.15	0.727	0.00	2485.15	0.000

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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 $\frac{M_{uy}}{\phi M_{ny}}$
	9.94737 - 7.71053		1857.89	2549.79	0.729	0.00	2549.79	0.000
	7.71053 - 5.47368		1908.53	2614.97	0.730	0.00	2614.97	0.000
	5.47368 - 3.23684		1959.29	2680.67	0.731	0.00	2680.67	0.000
	3.23684 - 1		2010.18	2746.88	0.732	0.00	2746.88	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	120 - 118.105	TP21.55x12x0.3125	0.12	211.53	0.001	0.00	225.10	0.000
	118.105 - 116.211		0.24	219.60	0.001	0.00	242.62	0.000
	116.211 - 114.316		0.32	227.68	0.001	0.00	260.79	0.000
	114.316 - 112.421		9.97	235.75	0.042	0.00	279.62	0.000
	112.421 - 110.526		10.05	243.83	0.041	0.00	299.11	0.000
	110.526 - 108.632		10.13	251.91	0.040	0.00	319.25	0.000
	108.632 - 106.737		10.21	259.98	0.039	0.00	340.05	0.000
	106.737 - 104.842		10.29	268.06	0.038	0.00	361.50	0.000
	104.842 - 102.947		10.37	276.14	0.038	0.00	383.62	0.000
	102.947 - 101.053		10.45	284.21	0.037	0.00	406.38	0.000
	101.053 - 99.1579		10.53	292.29	0.036	0.00	429.81	0.000
	99.1579 - 97.2632		10.60	300.37	0.035	0.00	453.89	0.000
	97.2632 - 95.3684		10.68	308.44	0.035	0.00	478.63	0.000
	95.3684 - 93.4737		10.76	316.52	0.034	0.00	504.02	0.000
	93.4737 - 91.5789		10.85	324.60	0.033	0.00	530.07	0.000
	91.5789 - 89.6842		10.93	332.67	0.033	0.00	556.78	0.000
	89.6842 - 87.7895		11.01	340.75	0.032	0.00	584.14	0.000
	87.7895 - 85.8947		11.10	348.83	0.032	0.00	612.16	0.000
	85.8947 - 84		11.18	356.90	0.031	0.00	640.83	0.000
	84 - 81		5.49	369.69	0.015	0.00	687.58	0.000
L2	84 - 81	TP30.1077x20.1904x0.375	5.88	429.27	0.014	0.00	772.54	0.000
	81 - 79.1111		11.46	438.93	0.026	0.00	807.70	0.000
	79.1111 - 77.2222		11.55	448.59	0.026	0.00	843.66	0.000
	77.2222 - 75.3333		11.64	458.25	0.025	0.00	880.38	0.000

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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 $\frac{T_u}{\phi T_n}$
	75.3333 - 73.4444		20.33	467.91	0.043	0.00	917.90	0.000
	73.4444 - 71.5556		20.40	477.58	0.043	0.00	956.20	0.000
	71.5556 - 69.6667		20.48	487.24	0.042	0.00	995.28	0.000
	69.6667 - 67.7778		20.55	496.90	0.041	0.00	1035.15	0.000
	67.7778 - 65.8889		20.62	506.56	0.041	0.00	1075.79	0.000
	65.8889 - 64		20.70	516.22	0.040	0.00	1117.22	0.000
	64 - 62.1111		20.77	525.88	0.039	0.00	1159.43	0.000
	62.1111 - 60.2222		20.84	535.55	0.039	0.00	1202.43	0.000
	60.2222 - 58.3333		20.92	545.21	0.038	0.00	1246.21	0.000
	58.3333 - 56.4444		20.99	554.87	0.038	0.00	1290.77	0.000
	56.4444 - 54.5556		21.06	564.53	0.037	0.00	1336.11	0.000
	54.5556 - 52.6667		21.13	574.19	0.037	0.00	1382.23	0.000
	52.6667 - 50.7778		21.21	583.86	0.036	0.00	1429.15	0.000
	50.7778 - 48.8889		21.28	593.52	0.036	0.00	1476.83	0.000
	48.8889 - 47		21.36	603.18	0.035	0.00	1525.31	0.000
	47 - 43.5		11.26	621.08	0.018	0.00	1617.20	0.000
L3	47 - 43.5	TP39.77x28.5006x0.375	10.32	605.42	0.017	0.00	1536.68	0.000
	43.5 - 41.2632		21.65	616.87	0.035	0.00	1595.34	0.000
	41.2632 - 39.0263		21.73	628.32	0.035	0.00	1655.10	0.000
	39.0263 - 36.7895		21.80	639.77	0.034	0.00	1715.96	0.000
	36.7895 - 34.5526		21.87	651.21	0.034	0.00	1777.91	0.000
	34.5526 - 32.3158		21.94	662.66	0.033	0.00	1840.97	0.000
	32.3158 - 30.0789		22.00	674.11	0.033	0.00	1905.12	0.000
	30.0789 - 27.8421		22.07	685.55	0.032	0.00	1970.37	0.000
	27.8421 - 25.6053		22.14	697.00	0.032	0.00	2036.72	0.000
	25.6053 - 23.3684		22.21	708.45	0.031	0.00	2104.17	0.000
	23.3684 - 21.1316		22.27	719.89	0.031	0.00	2172.72	0.000
	21.1316 - 18.8947		22.33	731.34	0.031	0.00	2172.72	0.000
	18.8947 - 16.6579		22.40	742.79	0.030	0.00	2242.36	0.000
	16.6579 - 14.4211		22.46	754.24	0.030	0.00	2384.95	0.000
	14.4211 - 12.1842		22.52	765.68	0.029	0.00	2457.89	0.000
	12.1842 - 9.94737		22.59	777.13	0.029	0.00	2531.93	0.000
	9.94737 - 7.71053		22.65	788.58	0.029	0.00	2607.07	0.000

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	Client	Tillman Infrastructure	Designed by AJain

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 $\frac{T_u}{\phi T_n}$
	7.71053 - 5.47368		22.71	800.02	0.028	0.00	2683.31	0.000
	5.47368 - 3.23684		22.76	811.47	0.028	0.00	2760.64	0.000
	3.23684 - 1		22.82	822.92	0.028	0.00	2839.08	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	120 - 118.105	0.000	0.002	0.000	0.001	0.000	0.002	1.000	✓
	118.105 - 116.211	0.000	0.003	0.000	0.001	0.000	0.003	1.000	✓
	116.211 - 114.316	0.001	0.005	0.000	0.001	0.000	0.005	1.000	✓
	114.316 - 112.421	0.008	0.027	0.000	0.042	0.000	0.037	1.000	✓
	112.421 - 110.526	0.008	0.090	0.000	0.041	0.000	0.100	1.000	✓
	110.526 - 108.632	0.008	0.145	0.000	0.040	0.000	0.155	1.000	✓
	108.632 - 106.737	0.008	0.194	0.000	0.039	0.000	0.204	1.000	✓
	106.737 - 104.842	0.008	0.237	0.000	0.038	0.000	0.247	1.000	✓
	104.842 - 102.947	0.008	0.275	0.000	0.038	0.000	0.284	1.000	✓
	102.947 - 101.053	0.008	0.309	0.000	0.037	0.000	0.318	1.000	✓
	101.053 - 99.1579	0.008	0.339	0.000	0.036	0.000	0.348	1.000	✓
	99.1579 - 97.2632	0.008	0.366	0.000	0.035	0.000	0.375	1.000	✓
	97.2632 - 95.3684	0.008	0.389	0.000	0.035	0.000	0.398	1.000	✓
	95.3684 - 93.4737	0.008	0.410	0.000	0.034	0.000	0.419	1.000	✓
	93.4737 - 91.5789	0.008	0.429	0.000	0.033	0.000	0.438	1.000	✓
	91.5789 - 89.6842	0.008	0.446	0.000	0.033	0.000	0.455	1.000	✓
	89.6842 - 87.7895	0.008	0.461	0.000	0.032	0.000	0.470	1.000	✓
	87.7895 - 85.8947	0.008	0.474	0.000	0.032	0.000	0.483	1.000	✓
	85.8947 - 84	0.008	0.486	0.000	0.031	0.000	0.495	1.000	✓

tnxTower Allpro Consulting Group Inc. 9221 Lyndson B. Jhonson Fwy Suite#204 Dallas.T.X.75243 Phone: 972-231-8893 FAX: 886-364-8375	Job	24-2694	Page 14 of 16
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	Client	Tillman Infrastructure	Designed by AJain

Section No.	Elevation ft	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	84 - 81	0.004	0.241	0.000	0.015	0.000	0.245	1.000	✓
L2	84 - 81	0.004	0.234	0.000	0.014	0.000	0.238	1.000	✓
	81 - 79.1111	0.007	0.456	0.000	0.026	0.000	0.464	1.000	✓
	79.1111 - 77.2222	0.007	0.463	0.000	0.026	0.000	0.470	1.000	✓
	77.2222 - 75.3333	0.007	0.469	0.000	0.025	0.000	0.476	1.000	✓
	75.3333 - 73.4444	0.011	0.488	0.000	0.043	0.000	0.501	1.000	✓
	73.4444 - 71.5556	0.011	0.509	0.000	0.043	0.000	0.522	1.000	✓
	71.5556 - 69.6667	0.011	0.529	0.000	0.042	0.000	0.541	1.000	✓
	69.6667 - 67.7778	0.011	0.546	0.000	0.041	0.000	0.559	1.000	✓
	67.7778 - 65.8889	0.011	0.562	0.000	0.041	0.000	0.574	1.000	✓
	65.8889 - 64	0.011	0.576	0.000	0.040	0.000	0.589	1.000	✓
	64 - 62.1111	0.011	0.589	0.000	0.039	0.000	0.602	1.000	✓
	62.1111 - 60.2222	0.011	0.601	0.000	0.039	0.000	0.613	1.000	✓
	60.2222 - 58.3333	0.011	0.612	0.000	0.038	0.000	0.624	1.000	✓
	58.3333 - 56.4444	0.011	0.622	0.000	0.038	0.000	0.634	1.000	✓
	56.4444 - 54.5556	0.011	0.630	0.000	0.037	0.000	0.643	1.000	✓
	54.5556 - 52.6667	0.011	0.638	0.000	0.037	0.000	0.650	1.000	✓
	52.6667 - 50.7778	0.011	0.645	0.000	0.036	0.000	0.658	1.000	✓
	50.7778 - 48.8889	0.011	0.652	0.000	0.036	0.000	0.664	1.000	✓
	48.8889 - 47	0.011	0.658	0.000	0.035	0.000	0.670	1.000	✓
	47 - 43.5	0.006	0.346	0.000	0.018	0.000	0.352	1.000	✓
L3	47 - 43.5	0.006	0.337	0.000	0.017	0.000	0.343	1.000	✓
	43.5 - 41.2632	0.011	0.707	0.000	0.035	0.000	0.719	1.000	✓
	41.2632 - 39.0263	0.011	0.711	0.000	0.035	0.000	0.723	1.000	✓
	39.0263 - 36.7895	0.011	0.714	0.000	0.034	0.000	0.726	1.000	✓
	36.7895 - 34.5526	0.011	0.717	0.000	0.034	0.000	0.729	1.000	✓

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	Client	Tillman Infrastructure	Designed by	AJain

Section No.	Elevation ft	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	34.5526 - 32.3158	0.011	0.719	0.000	0.033	0.000	0.731	1.000	✓
	32.3158 - 30.0789	0.011	0.720	0.000	0.033	0.000	0.733	1.000	✓
	30.0789 - 27.8421	0.011	0.722	0.000	0.032	0.000	0.734	1.000	✓
	27.8421 - 25.6053	0.011	0.722	0.000	0.032	0.000	0.735	1.000	✓
	25.6053 - 23.3684	0.011	0.723	0.000	0.031	0.000	0.735	1.000	✓
	23.3684 - 21.1316	0.011	0.723	0.000	0.031	0.000	0.735	1.000	✓
	21.1316 - 18.8947	0.012	0.723	0.000	0.031	0.000	0.735	1.000	✓
	18.8947 - 16.6579	0.012	0.723	0.000	0.030	0.000	0.735	1.000	✓
	16.6579 - 14.4211	0.012	0.724	0.000	0.030	0.000	0.736	1.000	✓
	14.4211 - 12.1842	0.012	0.726	0.000	0.029	0.000	0.738	1.000	✓
	12.1842 - 9.94737	0.012	0.727	0.000	0.029	0.000	0.740	1.000	✓
	9.94737 - 7.71053	0.012	0.729	0.000	0.029	0.000	0.741	1.000	✓
	7.71053 - 5.47368	0.012	0.730	0.000	0.028	0.000	0.742	1.000	✓
	5.47368 - 3.23684	0.012	0.731	0.000	0.028	0.000	0.743	1.000	✓
	3.23684 - 1	0.012	0.732	0.000	0.028	0.000	0.744	1.000	✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	120 - 81	Pole	TP21.55x12x0.3125	1	-9.12	1189.67	49.5	Pass
L2	81 - 43.5	Pole	TP30.1077x20.1904x0.375	2	-21.72	2010.60	67.0	Pass
L3	43.5 - 1	Pole	TP39.77x28.5006x0.375	3	-32.11	2743.06	74.4	Pass
							Summary	
							Pole (L3)	Pass
							RATING =	Pass

Seismic Load Analysis Output

Project Data

ACGI#	24-2694
Site Name/ID	TI-OPP-18058 P-007939
TIA Code	TIA-222-H
Type of Tower	MP
Risk Category	II

Output Result

Total Weight W	26.430	k
Fundamental Period (T)	3.975	s
Total Seismic Shear	0.244	k

Seismic Design Data

SDS	0.07
SD1	0.055
S1	0.035
TL(sec)	12

L1	120.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.122	0.115
L2	81.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.149	0.095
L3	43.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.099	0.034

MATHCAD CALCULATION PRINTOUT

Monopole Circular Baseplate & Anchor Bolts Calculations

Site Data	
ACGI #	24-2694
Site Name / ID	TI-OPP-18058
TIA Code	TIA-222-H

Reactions		
Mu	2010	ft-Kips
Axial, Pu	32	Kips
Shear, Vu	23	Kips
ETA Factor, η	0.5	

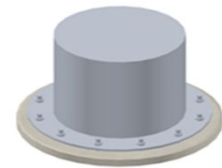
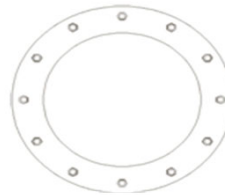
Anchor Rod Data		
Qty.	16	
Diameter	1.5	in
Yield Strength, Fy	105	ksi
Ultimate Strength, Fu	125	ksi
Bolt Circle	44.5	in
Anchor Rod Projection, lar	1	in

Base Plate Data		
Diameter	48.25	in
Thickness	2	in
Yield Strength, Fy	50	ksi
Ultimate Strength, Fu	65	ksi

Pole Data at Base		
Diameter	39.77	in
Thickness	0.375	in
Number of sides	18	"0" For round
Yield Strength, Fy	65	Ksi
Ultimate Strength, Fu	80	Ksi

Stiffener Data	
Configuration	0

Modification of Anchor bolts	No
------------------------------	----



OUTPUT

Base Plate Results		
Base Plate Stress	24.84	Ksi
Allowable Plate Stress	45.00	Ksi
Base Plate Stress Ratio	55.20%	PASS
Annex Q (Informative):	79.09%	PASS

Anchor Rod Results		
Anchor Rod Stress Ratio	102.03%	Acceptal

Proposed 120ft Monopole with Existing Pier Foundation Check

Customer Name: Tillman Corp
Customer Site Number: TI-OPP-18058
Customer Site Name: Taylor Co TX

Carrier Name: Verizon

Site Location: Abilene, TX

ACGI #24-2694

Allpro Consulting Group, Inc.
9221 Lyndon B. Johnson Freeway, Suite 204
Dallas, TX 75243
Tel: 972-231-8893, Fax: 866-364-8375

APPLICABLE CODES

- **ASCE7-16/TIA-222-H/IBC2021 - ACI 318-14 CODE**

INPUT DATA**-Foundation Reactions-(factored)**

(As per tnxTower Reaction)

Down Load: $P_{\text{down}} := 32 \cdot \text{kips}$

Uplift Load: $P_{\text{up}} := 0 \cdot \text{kips}$

Shear Load: $S := 23 \cdot \text{kips}$

Moment: $M := 2010 \cdot \text{ft} \cdot \text{kips}$

-Pier Dimensions-

(Note: Foundation design by Sabre Job #21-5397-TJH dated 4/1/2021)

Diameter: $D_{\text{pier}} := 6 \text{ ft}$

Extension above grade: $E_{\text{pier}} := 0.5 \cdot \text{ft}$

Concrete density See below

Concrete strength $F_c := 4500 \cdot \text{psi}$

Rebar $F_y := 60 \cdot \text{ksi}$

-Reinforcement Data-

Typical concrete cover $cc := 3 \cdot \text{in}$ No. of vertical rebars $NRB_{\text{use}} := 18$

Vertical rebar size $d_{\text{bar}} := 10$ Tiebar size $d_{\text{tie}} := 5$

ACI Strength reduction factors

$\phi_{\text{comp}} := 0.65$ (ACI 9.3.2.2)

$\phi_{\text{tens}} := 0.9$ (ACI 9.3.2.2a)

$\phi_{\text{shear}} := 0.75$ (ACI 9.3.2.3)

-Factor of Safety for soil strength-

$\phi_{s_bear} := 0.75$ as per TIA-222-H code for bearing, 9.7 - for MP/SST

$\phi_{s_friction} := 0.75$ as per TIA-222-H code for skin friction resistance, 9.7

$\phi_{s_lateral} := 0.75$ as per TIA-222-H code for lateral resistance, 9.7

$\phi_{s_uplift} := 0.75$ as per TIA-222-H code for lateral resistance, 9.7

-Soil Properties-

(Note: As per geotech report by Terradyne Project #D211034 dated 3/19/2021)

Number of soil layers $NSL := 4$ $i_{\text{neg}} := 1$ $j := 1 \dots NSL$

Neglected soil height $L_{\text{ngl}} := 5.0 \cdot \text{ft}$ $\geq 1.0 \times \text{Pier Diam.}$ $k := 1 \dots NSL$

$\alpha := 0.4$ Estimated cohesion $i := 1 \dots NSL$

Ground Water @ 10ft depth below ground level

Height	PHI	Cu	Soil Dens	Conc Dens	Ult Skin friction	
$H_j :=$	$\phi_j :=$	$Cu_j :=$	$\gamma_{s_j} :=$	$\gamma_{c_j} :=$	$SKU_{\text{dn}_j} :=$	$SKU_{\text{up}_j} :=$
6.ft	0.deg	0.ksf	105.pcf	150.pcf	0.ksf	0.ksf
4.ft	30.deg	0.ksf	105.pcf	150.pcf	0.ksf	0.ksf
3.5.ft	30.deg	0.ksf	42.6.pcf	87.6.pcf	1.ksf	1.ksf
10.5.ft	0.deg	1.5.ksf	27.6.pcf	87.6.pcf	0.6.ksf	0.6.ksf

$$L_{\text{pier}} := \sum_{j=1}^{\text{NSL}} H_j \quad L_{\text{pier}} = 24 \text{ ft}$$

Soil Bearing Safety factor: $SF := 2$ (As per GEO report)

Allowable bearing capacity: $BC_{\text{all}} := 4.95 \text{ksf}$ (As per GEO report)

End Ultimate bearing capacity: $BC_{\text{ult}} := BC_{\text{all}} \cdot SF = 9.9 \cdot \text{ksf}$

CALCULATIONS

-Pier calculation-

Aspect ratio $A_r := \frac{(L_{\text{pier}} + E_{\text{pier}})}{D_{\text{pier}}} = 4.08$

Pier area $A_{\text{pier}} := \pi \cdot \frac{D_{\text{pier}}^2}{4} \quad A_{\text{pier}} = 28.27 \text{ ft}^2$

Pier perimeter $PM_{\text{pier}} := \pi \cdot D_{\text{pier}} \quad PM_{\text{pier}} = 18.85 \text{ ft}$

Pier volume $V_{\text{pier}} := A_{\text{pier}} \cdot (L_{\text{pier}} + E_{\text{pier}}) \quad V_{\text{pier}} = 25.66 \cdot \text{cy}$

Weighted average unit weight of concrete

$$\gamma_{\text{cave}} := \frac{\sum_{n=1}^{\text{NSL}} (\gamma_{c_n} \cdot H_n)}{\sum_{n=1}^{\text{NSL}} H_n} \quad \gamma_{\text{cave}} = 113.6 \cdot \text{pcf}$$

$$\gamma_{\text{net}} := \frac{\sum_{n=1}^{\text{NSL}} [(\gamma_{c_n} - \gamma_{s_n}) \cdot H_n]}{\sum_{n=1}^{\text{NSL}} H_n} \quad \gamma_{\text{net}} = 51.56 \cdot \text{pcf}$$

Pier concrete weight $W_{\text{pier}} := V_{\text{pier}} \cdot \gamma_{\text{cave}} \quad W_{\text{pier}} = 78.69 \cdot \text{kips}$

Pier net weight $W_{\text{pier_net}} := V_{\text{pier}} \cdot \gamma_{\text{net}} \quad W_{\text{pier_net}} = 35.72 \cdot \text{kips}$

-Download capacity-

$$SKFN_k := SKU_{dn_k} \cdot PM_{pier} \cdot H_k \quad P_k := \text{if}[k = NSL, [A_{pier} \cdot (BC_{ult})], 0 \cdot \text{kips}] \quad SKUFN_k := SKU_{up_k} \cdot PM_{pier} \cdot H_k$$

$$SKFN_k =$$

0
0
65973.45
118752.2

·lb

$$P_k =$$

0
0
0
279915.91

·lb

$$P_{dcap} := \sum_k P_k \cdot \phi_{s_Bear} + \sum_k SKFN_k \cdot \phi_{s_friction}$$

$$P_{dwn_total} := P_{dwn} + 1.2 W_{pier_net}$$

$$P_{dcap} = 348.48 \cdot \text{kips} > P_{dwn_total} = 74.86 \cdot \text{kips}$$

OK!

$$\frac{P_{dwn_total}}{P_{dcap}} = 21.48\%$$

-Uplift capacity-

$$SKFUN_k := \pi \cdot D_{pier} \cdot H_k \cdot SKU_{up_k}$$

$$\text{Negative skin friction:} \quad N_{sf} := 500 \text{psf} \quad (\text{per soil report})$$

$$P_{upsoil} := N_{sf} \cdot \pi \cdot D_{pier} \cdot (H_1) \quad P_{upsoil} = 56.55 \cdot \text{kips}$$

$$P_{upmax} := \max(P_{up}, 1.2 \cdot P_{upsoil}) \quad P_{upmax} = 67.86 \cdot \text{kips} \quad \text{Maximum uplift load}$$

$$SKFUN_k =$$

0
0
65973.45
118752.2

lb

$$P_{ucap} := \sum_k SKFUN_k \cdot \phi_{s_friction} + 0.9 W_{pier}$$

$$P_{ucap} = 209.37 \cdot \text{kips} > P_{upmax} = 67.86 \cdot \text{kips}$$

OK!

$$\frac{P_{upmax}}{P_{ucap}} = 32.41\%$$

$$\alpha = 0.4 \quad - \quad (\text{average value for soils } 0.4)$$

$$\sigma_{v_0} := 0.0 \cdot \text{ksf}$$

$$TL_0 := 0 \cdot \text{ft}$$

$$\sigma_{v_i} := \sigma_{v_{i-1}} + 1.0 \cdot \gamma_{s_i} \cdot H_i$$

-Required Pier Length Based on Brohm's method-

Weighted average cohesion

$$C_u := \frac{\sum_{j=1}^{NSL} (C_{uj} \cdot H_j)}{\sum_{j=1}^{NSL} H_j - L_{ngl}} \quad C_u = 0.83 \cdot \text{ksf}$$

$$PP_i := \text{if} \left[i > i_{neg}, \left(2 \cdot C_{ui} \cdot \sqrt{\tan \left(45 \cdot \text{deg} + \frac{\phi_i}{2} \right)^2} + \sigma_{vi} \cdot \tan \left(45 \cdot \text{deg} + \frac{\phi_i}{2} \right) \right) \cdot \phi_{s_lateral}, 0 \cdot \text{kips} \right]$$

PP_j =

0
2362.5
2697.97
3366.67

·psf

PP_j =

0
2362.5
2697.97
3366.67

·psf

$$PP := \frac{\left[\sum_j \left[(PP_j + PP_{j-1}) \cdot \frac{H_j}{2} \right]^2 \right]}{\sum_j (H_j) - L_{ngl}}$$

$$PP = 4.78 \cdot \text{ksf}$$

Passive pressure

$$PP_{allw} := \frac{PP}{L_{pier} - L_{ngl}}$$

$$PP_{allw} = 0.25 \cdot \text{kcf}$$

Depth to the point of zero shear

$$f := \text{if} \left[\sum_{j=1}^{NSL} \phi_j > 0 \text{deg}, 0.816 \cdot \left(\frac{S}{D_{pier} \cdot PP_{allw}} \right)^{\frac{1}{2}}, \frac{S}{9 \cdot C_u \cdot D_{pier}} \right] \quad f = 3.18 \text{ ft}$$

g ultimate for moment calculation

$$g_u := \text{if} \left[\sum_{j=1}^{NSL} \phi_j > 0 \text{deg}, 0, \sqrt{\frac{S \cdot [(E_{pier} + L_{ngl}) + .5 \cdot f] + M}{2.25 \cdot C_u \cdot D_{pier}}} \right] \quad g_u = 0 \text{ ft}$$

g allowable with $\phi_{s_lateral} = 0.75$

$$g_a := \text{if} \left[\sum_{j=1}^{NSL} \phi_j > 0 \text{deg}, 0, \sqrt{\frac{S \cdot [(E_{pier} + L_{ngl}) + .5 \cdot f] + M}{2.25 \cdot (C_u \cdot \phi_{s_lateral}) \cdot D_{pier}}} \right] \quad g_a = 0 \text{ ft}$$

-Required pier length-

$$L_1 := 5 \cdot \text{ft}$$

$$A := \text{root} \left[S \cdot (E_{\text{pier}} + L_{\text{ngl}} + L_1) + M - \left[D_{\text{pier}} \cdot PP_{\text{allw}} \cdot L_1^3 \cdot (.5) \right], L_1 \right] \quad A = 14.86 \text{ ft}$$

$$L_{\text{req}} := \text{if} \left[\sum_{j=1}^{\text{NSL}} \phi_j > 0 \text{ deg}, A + L_{\text{ngl}}, (f + L_{\text{ngl}}) + g_a \right]$$

$$L_{\text{req}} = 19.86 \text{ ft} < L_{\text{pier}} = 24 \text{ ft}$$

OK!

$$\frac{L_{\text{req}}}{L_{\text{pier}}} = 82.76\%$$

OK!

Max. bending moment,

$$M_{\text{max}} := \text{if} \left[\sum_{j=1}^{\text{NSL}} \phi_j > 0 \text{ deg}, S \cdot (E_{\text{pier}} + L_{\text{ngl}} + f) - S \cdot \frac{f}{3} + M, 2.25 \cdot C_u \cdot D_{\text{pier}} \cdot g_u^2 \right] = 302133.36$$

Location @ $f + L_{\text{ngl}} = 8.18 \text{ ft}$ below ground level**REINFORCEMENT CALCULATIONS**

Effective pier diameter

$$D_{\text{eff}} := D_{\text{pier}} - cc \cdot 2$$

$$D_{\text{eff}} = 5.5 \text{ ft}$$

-Minimum required area of steel per ACI-

$$\text{Area}_{\text{stlmin}} := 0.005 \cdot \frac{\pi}{4} \cdot D_{\text{pier}}^2 \quad - (\text{ACI } 10.8.4) \quad \& \quad (\text{ACI } 10.9.1) \quad (\text{TIA-222-H } 9.4.1)$$

$$\text{Area}_{\text{stlmin}} = 20.36 \cdot \text{in}^2$$

-Rebar details-

Selected rebar size

$$d_{\text{bar}} = 10$$

-Rebar details-

$$\text{No} := (0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 11 \ 12 \ 13 \ 14 \ 15 \ 16 \ 17 \ 18)^T$$

$$d_b := (0 \ 0 \ 0 \ 0.375 \ 0.5 \ 0.625 \ 0.75 \ 0.875 \ 1.00 \ 1.125 \ 1.25 \ 1.41 \ 0 \ 0 \ 1.693 \ 0 \ 0)$$

$$A_b := (0 \ 0 \ 0 \ 0.11 \ 0.20 \ 0.31 \ 0.44 \ 0.60 \ 0.79 \ 1.00 \ 1.27 \ 1.56 \ 0 \ 0 \ 2.25 \ 0 \ 0 \ 0 \ 4)$$

$$B := d_{\text{bar}} \quad d_{b_B} = 1.25 \cdot \text{in} \quad \text{Bar area} = \quad \text{Area}_{\text{abar}} := A_{b_B} \quad \text{Area}_{\text{abar}} = 1.27 \cdot \text{in}^2$$

-Number of vertical rebars required-

$$NRB := \text{ceil}\left(\frac{Area_{stlmin}}{Area_{abar}}\right) \quad NRB = 17 \quad Area_{stluse} := Area_{abar} \cdot NRB \quad Area_{stluse} = 21.59 \cdot \text{in}^2$$

Number rebars provided as per drawings

$$NRB_{use} = 18$$

$$\frac{P_{dwn}}{\phi_{tens}} = 35.56 \cdot \text{kips}$$

$$Mn := 43365.729 \cdot \text{in} \cdot \text{kips}$$

$$0.9 \cdot Mn = 3252.43 \cdot \text{kips} \cdot \text{ft} > M_{max} = 2185.33 \cdot \text{kips} \cdot \text{ft}$$

$$\text{Vertical bar spacing} \quad S_{bar} := D_{eff} \cdot \frac{\pi}{NRB} - d_{b_B} \quad S_{bar} = 10.95 \cdot \text{in}$$

$$Area_{use} := Area_{abar} \cdot NRB \quad Area_{use} = 21.59 \cdot \text{in}^2$$

-Check pier in compression-

$$P_{comp} := 0.80 \cdot \phi_{comp} \cdot [0.85 \cdot F_c \cdot (A_{pier} - Area_{use}) + F_y \cdot Area_{use}] \quad (\text{ACI } 10.3.6.2 - (10-2))$$

$$P_{comp} = 8728.89 \cdot \text{kips} > P_{dwn} = 32 \cdot \text{kips}$$

OK!

$$\frac{P_{dwn}}{P_{comp}} = 0.37\%$$

SUMMARY**-Pier Dimensions-**

Depth of pier	$L_{\text{pier}} = 24 \text{ ft}$	Concrete strength	$F_c = 4500 \cdot \text{psi}$
Extension above grade	$E_{\text{pier}} = 0.5 \text{ ft}$	Rebar F_y	$F_y = 60 \cdot \text{ksi}$
Total length of pier	$L_{\text{tot}} := L_{\text{pier}} + E_{\text{pier}}$	$L_{\text{tot}} = 24.5 \text{ ft}$	
Diameter	$D_{\text{pier}} = 6 \text{ ft}$		
Volume of pier concrete	$V_{\text{pier}} = 25.66 \cdot \text{cy}$		
Weight of pier concrete	$W_{\text{pier}} = 78.69 \cdot \text{kips}$		

Calculations summary**-Download capacity-**

$$P_{\text{dcap}} = 348.48 \cdot \text{kips} > P_{\text{dwn_total}} = 74.86 \cdot \text{kips} \quad \text{OK!} \quad \frac{P_{\text{dwn_total}}}{P_{\text{dcap}}} = 21.48 \cdot \%$$

-Uplift capacity-

$$P_{\text{ucap}} = 209.37 \cdot \text{kips} > P_{\text{upmax}} = 67.86 \cdot \text{kips} \quad \text{OK!} \quad \frac{P_{\text{upmax}}}{P_{\text{ucap}}} = 32.41 \cdot \%$$

-Required Pier Length Based on Brohm's method-

$$L_{\text{req}} = 19.86 \text{ ft} < L_{\text{pier}} = 24 \text{ ft} \quad \text{OK!} \quad \frac{L_{\text{req}}}{L_{\text{pier}}} = 82.76 \cdot \%$$

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LFile for Windows, Version 2022-12.007

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method
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Files Used for Analysis

Path to file locations:

\Structural\24-2694 TI-OPP-18058_P-007939_Taylor Co. TX__VZW_Tower Modification
Design_06-24-2024\L-Pile\

Name of input data file:

TI-OPP-18058- Pier foundation.lp12d

Name of output report file:

TI-OPP-18058- Pier foundation.lp12o

Name of plot output file:

TI-OPP-18058- Pier foundation.lp12p

Name of runtime message file:

TI-OPP-18058- Pier foundation.lp12r

Date and Time of Analysis

Date: July 23, 2024

Time: 21:34:41

 Problem Title

24-2694
 Job Number: TI-OPP-18058
 Client: Tillman
 Engineer: Ankit Jain
 Description: Pier

 Program Options and Settings

Computational Options:
 - Compute nonlinear bending properties of pile only
 Engineering Units Used for Data Input and Computations:
 - US Customary System Units (pounds, feet, inches)

Output Options:
 - Output files use decimal points to denote decimal symbols.
 - Print using wide report formats

 File Structural Properties and Geometry

Number of pile sections defined	=	1
Total length of pile	=	24.000 ft
Depth of ground surface below top of pile	=	0.0000 ft

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

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

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	72.0000
2	24.000	72.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile

Length of section = 24.000000 ft
 Shaft Diameter = 72.000000 in

 Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from input values

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section = 24.000000 ft
 Shaft Diameter = 72.000000 in
 Concrete Cover Thickness (to edge of trans. reinf.) = 3.000000 in
 Number of Reinforcing Bars = 18 bars
 Yield Stress of Reinforcing Bars = 60000. psi
 Modulus of Elasticity of Reinforcing Bars = 29000000. psi
 Gross Area of Shaft = 4072. sq. in.
 Total Area of Reinforcing Steel = 22.860000 sq. in.
 Area Ratio of Steel Reinforcement = 0.56 percent
 Edge-to-Edge Bar Spacing = 9.753186 in
 Maximum Concrete Aggregate Size = 0.750000 in
 Ratio of Bar Spacing to Aggregate Size = 13.00
 Offset of Center of Rebar Cage from Center of Pile = 0.0000 in
 Transverse Reinforcement
 Type: Hoop
 Number of Transverse Reinf. (per spacing) = 25
 Spacing of Transverse Reinf. = 12.000000 in
 Yield Stress of Transverse Reinf. = 60000. psi
 Diameter of Transverse Reinf. = 0.625000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = $0.85 F_c A_c + F_y A_s$ = 16857.664 kips
 Tensile Load for Cracking of Concrete = -1859.041 kips
 Nominal Axial Tensile Capacity = -1371.600 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
-----	-----	-----	-----	-----
1	1.270000	1.270000	31.740000	0.00000
2	1.270000	1.270000	29.825844	10.855719
3	1.270000	1.270000	24.314251	20.402079

4	1.270000	1.270000	15.870000	27.487646
5	1.270000	1.270000	5.511593	31.257798
6	1.270000	1.270000	-5.51159	31.257798
7	1.270000	1.270000	-15.87000	27.487646
8	1.270000	1.270000	-24.31425	20.402079
9	1.270000	1.270000	-29.82584	10.855719
10	1.270000	1.270000	-31.74000	0.00000
11	1.270000	1.270000	-29.82584	-10.85572
12	1.270000	1.270000	-24.31425	-20.40208
13	1.270000	1.270000	-15.87000	-27.48765
14	1.270000	1.270000	-5.51159	-31.25780
15	1.270000	1.270000	5.511593	-31.25780
16	1.270000	1.270000	15.870000	-27.48765
17	1.270000	1.270000	24.314251	-20.40208
18	1.270000	1.270000	29.825844	-10.85572

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

Minimum spacing between any two bars not equal to zero = 9.753 inches
between bars 14 and 15.

Ratio of bar spacing to maximum aggregate size = 13.00

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.11529 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Input Axial Thrust Forces:

Number of Axial Thrust Force Values Determined from Input Data = 1

Number	Axial Thrust Force kips
-----	-----
1	35.556

Definitions of Run Messages and Notes:

C = concrete in section has cracked in tension.
Y = stress in reinforcing steel has reached yield stress.
T = ACI 318 criteria for tension-controlled section met, tensile strain in reinforcement exceeds 0.005 while simultaneously compressive strain in concrete more than 0.003. See ACI 318-14, Section 21.2.3.
Z = depth of tensile zone in concrete section is less than 10 percent of

section depth.

Bending Stiffness (EI) = Computed Bending Moment / Curvature.

Position of neutral axis is measured from edge of compression side of pile.

Compressive stresses and strains are positive in sign.

Tensile stresses and strains are negative in sign.

