



City of Broken Arrow
Meeting Agenda
Planning Commission

Jason Coan Chairman
Jonathan Townsend Vice Chairman
Jaylee Klempa Commissioner
Robert Goranson Commissioner
Mindy Payne Commissioner

Thursday, July 23, 2026

5:30 PM

City of Broken Arrow
Council Chambers
220 South 1st Street
Broken Arrow, OK
74012

Amended

1. Call To Order

2. Roll Call

3. Old Business

4. Consideration of Consent Agenda

- A. [26-1125](#) Approval of Planning Commission meeting minutes of July 9, 2026

Attachments: [07.09.2026 Meeting Minutes](#)

- B. [26-1113](#) Approval of PT-002741-2026 | PR-000899-2026, Conditional Final Plat,
The Grove I, 33.66 acres, 105 lots, A-1 (Agricultural) to RS-3
(Single-Family Residential) via BAZ-001459-2024, located south of Jasper
Street (131st Street), west of 23rd Street (193rd E Avenue/County Line
Road)

Attachments: [2-The Grove Phase 1 CFP with comments](#)
 [3-Revised CFP for The Grove Phase 1 E&C comments](#)
 [4-The Grove Traffic Impact Analysis](#)

5. Consideration of Items Removed from Consent Agenda

6. Public Hearings

- A. [26-1109](#) Withdraw PUD-002941-2026, Planned Unit Development Major Amendment to PUD-28, 807 W Houston Street, 8.06 acres, located south and west of the intersection of Houston Street (81st Street) and Elm Place (161st E. Avenue)
- Attachments:** [2-Case Map](#)
[3-Aerial](#)
[4-Comprehensive Plan](#)
[5-McCarthy request to withdraw](#)
- B. [26-1127](#) Public hearing, consideration, and possible action regarding PUD-002918-2026 (Planned Unit Development), major amendment to PUD-111, 7Brew Kenosha, 0.70 acres, CG (Commercial General), located north of West Kenosha Street (71st Street) and west of South Aspen Avenue (145th E Ave)
- Attachments:** [2 - Case Map](#)
[3 - Aerial](#)
[4 - Conceptual Site Plan](#)
[5 - Development Outline](#)
- C. [26-1145](#) Public hearing, consideration, and possible action regarding PUD-002951-2026 (Planned Unit Development), Salt Dome, 1.09 acres, AG (Agricultural), one-half mile south of Kenosha Street (71st Street), east of 23rd Street (193rd E Ave/County Line Road), at the northeast corner of 23rd Street and E College Street
- Attachments:** [2-Case Map](#)
[3-Aerial](#)
[4-Comprehensive Plan Map](#)
[5-PUD-002951-2026 Salt Dome Design Statement](#)
[6-Salt Dome Plan Rev.6](#)
- D. [26-1119](#) Public hearing, consideration, and possible action regarding BAZ-002954-2026 (Rezoning), Tucson28, 33.92 acres, AG (Agricultural) to CG (Commercial General), located at the northwest corner of the intersection of Tucson Street (121st Street) and Aspen Avenue (145th E Avenue)
- Attachments:** [2-Case Map](#)
[3-Aerial](#)
[4-Comprehensive Plan Map](#)
[5-Tucson28 Plaza - Conceptual Site Layout](#)

- E. [26-1134](#) Public hearing, consideration, and possible action regarding PUD-002953-2026 and BAZ-002952-2026, Creekside Commercial, 101.90 acres, AG (Agricultural) and CH (Commercial Heavy) to CH (Commercial Heavy), IL (Industrial light), RMF (Residential multifamily), and RS-C (Single-family residential - Compact), located south of East Kenosha Street (71st Street), north of East Houston Street (81st Street), one-half mile east of 37th Street (209th E Ave), and along the east boundary of the Creek Turnpike (SH-364)

Attachments: [2 - Case Map](#)
 [3 - Aerial](#)
 [4 - Comprehensive Plan](#)
 [5 - PUD-002953-2026 Development Outline](#)

7. Appeals

8. General Commission Business

9. Remarks, Inquiries and Comments by Planning Commission and Staff (No Action)

10. Adjournment

NOTICE:

- 1. ALL MATTERS UNDER “CONSENT” ARE CONSIDERED BY THE PLANNING COMMISSION TO BE ROUTINE AND WILL BE ENACTED BY ONE MOTION. HOWEVER, ANY CONSENT ITEM CAN BE REMOVED FOR DISCUSSION, UPON REQUEST.**
- 2. IF YOU HAVE A DISABILITY AND NEED ACCOMMODATION IN ORDER TO PARTICIPATE IN THE MEETING, PLEASE CONTACT THE COMMUNITY DEVELOPMENT DEPARTMENT AT 918-259-8412, TO MAKE ARRANGEMENTS.**
- 3. EXHIBITS, PETITIONS, PICTURES, ETC. PRESENTED TO THE PLANNING COMMISSION MAY BE RECEIVED AND DEPOSITED IN CASE FILES TO BE MAINTAINED AT BROKEN ARROW CITY HALL.**
- 4. RINGING/SOUND ON ALL CELL PHONES AND PAGERS MUST BE TURNED OFF DURING THE PLANNING COMMISSION MEETING.**

A paper copy of this agenda is available upon request.

POSTED this ____ day of _____, _____, at _____ a.m./p.m.

City Clerk



City of Broken Arrow

Request for Action

File #: 26-1125, **Version:** 1

**Broken Arrow Planning Commission
07-23-2026**

To: Chairman and Commission Members
From: Community Development Department
Title:

Background: Approval of Planning Commission meeting minutes of July 9, 2026
Minutes recorded for the Broken Arrow Planning Commission meeting.

Attachments: 07 09 2026 Planning Commission Minutes

Recommendation: Approve minutes of Planning Commission meeting held July 9, 2026.

Reviewed By: Jane Wyrick

Approved By: Rocky Henkel



City of Broken Arrow

Minutes

Planning Commission

Jason Coan Chairman
Jonathan Townsend Vice Chairman
Jaylee Klempa Commissioner
Robert Goranson Commissioner
Mindy Payne Commissioner

City of Broken Arrow
220 South 1st Street
Broken Arrow, OK
74012

Thursday, July 9, 2026	5:30 p.m.	Council Chambers
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1. Call to Order

Chairman Jason Coan called the meeting to order at 5:30 p.m.

2. Roll Call

Present: 5 - Jaylee Klempa, Jason Coan, Mindy Payne, Robert Goranson, Jonathan Townsend

3. Old Business - NONE

4. Consideration of Consent Agenda

- A. 26-1012 Approval of Planning Commission meeting minutes of June 25, 2026**
- B. 26-1013 Approve COA-002892-2026, KED Plasma Change of Access, approximately 3.84 acres, CN (Commercial Neighborhood), located north of the northeast corner of Washington Street (91st Street) and Garnett Road (113th E. Avenue)**
- C. 26-1010 Approval of PT-002920-2026 | PR-000951-2026, Preliminary Plat, TCCL Broken Arrow South, 6.35 acres, 2 lots, CG (Commercial General), located south of New Orleans St (101st Street) and 600 feet west of Aspen Ave (145th E Avenue)**

MOTION: A motion to approve was introduced by Mindy Payne, seconded by Jaylee Klempa

Move to Approve consent agenda,

The motion carried by the following vote:

Aye: 5 - Jason Coan, Jaylee Klempa, Mindy Payne, Robert Goranson, Jonathan Townsend

5. Consideration of Items Removed from Consent Agenda - NONE

6. Public Hearings

- A. 26-1015 Public hearing, consideration, and possible action regarding PUD-002916-2025, Villa Square Minor Amendment, 1.37 acres, CH (Commercial Heavy), located just south of East Albany Street (61st Street) and one quarter of mile west of North 9th Street (177th E Ave)**

Jose Jimenez, Planner II, presented this item overviews the applicants current restrictions regarding the current PUD. The original PUD was approved by the Planning Commission in 2003 but was not developed further than a mini storage facility to the south. The north parcel has been split into three pieces, including in a reserve area. Current development practices conflict with those requirements which were in place in 2003. The applicant on behalf of the property owner, Gazi LLC, is requesting a minor amendment of the current PUD to allow for the proposed development to follow requirements matching or more like the current zoning ordinance requirements. Based upon the location of the property, the surrounding land uses, staff recommends that PUD-002916-2026 be approved.

Mr. Jimenez then answered questions from the commission regarding the use of a drive-thru or potential use of a pickup window. Further discussion captured a specific number of liminal feet. As well as additional changes from the original PUD regarding parking and stacking parking spaces. The Commission then asked for a conceptual site plan to better visualize the changes the applicant is asking for.

Gino Osmani, the general contractor and Curt Wilkins, the engineer, both applicants for the PUD amendment addressed the commission and answered questions regarding the PUD. The

applicants plan on installing a family owned pizza restaurant and a separate coffee shop in the proposed building. Ultimately, the applicants are asking for two pick up windows and relevant parking, and travel lanes be approved. Commissioners brought up the plans for the median within the development and it's positioning would cause issues for drivers with poor judgement.

Brenda Christie, President of the Stonewood Hills Home Owners Association, addressed the commission on how the development would affect a member of their HOA. She indicated from personal experience that commercial lighting and the removal of trees will disrupt her fellow homeowner. Additional concerns include additional disturbances like garbage collection, snow plowing, and loud music.

Jose Jimenez read three emailed comments from local residents Becky Philps, Cindy Fortney, and Thomas Johnson. Their concerns covered landscaping, stormwater drainage, loud noise concerns, commercial lighting, and trash screening.

Mr. Jimenez then reviewed with the commission the requirements for commercial outdoor lighting and stormwater draining as a part of the City's engineering review.

The applicants returned to rebut public comments, additional concerns from the commission regarding the coffee shop pick up window queue. The applicants agreed to installing fencing to prevent headlights from disturbing surrounding residents.

Applicant for rebuttal: Gino Osmani, Anthony Wilkins

MOTION: A motion to approve was introduced by Robert Goranson, seconded by Mindy Payne

Move to approve

The motion carried by the following vote:

Aye: 4 - Jaylee Klempa, Mindy Payne, Robert Goranson, Jonathan Townsend
Nay: 1 - Jason Coan

B. 26-1014 Public hearing, consideration, and possible action regarding BAZ-002903-2026 (Rezoning), Spicer Rezoning, 6.2 acres, AG (Agricultural) to RS (Single-Family Residential), located approximately one-quarter mile north of East Kenosha Street (71st Street) and one-quarter mile east of Oneta Road (241st E Avenue)

Jose Jimenez, Planner II, presented this item. The property owner is interested in splitting the approximately 6.2 acre parcel into two lots to allow for the development of a single family home on the proposed new lot at the northeast portion of the overall site. Right-of-way has not previously been dedicated along South 245th East Avenue, so both a 30-foot right-of-way and a 17.5-foot wide utility easement will be needed to be added as part of the anticipated lot split process that the applicant will apply for once the rezoning is completed. The property and surrounding land, excuse me, the property and surrounding area parcels are zoned AG agricultural, which necessitate a frontage of at least 330 foot and a lot size of at least five acres. Due to the limitations of the current size of the property, no lot would be able to meet those requirements. Thus, a rezoning of the property from AG to RS is required to achieve the lot split requested by the applicant. Based upon the comprehensive plan, the location of the property, and the surrounding land uses, staff recommends that BAZ-002903-2026 be approved.

Applicant and property owner Todd Spicer answered commissioners' questions regarding slight changed to the site plan originally submitted, confirming that only two lots be split from the original lot.

MOTION: A motion to approve was introduced by Jaylee Klempa, seconded by Mindy Payne.

Move to approve

The Motion carried the following vote:

Aye: 5 - Jason Coan, Jaylee Klempa, Mindy Payne, Robert Goranson, Jonathan Townsend

C. 26-495 Public hearing, consideration, and possible action regarding SP-002762-2026, Public Safety Telecommunications Tower, 10.58 acres, CN (Commercial Neighborhood), southwest corner of W. Jasper Street (131st Street) and S. Aspen Avenue (145th East Avenue)

Rebecca Blaine, Planning Section Manager, presented this item and staff report the proposed tele communication tower. The staff recommendation is to approve SP-002762-2026. And the funding and support of this project was through the 2014 Go Bond package. And then also included is the notice from engineering and construction that went out with the radius mailers

just to give people a little background on this specific project.

Applicant, Andrew Occhuzzo and Jennifer Tillson, City of Broken Arrow spoke to the commission and answered questions. Mr. Occhiozzo explained the need for the tower, including expanding access to the Public safety Communications Network, namely first responders and emergency services.

Sheryl & Pat Murphree spoke in opposition to the construction of the tower so close to their home. Thy mentioned health concerns regarding radio frequencies, changes in their property value, and additional environmental concerns.

Mr. Occhuzzo and Ms. Tillson responded to the heath concerns, educating the commission on additional details of the project and their relation to credible health data.

MOTION: A motion to approve was introduced by Jaylee Klempa, seconded by Mindy Payne.

Move to approve

The Motion carried the following vote:

Aye: 5 - Jason Coan, Jaylee Klempa, Mindy Payne, Robert Goranson, Jonathan Townsend

7. Appeals - NONE

8. General Commission Business – NONE

9. Remarks, Inquiries, and Comments by Planning Commission and Staff (No Action) - NONE

10. Adjournment

The meeting was adjourned at 6:54 p.m.

MOTION: A motion was made by Robert Goranson, seconded by Jaylee Klempa

Move to Adjourn

The motion carried by the following vote:

Aye: 4 - Jaylee Klempa, Jonathan Townsend, Robert Goranson, Mindy Payne

Nay: 1 - Jason Coan



City of Broken Arrow

Request for Action

File #: 26-1113, **Version:** 1

Broken Arrow Planning Commission
07-23-2026

To: Chairman and Commission Members
From: Community Development Department
Title:

Approval of PT-002741-2026 | PR-000899-2026, Conditional Final Plat, The Grove I, 33.66 acres, 105 lots, A-1 (Agricultural) to RS-3 (Single-Family Residential) via BAZ-001459-2024, located south of Jasper Street (131st Street), west of 23rd Street (193rd E Avenue/County Line Road)

Background:

Applicant: Alan Betchan, AAB Engineering, LLC
Owner: Blue Chip Development, LLC
Developer: Blue Chip Development, LLC
Engineer: Alan Betchan, AAB Engineering, LLC
Location: Located south of Jasper St (131st Street), west of 23rd Street (193rd E Avenue/County Line Road)
Size of Tract Approximately 33.66 acres
Number of Lots: 105 lots, 1 reserve area
Zoning: A-1 (Agricultural) to RS-3 (Single-Family Residential) via BAZ-001459-2024
Comp Plan: Level 2 - Urban Residential

PT-002741-2026 | PR-000899-2026, the conditional final plat for The Grove I, contains 105 proposed lots and one reserve area on 33.66 acres. This property is located south of Jasper Street (131st Street) and west of 23rd Street (193rd E Avenue/County Line Road).

In its early stages, this project was known as Broken Arrow West and Broken Arrow South. It is now being developed as The Grove. The rezoning and preliminary plat included the entire project site. The preliminary plat (PT-001944-2025) consisted of 458 lots on 109.55 acres. This conditional final plat is for Phase 1 only and consists of a proposed 105 lots on 33.66 acres at the eastern portion of the site.

During the City Council meeting of September 17, 2024, for the rezoning of this property (BAZ-001459-2024), it was noted that a Traffic Impact Analysis (TIA) would be performed for this development. Staff received the results of the TIA in conjunction with this conditional final plat request. The analysis concluded that the levels of service will remain acceptable for Phases 1 and 2 of The Grove development; however, once Phase 3 is completed, at around 2030, the intersection of S 23rd Street and Jasper Street would be expected to operate below acceptable levels-of-service during the a.m. and p.m. peak hours. The consultant offered three scenarios to mitigate the future level of service to an acceptable level. Pertinent city staff are reviewing the TIA results and will be working towards determining the most appropriate mitigation measure to address future levels of

service. Please see the attached Traffic Impact Analysis for this project for more detailed information.

This property lies across two FIRM (Flood Insurance Rate Map) panels. According to FEMA maps, none of Phase 1 of The Grove property is located within the 100-year floodplain. Water and Sewer are available from the City of Broken Arrow.

This conditional final plat was reviewed by the Technical Advisory Committee (TAC) on July 14, 2026. Staff and TAC recommend approval of the conditional final plat for The Grove I, subject to the attached comments.

Attachments: The Grove I Conditional Final Plat with Initial Comments
 Revised Conditional Final Plat for The Grove I Eng/Construction Comments
 Traffic Impact Analysis

Recommendation:

Staff recommends PT-002741-2026 | PR-000899-2026, Conditional Final Plat for The Grove I, be approved subject to the attached comments.

Reviewed by: Jane Wyrick

Approved by: Rocky Henkel

JMW

CONDITIONAL FINAL PLAT

The Grove I

A PART OF THE SE/4 NE/4 AND PART OF THE W/2 NE/4 AND PART OF THE E/2 NW/4 OF SECTION 12, T-17-N, R-14-E OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA

OWNER/DEVELOPER
BLUE CHIP DEVELOPMENT, LLC
PO Box 51208
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD

ENGINEER
AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE, 30, 2026
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN@AABENG.COM

Verify legal description and amend

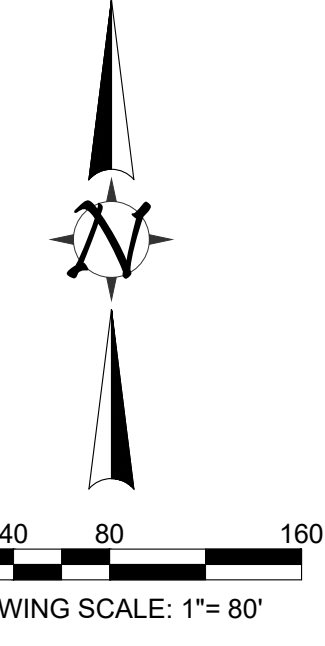
E09
Add the bearing between lots 1 & 2 or identify where the bearing for the lots change from N1-28-52W to N1-32-55W

E03
The arterial classification requires a 60' R/W dedication

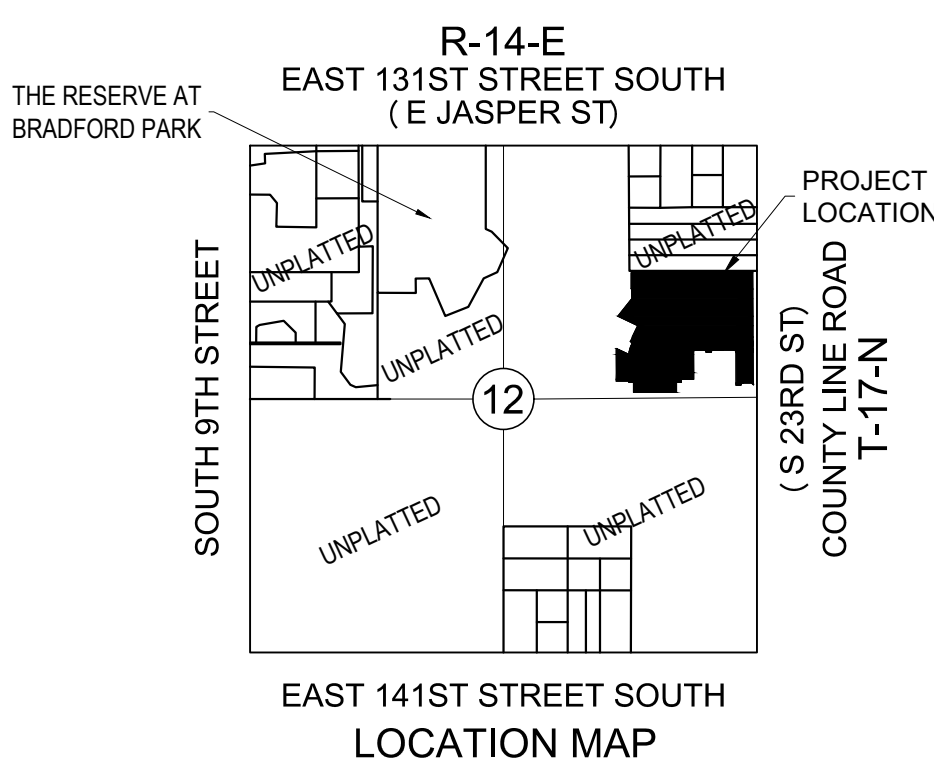
E04
One of the lengths of the lot lines on C21 and C15 will need to be revised to match the total length of the curve shown in the table

E05
The sum of the lot length do not add up, one lot is short by 5'

E06
The sum of the lot lengths do not match the total length



DRAWING SCALE: 1"= 80'



LEGEND

B/L		BUILDING LINE
LNA		LIMITS OF NO ACCESS
POB		POINT OF BEGINNING
POC		POINT OF COMMENCEMENT
ROW		RIGHT OF WAY
U/E		UTILITY EASEMENT
BK		BOOK
PG		PAGE
RA		RESTRICTED ACCESS

SUBDIVISION STATISTICS

SUBDIVISION CONTAINS ONE-HUNDRED AND SIX (106) LOTS IN SEVEN (7) BLOCKS AND ONE (1) RESERVE AREA CONTAINING 33.66 ACRES	
BLOCK 1.....	5.64 ACRES - 24 LOTS
BLOCK 2.....	4.70 ACRES - 22 LOTS
BLOCK 3.....	7.55 ACRES - 33 LOTS
BLOCK 4.....	2.76 ACRES - 12 LOTS
BLOCK 5.....	0.90 ACRES - 4 LOTS
BLOCK 6.....	1.33 ACRES - 6 LOTS
BLOCK 7.....	0.93 ACRES - 4 LOTS
RESERVE A.....	1.86 ACRES
RIGHT OF WAY.....	7.99 ACRES

CURVE TABLE

Curve #	Length	Radius	Chord Length	Chord Bearing
C1	13.29	25.00	13.14	S76°15'00"E
C2	131.71	50.00	96.80	N43°31'01"E
C3	13.29	25.00	13.14	N16°42'58"W
C4	41.56	25.00	36.93	N46°08'15"E
C5	39.27	25.00	35.36	S43°31'01"W
C6	39.27	25.00	35.36	N46°28'59"W
C7	39.27	25.00	35.36	N43°31'01"E
C8	39.27	25.00	35.36	S46°28'59"E
C9	104.77	200.00	103.58	S13°31'30"W
C10	37.31	25.00	33.95	S71°17'33"W
C11	111.42	250.00	110.50	N78°42'55"W
C12	39.27	25.00	35.36	N46°28'59"W
C13	39.27	25.00	35.36	N43°31'01"E
C14	13.29	25.00	13.14	S73°17'02"W
C15	131.71	50.00	96.80	N46°28'59"W
C16	13.29	25.00	13.14	N13°45'00"E
C17	39.27	25.00	35.36	N46°28'59"W
C18	39.27	25.00	35.36	N46°28'59"W
C19	39.27	25.00	35.36	N43°31'01"E
C20	13.29	25.00	13.14	S76°15'00"E
C21	131.71	50.00	96.80	N43°31'01"E
C22	13.29	25.00	13.14	N16°42'58"W
C23	39.27	25.00	35.36	N43°31'01"E
C24	39.27	25.00	35.36	N46°28'59"W
C25	39.27	25.00	35.36	N43°31'01"E
C26	39.27	25.00	35.36	S46°28'59"E
C27	39.27	25.00	35.36	S43°31'01"W
C28	70.84	200.00	70.47	S76°05'41"E

Submitted
March 10, 2026

PT-001944-2024 is the preliminary plat number. The project number is PR-000899-2024.

THE GROVE I
Sheet 1 of 3
Date Prepared: March 9, 2026

SUBDIVISION DATA

BENCHMARK
MAGNAIL WITH COLLAR STAMPED "GEODECA CA 5524" AT NW CORNER OF SW QUARTER SECTION 7, T-17-N, R-15-E

ELEV=666.67' (NAVD 88)

BASIS OF BEARINGS
BASIS OF BEARING IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (ZONE 3401 NORTH) WITH THE WEST LINE OF LOT THREE (3) BEING NORTH 01°28'59" WEST.

LAND AREA
1,407,774 SF ± / 32.32 ACRES±

MONUMENTATION
A 3/8" X 18" REBAR WITH A YELLOW PLASTIC CAP STAMPED "CA0038" TO BE SET AT ALL LOT CORNERS, ALL STREET CENTERLINE INTERSECTIONS, POINTS OF CURVE, POINTS OF TANGENT, POINTS OF COMPOUND CURVE, POINTS OF REVERSE CURVE, CENTER OF CUL-DE-SACS AND CENTER OF EYEBROWS, AFTER COMPLETION OF IMPROVEMENTS, UNLESS NOTED OTHERWISE.

FLOODPLAIN

THE PROPERTY IS CONTAINED IN FEMA ZONE X (UNSHADED) (AREA OF MINIMAL FLOOD HAZARD) AS SHOWN ON FIRM PANEL "40143C0459L" DATED SEPTEMBER 29, 2016.

The subdivision falls within two FIRM panel areas. Include both panels and update the date for the panels.

MUNICIPAL AUTHORITY
CITY OF BROKEN ARROW
210 S. 1ST ST.
BROKEN ARROW, OK 74012
918-251-5311

UTILITY

OKLAHOMA NATURAL GAS COMPANY 5848 EAST 15TH STREET BROKEN ARROW, OK 74112 918-831-8293	PUBLIC SERVICE COMPANY OF OKLAHOMA 212 E. 6TH ST. BROKEN ARROW, OK 74119 918-599-2351
COX COMMUNICATIONS 1811 EAST 51ST STREET BROKEN ARROW, OK 74145 918-286-4658	WINDSTREAM TELECOM COMPANY 2300 EAST 1ST PLACE BROKEN ARROW, OK 74012 918-451-3427

CITY OF BROKEN ARROW
210 S. 1ST ST.
BROKEN ARROW, OK 74012
918-259-8409

E07
The minimum finish floor need to be shown on each lot and correspond with a survey of the finished grading of the site.

E08
A 20' wide access path is required to be shown to the reserve area at the time of the plat

E10
Label reserve A a drainage easement per the covenants

E11
Only 30' is required and several lots do not meet the 70' requirement noted

NOTE
1. ALL PIE SHAPED LOTS MEET THE SEVENTY (70) FOOT FRONTAGE REQUIREMENT AT THE FRONT BUILDING LINE.

CONDITIONAL FINAL PLAT

OWNER/DEVELOPER

BLUE CHIP DEVELOPMENT, LLC
PO Box 51209
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD
PHONE: 918.951.7009

ENGINEER/SURVEYOR

AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE, 30, 2026
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN @ AABENG.COM

The Grove I

A PART OF THE SE/4 NE/4 AND PART OF THE W/2 NE/4 AND PART OF THE E/2 NW/4 OF SECTION 12, T-17-N, R-14-E OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA

KNOW ALL MEN BY THESE PRESENTS: BLUE CHIP DEVELOPMENT, LLC, AN OKLAHOMA LIMITED LIABILITY COMPANY, HEREINAFTER REFERRED TO AS THE "OWNER/DEVELOPER", IS THE OWNER OF THE FOLLOWING DESCRIBED LAND IN CITY OF BROKEN ARROW, TULSA COUNTY, STATE OF OKLAHOMA, TO-WIT:

A TRACT OF LAND LOCATED IN PART OF THE SOUTH HALF OF THE NORTHEAST QUARTER (S/2 NE/4) OF SECTION TWELVE (12), TOWNSHIP SEVENTEEN (17) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA BEING MORE FULLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER (NE/4); THENCE SOUTH 01°32'56" EAST ALONG THE EAST LINE THEREOF, A DISTANCE OF 1,323.79 FEET TO THE NORTHEAST CORNER OF THE SOUTH HALF OF SAID NORTHEAST QUARTER (S/2 NE/4) AND THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 01°32'56" EAST ALONG SAID EAST LINE, A DISTANCE OF 1,166.75 FEET; THENCE SOUTH 88°39'29" WEST A DISTANCE OF 50.00 FEET; THENCE NORTH 46°28'59" WEST A DISTANCE OF 28.03 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 85.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF SOUTH 43°31'01" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 343.74 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 46°28'59" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.37 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE 210.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF SOUTH 43°31'01" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 46°28'59" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 105.00 FEET; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 303.74 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 130.00 FEET; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 31.26 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 105.00 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 446.91 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 105.00 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 11.54 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 130.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 342.41 FEET; THENCE SOUTH 65°56'51" EAST A DISTANCE OF 144.79 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A RADIUS OF 250.00 FEET, A CHORD BEARING OF NORTH 13°20'20" EAST, A CHORD DISTANCE OF 92.95 FEET, AND A CURVE LENGTH OF 93.49 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 13.67 FEET; THENCE ON A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 20°56'51" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 50.00 FEET; THENCE NORTH 65°56'51" WEST A DISTANCE OF 2.64 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 130.00 FEET; THENCE NORTH 65°39'43" WEST A DISTANCE OF 228.69 FEET; THENCE NORTH 37°08'26" EAST A DISTANCE OF 234.15 FEET; THENCE NORTH 01°59'01" WEST A DISTANCE OF 98.15 FEET; THENCE NORTH 52°15'34" WEST A DISTANCE OF 6.59 FEET TO THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER (SE/4 NE/4); THENCE NORTH 01°27'38" WEST ALONG SAID WEST LINE A DISTANCE OF 167.45 FEET TO THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHEAST QUARTER (SE/4 NE/4); THENCE NORTH 88°43'32" EAST ALONG THE NORTH LINE THEREOF, A DISTANCE OF 1,317.74 FEET TO THE POINT OF BEGINNING, CONTAINING 1,466,117 SQUARE FEET OR 33.66 ACRES MORE OR LESS.

LEGAL DESCRIPTION BASIS OF BEARINGS IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (ZONE 3501 NORTH) WITH THE EAST LINE OF THE NORTHEAST QUARTER (NE/4) BEING SOUTH 01°32'56" EAST.

AND HAS CAUSED THE ABOVE DESCRIBED TRACT OF LAND TO BE SURVEYED, STAKED, PLATTED AND SUBDIVIDED INTO 106 LOTS IN 7 BLOCKS AND 1 RESERVE AREA, EACH ONE REFERRED TO HEREIN AS A "LOT" OR COLLECTIVELY AS "LOTS", IN CONFORMITY WITH THE ACCOMPANYING PLAT, AND HAS DESIGNATED THE SUBDIVISION AS "THE GROVE I", A SUBDIVISION IN THE CITY OF BROKEN ARROW, TULSA COUNTY, OKLAHOMA (HEREINAFTER REFERRED TO AS "THE GROVE I" OR THE "SUBDIVISION").

SECTION I. PUBLIC STREETS, EASEMENTS AND UTILITIES

- A. PUBLIC STREETS AND GENERAL UTILITY EASEMENTS
- THE OWNER/DEVELOPER DOES HEREBY DEDICATE FOR PUBLIC USE THE STREETS DEPICTED ON THE ACCOMPANYING PLAT AND DOES FURTHER DEDICATE FOR PUBLIC USE THE UTILITY EASEMENTS AS DEPICTED ON THE ACCOMPANYING PLAT AS "U/E" OR "UTILITY EASEMENT". FOR OWNER/DEVELOPER AND ALL UTILITY SERVICES WITH FRANCHISE RIGHTS WITHIN TULSA COUNTY FOR THE SEVERAL PURPOSES OF CONSTRUCTING, MAINTAINING, OPERATING, REPAIRING, REPLACING, AND/OR REMOVING ANY AND ALL PUBLIC UTILITIES, INCLUDING STORM SEWERS, SANITARY SEWERS, TELEPHONE AND COMMUNICATION LINES, ELECTRIC POWER LINES AND TRANSFORMERS, GAS LINES, WATER LINES AND CABLE TELEVISION LINES, TOGETHER WITH ALL FITTINGS, INCLUDING THE POLES, WIRES, CONDUITS, PIPES, VALVES, METERS AND EQUIPMENT FOR EACH OF SUCH FACILITIES AND ANY OTHER APPURTENANCES THERETO, WITH THE RIGHTS OF INGRESS AND EGRESS TO AND UPON THE UTILITY EASEMENTS FOR THE USES AND PURPOSES AFORESAID, PROVIDED HOWEVER, THE OWNER/DEVELOPER HEREBY RESERVES THE RIGHT TO CONSTRUCT, MAINTAIN, OPERATE, LAY AND RE-LAY ALL UTILITY LINES, INCLUDING WATER LINES AND SEWER LINES, EXCLUDING NATURAL GAS LINES AND NATURAL GAS SERVICE LINES, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS FOR SUCH CONSTRUCTION, MAINTENANCE, OPERATION, LAYING AND RE-LAYING OVER, ACROSS AND ALONG ALL OF THE UTILITY EASEMENTS DEPICTED ON THE PLAT, FOR THE PURPOSE OF FURNISHING WATER SERVICE, SEWER SERVICE AND ALL UTILITY SERVICES, EXCLUDING NATURAL GAS, TO THE AREA INCLUDED IN THE PLAT AND ELSEWHERE, AS MAY BE REQUIRED. THE OWNER/DEVELOPER HEREIN IMPOSES A RESTRICTIVE COVENANT, WHICH COVENANT SHALL BE BINDING ON EACH LOT OWNER AND SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, TULSA COUNTY, OKLAHOMA, AND BY THE SUPPLIER OF ANY AFFECTED UTILITY SERVICE, THAT WITHIN THE UTILITY EASEMENTS DEPICTED ON THE ACCOMPANYING PLAT NO BUILDING, STRUCTURE OR OTHER ABOVE OR BELOW GROUND OBSTRUCTION SHALL BE PLACED, ERRECTED, INSTALLED OR MAINTAINED, PROVIDED HOWEVER, NOTHING HEREIN SHALL BE DEEMED TO PROHIBIT DRIVES, PARKING AREAS, CURBING, LANDSCAPING, CUSTOMARY SCREENING FENCES AND WALLS THAT DO NOT CONSTITUTE AN OBSTRUCTION.
- B. UTILITY LINES AND SERVICE
1. OVERHEAD LINES FOR THE SUPPLY OF ELECTRIC, TELEPHONE AND CABLE TELEVISION SERVICES AND OTHER COMMUNICATION SERVICES MAY BE LOCATED ALONG THE PERIMETER EASEMENTS OF THE SUBDIVISION. STREET LIGHT POLES OR STANDARDS MAY BE SERVED BY OVERHEAD LINE OR UNDERGROUND CABLE THROUGHOUT THE SUBDIVISION. OTHERWISE, ALL SUPPLY LINES SHALL BE LOCATED UNDERGROUND IN THE GENERAL UTILITY EASEMENTS AND IN THE RIGHTS-OF-WAY FOR PUBLIC STREETS AS DEPICTED BY THE PLAT. SERVICE PEDESTALS AND TRANSFORMERS, AS SOURCES OF SUPPLY AT SECONDARY VOLTAGES, MAY ALSO BE LOCATED IN THE GENERAL UTILITY EASEMENTS.
2. UNDERGROUND SERVICE CABLES TO ALL STRUCTURES WHICH MAY BE LOCATED WITHIN THE SUBDIVISION MAY BE RUN FROM THE NEAREST SERVICE PEDESTAL OR TRANSFORMER TO THE POINT OF USAGE DETERMINED BY THE LOCATION AND CONSTRUCTION OF SUCH STRUCTURE AS MAY BE LOCATED UPON THE LOT, PROVIDED THAT UPON THE INSTALLATION OF A SERVICE CABLE TO A PARTICULAR STRUCTURE, THE SUPPLIER OF SERVICE SHALL THEREAFTER BE DEEMED TO HAVE A DEFINITIVE, PERMANENT AND EFFECTIVE EASEMENT ON THE LOT, COVERING A 5 FOOT STRIP EXTENDING 2.5 FEET ON EACH SIDE OF THE SERVICE CABLE, EXTENDING FROM THE SERVICE PEDESTAL OR TRANSFORMER TO THE SERVICE ENTRANCE ON THE STRUCTURE.

Verify legal description and amend as deemed necessary.

E15
The legal will need to be required for the added length of the R/W dedication

E16
If no detention is being provided the language can be removed

Update lot count.

Why are natural gas lines excluded as indicated twice in this paragraph seeing Section E is for Gas Service?

E14
Add a section for the installation and construction of the sidewalk by the home owner, with the ramps and the open space/public use areas by the developer. Identify the the land owner is responsible for the maintenance and replacement of the sidewalk adjacent to their lot.

E13
Add to the the easement encroachment that HVAC and pool equipment are also prohibited from being in an easement.

2. DETENTION, RETENTION AND OTHER DRAINAGE FACILITIES LOCATED WITHIN RESERVE AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA.
3. NO FENCE, WALL, BUILDING, OR OTHER OBSTRUCTION MAY BE PLACED OR MAINTAINED IN RESERVES AREAS NOR SHALL THERE BE ANY ALTERATION OF GRADE IN SAID EASEMENTS UNLESS APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA.
4. DETENTION, RETENTION, AND OTHER DRAINAGE FACILITIES SHALL BE MAINTAINED BY THE OWNERS, TO THE EXTENT NECESSARY TO ACHIEVE THE INTENDED DRAINAGE, RETENTION, AND DETENTION FUNCTIONS INCLUDING REPAIR OF APPURTENANCES AND REMOVAL OF OBSTRUCTIONS AND SILTATION. DETENTION FACILITIES SHALL BE MAINTAINED BY THE OWNERS IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS:
- a. GRASS AREAS SHALL BE MOWED (IN SEASON) AT REGULAR INTERVALS OF FOUR WEEKS, OR LESS.
- b. CONCRETE APPURTENANCES SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED IF DAMAGED.
- c. THE DETENTION EASEMENT SHALL BE KEPT FREE OF DEBRIS.
- d. LANDSCAPING, APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA, SHALL BE ALLOWED WITHIN RESERVE AREAS.
10. ANY DRAINAGE EASEMENTS AREAS AND FACILITIES LOCATED WITHIN RESERVE AREAS, AS DEPICTED ON THE ACCOMPANYING PLAT, SHALL BE MAINTAINED BY THE INDIVIDUAL LOT OWNERS ON WHOSE LOTS THE EASEMENTS LIE AND BY THE HOMEOWNERS' ASSOCIATION TO THE EXTENT NECESSARY TO ACHIEVE THE INTENDED DRAINAGE FUNCTIONS AND IN ACCORDANCE WITH STANDARDS PRESCRIBED BY THE CITY OF BROKEN ARROW, OKLAHOMA, IN THE EVENT THE LOT OWNER(S) OR THE HOMEOWNERS' ASSOCIATION SHOULD FAIL TO PROPERLY MAINTAIN DRAINAGE EASEMENTS OR, IN THE EVENT OF THE PLACEMENT OF AN OBSTRUCTION WITHIN THE EASEMENT AREA, OR THE ALTERATION OF THE GRADE OR CONTOUR THEREIN, THE CITY OF BROKEN ARROW, OKLAHOMA MAY ENTER THE EASEMENT AREA AND PERFORM MAINTENANCE NECESSARY TO THE ACHIEVEMENT OF THE INTENDED DRAINAGE FUNCTIONS AND MAY REMOVE ANY OBSTRUCTION OR CORRECT ANY ALTERATION OF GRADE OR CONTOUR, AND THE COST THEREOF SHALL BE PAID BY THE LOT OWNER(S) OR HOMEOWNERS' ASSOCIATION. IN THE EVENT THE LOT OWNER(S) OR HOMEOWNERS' ASSOCIATION FAILS TO PAY THE COST OF MAINTENANCE AFTER COMPLETION OF THE MAINTENANCE AND RECEIPT OF A STATEMENT OF COSTS, THE CITY OF BROKEN ARROW, OKLAHOMA, MAY FILE OF RECORD A COPY OF THE STATEMENT OF COSTS, AND THEREAFTER THE COSTS SHALL BE A LIEN AGAINST THE LOT OWNER(S) OR HOMEOWNERS ASSOCIATION. A LIEN ESTABLISHED AS ABOVE PROVIDED MAY BE JUDICIALLY FORECLOSED BY THE CITY OF BROKEN ARROW.

- H. LIMITS OF NO ACCESS
- THE OWNER HEREBY RELINQUISHES RIGHTS OF VEHICULAR INGRESS OR EGRESS FROM ANY PORTION OF THE PROPERTY ADJACENT TO COUNTY LINE ROAD WITHIN THE BOUNDS DESIGNATED AS "LIMITS OF NO ACCESS" ON THE ACCOMPANYING PLAT, WHICH LIMITS OF NO ACCESS MAY BE AMENDED OR RELEASED BY CITY OF BROKEN ARROW PLANNING COMMISSION, OR ITS SUCCESSOR, WITH THE APPROVAL OF THE CITY OF BROKEN ARROW, OKLAHOMA, OR AS OTHERWISE PROVIDED BY THE STATUTES AND LAWS OF THE STATE OF OKLAHOMA, PERTAINING THERETO, AND THE LIMITS OF NO ACCESS ESTABLISHED ABOVE SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, OKLAHOMA.
- I. MINIMUM BUILDING SETBACKS AND YARDS
1. NO BUILDING SHALL BE LOCATED NEARER TO THE RIGHT OF WAY OF AN ADJOINING PUBLIC STREET THAN THE BUILDING LINE DEPICTED ON THE ACCOMPANYING PLAT.
2. EACH LOT SHALL MAINTAIN SIDE YARDS WHICH IN THE AGGREGATE ARE NOT LESS THAN TEN (10) FEET IN WIDTH AND NO SIDE YARD SHALL BE LESS THAN FIVE (5) FEET IN WIDTH. SIDE YARDS ABUTTING A STREET SHALL NOT BE LESS THAN FIFTEEN (15) FEET, UNLESS THE GARAGE ENTRY IS LOCATED ON SUCH SIDE, WHERE IT WILL BE NO LESS THAN TWENTY-FIVE (25) FEET.
3. THE MINIMUM REAR YARD SHALL BE TWENTY (20) FEET. CUSTOMARY ACCESSORY STRUCTURES MAY BE LOCATED IN THE REQUIRED REAR YARD, BUT NO BUILDING SHALL BE ERRECTED NEARER THAN FIVE (5) FEET TO ANY LOT LINE.
4. NO BUILDING, WHETHER PRINCIPAL OR ACCESSORY, SHALL ENCR OACH UPON ANY UTILITY EASEMENT AS DEPICTED ON THE ACCOMPANYING PLAT.