Axial Thrust Force = 35.556 kips

Bending Max Conc Curvature Stress rad/in. ksi	Bending Max Steel Run Moment Stress in-kip ksi	Bending Stiffness kip-in2	Depth to N Axis in	Max Comp Strain in/in	Max Tens Strain in/in
-----	-----	-----	-----	-----	-----
4.16667E-07	2584.	6201130185.	40.5348768	0.00001689	-0.00001311
0.0749868	0.4419464				
8.33333E-07	5155.	6186460461.	38.2744152	0.00003190	-0.00002810
0.1410076	0.8292650				
0.00000125	7714.	6171594849.	37.5209691	0.00004690	-0.00004310
0.2065324	1.2165851				
0.00000167	10261.	6156679955.	37.1442701	0.00006191	-0.00005809
0.2715611	1.6039064				
0.00000208	12795.	6141745327.	36.9182693	0.00007691	-0.00007309
0.3360938	1.9912288				
0.00000250	15317.	6126800819.	36.7676171	0.00009192	-0.00008808
0.4001304	2.3785522				
0.00000292	17826.	6111850664.	36.6600214	0.0001069	-0.000103
0.4636709	2.7658768				
0.00000333	17826.	5347869331.	17.1799357	0.00005727	-0.000183
0.2486778	-4.916473 C				
0.00000375	17826.	4753661627.	16.8854634	0.00006332	-0.000207
0.2744533	-5.563056 C				
0.00000417	17826.	4278295464.	16.6396913	0.00006933	-0.000231
0.2999658	-6.210871 C				
0.00000458	17826.	3889359513.	16.4392472	0.00007535	-0.000255
0.3254138	-6.858600 C				
0.00000500	17826.	3565246220.	16.2728005	0.00008136	-0.000279
0.3507973	-7.506244 C				
0.00000542	17826.	3290996511.	16.1288768	0.00008736	-0.000303
0.3760314	-8.154372 C				
0.00000583	17826.	3055925332.	16.0026824	0.00009335	-0.000327
0.4011176	-8.802980 C				
0.00000625	17826.	2852196976.	15.8938018	0.00009934	-0.000351
0.4261404	-9.451498 C				
0.00000667	17826.	2673934665.	15.7989899	0.0001053	-0.000375
0.4510995	-10.099929 C				
0.00000708	17826.	2516644391.	15.7157650	0.0001113	-0.000399
0.4759950	-10.748270 C				
0.00000750	17826.	2376830814.	15.6421972	0.0001173	-0.000423
0.5008268	-11.396522 C				
0.00000792	17826.	2251734455.	15.5767625	0.0001233	-0.000447
0.5255948	-12.044685 C				

0.00000833	17826.	2139147732.	15.5182421	0.0001293	-0.000471
0.5502988	-12.692758 C				
0.00000875	17826.	2037283555.	15.4648622	0.0001353	-0.000495
0.5749099	-13.340941 C				
0.00000917	17826.	1944679757.	15.4147830	0.0001413	-0.000519
0.5993845	-13.989537 C				
0.00000958	17826.	1860128463.	15.3693959	0.0001473	-0.000543
0.6237961	-14.638039 C				
0.00001000	17826.	1782623110.	15.3281154	0.0001533	-0.000567
0.6481445	-15.286446 C				
0.00001042	17826.	1711318186.	15.2904496	0.0001593	-0.000591
0.6724297	-15.934760 C				
0.00001083	17826.	1645498256.	15.2559823	0.0001653	-0.000615
0.6966516	-16.582979 C				
0.00001125	17826.	1584553876.	15.2243588	0.0001713	-0.000639
0.7208101	-17.231103 C				
0.00001167	17826.	1527962666.	15.1952753	0.0001773	-0.000663
0.7449052	-17.879132 C				
0.00001208	17826.	1475274298.	15.1684697	0.0001833	-0.000687
0.7689366	-18.527065 C				
0.00001250	17826.	1426098488.	15.1437151	0.0001893	-0.000711
0.7929043	-19.174903 C				
0.00001292	17826.	1380095311.	15.1208137	0.0001953	-0.000735
0.8168083	-19.822645 C				
0.00001333	17826.	1336967333.	15.0995924	0.0002013	-0.000759
0.8406484	-20.470291 C				
0.00001375	17826.	1296453171.	15.0798992	0.0002073	-0.000783
0.8644246	-21.117841 C				
0.00001417	17826.	1258322195.	15.0615999	0.0002134	-0.000807
0.8881367	-21.765293 C				
0.00001458	17826.	1222370133.	15.0445758	0.0002194	-0.000831
0.9117847	-22.412648 C				
0.00001500	17826.	1188415407.	15.0287211	0.0002254	-0.000855
0.9353685	-23.059906 C				
0.00001542	17826.	1156296071.	15.0139418	0.0002315	-0.000879
0.9588879	-23.707067 C				
0.00001583	17826.	1125867227.	15.0001535	0.0002375	-0.000902
0.9823429	-24.354129 C				
0.00001625	17826.	1096998837.	14.9872806	0.0002435	-0.000926
1.0057333	-25.001094 C				
0.00001708	17826.	1043486699.	14.9640154	0.0002556	-0.000974
1.0523204	-26.294727 C				
0.00001792	17826.	994952434.	14.9436767	0.0002677	-0.001022
1.0986481	-27.587965 C				
0.00001875	17826.	950732325.	14.9258787	0.0002799	-0.001070
1.1447159	-28.880803 C				
0.00001958	17826.	910275631.	14.9103011	0.0002920	-0.001118
1.1905229	-30.173241 C				
0.00002042	17826.	873121523.	14.8966760	0.0003041	-0.001166
1.2360683	-31.465276 C				
0.00002125	17826.	838881464.	14.8847777	0.0003163	-0.001214
1.2813514	-32.756906 C				
0.00002208	17826.	807225559.	14.8744145	0.0003285	-0.001262
1.3263713	-34.048127 C				
0.00002292	18219.	795008409.	14.8654226	0.0003407	-0.001309
1.3711272	-35.338938 C				

0.00002375	18847.	793559880.	14.8576612	0.0003529	-0.001357
1.4156183	-36.629336 C				
0.00002458	19475.	792190952.	14.8510088	0.0003651	-0.001405
1.4598437	-37.919318 C				
0.00002542	20102.	790893701.	14.8453598	0.0003773	-0.001453
1.5038028	-39.208883 C				
0.00002625	20729.	789661207.	14.8406218	0.0003896	-0.001500
1.5474945	-40.498027 C				
0.00002708	21355.	788487403.	14.8367142	0.0004018	-0.001548
1.5909181	-41.786747 C				
0.00002792	21981.	787366943.	14.8335659	0.0004141	-0.001596
1.6340727	-43.075042 C				
0.00002875	22606.	786295101.	14.8311139	0.0004264	-0.001644
1.6769575	-44.362909 C				
0.00002958	23231.	785267684.	14.8293026	0.0004387	-0.001691
1.7195716	-45.650344 C				
0.00003042	23855.	784280956.	14.8280825	0.0004510	-0.001739
1.7619141	-46.937345 C				
0.00003125	24479.	783331579.	14.8274092	0.0004634	-0.001787
1.8039841	-48.223910 C				
0.00003208	25103.	782416561.	14.8272431	0.0004757	-0.001834
1.8457808	-49.510036 C				
0.00003292	25725.	781533212.	14.8275487	0.0004881	-0.001882
1.8873032	-50.795719 C				
0.00003375	26348.	780679107.	14.8282939	0.0005005	-0.001930
1.9285504	-52.080957 C				
0.00003458	26970.	779852054.	14.8294499	0.0005129	-0.001977
1.9695216	-53.365747 C				
0.00003542	27591.	779050067.	14.8309904	0.0005253	-0.002025
2.0102157	-54.650087 C				
0.00003625	28212.	778271340.	14.8328918	0.0005377	-0.002072
2.0506320	-55.933972 C				
0.00003708	28833.	777514230.	14.8351325	0.0005501	-0.002120
2.0907693	-57.217401 C				
0.00003792	29453.	776777238.	14.8376929	0.0005626	-0.002167
2.1306268	-58.500370 C				
0.00003875	30072.	776058992.	14.8405550	0.0005751	-0.002215
2.1702035	-59.782876 C				
0.00003958	30653.	774395313.	14.8378240	0.0005873	-0.002263
2.2087517	-60.000000 CY				
0.00004042	31117.	769896514.	14.8177503	0.0005989	-0.002311
2.2447321	-60.000000 CY				
0.00004125	31563.	765169193.	14.7962842	0.0006103	-0.002360
2.2801406	-60.000000 CY				
0.00004208	32009.	760600495.	14.7758289	0.0006218	-0.002408
2.3152901	-60.000000 CY				
0.00004292	32375.	754371218.	14.7432879	0.0006327	-0.002457
2.3484400	-60.000000 CY				
0.00004375	32665.	746621313.	14.6987249	0.0006431	-0.002507
2.3795453	-60.000000 CY				
0.00004458	32954.	739156244.	14.6560426	0.0006534	-0.002557
2.4104535	-60.000000 CY				
0.00004542	33243.	731960310.	14.6151382	0.0006638	-0.002606
2.4411639	-60.000000 CY				
0.00004625	33532.	725018941.	14.5759167	0.0006741	-0.002656
2.4716762	-60.000000 CY				

0.00004708	33821.	718318601.	14.5382897	0.0006845	-0.002705
2.5019898	-60.000000 CY				
0.00004792	34109.	711846681.	14.5021749	0.0006949	-0.002755
2.5321041	-60.000000 CY				
0.00004875	34394.	705512562.	14.4668486	0.0007053	-0.002805
2.5619257	-60.000000 CY				
0.00004958	34634.	698491278.	14.4254510	0.0007153	-0.002855
2.5904650	-60.000000 CY				
0.00005292	35313.	667332722.	14.2302457	0.0007530	-0.003057
2.6960823	-60.000000 CY				
0.00005625	35975.	639558809.	14.0580381	0.0007908	-0.003259
2.7986737	-60.000000 CY				
0.00005958	36631.	614783342.	13.8970108	0.0008280	-0.003462
2.8969683	-60.000000 CY				
0.00006292	37235.	591807418.	13.7447682	0.0008648	-0.003665
2.9909818	-60.000000 CY				
0.00006625	37578.	567220588.	13.5641845	0.0008986	-0.003871
3.0748414	-60.000000 CY				
0.00006958	37907.	544767102.	13.3999154	0.0009324	-0.004078
3.1561349	-60.000000 CY				
0.00007292	38231.	524305718.	13.2462441	0.0009659	-0.004284
3.2342723	-60.000000 CY				
0.00007625	38550.	505571608.	13.1011189	0.0009990	-0.004491
3.3092069	-60.000000 CY				
0.00007958	38868.	488390908.	12.9693665	0.0010321	-0.004698
3.3820722	-60.000000 CY				
0.00008292	39184.	472576044.	12.8493880	0.0010654	-0.004905
3.4528495	-60.000000 CY				
0.00008625	39500.	457968495.	12.7398320	0.0010988	-0.005111
3.5215205	-60.000000 CY				
0.00008958	39759.	443815953.	12.6283530	0.0011313	-0.005319
3.5860337	-60.000000 CY				
0.00009292	39902.	429433753.	12.4949600	0.0011610	-0.005529
3.6428990	-60.000000 CY				
0.00009625	40035.	415945573.	12.3675391	0.0011904	-0.005740
3.6973409	-60.000000 CY				
0.00009958	40167.	403353108.	12.2494453	0.0012198	-0.005950
3.7501422	-60.000000 CY				
0.0001029	40299.	391569281.	12.1397791	0.0012494	-0.006161
3.8012891	-60.000000 CY				
0.0001063	40430.	380517867.	12.0377541	0.0012790	-0.006371
3.8507676	-60.000000 CY				
0.0001096	40560.	370131935.	11.9426797	0.0013087	-0.006581
3.8985632	-60.000000 CY				
0.0001129	40688.	360337812.	11.8511860	0.0013382	-0.006792
3.9441688	-60.000000 CY				
0.0001163	40811.	351066269.	11.7593959	0.0013670	-0.007003
3.9869983	-60.000000 CY				
0.0001196	40934.	342305912.	11.6733910	0.0013959	-0.007214
4.0282272	-60.000000 CY				
0.0001229	41056.	334015094.	11.5927075	0.0014249	-0.007425
4.0678417	-60.000000 CY				
0.0001263	41177.	326156507.	11.5169310	0.0014540	-0.007636
4.1058279	-60.000000 CY				
0.0001296	41298.	318696803.	11.4456894	0.0014832	-0.007847
4.1421717	-60.000000 CY				

0.0001329	41418.	311605849.	11.3786487	0.0015124	-0.008058
4.1768586	-60.000000 CY				
0.0001363	41537.	304856493.	11.3155074	0.0015417	-0.008268
4.2098738	-60.000000 CY				
0.0001396	41655.	298424202.	11.2559931	0.0015711	-0.008479
4.2412024	-60.000000 CY				
0.0001429	41773.	292286717.	11.1998590	0.0016006	-0.008689
4.2708291	-60.000000 CY				
0.0001462	41866.	286265773.	11.1389117	0.0016291	-0.008901
4.2976282	-60.000000 CY				
0.0001496	41947.	280427042.	11.0739024	0.0016565	-0.009114
4.3218551	-60.000000 CY				
0.0001529	41996.	274631239.	11.0030476	0.0016825	-0.009327
4.3434263	-60.000000 CY				
0.0001562	42037.	269036352.	10.9337386	0.0017084	-0.009542
4.3634249	-60.000000 CY				
0.0001596	42078.	263672649.	10.8677700	0.0017343	-0.009756
4.3821094	-60.000000 CY				
0.0001629	42118.	258525937.	10.8049406	0.0017603	-0.009970
4.3994683	-60.000000 CY				
0.0001662	42158.	253583097.	10.7450653	0.0017864	-0.010184
4.4154899	-60.000000 CY				
0.0001696	42198.	248832085.	10.6879740	0.0018125	-0.010397
4.4301626	-60.000000 CY				
0.0001729	42237.	244261761.	10.6335096	0.0018387	-0.010611
4.4434745	-60.000000 CY				
0.0001762	42276.	239861840.	10.5815269	0.0018650	-0.010825
4.4554133	-60.000000 CY				
0.0001796	42314.	235622798.	10.5318918	0.0018914	-0.011039
4.4659669	-60.000000 CY				
0.0001829	42352.	231535773.	10.4844801	0.0019178	-0.011252
4.4751227	-60.000000 CY				
0.0002029	42551.	209695407.	10.2106139	0.0020719	-0.012538
4.4999962	-60.000000 CY				
0.0002229	42729.	191683717.	9.9940859	0.0022278	-0.013822
4.4997922	-60.000000 CY				
0.0002429	42892.	176571712.	9.8258628	0.0023869	-0.015103
4.4970671	-60.000000 CY				
0.0002629	43039.	163698765.	9.6891658	0.0025474	-0.016383
4.4849248	-60.000000 CY				
0.0002829	43169.	152585573.	9.5640020	0.0027058	-0.017664
4.4999311	-60.000000 CY				
0.0003029	43289.	142905653.	9.4647565	0.0028670	-0.018943
4.4851037	-60.000000 CY				
0.0003229	43381.	134341949.	9.3731045	0.0030267	-0.020223
4.4995408	-60.000000 CYT				
0.0003429	43442.	126685065.	9.2864741	0.0031845	-0.021506
4.4727104	-60.000000 CYT				
0.0003629	43463.	119761231.	9.1943881	0.0033368	-0.022793
4.4885214	-60.000000 CYT				
0.0003829	43479.	113546729.	9.1128497	0.0034895	-0.024081
4.4991448	-60.000000 CYT				
0.0004029	43489.	107936596.	9.0425386	0.0036434	-0.025367
4.4823130	-60.000000 CYT				
0.0004229	43495.	102844491.	8.9780144	0.0037970	-0.026653
4.4623549	60.0000000 CYT				

0.0004429 43495. 98200525. 9.0271581 0.0039983 -0.027892
 4.4936317 60.0000000 CYT

 Summary of Results for Nominal Moment Capacity for Section 1

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

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain	Max. Tens. Strain
----	-----	-----	-----	-----
1	35.556	43365.729	0.00300000	-0.02000896

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

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

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

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

Axial Stiff. Load Mom No. kip-in^2	Resist. Factor	Nominal Ax. Thrust kips	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. at Ult
-----	-----	-----	-----	-----	-----	-----
1 778302204.	0.65	35.555560	43366.	23.111114	28188.	
1 750378335.	0.75	35.555560	43366.	26.666670	32524.	
1 480331003.	0.90	35.555560	43366.	32.000004	39029.	

The analysis ended normally.

BASE PLATE AND MONOPOLE CONNECTION CALCULATIONS

Tillman Site ID: TI-OPP-18058
Tillman Site Name: TAYLOR Co TX

**3309 N 10th Street,
Abilene, TX 79603
Taylor County**

ACGI #24-2694

By:

Allpro Consulting Group, Inc.
9221 Lyndon B. Johnson Fwy., Suite 204
Dallas, TX 75243

Check Gusset Plate Weld Connection:

Base Plate Size: 48.25"x39.77"x2" (Outer Dia x Inner Dia x Thickness)

Base Plate Thickness : $t_{\text{flange}} := 2\text{ in}$

Pole base Thickness : $t_{\text{pole}} := 0.375\text{ in}$

Use 3/16" E-70 fillet welds $a := 0.1875\text{ in}$

effective throat: $t_e := a \cdot 0.707$ $t_e = 0.13\text{ in}$

strength of weld metal for E70 electrodes

$$\phi F_w := 31.5\text{ ksi}$$

stress capacity: $f_r := t_e \cdot \phi F_w$ $f_r = 4.18 \cdot \frac{\text{kips}}{\text{in}}$

Weld length: $L_{\text{weld}} := 124.94\text{ in} = 124.94\text{ in}$

Total weld capacity $\text{Weld}_{\text{cap}} := L_{\text{weld}} \cdot f_r$ $\text{Weld}_{\text{cap}} = 521.71\text{ kips}$

Maximum shear reaction as per trn Output:

$$\text{Shear}_{\text{max}} := P_z = 32\text{ kips} < \text{Weld}_{\text{cap}} = 521.71\text{ kips} \quad \textbf{OK}$$

GENERAL AND TECHNICAL SPECIFICATION NOTES

1. INDICATED MODIFICATIONS COMPLIES WITH TIA-222-H, FOR 106 MPH BASIC WIND SPEED AND 40 MPH + 1.5" ICE. THE TOWER IS ASSUMED TO BE IN GOOD CONDITION AND PROPERLY MAINTAINED.
2. EXISTING TOWER DATA AS PER PREVIOUS STRUCTURAL ANALYSIS BY TILLMAN INFRASTRUCTURE INC., PROJECT # 21-5397-TJH DATED 04-01-2021.
3. ALL MODIFICATION FABRICATION AND INSTALLATION SHOULD BE DONE BY A CONTRACTOR EXPERIENCED IN SIMILAR WORK.
4. CONTRACTOR SHALL OBSERVE ALL OSHA AND OTHER APPLICABLE SAFETY GUIDELINES DURING CONSTRUCTION.
5. ALL FABRICATION AND INSTALLATION PROCEDURES AND SITE SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONSTRUCTION.
6. DURING INSTALLING THE MODIFICATION, THE CONTRACTOR SHALL PRESERVE THE STRUCTURAL INTEGRITY AND STABILITY OF THE TOWER. BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER
7. CONTRACTOR SHALL OBSERVE ALL WEATHER CONDITIONS. DO NOT MODIFY THE TOWER DURING WINDS OF MORE THAN 15 MPH.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND FIT BEFORE FABRICATION.
9. MODIFICATION DRAWINGS DO NOT INCLUDE ALL THE EXISTING FIELD CONDITIONS, SOME OF WHICH MAY INTERFERE WITH THE INSTALLATION. CONTRACTOR SHALL CONDUCT A FIELD SURVEY TO IDENTIFY ANY POTENTIAL DIFFICULTIES IN THE INSTALLATION BEFORE WORK COMMENCES. CONTACT THE ENGINEER IF THE FIELD CONDITIONS REQUIRE ANY CHANGES IN THE MODIFICATION.
10. CONTRACTOR MAY HAVE TO MOVE EXISTING TRANSMISSION LINES AND OTHER OBSTRUCTIONS TO ADD THE MODIFICATION. COORDINATE ALL SUCH PROCEDURES WITH THE TOWER OWNER.
11. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LICENSES, PERMITS AND ANY OTHER APPROVALS REQUIRED FOR CONSTRUCTION.
12. PAINT THE NEW MEMBERS TO MATCH THE EXISTING TOWER.
13. ALL STEEL PLATES AND OTHER MISCELLANEOUS MEMBERS SHALL MEET ASTM A36 STEEL SPECIFICATIONS, 36 KSI MIN. YIELD STRENGTH UNLESS SPECIFIED OTHERWISE.
14. ALL STEEL SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A123 SPECIFICATIONS.
15. ALL LEG REINFORCEMENT HALF-PIPE AND ANGLE MEMBERS SHALL MEET A572-50, 50KSI MIN YIELD STRENGTH UNLESS SPECIFIED OTHERWISE.

16. ALL STEEL SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A123 SPECIFICATIONS.
17. ALL STEEL HARDWARE SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A153
18. ALL FINISHED BOLT HOLES SHALL NOT BE MORE THAN 1/16 INCH LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE
19. ALL FLANGE BOLTS SHALL BE TIGHTENED USING TURN-OFF-THE-NUT METHOD.
20. ALL FLANGE BOLT HOLES EDGE DISTANCES SHALL BE 1 1/2 INCH UNLESS OTHERWISE NOTED.
21. FOR ACCURATE FIT OF THE NEW MEMBERS SOME FIELD PUNCHING MAY BE REQUIRED. IF GALVANIZING IS REMOVED, RE-COAT WITH TWO COATS OF GAL-CON OR EQUIVALENT COATING.
22. DO NOT HEAT STRUCTURAL MATERIAL FOR STRAIGHTENING BENT OR WARPED MEMBERS.
23. CLEAN THE SITE OF ALL DEBRIS UPON COMPLETION OF THE WORK. STORE ALL SURPLUS MATERIALS NEATLY IN AN AREA APPROVED BY THE OWNER.
24. CONTRACTOR SHALL PROVIDE FIRE PROTECTION BEFORE FIELD WELDING.
25. ALL BOLTS SHALL BE DOMESTIC, NEW 1/2 INCH DIAMETER HIGH STRENGTH GALVANIZED BOLTS, BEARING TYPE 'X', UNLESS NOTED OTHERWISE IN THE DRAWINGS AND SHALL CONFORM TO ASTM A325 SPECIFICATIONS. USE ANCO LOCKNUTS & FLAT WASHERS ON ALL BOLTS.
26. ANY FIELD CUTS MUST BE THOROUGHLY CLEANED AND DOUBLE COATED..

REV	DATE	DESCRIPTION
0	07/25/2024	TOWER MOD.



152 WEST 57TH STREET 34TH FLOOR
NEW YORK, NY 10019

DATE DRAWN: 07/25/2024	DRAWN BY: ANKIT JAIN	APPROVED BY: SHIQIANG ZHANG
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TOWER MODIFICATION
DRAWINGS

SITE:
TI-OPP-18058
/P-007939

3309 N 10TH STREET
ABILENE,
TX 79603
TAYLOR COUNTY



6221 LYNDON B JOHNSON FREEWAY
SUITE 204, DALLAS, TX 75249
PHONE: 972-291-8880
FAX: 972-384-8876
WWW.ALLPROCONS.COM



SHIQIANG ZHANG
137482
LICENSED
PROFESSIONAL ENGINEER

SHIQIANG ZHANG P.E.
TX PE # 137482
PRM REG # 6342
07/25/2024
ACGI# 24-2694

SHEET NAME
**GENERAL
NOTES**

SHEET NUMBER
S-3

MODIFICATION INSPECTION NOTES:

GENERAL

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF. NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT ALLPRO CONSULTING GROUP, INC.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO ALLPRO CGI.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO OR A NTP FOR THE MODIFICATION INSTALLATION , AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST AND AIS/IIA-222 CODE.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CANCELLATION OR DELAYS IN SCHEDULED MI

IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, AND EITHER PARTY CANCELS OR DELAYS, ALLPRO CGI SHALL NOT BE RESPONSIBLE FOR ANY COSTS, FEES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.).

CORRECTION OF FAILING MIS

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI (*FAILED MI*), THE GC SHALL WORK WITH MODIFICATION INSPECTOR TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.
- OR, WITH TOWER OWNER'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION

MI VERIFICATION INSPECTIONS

TOWER'S OWNER RESERVES THE RIGHT TO CONDUCT A MI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTION(S) ON TOWER MODIFICATION PROJECTS.

ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH AIS/IIA 222 CODE.

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT AEV/AESV FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE DATE OF AN ACCEPTED *PASSING MI* OR *PASS AS NOTED MI* REPORT FOR THE ORIGINAL PROJECT.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
 - RAW MATERIALS
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION AND TORQUE
 - FINAL INSTALLED CONDITION
 - SURFACE COATING REPAIR
 - POST CONSTRUCTION PHOTOGRAPHS
 - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

REV	DATE	DESCRIPTION
0	07/25/2024	TOWER MOD.



152 WEST 57TH STREET 34TH FLOOR
NEW YORK, NY 10019

DATE DRAWN: 07/25/2024	DRAWN BY: ANKIT JAIN	APPROVED BY: SHIQIANG ZHANG
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TOWER MODIFICATION DRAWINGS

SITE:
TI-OPP-18058
/P-007939

3309 N 10TH STREET
ABILENE,
TX 79603
TAYLOR COUNTY



8221 LYNDON B JOHNSON FREEWAY
SUITE 204, DALLAS, TX 75243
PHONE: 972-291-6983
FAX: 972-291-6175
WWW.ALLPROCGI.COM



SHIQIANG ZHANG P.E.
TX PE # 137482
07292024
ACGI# 24-2694

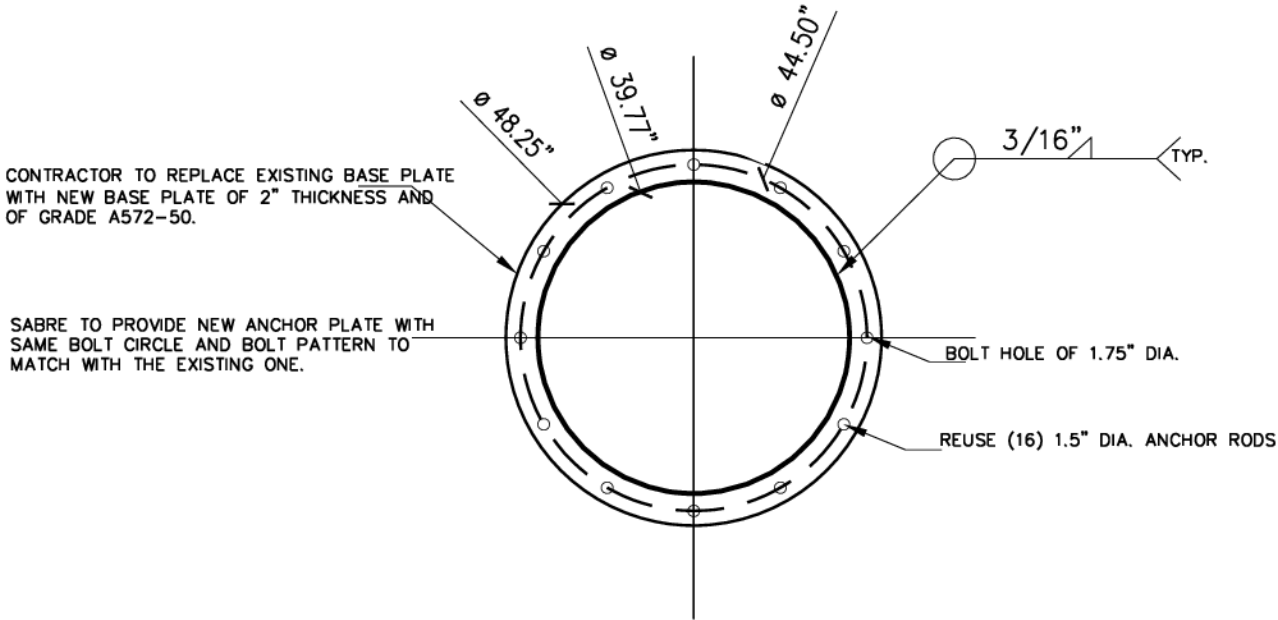
SHEET NAME
MODIFICATION INSPECTION NOTES

SHEET NUMBER
S-4

DURING FIELD WELDING, EXTRA CAUTION MUST BE GIVEN TO THE POSSIBILITY OF A FIRE HAZARD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE FIRE PROTECTION DURING WELDING. ONLY A CONTRACTOR EXPERIENCED IN SIMILAR WORK SHALL PERFORM THE RECOMMENDED MODIFICATIONS.

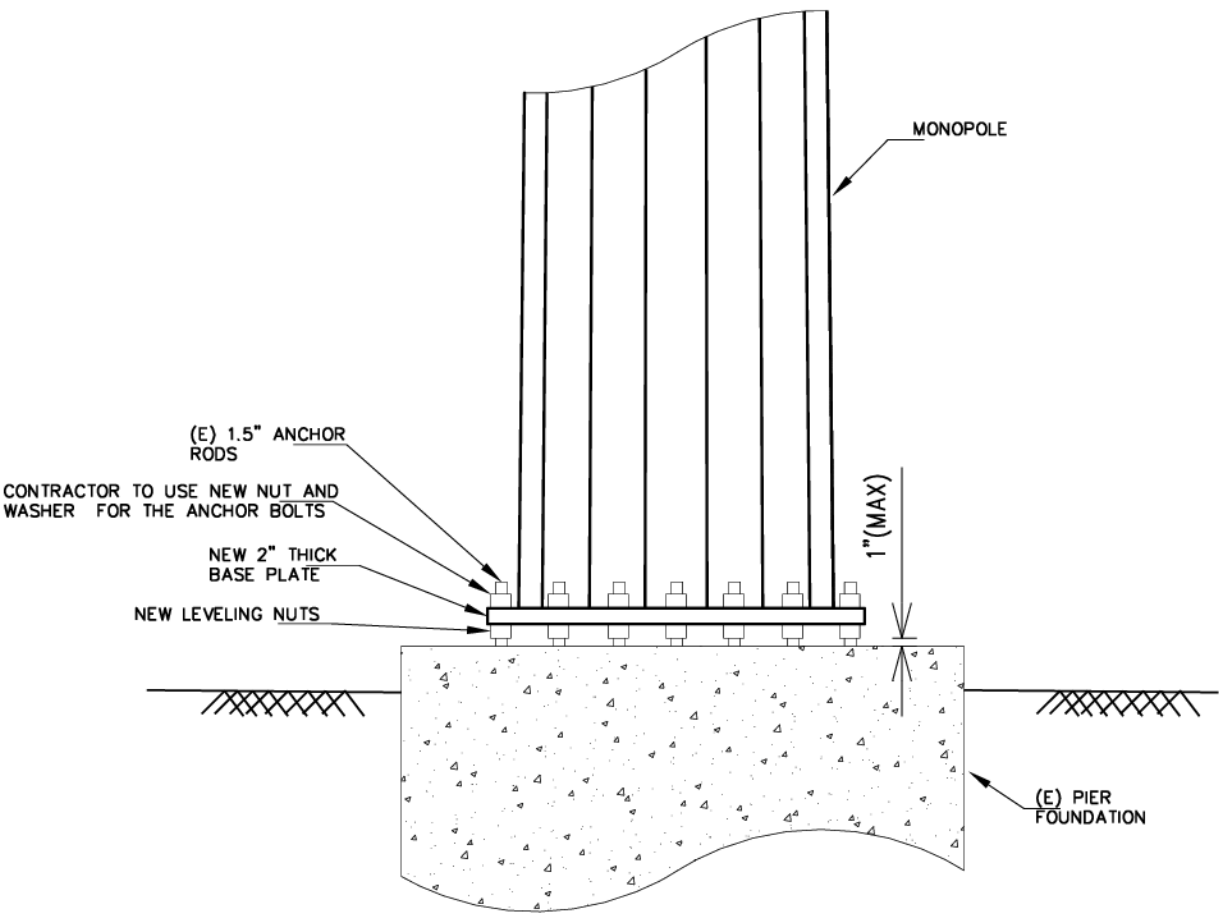
ALL INSTALLATIONS SHALL BE IN COMPLIANCE WITH ANSI/ASSE A10.48 AND ANY OTHER SAFETY STANDARDS

1. DO NOT MODIFY THE TOWER DURING WINDS OF MORE THAN 15 MPH.
2. DURING MODIFICATIONS, THE CONTRACTOR SHALL PRESERVE THE STRUCTURAL INTEGRITY AND THE STABILITY OF THE TOWER. BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER DURING MODIFICATION.
3. PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY. BEFORE ANY FABRICATION CONTRACTOR SHALL FIELD VERIFY ALL NEW MEMBER DIMENSIONS FOR FIT & POSSIBLE INTERFERENCE.
4. FUTURE AND PROPOSED TRANSMISSION LINES SHALL BE INSTALLED AS DEPICTED IN THE TOWER CROSS SECTION SHOWN BELOW TO AVOID TOWER OVERSTRESS. THIS LINE LAYOUT IS IMPERATIVE TO THE SAFETY AND STRUCTURAL INTEGRITY OF THE TOWER. TOWER MAY OVERSTRESS WITHOUT THIS PROPOSED LINE LAYOUT.
5. GUY WIRE RE-TENSIONING WILL BE REQUIRED.
6. CLASS IV RIGGING PLAN SHALL BE REQUIRED.



1 BASE PLATE PLAN
S-2 SCALE: 1/2"=1'

1



2 MONOPOLE ELEVATION
S-2 SCALE: 1/2"=1'

ALL DRAWINGS AND WRITTEN MATERIALS CONTAINED HEREIN ARE THE PROPERTY OF ALLPRO CONSULTING GROUP, INC. AND MAY NOT BE DUPLICATED, USED OR DISCLOSED.

SHEET NAME
NEW BASE PLATE DETAILS
SHEET NUMBER
S-2

SHIQIANG ZHANG P.E.
TX PE # 137482
FIRM REG # 6242
07/25/2024

ACGI# 24-2694

ALLPRO
CONSULTING GROUP, INC.

9221 LYNDON B JOHNSON FREEWAY
SUITE 204, DALLAS, TX 75243
PHONE: 972-231-8863
FAX: 972-231-8863
WWW.ALLPROCGI.COM

TOWER MODIFICATION
DRAWINGS

SITE:
TI-OPP-18058
/P-007939

3309 N 10TH STREET
ABILENE,
TX 79603
TAYLOR COUNTY

DATE DRAWN:
07/25/2024

DRAWN BY:
ANKIT JAIN

APPROVED BY:
SHIQIANG ZHANG

152 WEST 57TH STREET 34TH FLOOR
NEW YORK, NY 10019

REV	DATE	DESCRIPTION
0	07/25/2024	TOWER MOD.

**Tillman
Infrastructure**

TILLMAN SITE NUMBER:
TI-OPP-18058

PROJECT ID#: P-007939

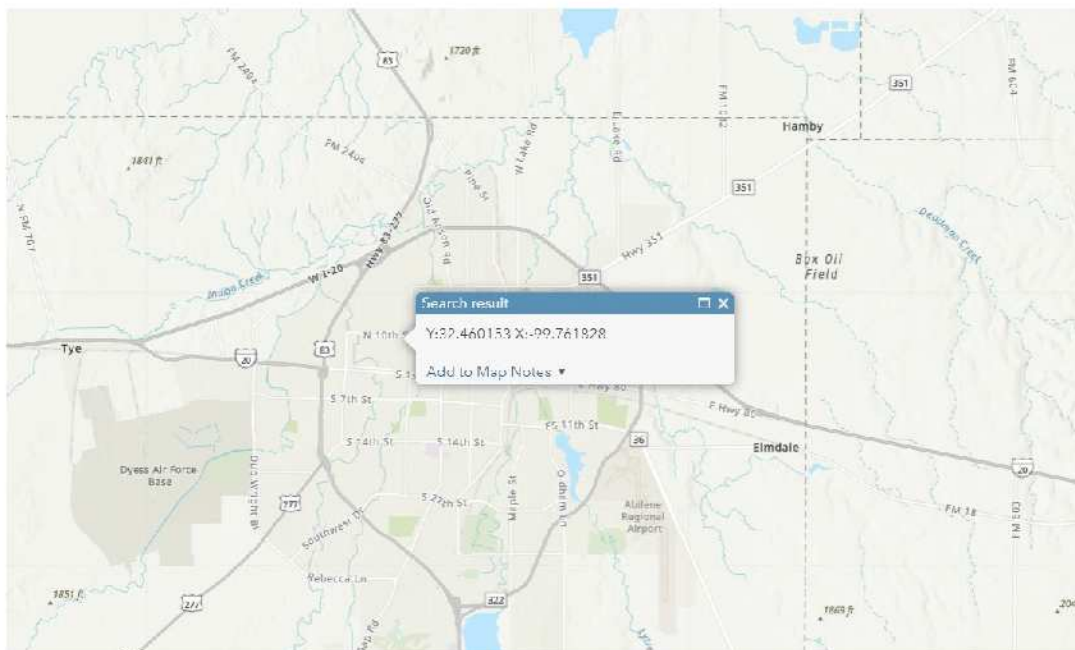
COORDINATES:
LAT: 32.460153°
LONG: -99.761828°

PREVIOUS STRUCTURAL ANALYSIS	
COMPANY	TILLMAN INFRASTRUCTURE
ACGI#	21-5397-TJH
DATE	04/01/2021

PROJECT DATA	
CODE AND STANDARDS	
BUILDING CODE	INTERNATIONAL BUILDING CODE (IBC 2021)
TIA STANDARD	ANSI/TIA-222-H
BASIC WIND SPEED WITHOUT ICE (MPH)	106 MPH
BASIC WIND SPEED WITH ICE (MPH)	40 MPH
SERVICE WIND SPEED (MPH)	60 MPH
ICE THICKNESS (IN)	1.5 IN
EXPOSURE CATEGORY	C
RISK CATEGORY	II
TOPOGRAPHIC CATEGORY	1
CREST HEIGHT (FT)	0 FT
S _s (G)	0.066
S ₁ (G)	0.035

CONSTRUCTION CLASS

ALLPRO CONSULTING GROUP, INC. HAS DETERMINED THIS PROJECT AS A CLASS IV CONSTRUCTION PROJECT PER ANSI/ASSE A10.48

[illegible]

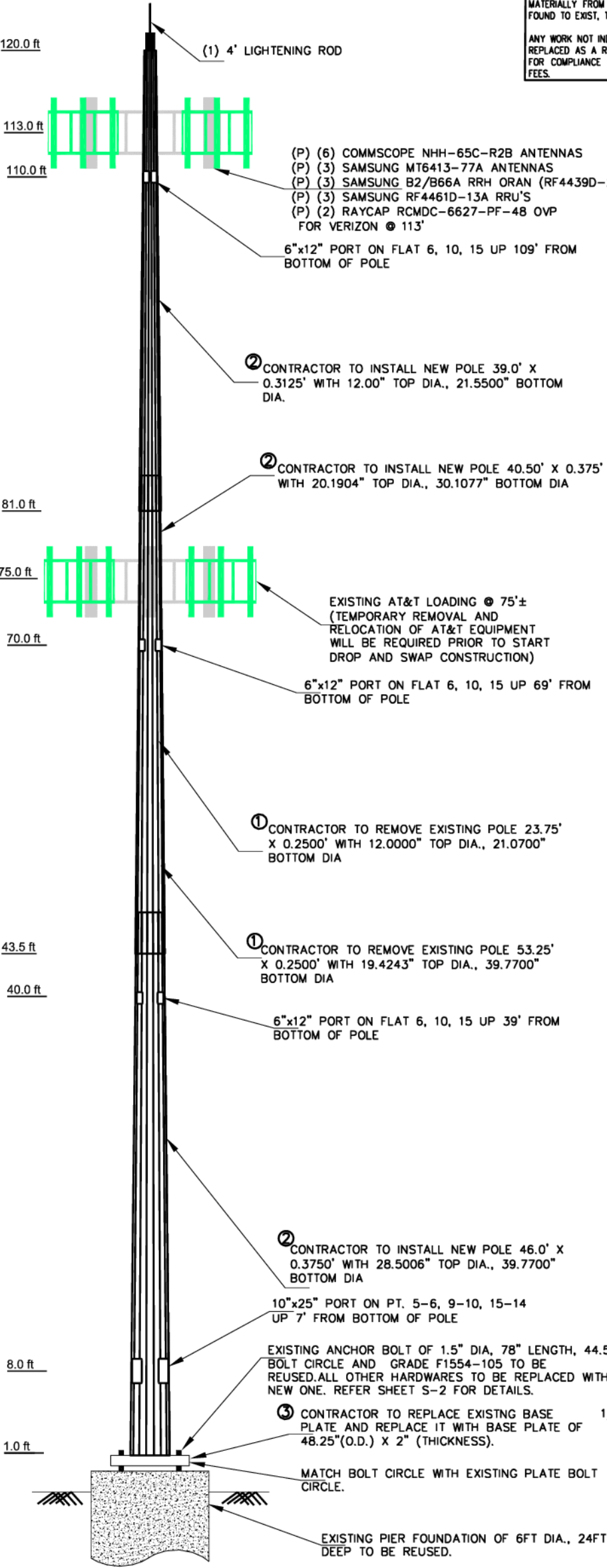
SHEET NAME TITLE PAGE						TOWER MODIFICATION DRAWINGS		DATE DRAWN: 07/25/2024				REV	DATE	DESCRIPTION
SHEET NUMBER T-1		SHIQIANG ZHANG P.E. TX PE # 137482 FPM REG # 8242 07282004 ACGI# 24-2694		0221 LYNDON B JOHNSON FREEWAY SUITE 20A, DALLAS, TX 75243 PHONE: 972-291-8883 FAX: 972-361-6378 WWW.ALLPROCG.COM		SITE: TI-OPP-18058 /P-007939		DRAWN BY: ANKIT JAIN		152 WEST 57TH STREET 34TH FLOOR NEW YORK, NY 10019		0	07/25/2024	TOWER MOD.
				3309 N 10TH STREET ABILENE, TX 79603 TAYLOR COUNTY		APPROVED BY: SHIQIANG ZHANG								

TOWER MODIFICATION SCHEDULE			
NO.	TYPE OF REPAIRS	DETAIL	ELEVATION
1	REMOVE AND DISPOSE EXISTING 75FT MONOPOLE WITH ALL ITS SECTIONS.	S-1	0'-75'
2	STACK NEW 120' MONOPOLE. REUSE EXISTING FOUNDATION AND ANCHOR BOLT.	S-1	0'-120'
3	INSTALL NEW SAFETY CLIMB SYSTEM	S-1	0'-120'
4	NEW BASE PLATE & EXISTING ANCHOR ROD DETAILS	S-2	1'
5	INSTALL NEW GROUNDING FOR THE NEW TOWER	S-1	0'

NOTE: TEMPORARY REMOVAL AND RELOCATION OF AT&T EQUIPMENT WILL BE REQUIRED PRIOR TO START DROP AND SWAP CONSTRUCTION.

MATERIAL STRENGTH		
GRADE	Fy	Fu
A572-65	65 ksi	80 ksi

1	39.00	18	0.3125	3.00	12.0000	21.5500	2.3
2	40.50	18	0.3750	3.50	20.1904	30.1077	4.3
3	46.00	18	0.3750	28.5006	39.7700		6.6
Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade
							Weight (K)
							13.1



- DO NOT MODIFY THE TOWER DURING WINDS OF MORE THAN 15 MPH.
- DURING MODIFICATIONS, THE CONTRACTOR SHALL PRESERVE THE STRUCTURAL INTEGRITY AND THE STABILITY OF THE TOWER. BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER DURING MODIFICATION.
- PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY. BEFORE ANY FABRICATION CONTRACTOR SHALL FIELD VERIFY ALL NEW MEMBER DIMENSIONS FOR FIT & POSSIBLE INTERFERENCE.
- FUTURE AND PROPOSED TRANSMISSION LINES SHALL BE INSTALLED AS DEPICTED IN THE TOWER CROSS SECTION SHOWN BELOW TO AVOID TOWER OVERSTRESS. THIS LINE LAYOUT IS IMPERATIVE TO THE SAFETY AND STRUCTURAL INTEGRITY OF THE TOWER. TOWER MAY OVERSTRESS WITHOUT THIS PROPOSED LINE LAYOUT.
- CLASS IV RIGGING PLAN SHALL BE REQUIRED.

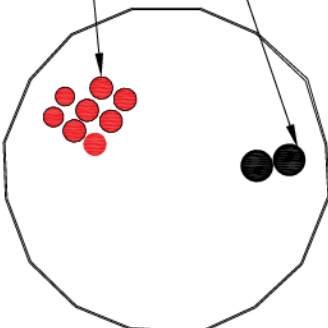
ALL INSTALLATIONS SHALL BE IN COMPLIANCE WITH ANSI/ASSE A10.48 AND ANY OTHER SAFETY STANDARDS

IF CONCEALED OR UNKNOWN PHYSICAL CONDITIONS ARE ENCOUNTERED AT THE SITE THAT DIFFER MATERIALLY FROM THOSE INDICATED IN THE DRAWINGS OR FROM THOSE CONDITIONS ORDINARILY FOUND TO EXIST, THE ADDITIONAL FEES MAY BE REQUIRED AS NEEDED.

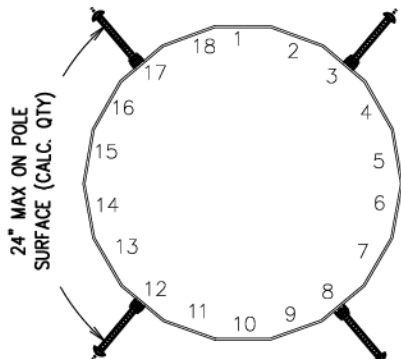
ANY WORK NOT INDICATED IN THE PLANS OR SPECIFICATIONS, THAT MUST BE ADDED, REPAIRED, OR REPLACED AS A RESULT OF HIDDEN, CONCEALED, OR CHANGED CONDITIONS, OR THAT IS REQUIRED FOR COMPLIANCE WITH BUILDING CODES OR OTHER REGULATIONS, SHALL RESULT IN ADDITIONAL FEES.