SECTION II. HOMEOWNERS' ASSOCIATION

- A. FORMATION OF HOMEOWNERS' ASSOCIATION
- THE OWNER/DEVELOPER HAS FORMED AN ASSOCIATION OF THE OWNERS OF THE LOTS WITHIN THE GROVE I (HEREINAFTER AND HERETOFORE REFERRED TO AS THE "HOMEOWNERS' ASSOCIATION") TO BE ESTABLISHED IN ACCORDANCE WITH THE STATUTES OF THE STATE OF OKLAHOMA, FOR THE GENERAL PURPOSES OF MAINTAINING THE COMMON AREAS, INCLUDING BUT WITHOUT LIMITATION THE RESERVE AREA AND PERIMETER FENCING, AND ENHANCING THE VALUE, DESIRABILITY AND ATTRACTIVENESS OF ALL PHASES OF THE GROVE I.
- B. MEMBERSHIP
- EVERY PERSON OR ENTITY WHO IS A RECORD OWNER OF THE FEE INTEREST OF A LOT SHALL BE A MEMBER OF THE "HOMEOWNERS' ASSOCIATION. MEMBERSHIP SHALL BE APPURTENANT TO AND MAY NOT BE SEPARATED FROM THE OWNERSHIP OF A LOT.
- C. ASSESSMENT
- EACH RECORD OWNER OF A LOT SHALL BE SUBJECT TO ASSESSMENT BY THE HOMEOWNERS' ASSOCIATION FOR THE PURPOSES OF IMPROVEMENT AND MAINTENANCE OF THE STORM WATER DETENTION FACILITIES, RESERVE AREAS AND OTHER COMMON AREAS.

PT-001944-2024 is the preliminary plat number. The project number is PR-000899-2024.

Submitted
March 10, 2026

OWNER/DEVELOPER
BLUE CHIP DEVELOPMENT, LLC
PO Box 51209
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD
PHONE: 918.951.7009

CONDITIONAL FINAL PLAT

The Grove I

ENGINEER/SURVEYOR
AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE, 30, 2026
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN @ AABENG.COM

Verify legal description and amend as deemed necessary.

A PART OF THE SE/4 NE/4 AND PART OF THE W/2 NE/4 AND PART OF THE E/2 NW/4 OF SECTION 12, T-17-N, R-14-E OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA

SECTION III. ENFORCEMENT, DURATION, AMENDMENT AND SEVERABILITY

A. ENFORCEMENT

THE RESTRICTIONS HEREIN SET FORTH ARE COVENANTS TO RUN WITH THE LAND AND SHALL BE BINDING UPON THE OWNER/DEVELOPER, ITS SUCCESSORS AND ASSIGNS. WITHIN THE PROVISIONS OF SECTION I, PUBLIC STREETS, EASEMENTS AND UTILITIES ARE SET FORTH CERTAIN COVENANTS AND THE ENFORCEMENT RIGHTS PERTAINING THERETO, AND ADDITIONALLY THE COVENANTS WITHIN SECTION I. WHETHER OR NOT SPECIFICALLY THEREIN SO STATED SHALL INURE TO THE BENEFIT OF AND SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, OKLAHOMA. THE COVENANTS CONTAINED IN SECTION II, HOMEOWNERS' ASSOCIATION, SHALL INURE TO THE BENEFIT OF ANY OWNER OF A LOT AND THE HOMEOWNERS' ASSOCIATION. IF THE OWNER OF ANY LOT SHALL VIOLATE ANY OF THE COVENANTS WITHIN SECTION III, IT SHALL BE LAWFUL FOR ANY OWNER OF A LOT OR THE HOMEOWNERS' ASSOCIATION TO MAINTAIN ANY ACTION AT LAW OR IN EQUITY AGAINST THE PERSON OR PERSONS VIOLATING OR ATTEMPTING TO VIOLATE ANY SUCH COVENANT, TO PREVENT HIM OR THEM FROM SO DOING OR TO COMPEL COMPLIANCE WITH THE COVENANT. IN ANY JUDICIAL ACTION BROUGHT TO ENFORCE THE COVENANTS ESTABLISHED WITHIN THIS DEED OF DEDICATION, THE DEFENSE THAT THE PARTY INITIATING THE EQUITABLE PROCEEDING HAS AN ADEQUATE REMEDY AT LAW IS HEREBY WAIVED. IN ANY JUDICIAL ACTION BROUGHT BY ANY OWNER OF A LOT OR THE ASSOCIATION, WHICH ACTION SEEKS TO ENFORCE THE COVENANTS CONTAINED IN THE RESTRICTIVE COVENANTS HEREIN AND/OR TO RECOVER DAMAGES FOR THE BREACH THEREOF, THE PREVAILING PARTY SHALL BE ENTITLED TO RECEIVE REASONABLE ATTORNEY FEES AND COSTS AND EXPENSES INCURRED IN SUCH ACTION.

B. DURATION

THE RESTRICTIVE COVENANTS HEREIN, TO THE EXTENT PERMITTED BY APPLICABLE LAW, SHALL BE PERPETUAL BUT IN ANY EVENT SHALL BE IN FORCE AND EFFECT FOR A TERM OF NOT LESS THAN THIRTY (30) YEARS FROM THE DATE OF THE RECORDING OF THIS DEED OF DEDICATION UNLESS TERMINATED OR AMENDED AS HEREINAFTER PROVIDED.

C. AMENDMENT

THE COVENANTS CONTAINED WITHIN SECTION I, PUBLIC STREETS, EASEMENTS AND UTILITIES, MAY BE AMENDED OR TERMINATED AT ANY TIME BY A WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE OWNER OF THE LAND TO WHICH THE AMENDMENT OR TERMINATION IS TO BE APPLICABLE AND APPROVED BY CITY OF BROKEN ARROW PLANNING COMMISSION, OR ITS SUCCESSORS AND THE CITY OF BROKEN ARROW, OKLAHOMA. THE PROVISIONS CONTAINED WITHIN SECTION II, HOMEOWNERS' ASSOCIATION, MAY BE AMENDED OR TERMINATED AT ANY TIME BY A WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE OWNER/DEVELOPER DURING SUCH PERIOD THAT THE OWNER/DEVELOPER IS THE OWNER OF AT LEAST 1 LOT, OR ALTERNATIVELY THE COVENANTS AND RESTRICTIONS MAY BE AMENDED OR TERMINATED AT ANY TIME BY A MAJORITY VOTE OF THE MEMBERS OF THE HOMEOWNER ASSOCIATION AS EVIDENCED BY WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE PRESIDENT OF THE HOMEOWNERS' ASSOCIATION. IN THE EVENT OF ANY CONFLICT BETWEEN AN AMENDMENT OR TERMINATION PROPERLY EXECUTED BY THE OWNER/DEVELOPER (DURING ITS OWNERSHIP OF AT LEAST 1 LOT) AND ANY AMENDMENT OR TERMINATION EVIDENCED BY AN INSTRUMENT PROPERLY EXECUTED BY THE PRESIDENT OF THE HOMEOWNERS' ASSOCIATION, THE INSTRUMENT EXECUTED BY THE OWNER/DEVELOPER SHALL PREVAIL DURING ITS OWNERSHIP OF AT LEAST 1 LOT. THE PROVISIONS OF ANY INSTRUMENT AMENDING OR TERMINATING COVENANTS AS ABOVE SET FORTH SHALL BE EFFECTIVE FROM AND AFTER THE DATE, IT IS PROPERLY RECORDED.

D. SEVERABILITY

INVALIDATION OF ANY RESTRICTION SET FORTH HEREIN, OR ANY PART THEREOF, BY AN ORDER, JUDGMENT, OR DECREE OF ANY COURT, OR OTHERWISE, SHALL NOT INVALIDATE OR AFFECT ANY OF THE OTHER RESTRICTIONS OR ANY PART THEREOF AS SET FORTH HEREIN, WHICH SHALL REMAIN IN FULL FORCE AND EFFECT.

IN WITNESS WHEREOF: BLUE CHIP LAND DEVELOPMENT, LLC, AN OKLAHOMA LIMITED LIABILITY COMPANY, HAS EXECUTED THIS INSTRUMENT THIS _____ DAY OF _____, 2026.

BLUE CHIP LAND DEVELOPMENT, LLC,
AN OKLAHOMA LIMITED LIABILITY COMPANY

BY: _____
ALEX TRINIDAD, MANAGER

STATE OF OKLAHOMA)
) SS
COUNTY OF TULSA)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____, 2026, BY ALEX TRINIDAD, MANAGER OF BLUE CHIP LAND DEVELOPMENT, LLC.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____
COMMISSION NUMBER: 19011877

CERTIFICATE OF SURVEY

I, MIKEL L. STEWART, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF OKLAHOMA, HEREBY CERTIFY THAT I HAVE SURVEYED, SUBDIVIDED AND PLATTED THE ABOVE TRACT DESIGNATED AS "THE GROVE I" A SUBDIVISION IN THE CITY OF BROKEN ARROW, TULSA COUNTY, STATE OF OKLAHOMA. THE ABOVE PLAT IS AN ACCURATE REPRESENTATION OF SAID SURVEY.

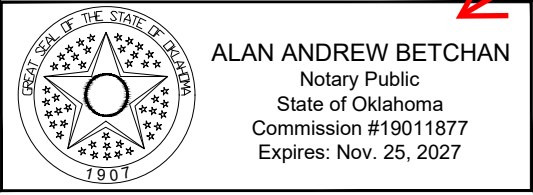
MIKEL L. STEWART
REGISTERED PROFESSIONAL LAND SURVEYOR
OKLAHOMA NO. 2105



STATE OF OKLAHOMA)
) SS
COUNTY OF TULSA)

BEFORE ME, A NOTARY PUBLIC IN AND FOR SAID STATE AND COUNTY, ON THIS _____ DAY OF _____, 2026, PERSONALLY APPEARED MIKEL L. STEWART, TO ME KNOWN TO BE THE IDENTICAL PERSON WHO SUBSCRIBED HIS NAME TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME AS HIS FREE AND VOLUNTARY ACT AND DEED, FOR THE USES AND PURPOSE THEREIN SET FORTH.

NOTARY PUBLIC
MY COMMISSION EXPIRES: NOVEMBER 25, 2027
COMMISSION NUMBER: 19011877



Consider using a notary who is not involved in the development of this plat.

City Council approves plats

PT-001944-2024 is the preliminary plat number. The project number is PR-000899-2024.

Submitted
March 10, 2026

CONDITIONAL FINAL PLAT

The Grove I

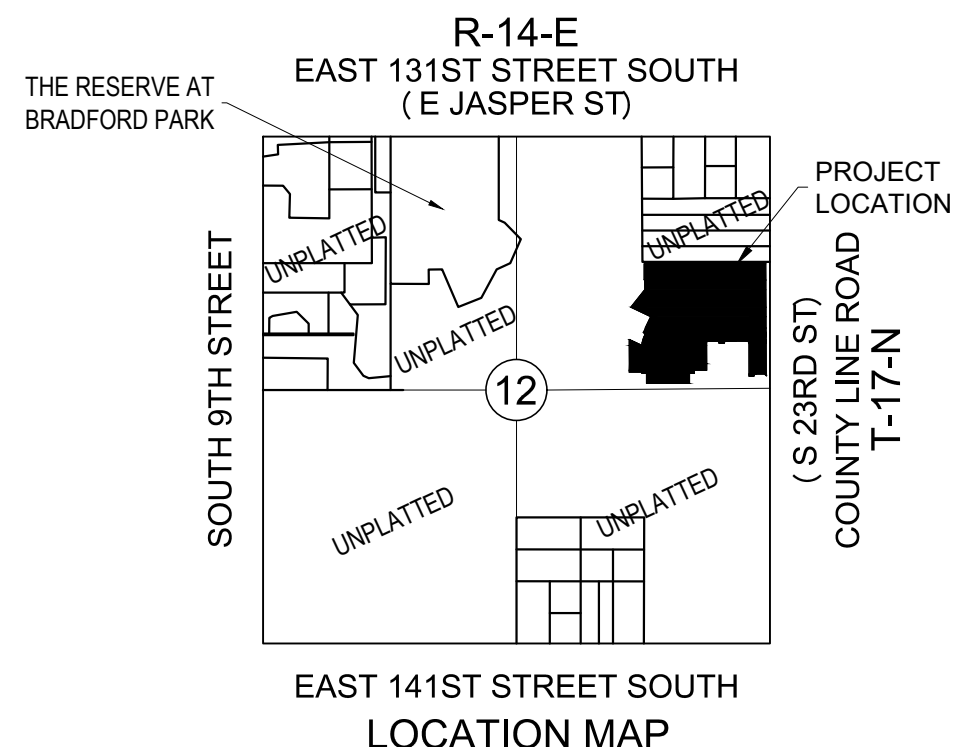
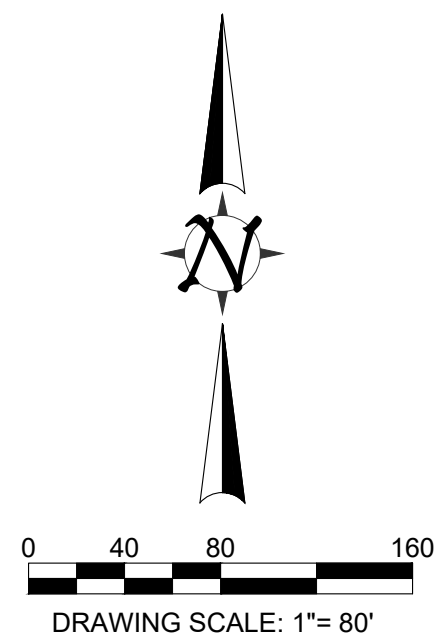
A TRACT OF LAND LOCATED IN PART OF THE SOUTH HALF OF THE NORTHEAST QUARTER (S/2 NE/4) OF SECTION TWELVE (12), TOWNSHIP SEVENTEEN (17) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA

OWNER/DEVELOPER

BLUE CHIP DEVELOPMENT, LLC
PO Box 51208
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD

ENGINEER

AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE 30, 2028
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN@AABENG.COM



LEGEND

B/L.....BUILDING LINE
LNA.....LIMITS OF NO ACCESS
POB.....POINT OF BEGINNING
POC.....POINT OF COMMENCEMENT
ROW.....RIGHT OF WAY
U/E.....UTILITY EASEMENT
D/E.....DRAINAGE EASEMENT
A/E.....ACCESS EASEMENT
BK.....BOOK
PG.....PAGE
RA.....RESTRICTED ACCESS
FFE.....FINISHED FLOOR ELEVATION

SUBDIVISION STATISTICS

SUBDIVISION CONTAINS ONE-HUNDRED AND FIVE (105) LOTS IN SEVEN (7) BLOCKS AND ONE (1) RESERVE AREA CONTAINING 33.66 ACRES

BLOCK 1.....5.64 ACRES - 24 LOTS
BLOCK 2.....4.70 ACRES - 22 LOTS
BLOCK 3.....7.55 ACRES - 33 LOTS
BLOCK 4.....2.76 ACRES - 12 LOTS
BLOCK 5.....0.90 ACRES - 4 LOTS
BLOCK 6.....1.33 ACRES - 6 LOTS
BLOCK 7.....0.93 ACRES - 4 LOTS

RESERVE A.....1.86 ACRES
RIGHT OF WAY.....7.99 ACRES

CURVE TABLE

Curve #	Length	Radius	Chord Length	Chord Bearing
C1	13.29	25.00	13.14	S76°15'00"E
C2	131.71	50.00	96.80	N43°31'01"E
C3	13.29	25.00	13.14	N16°42'58"W
C4	41.56	25.00	36.93	N46°08'15"E
C5	39.27	25.00	35.36	S43°31'01"W
C6	39.27	25.00	35.36	N46°28'59"W
C7	39.27	25.00	35.36	N43°31'01"E
C8	39.27	25.00	35.36	S46°28'59"E
C9	104.77	200.00	103.58	S13°31'30"W
C10	37.31	25.00	33.95	S71°17'33"W
C11	111.42	250.00	110.50	N78°42'55"W
C12	39.27	25.00	35.36	N46°28'59"W
C13	39.27	25.00	35.36	N43°31'01"E
C14	13.29	25.00	13.14	S73°17'02"W
C15	131.71	50.00	96.80	N46°28'59"W
C16	13.29	25.00	13.14	N13°45'00"E
C17	39.27	25.00	35.36	N46°28'59"W
C18	39.27	25.00	35.36	N46°28'59"W
C19	39.27	25.00	35.36	N43°31'01"E
C20	13.29	25.00	13.14	S76°15'00"E
C21	131.71	50.00	96.80	N43°31'01"E
C22	13.29	25.00	13.14	N16°42'58"W
C23	39.27	25.00	35.36	N43°31'01"E
C24	39.27	25.00	35.36	N46°28'59"W
C25	39.27	25.00	35.36	N43°31'01"E
C26	39.27	25.00	35.36	S46°28'59"E
C27	39.27	25.00	35.36	S43°31'01"W
C28	70.84	200.00	70.47	S76°05'41"E

NOTE

1. ALL PIE SHAPED LOTS MEET THE SEVENTY (70) FOOT FRONTAGE REQUIREMENT AT THE FRONT BUILDING LINE.

Where is the Access Easement addressed in the Plat Language? Need to define what this means to the property owners.

All of the call outs that state "...By Separate Instrument" should list the book and page.

SUBDIVISION DATA

BENCHMARK
MAGNAIL WITH COLLAR STAMPED "GEODECA CA 5524" AT NW CORNER OF SW QUARTER SECTION 7, T-17-N, R-15-E
ELEV=666.67' (NAVD 88)

BASIS OF BEARINGS
BASIS OF BEARING IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (ZONE 3401 NORTH) WITH THE WEST LINE OF LOT THREE (3) BEING NORTH 01°28'59" WEST.

LAND AREA
1,407,774 SF ± / 33.66 ACRES ±

MONUMENTATION
A 3/8" X 18" REBAR WITH A YELLOW PLASTIC CAP STAMPED "CA6038" TO BE SET AT ALL LOT CORNERS, ALL STREET CENTERLINE INTERSECTIONS, POINTS OF CURVE, POINTS OF TANGENT, POINTS OF COMPOUND CURVE, POINTS OF REVERSE CURVE, CENTER OF CUL-DE-SACS AND CENTER OF EYEBROWS, AFTER COMPLETION OF IMPROVEMENTS, UNLESS NOTED OTHERWISE.

FLOODPLAIN

THE PROPERTY IS CONTAINED IN FEMA ZONE X (UNSHADED) (AREA OF MINIMAL FLOOD HAZARD) AS SHOWN ON FIRM PANEL "40143C0459L" DATED SEPTEMBER 30, 2016 AND FIRM PANEL "40143C0457M" DATED SEPTEMBER 30, 2016.

DETENTION DETERMINATION # DD-021225-06

CONTACTS

MUNICIPAL AUTHORITY
CITY OF BROKEN ARROW
210 S. 1ST ST.
BROKEN ARROW, OK 74012
918-251-5311

UTILITY

OKLAHOMA NATURAL GAS COMPANY
5848 EAST 15TH STREET
BROKEN ARROW, OK 74112
918-831-8293

PUBLIC SERVICE COMPANY
OF OKLAHOMA
212 E. 6TH ST.
BROKEN ARROW, OK 74119
918-599-2351

COX COMMUNICATIONS
11811 EAST 51ST STREET
BROKEN ARROW, OK 74145
918-286-4658

WINDSTREAM TELECOM COMPANY
2300 EAST 1ST PLACE
BROKEN ARROW, OK 74012
918-451-3427

CITY OF BROKEN ARROW
210 S. 1ST ST.
BROKEN ARROW, OK 74012
918-259-8409

please add:
"For water or sewer line breaks:
M-F 7a-4p Action Center @
918.258.3587
After hours: Police non-emergency
@ 918.259.8400"

Add label with filed dedication document and/or label as being dedicated with this plat

OWNER/DEVELOPER

BLUE CHIP DEVELOPMENT, LLC
PO Box 51209
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD
PHONE: 918.951.7009

CONDITIONAL FINAL PLAT

The Grove I

A TRACT OF LAND LOCATED IN PART OF THE SOUTH HALF OF THE NORTHEAST QUARTER (S/2 NE/4) OF SECTION TWELVE (12), TOWNSHIP SEVENTEEN (17) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA

ENGINEER/SURVEYOR

AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE 30, 2028
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN @ AABENG.COM

KNOW ALL MEN BY THESE PRESENTS: BLUE CHIP DEVELOPMENT, LLC, AN OKLAHOMA LIMITED LIABILITY COMPANY, HEREINAFTER REFERRED TO AS THE "OWNER/DEVELOPER", IS THE OWNER OF THE FOLLOWING DESCRIBED LAND IN CITY OF BROKEN ARROW, TULSA COUNTY, STATE OF OKLAHOMA, TO-WIT:

A TRACT OF LAND LOCATED IN PART OF THE SOUTH HALF OF THE NORTHEAST QUARTER (S/2 NE/4) OF SECTION TWELVE (12), TOWNSHIP SEVENTEEN (17) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA BEING MORE FULLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER (NE/4); THENCE SOUTH 01°32'56" EAST ALONG THE EAST LINE THEREOF, A DISTANCE OF 1,323.79 FEET TO THE NORTHEAST CORNER OF THE SOUTH HALF OF SAID NORTHEAST QUARTER (S/2 NE/4) AND THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 01°32'56" EAST ALONG SAID EAST LINE, A DISTANCE OF 1,166.75 FEET; THENCE SOUTH 88°39'29" WEST A DISTANCE OF 60.00 FEET; THENCE NORTH 46°28'59" WEST A DISTANCE OF 28.03 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 85.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF SOUTH 43°31'01" WEST, A CHORD DISTANCE OF 35.36 FEET AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 343.74 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 46°28'59" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.37 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE 210.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF SOUTH 43°31'01" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 46°28'59" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 105.00 FEET; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 303.74 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 130.00 FEET; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 31.26 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00; THENCE SOUTH 01°28'59" EAST A DISTANCE OF 105.00 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 446.91 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 105.00 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 50.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 11.54 FEET; THENCE SOUTH 88°31'01" WEST A DISTANCE OF 130.00 FEET; THENCE NORTH 01°28'59" WEST A DISTANCE OF 342.41 FEET; THENCE SOUTH 65°56'51" EAST A DISTANCE OF 144.79 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A RADIUS OF 250.00 FEET, A CHORD BEARING OF NORTH 13°20'20" EAST, A CHORD DISTANCE OF 92.95 FEET, AND A CURVE LENGTH OF 93.49 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 13.67 FEET; THENCE ON A CURVE TO THE LEFT HAVING A RADIUS OF 25.00 FEET, A CHORD BEARING OF NORTH 20°56'51" WEST, A CHORD DISTANCE OF 35.36 FEET, AND A CURVE LENGTH OF 39.27 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 50.00 FEET; THENCE NORTH 65°56'51" WEST A DISTANCE OF 2.64 FEET; THENCE NORTH 24°03'09" EAST A DISTANCE OF 130.00 FEET; THENCE NORTH 65°39'43" WEST A DISTANCE OF 228.69 FEET; THENCE NORTH 37°08'26" EAST A DISTANCE OF 234.15 FEET; THENCE NORTH 02°15'01" WEST A DISTANCE OF 58.15 FEET; THENCE NORTH 52°15'34" WEST A DISTANCE OF 6.59 FEET TO THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER (SE/4 NE/4); THENCE NORTH 01°27'38" WEST ALONG SAID WEST LINE A DISTANCE OF 167.45 FEET TO THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF THE NORTHEAST QUARTER (SE/4 NE/4); THENCE NORTH 88°43'32" EAST ALONG THE NORTH LINE THEREOF, A DISTANCE OF 1,317.74 FEET TO THE POINT OF BEGINNING, CONTAINING 1,466,117 SQUARE FEET OR 33.66 ACRES MORE OR LESS.

LEGAL DESCRIPTION BASIS OF BEARINGS IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (ZONE 3501 NORTH) WITH THE EAST LINE OF THE NORTHEAST QUARTER (NE/4) BEING SOUTH 01°32'56" EAST.

AND HAS CAUSED THE ABOVE DESCRIBED TRACT OF LAND TO BE SURVEYED, STAKED, PLATTED AND SUBDIVIDED INTO 105 LOTS IN 7 BLOCKS AND 1 RESERVE AREA, EACH ONE REFERRED TO HEREIN AS A "LOT" OR COLLECTIVELY AS "LOTS", IN CONFORMITY WITH THE ACCOMPANYING PLAT, AND HAS DESIGNATED THE SUBDIVISION AS "THE GROVE I", A SUBDIVISION IN THE CITY OF BROKEN ARROW, TULSA COUNTY, OKLAHOMA (HEREINAFTER REFERRED TO AS "THE GROVE I" OR THE "SUBDIVISION").

SECTION I. PUBLIC STREETS, EASEMENTS AND UTILITIES

- A. PUBLIC STREETS AND GENERAL UTILITY EASEMENTS
- THE OWNER/DEVELOPER DOES HEREBY DEDICATE FOR PUBLIC USE THE STREETS DEPICTED ON THE ACCOMPANYING PLAT AND DOES FURTHER DEDICATE FOR PUBLIC USE THE UTILITY EASEMENTS AS DEPICTED ON THE ACCOMPANYING PLAT AS "U/E" OR "UTILITY EASEMENT". FOR OWNER/DEVELOPER AND ALL UTILITY SERVICES WITH FRANCHISE RIGHTS WITHIN TULSA COUNTY FOR THE SEVERAL PURPOSES OF CONSTRUCTING, MAINTAINING, OPERATING, REPAIRING, REPLACING, AND/OR REMOVING ANY AND ALL PUBLIC UTILITIES, INCLUDING STORM SEWERS, SANITARY SEWERS, TELEPHONE AND COMMUNICATION LINES, ELECTRIC POWER LINES AND TRANSFORMERS, GAS LINES, WATER LINES AND CABLE TELEVISION LINES, TOGETHER WITH ALL FITTINGS, INCLUDING THE POLES, WIRES, CONDUITS, PIPES, VALVES, METERS AND EQUIPMENT FOR EACH OF SUCH FACILITIES AND ANY OTHER APPURTENANCES THERETO, WITH THE RIGHTS OF INGRESS AND EGRESS TO AND UPON THE UTILITY EASEMENTS FOR THE USES AND PURPOSES AFORESAID, PROVIDED HOWEVER, THE OWNER/DEVELOPER HEREBY RESERVES THE RIGHT TO CONSTRUCT, MAINTAIN, OPERATE, LAY AND RE-LAY ALL UTILITY LINES, INCLUDING WATER LINES AND SEWER LINES, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS FOR SUCH CONSTRUCTION, MAINTENANCE, OPERATION, LAYING AND RE-LAYING OVER, ACROSS AND ALONG ALL OF THE UTILITY EASEMENTS DEPICTED ON THE PLAT, FOR THE PURPOSE OF FURNISHING WATER SERVICE, SEWER SERVICE AND ALL UTILITY SERVICES, TO THE AREA INCLUDED IN THE PLAT AND ELSEWHERE, AS MAY BE REQUIRED. THE OWNER/DEVELOPER HEREIN IMPOSES A RESTRICTIVE COVENANT, WHICH COVENANT SHALL BE BINDING ON EACH LOT OWNER AND SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, TULSA COUNTY, OKLAHOMA, AND BY THE SUPPLIER OF ANY AFFECTED UTILITY SERVICE, THAT WITHIN THE UTILITY EASEMENTS DEPICTED ON THE ACCOMPANYING PLAT NO BUILDING, STRUCTURE OR OTHER ABOVE OR BELOW GROUND OBSTRUCTION SHALL BE PLACED, ERECTED, INSTALLED OR MAINTAINED, PROVIDED HOWEVER, NOTHING HEREIN SHALL BE DEEMED TO PROHIBIT DRIVES, PARKING AREAS, CURBING, LANDSCAPING, CUSTOMARY SCREENING FENCES AND WALLS THAT DO NOT CONSTITUTE AN OBSTRUCTION.
- B. UTILITY LINES AND SERVICE
1. OVERHEAD LINES FOR THE SUPPLY OF ELECTRIC, TELEPHONE AND CABLE TELEVISION SERVICES AND OTHER COMMUNICATION SERVICES MAY BE LOCATED ALONG THE PERIMETER EASEMENTS OF THE SUBDIVISION. STREET LIGHT POLES OR STANDARDS MAY BE SERVED BY OVERHEAD LINE OR UNDERGROUND CABLE THROUGHOUT THE SUBDIVISION. OTHERWISE, ALL SUPPLY LINES SHALL BE LOCATED UNDERGROUND IN THE GENERAL UTILITY EASEMENTS AND IN THE RIGHTS-OF-WAY FOR PUBLIC STREETS AS DEPICTED BY THE PLAT. SERVICE PEDESTALS AND TRANSFORMERS, AS SOURCES OF SUPPLY AT SECONDARY VOLTAGES, MAY ALSO BE LOCATED IN THE GENERAL UTILITY EASEMENTS.
2. UNDERGROUND SERVICE CABLES TO ALL STRUCTURES WHICH MAY BE LOCATED WITHIN THE SUBDIVISION MAY BE RUN FROM THE NEAREST SERVICE PEDESTAL OR TRANSFORMER TO THE POINT OF USAGE DETERMINED BY THE LOCATION AND CONSTRUCTION OF SUCH STRUCTURE AS MAY BE LOCATED UPON THE LOT, PROVIDED THAT UPON THE INSTALLATION OF A SERVICE CABLE TO A PARTICULAR STRUCTURE, THE SUPPLIER OF SERVICE SHALL THEREAFTER BE DEEMED TO HAVE A DEFINITIVE, PERMANENT AND EFFECTIVE EASEMENT ON THE LOT, COVERING A 5 FOOT STRIP EXTENDING 2.5 FEET ON EACH SIDE OF THE SERVICE CABLE, EXTENDING FROM THE SERVICE PEDESTAL OR TRANSFORMER TO THE SERVICE ENTRANCE ON THE STRUCTURE.

3. THE SUPPLIER OF ELECTRIC, TELEPHONE AND CABLE TELEVISION SERVICES AND OTHER COMMUNICATION SERVICES, THROUGH ITS AGENTS AND EMPLOYEES, SHALL AT ALL TIMES HAVE RIGHT OF ACCESS TO ALL GENERAL UTILITY EASEMENTS DEPICTED ON THE ACCOMPANYING PLAT OR OTHERWISE PROVIDED FOR IN THIS DEED OF DEDICATION FOR THE PURPOSE OF INSTALLING, MAINTAINING, REMOVING OR REPLACING ANY PORTION OF THE UNDERGROUND ELECTRIC, TELEPHONE, CABLE TELEVISION OR COMMUNICATION FACILITIES INSTALLED BY THE SUPPLIER OF THE UTILITY SERVICE.
4. THE OWNER OF THE LOT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE UNDERGROUND SERVICE FACILITIES LOCATED ON HIS LOT AND SHALL PREVENT THE ALTERATION OF GRADE OR ANY CONSTRUCTION ACTIVITY THAT WOULD INTERFERE WITH THE ELECTRIC, TELEPHONE, CABLE TELEVISION OR COMMUNICATION FACILITIES. THE SUPPLIER OF SERVICE SHALL BE RESPONSIBLE FOR ORDINARY MAINTENANCE OF UNDERGROUND FACILITIES, BUT THE OWNER SHALL PAY FOR DAMAGE OR RELOCATION OF SUCH FACILITIES CAUSED OR NECESSITATED BY ACTS OF THE OWNER OR HIS AGENTS OR CONTRACTORS.
5. THE FOREGOING COVENANTS SET FORTH IN THIS PARAGRAPH B SHALL BE ENFORCEABLE BY THE SUPPLIER OF THE ELECTRIC, TELEPHONE, CABLE TELEVISION OR OTHER COMMUNICATION SERVICE AND THE OWNER OF THE LOT AGREES TO BE BOUND HEREBY.

C. WATER AND STORM SEWER SERVICE

1. THE OWNER OF THE LOT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PUBLIC WATER MAINS, AND STORM SEWERS LOCATED ON THEIR LOT AND SHALL PREVENT THE ALTERATION OF GRADE OR ANY CONSTRUCTION ACTIVITY WHICH MAY INTERFERE WITH SAID PUBLIC WATER MAIN, OR STORM SEWER.
2. WITHIN THE UTILITY AND DRAINAGE EASEMENT AREAS DEPICTED ON THE ACCOMPANYING PLAT, THE ALTERATION OF GRADE FROM THE CONTOURS EXISTING UPON THE COMPLETION OF THE INSTALLATION OF A PUBLIC WATER MAIN, STORM SEWER OR DRAINAGE WAYS, OR ANY CONSTRUCTION ACTIVITY WHICH WOULD INTERFERE WITH PUBLIC WATER MAINS AND STORM SEWERS SHALL BE PROHIBITED. THE CITY OF BROKEN ARROW, MAY SPECIFICALLY ENFORCE THIS PROVISION.
3. THE CITY OF BROKEN ARROW, OR ITS SUCCESSORS AS THE PROVIDER, SHALL BE RESPONSIBLE FOR ORDINARY MAINTENANCE OF PUBLIC WATER MAINS, BUT THE OWNER SHALL PAY FOR DAMAGE OR RELOCATION OF SUCH FACILITIES CAUSED OR NECESSITATED BY ACTS OF THE OWNER, HIS AGENTS OR CONTRACTORS.
4. THE CITY OF BROKEN ARROW, OKLAHOMA, OR ITS SUCCESSORS, SHALL AT ALL TIMES HAVE RIGHT OF ACCESS TO ALL EASEMENTS DEPICTED ON THE ACCOMPANYING PLAT, OR OTHERWISE PROVIDED FOR IN THIS DEED OF DEDICATION, FOR THE PURPOSE OF INSTALLING, MAINTAINING, REMOVING OR REPLACING ANY PORTION OF UNDERGROUND WATER OR SEWER FACILITIES OR STORM WATER FACILITIES. THE CITY OF BROKEN ARROW SHALL HAVE SUCH RIGHT OF ACCESS FOR THE PURPOSE OF INSTALLING, MAINTAINING, REMOVING OR REPLACING ANY PORTION OF POTABLE WATER FACILITIES. ITS SUCCESSOR UTILITY OR MUNICIPALITY PROVIDING WATER SERVICE SHALL HAVE SIMILAR RIGHT OF ACCESS.
5. WHERE WATER LINES ARE INSTALLED WITHIN A UTILITY EASEMENT, THAT PORTION OF THE UTILITY EASEMENT IS FOR THE USE OF THE CITY OF BROKEN ARROW, OKLAHOMA, OR ITS SUCCESSORS. THE UTILITY EASEMENTS DEDICATED HEREIN FOR THE PURPOSE OF PROVIDING POTABLE WATER ARE DEDICATED TO THE CITY OF BROKEN ARROW, OR ITS SUCCESSORS OR ASSIGNS, AS THE EXCLUSIVE PROVIDER OF POTABLE WATER TO THE SUBDIVISION. SEWER, GAS, ELECTRIC, COMMUNICATION, CABLE, SOLID WASTE MANAGEMENT, AND OTHER PROVIDERS OF UTILITIES, OTHER THAN POTABLE WATER, MAY ALSO USE SAID EASEMENTS.
6. THE FOREGOING COVENANTS SET FORTH IN THIS PARAGRAPH C SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, OKLAHOMA, THEIR SUCCESSORS, OR ANY UTILITY PROVIDER OF SERVICES AND THE OWNER OF THE LOT AGREES TO BE BOUND HEREBY.

D. PAVING AND LANDSCAPING WITHIN EASEMENTS

THE OWNER OF THE LOT AFFECTED SHALL BE RESPONSIBLE FOR THE REPAIR OF DAMAGE TO LANDSCAPING AND PAVING OCCASIONED BY NECESSARY INSTALLATION OR MAINTENANCE OF UNDERGROUND WATER, SEWER, STORM SEWER, NATURAL GAS, COMMUNICATION, CABLE TELEVISION OR ELECTRIC FACILITIES WITHIN THE EASEMENT AREAS DEPICTED UPON THE ACCOMPANYING PLAT, PROVIDED, HOWEVER, THE CITY OF BROKEN ARROW, OKLAHOMA, OR THE SUPPLIER OF THE UTILITY SERVICE SHALL USE REASONABLE CARE IN THE PERFORMANCE OF SUCH ACTIVITIES.

E. GAS SERVICE

1. THE OWNER OF THE LOT SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE UNDERGROUND GAS FACILITIES LOCATED ON THE LOT.
2. WITHIN THE DEPICTED UTILITY EASEMENT AREAS, THE ALTERATION OF GRADE OR ANY CONSTRUCTION ACTIVITY, WHICH MAY INTERFERE WITH THE UNDERGROUND GAS FACILITIES, SHALL BE PROHIBITED.
3. THE SUPPLIER OF GAS SERVICE OR ITS SUCCESSORS SHALL BE RESPONSIBLE FOR ORDINARY MAINTENANCE OF THE GAS FACILITIES, BUT THE OWNER SHALL PAY FOR DAMAGE OR RELOCATION OF SUCH FACILITIES CAUSED OR NECESSITATED BY ACTS OF THE OWNER, HIS AGENTS OR CONTRACTORS.
4. THE SUPPLIER OF GAS SERVICE OR ITS SUCCESSORS SHALL AT ALL TIMES HAVE RIGHT OF ACCESS WITH THEIR EQUIPMENT TO ALL EASEMENT WAYS DEPICTED ON THE PLAT OR OTHERWISE PROVIDED FOR IN THIS DEED OF DEDICATION FOR THE PURPOSE OF INSTALLING, MAINTAINING, REMOVING OR REPLACING ANY PORTION OF UNDERGROUND GAS FACILITIES.
5. UNDERGROUND GAS SERVICE LINES TO ALL STRUCTURES WHICH MAY BE LOCATED WITHIN THE SUBDIVISION MAY BE RUN FROM THE NEAREST GAS MAIN TO THE POINT OF USAGE DETERMINED BY THE LOCATION AND CONSTRUCTION OF SUCH STRUCTURE AS MAY BE LOCATED UPON THE LOT, PROVIDED THAT UPON THE INSTALLATION OF A SERVICE LINE TO A PARTICULAR STRUCTURE, THE SUPPLIER OF SERVICE SHALL THEREAFTER BE DEEMED TO HAVE A DEFINITIVE, PERMANENT AND EFFECTIVE EASEMENT ON THE LOT, COVERING A 5 FOOT STRIP EXTENDING 2.5 FEET ON EACH SIDE OF THE SERVICE LINE, EXTENDING FROM THE GAS MAIN TO THE SERVICE ENTRANCE ON THE STRUCTURE.
6. THE FOREGOING COVENANTS SET FORTH IN THIS SUBSECTION E SHALL BE ENFORCEABLE BY THE SUPPLIER OF GAS SERVICE OR ITS SUCCESSORS AND THE OWNER OF THE LOT AGREES TO BE BOUND HEREBY.

F. SURFACE DRAINAGE AND LOT GRADING RESTRICTION

EACH LOT SHALL RECEIVE AND DRAIN, IN AN UNOBSTRUCTED MANNER, THE STORM AND SURFACE WATERS FROM LOTS AND DRAINAGE AREAS OF HIGHER ELEVATION AND FROM PUBLIC STREETS AND EASEMENTS. NO LOT OWNER SHALL CONSTRUCT OR PERMIT TO BE CONSTRUCTED ANY FENCING OR OTHER OBSTRUCTIONS WHICH WOULD IMPAIR THE DRAINAGE OF STORM AND SURFACE WATERS OVER AND ACROSS HIS LOT. THE FOREGOING COVENANTS SET FORTH IN THIS PARAGRAPH F SHALL BE ENFORCEABLE BY ANY AFFECTED LOT OWNER, BY THE OWNER/DEVELOPER, AND THE HOMEOWNERS ASSOCIATION.

G. RESERVE AREAS

1. THE USE OF RESERVE AREAS DEDICATED ON THE PLAT OR SUBSEQUENTLY DEDICATED FOR THE SUBDIVISION SHALL BE LIMITED TO USE AS OPEN SPACE, FENCING, LANDSCAPING AND DETENTION, AS WELL AS UTILITY EASEMENTS AND ARE RESERVED FOR SUBSEQUENT CONVEYANCE TO THE HOMEOWNERS' ASSOCIATION. MAINTENANCE OF RESERVE AREAS WILL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER UNTIL CONVEYANCE TO THE HOMEOWNERS ASSOCIATION.