(E) (2) 0.35" FIBER
(E) (6) 0.88" CONTROL
CABLES @ 75' ± FOR AT&T

(P) (2) 1.43" HYBRID CABLES
@ 113'± FOR VERIZON

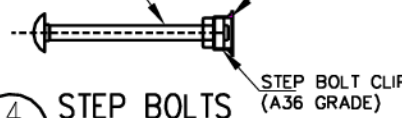


2 COAX LAYOUT
SCALE: NTS

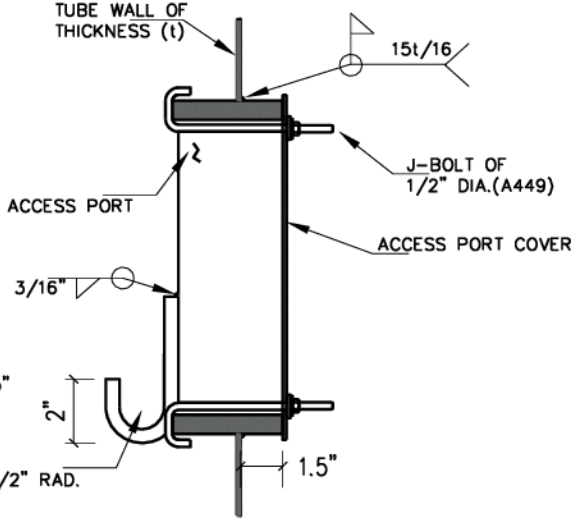


3 CLIMBING DETAILS
SCALE: NTS

5/8"-11-7" STEP BOLT (GALV.)
(A-449 GRADE)



4 STEP BOLTS
SCALE: NTS



5 ACCESS PORT DETAILS
SCALE: NTS

1 ELEVATION: NEW 120FT MONOPOLE TO REPLACE EXISTING
SCALE: 3/32"=1'

ALL DRAWINGS AND WRITTEN MATERIALS CONTAINED HEREIN ARE THE PROPERTY OF ALLPRO CONSULTING GROUP, INC. AND MAY NOT BE DUPLICATED, USED OR DISCLOSED.

SHEET NAME
TOWER PROFILE

SHEET NUMBER
S-1

TOWER MODIFICATION DRAWINGS
SITE:
TI-OPP-18058 /P-007939
3309 N 10TH STREET
ABILENE, TX 79603
TAYLOR COUNTY

DATE DRAWN:
07/25/2024
DRAWN BY:
ANKIT JAIN
APPROVED BY:
SHIQIANG ZHANG

REV	DATE	DESCRIPTION
0	07/25/2024	TOWER MOD.

ZONING CASE CUP-2024-08 STAFF REPORT

Scheduled Hearings

Planning & Zoning Commission: November 5, 2024
City Council 1st Read: November 7, 2024
City Council 2nd Read: November 21, 2024

Applicant

Owner: Fountaingate Fellowship
Agent: Victor Buenrostro

Case Manager

Mason Teegardin – Planner

Request

The applicant is requesting a Conditional Use Permit to replace an existing 75' tall monopole with a new 120' tall monopole within General Retail (GR) zoning.

Location

The subject property is located at 920x Westview Drive. Legal description being Block 103, Westlawn Addition, Abilene, Taylor County, Texas.

Background

The subject property was annexed into the City of Abilene in 1957 and has been zoned General Retail (GR) since at least 1974. This property has remained mostly vacant since being annexed, except for the existing monopole tower and a small parking lot along the west property line used by a nearby church. A Conditional Use Permit (CUP) was approved in August 2020 to allow the 75' monopole. Due to the proposed height increase, a new CUP is required.

Zoning, Existing and Proposed Land Use

	Zoning	Existing Land Use
North	GR & RS-6	Restaurant & residences
East	GR	TLCA Classrooms (school)
South	MD	Church
West	GR	Walgreens

Criteria Assessment

Staff has reviewed the request based upon the factors established in Section 1.4.3.5, Criteria for Approval of the Land Development Code. These factors are identified and addressed below:

- 1. The proposed use at the specified location is consistent with the policies embodied in the adopted Comprehensive Plan.**
The proposed request is consistent with the Comprehensive Plan and Future Land Use, which both recommend "Neighborhood Commercial" uses at this location.
- 2. The proposed use is consistent with the general purpose and intent of the applicable zoning district regulations.**
The proposed use is compatible with the existing monopole to be replaced. Additional tower height is requested to improve the range of coverage and quality of service.

3. **The proposed use is compatible with and preserves the character and integrity of adjacent developments and neighborhoods and includes improvements either on-site or within the public rights-of-way to mitigate development-related adverse impacts, such as traffic, noise, odors, visual nuisances, drainage or other similar adverse effects to adjacent development and neighborhoods.**

The proposed/existing use is compatible with surrounding developments and will not create adverse impacts regarding traffic, noise, or visual nuisances. The purpose of the tower is to provide more communication capacity to improve the level of service and to cover a greater service area with communication service.

4. **The proposed use does not generate pedestrian and vehicular traffic which will be hazardous or conflict with the existing and anticipated traffic in the neighborhood.**

The proposed/existing use will not generate additional pedestrian or vehicular traffic.

5. **The proposed use incorporates roadway adjustments, traffic control devices or mechanisms, and access restrictions to control traffic flow or divert traffic as may be needed to reduce or eliminate development-generated traffic on neighborhood streets.**

The proposed use does not generate a level of traffic that would adversely affect the existing road network in the vicinity of the subject site.

6. **The proposed use incorporates features to minimize adverse effects, including visual impacts, of the proposed conditional use on adjacent properties.**

The existing masonry wall will remain at the subject site to mitigate any immediate visual impacts.

7. **The proposed use meets the standards for the zoning district, or to the extent variations from such standards have been requested, that such variations are necessary to render the use compatible with adjoining development and the neighborhood.**

The use, as it currently exists and is proposed, complies with all applicable LDC requirements.

Staff Recommendation

Staff recommends **approval** of the Conditional Use Permit.

Attachments

- Technical Drawings
- Analysis Report & Details
- PowerPoint Presentation

Notification

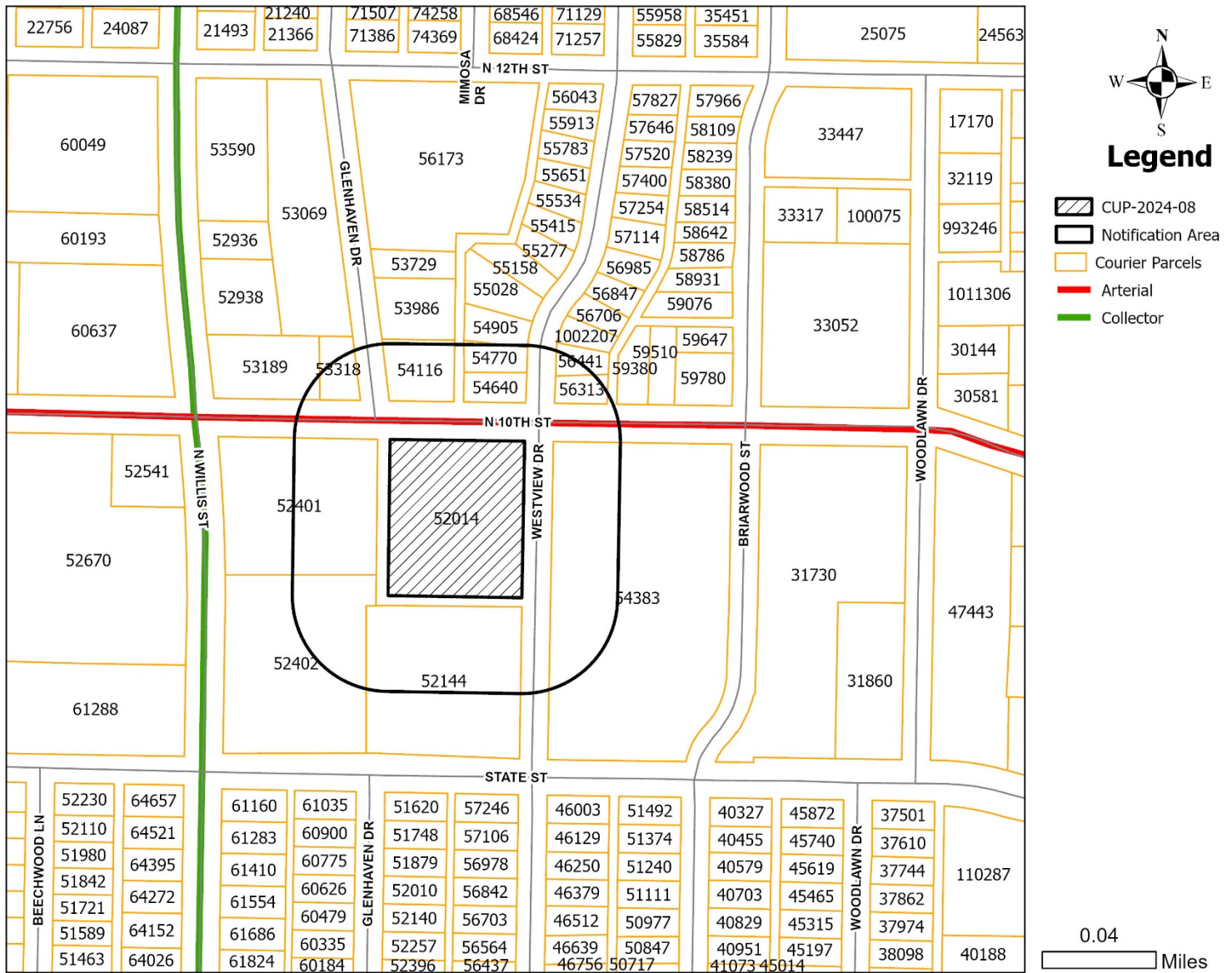
Pursuant to Section 1.2.2.2 of the Land Development Code, City staff mailed personal notices on October 16, 2024, via standard mail to the owners of property within a 200-foot radius of the subject street right of way. The property owners and associated parcel identification numbers are identified below:

Legend: O - Opposed, F - In Favor

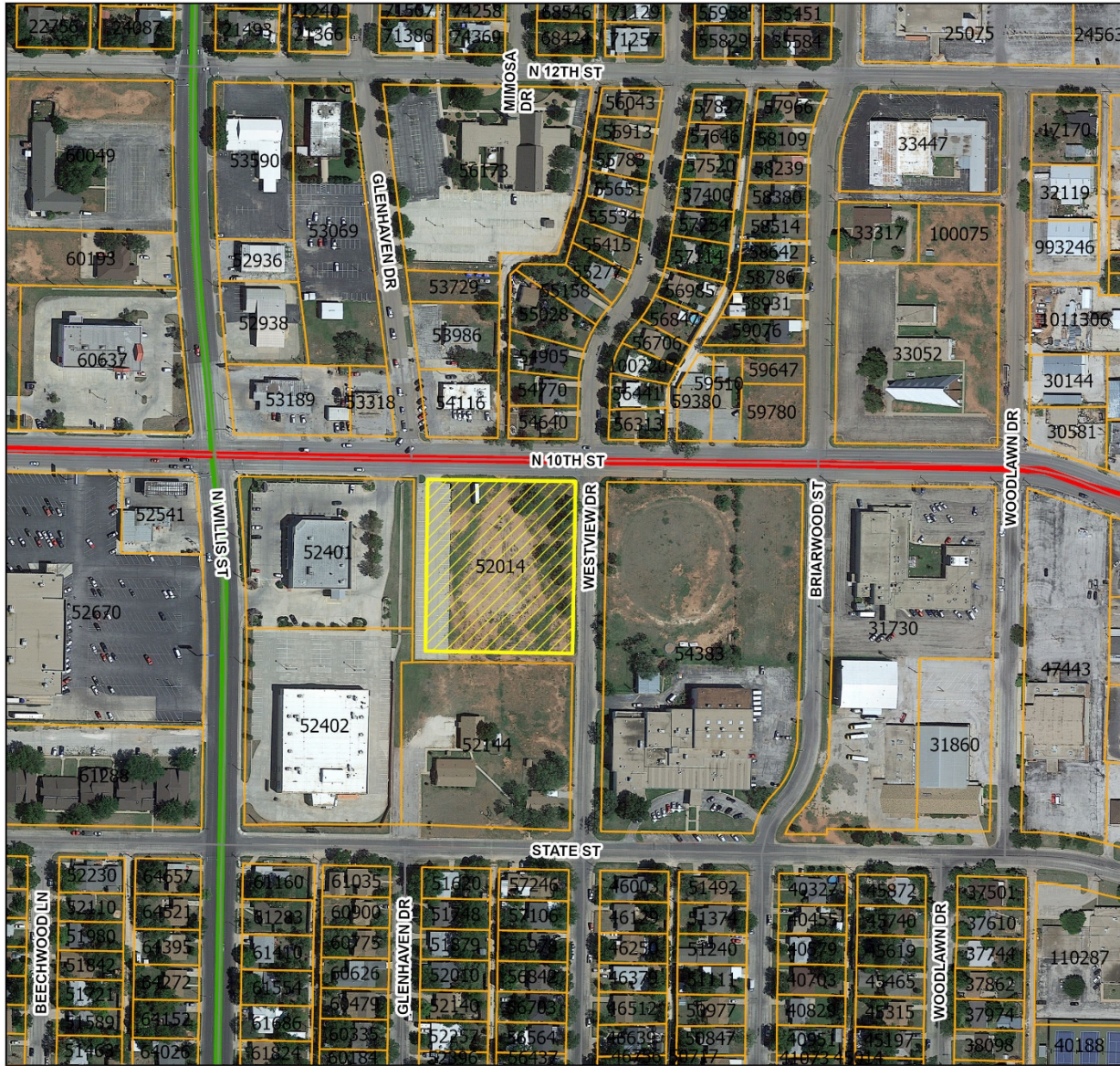
PROPERTY OWNER	PROPERTY ID	SITUS	RESPONSE
ABILENE SUNRISE PROPERTIES	56313	1001 WESTVIEW DR	
BLUEROCK NNN I DST	52401	991 Y N WILLIS ST	
BLUEROCK NNN I DST	52401	991 N WILLIS ST	
COUGAR ESKIMO HUT	53189	3366 N 10TH ST	
COUGAR ESKIMO HUT	53189	3382 N 10TH ST	
COUGAR ESKIMO HUT	53189	3382 B N 10TH ST	
DAVIS CHRISTI	54640	1002 WESTVIEW DR	

FOUNTAINGATE FELLOWSHIP	52402	909 N WILLIS ST	O
FOUNTAINGATE FELLOWSHIP	52014	3309 N 10TH ST	
FOUNTAINGATE FELLOWSHIP	52014	920X WESTVIEW DR	
GARCIA ELIGIO & CATALINA	54116	3310 N 10TH ST	
LOPEZ MICHAEL F	54905	1018 WESTVIEW DR	
MESA LANDY CASTRO	54770	1010 WESTVIEW DR	
SMITH LEE ANN LF EST	56441	1009 WESTVIEW DR	
TLC ACADEMY TEXAS	54383	3250 STATE ST	
TRINITY CHURCH OF THE	52144	3342 STATE ST	
TRINITY CHURCH OF THE	52144	3302 STATE ST	
VINSON J W	53318	3350 N 10TH ST	

NOTIFICATION MAP



LOCATION MAP



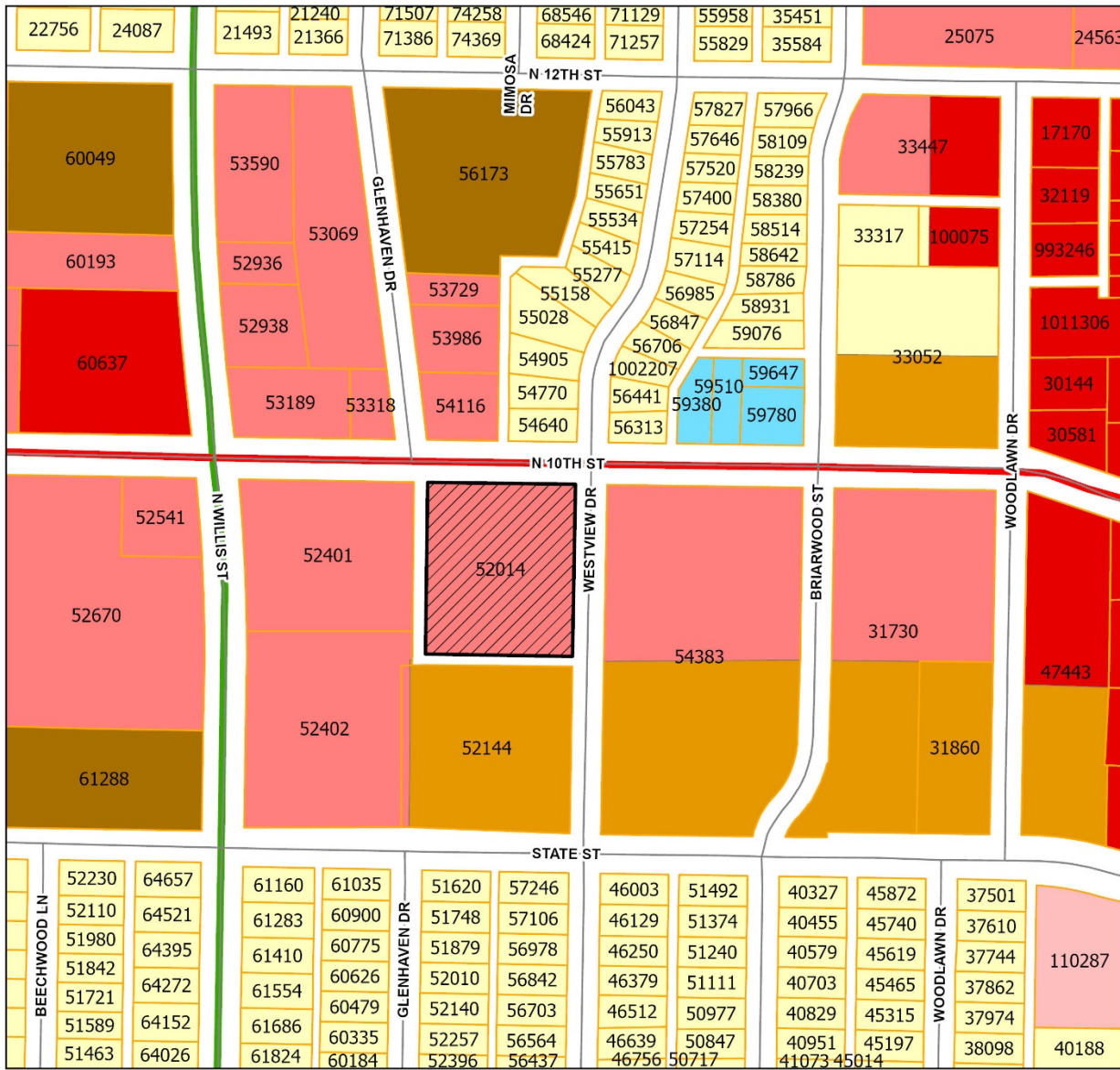
Legend

- CUP-2024-08
- Courier Parcels
- Arterial
- Collector

0.04

Miles

ZONING MAP



Legend

- CUP-2024-08
- Courier Parcels
- GC (General Commercial)
- GR (General Retail)
- NR (Neighborhood Retail)
- O (Office)
- MD (Residential - Medium Density)
- MF (Residential - Multi-family)
- RS (Residential - Single Family)
- Arterial
- Collector

0.04

Miles



CONDITIONAL USE PERMIT

Case: CUP-2024-08

Agent: Victor Buenrostro

Request: A Conditional Use Permit to replace an existing 75' tall monopole with a new 120' tall monopole within General Retail (GR) zoning.

Location: 920x Westview Drive

Notification: 0 in Favor, 1 in Opposition

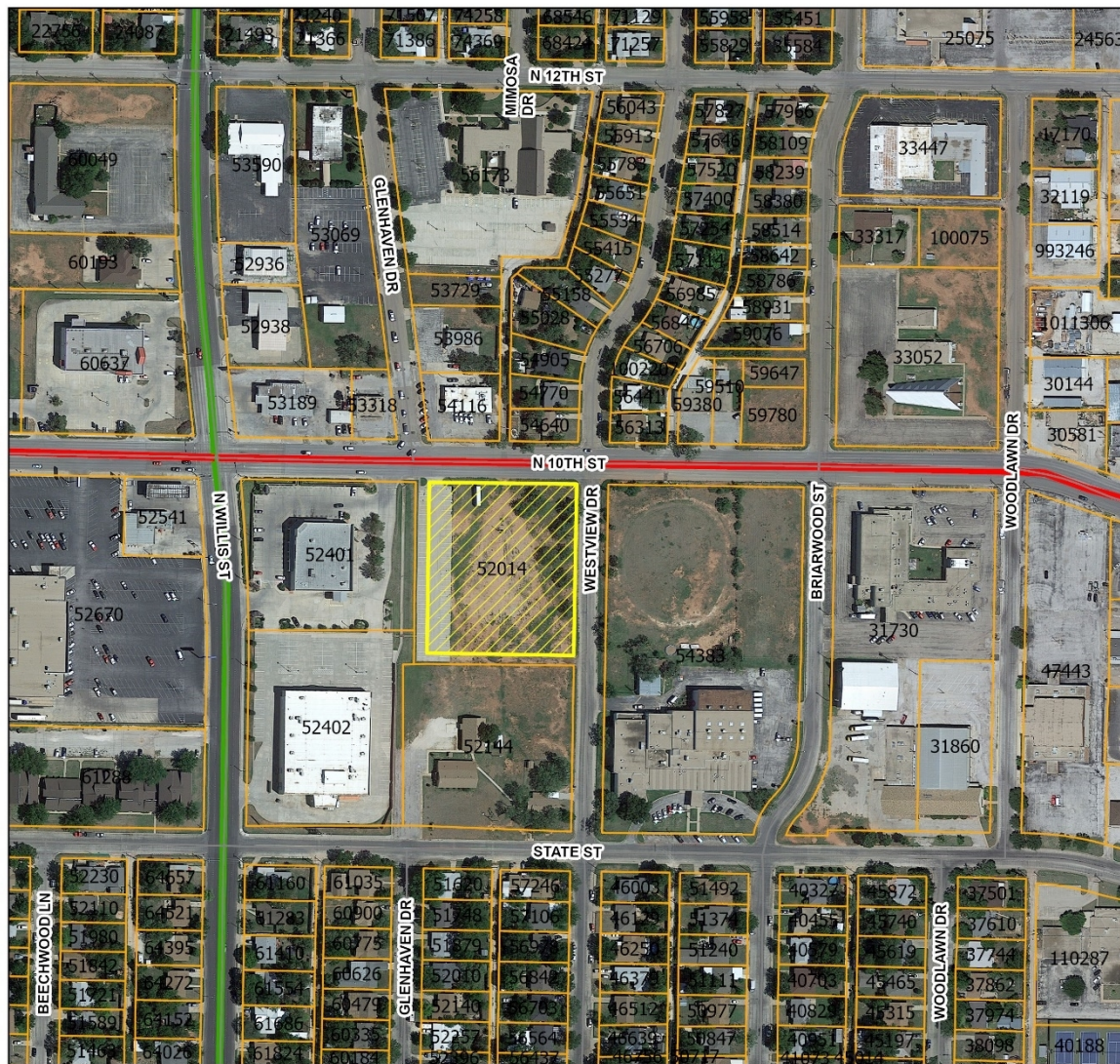
Planning & Zoning: November 5, 2024

Council Hearing: November 7, 2024
November 21, 2024





AERIAL LOCATION MAP

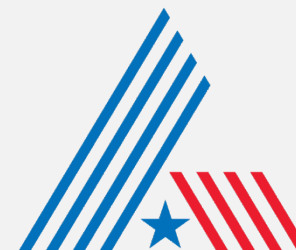


Legend

- CUP-2024-08
- Courier Parcels
- Arterial
- Collector

0.04

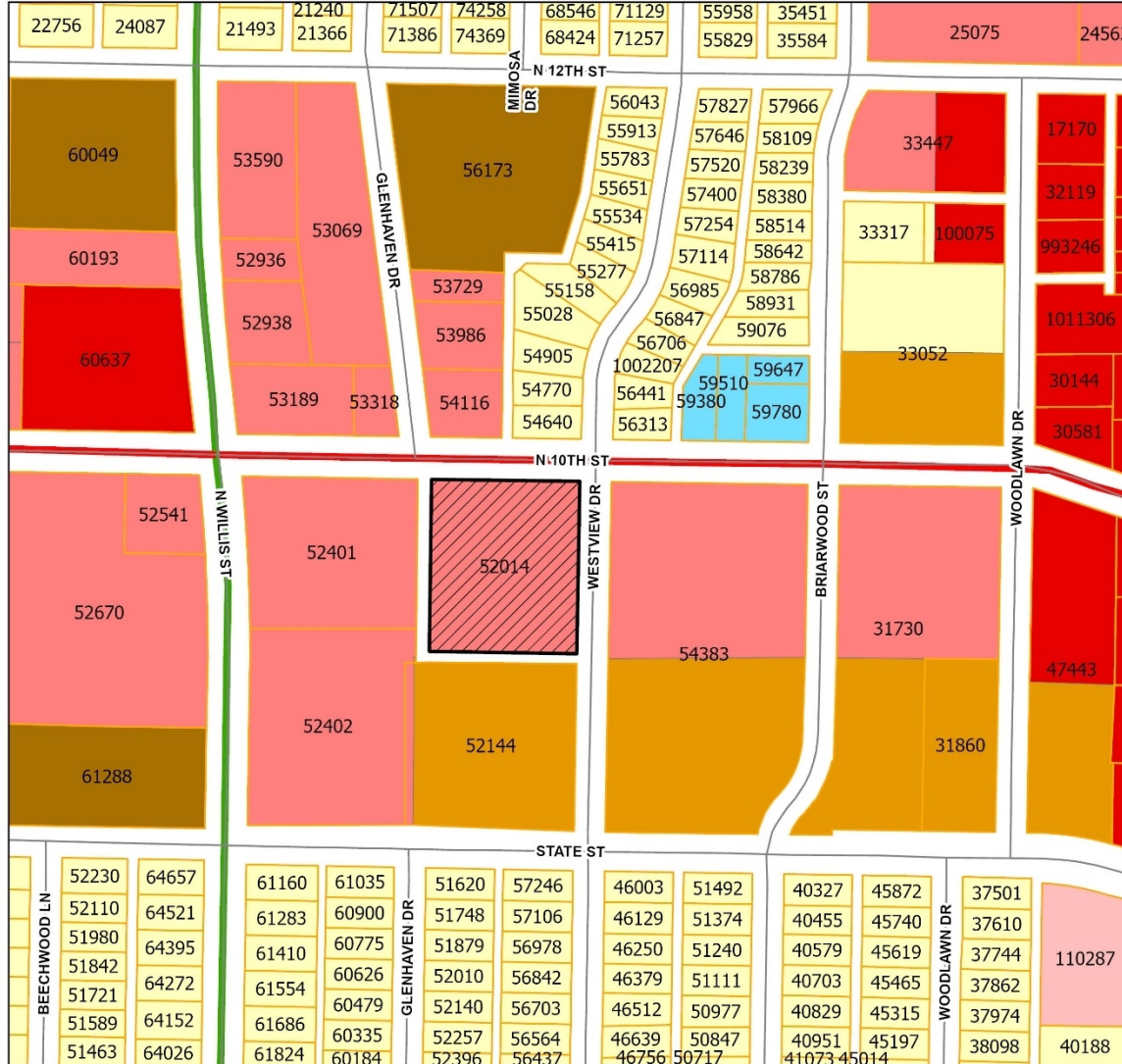
Miles



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TEXAS



ZONING MAP

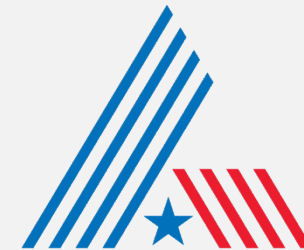


Legend

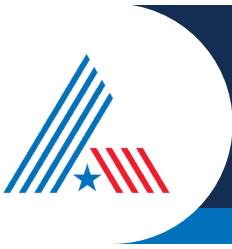
- CUP-2024-08
- Courier Parcels
- GC (General Commercial)
- GR (General Retail)
- NR (Neighborhood Retail)
- O (Office)
- MD (Residential - Medium Density)
- MF (Residential - Multi-family)
- RS (Residential - Single Family)
- Arterial
- Collector

0.04

Miles



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USES IN GENERAL RETAIL ZONING

RESIDENTIAL USES:

- P Bed & Breakfast
- P Dwelling – Industrialized Housing Unit
- P Dwelling – Institutional
- C Dwelling – Multiple-Family
- P Dwelling – Single Family Detached
- P Hotel/Motel

ACCESSORY AND INCIDENTAL USES:

- P Accessory Structure (Also see Division 4 of this article)
- P Antenna, Non-Commercial/Amateur
- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P/C Day Care Operation – Home Based
- P Drive-Thru Facility
- TP Field Office or Construction Office (temporary)
- C Freight Container
- P Fuel Sales
- P Garage Sales
- P Home Occupation
- TP Itinerant Business
- P Manufacturing (incidental)
- TP Mobile Home (temporary security residence)
- P Recreation Building, Multipurpose
- P Recreation Equipment, Mobile (storage and parking)
- P Recycling Collection Point
- P Subdivision Sales Office (temporary)
- P Swimming Pools, Private (accessory to residential use)
- P Tennis Courts, Private (accessory to residential use)
- P/SE Wind Energy Conversion Systems

CULTURAL AND RECREATIONAL USES:

- P Civic, Social, and Fraternal Organization
- P Cultural Facilities
- C Recreation – Outdoors (active)
- P Recreation – Outdoors (passive)
- P Recreation and Commercial Entertainment - Indoor

GOVERNMENT, HEALTH, SAFETY AND WELFARE USES:

- C Ambulance Service
- P Fire/Police Station
- P Medical/Dental Laboratory
- P Post Office
- C Social Service Facility

EDUCATIONAL AND RELIGIOUS USES:

- P Arts School
- P Church or Place of Worship
- P Day-Care Operation - Center-Based
- P Educational and Scientific Research
- P School: Public/Private
- C Trade/Business School
- P University/College

SERVICE:

- P/C Automobile Wash
- C Funeral Home/ Mortuary/Morgue
- P Kennel (Without Outdoor Pens)
- P Laundry/Dry Cleaning Services & Facilities
- P Office (general, professional, financial)
- P Personal Services
- C Printing, Copying, Reproduction, Publishing
- P Repair and Maintenance Services - Automobile/Small Truck (minor)
- P Repair and Maintenance Services (indoor)
- C Tattoo Parlor
- P Veterinary Service (small animals)

TRADE – RETAIL USES:

- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P Fuel Sales
- P Liquor Store (Off Premises Consumption) (*Defined under Liquor Store*)
- P Liquor Store (On Premises Consumption) (*Defined under Liquor Store*)
- P Restaurant, Brew Pub
- P Restaurant, Fast Food
- P Restaurant, Standard
- P Retail Sales/Rental (indoor)
- C Retail Sales/Rental (outdoors, non-vehicle)

TRANSPORTATION, COMMUNICATION AND UTILITIES:

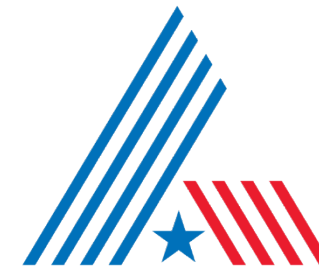
- C Antenna Tower- Commercial
- P Automobile Parking Lot or Structure - Commercial
- P Broadcast Studio
- P Public Utility Facility

RESOURCE PRODUCTION AND EXTRACTION USES:

- P Petroleum or Gas Well
- P Urban Garden

LEGEND

- P Permitted as a Right-of-Use (may be subject to compliance with conditions described within Division 3- Requirements Applicable to Specific Land Uses of the Land Development Code)
- C Permitted as a Conditional Use Permit, Requiring Approval by City Council
- TP Permitted by Temporary Permit Only, Requiring Approval by Board of Adjustment



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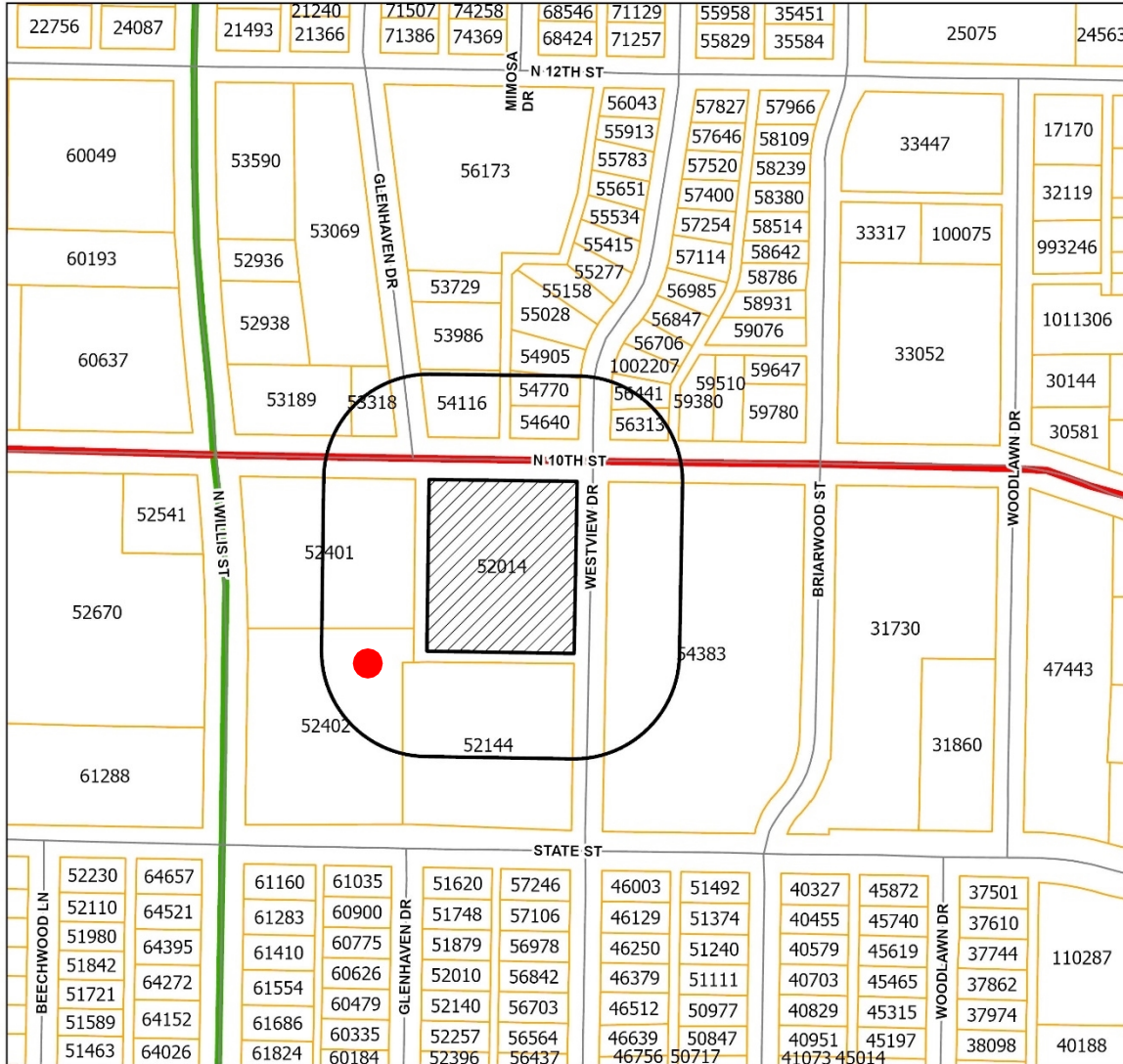


PROPERTY VIEWS





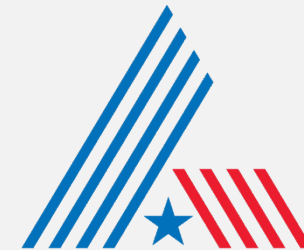
NOTIFICATION AREA MAP



Legend

- CUP-2024-08
- Notification Area
- Courier Parcels
- Arterial
- Collector

0- In Favor- ●
1- Opposed- ●
8.2% opposition



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TEXAS

0.04

Miles



FINDINGS AND RECOMMENDATION

The proposed request is consistent with:

- The *Comprehensive Plan*;
- The surrounding uses and zoning;
- Generally accepted planning principals; and
- The Criteria for Approval in the LDC.

Staff Recommendation: **Approval**





Questions?



ZONING CASE CUP-2024-10 STAFF REPORT

Scheduled Hearings

Planning & Zoning Commission: November 5, 2024
City Council 1st Read: November 21, 2024
City Council 2nd Read: December 5, 2024

Applicant

Owner: Crosstone Properties, LLC
Agent: Bruce Reed

Case Manager

Mason Teegardin – Planner

Request

The applicant is requesting to apply a Conditional Use Permit to approximately 0.32 acres zoned General Retail (GR) to allow for a Freight Container.

Location

The subject property is located at 1350 Grape Street, legal description being the Merchant Grape Subdivision, Block A, Lot 225, Abilene, Taylor County, Texas.

Background

The subject property was annexed into the City in 1895, within the Original Town of Abilene. Located on this site is a home built in 1940 and a freight container. The freight container has been at this property since, at least, 2012. The owner states the freight container is used for personal storage and will remain as such if the request is approved. The owner has been using this lot for his Contractor Services but is in the process of moving that use off the property, as it is not a permitted use.

Zoning, Existing and Proposed Land Use

	Zoning	Existing Land Use
North	GR	Church
East	GR	Vacant lot & residences
South	GR	Residence
West	GR	Shopping Center

Criteria Assessment

Staff has reviewed the request based upon the factors established in Section 1.4.3.5, Criteria for Approval of the Land Development Code. These factors are identified and addressed below:

- 1. The proposed use at the specified location is consistent with the policies embodied in the adopted Comprehensive Plan.**
The proposed request is consistent with the Comprehensive Plan and Future Land Use Map.
- 2. The proposed use is consistent with the general purpose and intent of the applicable zoning district regulations.**
The proposed request is consistent with the intent of the General Retail zoning district regulations and uses.

3. **The proposed use is compatible with and preserves the character and integrity of adjacent developments and neighborhoods and includes improvements either on-site or within the public rights-of-way to mitigate development-related adverse impacts, such as traffic, noise, odors, visual nuisances, drainage or other similar adverse effects to adjacent development and neighborhoods.**

The proposed/existing use is compatible with surrounding developments and will not create adverse impacts regarding traffic, noise, or visual nuisances.

4. **The proposed use does not generate pedestrian and vehicular traffic which will be hazardous or conflict with the existing and anticipated traffic in the neighborhood.**

The proposed/existing use will not generate additional pedestrian or vehicular traffic.

5. **The proposed use incorporates roadway adjustments, traffic control devices or mechanisms, and access restrictions to control traffic flow or divert traffic as may be needed to reduce or eliminate development-generated traffic on neighborhood streets.**

The proposed use does not generate a level of traffic that would adversely affect the existing road network in the vicinity of the subject site.

6. **The proposed use incorporates features to minimize adverse effects, including visual impacts, of the proposed conditional use on adjacent properties.**

The applicant will be required to comply with the Land Development Code requirements regarding freight containers in General Retail zoning.

7. **The proposed use meets the standards for the zoning district, or to the extent variations from such standards have been requested, that such variations are necessary to render the use compatible with adjoining development and the neighborhood.**

The use, if approved, will be subject to the following LDC requirements:

- Freight Containers in Commercial districts shall be screened from public right-of-way, except alleys
- Freight containers in any district shall be screened from adjacent properties with zoning designations other than HI, LI, HC, and GC
- Freight containers shall not have signs, logos, or other markings, other than small, incidental labeling, visible from the right-of-way or visible from adjacent properties with zoning designations other than HI, LI, HC, and GC.
- A building permit shall be obtained for each container, and each shall meet all building and development regulations

Staff Recommendation

Staff recommends **approval** of the Conditional Use Permit, subject to the following conditions:

1. A building permit must be applied for within 30 days of approval
2. The freight container must comply with all applicable LDC requirements, as listed in the staff report.

Attachments

- Aerial image provided by applicant
- Application
- LDC requirements for freight containers

Notification

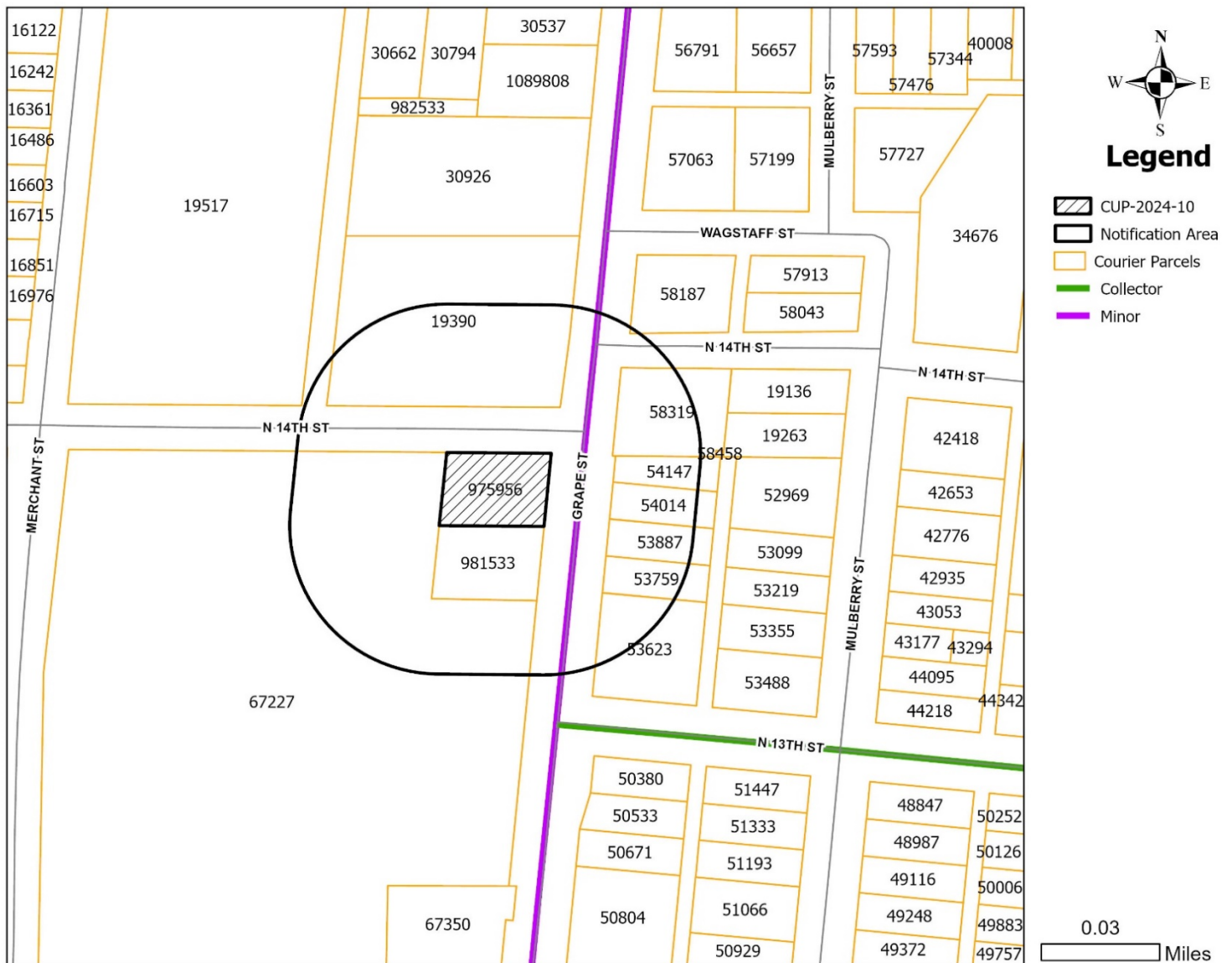
Pursuant to Section 1.2.2.2 of the Land Development Code, City staff mailed personal notices on October 16, 2024, via standard mail to the owners of property within a 200-foot radius of the subject street right of way. The property owners and associated parcel identification numbers

are identified below:

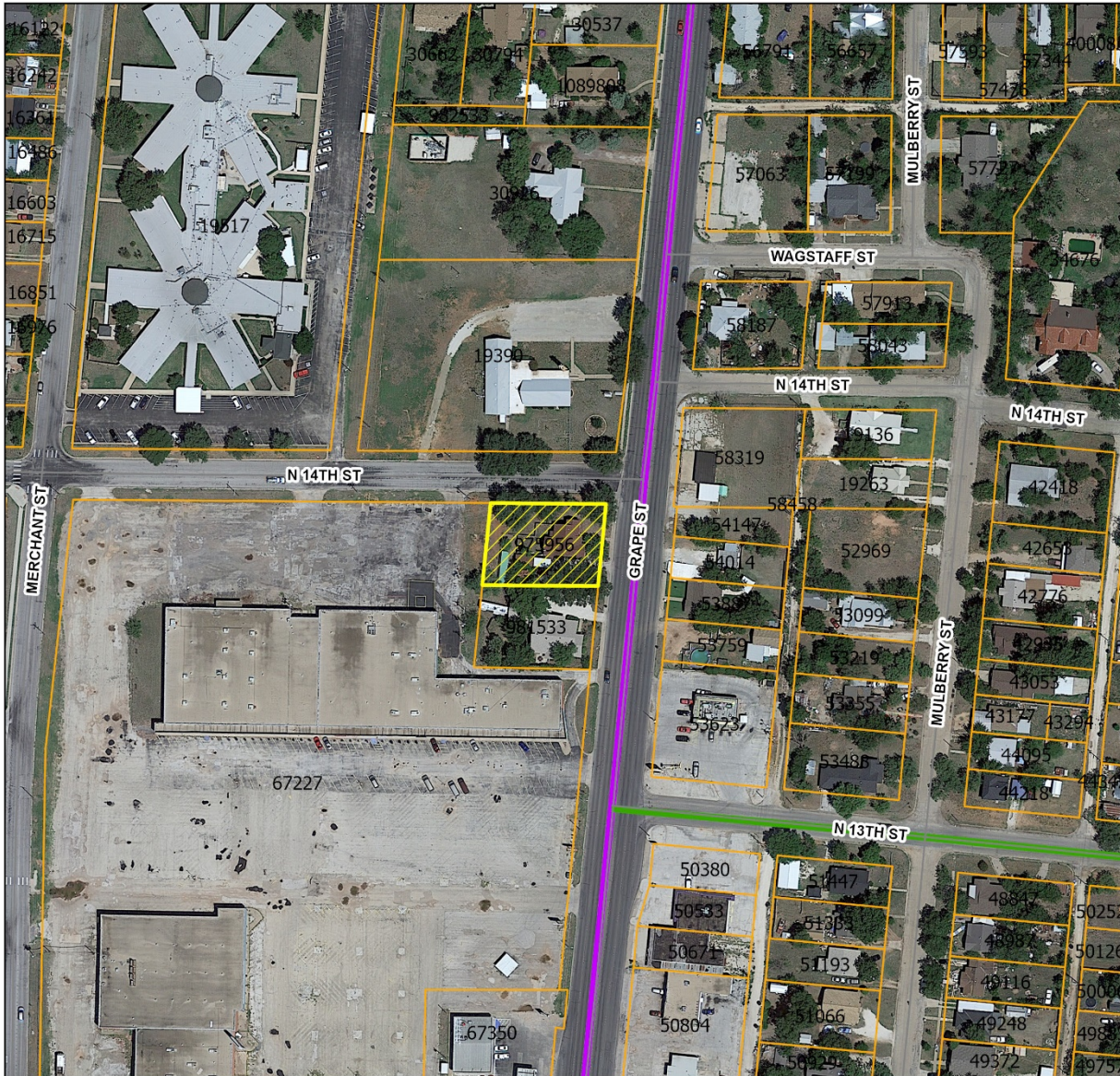
Legend: O - Opposed, F - In Favor

PROPERTY OWNER	PROPERTY ID	SITUS	RESPONSE
CHAVIRA PEDRO	54147	1349 GRAPE ST	
CHAVIRA PEDRO	58319	1357 GRAPE ST	
CROSTONE PROPERTIES LLC	981533	1336 GRAPE ST	
DE LEON JUAN	58187	1407 GRAPE ST	
GRACE & MERCY COMMUNITY CHURCH OF ABILENE	19390	1402 GRAPE ST	
HUSKIN JEREMY JAMES	53887	1333 GRAPE ST	
HUSKIN JEREMY JAMES	54014	1341 GRAPE ST	
JMK5 ABILENE LLC	67227	1204 GRAPE ST	
M BAIG 897 LLC	53623	1309 GRAPE ST	
WILSON SUSIE VIRGINIA	53759	1325 GRAPE ST	

NOTIFICATION MAP



LOCATION MAP



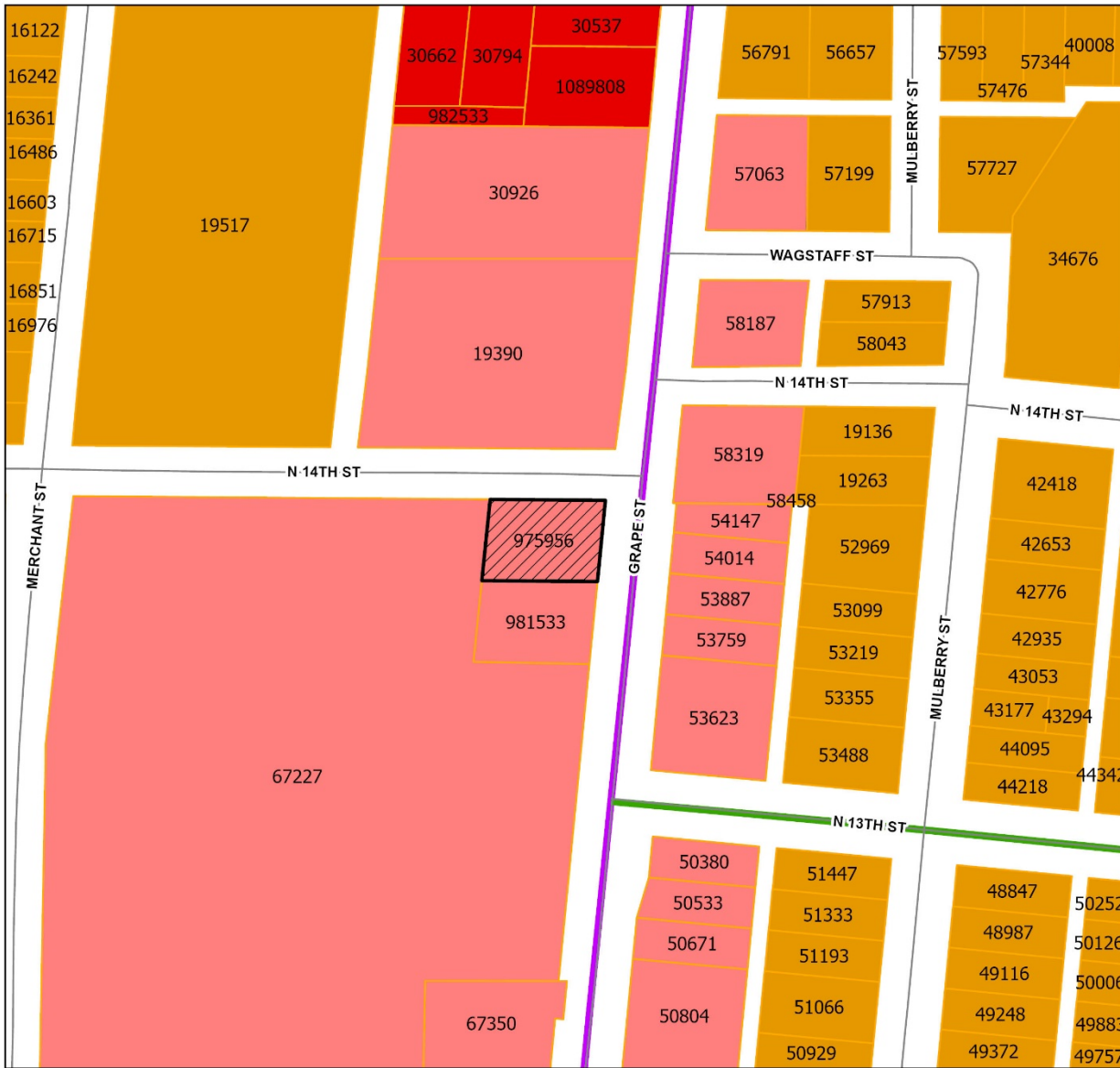
Legend

- CUP-2024-10
- Courier Parcels
- Collector
- Minor

0.03

Miles

ZONING MAP



Legend

- CUP-2024-10
- Courier Parcels
- GC (General Commercial)
- GR (General Retail)
- MD (Residential - Medium Density)
- Collector
- Minor

0.03

Miles



CONDITIONAL USE PERMIT

Case:	CUP-2024-10
Agent:	Bruce Reed
Requests:	A Conditional Use Permit to allow for a Freight Container in General Retail (GR) zoning.
Location:	1350 Grape Street
Notification:	0 in Favor, 0 in Opposition
Planning & Zoning:	November 5, 2024
Council Hearing:	November 21, 2024 December 5, 2024





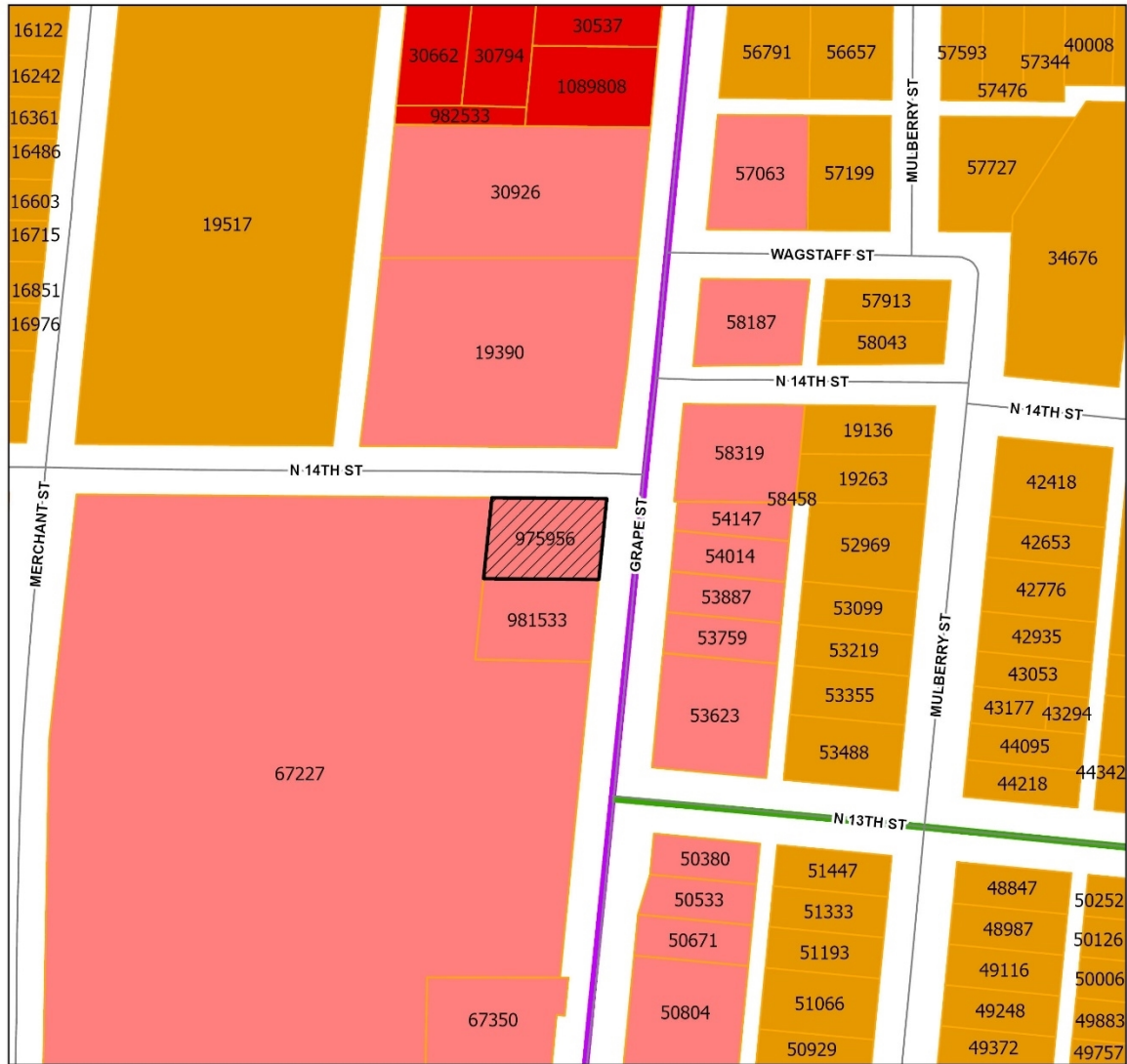
 CUP-2024-10
 Courier Parcels
 Collector
 Minor

0.03 Miles





ZONING MAP



Legend

- CUP-2024-10
- Courier Parcels
- GC (General Commercial)
- GR (General Retail)
- MD (Residential - Medium Density)
- Collector
- Minor

0.03

Miles



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USES IN GENERAL RETAIL ZONING

RESIDENTIAL USES:

- P Bed & Breakfast
- P Dwelling – Industrialized Housing Unit
- P Dwelling – Institutional
- C Dwelling – Multiple-Family
- P Dwelling – Single Family Detached
- P Hotel/Motel

ACCESSORY AND INCIDENTAL USES:

- P Accessory Structure (Also see Division 4 of this article)
- P Antenna, Non-Commercial/Amateur
- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P/C Day Care Operation – Home Based
- P Drive-Thru Facility
- TP Field Office or Construction Office (temporary)
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- P Fuel Sales
- P Garage Sales
- P Home Occupation
- TP Itinerant Business
- P Manufacturing (incidental)
- TP Mobile Home (temporary security residence)
- P Recreation Building, Multipurpose
- P Recreation Equipment, Mobile (storage and parking)
- P Recycling Collection Point
- P Subdivision Sales Office (temporary)
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- P Tennis Courts, Private (accessory to residential use)
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CULTURAL AND RECREATIONAL USES:

- P Civic, Social, and Fraternal Organization
- P Cultural Facilities
- C Recreation – Outdoors (active)
- P Recreation – Outdoors (passive)
- P Recreation and Commercial Entertainment - Indoor

GOVERNMENT, HEALTH, SAFETY AND WELFARE USES:

- C Ambulance Service
- P Fire/Police Station
- P Medical/Dental Laboratory
- P Post Office
- C Social Service Facility

EDUCATIONAL AND RELIGIOUS USES:

- P Arts School
- P Church or Place of Worship
- P Day-Care Operation - Center-Based
- P Educational and Scientific Research
- P School: Public/Private
- C Trade/Business School
- P University/College

SERVICE:

- P/C Automobile Wash
- C Funeral Home/ Mortuary/Morgue
- P Kennel (Without Outdoor Pens)
- P Laundry/Dry Cleaning Services & Facilities
- P Office (general, professional, financial)
- P Personal Services
- C Printing, Copying, Reproduction, Publishing
- P Repair and Maintenance Services - Automobile/Small Truck (minor)
- P Repair and Maintenance Services (indoor)
- C Tattoo Parlor
- P Veterinary Service (small animals)

TRADE – RETAIL USES:

- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P Fuel Sales
- P Liquor Store (Off Premises Consumption) (*Defined under Liquor Store*)
- P Liquor Store (On Premises Consumption) (*Defined under Liquor Store*)
- P Restaurant, Brew Pub
- P Restaurant, Fast Food
- P Restaurant, Standard
- P Retail Sales/Rental (indoor)
- C Retail Sales/Rental (outdoors, non-vehicle)

TRANSPORTATION, COMMUNICATION AND UTILITIES:

- C Antenna Tower- Commercial
- P Automobile Parking Lot or Structure - Commercial
- P Broadcast Studio
- P Public Utility Facility

RESOURCE PRODUCTION AND EXTRACTION USES:

- P Petroleum or Gas Well
- P Urban Garden

LEGEND

- P Permitted as a Right-of-Use (may be subject to compliance with conditions described within Division 3- Requirements Applicable to Specific Land Uses of the Land Development Code)
- C Permitted as a Conditional Use Permit, Requiring Approval by City Council
- TP Permitted by Temporary Permit Only, Requiring Approval by Board of Adjustment





PROPERTY VIEWS



CITY OF
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TEXAS



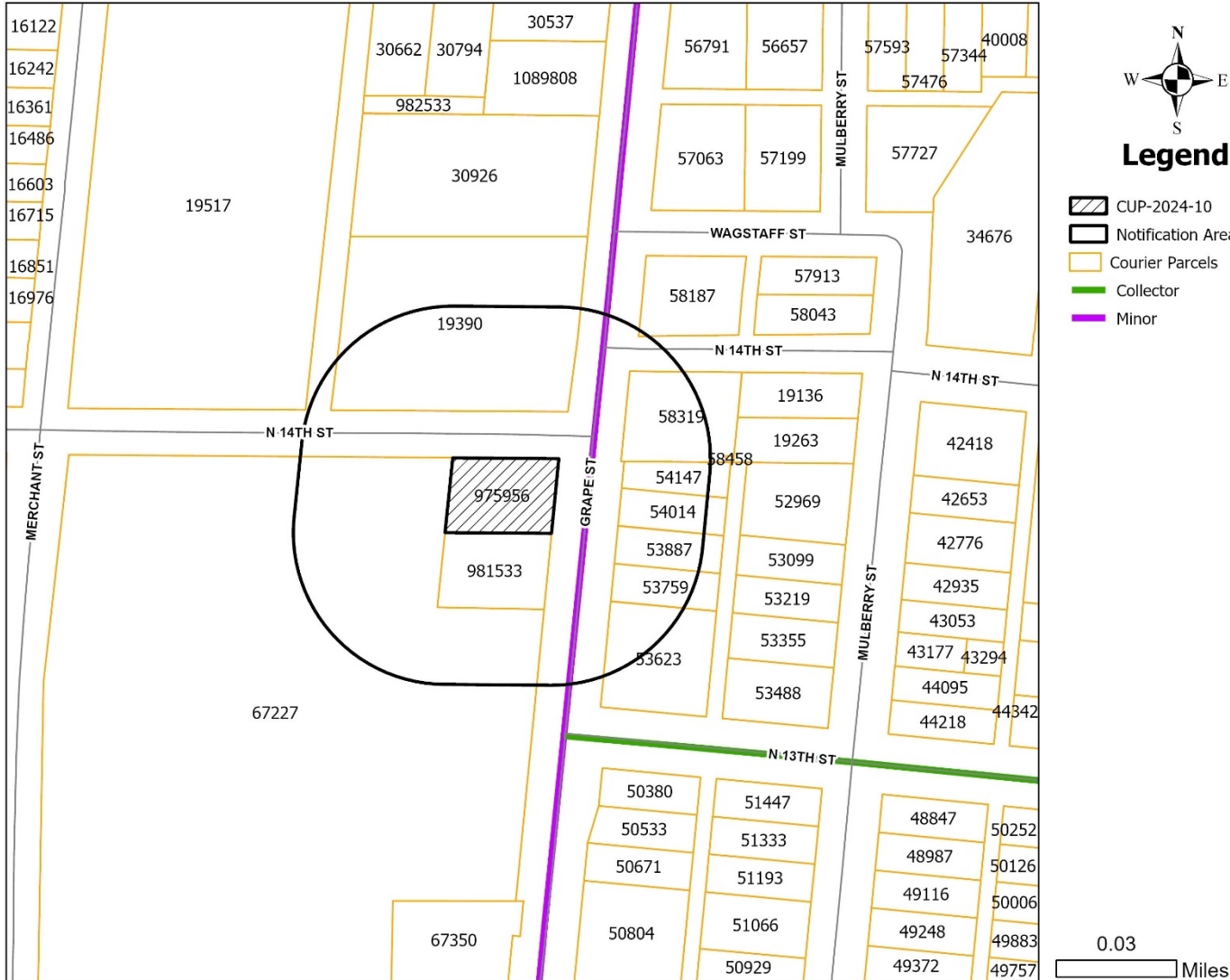
PROPERTY VIEWS



CITY OF
ABILENE
TEXAS



NOTIFICATION AREA MAP



0- In Favor- ●
0- Opposed- ●





FINDINGS AND RECOMMENDATION

The proposed request is consistent with:

- The *Comprehensive Plan*;
- The surrounding uses and zoning; or
- The Criteria for Approval in the LDC.

Staff Recommendation:

Staff recommends **approval** of the Conditional Use Permit, subject to the following conditions:

1. A building permit must be applied for within 30 days of approval.
2. The freight container must comply with all applicable LDC requirements, as listed in the staff report.





Questions?



a. *Screening.*

1. Freight Containers in Agricultural Open Space districts and Commercial districts shall be screened from public right-of-way, except alleys.
2. Freight containers in any district shall be screened from adjacent properties with zoning designations other than HI, LI, HC, and GC.
3. Screening, as required in subsections a.1 and a.2 above, shall be accomplished through the use of landscaping as indicated below:
 - i. A continuous hedge with a mature height of at least five feet achieved within one year, and
 - ii. Trees with a mature height of at least ten feet spaced at twenty-foot intervals.
 - iii. Alternative screening of a minimum seven feet height of an opaque material consisting of wood fencing and/or masonry walls may be approved by the Development Review Committee (DRC) where landscaping would not be practical or appropriate.

b. *Location and Appearance in Certain Zoning Districts.* In HC or GC districts, freight containers shall be located in the rear of the main structure and shall be a solid color to match the dominant color of the principal structure. In AO districts, freight containers shall be located a minimum of 200 feet from property lines.

c. *Signage.* Freight containers shall not have signs, logos, or other markings, other than small, incidental labeling, visible from the right-of-way or visible from adjacent properties with zoning designations other than HI, LI, HC, and GC.

d. *Building Permit Required.* A building permit shall be obtained for each container and each shall meet all building and development regulations, with the exception that building separation requirements shall apply to separation from freight containers to other structures, not between multiple freight containers.

e. *Storage Freight Containers.* Freight containers used only for storage shall meet the building requirements as a "temporary structure," regardless of the length of time it is in use on the property, with the exception that any ventilation requirements that would apply to a permanent structure also apply to a permanently placed freight container.

f. *Stacking Prohibited.* Freight containers shall not be stacked.

g. *Number of Freight Containers and Distance to Property Lines in AO Zoning.* Only 1 freight container is permitted by right in the AO zoning district. A Conditional Use Permit is required if more than 1 freight container is proposed or if a freight container is proposed to be less than 200 feet from a property line.

ZONING CASE OAM-2024-01

STAFF REPORT

Scheduled Hearings

Planning & Zoning Commission: November 5, 2024
City Council 1st Reading: November 21, 2024
City Council 2nd Reading: December 5, 2024

Applicant

City of Abilene

Case Manager

Don Green – Transportation Services Director

Request

An amendment to the Land Development Code (LDC) to repeal Section 2.3.5.1, “*Airport Zoning*”, and replace it Section 2.3.5.1 “*Airport Zoning*”, as revised.

Airport Zoning Ordinance Purposes

1. Protect health, safety, and general welfare of the public, where it is recognized that obstructions, aircraft accidents, and excessive noise have the potential for endangering or harming the lives and/or property of users or occupants of land in the vicinity of Abilene Regional Airport and Dyess Air Force Base.
2. Regulate airport zoning hazard areas and compatible land uses surrounding airports in the City of Abilene, pursuant to Chapter 241 of the Texas Local Government Code, as amended.

Background

The City of Abilene was the sponsor of the Joint Land Use Study (JLUS) which considered the impact of development around Dyess Air Force Base (DAFB) and how certain surrounding development could affect the ability of DAFB to complete its mission and purpose in the future.

The City of Abilene worked with stakeholders from Taylor County, DAFB, the City of Tye, representatives from View and Caps communities, and interested property owners. The final JLUS report that was unanimously adopted includes recommendations intended to allow DAFB to satisfy its purposes and mission, protect public health and safety, and to not unnecessarily dilute the property rights of area property owners. Several of the JLUS recommendations pertain to land development and require an amendment to the Airport Zoning regulations of the Land Development Code to implement.

Proposed Amendment

The attached ordinance, if approved, would repeal and replace the existing Airport Zoning regulations and implement the development-related recommendations of the JLUS report.

Staff Recommendation

Staff recommends **approval**.

Attachment

Proposed Airport Zoning regulations

City of Abilene
Division 5 - Airport Zoning

Section 2.3.5.1 Airport Zoning

- (a) Purpose. It is the purpose of this Section to protect health, safety, and general welfare of the public, where it is recognized that obstructions, aircraft accidents, and excessive noise have the potential for endangering or harming the lives and/or property of users or occupants of land in the vicinity of Abilene Regional Airport and Dyess Air Force Base (Dyess AFB). It is further the purpose of this Section to regulate airport zoning hazard areas and compatible land uses surrounding airports in the City of Abilene, pursuant to Chapter 241 of the Texas Local [Government] Code, as amended, and to preserve and maintain existing and future operational capabilities of Abilene Regional Airport and Dyess AFB.
- (b) Applicability. This Section establishes regulations applicable to all land located within the boundary of the Airport Zoning for operational areas around Abilene Regional Airport and Dyess AFB, as adopted and depicted on the official Zoning Map for the City of Abilene. All airport zoning regulations shall be in accordance with Local Government Code § 241.001, et seq., as amended, and shall apply within the corporate limits and unincorporated areas within the extraterritorial jurisdiction of the City of Abilene, as well as the Airport Hazard Areas in and surrounding Abilene Regional Airport and Dyess AFB. The use of all land and any natural growth, structures, or any other obstructions upon the land, and the height, construction, reconstruction, alteration, expansion, or relocation of any natural growth, structures, or any other obstructions upon the land, shall conform to all regulations contained in and applicable to this Section. No land, natural growth, structure, or other obstruction shall be erected, constructed, used, replaced, altered, and/or maintained for any purpose or in any manner other than permitted by this section.
- (c) Background. The Dyess AFB Joint Land Use Study (JLUS) was completed in January 2018. The JLUS was developed through a collaborative process among the City of Abilene, the City of Tye, Taylor County, property owners and residents including within the View/Caps Community, the Abilene Chamber of Commerce, and Dyess AFB. Through the JLUS process, stakeholders collaborated to identify and assess existing, perceived, and potential compatible and incompatible/not recommended activities between Dyess AFB and the surrounding communities. The outcome of the JLUS was a series of recommendations to assist in promoting and guiding sustainable growth for Dyess AFB and the surrounding community. Among the recommendations were several to amend the existing Abilene Airport Zoning regulations, without limiting property owner and development rights related to safety concerns and noise generated by activities at Dyess AFB.

It is important to note that throughout the Dyess AFB JLUS process, property owners in the unincorporated View/Caps Community to the south and west of Dyess AFB were very involved and invested in the JLUS process and development of the study. As property owners in the areas affected by safety (clear zones and accident potential zones) and noise generated by aircraft operating at Dyess AFB, these citizens were influential in the assessment of the JLUS compatibility issues, particularly regarding safety and noise. While it is part of the JLUS process to identify and assess existing conditions (e.g., safety and noise zones from aircraft operations that goes outside of the boundaries of Dyess AFB), many of the current View/Caps property owners have publicly stated that they do not have any concerns with safety or noise, and they accept the levels of safety concerns and noise generated by aircraft at Dyess AFB. These property owners are proud to have Dyess AFB as their neighbor and have voiced their continued support for Dyess AFB's missions.

The development and establishment of the Airport Zoning ordinance was a collaborative process involving the City of Abilene, City of Tye, Taylor County, Dyess AFB, and property owners within the affected area. While the Dyess AFB Air Installation Compatible Use Zone Study (AICUZ) Study recommendations were used as a starting point in the process, the ultimate decisions made by the City of Abilene took some of the AICUZ recommendations into consideration, but intentionally does not contain all of them. These decisions were made to accommodate local preferences, quality of life, and desired lifestyle of the community. Land use regulations are also established by the ordinance, which are similar to the recommendations outlined in the AICUZ; however, there are some differences which were agreed upon by all parties that participated in the development of the ordinance. Noise regulations within the Dyess AFB noise contours were considered for inclusion in the Airport Zoning ordinance, but were omitted through a public process in which many of the property owners within the noise contours publicly stated that they accept the risks and potential impacts associated with noise generated by Dyess AFB aircraft operations and requested that noise regulations be removed from the ordinance, which it was.

In lieu of regulating land use and development within the Dyess AFB noise contours through this Airport Zoning ordinance, the City of Abilene and other JLUS stakeholders agreed to utilize educational materials such as brochures and maps to inform existing and future property owners about the boundaries of the noise contours and potential implications of developing within them.

- (d) Definitions. The following words and phrases, whenever used in this Section, shall be defined as follows:
- (1) “Accident Potential Zone” (“APZ”) means a land use control area beyond the clear zones of a military runway that possesses a significant potential for accidents;
 - (2) “Air Installation Compatible Use Zone (AICUZ) Study” means a study developed by Dyess AFB to provide information about aircraft operations at Dyess AFB that cause noise and safety hazards and to provide recommendations for local communities to inform land use planning around Dyess AFB;
 - (3) “Air Operations Area” means any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron;
 - (4) “Airport” means the Abilene Regional Airport and/or Dyess AFB;
 - (5) “Airport Elevation” means the established elevation of the highest point on the usable landing area;
 - (6) “Airport Hazard” means any natural growth, structure, any other potential obstruction, or use of land which obstructs the airspace required for, or is otherwise potentially hazardous to, the flight of aircraft in landing or taking off at an airport or that interferes with visual, radar, radio, or other systems for tracking, acquiring data relating to, monitoring, or controlling aircraft;
 - (7) “Airport Hazard Area” means an area of land or water on which an airport hazard could exist;
 - (8) “Bird / Wildlife Aircraft Strike Hazard (BASH)” means the likely occurrence for a collision between an airborne animal or an animal on the ground and an aircraft on or near a runway. The BASH Relevancy Area is a five-statute mile area around Airports where risk is highly associated with BASH;
 - (9) “Board of Adjustment” means the City of Abilene Board of Adjustment, as created by the City’s Charter and defined in this Code of the City of Abilene and by State law;

- (10) “Centerline” means a line extending through the midpoint of each end of a runway;
- (11) “Compatible Land Use” means a use of land adjacent to or in the vicinity of an airport that does not have the potential to endanger the health, safety, or welfare of the owners, occupants, or users of the land because of levels of noise or vibrations or the risk of personal injury or property damage created by the operations of the airport including the taking off and landing of aircraft;
- (12) “Day Night Average Noise Level” (“DNL”) means a 24-hour time-averaged sound exposure level, adjusted for average-day sound source operations. In the case of aircraft noise, a single operation is equivalent to a single aircraft departure, approach;
- (13) “Decibel (dB)” means a unit of measure based on a logarithmic scale. A 10 dB increase in noise level corresponds to a 100 percent increase (doubling) in perceived loudness;
- (14) “FAA” means the Federal Aviation Administration;
- (15) “Hazard to Air Navigation” means an obstruction determined to have an adverse effect on the safe and efficient utilization of the navigable airspace;
- (16) “Height” is determined by mean sea level elevation, unless otherwise specified;
- (17) “Imaginary Surfaces Map” refers to the current map for the Abilene Regional Airport, as amended, created pursuant to 14 Code of Federal Regulations (C.F.R) Part 77, a true and correct copy of which is maintained at the Abilene Regional Airport Administrative Office and the City of Abilene Planning Department;
- (18) “Instrument Runway” means a runway equipped or to be equipped with electronic or visual air navigation aids adequate to permit the landing of aircraft under restricted visibility conditions. It also means a runway for which a precision approach system is planned, as so indicated on an approved airport layout plan or any other airport planning document or map;
- (19) “Joint Land Use Study (JLUS)” means a planning tool developed through the collaborative efforts of a comprehensive set of stakeholders in a defined study area in order to identify compatibility / recommended land use guidelines within, and adjacent to, active military installations.
- (20) “Landing Area” means the area of the airport used for the landing, take off, or taxiing of aircraft;
- (21) “Landing Zone” (“LZ”) means a landing zone consisting of a runway, a runway and taxiway, or other aircraft operational surfaces (e.g., aprons, turnarounds). An LZ is a prepared or semi-prepared (unpaved) airfield used to conduct military operations in an airfield environment similar to forward operating locations. LZ runways are typically shorter and narrower than standard runways;
- (22) “Larger than Utility Runway” means a runway that is constructed for and intended to be used by propeller-driven aircraft of greater than 12,500 pounds maximum gross weight and jet-powered aircraft.
- (23) “Mean Sea Level (MSL)” means the average height of water in the sea used as the datum plane to measure land elevation;
- (24) “Military Imaginary Surfaces Map” refers to the most recent map indicating zones in and surrounding Dyess AFB, a true and correct copy of which is maintained in the City of Abilene Planning Department;
- (25) “Natural Growth” means any tree, shrub, grass, or other item found in nature that is flora;

- (26) “Noise Contour” means a geographical representation of DNL noise levels;
- (27) “Noise Contours Map” refers to the most recent map and attachments, as amended, developed by Abilene Regional Airport and Dyess AFB, respectively, pursuant to 14 C.F.R. Part 150, indicating estimated noise levels and compatible land uses for zones surrounding the Abilene Regional Airport and Dyess AFB, a true and correct copy of which is maintained at the Abilene Regional Airport Administrative Office and the City of Abilene Planning Department, and Dyess, respectively, as well as online at www.abilenetx.gov and at <https://storymaps.arcgis.com/stories/83da8ff08d4c4528ab046cb50368cf2c>;
- (28) “Noise Level Reduction” means the voluntary incorporation of sound attenuation measures (outdoor to indoor) into the design and construction of a Structure;
- (29) “Nonconforming/Not recommended Structure” means any Structure, existing on land which does not conform to the regulations, relative to its size, height, or location, within the district in which it is located. Nonconforming/Not recommended Structures may not be improved or enlarged, except as provided for in this Section, or pursuant to a Variance or Special Exception granted by the Board of Adjustment;
- (30) “Nonconforming/Not recommended Use” means any activity or use of land which was approved prior to the enactment of this Section, but does not conform to the regulations of the district in which it is located pursuant to this Section or is not recommended for use. Any nonconforming/not recommended use existing at the time of the enactment of this Section may be continued, except as provided in this Section;
- (31) “Obstruction” means any structure, tree, plant, or other object of natural growth that penetrates an imaginary surface or is determined by the Federal Aviation Administration to interfere with the established aviation traffic pattern;
- (32) “Planning Department” means the City of Abilene department responsible for the City’s planning and zoning activities, currently referred to as the Planning and Development Services Department.
- (33) “Planning Director” means the City of Abilene Director of Planning and Development Services or designee;
- (34) “Precision Instrument Runway” means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS) or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated on an approved airport layout plan or any other planning document;
- (35) “Primary Surface” means a surface longitudinally centered on a runway. When the runway has a specifically prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; for military runways or when the runway has no specifically prepared hard surface, the primary surface ends at each end of that runway. The width of the primary surfaces for Abilene Regional Airport and Dyess AFB are more particularly described in subsection (e);
- (36) “Runway” means a defined area on an airport prepared for landing and take-off of aircraft along its length;
- (37) “Structure” means any object, including a mobile object, constructed or installed by man, including without limitation, any building, physical improvement, tower, smokestack, earth formation, and overhead transmission lines;
- (38) “Utility Runway” means a runway that is constructed for and intended to be used by propeller-

driven aircraft of 12,500 pounds maximum gross weight and less;

(39) “Visual Runway” means a runway intended solely for the operation of aircraft using visual approach procedures;

(e) Surfaces; Zones; Height Limitations; and Noise Zones.

(1) Abilene Regional Airport.

a. Imaginary Surfaces. There are hereby established and designated certain surfaces, as shown on the Imaginary Surfaces Map for Abilene Regional Airport. The surfaces are more particularly described and defined as follows:

1. “Approach Surface” means a surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope, as described in this Section. The perimeter of the approach surface coincides with the perimeter of the approach zone;
2. “Conical Surface” means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet;
3. “Horizontal Surface” means a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of the airport and connecting the adjacent arcs by lines tangent to those arcs. For all visual runways designated as utility or visual, the radius of each arc is 5,000 feet; for all other runways, the radius of each arc is 10,000 feet. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.
4. “Transitional Surfaces” means the surfaces extending outward at 90-degree angles to the runway centerline and the runway centerline extended at a slope of 7 feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces. Transitional surfaces, for those portions of the precision approach surfaces which project through and beyond the limits of the conical surfaces, extend a distance of 5,000 feet, measured horizontally from the edge of the approach surface and at 90-degree angles to the extended runway centerline.

b. Height Limitations; Zones. There are hereby created and established certain zones which include all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to Abilene Regional Airport. Such zones are shown on the Imaginary Surfaces Map, and more particularly described as follows. Except as otherwise provided in this Section, no structure, natural growth, or other obstruction shall be erected, altered, allowed to grow, or maintained in any zone contained in this Section to a height level above the applicable surfaces on the outer or upper edge of the below-described zones. An area located in more than one of the following zones is considered to be only in the zone with the more restrictive height limitation.

1. Utility Runway Visual Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is 250 feet wide. The approach zone expands outward uniformly to a width of 1,250 feet at a horizontal distance of 5,000 feet from the

primary surface. Its centerline is the continuation of the centerline of the runway.

2. Runway Larger than Utility With a Visibility Minimum as Low as 3/4 Mile Non-Precision Instrument Approach Zone: the inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 4,000 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
 3. Precision Instrument Runway Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 16,000 feet at a horizontal distance of 50,000 feet from the primary surface. Its centerline is the continuation of the runway.
 4. Transitional Zones: The transitional zones are the areas beneath the transitional surfaces.
 5. Horizontal Zone: A horizontal zone is hereby established by swinging arcs of 5,000 feet radii for all runways designated utility or visual and 10,000 feet for all others from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.
 6. Conical Zone: A Conical Zone is hereby established as the area that commences at the periphery of the Horizontal Zone and extends outward there from a horizontal distance of 4,000 feet. The Conical Zone does not include the Approach Zones and Horizontal Zones.
- c. Noise Zones. For the purpose of regulating the development areas which possess a noise hazard for certain land uses, so as to promote compatibility between the airport and the surrounding land uses, protect the airport from incompatible/not recommended use encroachment, and promote and protect the health, safety, and general welfare of property users, noise zones are hereby established within and surrounding the areas of the Abilene Regional Airport, as follows:
1. Zone Boundaries. The boundaries of said zones are established as shown on the most recent Noise Contours Map, as amended.
 2. Compatible Land Uses. Compatible land uses within the noise zones are established as shown on the most recent Noise Contours Map, as amended.
 3. A copy of the most recent Noise Contours Map, as amended, is on file in the Administrative Office of the Abilene Regional Airport and the City of Abilene Planning Department.

(2) Dyess Air Force Base.

- a. Imaginary Surfaces. There are hereby established and designated certain surfaces, as shown on the Military Imaginary Surfaces Map. The surfaces are described as follows:
 1. "Approach Clearance Surface" means an inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the Approach Clearance Surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation, which is 1789 feet above mean sea level for Dyess AFB. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end

is the same as the primary surface, it flares uniformly, and the width at 50,000 feet is 16,000 feet.