2. DRAINAGE FACILITIES LOCATED WITHIN RESERVE AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA.
3. NO FENCE, WALL, BUILDING, OR OTHER OBSTRUCTION MAY BE PLACED OR MAINTAINED IN RESERVES AREAS NOR SHALL THERE BE ANY ALTERATION OF GRADE IN SAID EASEMENTS UNLESS APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA.
4. DRAINAGE FACILITIES SHALL BE MAINTAINED BY THE OWNERS, TO THE EXTENT NECESSARY TO ACHIEVE THE INTENDED DRAINAGE, RETENTION, AND DETENTION FUNCTIONS INCLUDING REPAIR OF APPURTENANCES AND REMOVAL OF OBSTRUCTIONS AND SILTATION. DETENTION FACILITIES SHALL BE MAINTAINED BY THE OWNERS IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS:
- a. GRASS AREAS SHALL BE MOWED (IN SEASON) AT REGULAR INTERVALS OF FOUR WEEKS, OR LESS.
- b. CONCRETE APPURTENANCES SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED IF DAMAGED.
- c. THE DETENTION EASEMENT SHALL BE KEPT FREE OF DEBRIS.
- d. LANDSCAPING, APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA, SHALL BE ALLOWED WITHIN RESERVE AREAS.
10. ANY DRAINAGE EASEMENTS AREAS AND FACILITIES LOCATED WITHIN RESERVE AREAS, AS DEPICTED ON THE ACCOMPANYING PLAT, SHALL BE MAINTAINED BY THE INDIVIDUAL LOT OWNERS ON WHOSE LOTS THE EASEMENTS LIE AND BY THE HOMEOWNERS' ASSOCIATION TO THE EXTENT NECESSARY TO ACHIEVE THE INTENDED DRAINAGE FUNCTIONS AND IN ACCORDANCE WITH STANDARDS PRESCRIBED BY THE CITY OF BROKEN ARROW, OKLAHOMA, IN THE EVENT THE LOT OWNER(S) OR THE HOMEOWNERS' ASSOCIATION SHOULD FAIL TO PROPERLY MAINTAIN DRAINAGE EASEMENTS OR, IN THE EVENT OF THE PLACEMENT OF AN OBSTRUCTION WITHIN THE EASEMENT AREA OR THE ALTERATION OF THE GRADE OR CONTOUR THEREIN, THE CITY OF BROKEN ARROW, OKLAHOMA MAY ENTER THE EASEMENT AREA AND PERFORM MAINTENANCE NECESSARY TO THE ACHIEVEMENT OF THE INTENDED DRAINAGE FUNCTIONS AND MAY REMOVE ANY OBSTRUCTION OR CORRECT ANY ALTERATION OF GRADE OR CONTOUR, AND THE COST THEREOF SHALL BE PAID BY THE LOT OWNER(S) OR HOMEOWNERS' ASSOCIATION. IN THE EVENT THE LOT OWNER(S) OR HOMEOWNERS' ASSOCIATION FAILS TO PAY THE COST OF MAINTENANCE AFTER COMPLETION OF THE MAINTENANCE AND RECEIPT OF A STATEMENT OF COSTS, THE CITY OF BROKEN ARROW, OKLAHOMA, MAY FILE OF RECORD A COPY OF THE STATEMENT OF COSTS, AND THEREAFTER THE COSTS SHALL BE A LIEN AGAINST THE LOT OWNER(S) OR HOMEOWNERS ASSOCIATION. A LIEN ESTABLISHED AS ABOVE PROVIDED MAY BE JUDICIALLY FORECLOSED BY THE CITY OF BROKEN ARROW.

H. LIMITS OF NO ACCESS

THE OWNER HEREBY RELINQUISHES RIGHTS OF VEHICULAR INGRESS OR EGRESS FROM ANY PORTION OF THE PROPERTY ADJACENT TO COUNTY LINE ROAD WITHIN THE BOUNDS DESIGNATED AS "LIMITS OF NO ACCESS" ON THE ACCOMPANYING PLAT, WHICH LIMITS OF NO ACCESS MAY BE AMENDED OR RELEASED BY CITY OF BROKEN ARROW PLANNING COMMISSION, OR ITS SUCCESSOR, WITH THE APPROVAL OF THE CITY OF BROKEN ARROW, OKLAHOMA, OR AS OTHERWISE PROVIDED BY THE STATUTES AND LAWS OF THE STATE OF OKLAHOMA PERTAINING THERETO, AND THE LIMITS OF NO ACCESS ESTABLISHED ABOVE SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, OKLAHOMA.

I. SIDEWALKS

SIDEWALKS ARE REQUIRED ALONG STREETS DESIGNATED BY AND IN ACCORDANCE WITH SUBDIVISION REGULATIONS. THE OWNER SHALL CONSTRUCT REQUIRED SIDEWALKS WITHIN ANY RESERVE AREAS, COMMON AREAS AND ALL CURB RAMPS ALONG ARTERIAL STREET FRONTAGES OF ABUTTING LOTS HAVING ACCESS ONTO MINOR STREETS. WHERE SIDEWALKS ARE NOT CONSTRUCTED BY THE OWNER/DEVELOPER, THE BUILDER OF A RESIDENCE ON EACH LOT SHALL CONSTRUCT THE REQUIRED SIDEWALK. REQUIRED SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH CITY OF BROKEN ARROW ENGINEERING DESIGN STANDARDS.

J. MINIMUM BUILDING SETBACKS AND YARDS

1. NO BUILDING SHALL BE LOCATED NEARER TO THE RIGHT OF WAY OF AN ADJOINING PUBLIC STREET THAN THE BUILDING LINE DEPICTED ON THE ACCOMPANYING PLAT.
2. EACH LOT SHALL MAINTAIN SIDE YARDS WHICH IN THE AGGREGATE ARE NOT LESS THAN TEN (10) FEET IN WIDTH AND NO SIDE YARD SHALL BE LESS THAN FIVE (5) FEET IN WIDTH. SIDE YARDS ABUTTING A STREET SHALL NOT BE LESS THAN FIFTEEN (15) FEET, UNLESS THE GARAGE ENTRY IS LOCATED ON SUCH SIDE, WHERE IT WILL BE NO LESS THAN TWENTY-FIVE (25) FEET.
3. THE MINIMUM REAR YARD SHALL BE TWENTY (20) FEET. CUSTOMARY ACCESSORY STRUCTURES MAY BE LOCATED IN THE REQUIRED REAR YARD, BUT NO BUILDING SHALL BE ERECTED NEARER THAN FIVE (5) FEET TO ANY LOT LINE.
4. NO BUILDING, WHETHER PRINCIPAL OR ACCESSORY (INCLUDING ANY HVAC EQUIPEMENT OR POOL EQUIPMENT), SHALL ENCROACH UPON ANY UTILITY EASEMENT AS DEPICTED ON THE ACCOMPANYING PLAT.

SECTION II. HOMEOWNERS' ASSOCIATION

A. FORMATION OF HOMEOWNERS' ASSOCIATION

THE OWNER/DEVELOPER HAS FORMED AN ASSOCIATION OF THE OWNERS OF THE LOTS WITHIN THE GROVE I (HEREINAFTER AND HERETOFORE REFERRED TO AS THE "HOMEOWNERS' ASSOCIATION") TO BE ESTABLISHED IN ACCORDANCE WITH THE STATUTES OF THE STATE OF OKLAHOMA, FOR THE GENERAL PURPOSES OF MAINTAINING THE COMMON AREAS, INCLUDING BUT WITHOUT LIMITATION THE RESERVE AREA AND PERIMETER FENCING, AND ENHANCING THE VALUE, DESIRABILITY AND ATTRACTIVENESS OF ALL PHASES OF THE GROVE I.

B. MEMBERSHIP

EVERY PERSON OR ENTITY WHO IS A RECORD OWNER OF THE FEE INTEREST OF A LOT SHALL BE A MEMBER OF THE HOMEOWNERS' ASSOCIATION. MEMBERSHIP SHALL BE APPURTENANT TO AND MAY NOT BE SEPARATED FROM THE OWNERSHIP OF A LOT.

C. ASSESSMENT

EACH RECORD OWNER OF A LOT SHALL BE SUBJECT TO ASSESSMENT BY THE HOMEOWNERS' ASSOCIATION FOR THE PURPOSES OF IMPROVEMENT AND MAINTENANCE OF THE STORM WATER DETENTION FACILITIES, RESERVE AREAS AND OTHER COMMON AREAS.

OWNER/DEVELOPER
BLUE CHIP DEVELOPMENT, LLC
PO Box 51209
TULSA, OK 74125
EMAIL: alex@executivehomes.com
ATTN: ALEX TRINIDAD
PHONE: 918.951.7009

CONDITIONAL FINAL PLAT

The Grove I

A TRACT OF LAND LOCATED IN PART OF THE SOUTH HALF OF THE NORTHEAST
QUARTER (S/2 NE/4) OF SECTION TWELVE (12), TOWNSHIP SEVENTEEN (17)
NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN,
TULSA COUNTY, STATE OF OKLAHOMA

ENGINEER/SURVEYOR
AAB ENGINEERING LLC
CERTIFICATE OF AUTHORIZATION NO. 6318, EXP. JUNE 30, 2028
PO BOX 2136
SAND SPRINGS, OK 74063
PHONE: 918.514.4283
FAX: 918.514.4288
EMAIL: ALAN @ AABENG.COM

SECTION III. ENFORCEMENT, DURATION, AMENDMENT AND SEVERABILITY

A. ENFORCEMENT

THE RESTRICTIONS HEREIN SET FORTH ARE COVENANTS TO RUN WITH THE LAND AND SHALL BE BINDING UPON THE OWNER/DEVELOPER, ITS SUCCESSORS AND ASSIGNS. WITHIN THE PROVISIONS OF SECTION I, PUBLIC STREETS, EASEMENTS AND UTILITIES ARE SET FORTH CERTAIN COVENANTS AND THE ENFORCEMENT RIGHTS PERTAINING THERETO, AND ADDITIONALLY THE COVENANTS WITHIN SECTION I, WHETHER OR NOT SPECIFICALLY THEREIN SO STATED SHALL INURE TO THE BENEFIT OF AND SHALL BE ENFORCEABLE BY THE CITY OF BROKEN ARROW, OKLAHOMA. THE COVENANTS CONTAINED IN SECTION II, HOMEOWNERS' ASSOCIATION, SHALL INURE TO THE BENEFIT OF ANY OWNER OF A LOT AND THE HOMEOWNERS' ASSOCIATION. IF THE OWNER OF ANY LOT SHALL VIOLATE ANY OF THE COVENANTS WITHIN SECTION III, IT SHALL BE LAWFUL FOR ANY OWNER OF A LOT OR THE HOMEOWNERS' ASSOCIATION TO MAINTAIN ANY ACTION AT LAW OR IN EQUITY AGAINST THE PERSON OR PERSONS VIOLATING OR ATTEMPTING TO VIOLATE ANY SUCH COVENANT, TO PREVENT HIM OR THEM FROM SO DOING OR TO COMPEL COMPLIANCE WITH THE COVENANT. IN ANY JUDICIAL ACTION BROUGHT TO ENFORCE THE COVENANTS ESTABLISHED WITHIN THIS DEED OF DEDICATION, THE DEFENSE THAT THE PARTY INITIATING THE EQUITABLE PROCEEDING HAS AN ADEQUATE REMEDY AT LAW IS HEREBY WAIVED. IN ANY JUDICIAL ACTION BROUGHT BY ANY OWNER OF A LOT OR THE ASSOCIATION, WHICH ACTION SEEKS TO ENFORCE THE COVENANTS CONTAINED IN THE RESTRICTIVE COVENANTS HEREIN AND/OR TO RECOVER DAMAGES FOR THE BREACH THEREOF, THE PREVAILING PARTY SHALL BE ENTITLED TO RECEIVE REASONABLE ATTORNEY FEES AND COSTS AND EXPENSES INCURRED IN SUCH ACTION.

B. DURATION

THE RESTRICTIVE COVENANTS HEREIN, TO THE EXTENT PERMITTED BY APPLICABLE LAW, SHALL BE PERPETUAL BUT IN ANY EVENT SHALL BE IN FORCE AND EFFECT FOR A TERM OF NOT LESS THAN THIRTY (30) YEARS FROM THE DATE OF THE RECORDING OF THIS DEED OF DEDICATION UNLESS TERMINATED OR AMENDED AS HEREINAFTER PROVIDED.

C. AMENDMENT

THE COVENANTS CONTAINED WITHIN SECTION I, PUBLIC STREETS, EASEMENTS AND UTILITIES, MAY BE AMENDED OR TERMINATED AT ANY TIME BY A WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE OWNER OF THE LAND TO WHICH THE AMENDMENT OR TERMINATION IS TO BE APPLICABLE AND APPROVED BY BROKEN ARROW CITY COUNCIL, OR ITS SUCCESSORS AND THE CITY OF BROKEN ARROW, OKLAHOMA. THE PROVISIONS CONTAINED WITHIN SECTION II, HOMEOWNERS' ASSOCIATION, MAY BE AMENDED OR TERMINATED AT ANY TIME BY A WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE OWNER/DEVELOPER DURING SUCH PERIOD THAT THE OWNER/DEVELOPER IS THE OWNER OF AT LEAST 1 LOT, OR ALTERNATIVELY THE COVENANTS AND RESTRICTIONS MAY BE AMENDED OR TERMINATED AT ANY TIME BY A MAJORITY VOTE OF THE MEMBERS OF THE HOMEOWNER ASSOCIATION AS EVIDENCED BY WRITTEN INSTRUMENT SIGNED AND ACKNOWLEDGED BY THE PRESIDENT OF THE HOMEOWNERS' ASSOCIATION. IN THE EVENT OF ANY CONFLICT BETWEEN AN AMENDMENT OR TERMINATION PROPERLY EXECUTED BY THE OWNER/DEVELOPER (DURING ITS OWNERSHIP OF AT LEAST 1 LOT) AND ANY AMENDMENT OR TERMINATION EVIDENCED BY AN INSTRUMENT PROPERLY EXECUTED BY THE PRESIDENT OF THE HOMEOWNERS' ASSOCIATION, THE INSTRUMENT EXECUTED BY THE OWNER/DEVELOPER SHALL PREVAIL DURING ITS OWNERSHIP OF AT LEAST 1 LOT. THE PROVISIONS OF ANY INSTRUMENT AMENDING OR TERMINATING COVENANTS AS ABOVE SET FORTH SHALL BE EFFECTIVE FROM AND AFTER THE DATE, IT IS PROPERLY RECORDED.

D. SEVERABILITY

INVALIDATION OF ANY RESTRICTION SET FORTH HEREIN, OR ANY PART THEREOF, BY AN ORDER, JUDGMENT, OR DECREE OF ANY COURT, OR OTHERWISE, SHALL NOT INVALIDATE OR AFFECT ANY OF THE OTHER RESTRICTIONS OR ANY PART THEREOF AS SET FORTH HEREIN, WHICH SHALL REMAIN IN FULL FORCE AND EFFECT.

IN WITNESS WHEREOF: BLUE CHIP LAND DEVELOPMENT, LLC, AN OKLAHOMA LIMITED LIABILITY COMPANY, HAS EXECUTED THIS INSTRUMENT THIS _____ DAY OF _____, 2026.

BLUE CHIP LAND DEVELOPMENT, LLC,
AN OKLAHOMA LIMITED LIABILITY COMPANY

BY: _____
ALEX TRINIDAD, MANAGER

STATE OF OKLAHOMA)
) SS
COUNTY OF TULSA)

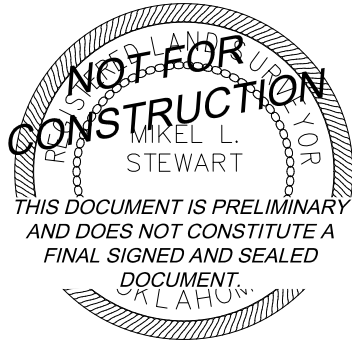
THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS _____ DAY OF _____, 2026, BY ALEX TRINIDAD, MANAGER OF BLUE CHIP LAND DEVELOPMENT, LLC.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____
COMMISSION NUMBER: 19011877

CERTIFICATE OF SURVEY

I, MIKEL L. STEWART, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF OKLAHOMA, HEREBY CERTIFY THAT I HAVE SURVEYED, SUBDIVIDED AND PLATTED THE ABOVE TRACT DESIGNATED AS "THE GROVE I" A SUBDIVISION IN THE CITY OF BROKEN ARROW, TULSA COUNTY, STATE OF OKLAHOMA. THE ABOVE PLAT IS AN ACCURATE REPRESENTATION OF SAID SURVEY.

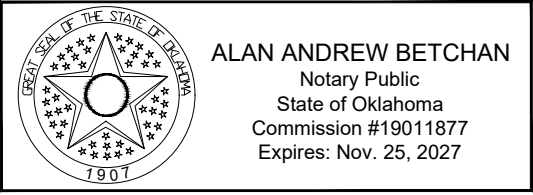
MIKEL L. STEWART
REGISTERED PROFESSIONAL LAND SURVEYOR
OKLAHOMA NO. 2105



STATE OF OKLAHOMA)
) SS
COUNTY OF TULSA)

BEFORE ME, A NOTARY PUBLIC IN AND FOR SAID STATE AND COUNTY, ON THIS _____ DAY OF _____, 2026, PERSONALLY APPEARED MIKEL L. STEWART, TO ME KNOWN TO BE THE IDENTICAL PERSON WHO SUBSCRIBED HIS NAME TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME AS HIS FREE AND VOLUNTARY ACT AND DEED, FOR THE USES AND PURPOSE THEREIN SET FORTH.

NOTARY PUBLIC
MY COMMISSION EXPIRES: NOVEMBER 25, 2027
COMMISSION NUMBER: 19011877



TRAFFIC IMPACT ANALYSIS

**Proposed Residential Development
S 23rd Street (S 193rd E Avenue) and E 141st Street S
Broken Arrow, Oklahoma**

**Prepared for:
AAB Engineering, LLC
May 2025**

**Prepared by:
Traffic Engineering Consultants, Inc.**




**B.J. Hawkins, P.E., PTOE
Oklahoma P.E. # 25164
CA # 1160**

5 / 13 / 2025

Date

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1.0 INTRODUCTION

Traffic Engineering Consultants, Inc. (TEC) was retained to conduct a traffic impact analysis (TIA) for a proposed residential development to be constructed in Broken Arrow, Oklahoma. The analysis was requested to determine the effects the proposed development would have on the adjacent street system, to review the available access to the development, and to provide recommendations for improvements that may be necessary to accommodate the trips expected to be generated by the development.

2.0 BACKGROUND

2.1 PROPOSED DEVELOPMENT

The site of the proposed development is located on the northwest and northeast corners of S 23rd Street (S 193rd E Avenue) and E 141st Street S as shown in **Figure 1**. The proposed development would be a single-family residential development with a total of 543 lots which would be developed in three phases with the first phase constructing 311 lots, the second phase constructing 94 lots, and the third phase constructing 138 lots. Access to the new development, as shown in **Figure 2**, is proposed via six full-access drives along S 23rd Street and two full-access drives along E 141st Street S. Drives #1 and #2 would be constructed in development phase 1, Drives #3, #4, and #5 would be constructed in development phase 2, and Drives #6, #7, and #8 would be constructed in development phase 3.