2. “Conical Surface” means a surface extending outward and upward from the periphery of the inner horizontal surface at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.
 3. “Inner Horizontal Surface” means a plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.
 4. “LZ Approach-Departure Clearance Surface” means an imaginary surface that is an inclined plane arranged symmetrically about the runway centerline extended, beginning at the end of the clear zone, 500 feet beyond each end of the runway threshold, and extending 10,500 feet. The slope of the surface is 35 to 1 along the runway centerline extended until it reaches an elevation of 300 feet above the runway end elevation. The width of this surface at the clear zone end is 500 feet flaring uniformly until it reaches a width of 2,500 feet at 10,500 feet.
 5. “Outer Horizontal Surface” means a plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
 6. “Primary Surface” means a surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet.
 7. “Transitional Surfaces” means the surfaces that connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.
- b. Height Limitations: Zones. There are hereby created and established certain zones which include all of the land beneath the Approach Clearance Surface, Conical Surface, Inner Horizontal Surface, LZ Approach-Departure Clearance Surface, Outer Horizontal Surface, Primary Surface, and Transitional Surface as they apply to Dyess AFB. Such zones are shown on the Military Imaginary Surfaces Map, and more particularly described in subsection a above. Except as otherwise provided in this Section, no structure, natural growth, or other obstruction shall be erected, altered, allowed to grow, or maintained in any zone contained in this Section to a height level above the surfaces established and described in subsection (2) above. An area located in more than one of these zones is considered to be only in the zone with the more restrictive height limitation. A property owner wishing to erect or maintain a structure or natural growth that exceeds the height limitations of this subsection may apply for a variance, as described in Section 2.3.5.1 (j) (7).
- c. Clear Zones. Clear Zones are areas on the ground, located at the end of each runway. They possess a high potential for accidents and their use is restricted to be compatible with aircraft operations in accordance with Table 1 below. Clear Zones are 3,000 feet long measured along the extended runway centerline beginning at the runway end. They are 3,000 feet wide centered on and measured at right angles to the extended runway centerline.

- d. Accident Potential Zones (APZs). APZs are areas on the ground located beyond the Clear Zone of each runway. They possess a potential for accidents and their use is restricted in accordance with Table 1.
1. APZ I. APZ I begins at the end of the Clear Zone, and is centered and measured on the extended centerline. It is 3,000 feet wide and 5,000 feet long.
 2. APZ II. APZ II begins at the end of APZ I, and is centered and measured on the extended runway centerline. It is 3,000 feet wide and 7,000 feet long.
 3. LZ APZs. LZ APZs begin at the end of the LZ Clear Zone, and are centered and measured on the extended runway centerline. They are 500 feet wide and 2,500 feet long.
- e. Land Use Restrictions.
1. An individual single-family residential structure, including manufactured housing, shall be permitted on a lot of 1 acre or larger, except within the Clear Zone associated with Dyess AFB. This does not eliminate the need for an Airport Zone Development Permit.
 2. An individual single-family residential structure, including manufactured housing or allowable accessory structure, meaning any object, including a mobile object, constructed or installed by man, including without limitation, any building or structure, physical improvement, tower, smokestack, earth formation, overhead transmission lines, garages, carports, shops, barns, storage buildings, etc. or similar uses used in conjunction or not in conjunction with residential or similar uses, shall be permitted on an existing legally platted lot, or a lot subdivided prior to 1984, even if the area of the lot is less than 1 acre, except within the Clear Zone associated with Dyess AFB. This does not preclude the acceptance of utility services water, electrical, sewer, or any other utility.
 3. An individual single-family residential structure, including manufactured housing and any other type of building/structure, shall not exceed a height greater than thirty-five (35) feet if the structure penetrates an established Military Imaginary Surface.
 4. Future development within the APZ I and APZ II shall conform to Table 1 Dyess Air Force Base Land Use Restrictions. A property owner wishing to erect a structure in APZs I or II that is not allowed in Table 1 may apply for a Special Exception as described in Section 2.3.5.1 (j) (8).
 5. Except as otherwise stated in this ordinance, previously approved nonconforming/not recommended uses in the APZs I and II that do not conform to Table 1 Dyess Air Force Base Land Use Restrictions may be replaced, but not expanded in square footage unless a Special Exception is approved. Such replacement may not expand square footage or increase the density and intensity of the original nonconforming/not recommended use unless a Special Exception is approved.

Table 1
Dyess Air Force Base
Land Use Restrictions

Land Use	APZ I	APZ II
RESIDENTIAL USES¹		
Bed & Breakfast	No	Yes ²
Dwelling - Duplex	No	Yes ²
Dwelling - Industrialized Housing	Yes ²	Yes ²
Dwelling - Institutional	No	No
Dwelling - Manufactured Home (HUD-Code)	No	Yes ²
Dwelling - Mobile Home	No ¹	Yes ^{1, 2}
Dwelling - Multiple-Family	No	No
Dwelling - Patio Home	Yes ^{1, 2}	Yes ^{1, 2}
Dwelling - Single Family Detached	Yes ^{1, 2}	Yes ^{1, 2}
Dwelling - Townhome	No	No
Group Home	No	No
Hotel/Motel	No	No
Travel Trailer/ Recreational Vehicle	No ¹	Yes ^{1, 2}
Vacation Travel Trailer Park	No	No
ACCESSORY & INCIDENTAL USE		
Accessory Structure	Yes ¹	Yes ¹
Animal Lot	Yes ³	Yes ³
Antenna, Non-Commercial/ Amateur	Yes	Yes
ATMs, Self-Serve Kiosks, and Similar Facilities	Yes	Yes
Day Care Operation - Home-Based	No	No
Dwelling - Accessory	Yes ^{1, 2}	Yes ^{1, 2}

Drive-Thru Facility	No	Yes
Field Office or Construction Office (temporary)	Yes	Yes
Freight Container	Yes	Yes
Fuel Sales	No	No
Garage Sale	Yes	Yes
Home Occupation	Yes ^{1, 2}	Yes ^{1, 2}
Itinerant Business	No	Yes
Manufacturing	SE ⁴	SE ⁴
Mobile Home (permanent security residence)	No	Yes
Mobile Home (temporary security residence)	No	Yes
Mobile Home or Temporary Building (office for sales and service)	No	Yes
Recreation Building, Multipurpose	Yes ⁵	Yes ⁵
Recycling Collection Point	Yes	Yes
Subdivision Sales Office (temporary)	No	Yes
Swimming Pool, Private (accessory to residential use)	Yes	Yes
Tennis Court, Private (accessory to residential use)	Yes	Yes
Travel Trailers (accessory to hospitals)	No	Yes
CULTURAL & RECREATION USE		
Adult Entertainment Enterprise	No	No
Civic, Social, and Fraternal Organization	No	No
Cultural Facilities	No	No
Drive-in Theater	No	No
Fairgrounds/Rodeo	No	No
Motorized Racing	No	No
Recreation - Outdoors (active and passive)	Yes ⁵	Yes ⁵
Recreation and Commercial Entertainment	No	No

Zoo	No	No
GOVERNMENT, HEALTH, SAFETY, AND WELFARE USES		
Ambulance Service	No	SE
Community Home	No	No
Correction, Detention, or Penal Facilities	No	No
Fire/Police Station	No	SE
Homeless/Emergency Shelter	No	No
Hospital	No	No
Medical/Dental Laboratory	No	No
Military and Armed Forces Reserve Center	No	No
Military Base and Reservation	No	No
Personal Care Facility	No	No
Post Office	No	SE
Rehabilitation Facility	No	No
Sanitary Landfill	No	No
Social Service Facility	No	No
EDUCATIONAL & RELIGIOUS USES		
Arts School	No	No
Cemetery, Crematorium, and Mausoleum	Yes ⁶	Yes ⁶
Church or Place of Worship	No	No
Day-Care Operation - Center-Based	No	No
Educational and Scientific Research	No	No
School: Public/Private	No	No
Trade/Business School	No	No
University/College	No	No
SERVICE		

Automobile Wash	Yes	Yes
Cabinet Making; Carpentry and Wood Flooring Services	SE ⁴	Yes ⁴
Contractor Services	Yes	Yes
Delivery Services	SE	Yes
Drilling-Rig Repair (sand and water blasting)	SE ⁴	Yes ⁴
Electrical Motor Repair	SE	Yes
Equipment Repair, Services, and Sales	SE	Yes
Exterminating and Fumigating Services	SE ⁴	Yes ⁴
Farm Equipment Repair, Services, and Sales	SE	Yes
Funeral Home/Mortuary/Morgue	No	No
Heating, Ventilation, Air-Conditioning Services	SE ⁴	Yes ⁴
House Wrecking and Demolition	SE ⁴	Yes ⁴
Kennel (With Outdoor Pens)	Yes	Yes
Kennel (Without Outdoor Pens)	Yes	Yes
Landscaping Services	SE	Yes
Laundry, Dry Cleaning, Dyeing, and Linen Service (no retail customers)	No	Yes
Laundry/Dry Cleaning Services & Facilities	No	Yes
Machine Shops	SE ⁴	Yes ⁴
Masonry, Concrete, Stonework, Tile Setting, and Plastering Services	SE ⁴	Yes ⁴
Office (general, professional, financial)	No	Yes
Oilfield Service	SE ⁴	Yes ⁴
Oil Well Drilling Contractors	SE ⁴	Yes ⁴
Paint and Body Repairs, Services, and Sales	SE	Yes
Personal Services	No	Yes
Pet Services and Sales	SE	Yes
Pipe Cleaning and Testing (sand and water blasting)	SE ⁴	Yes ⁴

Plumbing Services	SE	Yes
Printing, Copying, Reproduction, Publishing	No	Yes
Recycling Collection and Processing Center	Yes	Yes
Refrigerated Warehousing	SE ⁴	Yes ⁴
Repair and Maintenance Services - Automobile/Small Truck (major)	Yes	Yes
Repair and Maintenance Services - Automobile/Small Truck (minor)	Yes	Yes
Repair and Maintenance Services (indoor)	Yes	Yes
Repair and Maintenance Services (outdoors)	Yes	Yes
Repair and Maintenance Services (truck and other large vehicles)	Yes	Yes
Roofing and Sheet Metal Services	SE	Yes
Scales (public)	Yes	Yes
Storage - Self-Service Units	Yes	Yes
Storage and Warehousing (general)	SE ⁴	Yes ⁴
Tattoo Parlor	No	Yes
Taxidermist	No	Yes
Veterinary Service (all size animals)	No	No
Veterinary Service (small animals)	No	No
Water Well Drilling Services	SE ⁴	Yes ⁴
Welding and Cutting Services and Sales	SE ⁴	Yes ⁴
Wrecker/Towing	Yes	Yes
TRADE - RETAIL USES		
Aircraft and Accessories	Yes	Yes
ATMs, Self-Serve Kiosks, and Similar Facilities	Yes	Yes
Convenience Store	No	Yes
Fuel Sales	No	No
Liquor Store (Off Premises Consumption)	No	Yes

Liquor Store (On Premises Consumption)	No	No
Restaurant, Fast Food	No	No
Restaurant, Standard	No	No
Retail Sales/Rental (automobile/small truck)	Yes	Yes
Retail Sales/Rental (indoor)	No	Yes
Retail Sales/Rental (outdoors, non-vehicle)	No	Yes
Retail Sales/Rental (trucks and other large vehicles and equipment)	Yes	Yes
Scrap and Waste Material	Yes	Yes
TRADE - WHOLESALE USES		
Liquor, Wholesale/Distribution	Yes	Yes
Livestock - Wholesale only (no auction)	Yes ³	Yes ³
Wholesaling and Storage (indoor) ⁷	Yes	Yes
Wholesaling and Storage (outdoors) ⁷	Yes	Yes
TRANSPORTATION, COMMUNICATION, & UTILITIES		
Airport, Heliport and Flying Field Terminals - Commercial (passenger and freight)	No	No
Antenna Tower - Commercial	Yes ⁸	Yes
Automobile Parking Lot or Structure - Commercial	Yes ⁸	Yes
Broadcast Studio	No	No
Passenger Ground Transportation Terminal	No	Yes
Pressure Control Station	Yes ⁸	Yes
Public Utility Facility	Yes ⁸	Yes
Railroad Switching and Marshalling Yard	Yes ⁸	Yes
Utility Generation, Production, Treatment	Yes ⁸	Yes
RESOURCE PRODUCTION & EXTRACTION		
Farming, Ranching & Livestock, Hatchery	Yes ³	Yes ³
Feedlot, Commercial	Yes ³	Yes ³

Mining	Yes ⁹	Yes ⁹
Petroleum or Gas Well	No	No
Liquor	Yes	Yes
Manufacturing (light)	SE ⁴	SE ⁴
Manufacturing (heavy)	SE ⁴	SE ⁴

Notes:

- Any nonconforming/not recommended use approved prior to or at the time of the enactment of this Airport Zoning regulation may be continued.
- Any land use not listed in Table 1 will be evaluated based on a similar use from the table. If such similar use is allowed within APZ I or APZ II, the not-listed use will be allowed without the need for a Special Exception approved by the Board of Adjustment.
- Yes = The use is allowed.
- Yes (with superscript number) = The use is allowed, but may have stipulations.
- No = The use is not allowed; however, any proposed use identified as “No” may be submitted through a Special Exception process for consideration for approval by the Board of Adjustment after being reviewed by Dyess AFB.
- SE = A Special Exception approved by the Board of Adjustment after being reviewed by Dyess AFB is required.

¹ - Existing lots of less than 1 acre that were legally platted, or that were subdivided prior to 1984, are allowed one residence.

² - The maximum density is one (1) dwelling unit per acre.

³ - Activities that attract concentrations of birds creating a hazard to aircraft operations should be excluded.

⁴ - Except for chemicals and allied products; precision equipment; apparel and other finished products; products made from fabrics, leather and similar materials; petroleum refining and related industries; Rubber and miscellaneous plastic products; professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks; or other hazardous or noise/vibration-sensitive uses. No activity which produces smoke, glare, or involves explosives.

⁵ - Facilities such as playgrounds, club houses, meeting places, auditoriums, large classes, etc., are not permitted.

⁶ - No chapels or houses of worship are allowed within APZ I or APZ II.

⁷ - Big box home improvement stores are not included as part of this category.

⁸ - No above ground passenger terminals and no above ground power transmission or distribution lines at a height greater than 50 feet above Dyess AFB airport elevation. Prohibited power lines include high-voltage transmission lines and distribution lines that provide power to cities, towns, or regional power for unincorporated areas.

⁹ - Surface mining operations that could create retention ponds that may attract waterfowl and present bird/wildlife aircraft strike hazards (BASH), or operations that produce dust or light emissions that could affect pilot vision are not compatible. No activity which produces smoke, glare, or involves explosives.

In addition to the above listed restrictions, no use shall have hazardous materials stored on-site other than minimal, incidental storage of small quantities[.]

f. Noise Zones.

Residential developments and other land uses within Noise Zones may be recommended to consider sound attenuation measures to reduce potential interior noise impacts and achieve a maximum interior noise level of 45 dB DNL. While regulated sound attenuation measures may not be necessary in the Noise Zones due to personal preferences of property owners, the City of Abilene maintains educational materials for interested property owners or developers who want to learn more information about how to reduce interior noise levels inside their residential or other structure. This will alert buyers on the potential for noise impacts in areas close to Dyess AFB. The materials would be educational and not mandatory requirements.

For the purpose of guiding the development of areas which possess a noise hazard to certain land uses, so as to promote compatibility between Dyess AFB and the surrounding land uses and protect the airport from incompatible/not recommended encroachment, noise zones are hereby established within and surrounding the areas of Dyess AFB as follows.

1. Noise Zone Boundaries. The boundaries of said noise zones are established as shown on the most recent Dyess AFB Noise Contours Map, as amended.
2. A copy of the most recent Noise Contours Map, as amended, is on file in the Administrative Office of the Abilene Regional Airport and the City of Abilene Planning Department and online at www.abilenetx.gov
<https://storymaps.arcgis.com/stories/83da8ff08d4c4528ab046cb50368cf2c>.
3. New development within the Noise Zones is subject to the following regulations.
 - i. No new mobile and/or manufactured home parks or zones shall be established within any Noise Zone.

(f) Bird /Wildlife Aircraft Strike Hazard (BASH).

All development within a five (5) statute mile radius of the Air Operations Area at Abilene Regional Airport or Dyess AFB shall adhere to the following use standards.

- (1) Solid Waste Landfills. New solid waste landfills are prohibited. Solid waste landfills are defined as any discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile.
- (2) Solid Waste Landfill Transfer Stations. All new landfill transfer stations shall meet the following criteria.
 - a. Shall be fully-enclosed and receive garbage behind closed doors;
 - b. Process received garbage via compaction, incineration, or similar manner; and
 - c. Remove all residue by enclosed vehicles.
 - d. Solid Waste Landfill Transfer Stations are prohibited if they:
 1. Handle or store putrescible waste outside or in a partially enclosed structure accessible to wildlife.

2. Are open on one or more sides.
 3. Store uncovered quantities of municipal solid waste outside, even if only for a short time.
 4. Use semi-trailers that leak or have trash clinging to the outside.
 5. Do not control odors by ventilation and filtration systems (odor masking is not acceptable).
- (3) **Water Management Facilities.** Water management facilities include drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, and ponds that result from mining activities. For the purpose of this section, ponds refer to stagnant bodies of water that may be natural or constructed and exclude residential and public swimming pools and other constructed facilities where water is circulated for filtration and chemical treatment. All new water management facilities shall meet the following criteria.
- a. Designed and operated so as not to create above-ground standing water.
 - b. Stormwater detention ponds shall be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, steep-sided, rip-rap lined, narrow, linearly shaped water detention basins shall be used.
 - c. The following Water Management Facilities are prohibited:
 1. New wastewater management facilities or associated settling ponds.
 2. Artificial marshes.
- (4) **Aquaculture.** All new aquaculture activities shall be within fully enclosed buildings. Aquaculture activities outside fully enclosed buildings are prohibited.

(g) Solar Energy Development and Solar Panels.

The requirements of this Section shall apply to any application for municipal approval for the erection and maintenance of solar energy development or solar panels within five statute miles around Abilene Regional Airport or Dyess AFB, or as otherwise described below, excluding solar panels for use on a private residence or business to be used exclusively for that residence or business.

- (1) Applications for solar energy development projects within five miles of Dyess AFB only shall include a mission compatibility evaluation from the DoD Military Aviation and Installation Assurance Siting Clearinghouse, if deemed necessary by consultation with Dyess AFB.
- (2) Applications for solar energy development projects shall include details related to the siting of facilities and distance from Abilene Regional Airport or Dyess AFB, energy capacity output, height of structures and facilities, and construction technology.
- (3) Applications for solar energy development projects shall include a glare analysis that satisfies the requirements of the 2013 FAA Interim Policy 78 FR 63276 regarding yellow glare, glare at Air Traffic Control Towers and analysis and observer characteristics.

(h) Use Restrictions; Interference.

- (1) Notwithstanding any other provision of this Section, no use may be made of land within any zone

established by this Section in such manner as to create electrical interference with navigational signals or radio communication between the airports and aircraft, and aircraft, make it difficult for flyers to distinguish between airport lights and others, result in glare in the eyes of pilots or air traffic controllers using the airport, impair visibility in the vicinity of the airports, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, taking off, or maneuvering of aircraft intending to use the airport.

- (2) No structure, natural growth, or other obstruction, except for those allowed as identified in Section 2.3.5.1 (e) (2) e., shall be placed, erected, or allowed to grow to a height that would penetrate a 100-to-one slope from any point on a runway to the outer limits of the extraterritorial jurisdiction and/or Airport Hazard Area, without a determination as to the impact of such use. The City, and Dyess AFB shall be responsible for evaluating the impacts of the structure, natural growth or other obstruction, and findings shall be reported to the Planning Director for evaluation and determination of the potential impact. The Board of Adjustment shall be responsible for approving, conditionally approving, or denying the placement of a structure, natural growth, or other obstruction exceeding this slope, except as stated in Section 2.3.5.1 (j) (1) a.

(i) Nonconforming/Not Recommended Uses and Structures; Abandonment; Replacement.

- (1) Regulation not retroactive. The regulations prescribed in this Section shall not be construed to require the removal, lowering, or other changes or alteration of any structure, natural growth, or other obstruction not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of any nonconforming/not recommended use. Nothing herein contained shall require any change in the construction, alteration, or intended use of any Structure, if the construction, alteration, or use began prior to the effective date of this Section and is diligently prosecuted or completed.
- (2) Nonconforming/Not Recommended Use. Any nonconforming/not recommended use under this Section is subject to the conditions and procedures set forth in this Code.
- (3) Replacement of Nonconforming/Not Recommended Objects of natural growth. A person may not replace a nonconforming/not recommended object of natural growth that has been removed or destroyed.
- (4) A person may renovate a nonconforming/not recommended Structure. The portion of a structure that is renovated must comply with the regulations contained herein, where applicable.
- (5) Replacement/Expansion of Nonconforming/Not Recommended Single-Family Residential Structure. An existing nonconforming/not recommended single-family residential structure, including manufactured housing, may be replaced and/or enlarged even if not otherwise allowed. There shall be no size restrictions other than required by zoning, where applicable.
- (6) Replacement of a Structure on the Site of a Nonconforming/Not Recommended Nonresidential Use. An existing structure on the site of a nonconforming/not recommended nonresidential use that has been damaged or destroyed may be replaced or restored even if not otherwise allowed. However, the replaced or restored structure shall not exceed the size of the damaged or destroyed structure and shall not exceed any height limitations imposed by this ordinance. A property owner replacing a damaged or destroyed nonconforming/not recommended structure who wishes to exceed the size of the damaged or destroyed structure or exceed height limitations imposed by this ordinance may submit a request for a Special Exception. In addition, no such structure shall be permitted if deemed a hazard by the FAA. This provision does not waive the requirement for obtaining an Airport Zone Development Permit, where applicable.

- (7) Any legal, nonconforming/not recommended industrial uses in the APZ I or APZ II area of Dyess AFB may be expanded to the limits of their property as of the effective date of this ordinance, with no limitation on number of employees, but maintaining restrictions on manufacturing or storage of chemical and hazardous materials.
- (8) Marking and Lighting. Notwithstanding the preceding provisions in this Section, the owner of any existing nonconforming/not recommended structure, natural growth, or other obstruction is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Planning Director to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated, and maintained at the expense of the City of Abilene.

(j) Permits.

(1) In General.

- a. Airport Zone Development Permit. Any development, construction, modification, remodeling, or change in use within an area regulated by this Section shall require an Airport Zone Development Permit, with the following exception associated with Dyess AFB.

Any allowable home or other primary structure, addition to an existing home or other primary structure, allowable accessory structure, natural growth, or other object less than 50 feet in height in the APZ I and less than 150 feet in height in the APZ II and beyond shall be exempt from obtaining an Airport Zone Development Permit. This exception does not apply within the Clear Zone associated with Dyess AFB.

- b. This section shall not be interpreted to allow any permit that would:
 1. establish an airport hazard, except as otherwise stated in this ordinance as allowed;
 2. establish a nonconforming/not recommended use, except as otherwise stated in this ordinance as allowed;
 3. allow a nonconforming/not recommended structure, object of natural growth, or other obstruction to become higher than it was on the date this Section was adopted, except as otherwise stated in this ordinance as allowed;
 4. allow a nonconforming/not recommended structure, object of natural growth, other obstruction, or use to become a greater hazard to air navigation than it was on the date this Section was adopted, except as otherwise stated in this ordinance as allowed.
- c. No permit shall be granted to construct, modify, reconstruct, or remodel any Structure or other obstruction to a height of 150 feet or greater, unless an FAA Determination of No Hazard to Air Navigation has been obtained and provided to the Planning Director. Construction must comply with all applicable limitations and/or requirements contained herein and FAA guidelines.
- d. A permit issued for a particular land use on a site is intended to allow multiple and recurring activities identified in the permit without the need for a separate permit for each.
- e. There shall be no separate permit fee for an Airport Zone Development Permit.

- (2) Except as provided in subsection (j)(1)b. above, an application for permit shall be granted.

- (3) New Construction. No material change shall be made in the use of land and no structure, natural growth, or other obstruction, unless exempted above, shall be erected, altered, planted, or otherwise established in any zone hereby created, unless an Airport Zone Development Permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired with sufficient particularity to permit a determination as to whether the resulting use, structure, natural growth, or other obstruction, would conform to the regulations herein prescribed.
- (4) New Use. No material change shall be made in the use of a structure or property, unless an Airport Zone Development Permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired with sufficient particularity to permit a determination as to whether the resulting use would conform to the regulations herein prescribed.
- (5) Noise. Noise regulations are hereby established for new construction and rehabilitation, rebuilding, or remodeling, of existing construction within Abilene Regional Airport Noise Zones, as follows:
 - a. Abilene Regional Airport. In the area within 65 DNL or greater noise contour, as shown in the latest Noise Contours Map for the Abilene Regional Airport, as amended, a permit shall be required for any use or structure as identified by the FAA as requiring Noise Level Reduction (NLR). Such permits shall be issued when the Planning Director has approved noise attenuation measures consistent with FAA requirements and approval is obtained from the FAA.
 - b. Certificate of Occupancy or Final Building Approval. For those properties identified by the Noise Contours Map as requiring NLR measures within the incorporated city limits of the City of Abilene, no Certificate of Occupancy or Final Building Approval shall be issued, until the appropriate general contractor or subcontractor of a property provides a copy of the FAA requirements for NLR and verifies that such noise attenuation measures have been properly taken with regard to the property.
 - c. Airport Zone Development Permit. For those properties identified by the Noise Contours Map, as amended, as requiring NLR measures within the extraterritorial jurisdiction of the City of Abilene, an Airport Zone Development Permit is required prior to the construction of a structure. No Airport Zone Development Permit shall be issued until the appropriate general [contractor] or subcontractor of a property provides a copy of the FAA requirements for NLR and verifies that such noise attenuation measures will be taken with regard to the property.
 - d. Routine maintenance of a nonconforming/not recommended structure does not invoke the requirements of this subsection.
- (6) Nonconforming/Not Recommended Uses Abandoned or Destroyed. Whenever the Planning Director determines that a nonconforming/not recommended structure or natural growth has been abandoned or more than 50 percent torn down, damaged, destroyed, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or natural growth to exceed the height limit for that zone or otherwise deviate from the regulations contained in this Section or this Chapter.
- (7) Variances. Any person desiring to erect or increase the height of any structure or permit the growth of any natural growth or use his/her property in any manner inconsistent with the regulations prescribed in this Section may apply to the Board of Adjustment for a variance from such regulation(s). Procedural rules regarding variances contained in Code of the City of Abilene apply to this Section.

For all zones established in this Section, the application for variance may be required to be accompanied by a determination from the Federal Aviation Administration (FAA) as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable airspace. Such variances may be allowed. In reaching its decision to grant a variance, the Board of Adjustment shall determine that all of the following conditions are present: a literal application or enforcement of the regulations in this Section will result in unnecessary hardship, and relief, if granted, will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the spirit of this Section.

In addition, no application for a variance to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Airport Development Board (regarding Abilene Regional Airport Zones) or the Dyess AFB Base Civil Engineer (regarding Dyess AFB Zones) for a recommendation as to the aeronautical effects of the requested variance, as more particularly set forth in subsection (l).

- (8) Special Exceptions. Any person desiring to erect, rebuild, or remodel any structure within an Abilene Regional Airport noise zone may apply to the Board of Adjustment for a Special Exception, for a determination as to what noise abatement measures must be included in such construction or remodeling. Procedural rules and standards for granting or denying Special Exceptions contained in this Code of the City of Abilene apply to this Section. In addition, no application for a Special Exception to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Airport Development Board (regarding Abilene Regional Airport Zones) for a recommendation as to the aeronautical or sound effects of the requested variance.

Unless otherwise exempted within this ordinance, any person desiring to erect, rebuild, or remodel any structure, or change land use in a non-recommended manner within a Dyess AFB accident potential zone, as defined in this ordinance, may apply to the Board of Adjustment for a Special Exception of density or intensity stipulations. Procedural rules and standards for granting or denying Special Exceptions contained in this Code of the City of Abilene apply to this Section. In addition, no application for a Special Exception to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Dyess AFB Base Civil Engineer for review of density/intensity.

- (9) Hazard marking and lighting. Any permit or variance granted may, if such action is deemed advisable to effectuate the purpose of this Section and be reasonable under the circumstances, be so conditioned as to require the owner of the structure, natural growth, or other obstruction in question, at his/her own expense, to install, operate, and maintain thereon, such markers and lights as may be necessary to indicate to flyers the presence of a potential airport hazard.

- (10) Subdivision Plat Acknowledgement of Abilene Regional Airport or Dyess AFB Operations. Applicants for plat approval of land subject to regulations within this Section shall be required to sign an acknowledgement statement and include a note on the plat documentation indicating they understand that the land subject of the plat is within an area that may experience potential impacts or effects associated with aircraft operations at Abilene Regional Airport or military operations at Dyess AFB.

- (11) Other Conditions. The Board of Adjustment may place reasonable conditions upon the granting of any variance or special exception.

- (k) Enforcement. It shall be the duty of the Planning Director to administer and enforce the regulations prescribed herein. Applications for permits and variances shall be made to the Planning Director upon a

form furnished by the Planning Department. Applications required by this Section to be submitted to the Planning Director shall be promptly considered and granted or denied by said Planning Director. Applications for action by the Board of Adjustment shall be forthwith transmitted by the Planning Director.

(l) Board of Adjustment.

(1) The Board of Adjustment is hereby granted the authority, in addition to its other duties and powers, to have and exercise the following powers:

- a. to hear and decide appeals from any order, requirement, decision, or determination made by the Planning Director, in the enforcement of this Section;
- b. to hear and decide special exceptions to the terms of this Section;
- c. to hear and decide requests for variances of the requirements of this Section.

(2) Decisions made by the Board of Adjustment, appeals, and judicial review related to this Section shall be in accordance with this Code.

(3) Recommendation to the Board.

a. Abilene Regional Airport.

The Abilene Regional Airport Development Board may make a recommendation, in writing or by representative, to the Board of Adjustment, regarding any matter before the Board that may have an effect on the Abilene Regional Airport. The Planning Director shall promptly forward any application for a variance or special exception, including any relevant material, to the Airport Development Board for consideration at its next available regular meeting. The Airport Development Board shall thereafter notify the Planning Director of its determination regarding the matter, at any time after the regular meeting, and no later than the date necessary to include the matter on the agenda for the next available regular Board of Adjustment meeting.

b. Dyess Air Force Base.

The Dyess AFB Base Civil Engineer may make a recommendation, in writing or by representative, to the Board of Adjustment, regarding any matter before the Board that may have an effect on Dyess AFB. The Planning Director shall promptly forward any application for a variance or special exception, including any relevant material, to the Dyess AFB Base Civil Engineer for consideration. A representative of the Dyess AFB Base Civil Engineer shall thereafter promptly notify the Planning Director of its determination regarding the matter, at any time after receiving the application from the City of Abilene, and not later than 15 days after receipt. Promptly and within a reasonable time after the 15 days has elapsed or a response has been received from the Dyess AFB Base Civil Engineer (whichever is earlier), the Planning Director shall include the matter on the agenda for the next available regular Board of Adjustment meeting.

(m) Violations and Penalties.

(1) It shall be unlawful for any person to violate any regulation, order, or ruling promulgated under this Section.

(2) Each day a violation occurs shall constitute a separate offense. The daily Penalties will be

suspended upon application for Special Exception or request for Variance.

- (3) Any person who violates any provision of this Section shall be guilty of a misdemeanor, punishable by a fine as set forth in Chapter 1, [Sec. 1-9](#) of the Code of the City of Abilene.

(n) Civil Remedies.

- (1) The City Attorney may enforce this Section by injunction, declaratory relief, or other action at law or in equity.
- (2) Any structure erected or used, or any work done, contrary to any of the provisions of this Section or to any of the details contained in the final site plan or Airport Zone Development Permit approved by the City is hereby declared to be unlawful and shall constitute a violation of this Section. The Council may direct the City Attorney to initiate injunction, mandamus, abatement, or any other action available in law or equity to prevent, enjoin, abate, correct or remove the unlawful structure, use or work.
- (3) In addition to any other remedies which may be available at law or in equity, the City may sue in the appropriate district court for an injunction to prohibit the violation of, or to enforce compliance with, any regulation contained in this Section.

(o) Amendments.

- (1) As part of the development of an amendment to this Section, a committee shall be appointed to participate in the development of the amendment language. This committee shall include the County Commissioner whose precinct is within the affected area around Dyess AFB and at least three (3) property owners whose property is located within an area affected by the Section, to include the current Dyess AFB accident potential zones or noise contours, who shall be appointed by said County Commissioner.
- (2) Prior to approval of an amendment to this Section, this committee shall have a minimum of 60 days to review and comment on any proposed amendment.

(p) Exemptions.

The following uses are exempt from the Airport Zoning regulations, unless otherwise regulated through other sections:

- (1) Agricultural Use. This regulation shall not be used to regulate any operational aspect of an existing agricultural use, including the cultivation and harvesting of crops, land management activities (prescribed burning, clearing, spraying and trimming), livestock management, hunting, use and application of water, or ponds/tanks used for watering of livestock or recreational use. Expansion of existing structures and construction of new structures that are accessory for agricultural uses are subject to these regulations to the extent permitted by state law.
- (2) Existing Structures. This regulation shall not restrict or limit the use of legally established, existing land uses and structures as of the effective date of these regulations.

(Ord. No. 8-2010, pt. 1 (Exh. A), 4-22-10; Ord. No. 12-2010, pt. A (Exh. A), 6-10-10)



ORDINANCE AMENDMENT REQUEST

Case: OAM-2024-01

Applicant: City of Abilene
Don Green, Transportation Services Director

Request: An amendment to the Land Development Code (LDC) to repeal Section 2.3.5.1 “*Airport Zoning*” and replace it with Section 2.3.5.1 “*Airport Zoning*”, as revised.

Planning & Zoning: November 5, 2024

Council Hearing: November 21, 2024
December 5, 2024





Airport Zoning Regulations - Purpose

The purpose of the Airport Zoning regulations are to:

1. Protect health, safety, and general welfare of the public, where it is recognized that obstructions, aircraft accidents, and excessive noise have the potential for endangering or harming the lives and/or property of users or occupants of land in the vicinity of Abilene Regional Airport and Dyess Air Force Base.
2. Regulate airport zoning hazard areas and compatible land uses surrounding Dyess AFB and Abilene Regional Airport pursuant to Chapter 241 of the Texas Local Government Code, as amended.





Airport Zoning Regulations

Generally speaking, airport zoning regulations:

1. Are highly technical and 3-dimensional relative to airport Clear Zones (CZ) and the height of buildings and structures in proximity to CZ areas; and
2. Restrict development in:
 - Accident Potential Zones (APZ) beyond the runway clear zones;
 - Noise Zones (NZ) where the sound of aircraft may be detrimental to public health and safety; and
 - Areas where residential uses are not appropriate in relation to the locations of CZ, APZ, and NZ zones.





JLUS Report and Recommendations

- The City of Abilene sponsored the Joint Land Use Study (JLUS) to assess the impact of new development in proximity to Dyess AFB.
- The study included stakeholders from Taylor County, City of Tye, Dyess AFB, and representatives from the View/Caps communities.
- The study resulted in recommendations to mitigate the impacts of aircraft traffic on new residential uses and to ensure that new residential development will not diminish the ability of Dyess AFB to accomplish its purposes and missions in the future.
- One of the JLUS recommendation is to revise the Airport Zoning Ordinance to incorporate the JLUS recommendations.





JLUS Report Conclusions and Considerations

1. The stakeholders agreed that amendments to the LDC were needed to ensure:
 - That undeveloped areas around Dyess AFB are developed in a manner that will allow Dyess AFB to continue to fulfill its on-going purposes and missions;
 - That the rights of property owners in the regulated areas will not be unnecessarily diluted; and
 - Similar considerations are necessary for Abilene Regional Airport for the same purposes and rationale.
2. The term “non-compatible use” was revised to “not-recommended”.
3. The voting members of the committee unanimously approved the final report.
4. The proposed ordinance will implement the development related JLUS recommendations.





FINDINGS AND RECOMMENDATIONS

The proposed ordinance is consistent with:

- The *Comprehensive Plan*;
- The *JLUS Study* recommendations;
- Generally accepted military and civilian airport management principals; and
- The Criteria for Approval in the LDC.

Staff Recommendation: **Approval**





Questions?



ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF ABILENE, TEXAS, AMENDING CHAPTER 2 (ZONING REGULATIONS) OF THE LAND DEVELOPMENT CODE (LDC) SPECIFICALLY TO REPEAL SECTION 2.3.5.1, "AIRPORT ZONING" AND TO REPLACE SAID SECTION WITH SECTION 2.3.5.1 "AIRPORT ZONING", AS REVISED, TO IMPLEMENT LAND DEVELOPMENT RECOMMENDATIONS OF THE JOINT LAND USE STUDY (JLUS); CALLING A PUBLIC HEARING; PROVIDING A PENALTY AND AN EFFECTIVE DATE.

WHEREAS, the City Council desires to continue to protect health, safety, and general welfare of the public, where it is recognized that obstructions, aircraft accidents, and excessive noise have the potential for endangering or harming the lives and/or property of users or occupants of land in the vicinity of Abilene Regional Airport and Dyess Air Force Base (AFB); and

WHEREAS, the City Council desires to continue to regulate airport zoning hazard areas and compatible land uses surrounding Dyess AFB and Abilene Regional Airport pursuant to Chapter 241 of the Texas Local Government Code, as amended; and

WHEREAS, the City Council desires to ensure that new residential development will not be located in areas that could diminish the ability of Dyess AFB and Abilene Regional Airport from accomplishing their respective purposes and place residences in proximity to "Accident Potential Zones" and "Noise Zones"; and

WHEREAS, the City Council desires to protect the property rights of owners surrounding Dyess AFB or Abilene Regional Airport; and

WHEREAS, the City Council sponsored the Joint Land Use Study (JLUS) to assess the relationship between the development of vacant properties surrounding Dyess AFB and Abilene Regional Airport with ability of each to accomplish their purposes and missions; and

WHEREAS, the City Council recognizes that the JLUS report was completed in a cooperative and inclusive manner with the stakeholders of the City of Abilene, City of Tye, Taylor County, representatives from the View and Caps communities, and area land owners and that the final JLUS report was unanimously approved by the stakeholders; and

WHEREAS, the City Council wishes to implement those recommendations of the JLUS report that pertain to the development of property by revising Section 2.3.5.1 of the Land Development Code.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ABILENE, TEXAS:

PART 1: That Chapter 2 (Zoning Regulations), Section 2.3.5.1 "Airport Zoning", is hereby repealed and replaced by Section 2.3.5.1 "Airport Zoning", as set out in Exhibit A, attached hereto and made a part of this ordinance for all purposes.

PART 2: That any person, firm or corporation violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not more than Two Thousand Dollars (\$2,000.00). Each day such violation shall continue or be permitted to continue, shall be deemed a separate offense.

PASSED ON FIRST READING the 21st day of November, 2024.

A notice of the time and place, where and when said ordinance would be given a public hearing and considered for final passage, was published in the *Abilene Reporter-News*, a daily newspaper of general circulation in the City of Abilene, said publication being on the 18th day of October 2024, the same being more than fifteen (15) days prior to a public hearing held in the Council Chamber of the City Hall in Abilene, Texas, at 8:30 a.m. on the 5th day of December 2024, to permit the public to be heard prior to final consideration of this ordinance. Said ordinance, being a penal ordinance, becomes effective ten (10) days after its publication in the newspaper, as provided by Section 19 of the Charter of the City of Abilene.

PASSED ON FINAL READING THIS 5th day of December 2024.

ATTEST:

CITY SECRETARY

MAYOR

APPROVED:

CITY ATTORNEY

EXHIBIT A

-END-

City of Abilene
Division 5 - Airport Zoning

Section 2.3.5.1 Airport Zoning

- (a) Purpose. It is the purpose of this Section to protect health, safety, and general welfare of the public, where it is recognized that obstructions, aircraft accidents, and excessive noise have the potential for endangering or harming the lives and/or property of users or occupants of land in the vicinity of Abilene Regional Airport and Dyess Air Force Base (Dyess AFB). It is further the purpose of this Section to regulate airport zoning hazard areas and compatible land uses surrounding airports in the City of Abilene, pursuant to Chapter 241 of the Texas Local [Government] Code, as amended, and to preserve and maintain existing and future operational capabilities of Abilene Regional Airport and Dyess AFB.
- (b) Applicability. This Section establishes regulations applicable to all land located within the boundary of the Airport Zoning for operational areas around Abilene Regional Airport and Dyess AFB, as adopted and depicted on the official Zoning Map for the City of Abilene. All airport zoning regulations shall be in accordance with Local Government Code § 241.001, et seq., as amended, and shall apply within the corporate limits and unincorporated areas within the extraterritorial jurisdiction of the City of Abilene, as well as the Airport Hazard Areas in and surrounding Abilene Regional Airport and Dyess AFB. The use of all land and any natural growth, structures, or any other obstructions upon the land, and the height, construction, reconstruction, alteration, expansion, or relocation of any natural growth, structures, or any other obstructions upon the land, shall conform to all regulations contained in and applicable to this Section. No land, natural growth, structure, or other obstruction shall be erected, constructed, used, replaced, altered, and/or maintained for any purpose or in any manner other than permitted by this section.
- (c) Background. The Dyess AFB Joint Land Use Study (JLUS) was completed in January 2018. The JLUS was developed through a collaborative process among the City of Abilene, the City of Tye, Taylor County, property owners and residents including within the View/Caps Community, the Abilene Chamber of Commerce, and Dyess AFB. Through the JLUS process, stakeholders collaborated to identify and assess existing, perceived, and potential compatible and incompatible/not recommended activities between Dyess AFB and the surrounding communities. The outcome of the JLUS was a series of recommendations to assist in promoting and guiding sustainable growth for Dyess AFB and the surrounding community. Among the recommendations were several to amend the existing Abilene Airport Zoning regulations, without limiting property owner and development rights related to safety concerns and noise generated by activities at Dyess AFB.

It is important to note that throughout the Dyess AFB JLUS process, property owners in the unincorporated View/Caps Community to the south and west of Dyess AFB were very involved and invested in the JLUS process and development of the study. As property owners in the areas affected by safety (clear zones and accident potential zones) and noise generated by aircraft operating at Dyess AFB, these citizens were influential in the assessment of the JLUS compatibility issues, particularly regarding safety and noise. While it is part of the JLUS process to identify and assess existing conditions (e.g., safety and noise zones from aircraft operations that goes outside of the boundaries of Dyess AFB), many of the current View/Caps property owners have publicly stated that they do not have any concerns with safety or noise, and they accept the levels of safety concerns and noise generated by aircraft at Dyess AFB. These property owners are proud to have Dyess AFB as their neighbor and have voiced their continued support for Dyess AFB's missions.

The development and establishment of the Airport Zoning ordinance was a collaborative process involving the City of Abilene, City of Tye, Taylor County, Dyess AFB, and property owners within the affected area. While the Dyess AFB Air Installation Compatible Use Zone Study (AICUZ) Study recommendations were used as a starting point in the process, the ultimate decisions made by the City of Abilene took some of the AICUZ recommendations into consideration, but intentionally does not contain all of them. These decisions were made to accommodate local preferences, quality of life, and desired lifestyle of the community. Land use regulations are also established by the ordinance, which are similar to the recommendations outlined in the AICUZ; however, there are some differences which were agreed upon by all parties that participated in the development of the ordinance. Noise regulations within the Dyess AFB noise contours were considered for inclusion in the Airport Zoning ordinance, but were omitted through a public process in which many of the property owners within the noise contours publicly stated that they accept the risks and potential impacts associated with noise generated by Dyess AFB aircraft operations and requested that noise regulations be removed from the ordinance, which it was.

In lieu of regulating land use and development within the Dyess AFB noise contours through this Airport Zoning ordinance, the City of Abilene and other JLUS stakeholders agreed to utilize educational materials such as brochures and maps to inform existing and future property owners about the boundaries of the noise contours and potential implications of developing within them.

(d) Definitions. The following words and phrases, whenever used in this Section, shall be defined as follows:

- (1) "Accident Potential Zone" ("APZ") means a land use control area beyond the clear zones of a military runway that possesses a significant potential for accidents;
- (2) "Air Installation Compatible Use Zone (AICUZ) Study" means a study developed by Dyess AFB to provide information about aircraft operations at Dyess AFB that cause noise and safety hazards and to provide recommendations for local communities to inform land use planning around Dyess AFB;
- (3) "Air Operations Area" means any area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron;
- (4) "Airport" means the Abilene Regional Airport and/or Dyess AFB;
- (5) "Airport Elevation" means the established elevation of the highest point on the usable landing area;
- (6) "Airport Hazard" means any natural growth, structure, any other potential obstruction, or use of land which obstructs the airspace required for, or is otherwise potentially hazardous to, the flight of aircraft in landing or taking off at an airport or that interferes with visual, radar, radio, or other systems for tracking, acquiring data relating to, monitoring, or controlling aircraft;
- (7) "Airport Hazard Area" means an area of land or water on which an airport hazard could exist;
- (8) "Bird / Wildlife Aircraft Strike Hazard (BASH)" means the likely occurrence for a collision between an airborne animal or an animal on the ground and an aircraft on or near a runway. The BASH Relevancy Area is a five-statute mile area around Airports where risk is highly associated with BASH;
- (9) "Board of Adjustment" means the City of Abilene Board of Adjustment, as created by the City's Charter and defined in this Code of the City of Abilene and by State law;

- (10) "Centerline" means a line extending through the midpoint of each end of a runway;
- (11) "Compatible Land Use" means a use of land adjacent to or in the vicinity of an airport that does not have the potential to endanger the health, safety, or welfare of the owners, occupants, or users of the land because of levels of noise or vibrations or the risk of personal injury or property damage created by the operations of the airport including the taking off and landing of aircraft;
- (12) "Day Night Average Noise Level" ("DNL") means a 24-hour time-averaged sound exposure level, adjusted for average-day sound source operations. In the case of aircraft noise, a single operation is equivalent to a single aircraft departure, approach;
- (13) "Decibel (dB)" means a unit of measure based on a logarithmic scale. A 10 dB increase in noise level corresponds to a 100 percent increase (doubling) in perceived loudness;
- (14) "FAA" means the Federal Aviation Administration;
- (15) "Hazard to Air Navigation" means an obstruction determined to have an adverse effect on the safe and efficient utilization of the navigable airspace;
- (16) "Height" is determined by mean sea level elevation, unless otherwise specified;
- (17) "Imaginary Surfaces Map" refers to the current map for the Abilene Regional Airport, as amended, created pursuant to 14 Code of Federal Regulations (C.F.R) Part 77, a true and correct copy of which is maintained at the Abilene Regional Airport Administrative Office and the City of Abilene Planning Department;
- (18) "Instrument Runway" means a runway equipped or to be equipped with electronic or visual air navigation aids adequate to permit the landing of aircraft under restricted visibility conditions. It also means a runway for which a precision approach system is planned, as so indicated on an approved airport layout plan or any other airport planning document or map;
- (19) "Joint Land Use Study (JLUS)" means a planning tool developed through the collaborative efforts of a comprehensive set of stakeholders in a defined study area in order to identify compatibility / recommended land use guidelines within, and adjacent to, active military installations.
- (20) "Landing Area" means the area of the airport used for the landing, take off, or taxiing of aircraft;
- (21) "Landing Zone" ("LZ") means a landing zone consisting of a runway, a runway and taxiway, or other aircraft operational surfaces (e.g., aprons, turnarounds). An LZ is a prepared or semi-prepared (unpaved) airfield used to conduct military operations in an airfield environment similar to forward operating locations. LZ runways are typically shorter and narrower than standard runways;
- (22) "Larger than Utility Runway" means a runway that is constructed for and intended to be used by propeller-driven aircraft of greater than 12,500 pounds maximum gross weight and jet-powered aircraft.
- (23) "Mean Sea Level (MSL)" means the average height of water in the sea used as the datum plane to measure land elevation;
- (24) "Military Imaginary Surfaces Map" refers to the most recent map indicating zones in and surrounding Dyess AFB, a true and correct copy of which is maintained in the City of Abilene Planning Department;
- (25) "Natural Growth" means any tree, shrub, grass, or other item found in nature that is flora;

- (26) "Noise Contour" means a geographical representation of DNL noise levels;
- (27) "Noise Contours Map" refers to the most recent map and attachments, as amended, developed by Abilene Regional Airport and Dyess AFB, respectively, pursuant to 14 C.F.R. Part 150, indicating estimated noise levels and compatible land uses for zones surrounding the Abilene Regional Airport and Dyess AFB, a true and correct copy of which is maintained at the Abilene Regional Airport Administrative Office and the City of Abilene Planning Department, and Dyess, respectively, as well as online at www.abilenetx.gov (full link is here - <https://storymaps.arcgis.com/stories/83da8ff08d4c4528ab046cb50368cf2c>);
- (28) "Noise Level Reduction" means the voluntary incorporation of sound attenuation measures (outdoor to indoor) into the design and construction of a Structure;
- (29) "Nonconforming/Not recommended Structure" means any Structure, existing on land which does not conform to the regulations, relative to its size, height, or location, within the district in which it is located. Nonconforming/Not recommended Structures may not be improved or enlarged, except as provided for in this Section, or pursuant to a Variance or Special Exception granted by the Board of Adjustment;
- (30) "Nonconforming/Not recommended Use" means any activity or use of land which was approved prior to the enactment of this Section, but does not conform to the regulations of the district in which it is located pursuant to this Section or is not recommended for use. Any nonconforming/not recommended use existing at the time of the enactment of this Section may be continued, except as provided in this Section;
- (31) "Obstruction" means any structure, tree, plant, or other object of natural growth that penetrates an imaginary surface or is determined by the Federal Aviation Administration to interfere with the established aviation traffic pattern;
- (32) "Planning Department" means the City of Abilene department responsible for the City's planning and zoning activities, currently referred to as the Planning and Development Services Department.
- (33) "Planning Director" means the City of Abilene Director of Planning and Development Services or designee;
- (34) "Precision Instrument Runway" means a runway having an existing instrument approach procedure utilizing an Instrument Landing System (ILS) or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated on an approved airport layout plan or any other planning document;
- (35) "Primary Surface" means a surface longitudinally centered on a runway. When the runway has a specifically prepared hard surface, the primary surface extends 200 feet beyond each end of that runway; for military runways or when the runway has no specifically prepared hard surface, the primary surface ends at each end of that runway. The width of the primary surfaces for Abilene Regional Airport and Dyess AFB are more particularly described in subsection (e);
- (36) "Runway" means a defined area on an airport prepared for landing and take-off of aircraft along its length;
- (37) "Structure" means any object, including a mobile object, constructed or installed by man, including without limitation, any building, physical improvement, tower, smokestack, earth formation, and overhead transmission lines;
- (38) "Utility Runway" means a runway that is constructed for and intended to be used by propeller-driven aircraft of 12,500 pounds maximum gross weight and less;

(39) “Visual Runway” means a runway intended solely for the operation of aircraft using visual approach procedures;

(e) Surfaces; Zones; Height Limitations; and Noise Zones.

(1) Abilene Regional Airport.

a. Imaginary Surfaces. There are hereby established and designated certain surfaces, as shown on the Imaginary Surfaces Map for Abilene Regional Airport. The surfaces are more particularly described and defined as follows:

1. “Approach Surface” means a surface longitudinally centered on the extended runway centerline, extending outward and upward from the end of the primary surface and at the same slope as the approach zone height limitation slope, as described in this Section. The perimeter of the approach surface coincides with the perimeter of the approach zone;
2. “Conical Surface” means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet;
3. “Horizontal Surface” means a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of the airport and connecting the adjacent arcs by lines tangent to those arcs. For all visual runways designated as utility or visual, the radius of each arc is 5,000 feet; for all other runways, the radius of each arc is 10,000 feet. The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be the highest determined for either end of the runway. When a 5,000-foot arc is encompassed by tangents connecting two adjacent 10,000-foot arcs, the 5,000-foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.
4. “Transitional Surfaces” means the surfaces extending outward at 90-degree angles to the runway centerline and the runway centerline extended at a slope of 7 feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces. Transitional surfaces, for those portions of the precision approach surfaces which project through and beyond the limits of the conical surfaces, extend a distance of 5,000 feet, measured horizontally from the edge of the approach surface and at 90-degree angles to the extended runway centerline.

b. Height Limitations; Zones. There are hereby created and established certain zones which include all of the land lying beneath the approach surfaces, transitional surfaces, horizontal surfaces, and conical surfaces as they apply to Abilene Regional Airport. Such zones are shown on the Imaginary Surfaces Map, and more particularly described as follows. Except as otherwise provided in this Section, no structure, natural growth, or other obstruction shall be erected, altered, allowed to grow, or maintained in any zone contained in this Section to a height level above the applicable surfaces on the outer or upper edge of the below-described zones. An area located in more than one of the following zones is considered to be only in the zone with the more restrictive height limitation.

1. Utility Runway Visual Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is 250 feet wide. The approach zone expands outward uniformly to a width of 1,250 feet at a horizontal distance of 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.

2. Runway Larger than Utility With a Visibility Minimum as Low as 3/4 Mile Non-Precision Instrument Approach Zone: the inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 4,000 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.
 3. Precision Instrument Runway Approach Zone: The inner edge of this approach zone coincides with the width of the primary surface and is 1,000 feet wide. The approach zone expands outward uniformly to a width of 16,000 feet at a horizontal distance of 50,000 feet from the primary surface. Its centerline is the continuation of the runway.
 4. Transitional Zones: The transitional zones are the areas beneath the transitional surfaces.
 5. Horizontal Zone: A horizontal zone is hereby established by swinging arcs of 5,000 feet radii for all runways designated utility or visual and 10,000 feet for all others from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.
 6. Conical Zone: A Conical Zone is hereby established as the area that commences at the periphery of the Horizontal Zone and extends outward there from a horizontal distance of 4,000 feet. The Conical Zone does not include the Approach Zones and Horizontal Zones.
- c. Noise Zones. For the purpose of regulating the development areas which possess a noise hazard for certain land uses, so as to promote compatibility between the airport and the surrounding land uses, protect the airport from incompatible/not recommended use encroachment, and promote and protect the health, safety, and general welfare of property users, noise zones are hereby established within and surrounding the areas of the Abilene Regional Airport, as follows:
1. Zone Boundaries. The boundaries of said zones are established as shown on the most recent Noise Contours Map, as amended.
 2. Compatible Land Uses. Compatible land uses within the noise zones are established as shown on the most recent Noise Contours Map, as amended.
 3. A copy of the most recent Noise Contours Map, as amended, is on file in the Administrative Office of the Abilene Regional Airport and the City of Abilene Planning Department.

(2) Dyess Air Force Base.

- a. Imaginary Surfaces. There are hereby established and designated certain surfaces, as shown on the Military Imaginary Surfaces Map. The surfaces are described as follows:
 1. "Approach Clearance Surface" means an inclined plane, symmetrical about the runway centerline extended, beginning 200 feet beyond each end of the primary surface at the centerline elevation of the runway end and extending for 50,000 feet. The slope of the Approach Clearance Surface is 50 to 1 along the runway centerline extended until it reaches an elevation of 500 feet above the established airport elevation, which is 1789 feet above mean sea level for Dyess AFB. It then continues horizontally at this elevation to a point 50,000 feet from the point of beginning. The width of this surface at the runway end is the same as the primary surface, it flares uniformly, and the width

at 50,000 feet is 16,000 feet.

2. "Conical Surface" means a surface extending outward and upward from the periphery of the inner horizontal surface at a slope of 20 to 1 for a horizontal distance of 7,000 feet to a height of 500 feet above the established airfield elevation.
 3. "Inner Horizontal Surface" means a plane that is oval in shape at a height of 150 feet above the established airfield elevation. The plane is constructed by scribing an arc with a radius of 7,500 feet about the centerline at the end of each runway and interconnecting these arcs with tangents.
 4. "LZ Approach-Departure Clearance Surface" means an imaginary surface that is an inclined plane arranged symmetrically about the runway centerline extended, beginning at the end of the clear zone, 500 feet beyond each end of the runway threshold, and extending 10,500 feet. The slope of the surface is 35 to 1 along the runway centerline extended until it reaches an elevation of 300 feet above the runway end elevation. The width of this surface at the clear zone end is 500 feet flaring uniformly until it reaches a width of 2,500 feet at 10,500 feet.
 5. "Outer Horizontal Surface" means a plane, located 500 feet above the established airfield elevation, extending outward from the outer periphery of the conical surface for a horizontal distance of 30,000 feet.
 6. "Primary Surface" means a surface located on the ground or water longitudinally centered on each runway with the same length as the runway. The width of the primary surface for runways is 2,000 feet.
 7. "Transitional Surfaces" means the surfaces that connect the primary surfaces, the first 200 feet of the clear zone surfaces, and the approach clearance surfaces to the inner horizontal surface, conical surface, outer horizontal surface or other transitional surfaces. The slope of the transitional surface is 7 to 1 outward and upward at right angles to the runway centerline.
- b. Height Limitations: Zones. There are hereby created and established certain zones which include all of the land beneath the Approach Clearance Surface, Conical Surface, Inner Horizontal Surface, LZ Approach-Departure Clearance Surface, Outer Horizontal Surface, Primary Surface, and Transitional Surface as they apply to Dyess AFB. Such zones are shown on the Military Imaginary Surfaces Map, and more particularly described in subsection a above. Except as otherwise provided in this Section, no structure, natural growth, or other obstruction shall be erected, altered, allowed to grow, or maintained in any zone contained in this Section to a height level above the surfaces established and described in subsection (2) above. An area located in more than one of these zones is considered to be only in the zone with the more restrictive height limitation. A property owner wishing to erect or maintain a structure or natural growth that exceeds the height limitations of this subsection may apply for a variance, as described in Section 2.3.5.1 (j) (7).
- c. Clear Zones. Clear Zones are areas on the ground, located at the end of each runway. They possess a high potential for accidents and their use is restricted to be compatible with aircraft operations in accordance with Table 1 below. Clear Zones are 3,000 feet long measured along the extended runway centerline beginning at the runway end. They are 3,000 feet wide centered on and measured at right angles to the extended runway centerline.
- d. Accident Potential Zones (APZs). APZs are areas on the ground located beyond the Clear

Zone of each runway. They possess a potential for accidents and their use is restricted in accordance with Table 1.

1. APZ I. APZ I begins at the end of the Clear Zone, and is centered and measured on the extended centerline. It is 3,000 feet wide and 5,000 feet long.
2. APZ II. APZ II begins at the end of APZ I, and is centered and measured on the extended runway centerline. It is 3,000 feet wide and 7,000 feet long.
3. LZ APZs. LZ APZs begin at the end of the LZ Clear Zone, and are centered and measured on the extended runway centerline. They are 500 feet wide and 2,500 feet long.

e. Land Use Restrictions.

1. An individual single-family residential structure, including manufactured housing, shall be permitted on a lot of 1 acre or larger, except within the Clear Zone associated with Dyess AFB. This does not eliminate the need for an Airport Zone Development Permit.
2. An individual single-family residential structure, including manufactured housing or allowable accessory structure, meaning any object, including a mobile object, constructed or installed by man, including without limitation, any building or structure, physical improvement, tower, smokestack, earth formation, overhead transmission lines, garages, carports, shops, barns, storage buildings, etc. or similar uses used in conjunction or not in conjunction with residential or similar uses, shall be permitted on an existing legally platted lot, or a lot subdivided prior to 1984, even if the area of the lot is less than 1 acre, except within the Clear Zone associated with Dyess AFB. This does not preclude the acceptance of utility services water, electrical, sewer, or any other utility.
3. An individual single-family residential structure, including manufactured housing and any other type of building/structure, shall not exceed a height greater than thirty-five (35) feet if the structure penetrates an established Military Imaginary Surface.
4. Future development within the APZ I and APZ II shall conform to Table 1 Dyess Air Force Base Land Use Restrictions. A property owner wishing to erect a structure in APZs I or II that is not allowed in Table 1 may apply for a Special Exception as described in Section 2.3.5.1 (j) (8).
5. Except as otherwise stated in this ordinance, previously approved nonconforming/not recommended uses in the APZs I and II that do not conform to Table 1 Dyess Air Force Base Land Use Restrictions may be replaced, but not expanded in square footage unless a Special Exception is approved. Such replacement may not expand square footage or increase the density and intensity of the original nonconforming/not recommended use unless a Special Exception is approved.

Table 1
Dyess Air Force Base
Land Use Restrictions

Land Use	APZ I	APZ II
RESIDENTIAL USES¹		
Bed & Breakfast	No	Yes ²
Dwelling - Duplex	No	Yes ²
Dwelling - Industrialized Housing	Yes ²	Yes ²
Dwelling - Institutional	No	No
Dwelling - Manufactured Home (HUD-Code)	No	Yes ²
Dwelling - Mobile Home	No ¹	Yes ^{1, 2}
Dwelling - Multiple-Family	No	No
Dwelling - Patio Home	Yes ^{1, 2}	Yes ^{1, 2}
Dwelling - Single Family Detached	Yes ^{1, 2}	Yes ^{1, 2}
Dwelling - Townhome	No	No
Group Home	No	No
Hotel/Motel	No	No
Travel Trailer/ Recreational Vehicle	No ¹	Yes ^{1, 2}
Vacation Travel Trailer Park	No	No
ACCESSORY & INCIDENTAL USE		
Accessory Structure	Yes ¹	Yes ¹
Animal Lot	Yes ³	Yes ³
Antenna, Non-Commercial/ Amateur	Yes	Yes
ATMs, Self-Serve Kiosks, and Similar Facilities	Yes	Yes
Day Care Operation - Home-Based	No	No
Dwelling - Accessory	Yes ^{1, 2}	Yes ^{1, 2}
Drive-Thru Facility	No	Yes
Field Office or Construction Office (temporary)	Yes	Yes
Freight Container	Yes	Yes
Fuel Sales	No	No
Garage Sale	Yes	Yes
Home Occupation	Yes ^{1, 2}	Yes ^{1, 2}
Itinerant Business	No	Yes
Manufacturing	SE ⁴	SE ⁴
Mobile Home (permanent security residence)	No	Yes
Mobile Home (temporary security residence)	No	Yes
Mobile Home or Temporary Building (office for sales and service)	No	Yes
Recreation Building, Multipurpose	Yes ⁵	Yes ⁵
Recycling Collection Point	Yes	Yes
Subdivision Sales Office (temporary)	No	Yes
Swimming Pool, Private (accessory to residential use)	Yes	Yes
Tennis Court, Private (accessory to residential use)	Yes	Yes
Travel Trailers (accessory to hospitals)	No	Yes
CULTURAL & RECREATION USE		
Adult Entertainment Enterprise	No	No
Civic, Social, and Fraternal Organization	No	No
Cultural Facilities	No	No
Drive-in Theater	No	No
Fairgrounds/Rodeo	No	No
Motorized Racing	No	No
Recreation - Outdoors (active and passive)	Yes ⁵	Yes ⁵
Recreation and Commercial Entertainment	No	No

Zoo	No	No
GOVERNMENT, HEALTH, SAFETY, AND WELFARE USES		
Ambulance Service	No	SE
Community Home	No	No
Correction, Detention, or Penal Facilities	No	No
Fire/Police Station	No	SE
Homeless/Emergency Shelter	No	No
Hospital	No	No
Medical/Dental Laboratory	No	No
Military and Armed Forces Reserve Center	No	No
Military Base and Reservation	No	No
Personal Care Facility	No	No
Post Office	No	SE
Rehabilitation Facility	No	No
Sanitary Landfill	No	No
Social Service Facility	No	No
EDUCATIONAL & RELIGIOUS USES		
Arts School	No	No
Cemetery, Crematorium, and Mausoleum	Yes ⁶	Yes ⁶
Church or Place of Worship	No	No
Day-Care Operation - Center-Based	No	No
Educational and Scientific Research	No	No
School: Public/Private	No	No
Trade/Business School	No	No
University/College	No	No
SERVICE		
Automobile Wash	Yes	Yes
Cabinet Making; Carpentry and Wood Flooring Services	SE ⁴	Yes ⁴
Contractor Services	Yes	Yes
Delivery Services	SE	Yes
Drilling-Rig Repair (sand and water blasting)	SE ⁴	Yes ⁴
Electrical Motor Repair	SE	Yes
Equipment Repair, Services, and Sales	SE	Yes
Exterminating and Fumigating Services	SE ⁴	Yes ⁴
Farm Equipment Repair, Services, and Sales	SE	Yes
Funeral Home/Mortuary/Morgue	No	No
Heating, Ventilation, Air-Conditioning Services	SE ⁴	Yes ⁴
House Wrecking and Demolition	SE ⁴	Yes ⁴
Kennel (With Outdoor Pens)	Yes	Yes
Kennel (Without Outdoor Pens)	Yes	Yes
Landscaping Services	SE	Yes
Laundry, Dry Cleaning, Dyeing, and Linen Service (no retail customers)	No	Yes
Laundry/Dry Cleaning Services & Facilities	No	Yes
Machine Shops	SE ⁴	Yes ⁴
Masonry, Concrete, Stonework, Tile Setting, and Plastering Services	SE ⁴	Yes ⁴
Office (general, professional, financial)	No	Yes
Oilfield Service	SE ⁴	Yes ⁴
Oil Well Drilling Contractors	SE ⁴	Yes ⁴
Paint and Body Repairs, Services, and Sales	SE	Yes
Personal Services	No	Yes
Pet Services and Sales	SE	Yes
Pipe Cleaning and Testing (sand and water blasting)	SE ⁴	Yes ⁴
Plumbing Services	SE	Yes
Printing, Copying, Reproduction, Publishing	No	Yes
Recycling Collection and Processing Center	Yes	Yes
Refrigerated Warehousing	SE ⁴	Yes ⁴
Repair and Maintenance Services - Automobile/Small Truck (major)	Yes	Yes
Repair and Maintenance Services - Automobile/Small Truck (minor)	Yes	Yes

Repair and Maintenance Services (indoor)	Yes	Yes
Repair and Maintenance Services (outdoors)	Yes	Yes
Repair and Maintenance Services (truck and other large vehicles)	Yes	Yes
Roofing and Sheet Metal Services	SE	Yes
Scales (public)	Yes	Yes
Storage - Self-Service Units	Yes	Yes
Storage and Warehousing (general)	SE ⁴	Yes ⁴
Tattoo Parlor	No	Yes
Taxidermist	No	Yes
Veterinary Service (all size animals)	No	No
Veterinary Service (small animals)	No	No
Water Well Drilling Services	SE ⁴	Yes ⁴
Welding and Cutting Services and Sales	SE ⁴	Yes ⁴
Wrecker/Towing	Yes	Yes
TRADE - RETAIL USES		
Aircraft and Accessories	Yes	Yes
ATMs, Self-Serve Kiosks, and Similar Facilities	Yes	Yes
Convenience Store	No	Yes
Fuel Sales	No	No
Liquor Store (Off Premises Consumption)	No	Yes
Liquor Store (On Premises Consumption)	No	No
Restaurant, Fast Food	No	No
Restaurant, Standard	No	No
Retail Sales/Rental (automobile/small truck)	Yes	Yes
Retail Sales/Rental (indoor)	No	Yes
Retail Sales/Rental (outdoors, non-vehicle)	No	Yes
Retail Sales/Rental (trucks and other large vehicles and equipment)	Yes	Yes
Scrap and Waste Material	Yes	Yes
TRADE - WHOLESALE USES		
Liquor, Wholesale/Distribution	Yes	Yes
Livestock - Wholesale only (no auction)	Yes ³	Yes ³
Wholesaling and Storage (indoor) ⁷	Yes	Yes
Wholesaling and Storage (outdoors) ⁷	Yes	Yes
TRANSPORTATION, COMMUNICATION, & UTILITIES		
Airport, Heliport and Flying Field Terminals - Commercial (passenger and freight)	No	No
Antenna Tower - Commercial	Yes ⁸	Yes
Automobile Parking Lot or Structure - Commercial	Yes ⁸	Yes
Broadcast Studio	No	No
Passenger Ground Transportation Terminal	No	Yes
Pressure Control Station	Yes ⁸	Yes
Public Utility Facility	Yes ⁸	Yes
Railroad Switching and Marshalling Yard	Yes ⁸	Yes
Utility Generation, Production, Treatment	Yes ⁸	Yes
RESOURCE PRODUCTION & EXTRACTION		
Farming, Ranching & Livestock, Hatchery	Yes ³	Yes ³
Feedlot, Commercial	Yes ³	Yes ³
Mining	Yes ⁹	Yes ⁹
Petroleum or Gas Well	No	No
Liquor	Yes	Yes
Manufacturing (light)	SE ⁴	SE ⁴
Manufacturing (heavy)	SE ⁴	SE ⁴

Notes:

- Any nonconforming/not recommended use approved prior to or at the time of the enactment of this Airport Zoning regulation may be continued.
- Any land use not listed in Table 1 will be evaluated based on a similar use from the table. If such similar use is allowed within APZ I or APZ II, the not-listed use will be allowed without the need for a Special Exception approved by the Board of Adjustment.
- Yes = The use is allowed.

- Yes (with superscript number) = The use is allowed, but may have stipulations.
 - No = The use is not allowed; however, any proposed use identified as “No” may be submitted through a Special Exception process for consideration for approval by the Board of Adjustment after being reviewed by Dyess AFB.
 - SE = A Special Exception approved by the Board of Adjustment after being reviewed by Dyess AFB is required.
- ¹ - Existing lots of less than 1 acre that were legally platted, or that were subdivided prior to 1984, are allowed one residence.
 - ² - The maximum density is one (1) dwelling unit per acre.
 - ³ - Activities that attract concentrations of birds creating a hazard to aircraft operations should be excluded.
 - ⁴ - Except for chemicals and allied products; precision equipment; apparel and other finished products; products made from fabrics, leather and similar materials; petroleum refining and related industries; Rubber and miscellaneous plastic products; professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks; or other hazardous or noise/vibration-sensitive uses. No activity which produces smoke, glare, or involves explosives.
 - ⁵ - Facilities such as playgrounds, club houses, meeting places, auditoriums, large classes, etc., are not permitted.
 - ⁶ - No chapels or houses of worship are allowed within APZ I or APZ II.
 - ⁷ - Big box home improvement stores are not included as part of this category.
 - ⁸ - No above ground passenger terminals and no above ground power transmission or distribution lines at a height greater than 50 feet above Dyess AFB airport elevation. Prohibited power lines include high-voltage transmission lines and distribution lines that provide power to cities, towns, or regional power for unincorporated areas.
 - ⁹ - Surface mining operations that could create retention ponds that may attract waterfowl and present bird/wildlife aircraft strike hazards (BASH), or operations that produce dust or light emissions that could affect pilot vision are not compatible. No activity which produces smoke, glare, or involves explosives.

In addition to the above listed restrictions, no use shall have hazardous materials stored on-site other than minimal, incidental storage of small quantities[.]

f. Noise Zones.

Residential developments and other land uses within Noise Zones may be recommended to consider sound attenuation measures to reduce potential interior noise impacts and achieve a maximum interior noise level of 45 dB DNL. While regulated sound attenuation measures may not be necessary in the Noise Zones due to personal preferences of property owners, the City of Abilene maintains educational materials for interested property owners or developers who want to learn more information about how to reduce interior noise levels inside their residential or other structure. This will alert buyers on the potential for noise impacts in areas close to Dyess AFB. The materials would be educational and not mandatory requirements.

For the purpose of guiding the development of areas which possess a noise hazard to certain land uses, so as to promote compatibility between Dyess AFB and the surrounding land uses and protect the airport from incompatible/not recommended encroachment, noise zones are hereby established within and surrounding the areas of Dyess AFB as follows.

1. Noise Zone Boundaries. The boundaries of said noise zones are established as shown on the most recent Dyess AFB Noise Contours Map, as amended.
2. A copy of the most recent Noise Contours Map, as amended, is on file in the Administrative Office of the Abilene Regional Airport and the City of Abilene Planning Department and online at www.abilenetx.gov ~~(full link is here-~~ <https://storymaps.arcgis.com/stories/83da8ff08d4c4528ab046cb50368cf2c>).
3. New development within the Noise Zones is subject to the following regulations.
 - i. No new mobile and/or manufactured home parks or zones shall be established within any Noise Zone.

(f) Bird /Wildlife Aircraft Strike Hazard (BASH).

All development within a five (5) statute mile radius of the Air Operations Area at Abilene Regional Airport or Dyess AFB shall adhere to the following use standards.

- (1) Solid Waste Landfills. New solid waste landfills are prohibited. Solid waste landfills are defined as any discrete area of land or an excavation that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile.
- (2) Solid Waste Landfill Transfer Stations. All new landfill transfer stations shall meet the following criteria.
 - a. Shall be fully-enclosed and receive garbage behind closed doors;
 - b. Process received garbage via compaction, incineration, or similar manner; and
 - c. Remove all residue by enclosed vehicles.
 - d. Solid Waste Landfill Transfer Stations are prohibited if they:
 1. Handle or store putrescible waste outside or in a partially enclosed structure accessible to wildlife.
 2. Are open on one or more sides.
 3. Store uncovered quantities of municipal solid waste outside, even if only for a short time.
 4. Use semi-trailers that leak or have trash clinging to the outside.
 5. Do not control odors by ventilation and filtration systems (odor masking is not acceptable).
- (3) Water Management Facilities. Water management facilities include drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, and ponds that result from mining activities. For the purpose of this section, ponds refer to stagnant bodies of water that may be natural or constructed and exclude residential and public swimming pools and other constructed facilities where water is circulated for filtration and chemical treatment. All new water management facilities shall meet the following criteria.
 - a. Designed and operated so as not to create above-ground standing water.
 - b. Stormwater detention ponds shall be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, steep-sided, rip-rap lined, narrow, linearly shaped water detention basins shall be used.
 - c. The following Water Management Facilities are prohibited:
 1. New wastewater management facilities or associated settling ponds.
 2. Artificial marshes.
- (4) Aquaculture. All new aquaculture activities shall be within fully enclosed buildings. Aquaculture activities outside fully enclosed buildings are prohibited.

(g) Solar Energy Development and Solar Panels.

The requirements of this Section shall apply to any application for municipal approval for the erection and maintenance of solar energy development or solar panels within five statute miles around Abilene Regional Airport or Dyess AFB, or as otherwise described below, excluding solar panels for use on a private residence or business to be used exclusively for that residence or

business.

- (1) Applications for solar energy development projects within five miles of Dyess AFB only shall include a mission compatibility evaluation from the DoD Military Aviation and Installation Assurance Siting Clearinghouse, if deemed necessary by consultation with Dyess AFB.
- (2) Applications for solar energy development projects shall include details related to the siting of facilities and distance from Abilene Regional Airport or Dyess AFB, energy capacity output, height of structures and facilities, and construction technology.
- (3) Applications for solar energy development projects shall include a glare analysis that satisfies the requirements of the 2013 FAA Interim Policy 78 FR 63276 regarding yellow glare, glare at Air Traffic Control Towers and analysis and observer characteristics.

(h) Use Restrictions; Interference.

- (1) Notwithstanding any other provision of this Section, no use may be made of land within any zone established by this Section in such manner as to create electrical interference with navigational signals or radio communication between the airports and aircraft, and aircraft, make it difficult for flyers to distinguish between airport lights and others, result in glare in the eyes of pilots or air traffic controllers using the airport, impair visibility in the vicinity of the airports, create bird strike hazards, or otherwise in any way endanger or interfere with the landing, taking off, or maneuvering of aircraft intending to use the airport.
- (2) No structure, natural growth, or other obstruction, except for those allowed as identified in Section 2.3.5.1 (e) (2) e., shall be placed, erected, or allowed to grow to a height that would penetrate a 100-to-one slope from any point on a runway to the outer limits of the extraterritorial jurisdiction and/or Airport Hazard Area, without a determination as to the impact of such use. The City, and Dyess AFB shall be responsible for evaluating the impacts of the structure, natural growth or other obstruction, and findings shall be reported to the Planning Director for evaluation and determination of the potential impact. The Board of Adjustment shall be responsible for approving, conditionally approving, or denying the placement of a structure, natural growth, or other obstruction exceeding this slope, except as stated in Section 2.3.5.1 (j) (1) a.

(i) Nonconforming/Not Recommended Uses and Structures; Abandonment; Replacement.

- (1) Regulation not retroactive. The regulations prescribed in this Section shall not be construed to require the removal, lowering, or other changes or alteration of any structure, natural growth, or other obstruction not conforming to the regulations as of the effective date of this Section, or otherwise interfere with the continuance of any nonconforming/not recommended use. Nothing herein contained shall require any change in the construction, alteration, or intended use of any Structure, if the construction, alteration, or use began prior to the effective date of this Section and is diligently prosecuted or completed.
- (2) Nonconforming/Not Recommended Use. Any nonconforming/not recommended use under this Section is subject to the conditions and procedures set forth in this Code.
- (3) Replacement of Nonconforming/Not Recommended Objects of natural growth. A person may not replace a nonconforming/not recommended object of natural growth that has been removed or destroyed.
- (4) A person may renovate a nonconforming/not recommended Structure. The portion of a structure that is renovated must comply with the regulations contained herein, where

applicable.

- (5) Replacement/Expansion of Nonconforming/Not Recommended Single-Family Residential Structure. An existing nonconforming/not recommended single-family residential structure, including manufactured housing, may be replaced and/or enlarged even if not otherwise allowed. There shall be no size restrictions other than required by zoning, where applicable.
- (6) Replacement of a Structure on the Site of a Nonconforming/Not Recommended Nonresidential Use. An existing structure on the site of a nonconforming/not recommended nonresidential use that has been damaged or destroyed may be replaced or restored even if not otherwise allowed. However, the replaced or restored structure shall not exceed the size of the damaged or destroyed structure and shall not exceed any height limitations imposed by this ordinance. A property owner replacing a damaged or destroyed nonconforming/not recommended structure who wishes to exceed the size of the damaged or destroyed structure or exceed height limitations imposed by this ordinance may submit a request for a Special Exception. In addition, no such structure shall be permitted if deemed a hazard by the FAA. This provision does not waive the requirement for obtaining an Airport Zone Development Permit, where applicable.
- (7) Any legal, nonconforming/not recommended industrial uses in the APZ I or APZ II area of Dyess AFB may be expanded to the limits of their property as of the effective date of this ordinance, with no limitation on number of employees, but maintaining restrictions on manufacturing or storage of chemical and hazardous materials.
- (8) Marking and Lighting. Notwithstanding the preceding provisions in this Section, the owner of any existing nonconforming/not recommended structure, natural growth, or other obstruction is hereby required to permit the installation, operation, and maintenance thereon of such markers and lights as shall be deemed necessary by the Planning Director to indicate to the operators of aircraft in the vicinity of the airport the presence of such airport obstruction. Such markers and lights shall be installed, operated, and maintained at the expense of the City of Abilene.

(j) Permits.

(1) In General.

- a. Airport Zone Development Permit. Any development, construction, modification, remodeling, or change in use within an area regulated by this Section shall require an Airport Zone Development Permit, with the following exception associated with Dyess AFB.

Any allowable home or other primary structure, addition to an existing home or other primary structure, allowable accessory structure, natural growth, or other object less than 50 feet in height in the APZ I and less than 150 feet in height in the APZ II and beyond shall be exempt from obtaining an Airport Zone Development Permit. This exception does not apply within the Clear Zone associated with Dyess AFB.

- b. This section shall not be interpreted to allow any permit that would:
 1. establish an airport hazard, except as otherwise stated in this ordinance as allowed;
 2. establish a nonconforming/not recommended use, except as otherwise stated in this ordinance as allowed;
 3. allow a nonconforming/not recommended structure, object of natural growth, or other obstruction to become higher than it was on the date this Section was adopted, except as otherwise stated in this ordinance as allowed;

4. allow a nonconforming/not recommended structure, object of natural growth, other obstruction, or use to become a greater hazard to air navigation than it was on the date this Section was adopted, except as otherwise stated in this ordinance as allowed.
 - c. No permit shall be granted to construct, modify, reconstruct, or remodel any Structure or other obstruction to a height of 150 feet or greater, unless an FAA Determination of No Hazard to Air Navigation has been obtained and provided to the Planning Director. Construction must comply with all applicable limitations and/or requirements contained herein and FAA guidelines.
 - d. A permit issued for a particular land use on a site is intended to allow multiple and recurring activities identified in the permit without the need for a separate permit for each.
 - e. There shall be no separate permit fee for an Airport Zone Development Permit.
- (2) Except as provided in subsection (j)(1)b. above, an application for permit shall be granted.
 - (3) New Construction. No material change shall be made in the use of land and no structure, natural growth, or other obstruction, unless exempted above, shall be erected, altered, planted, or otherwise established in any zone hereby created, unless an Airport Zone Development Permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired with sufficient particularity to permit a determination as to whether the resulting use, structure, natural growth, or other obstruction, would conform to the regulations herein prescribed.
 - (4) New Use. No material change shall be made in the use of a structure or property, unless an Airport Zone Development Permit therefor shall have been applied for and granted. Each application for a permit shall indicate the purpose for which the permit is desired with sufficient particularity to permit a determination as to whether the resulting use would conform to the regulations herein prescribed.
 - (5) Noise. Noise regulations are hereby established for new construction and rehabilitation, rebuilding, or remodeling, of existing construction within Abilene Regional Airport Noise Zones, as follows:
 - a. Abilene Regional Airport. In the area within 65 DNL or greater noise contour, as shown in the latest Noise Contours Map for the Abilene Regional Airport, as amended, a permit shall be required for any use or structure as identified by the FAA as requiring Noise Level Reduction (NLR). Such permits shall be issued when the Planning Director has approved noise attenuation measures consistent with FAA requirements and approval is obtained from the FAA.
 - b. Certificate of Occupancy or Final Building Approval. For those properties identified by the Noise Contours Map as requiring NLR measures within the incorporated city limits of the City of Abilene, no Certificate of Occupancy or Final Building Approval shall be issued, until the appropriate general contractor or subcontractor of a property provides a copy of the FAA requirements for NLR and verifies that such noise attenuation measures have been properly taken with regard to the property.
 - c. Airport Zone Development Permit. For those properties identified by the Noise Contours Map, as amended, as requiring NLR measures within the extraterritorial jurisdiction of the City of Abilene, an Airport Zone Development Permit is required prior to the construction of a structure. No Airport Zone Development Permit shall be issued until the appropriate general [contractor] or subcontractor of a property provides a copy of the FAA requirements for NLR and verifies that such noise attenuation measures will be taken with regard to the

property.

d. Routine maintenance of a nonconforming/not recommended structure does not invoke the requirements of this subsection.

- (6) Nonconforming/Not Recommended Uses Abandoned or Destroyed. Whenever the Planning Director determines that a nonconforming/not recommended structure or natural growth has been abandoned or more than 50 percent torn down, damaged, destroyed, physically deteriorated, or decayed, no permit shall be granted that would allow such structure or natural growth to exceed the height limit for that zone or otherwise deviate from the regulations contained in this Section or this Chapter.
- (7) Variances. Any person desiring to erect or increase the height of any structure or permit the growth of any natural growth or use his/her property in any manner inconsistent with the regulations prescribed in this Section may apply to the Board of Adjustment for a variance from such regulation(s). Procedural rules regarding variances contained in Code of the City of Abilene apply to this Section.