2.2 ADJACENT ROADWAY NETWORK

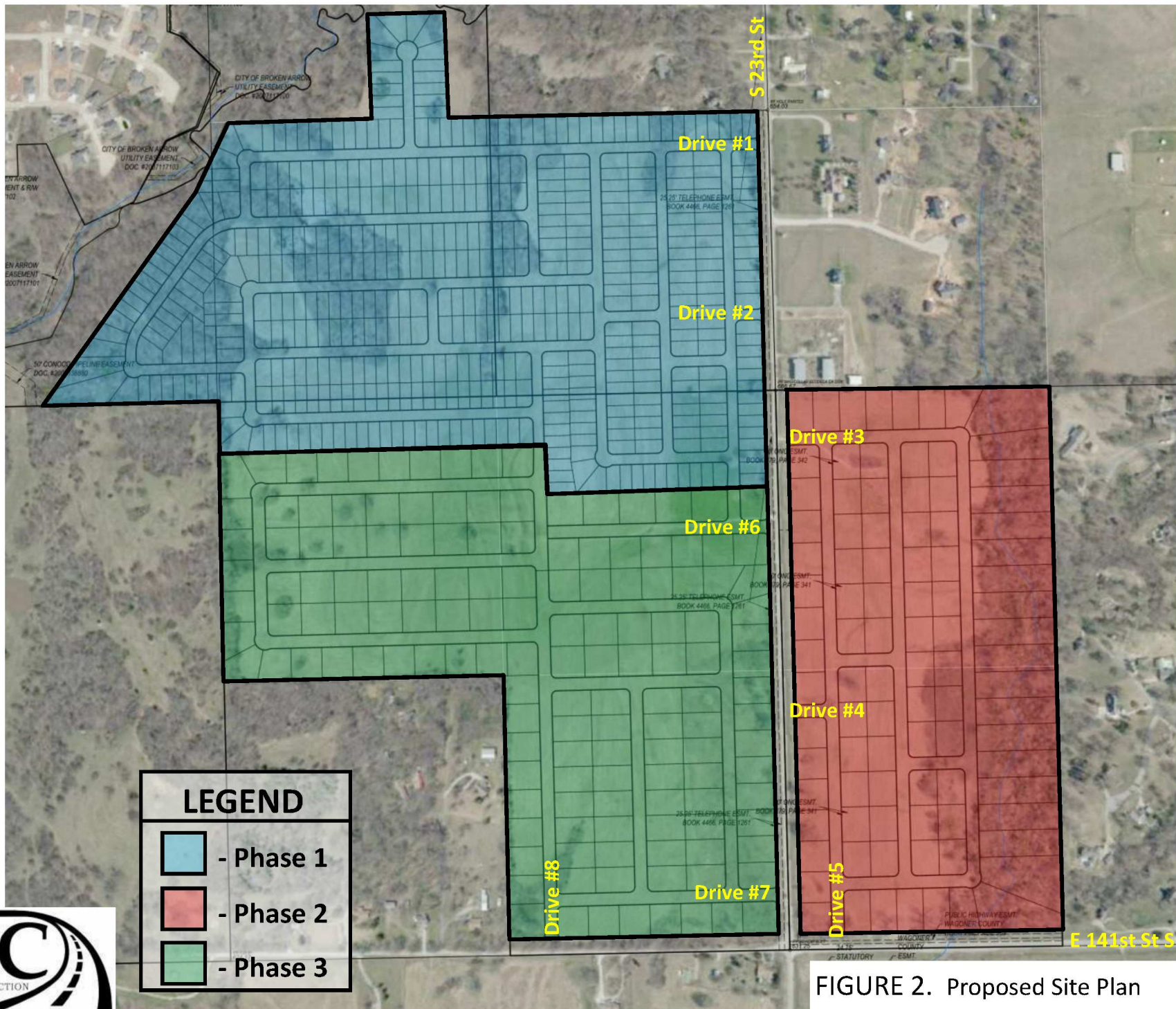
S 23rd Street is a two-lane primary arterial with a posted speed limit of 45 miles per hour (mph) north of Jasper Street (E 131st Street S) and 50 mph south of Jasper Street. It carries an approximate average daily traffic (ADT) of 6,500 vehicles per day (vpd) north of Jasper Street, 7,100 vpd between Jasper Street and E 141st Street S, and 2,000 vpd south of E 141st Street S. Jasper Street is a two-lane secondary arterial with a posted speed limit of 45 mph west of S 23rd Street and 20 mph east of S 23rd Street. It carries an approximate ADT of 3,750 vpd west of S 23rd Street and 650 vpd east of S 23rd Street where it dead-ends. E 141st Street S is a two-lane secondary arterial with a posted speed limit of 45 mph east of S 23rd Street. It carries an approximate ADT of 5,050 vpd east of S 23rd Street and 100 vpd west of S 23rd Street where it dead-ends.



LEGEND

-  = 24-Hour Turning Movement Count Location
(Weekday - Tue., Wed., or Thur. Only)

FIGURE 1. Site and Count Location Map
S 23rd Street and E 141st Street S
Broken Arrow, Oklahoma



2.3 STUDY INTERSECTIONS

The intersections of S 23rd Street and Jasper Street and S 23rd Street and E 141st Street S are unsignalized with all-way stop control. Each approach includes one shared left/through/right lane.

3.0 BACKGROUND TRAFFIC

3.1 EXISTING TRAFFIC

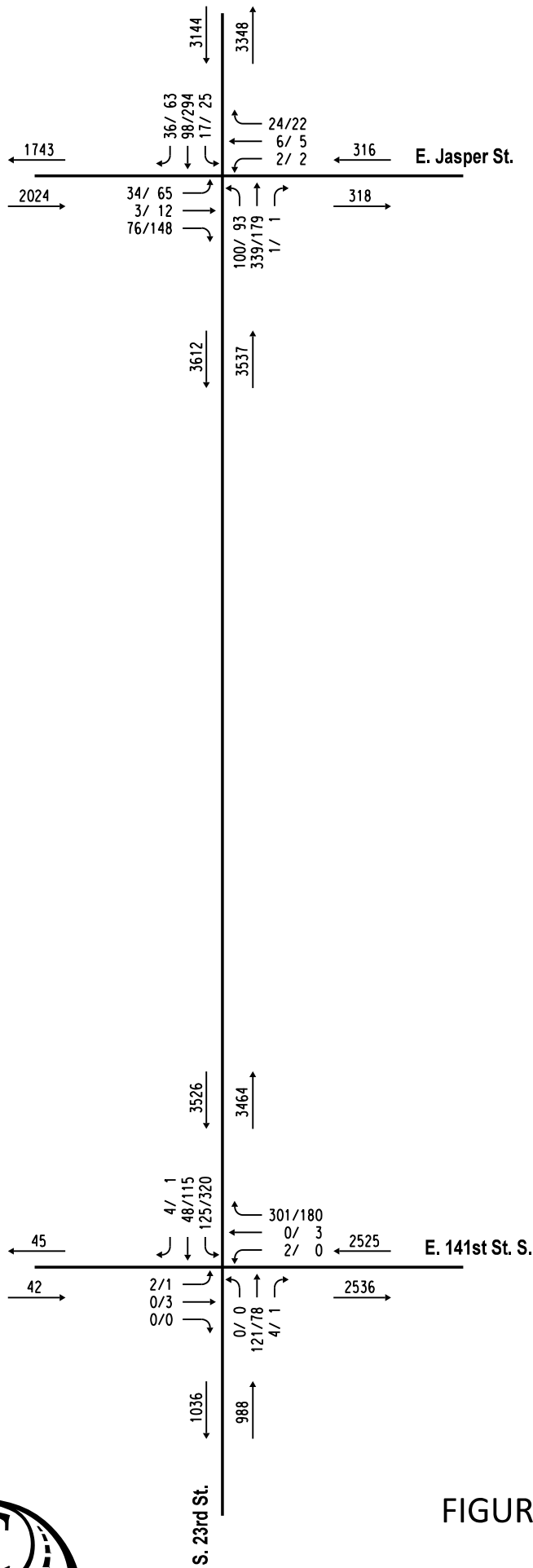
Existing traffic volume data was collected adjacent to the proposed site in March 2025 when schools were in session as shown in Figure 1. Twenty-four hour turning movement volumes were collected at the study intersections of S 23rd Street and Jasper Street and S 23rd Street and E 141st Street S. The traffic volume data indicated that the a.m. peak hour occurred from 7:30 - 8:30 and the p.m. peak hour generally occurred from 4:30 - 5:30. Given the traffic characteristics in the area and the anticipated trip generation for the proposed site, the weekday peak periods would represent a “worst-case scenario” with regards to traffic impact on the surrounding roadway network. If traffic operations are acceptable during these weekday peak hours, it can be reasoned that conditions would be acceptable throughout the remainder of the day and week. The 2025 existing traffic is summarized in **Figure 3** and detailed printouts of all the traffic count data are included in the appendix.

3.2 FUTURE BACKGROUND TRAFFIC

The 2025 existing traffic volumes were utilized to determine the background traffic for 2026, 2028, and 2030 which were the estimated completion years of development phases 1, 2, and 3, respectively. Considering historical annual average daily traffic (AADT) volume counts reported by Indian Nations Council of Governments (INCOG) since 2019, a 2.0% annual growth rate was utilized to project future traffic volumes in addition to the proposed site trips. The 2026, 2028, and 2030 future background traffic is summarized in **Figures 4, 5, and 6**, respectively.

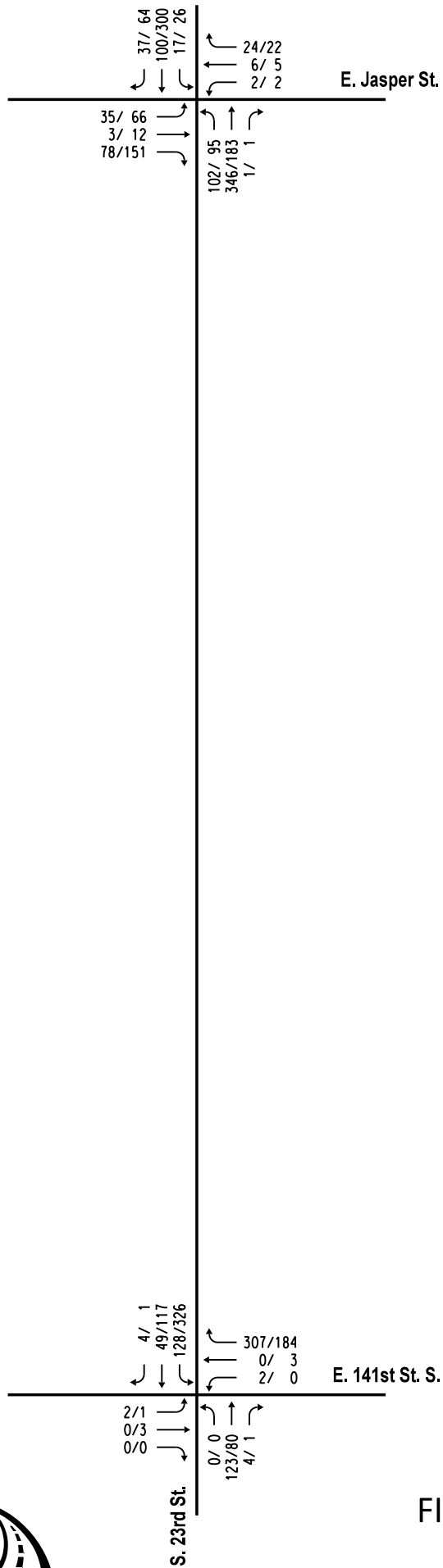
4.0 PROPOSED SITE TRIPS

To determine the effects a new development will have on an existing street system, new or additional trips must be projected. The latest edition of the *Trip Generation Manual*, published by the Institute of Transportation Engineers, was used to determine the number of trips the site is expected to generate. The report is a nationally accepted reference which provides trip rates for determining the trips expected to be generated by different land use types.



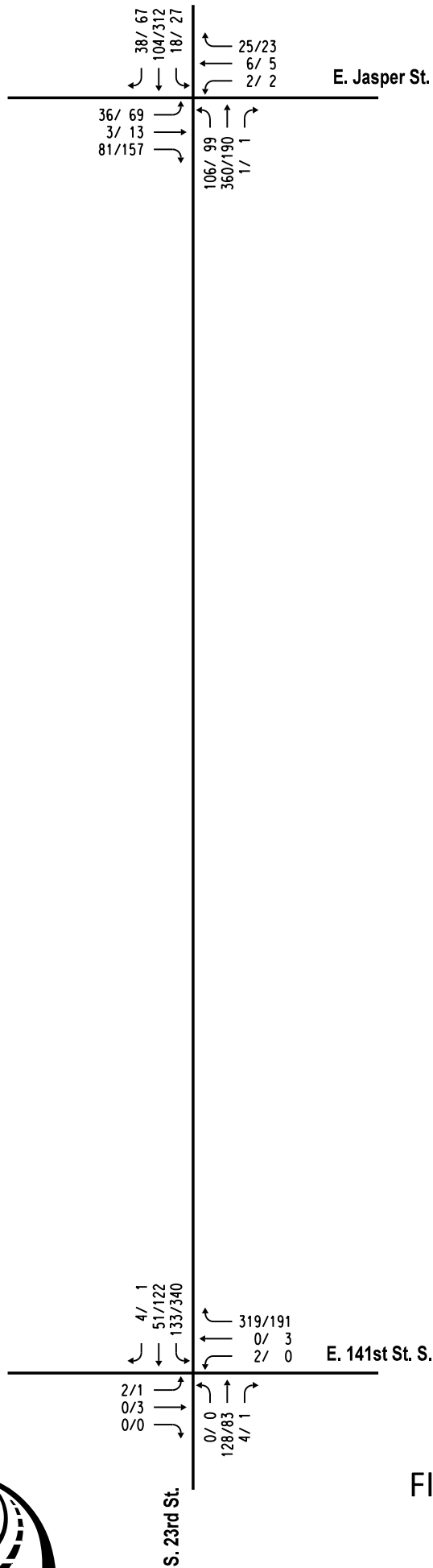
LEGEND	
XXX/XXX	P.M. PEAK HOUR
XXX/XXX	A.M. PEAK HOUR
XXXX	= 24 HOUR VOL

FIGURE 3. 2025 Existing Traffic



LEGEND	
XXX/XXX	P.M. PEAK HOUR
XXX/XXX	A.M. PEAK HOUR

FIGURE 4. 2026 Future Background Traffic

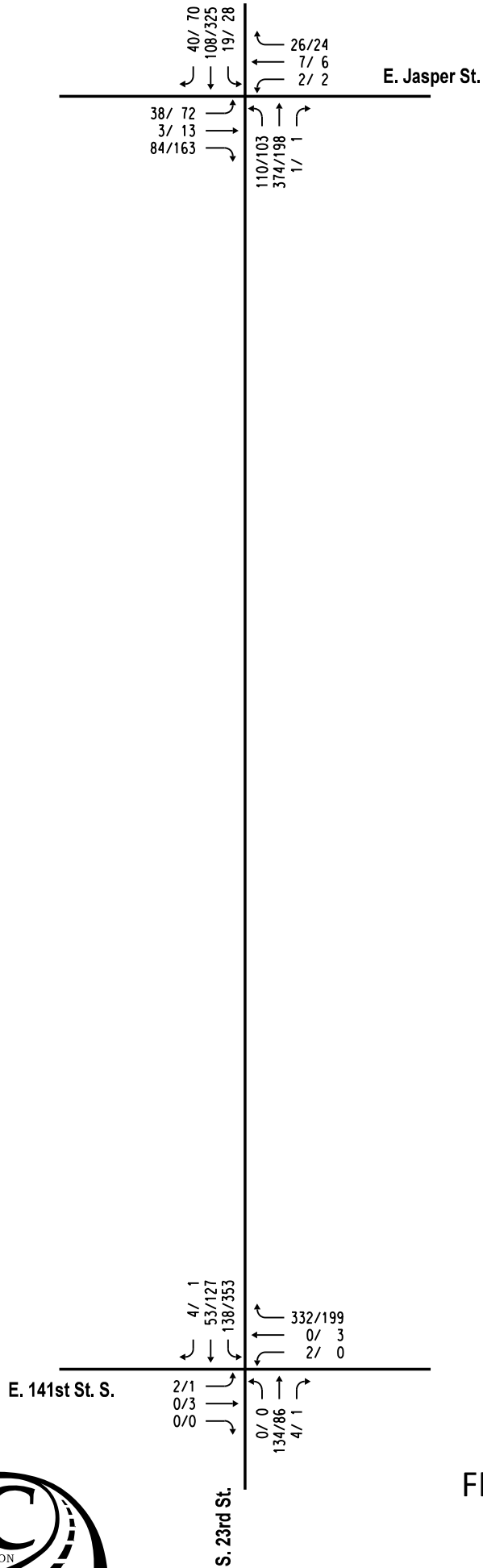


LEGEND	
XXX/XXX	P.M. PEAK HOUR
XXX/XXX	A.M. PEAK HOUR



FIGURE 5. 2028 Future Background Traffic





LEGEND	
xxx/xxx	P.M. PEAK HOUR
xxx/xxx	A.M. PEAK HOUR

FIGURE 6. 2030 Future Background Traffic

Available information was utilized regarding the anticipated land use to determine the site generated trips. The *Single-Family Detached Housing* land use category was selected to determine the trip generation for the site. The resulting trips projected to be generated by phases 1, 2, and 3 of the proposed development once fully constructed and occupied are indicated in **Table 1**.

TABLE 1
Projected Site Generated Trips

Building Type (Land Use)	ITE Land Use Code	Approximate Gross Floor Area or Other	Average Weekday Vehicle Trips			Average AM Peak Hour Directional Distribution		Average AM Peak Hour Directional Trips (vph)		Average PM Peak Hour Directional Distribution		Average PM Peak Hour Directional Trips (vph)	
			Per Day	Per Peak Hour of Adjacent Street Traffic									
				One Hour Between 7am & 9am	One Hour Between 4pm & 6pm								
				(vpd)	(vph)	(vph)	IN	OUT	IN	OUT	IN	OUT	IN
Development Phase 1													
Trip Rate* Single-Family Detached Housing	210	(Dwelling Units)	9.43	0.70	0.94	25%	75%	55	163	63%	37%	184	108
	311	2,933	218	292									
Development Phase 2													
Trip Rate* Single-Family Detached Housing	210	(Dwelling Units)	9.43	0.70	0.94	25%	75%	17	49	63%	37%	55	33
	94	886	66	88									
Development Phase 3													
Trip Rate* Single-Family Detached Housing	210	(Dwelling Units)	9.43	0.70	0.94	25%	75%	24	73	63%	37%	82	48
	138	1,301	97	130									
Total			5,120	381	510			96	285			321	189

* Trip Rates from "TRIP GENERATION MANUAL", 11th Ed., Institute of Transportation Engineers.

The proposed development phase 1 would be expected to generate 2,933 vehicle trips per day with 55 entering and 163 exiting vehicles during the a.m. peak hour and 184 entering and 108 exiting vehicles during the p.m. peak hour. The proposed development phase 2 would be expected to generate 886 vehicle trips per day with 17 entering and 49 exiting vehicles during the a.m. peak hour and 55 entering and 33 exiting vehicles during the p.m. peak hour. The proposed development phase 3 would be expected to generate 1,301 vehicle trips per day with 24 entering and 73 exiting vehicles during the a.m. peak hour and 82 entering and 48 exiting vehicles during the p.m. peak hour.

4.1 DISTRIBUTION OF PROPOSED SITE TRIPS

The trips expected to be generated by each phase of the proposed development were then distributed among the points of access and nearby study intersections for the a.m. and p.m. peak hours. The distribution of the site generated trips was based on anticipated usage of the site and traffic patterns in the area. The directional distribution of the ingress and egress site generated trips for the proposed site is expected to be:

- 50% to/from S 23rd Street north of the site
- 20% to/from E 141st Street S east of the site
- 15% to/from S 23rd Street south of the site
- 15% to/from Jasper Street northwest of the site

The ingress and egress of trips expected to be generated from the proposed development phases 1, 2, and 3 are summarized in **Figures 7, 8, and 9**, respectively.

4.2 TOTAL TRAFFIC

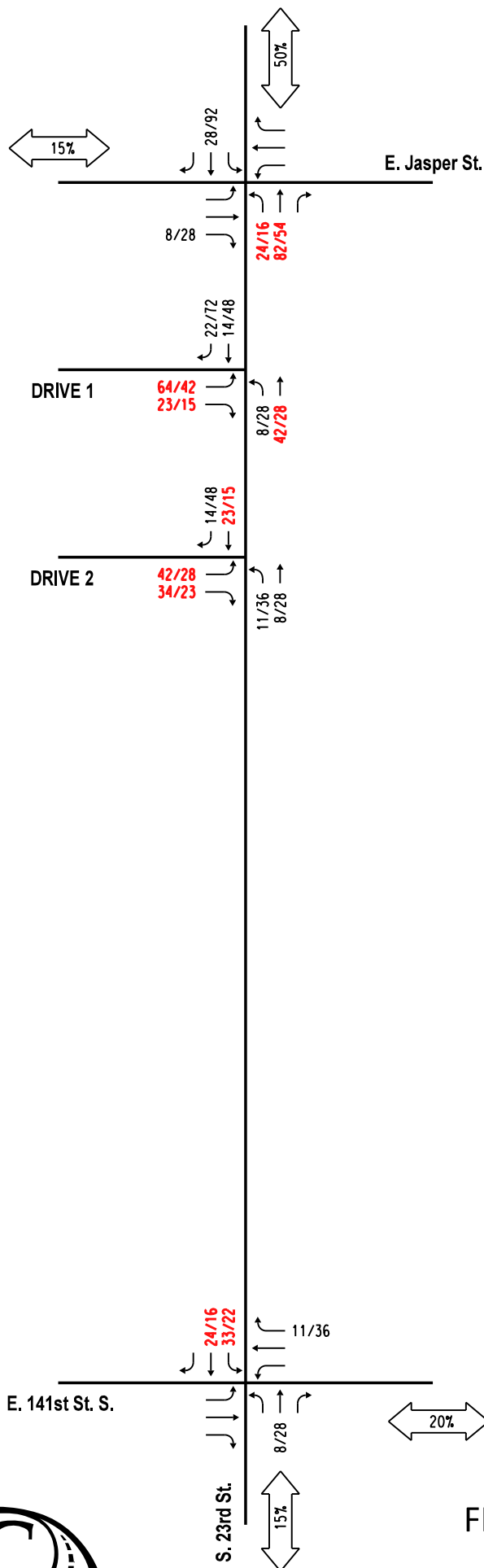
The proposed site trips for each development phase were then added to the corresponding future background traffic design year. The 2026 total traffic for phase 1 (2026 future background traffic + proposed site trips for phase 1) for each access point as well as the adjacent study intersections is summarized in **Figure 10**. The 2028 total traffic for phase 2 (2028 future background traffic + proposed site trips for phases 1 and 2) for each access point as well as the adjacent study intersections is summarized in **Figure 11**. The 2030 total traffic for phase 3 (2030 future background traffic + proposed site trips for phases 1, 2, and 3) for each access point as well as the adjacent study intersections is summarized in **Figure 12**.