For all zones established in this Section, the application for variance may be required to be accompanied by a determination from the Federal Aviation Administration (FAA) as to the effect of the proposal on the operation of air navigation facilities and the safe, efficient use of navigable airspace. Such variances may be allowed. In reaching its decision to grant a variance, the Board of Adjustment shall determine that all of the following conditions are present: a literal application or enforcement of the regulations in this Section will result in unnecessary hardship, and relief, if granted, will not be contrary to the public interest, will not create a hazard to air navigation, will do substantial justice, and will be in accordance with the spirit of this Section.

In addition, no application for a variance to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Airport Development Board (regarding Abilene Regional Airport Zones) or the Dyess AFB Base Civil Engineer (regarding Dyess AFB Zones) for a recommendation as to the aeronautical effects of the requested variance, as more particularly set forth in subsection (I).

- (8) Special Exceptions. Any person desiring to erect, rebuild, or remodel any structure within an Abilene Regional Airport noise zone may apply to the Board of Adjustment for a Special Exception, for a determination as to what noise abatement measures must be included in such construction or remodeling. Procedural rules and standards for granting or denying Special Exceptions contained in this Code of the City of Abilene apply to this Section. In addition, no application for a Special Exception to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Airport Development Board (regarding Abilene Regional Airport Zones) for a recommendation as to the aeronautical or sound effects of the requested variance.

Unless otherwise exempted within this ordinance, any person desiring to erect, rebuild, or remodel any structure, or change land use in a non-recommended manner within a Dyess AFB accident potential zone, as defined in this ordinance, may apply to the Board of Adjustment for a Special Exception of density or intensity stipulations. Procedural rules and standards for granting or denying Special Exceptions contained in this Code of the City of Abilene apply to this Section. In addition, no application for a Special Exception to the requirements of this Section may be considered by the Board of Adjustment unless a copy of the application has been furnished to the Dyess AFB Base Civil Engineer for review of density/intensity.

- (9) Hazard marking and lighting. Any permit or variance granted may, if such action is deemed

advisable to effectuate the purpose of this Section and be reasonable under the circumstances, be so conditioned as to require the owner of the structure, natural growth, or other obstruction in question, at his/her own expense, to install, operate, and maintain thereon, such markers and lights as may be necessary to indicate to flyers the presence of a potential airport hazard.

(10) Subdivision Plat Acknowledgement of Abilene Regional Airport or Dyess AFB Operations. Applicants for plat approval of land subject to regulations within this Section shall be required to sign an acknowledgement statement and include a note on the plat documentation indicating they understand that the land subject of the plat is within an area that may experience potential impacts or effects associated with aircraft operations at Abilene Regional Airport or military operations at Dyess AFB.

(11) Other Conditions. The Board of Adjustment may place reasonable conditions upon the granting of any variance or special exception.

(k) Enforcement. It shall be the duty of the Planning Director to administer and enforce the regulations prescribed herein. Applications for permits and variances shall be made to the Planning Director upon a form furnished by the Planning Department. Applications required by this Section to be submitted to the Planning Director shall be promptly considered and granted or denied by said Planning Director. Applications for action by the Board of Adjustment shall be forthwith transmitted by the Planning Director.

(l) Board of Adjustment.

(1) The Board of Adjustment is hereby granted the authority, in addition to its other duties and powers, to have and exercise the following powers:

- a. to hear and decide appeals from any order, requirement, decision, or determination made by the Planning Director, in the enforcement of this Section;
- b. to hear and decide special exceptions to the terms of this Section;
- c. to hear and decide requests for variances of the requirements of this Section.

(2) Decisions made by the Board of Adjustment, appeals, and judicial review related to this Section shall be in accordance with this Code.

(3) Recommendation to the Board.

- a. Abilene Regional Airport.

The Abilene Regional Airport Development Board may make a recommendation, in writing or by representative, to the Board of Adjustment, regarding any matter before the Board that may have an effect on the Abilene Regional Airport. The Planning Director shall promptly forward any application for a variance or special exception, including any relevant material, to the Airport Development Board for consideration at its next available regular meeting. The Airport Development Board shall thereafter notify the Planning Director of its determination regarding the matter, at any time after the regular meeting, and no later than the date necessary to include the matter on the agenda for the next available regular Board of Adjustment meeting.

- b. Dyess Air Force Base.

The Dyess AFB Base Civil Engineer may make a recommendation, in writing or by representative, to the Board of Adjustment, regarding any matter before the Board that

may have an effect on Dyess AFB. The Planning Director shall promptly forward any application for a variance or special exception, including any relevant material, to the Dyess AFB Base Civil Engineer for consideration. A representative of the Dyess AFB Base Civil Engineer shall thereafter promptly notify the Planning Director of its determination regarding the matter, at any time after receiving the application from the City of Abilene, and not later than 15 days after receipt. Promptly and within a reasonable time after the 15 days has elapsed or a response has been received from the Dyess AFB Base Civil Engineer (whichever is earlier), the Planning Director shall include the matter on the agenda for the next available regular Board of Adjustment meeting.

(m) Violations and Penalties.

- (1) It shall be unlawful for any person to violate any regulation, order, or ruling promulgated under this Section.
- (2) Each day a violation occurs shall constitute a separate offense. The daily Penalties will be suspended upon application for Special Exception or request for Variance.
- (3) Any person who violates any provision of this Section shall be guilty of a misdemeanor, punishable by a fine as set forth in Chapter 1, Sec. 1-9 of the Code of the City of Abilene.

(n) Civil Remedies.

- (1) The City Attorney may enforce this Section by injunction, declaratory relief, or other action at law or in equity.
- (2) Any structure erected or used, or any work done, contrary to any of the provisions of this Section or to any of the details contained in the final site plan or Airport Zone Development Permit approved by the City is hereby declared to be unlawful and shall constitute a violation of this Section. The Council may direct the City Attorney to initiate injunction, mandamus, abatement, or any other action available in law or equity to prevent, enjoin, abate, correct or remove the unlawful structure, use or work.
- (3) In addition to any other remedies which may be available at law or in equity, the City may sue in the appropriate district court for an injunction to prohibit the violation of, or to enforce compliance with, any regulation contained in this Section.

(o) Amendments.

- (1) As part of the development of an amendment to this Section, a committee shall be appointed to participate in the development of the amendment language. This committee shall include the County Commissioner whose precinct is within the affected area around Dyess AFB and at least three (3) property owners whose property is located within an area affected by the Section, to include the current Dyess AFB accident potential zones or noise contours, who shall be appointed by said County Commissioner.
- (2) Prior to approval of an amendment to this Section, this committee shall have a minimum of 60 days to review and comment on any proposed amendment.

(p) Exemptions.

The following uses are exempt from the Airport Zoning regulations, unless otherwise regulated through other sections:

- (1) Agricultural Use. This regulation shall not be used to regulate any operational aspect of an existing agricultural use, including the cultivation and harvesting of crops, land management

activities (prescribed burning, clearing, spraying and trimming), livestock management, hunting, use and application of water, or ponds/tanks used for watering of livestock or recreational use. Expansion of existing structures and construction of new structures that are accessory for agricultural uses are subject to these regulations to the extent permitted by state law.

- (2) Existing Structures. This regulation shall not restrict or limit the use of legally established, existing land uses and structures as of the effective date of these regulations.

(Ord. No. 8-2010, pt. 1 (Exh. A), 4-22-10; Ord. No. 12-2010, pt. A (Exh. A), 6-10-10)

ZONING CASE Z-2024-31

STAFF REPORT

Scheduled Hearings

Planning & Zoning Commission: November 5, 2024
City Council 1st Reading: November 21, 2024
City Council 2nd Reading: December 5, 2024

Applicant

Owner: Jessica Jacob

Case Manager

Kera Valois – Planner

Request

Change the zoning of approximately 0.45 acres from Heavy Commercial (HC) to Office (O).

Location

Located at 1234, 1232, 1226, and 1218 North Treadaway Boulevard. Legal description Lots 1-4, Block 2, T W Daugherty Subdivision within Original Town Abilene, Abilene, Taylor County, Texas.

Background

The subject properties were annexed in 1895 within the Original Town of Abilene. The single-family residences formerly located at 1232, 1226, and 1218 North Treadaway Boulevard were all demolished in 2006 due to condemnation. A demolition permit was pulled October 2024 for the remaining house on the property and has yet to be completed. Currently, the subject properties are being re-platted into one lot. The applicant is proposing office zoning for private practice.

Zoning, Existing and Proposed Land Use

	Zoning	Existing Land Use
North	HC	Convenience Store
East	HC	Restaurant & Monument Sales
South	HC	Boot Store
West	RS-6	Residences

Criteria Assessment

Section 1.4.1.4 of Abilene's Land Development Code states that, in making a determination regarding a requested zoning change, the Planning and Zoning Commission and the City Council may consider the following factors:

(1) Whether the proposed zoning map amendment implements the policies of the adopted Comprehensive Plan, including the land use classification of the property on the Future Land Use and Development Plan Map, as amended.

The Future Land Use Map recommends Medium Density Residential, which is not compatible with the request. However, the Comprehensive Plan identifies this area as a Transitional Character Area which supports the request. The proposed Office zoning would serve as an appropriate transition between residential and commercial properties. The Transitional Character Area promotes varying housing, office and retail options which would be consistent

with the Comprehensive Plan and a more appropriate zoning abutting the residential properties than the current zoning.

(2) Whether the uses permitted by the proposed change in zoning classification and the standards applicable to such uses will be appropriate in the immediate area of the land to be reclassified.

The proposed zoning would be appropriate as it would be consistent with the surrounding uses. Office zoning would serve as a less intensive transition to the residential properties than the existing Heavy Commercial zoning.

(3) Whether the proposed change is in accord with any existing or proposed plans for providing public schools, streets, water supply, sanitary sewers, and other public services and utilities to the area.

This property will be subject to a formal site plan review and any proposed utilities that may be required will be addressed during that review period.

(4) Any other factors, which will substantially affect the public health, safety, morals, or general welfare.

None known.

Staff Recommendation

Staff recommends **approval**.

Attachments

- Final draft of Plat
- PowerPoint Presentation

Notification

Pursuant to Section 1.2.2.2 of the Land Development Code, City staff mailed personal notices on October 16, 2024, via standard mail to the owners of property within a 200-foot radius of the subject street right of way. The property owners and associated parcel identification numbers are identified below:

PROPERTY OWNER		Legend: O - Opposed, F - In Favor	
PROPERTY OWNER	PROPERTY ID	SITUS	RESPONSE
	41145	1138 N TREADAWAY BL	
	41010	1127 ASH ST	
ABILENE CONCEPTS IN STONE LLC	37673	1221 N TREADAWAY BL	
ABILENE CONCEPTS IN STONE LLC	41662	1131 N TREADAWAY BL	
CITY OF ABILENE	56157	1242 ASH ST	
CJAB ENTERPRISES LLC	38294	1226 N TREADAWAY BL	
CJAB ENTERPRISES LLC	38430	1218 N TREADAWAY BL	
FREYHOLTZ MICHAEL J	60314	409 N 13TH ST	
GRANT JON	59760	537 N 13TH ST	
GRAY BETTY	39866	1216 ASH ST	
GRIMES JOSEPH DANIEL	56156	609 N 13TH ST	
JACOB CRAIG & JESSICA	38167	1232 N TREADAWAY BL	
JACOB CRAIG & JESSICA	38036	1234 N TREADAWAY BL	
JGN PROPERTIES LLC	59895	533 N 13TH ST	
LEDDYS LEGACY LLC	38551	1220 N TREADAWAY BL	
LEDDYS LEGACY LLC	41281	1142 N TREADAWAY BL	
NORTH TREADAWAY AUTOMOTIVE INC	41534	1141 N TREADAWAY BL	

NORTH TREADAWAY AUTOMOTIVE INC	41534	1125 N TREADAWAY BL	
OLNEY LARRY D	60611	1241 N TREADAWAY BL	
OLNEY LARRY D	37919	1233 N TREADAWAY BL	
PORTLOCK WALTER	39507	1234 ASH ST	
PORTLOCK WALTER	39617	1226 ASH ST	
PORTLOCK WALTER	39743	1218 ASH ST	
RANDOLPH ELIZABETH ET AL	39390	1233 ASH ST	
RICHARDSON LUCY A	38791	1201 ASH ST	
RISE CHURCH ABILENE INC	38927	1205 ASH ST	
RISE CHURCH ABILENE INC	40890	1137 ASH ST	
RISE CHURCH ABILENE INC	39981	1142 ASH ST	
RISE CHURCH ABILENE INC	39981	1202 ASH ST	
SKINNYS INC	60029	1242 N TREADAWAY BL	
VILLARREAL DOTTY M	39043	1209 ASH ST	
VILLARREAL ROBERTO DAVID	39267	1225 ASH ST	
VILLARREAL ROBERTO DAVID	39159	1217 ASH ST	

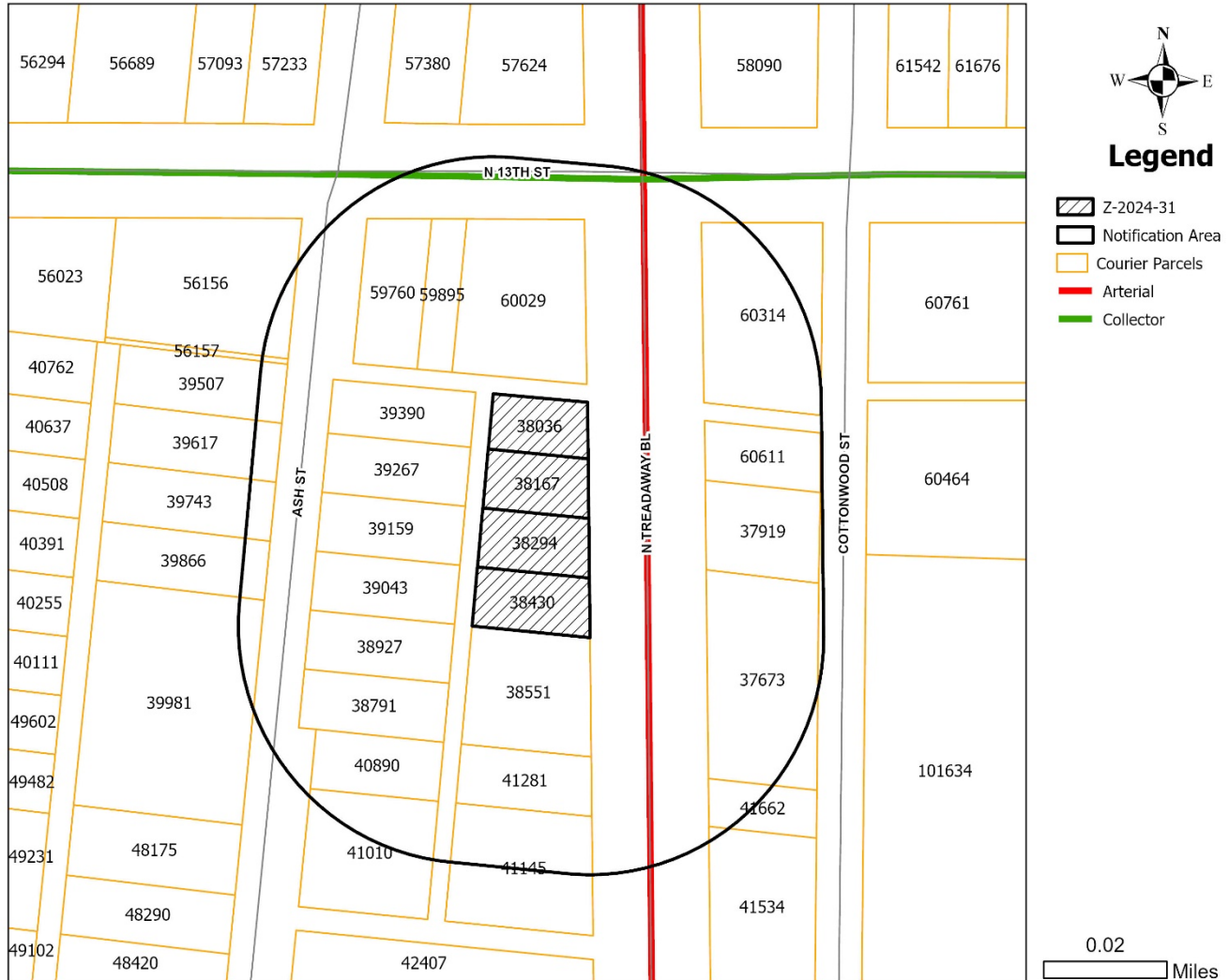
PROPERTY ID

Legend: O - Opposed, F - In Favor

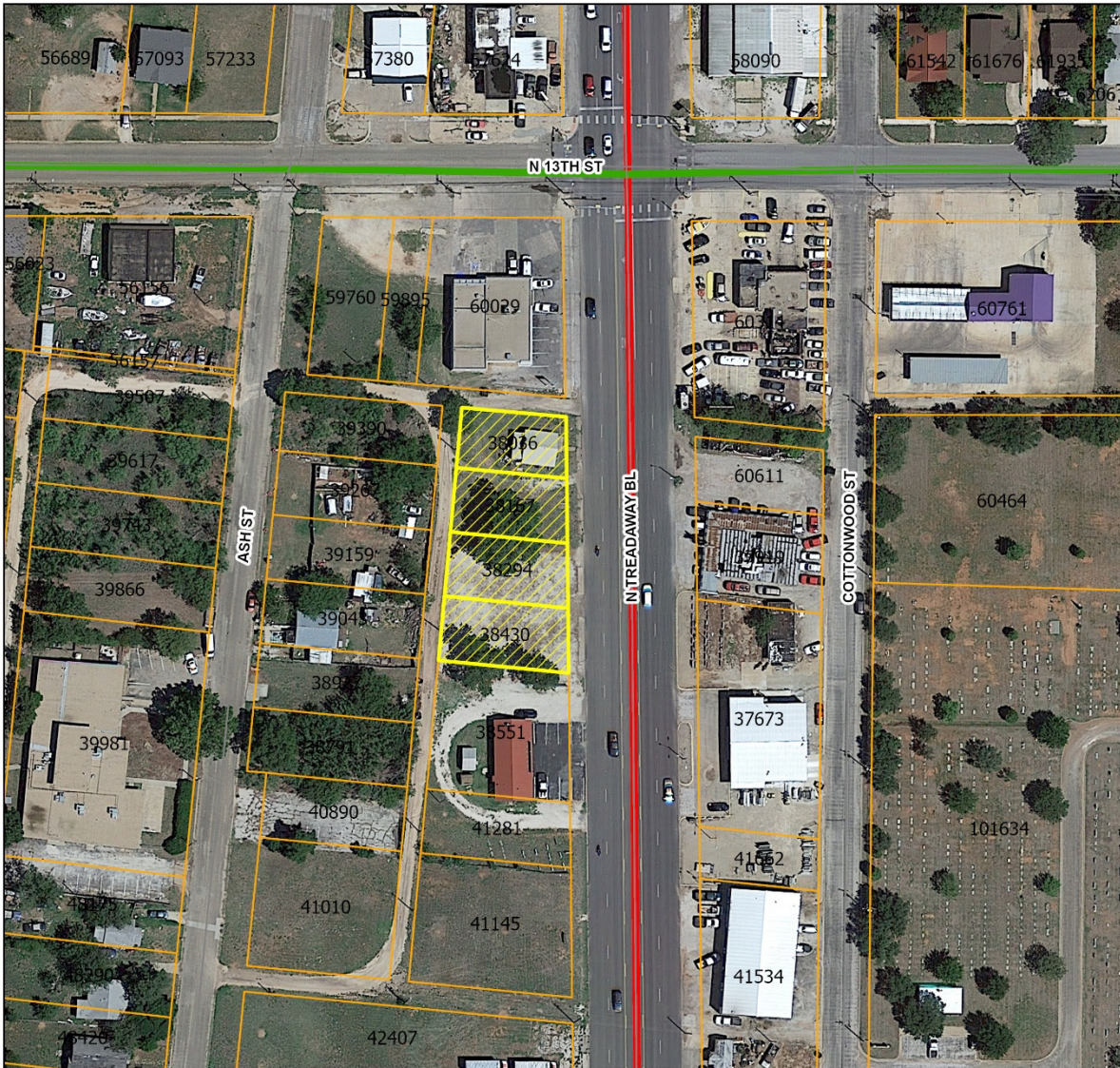
PROPERTY OWNER	PROPERTY ID	SITUS	RESPONSE
ABILENE CONCEPTS IN STONE LLC	37673	1221 N TREADAWAY BL	
OLNEY LARRY D	37919	1233 N TREADAWAY BL	
JACOB CRAIG & JESSICA	38036	1234 N TREADAWAY BL	
JACOB CRAIG & JESSICA	38167	1232 N TREADAWAY BL	
CJAB ENTERPRISES LLC	38294	1226 N TREADAWAY BL	
CJAB ENTERPRISES LLC	38430	1218 N TREADAWAY BL	
LEDDYS LEGACY LLC	38551	1220 N TREADAWAY BL	
RICHARDSON LUCY A	38791	1201 ASH ST	
RISE CHURCH ABILENE INC	38927	1205 ASH ST	
VILLARREAL DOTTY M	39043	1209 ASH ST	
VILLARREAL ROBERTO DAVID	39159	1217 ASH ST	
VILLARREAL ROBERTO DAVID	39267	1225 ASH ST	
RANDOLPH ELIZABETH ET AL	39390	1233 ASH ST	
PORTLOCK WALTER	39507	1234 ASH ST	
PORTLOCK WALTER	39617	1226 ASH ST	
PORTLOCK WALTER	39743	1218 ASH ST	
GRAY BETTY	39866	1216 ASH ST	
RISE CHURCH ABILENE INC	39981	1142 ASH ST	
RISE CHURCH ABILENE INC	39981	1202 ASH ST	
RISE CHURCH ABILENE INC	40890	1137 ASH ST	
	41010	1127 ASH ST	
	41145	1138 N TREADAWAY BL	
LEDDYS LEGACY LLC	41281	1142 N TREADAWAY BL	
NORTH TREADAWAY AUTOMOTIVE INC	41534	1141 N TREADAWAY BL	
NORTH TREADAWAY AUTOMOTIVE INC	41534	1125 N TREADAWAY BL	
ABILENE CONCEPTS IN STONE LLC	41662	1131 N TREADAWAY BL	
GRIMES JOSEPH DANIEL	56156	609 N 13TH ST	
CITY OF ABILENE	56157	1242 ASH ST	
GRANT JON	59760	537 N 13TH ST	

JGN PROPERTIES LLC	59895	533 N 13TH ST	
SKINNYS INC	60029	1242 N TREADAWAY BL	
FREYHOLTZ MICHAEL J	60314	409 N 13TH ST	
OLNEY LARRY D	60611	1241 N TREADAWAY BL	

NOTIFICATION MAP



LOCATION MAP



Legend

- Z-2024-31
- Courier Parcels
- Arterial
- Collector

0.02
Miles

ZONING MAP





REZONE REQUEST

Case: Z-2024-31

Agent: Jessica Jacob

Request: Change the zoning of approximately 0.45 acres from Heavy Commercial (HC) to Office (O).

Location: Located at 1234,1232, 1226, and 1218 North Treadaway Blvd.

Notification: 1 in Favor, 0 in Opposition

Planning & Zoning: November 5, 2024

Council Hearing: November 21, 2024
December 5, 2024





AERIAL LOCATION MAP



Legend

- Z-2024-31
- Courier Parcels
- Arterial
- Collector

0.02

Miles



CITY OF
ABILENE
TEXAS



ZONING MAP

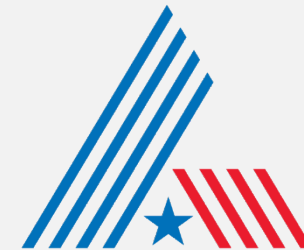


Legend

- Z-2024-31
- Courier Parcels
- HC (Heavy Commercial)
- MD (Residential - Medium Density)
- MF (Residential - Multi-family)
- RS (Residential - Single Family)
- AO (Agricultural Open)
- Arterial
- Collector

0.02

Miles



CITY OF
ABILENE
TEXAS



PROPERTY VIEWS





USES IN HEAVY COMMERCIAL ZONING

RESIDENTIAL USES:

C Hotel/Motel

ACCESSORY AND INCIDENTAL USES:

P Accessory Structure (Also see Division 4 of this article)
P Antenna, Non-Commercial/Amateur
P ATM's, Self-Serve Kiosks, and Similar Facilities
P Drive-Through Facility
TP Field Office or Construction Office (temporary)
P Freight Container
P Fuel Sales
TP Itinerant Business
P Manufacturing (incidental)
C Mobile Home (permanent security residence)
TP Mobile Home (temporary security residence)
P Mobile Home or Temporary Building (office for sales and service)
P Recycling Collection Point
C Travel Trailers (accessory to hospitals)
P/SE Wind Energy Conversion Systems

CULTURAL AND RECREATIONAL USES:

C Adult Entertainment Enterprise
P Civic, Social, and Fraternal Organization
P Cultural Facilities
P Drive-in Theater
C Motorized Racing
P Recreation – Outdoors (active)
P Recreation – Outdoors (passive)
P Recreation and Commercial Entertainment - Indoor

GOVERNMENT, HEALTH, SAFETY AND WELFARE USES:

P Ambulance Service
C Correction, Detention, or Penal Facilities
P Fire/Police Station
P Homeless/Emergency Shelter
P Hospital
P Medical/Dental Laboratory
P Military and Armed Forces Reserve Center
P Post Office
P Rehabilitation Facility
C Sanitary Landfill
P Social Service Facility

EDUCATIONAL AND RELIGIOUS USES:

P Arts School
C Cemetery, Crematorium, and Mausoleum
P Church or Place of Worship
P Educational and Scientific Research
P School: Public/Private
P Trade/Business School

TRADE – RETAIL USES:

P Aircraft and Accessories
P ATM's, Self-Serve Kiosks, and Similar Facilities
P Fuel Sales
P Head Shop
P Liquor Store (Off Premises Consumption) (*Defined under Liquor Store*)
P Liquor Store (On Premises Consumption) (*Defined under Liquor Store*)
P Restaurant, Brew Pub
P Restaurant, Fast Food
P Restaurant, Standard
P Retail Sales/Rental (automobile/small truck)
P Retail Sales/Rental (indoor)
P Retail Sales/Rental (outdoors, non-vehicle)
P Retail Sales/Rental (trucks and other large vehicles and equipment)

SERVICE:

P/C Automobile Wash
P Contractor Services
P Funeral Home/ Mortuary/Morgue
P Kennel (With Outdoor Pens)
P Kennel (Without Outdoor Pens)
P Laundry, Dry Cleaning, Dyeing, and Linen Service (no retail customers)
P Laundry/Dry Cleaning Services & Facilities
P Office (general, professional, financial)
P Printing, Copying, Reproduction, Publishing
P Recycling Collection and Processing Center
P Repair and Maintenance Services - Automobile/Small Truck (major)
P Repair and Maintenance Services - Automobile/Small Truck (minor)
P Repair and Maintenance Services (indoor)
P Repair and Maintenance Services (outdoors)
P Repair and Maintenance Services (truck and other large vehicles)
P Scales (public)
P Storage - Self-Service Units
P Tattoo Parlor
P Taxidermist
P Veterinary Service (all size animals)
P Veterinary Service (small animals)
P Wrecker/Towing

TRADE – WHOLESALE USES:

P Liquor, Wholesale/Distribution
P Wholesaling and Storage (indoor)
C Wholesaling and Storage (outdoors)

TRANSPORTATION, COMMUNICATION AND UTILITIES:

P Airport, Heliport and Flying Field Terminals - Commercial (passenger and freight)
C Antenna Tower - Commercial
P Automobile Parking Lot or Structure - Commercial
P Broadcast Studio
P Passenger Ground Transportation Terminal
P Pressure Control Station
P Public Utility Facility
C Utility Generation, Production, Treatment

RESOURCE PRODUCTION AND EXTRACTION USES:

P Petroleum or Gas Well
C Manufacturing (light)
P Urban Garden

LEGEND

P Permitted as a Right-of-Use (may be subject to compliance with conditions described within Division 3- Requirements Applicable to Specific Land Uses of the Land Development Code)
C Permitted as a Conditional Use Permit, Requiring Approval by City Council
TP Permitted by Temporary Permit Only, Requiring Approval by Board of Adjustment





USES IN OFFICE ZONING

RESIDENTIAL USES:

- P Bed & Breakfast
- P Dwelling – Duplex
- P Dwelling – Industrialized Housing Unit
- P Dwelling – Institutional
- C Dwelling – Multiple-Family
- P Dwelling – Single-Family Detached

ACCESSORY AND INCIDENTAL USES:

- P Accessory Structure (Also see Division 4 of this article)
- P Antenna, Non-Commercial/Amateur
- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P/C Day Care Operation – Home-Based
- TP Field Office or Construction Office (temporary)
- P Garage Sale
- P Home Occupation
- C Mobile Home (temporary security residence)
- P Recreation Building, Multipurpose
- P Recreation Equipment, Mobile (storage & parking)
- P Subdivision Sales Office (temporary)
- P Swimming Pool, Private (accessory to residential use)
- P Tennis Court, Private (accessory to residential use)
- P/SE Wind Energy Conversion Systems

CULTURAL AND RECREATIONAL USES:

- P Civic, Social, and Fraternal Organization
- C Cultural Facilities
- P Recreation – Outdoors (passive)

GOVERNMENT, HEALTH, SAFETY AND WELFARE USES:

- P Fire/Police Station
- C Medical/Dental Laboratory
- P Post Office

EDUCATIONAL AND RELIGIOUS USES:

- C Arts School
- P Church or Place of Worship
- C Day-Care Operation - Center-Based
- P School: Public/Private

SERVICE:

- P Office (general, professional, financial)
- P Personal Services
- C Printing, Copying, Reproduction, Publishing

TRADE – RETAIL USES:

- P ATM's, Self-Serve Kiosks, and Similar Facilities
- P/C Restaurant, Fast Food
- P/C Restaurant, Standard

TRANSPORTATION, COMMUNICATION AND UTILITIES:

- P Automobile Parking Lot or Structure - Commercial
- C Broadcast Studio
- P Public Utility Facility

RESOURCE PRODUCTION & EXTRACTION:

- P Petroleum or Gas Well
- P Urban Garden

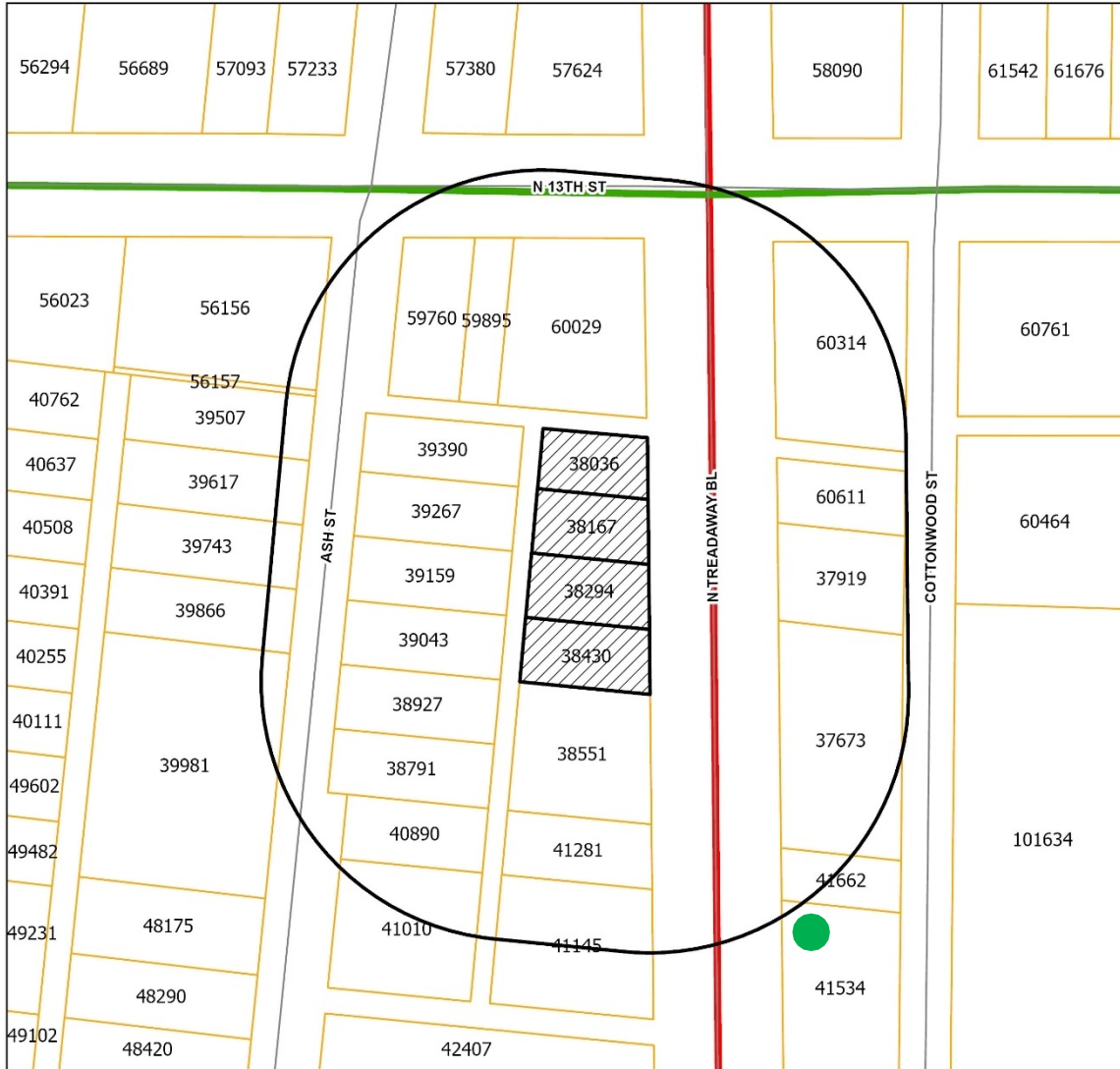
LEGEND

- P Permitted as a Right-of-Use (may be subject to compliance with conditions described within Division 3- Requirements Applicable to Specific Land Uses of the Land Development Code)
- C Permitted as a Conditional Use Permit, Requiring Approval by City Council
- TP Permitted by Temporary Permit Only, Requiring Approval by Board of Adjustment





NOTIFICATION AREA MAP



Legend

- Z-2024-31
- Notification Area
- Courier Parcels
- Arterial
- Collector

1 - in Favor -

0 - in Opposition -

% OPPOSITION





FINDINGS AND RECOMMENDATIONS

The request is consistent with:

- The *Comprehensive Plan*;
- The surrounding uses and zoning;
- Generally accepted planning principals; and
- The Criteria for Approval in the LDC.

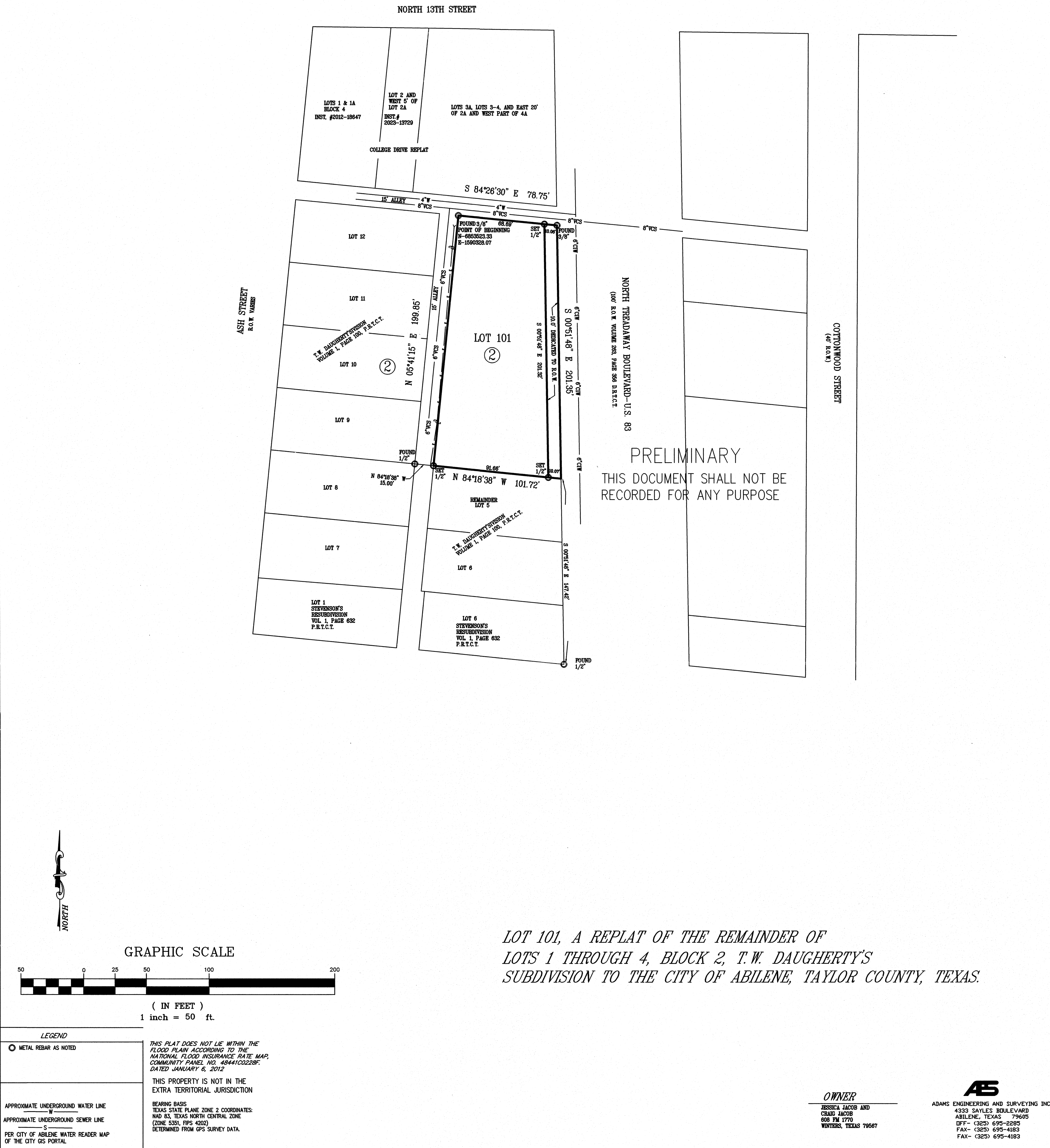
Staff Recommendation: **Approval**





Questions?





PLANNING COMMISSION		PLANNING DIRECTOR	
THIS PLAT IS HEREBY APPROVED BY THE CITY PLANNING COMMISSION OF THE CITY OF ABILENE, TEXAS AND THE COUNTY CLERK IS HEREBY AUTHORIZED TO FILE SAID PLAT IN ACCORDANCE WITH THE PROVISIONS OF TEXAS LOCAL GOVERNMENT CODE CHAPTER 212, SUBCHAPTER A, AS AMENDED		FILED WITH PLANNING DIRECTOR, CITY OF ABILENE, TEXAS.	
DATE	CHAIRMAN	DATE	FILE NUMBER
ATTEST	SECRETARY	PLANNING DIRECTOR	
DATE	PLANNING DIRECTOR	FEES	
DIRECTOR OF PUBLIC WORKS		COUNTY CLERK	
THE DEDICATION FILED, IN CONNECTION WITH THIS PLAT IS HEREBY APPROVED AND ALL STREETS, ALLEYS, AND PUBLIC AREAS SHOWN HEREON ARE HEREBY ACCEPTED ON BEHALF OF THE PUBLIC BY THE DIRECTOR OF PUBLIC WORKS OF THE CITY OF ABILENE, TEXAS.		I CERTIFY THAT THE SUBDIVISION PLAT DESCRIBED HEREIN WAS FILED FOR RECORD ON	
DATE	DIRECTOR OF PUBLIC WORKS	DATE	FILE NUMBER
		COUNTY CLERK COUNTY TEXAS	
		DEPUTY	

OWNER'S CERTIFICATE AND DEDICATION

THE UNDERSIGNED OWNER(S) OF THE HEREINAFTER DESCRIBED REAL PROPERTY HAVE CAUSED SUCH PROPERTY TO BE SURVEYED AND PLATTED AND TO BE SUBDIVIDED INTO BLOCKS, LOTS, STREETS AND ALLEYS UNDER THE NAME OF LOT 101, A REPLAT OF THE REMAINDER OF LOTS 1 THROUGH 4, BLOCK 2, T.W. DAUGHERTY'S SUBDIVISION TO THE CITY OF ABILENE, TAYLOR COUNTY, TEXAS. AS SHOWN ON THE ATTACHED PLAT AND DO HEREBY DEDICATE TO THE PUBLIC FOREVER FOR ALL PUBLIC PURPOSES THE STREETS, ALLEYS, LANES, EASEMENTS, PARKS AND OTHER PUBLIC LANDS SHOWN THEREON THE LANDS INCLUDED WITHIN SUCH PLAT OR SUBDIVISION ARE DESCRIBED BY METES AND BOUNDS AS FOLLOWS

Being 0.414 acres of land being a replat of the remainder of Lots 1, 2, 3, and 4, Block 2, T. W. Daugherty's Subdivision to the City of Abilene, Taylor County, Texas recorded in Volume 1, Page 100, Plat Records of Taylor County, Texas and said 0.414 acres being more particularly described as follows: BEGINNING at a found 3/8" metal rebar at the Northwest corner of said Lot 1 on the South and East line of a 15.0' alley; THENCE S84°26'30"E 78.75' along the South line of said 15.0' alley and the North line of said Lot 1 to a found 3/8" metal rebar on the West line of North Treadway Boulevard (100.0' R.O.W.); THENCE S00°51'48"E 201.35' along the West line of North Treadway to a point on the South line of said Lot 4 whence a found 1/2" metal rebar at the Southeast of Lot 6, Stevenson's Resubdivision to the City of Abilene, recorded in Volume 1, Page 632, Plat Records, Taylor County, Texas bears S00°51'48"E 147.42'; THENCE N84°18'38"W along the South line of said Lot 4 at 10.07' pass a set 1/2" metal rebar and continue on a distance in all of 101.72' to a set 1/2" metal rebar at the Southwest corner of said Lot 4 on the East line of a 15.0' alley whence a found 1/2" metal rebar at the Southeast corner of Lot 9, Block 2, T. W. Daugherty's Subdivision bears N84°18'38"W 15.00'; THENCE N05°41'15"E 199.85' along the East line of a 15.0' alley to the place of beginning and containing 0.414 acres of land.