5.0 CAPACITY ANALYSIS

5.1 METHODOLOGY

The capacity analyses were conducted using *Synchro 12*, which is a software package for modeling and optimizing traffic signal timings at signalized intersections and analyzing unsignalized intersections in accordance with the methodology of the latest edition of the *Highway Capacity Manual*. The *Highway Capacity Manual* is published by the Transportation Research Board of the National Research Council, Washington, D.C. The information has been widely accepted throughout the U.S. as a guide for defining and solving transportation challenges. The information is approved and distributed by the U.S. Department of Transportation, Federal Highway Administration.

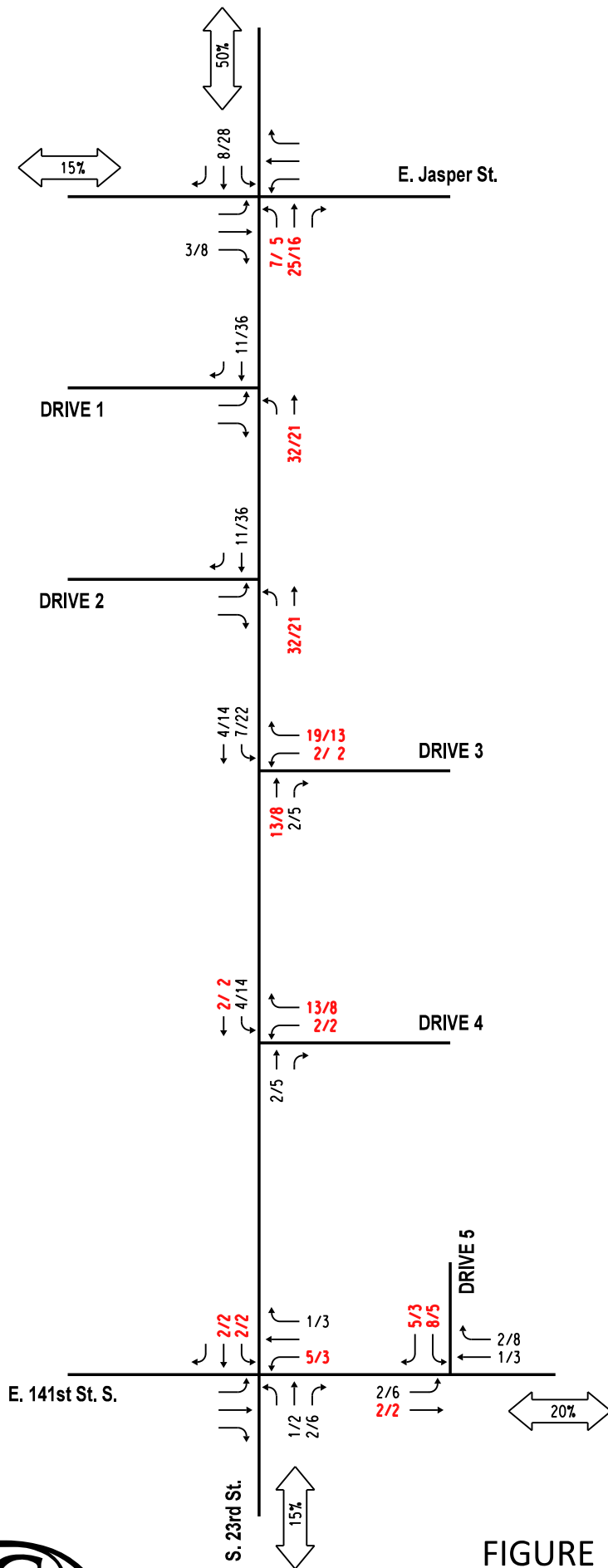
The capacity analysis provides a measure of the amount of traffic that a given facility can accommodate. Traffic facilities generally operate poorly at or near capacity. The analysis is intended to estimate the maximum amount of traffic that can be accommodated by a facility while maintaining prescribed



PEAK HOUR SITE GENERATED TRAFFIC	
A.M. ENTERING =	55 VPH
A.M. EXITING =	163 VPH
P.M. ENTERING =	184 VPH
P.M. EXITING =	108 VPH

LEGEND	
xxx/xxx	P.M. PEAK HOUR
xxx/xxx	A.M. PEAK HOUR

FIGURE 7. 2026 Site Traffic
(Phase 1)



PEAK HOUR SITE GENERATED TRAFFIC	
A.M. ENTERING = 17 VPH	
A.M. EXITING = 49 VPH	
P.M. ENTERING = 55 VPH	
P.M. EXITING = 33 VPH	

LEGEND	
xxx/xxx	P.M. PEAK HOUR
xxx/xxx	A.M. PEAK HOUR

FIGURE 8. 2028 Site Traffic (Phase 2)

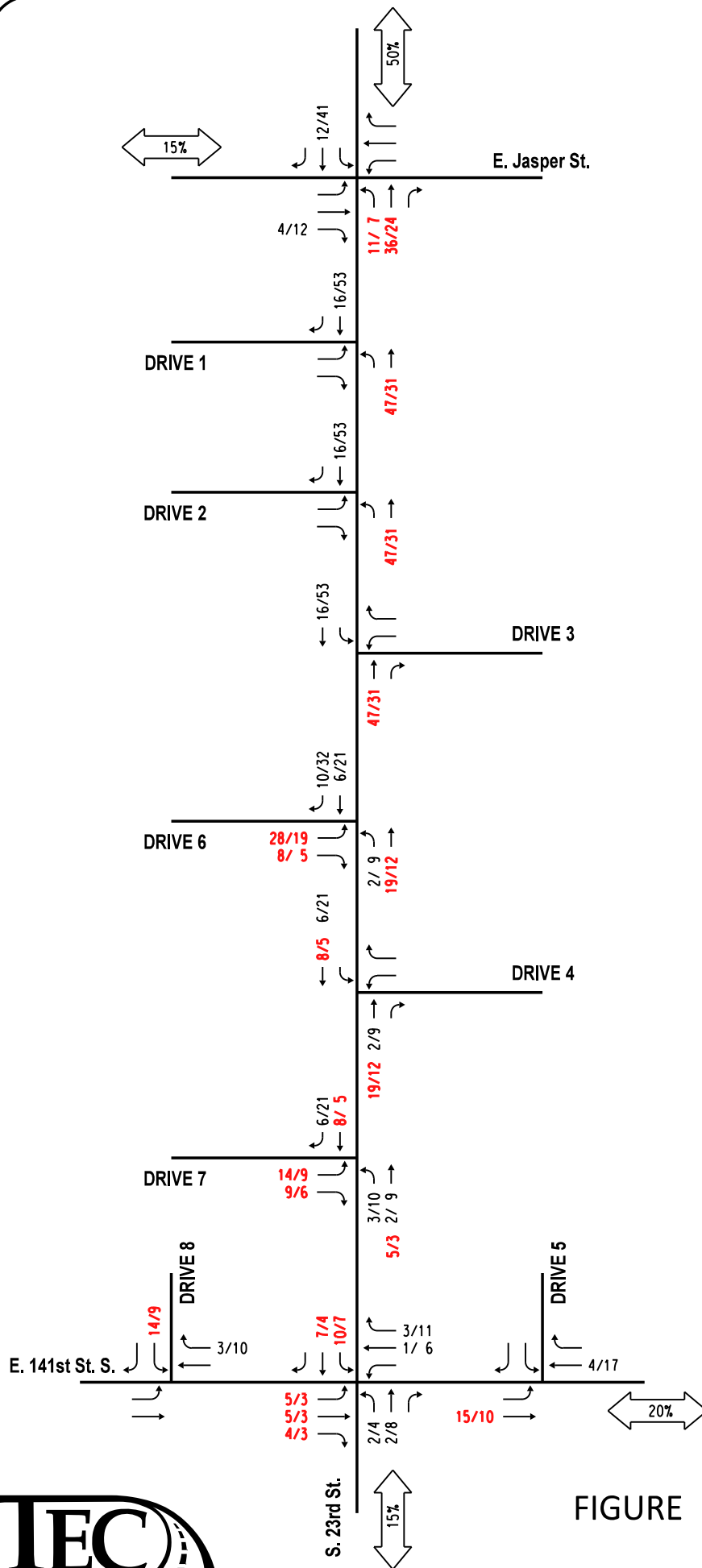


FIGURE 9. 2030 Site Traffic (Phase 3)

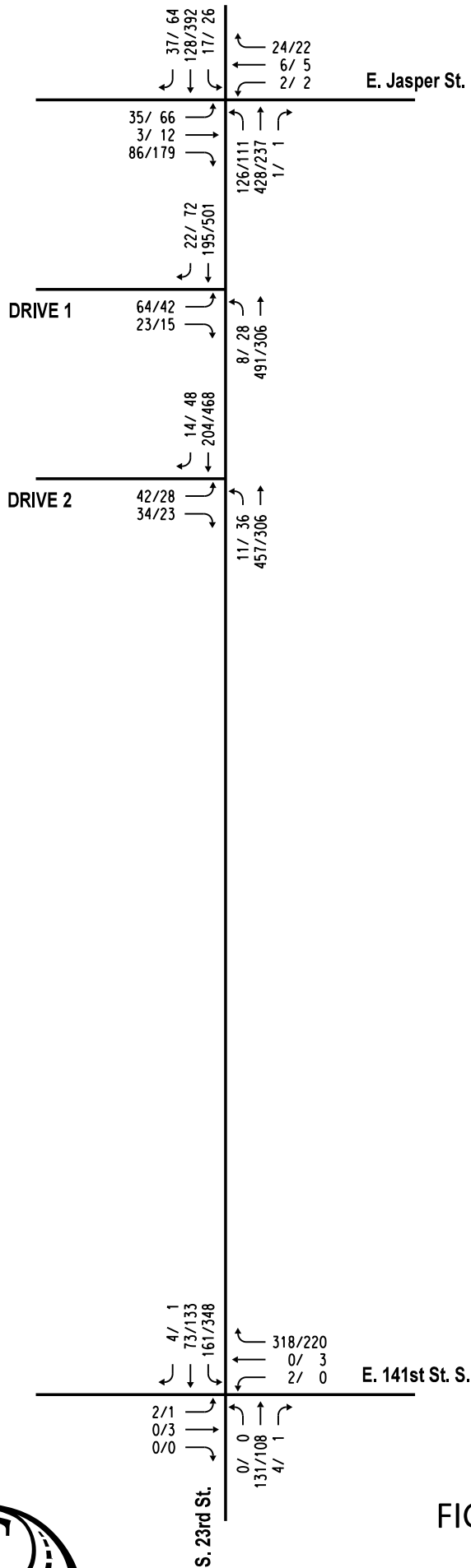


FIGURE 10. 2026 Total Traffic (Phase 1)

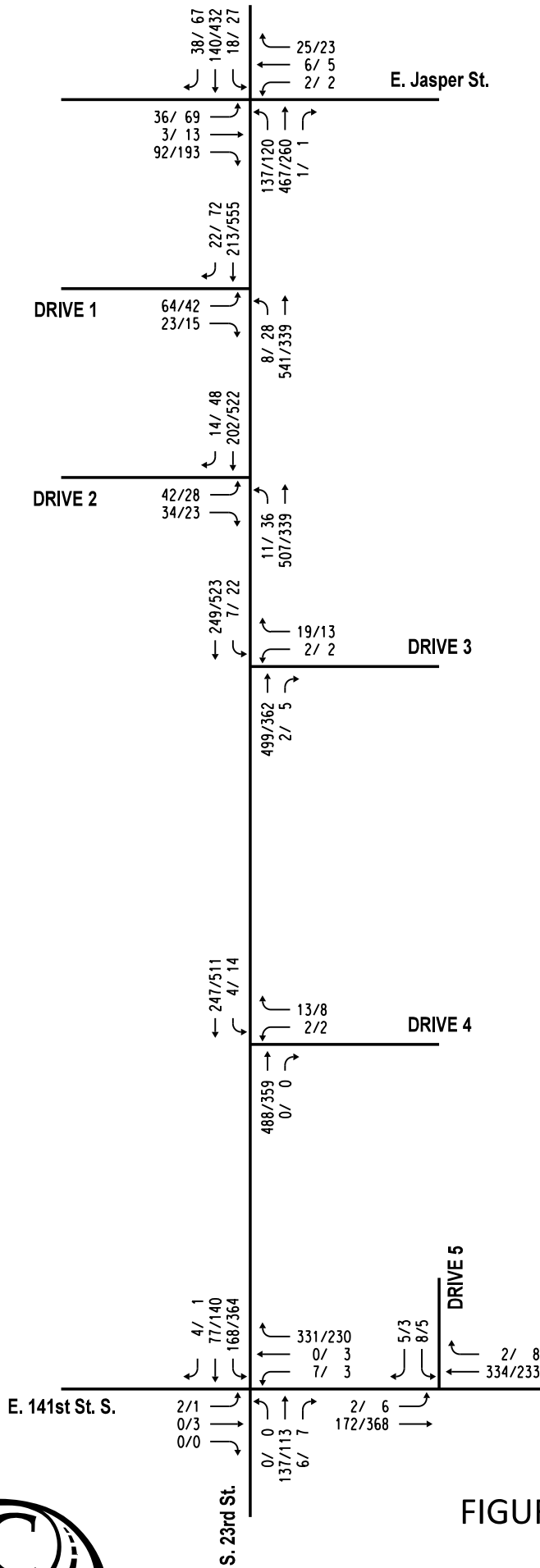


FIGURE 11. 2028 Total Traffic (Phase 2)

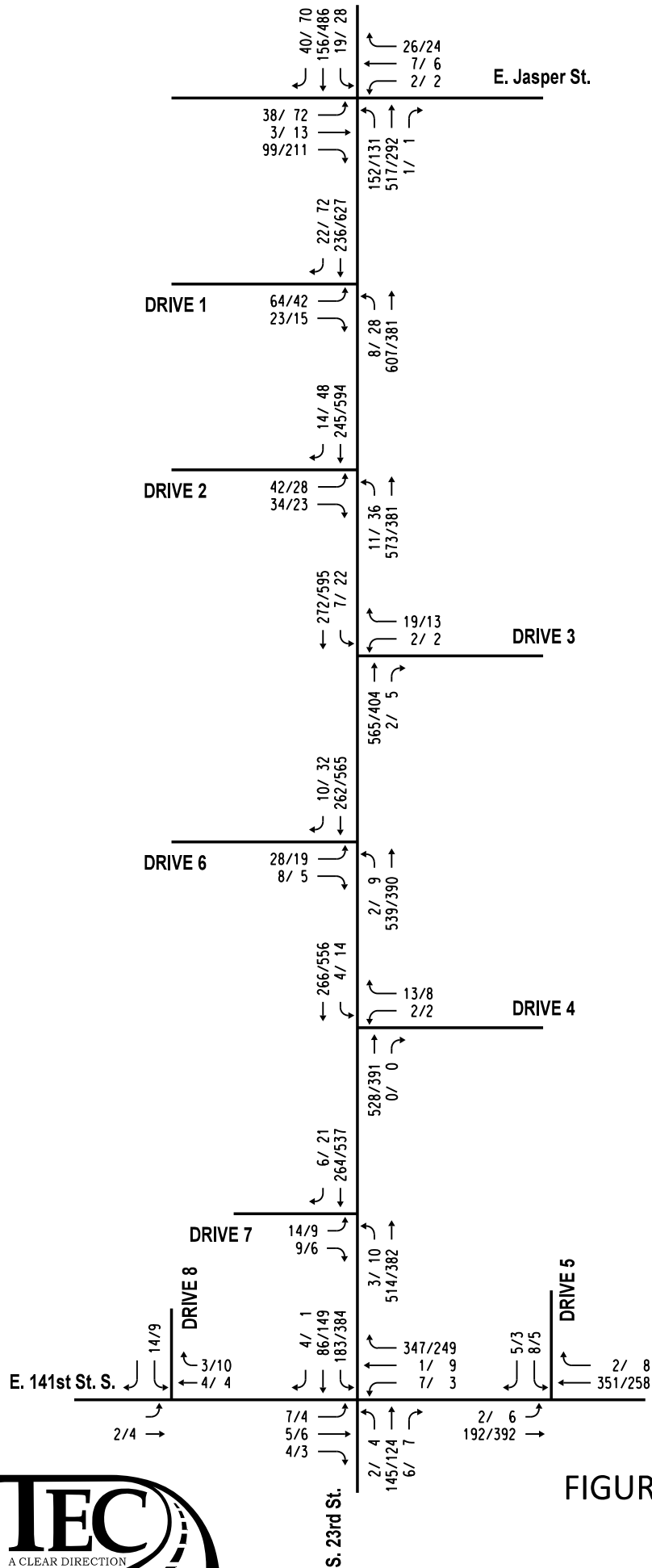


FIGURE 12. 2030 Total Traffic (Phase 3)

operational qualities. The definition of operational criteria is accomplished using levels-of-service. The concept of levels-of-service is defined as a qualitative measure and describes operational conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Six levels-of-service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from “A” to “F”, with level-of-service “A” representing the best operating conditions and level-of-service “F” the worst.

The average control delay for signalized intersections is estimated for each lane group and aggregated for each approach and for the intersection as a whole. The level-of-service for this type of traffic control is directly related to the control delay value. The criteria for stop-controlled or unsignalized intersections have different threshold values than those for signalized intersections. A higher level of control delay has been determined to be acceptable at a signalized intersection for the same level-of-service. Longer delays for side streets are generally acceptable if gaps in traffic are prevalent. Generally, a gap acceptance threshold for longer delay values (LOS “E” or “F”) is defined when v/c ratios are less than 0.80. The level-of-service criteria are summarized in **Table 2**. The Highway Capacity Manual considers an overall intersection level-of-service “D” or better and a critical approach (approach with the lowest level-of-service) level-of-service “E” or better to be acceptable levels-of-service.

TABLE 2
Level-of-Service Criteria

Level-of-Service	Average Delay (seconds/vehicle)		Traffic Condition
	Unsignalized	Signalized	
A	≤10	≤10	Free Flow
B	> 10 - 15	> 10 - 20	Stable Flow (slight delays)
C	> 15 - 25	> 20 - 35	Stable Flow (acceptable delays)
D	> 25 - 35	> 35 - 55	Approaching Unstable Flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	> 35 - 50	> 55 - 80	Unstable Flow (intolerable delay)
F	> 50	> 80	Forced Flow (congested and queues fail to clear)

5.2 SCENARIOS

Capacity analyses were conducted for the a.m. and p.m. peak hours at each access point as well as the adjacent study intersections. The intersections were analyzed and reviewed under the 2025 existing traffic, 2026 future background traffic, 2026 total traffic (phase 1), 2028 total traffic (phase 2), and 2030 total traffic (phase 3). The results of the capacity analyses conducted are summarized in **Table 3** and the data sheets have been included in the appendix.