EXECUTED THIS _____ DAY OF _____, 2024

OWNER JESSICA JACOB AND CRASH JACOB

ACKNOWLEDGMENT

THE STATE OF TEXAS: COUNTY OF TAYLOR

BEFORE ME, THE UNDERSIGNED AUTHORITY IN AND FOR SAID COUNTY AND STATE ON THIS DAY PERSONALLY APPEARED JESSICA JACOB AND CRASH JACOB KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT SHE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, A.D. 2024

JOSEPH GERARD GRZYWA
My Notary ID # 1111154
Expires February 1, 2025

GENERAL NOTES

SHEET 1 OF 1 SHEETS ACREAGE 0.414 ACRES

SCALE 1" = 50' SMALLEST LOT 16,000 SQ. FT. LARGEST LOT 16,000 SQ. FT.

LOT WIDTH MIN 200' MAX 200' LOT DEPTH MIN 66' MAX 92'

CONCRETE MONUMENTS (SYMBOL) POLES (SYMBOL) DOWN GUYS (SYMBOL)

SURVEYOR CERTIFICATE AND PLAT DESCRIPTION

CERTIFICATION: I HEREBY CERTIFY THAT THE PLAT SUBMITTED HERewith REPRESENTS A TRUE SURVEY MADE BY THE UNDERSIGNED OR UNDER MY SUPERVISION ON THE GROUND ON THAT PERMANENT MARKERS AND MONUMENTS HAVE BEEN SET AS INDICATED ON THE PLAT AND IN ACCORDANCE WITH THE "SUBDIVISION REGULATIONS" OF THE CITY OF ABILENE

PLAT DESCRIPTION: LOT 101, A REPLAT OF THE REMAINDER OF LOTS 1 THROUGH 4, BLOCK 2, T.W. DAUGHERTY'S SUBDIVISION TO THE CITY OF ABILENE, TAYLOR COUNTY, TEXAS.

PRELIMINARY

THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE

DATE ALVIN JOE ADAMS (PRINT)
REGISTERED PROFESSIONAL LAND SURVEYOR
P.E. NO. 49263
R.P.L.S. NO. 4130

ZONING CASE Z-2024-33

STAFF REPORT

Scheduled Hearings

Planning & Zoning Commission: November 5, 2024
City Council 1st Reading: November 21, 2024
City Council 2nd Reading: December 5, 2024

Applicant

Owner: City of Abilene

Case Manager

Adam Holland – Planner

Request

Change the zoning of approximately 5.9 acres from Agricultural Open (AO) to Planned Development District 181 (PDD-181).

Location

Located at 617 F.M. 2404

Background

The subject property was annexed in 2024 and zoned as Agricultural Open per the LDC requirements. The owner proposes to incorporate this property into existing Planned Development district to the west (PDD-181).

Lancium intends to incorporate the property with lot 1 of the initially approved conceptual plan to extend the Heavy Industrial uses further east.

Zoning, Existing and Proposed Land Use

	Zoning	Existing Land Use
North	NA	Residential (ETJ)
East	NA	Residential (ETJ)
South	NA	Residential (ETJ)
West	PDD-181	Heavy Industrial

Criteria Assessment

Section 1.4.1.4 of Abilene's Land Development Code states that, in making a determination regarding a requested zoning change, the Planning and Zoning Commission and the City Council may consider the following factors:

- (1) Whether the proposed zoning map amendment implements the policies of the adopted Comprehensive Plan, including the land use classification of the property on the Future Land Use and Development Plan Map, as amended.**

The proposed request is consistent with the Comprehensive Plan and Future Land Use Map.

(2) **Whether the uses permitted by the proposed change in zoning classification and the standards applicable to such uses will be appropriate in the immediate area of the land to be reclassified.**

The proposed zoning would be appropriate as it would be consistent with the surrounding uses.

(3) **Whether the proposed change is in accord with any existing or proposed plans for providing public schools, streets, water supply, sanitary sewers, and other public services and utilities to the area.**

This property has been platted. New utility connections are being constructed in the area in accordance with the LDC to serve the property.

(4) **Any other factors, which will substantially affect the public health, safety, morals, or general welfare.**

None known.

Staff Recommendation

Staff recommends **approval**.

Attachments

- PowerPoint Presentation
- Concept plan

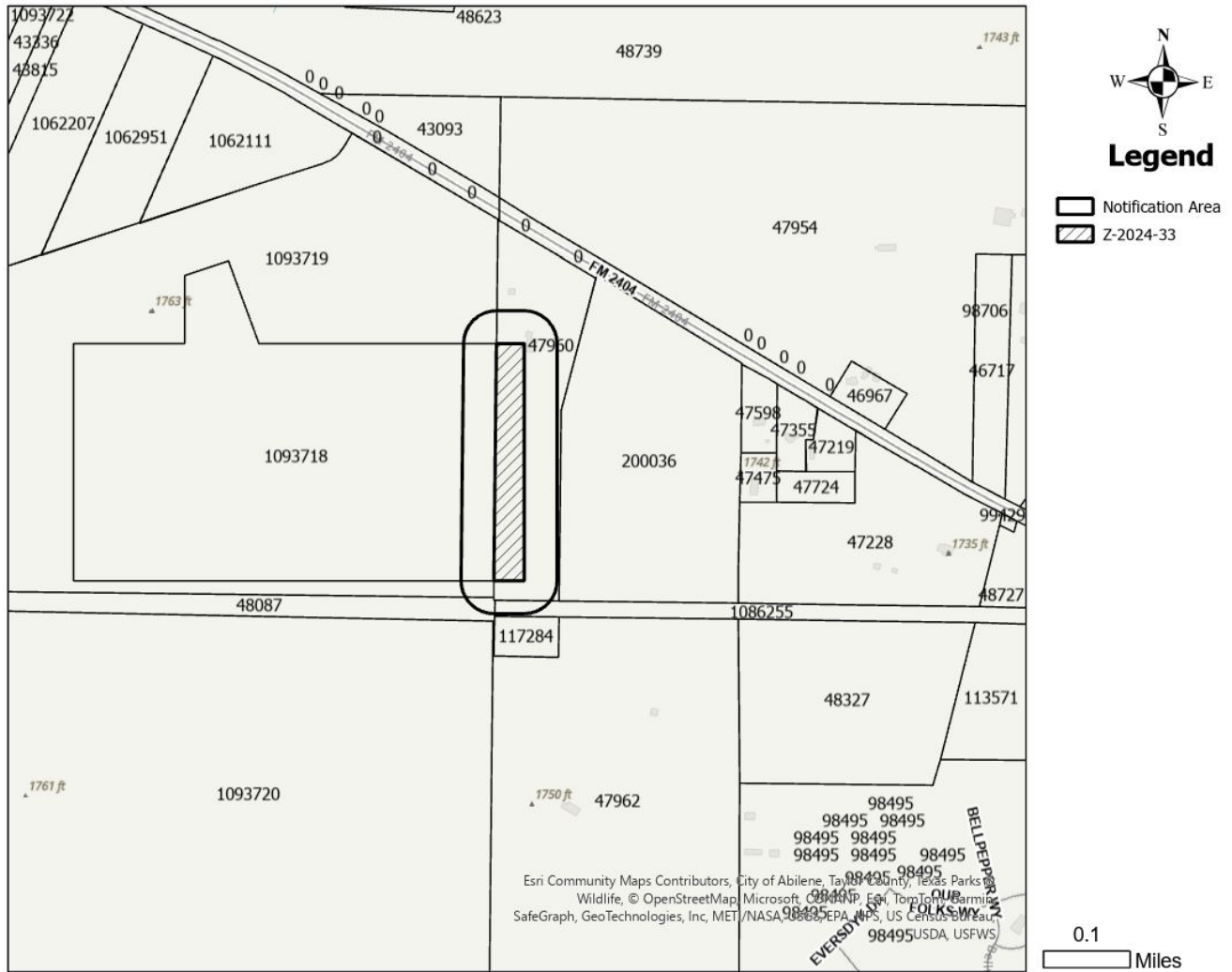
Notification

Pursuant to Section 1.2.2.2 of the Land Development Code, City staff mailed personal notices on October 16, 2024, via standard mail to the owners of property within a 200-foot radius of the subject street right of way. The property owners and associated parcel identification numbers are identified below:

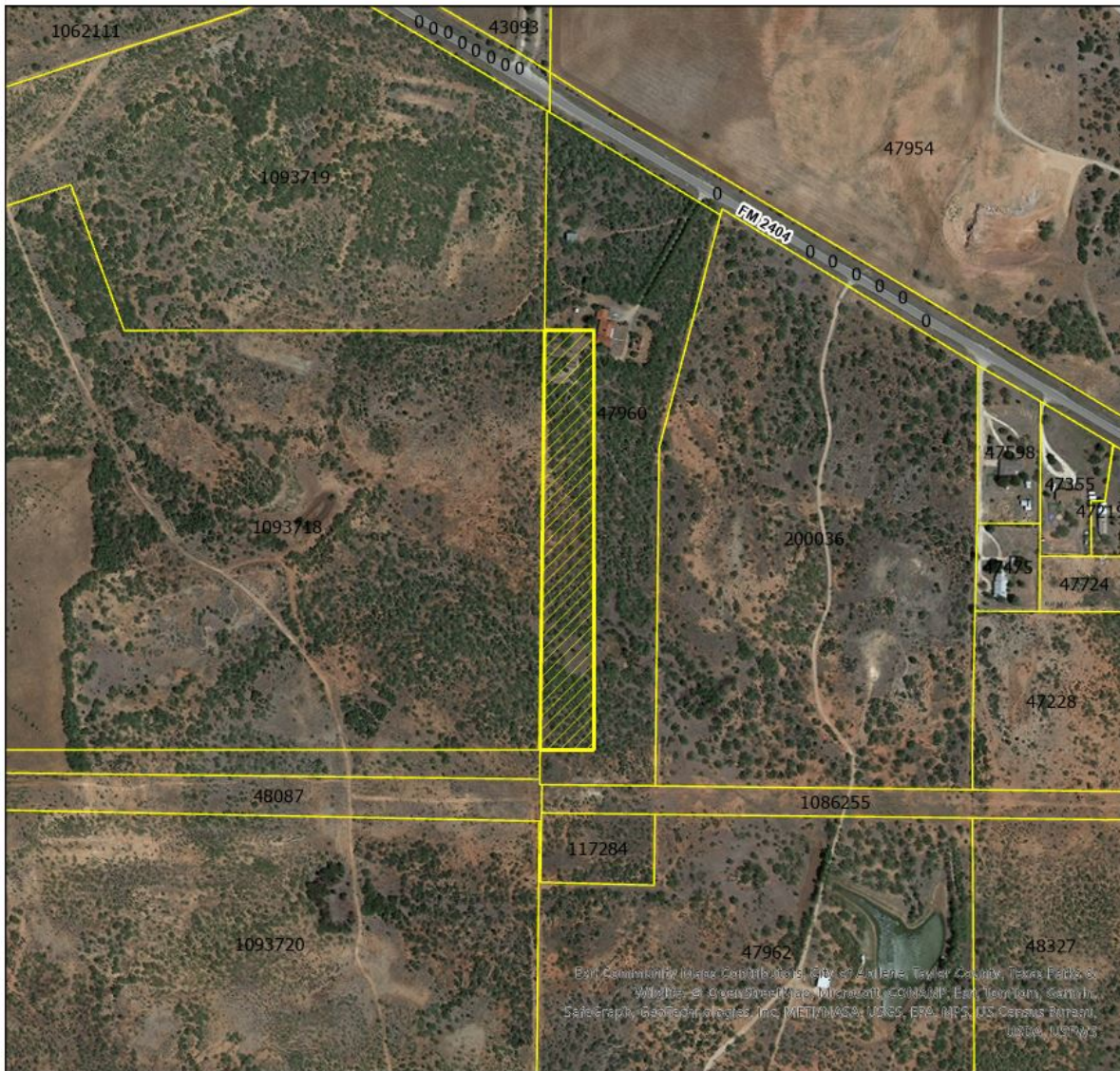
PROPERTY OWNER Legend: O - Opposed, F - In Favor

OWNER	SITUS	PROP_ID	RESPONSE
ROLLING PLAINS EV STATIONS LLC		47960	
WEST TEXAS UTILITIES CO		1086255	

NOTIFICATION MAP



LOCATION MAP



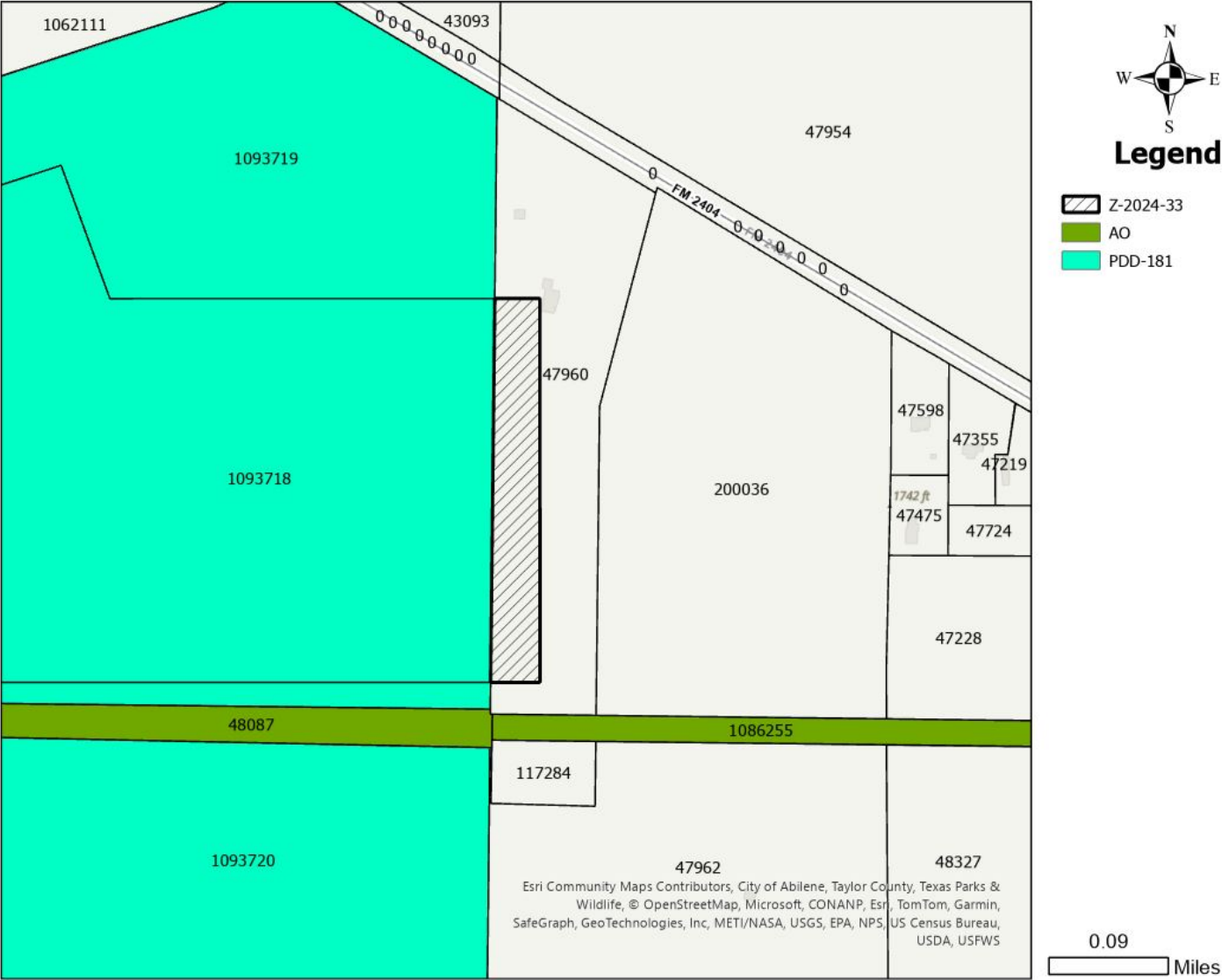
Legend

 Z-20204-33

0.09

 Miles

ZONING MAP





REZONE REQUEST

Case: Z-2024-33

Owner: Rolling Plains EV Stations, LLC

Requests: Change the zoning of approximately 5.9 acres from Agricultural Open to Planned Development District (PDD-181).

Location: 617 F.M. 2404

Notification: 0 in Favor, 0 in Opposition

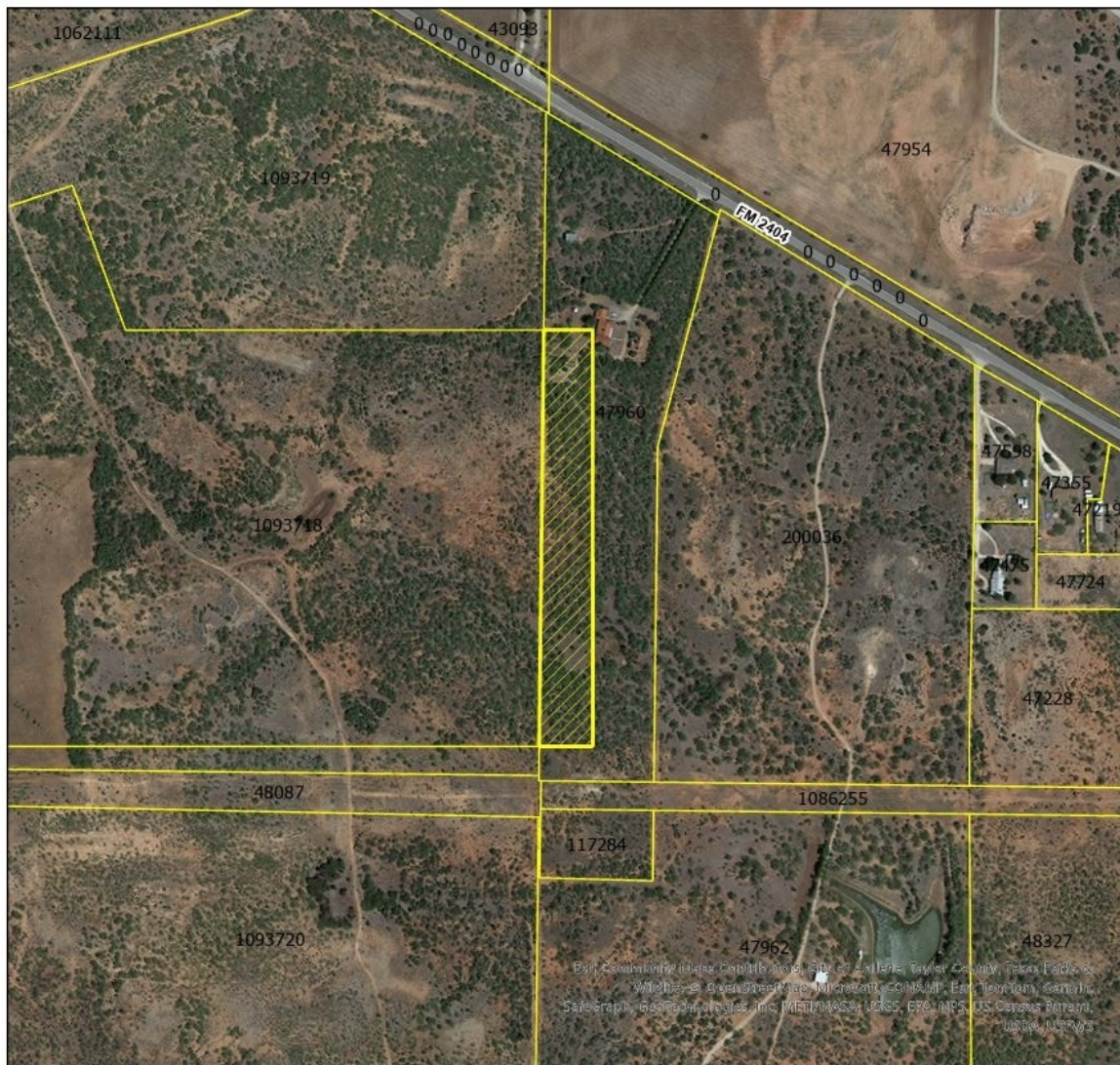
Planning & Zoning: November 5, 2024

Council Hearing: November 21, 2024
December 5, 2024





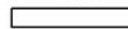
AERIAL LOCATION MAP

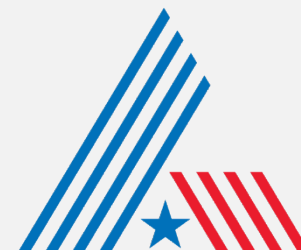


Legend

 Z-20204-33

0.09

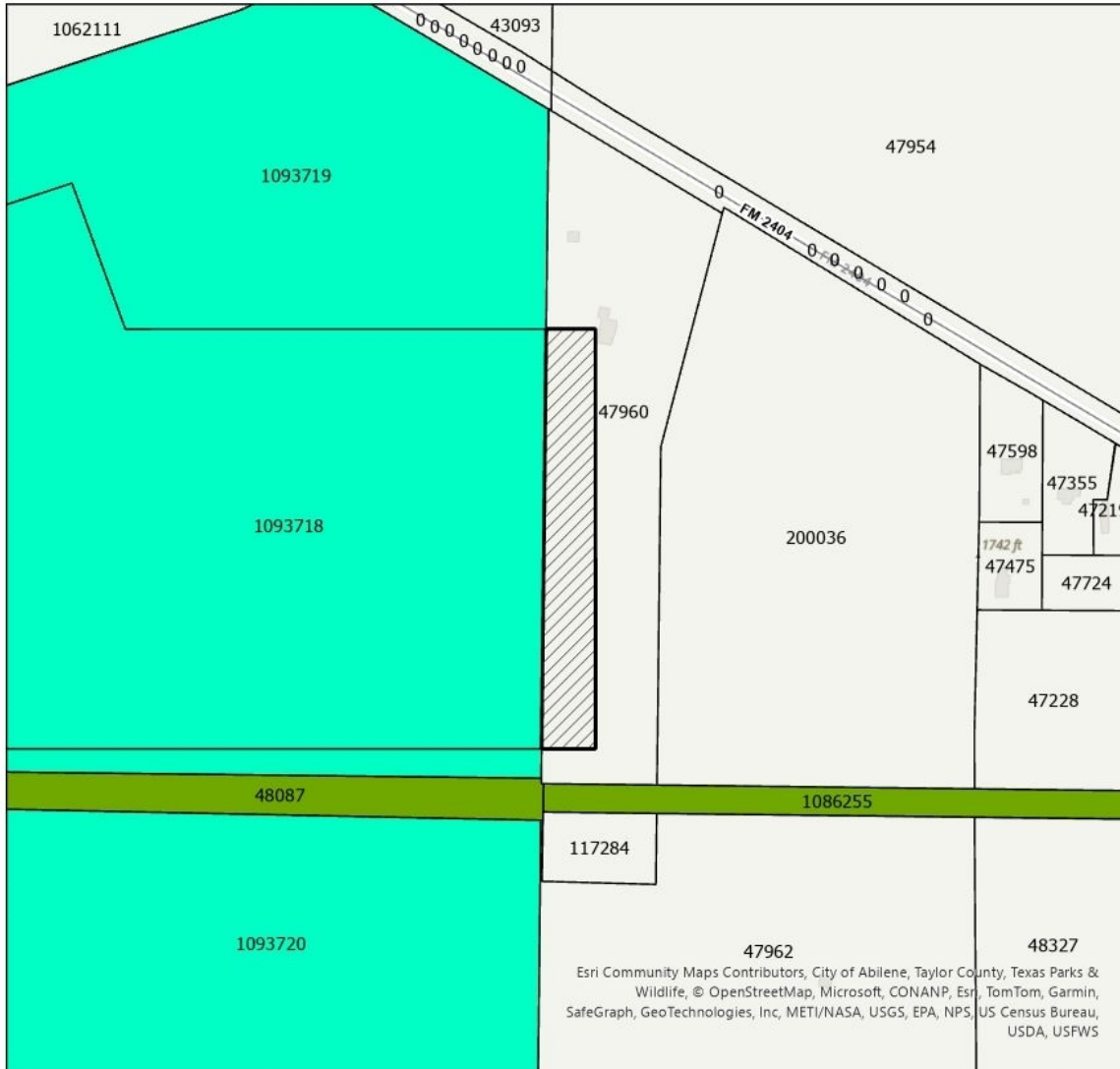
 Miles



CITY OF
ABILENE
TEXAS

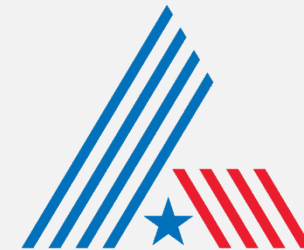


ZONING MAP



Legend

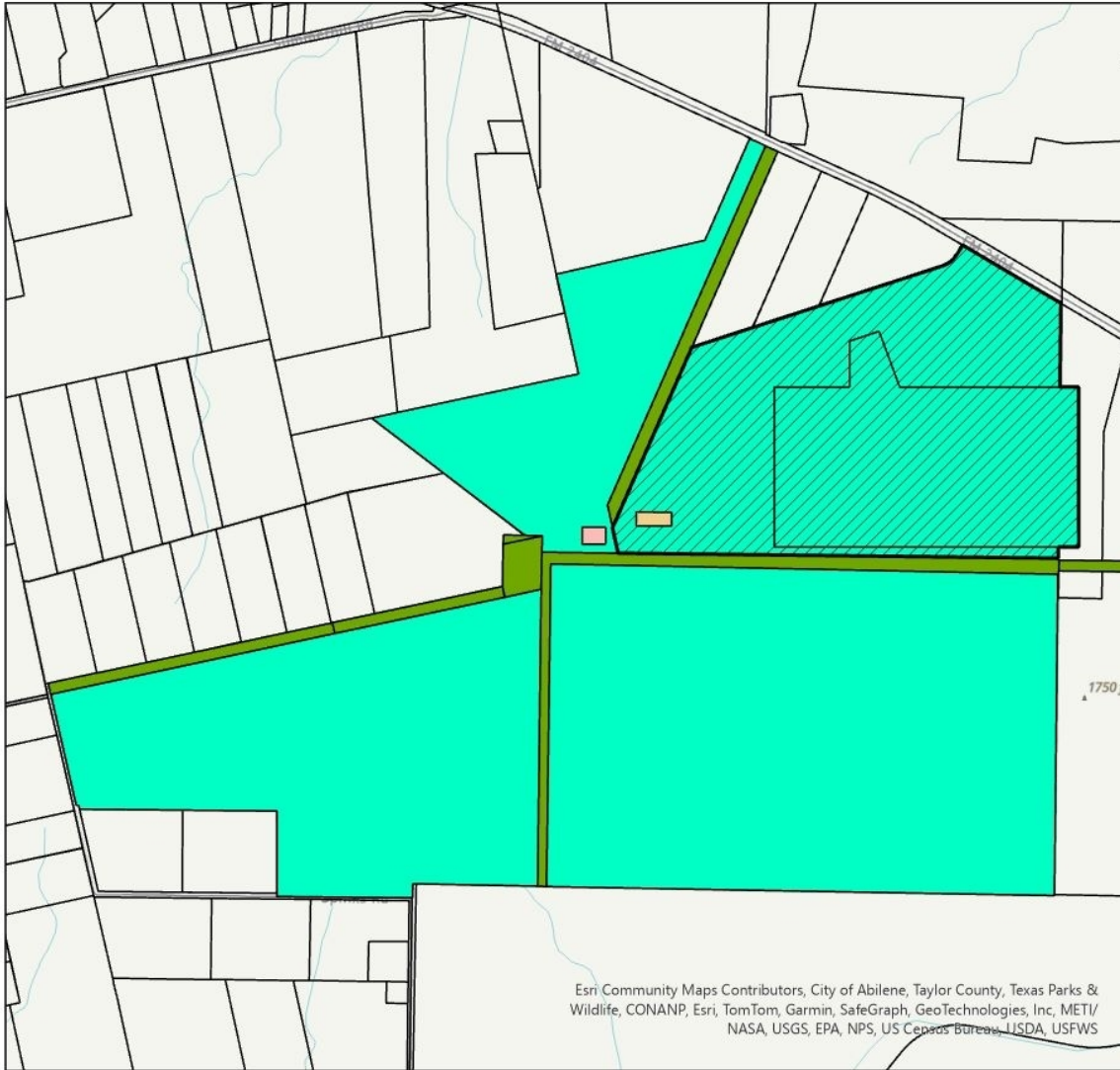
- Z-2024-33
- AO
- PDD-181



CITY OF
ABILENE
TEXAS



CONCEPT PLAN



Legend

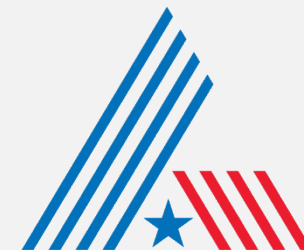
- Heavy Industrial Use
- To remain AO
- PDD-181

Substations

- 200MW
- Future 1000 MW

0.2

Miles



CITY OF
ABILENE
TEXAS



PROPERTY VIEWS

North neighboring
property



North neighboring
property



North neighboring
property



West neighboring
property



Subject property







FINDINGS AND RECOMMENDATION

The request is consistent with:

- The *Comprehensive Plan*;
- The surrounding uses and zoning;
- Generally accepted planning principles; and
- The Criteria for Approval in the LDC.

Staff Recommendation: Approval





Questions?



ORDINANCE NO. 25-2023

AN ORDINANCE OF THE CITY OF ABILENE, TEXAS, AMENDING THE, "LAND DEVELOPMENT CODE" OF THE ABILENE CITY CODE, BY CHANGING THE ZONING DISTRICT BOUNDARIES AFFECTING CERTAIN PROPERTIES; CALLING A PUBLIC HEARING; PROVIDING A PENALTY AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ABILENE, TEXAS:

PART 1: That Chapter 2 (Zoning Regulations) of the Land Development Code of the City of Abilene, is hereby amended by changing the zoning district boundaries as set out in Exhibit A, attached hereto and made a part of this ordinance for all purposes.

PART 2: That any person, firm or corporation violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by a fine of not more than Two Thousand Dollars (\$2,000.00). Each day such violation shall continue or be permitted to continue, shall be deemed a separate offense.

PART 3: That the Planning Director be, and is hereby authorized and directed to change the official Zoning Map of the City of Abilene to correctly reflect the amendments thereto.

PASSED ON FIRST READING the 27th day of April, 2023.

A notice of the time and place, where and when said ordinance would be given a public hearing and considered for final passage, was published in the *Abilene Reporter-News*, a daily newspaper of general circulation in the City of Abilene, said publication being on the 17th day of March, 2023, the same being more than fifteen (15) days prior to a public hearing held in the Council Chamber of the City Hall in Abilene, Texas, at 8:30 a.m. on the 11th day of May 2023, to permit the public to be heard prior to final consideration of this ordinance. Said ordinance, being a penal ordinance, becomes effective ten (10) days after its publication in the newspaper, as provided by Section 19 of the Charter of the City of Abilene.

PASSED ON FINAL READING THIS 11th day of May, 2023.

ATTEST:


CITY SECRETARY


MAYOR

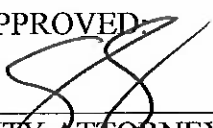
APPROVED:

CITY ATTORNEY

EXHIBIT A

Request: Change the zoning classification of the following described land, from the Agricultural Open Space (AO) district to the Planned Development District (PDD-181). The property shaded blue in the below map comprises the extent of PDD-181. The property shaded green on the map is not a part of PDD-181 and will continue to be zoned Agricultural Open (AO).

Location: 5502 Spinks Road, as legally described as:

285.90 acres out of Section 53 and 54, Block 16, T.&P. RR. Company Surveys, Taylor County, Texas; and 191.18 acres of Section 55, Block 16, T & P RR. Company Surveys, Taylor County, Texas; and 305.95 Acres of Section 24, W. W. Sills Survey, Taylor County, Texas.

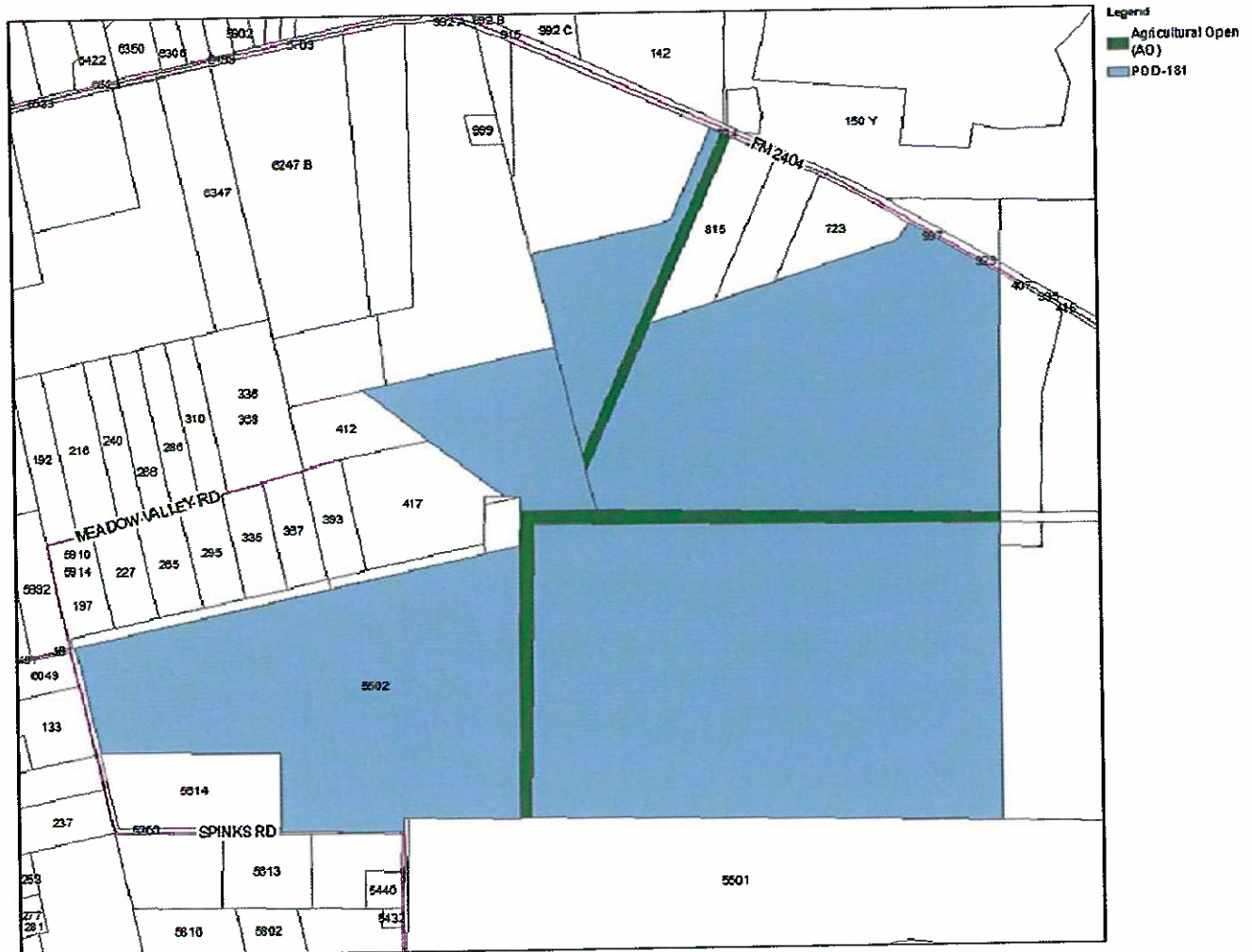


EXHIBIT B CONCEPT PLAN

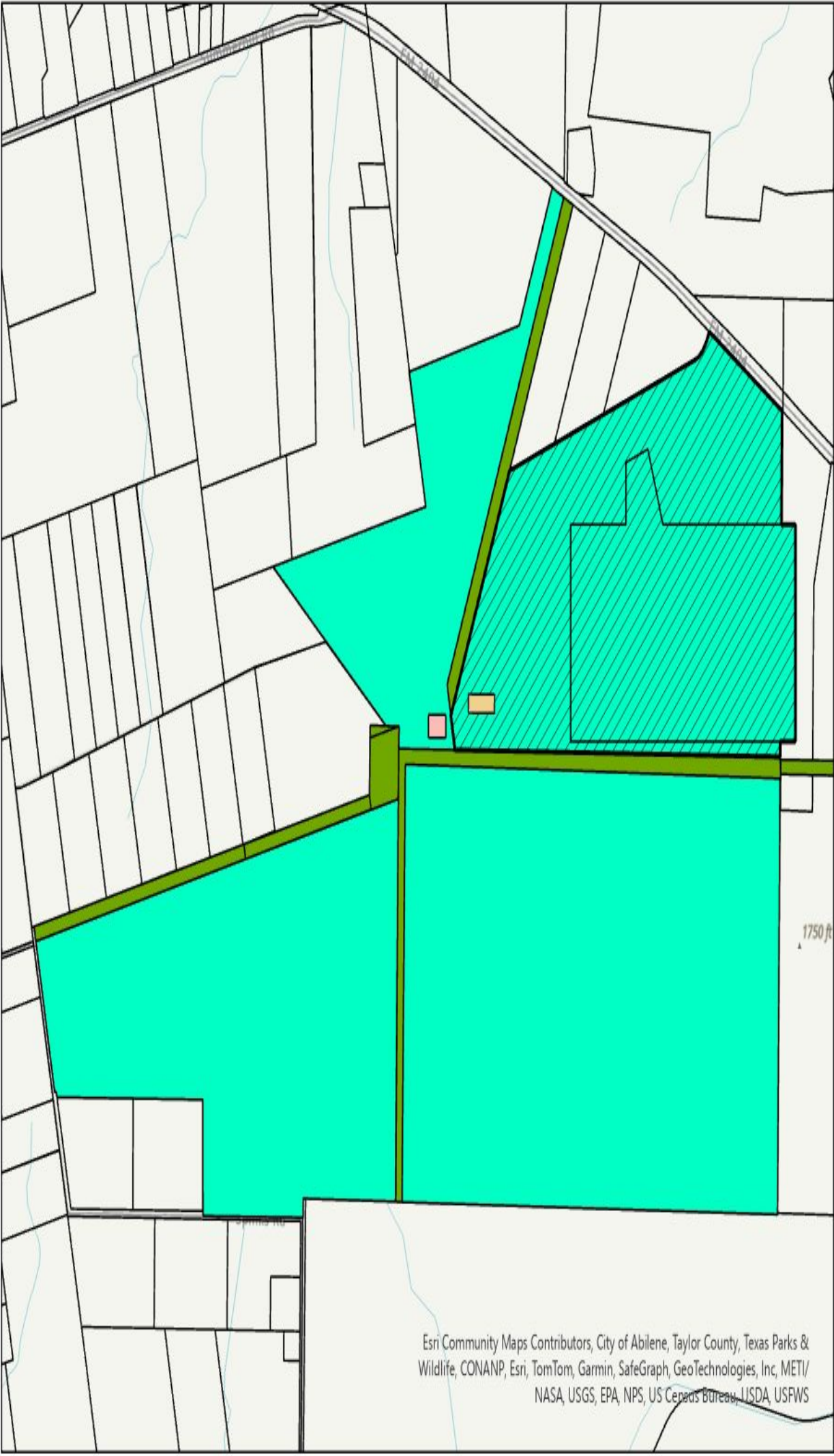


EXHIBIT C

Proposed Base Zoning District, Land Uses, and Development Standards

1. PDD-181 shall be developed in accordance with the Concept Plan (**Exhibit B**).
2. The base zoning district of PDD-181 shall be Light Industrial (LI).
3. The following Light Industrial uses shall be permitted by right at any location in PDD-181:
 - a. Data Center: High Performance Computing;
 - b. Data Center: Bitcoin Mining;
 - c. Operation and Maintenance Facilities;
 - d. Electric Vehicle Charging Station;
 - e. Solar Panel Array (green energy production);
 - f. Corporate Park (light industrial/office);
 - g. Warehousing;
 - h. Cold Storage;
 - i. Light Manufacturing;
 - j. Electric Substation; and
 - k. Corporate Headquarters (office).
4. The following Heavy Industrial (HI) uses shall be permitted by right on Lot 1:
 - a. Green Ammonia Production, Storage, and Loading Terminal;
 - b. Direct Air Capture (CO², carbon dioxide); and
 - c. Hydrogen Production, Storage, Loading Terminal.
5. The land area that comprises Lot 1 shall be the area highlighted in grey as shown in **Exhibit B**.
6. The 200-foot buffer designated on **Exhibit D** shall be maintained as open space, with all existing vegetation being maintained. Additional landscaping may also be installed as necessary.
7. The land area that comprises the 200-foot buffer area shall be the area as shown in **Exhibit D**.
8. PDD-181 shall be subject to all of the development standards that pertain to the LI zoning district.

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Legend

- Heavy Industrial Use
- To remain AO
- PDD-181

Substations

- 200MW
- Future 1000 MW

Esri Community Maps Contributors, City of Abilene, Taylor County, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

0.2

Miles