TABLE 3
Intersection Capacity Analysis Results

Intersection	Type of Traffic Control	AM Peak Hour						PM Peak Hour					
		Critical Approach			Intersection			Critical Approach			Intersection		
		Approach	Delay (sec/veh)	LOS	v/c Ratio*	Delay (sec/veh)	LOS	Approach	Delay (sec/veh)	LOS	v/c Ratio*	Delay (sec/veh)	LOS
2025 Existing Traffic													
S 23rd Street and Jasper Street	Unsignalized /All-Way Stop	NB	14.4	B		12.3	B	SB	15.1	C		13.3	B
S 23rd Street and E 141st Street S	Unsignalized /All-Way Stop	SB	9.8	A		9.6	A	SB	14.9	B		12.7	B
2026 Future Background Traffic													
S 23rd Street and Jasper Street	Unsignalized /All-Way Stop	NB	14.9	B		12.6	B	SB	15.7	C		13.7	B
S 23rd Street and E 141st Street S	Unsignalized /All-Way Stop	SB	9.9	A		9.7	A	SB	15.3	C		13.0	B
2026 Total Traffic (Phase 1)													
S 23rd Street and Jasper Street	Unsignalized /All-Way Stop	NB	22.6	C		17.8	C	SB	26.5	D		20.5	C
S 23rd Street and E 141st Street S	Unsignalized /All-Way Stop	SB	10.9	B		10.4	B	SB	18.6	C		15.1	C
S 23rd Street and Drive #1	Unsignalized / EB Stop	EB	15.8	C		1.8	A	EB	19.8	C		1.4	A
S 23rd Street and Drive #2	Unsignalized / EB Stop	EB	13.8	B		1.5	A	EB	17.0	C		1.3	A
2028 Total Traffic (Phase 2)													
S 23rd Street and Jasper Street	Unsignalized /All-Way Stop	NB	32.5	D		24.3	C	SB	43.4	E	0.91	30.0	D
S 23rd Street and E 141st Street S	Unsignalized /All-Way Stop	SB	11.4	B		10.9	B	SB	21.0	C		16.6	C
S 23rd Street and Drive #1	Unsignalized / EB Stop	EB	17.2	C		1.8	A	EB	22.3	C		1.4	A
S 23rd Street and Drive #2	Unsignalized / EB Stop	EB	14.7	B		1.4	A	EB	18.8	C		1.3	A
S 23rd Street and Drive #3	Unsignalized / WB Stop	WB	12.4	B		0.4	A	WB	11.9	B		0.4	A
S 23rd Street and Drive #4	Unsignalized / WB Stop	WB	12.3	B		0.3	A	WB	12.2	B		0.3	A
E 141st Street S and Drive #5	Unsignalized / SB Stop	SB	11.7	B		0.3	A	SB	12.2	B		0.2	A
2030 Total Traffic (Phase 3)													
S 23rd Street and Jasper Street	Unsignalized /All-Way Stop	NB	53.6	F	0.98	38.0	E	SB	82.5	F	1.05	50.7	F
S 23rd Street and E 141st Street S	Unsignalized /All-Way Stop	SB	12.5	B		11.9	B	SB	28.1	D		20.9	C
S 23rd Street and Drive #1	Unsignalized / EB Stop	EB	19.4	C		1.8	A	EB	26.5	D		1.5	A
S 23rd Street and Drive #2	Unsignalized / EB Stop	EB	16.1	C		1.4	A	EB	21.7	C		1.3	A
S 23rd Street and Drive #3	Unsignalized / WB Stop	WB	13.2	B		0.4	A	WB	12.5	B		0.4	A
S 23rd Street and Drive #4	Unsignalized / WB Stop	WB	12.8	B		0.3	A	WB	12.7	B		0.2	A
E 141st Street S and Drive #5	Unsignalized / SB Stop	SB	12.0	B		0.3	A	SB	12.7	B		0.2	A
S 23rd Street and Drive #6	Unsignalized / EB Stop	EB	16.1	C		0.7	A	EB	19.9	C		0.5	A
S 23rd Street and Drive #7	Unsignalized / EB Stop	EB	14.1	B		0.4	A	EB	17.0	C		0.4	A
E 141st Street S and Drive #8	Unsignalized / SB Stop	SB	8.6	A		5.2	A	SB	8.6	A		2.9	A
2030 Total Traffic (Phase 3) with Recommended Improvements													
S 23rd Street and Jasper Street	Unsignalized /EB/WB Stop	EB	20.0	C		4.5	A	EB	42.3	E	0.79	10.9	B
S 23rd Street and Jasper Street	Signalized	EB	12.7	B		6.3	A	EB	12.2	B		8.8	A
S 23rd Street and Jasper Street	Roundabout	NB	9.5	A		7.8	A	EB	10.4	B		8.8	A

*v/c ratio reported for unsignalized approach level-of-service "E" or "F".

5.2.1 2025 EXISTING TRAFFIC

The analyses conducted under the 2025 existing traffic indicated that the critical approach at the study intersections of S 23rd Street and Jasper Street and S 23rd Street and E 141st Street S currently operates at level-of-service "C" or better during the a.m. and p.m. peak hours. The study intersections currently operate at an overall level-of-service "B" or better during the a.m. and p.m. peak hours.

5.2.2 2026 FUTURE BACKGROUND TRAFFIC

Under the 2026 future background traffic, each study intersection's critical approach would be expected to continue operating at level-of-service "C" or better during the peak hours. The study intersections would be expected to continue operating at an overall level-of-service "B" or better during the peak hours.

5.2.3 2026 TOTAL TRAFFIC (PHASE 1)

Once the proposed site trips for development phase 1 were added to the 2026 future background traffic, the critical approach at the study intersections and site driveways would be expected to operate at an acceptable level-of-service "D" or better during the a.m. and p.m. peak hours. The study intersections and site driveways would be expected to operate at an overall level-of-service "C" or better during the a.m. and p.m. peak hours.

5.2.4 2028 TOTAL TRAFFIC (PHASE 2)

Once the proposed site trips for development phases 1 and 2 were added to the 2028 future background traffic, the critical approach at the study intersections and site driveways would be expected to operate at an acceptable level-of-service "E" or better during the a.m. and p.m. peak hours. The study intersections and site driveways would be expected to operate at an acceptable overall level-of-service "D" or better during the a.m. and p.m. peak hours.

5.2.5 2030 TOTAL TRAFFIC (PHASE 3)

Once the proposed site trips for development phases 1, 2, and 3 were added to the 2030 future background traffic, the critical approach at the study intersections and site driveways would be expected to operate at an acceptable level-of-service "D" or better during the a.m. and p.m. peak hours, except for the intersection of S 23rd Street and Jasper Street which would be expected to operate at level-of-service "F" during the a.m. and p.m. peak hours with a v/c ratio above 0.8. The study intersections and site driveways would be expected to operate at an acceptable overall level-of-service "C" or better during the a.m. and p.m. peak hours, except for the intersection of S 23rd Street and Jasper Street which is expected to operate at an overall level-of-service "E" during the a.m. peak hour and level-of-service "F" during the p.m. peak hour.

5.2.6 2030 TOTAL TRAFFIC (PHASE 3) WITH RECOMMENDED IMPROVEMENTS

The intersection of S 23rd Street and Jasper Street would be expected to experience delay issues as the background traffic increases and future developments are constructed. The intersection was reanalyzed with various roadway widening and traffic control improvements to determine the appropriate mitigation measures for the intersection in the future.

The intersection was initially analyzed with the removal of the northbound and southbound stop signs to create an eastbound/westbound stop-controlled intersection. The eastbound and westbound volumes are relatively light except for the eastbound right turn movement which is currently around 150 vehicles per hour during the p.m. peak hour and would be expected to increase to more than 200 vehicles per hour once the proposed development is completed. As a result, the addition of an eastbound right turn lane was included to remove the right turning traffic from the much more heavily delayed left turning traffic. The results of the analyses indicated that the intersection would be expected to operate at an acceptable overall level-of-service "B" or better and the critical approach would be expected to operate at an acceptable level-of-service "E" or better during the peak hours with a v/c ratio below 0.8.

The intersection was then analyzed with a traffic signal installed with permissive left turn phasing for all approaches. The results of the analyses indicated that the intersection would be expected to operate at an overall level-of-service "A" and the critical approach would be expected to operate at level-of-service "B" during the peak hours.

The intersection was then analyzed as a single-lane roundabout. The results indicated that the intersection would be expected to operate at an overall level-of-service "A" and the critical approach would be expected to operate at level-of-service "B" or better during the peak hours.

6.0 WARRANT ANALYSIS

To determine the need for additional traffic control measures at the intersection of S 23rd Street and Jasper Street, a multiway stop warrant analysis and a traffic signal warrant analysis were conducted. The analyses were conducted using *PC-Warrants 2*, which is a software package for evaluating intersections to support the installation of a multiway stop or traffic signal in accordance with the *Manual on Uniform Traffic Control Devices (MUTCD)*. This publication is a federally approved publication which governs traffic engineering practices across the country. The MUTCD has eight sets of thresholds or "warrants" that may be evaluated at an intersection to determine whether a multiway stop control or traffic signal should be considered to reduce accidents or delay. If one of the warrants is met the installation of a multiway stop or traffic signal should be considered.

6.1 MULTIWAY STOP WARRANT ANALYSIS

A multiway stop warrant analysis was conducted for the intersection to determine if the existing all-way stop control is warranted based on the 2025 existing traffic volumes with existing intersection geometry.

The results of the analysis are as follows:

MULTIWAY STOP WARRANT ANALYSIS

- **Criteria A – Crash Experience – Not Evaluated**
 - 5 or more crashes experienced within the last 12-month period or 6 or more experienced in a 36-month period.
- **Criteria B – Sight Distance – Satisfied**
 - All-way stop control may be installed at locations where minor-road does not have adequate sight distance for a vehicle to turn onto or cross the major road.
- **Criteria C – Interim Measure – Not Evaluated**
 - All-way stop control may be installed at locations where a future traffic signal or roundabout is being installed.
- **Criteria D – 8-Hour Volume (Vehicles, Pedestrians, Bicycles) – Not Satisfied**
 - The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major-street approaches is at least 300 per hour for each of any 8 hours of a typical day; and
 - The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor-street approaches is at least 200 per hour for each of any of the same 8 hours.

The intersection does not currently come close to satisfying the 8-Hour Multiway Stop Warrant but does satisfy the Sight Distance Multiway Stop Warrant due to the overgrown foliage at the intersection blocking the minor-road views of drivers turning onto or crossing S 23rd Street.



6.2 TRAFFIC SIGNAL WARRANT ANALYSIS

The eight-hour vehicular volumes, four-hour volumes, and peak hour volumes warrants were evaluated to determine if the intersection would warrant the installation of a traffic signal utilizing the 2025 existing traffic with existing intersection geometry. Following is a summary of the results:

- **Warrant 1 – Eight Hour Vehicular Volumes – Satisfied**
 - Warrant 1A – Minimum Vehicular Volume – Satisfied
(required volumes reached for 8 hours, 8 are needed)
 - Warrant 1B – Interruption of Continuous Traffic – Not Satisfied
(required volumes reached for 4 hours, 8 are needed)
 - Warrant 1C – Combination of Warrants – Not Satisfied
(required 80% 1A volumes reached for 12 hours, 8 are needed); and
(required 80% 1B volumes reached for 6 hours, 8 are needed)
- **Warrant 2 – Four Hour Volumes – Satisfied**
(required volumes reached for 5 hours; 4 are needed)
- **Warrant 3 – Peak Hour – Satisfied**
 - Warrant 3B – Peak Hour Volume – Satisfied
(required volumes reached for 2 hours, 1 is needed)

The results indicate that the intersection satisfies the eight-hour, four-hour, and peak hour vehicular volume warrants under the 2025 existing traffic volumes.

Only peak hour trips were projected for the proposed development and, therefore, only the peak hour volume warrant was evaluated to determine if the intersection would satisfy a traffic signal warrant once the development has been completed. Following is a summary of the results:

- **Warrant 3 – Peak Hour – Satisfied**
 - Warrant 3B – Peak Hour Volume – Satisfied
(required volumes reached for 2 hours, 1 is needed)

The results indicate that the intersection would be expected to satisfy peak hour vehicular volume warrants under the 2030 total traffic (Phase 3) volumes. The computer printouts of the warrant analyses have been included in the appendix.

7.0 CONCLUSIONS

7.1 SUMMARY

TEC was requested to conduct a traffic impact analysis on a proposed residential development to be constructed in Broken Arrow, Oklahoma. Existing traffic volume data was collected adjacent to the proposed site. The existing traffic was utilized to determine the background traffic for the 2026, 2028, and 2030 design years which coincide with the development phases 1, 2, and 3, respectively. The proposed site trips for development phases 1, 2, and 3 were determined and added to the 2026, 2028, and 2030 future background traffic volumes to create the 2026, 2028, and 2030 total traffic which was utilized for conducting the reviews and analyses.

The analyses conducted under the 2025 existing traffic and 2026 future combined background traffic indicated that the study intersections of S 23rd Street and Jasper Street and S 23rd Street and E 141st Street S currently operate and would be expected to continue operating at acceptable levels-of-service during the a.m. and p.m. peak hours.

Once the proposed site trips for development phase 1 were added to the 2026 future background traffic, each study intersection and site driveway would be expected to operate at acceptable levels-of-service during both peak hours. Once the proposed site trips for development phases 1 and 2 were added to the 2028 future background traffic, each study intersection and site driveway would be expected to continue operating at acceptable levels-of-service during both peak hours. Once the proposed site trips for development phases 1, 2, and 3 were added to the 2030 future background traffic, each study intersection and site driveway would be expected to continue operating at acceptable levels-of-service during both peak hours, except for the intersection of S 23rd Street and Jasper Street which would be expected to operate at an unacceptable level-of-service during the a.m. and p.m. peak hours.

7.2 S 23rd STREET AND JASPER STREET

The intersection of S 23rd Street and Jasper Street currently operates at acceptable levels-of-service and would be expected to continue operating at acceptable levels-of-service through the completion of development phase 2 as an all-way stop controlled intersection. Once phase 3 is completed, around 2030, the intersection would be expected to operate below acceptable levels-of-service during the a.m. and

p.m. peak hours. The intersection was reanalyzed under three roadway and/or traffic control improvement scenarios to improve vehicular delay and safety under the future conditions.

The first improvement scenario modified the existing all-way stop control to eastbound/westbound stop control which would allow the heavier northbound and southbound movements to operate unobstructed. Additionally, an eastbound right turn lane was added to the intersection to remove the heavy right turning traffic from the more delayed left turning traffic. With the improvements, the intersection would operate with reduced vehicular delay, but the critical approach would still be expected to operate at level-of-service "C" during the a.m. peak hour and level-of-service "E" during the p.m. peak hour. For this to be a viable option, the existing foliage around the intersection would need to be cut back to provide adequate sight distance for vehicles on Jasper Street to safely turn onto S 23rd Street.

The second improvement scenario removed the existing all-way stop control to install a traffic signal utilizing the existing roadway geometry. With the improvement, the intersection would operate with greatly reduced vehicular delay resulting in level-of-service "B" or better during the a.m. and p.m. peak hours. Typically, the construction of left turn lanes is highly recommended when a new traffic signal is installed at an intersection to allow the left turn vehicles to exit the through lane and prevent unnecessary vehicular delay. However, this can add significant costs and may require additional right-of-way acquisition, utility relocation, and drainage improvements.

The third improvement scenario removed the existing all-way stop control to construct a single lane roundabout utilizing the existing roadway geometry. With the improvement, the intersection would operate with greatly reduced vehicular delay resulting in level-of-service "B" or better during the a.m. and p.m. peak hours. The single lane roundabout can utilize the two-lane roadway geometry but would require widening at the intersection which may require additional right-of-way acquisition, utility relocation, and drainage improvements.

7.3 RECOMMENDATIONS

Based on the results of the analyses conducted and site plan evaluation, no traffic control or geometric roadway improvements are necessary as a result of the proposed site phases 1 and 2 for traffic to continue operating at acceptable level-of-service. However, once development phase 3 is completed, the intersection of S 23rd Street and Jasper Street would be expected to operate below acceptable levels-of-

service. It is recommended that the developer and the City of Broken Arrow begin planning future roadway and traffic control improvements at the intersection of S 23rd Street and Jasper Street to reduce the increasing vehicular delay once development phase 3 begins construction. The recommended improvements in order of most preferred to least preferred are: single lane roundabout, traffic signal, and side street stop control with eastbound right turn lane. The selected improvement would be dependent on cost which includes right-of-way acquisition, utility relocation, and drainage improvements.

The proposed development would be expected to add 248 vehicles to the intersection of S 23rd Street and Jasper Street during the a.m. peak hour and 331 vehicles during the p.m. peak hour. This equates to 23.4% of the 2030 total traffic during the a.m. peak hour and 24.8% during the p.m. peak hour.

APPENDIX

TRAFFIC DATA

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Full Length (7:30 AM-7:30 AM (+1))

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 7:30AM	4	29	1	0	34	10	0	1	0	11	0	84	27	0	111	26	1	11	0	38	194
7:45AM	17	23	7	0	47	4	1	0	0	5	1	93	23	0	117	18	2	7	0	27	196
Hourly Total	21	52	8	0	81	14	1	1	0	16	1	177	50	0	228	44	3	18	0	65	390
8:00AM	5	21	3	0	29	7	2	1	0	10	0	87	28	0	115	17	0	11	0	28	182
8:15AM	10	25	6	0	41	3	3	0	0	6	0	75	22	0	97	15	0	5	0	20	164
8:30AM	5	22	1	0	28	4	1	0	0	5	1	66	28	0	95	12	1	12	0	25	153
8:45AM	11	29	1	0	41	2	2	1	0	5	0	59	18	0	77	9	0	13	0	22	145
Hourly Total	31	97	11	0	139	16	8	2	0	26	1	287	96	0	384	53	1	41	0	95	644
9:00AM	12	25	6	0	43	6	3	1	0	10	0	47	8	0	55	11	0	13	0	24	132
9:15AM	8	23	3	0	34	3	1	0	0	4	1	49	16	0	66	21	2	8	0	31	135
9:30AM	5	22	2	0	29	4	1	0	0	5	0	34	18	0	52	22	1	15	0	38	124
9:45AM	6	23	5	0	34	0	0	0	0	0	0	25	12	0	37	17	1	7	0	25	96
Hourly Total	31	93	16	0	140	13	5	1	0	19	1	155	54	0	210	71	4	43	0	118	487
10:00AM	6	24	5	0	35	3	0	0	0	3	1	35	13	0	49	16	0	9	0	25	112
10:15AM	10	20	2	0	32	6	1	0	0	7	0	41	8	0	49	11	2	7	0	20	108
10:30AM	2	26	1	0	29	3	1	0	0	4	0	17	15	0	32	19	0	3	0	22	87
10:45AM	7	37	2	0	46	5	0	0	0	5	0	37	14	0	51	10	0	8	0	18	120
Hourly Total	25	107	10	0	142	17	2	0	0	19	1	130	50	0	181	56	2	27	0	85	427
11:00AM	9	25	1	0	35	4	1	1	0	6	1	37	11	0	49	17	1	5	0	23	113
11:15AM	7	28	1	0	36	2	1	0	0	3	0	43	10	0	53	18	1	6	0	25	117
11:30AM	8	25	3	0	36	1	1	0	0	2	1	37	14	0	52	12	1	11	0	24	114
11:45AM	7	29	5	0	41	4	2	0	0	6	0	20	16	0	36	13	1	13	0	27	110
Hourly Total	31	107	10	0	148	11	5	1	0	17	2	137	51	0	190	60	4	35	0	99	454
12:00PM	11	28	1	0	40	1	0	1	0	2	0	25	19	0	44	13	1	10	0	24	110
12:15PM	11	28	4	0	43	4	0	0	0	4	0	23	18	0	41	25	0	15	0	40	128
12:30PM	9	37	2	0	48	5	3	0	0	8	0	31	10	0	41	19	3	1	0	23	120
12:45PM	10	35	3	0	48	5	1	0	0	6	1	42	21	0	64	17	3	1	0	21	139
Hourly Total	41	128	10	0	179	15	4	1	0	20	1	121	68	0	190	74	7	27	0	108	497
1:00PM	11	29	1	0	41	7	0	0	0	7	1	20	17	0	38	20	0	12	0	32	118
1:15PM	8	25	2	0	35	2	1	0	0	3	0	27	12	0	39	11	2	9	0	22	99
1:30PM	5	37	5	0	47	7	0	0	0	7	1	30	18	0	49	22	3	6	0	31	134
1:45PM	14	21	1	0	36	1	0	1	0	2	0	37	6	0	43	11	2	7	0	20	101
Hourly Total	38	112	9	0	159	17	1	1	0	19	2	114	53	0	169	64	7	34	0	105	452
2:00PM	11	33	1	0	45	3	1	1	0	5	1	32	15	0	48	16	3	8	0	27	125
2:15PM	3	35	3	0	41	1	1	0	0	2	0	37	21	0	58	27	0	13	0	40	141
2:30PM	11	38	5	0	54	6	1	1	0	8	0	28	18	0	46	32	0	8	0	40	148
2:45PM	12	43	8	0	63	2	2	1	0	5	0	23	18	0	41	35	5	10	0	50	159
Hourly Total	37	149	17	0	203	12	5	3	0	20	1	120	72	0	193	110	8	39	0	157	573
3:00PM	19	49	3	0	71	6	0	0	0	6	1	35	18	0	54	23	1	6	0	30	161
3:15PM	12	47	4	0	63	6	1	1	0	8	0	39	14	0	53	23	0	14	0	37	161
3:30PM	15	60	5	0	80	5	1	0	0	6	1	33	24	0	58	27	0	19	0	46	190
3:45PM	16	70	3	0	89	4	1	0	0	5	0	42	15	0	57	32	2	14	0	48	199
Hourly Total	62	226	15	0	303	21	3	1	0	25	2	149	71	0	222	105	3	53	0	161	711
4:00PM	9	62	13	0	84	3	4	2	0	9	0	40	19	0	59	31	5	10	0	46	198
4:15PM	24	73	3	0	100	2	0	0	0	2	1	39	18	0	58	38	0	10	0	48	208
4:30PM	23	68	5	0	96	2	1	0	0	3	0	44	15	0	59	40	3	19	0	62	220
4:45PM	22	73	8	0	103	3	0	0	0	3	0	38	24	0	62	30	6	20	0	56	224
Hourly Total	78	276	29	0	383	10	5	2	0	17	1	161	76	0	238	139	14	59	0	212	850
5:00PM	12	64	6	0	82	10	3	1	0	14	0	58	25	0	83	37	0	15	0	52	231
5:15PM	14	83	5	0	102	7	2	0	0	9	0	30	26	0	56	47	3	16	0	66	233
5:30PM	15	74	6	0	95	2	0	1	0	3	1	53	18	0	72	34	3	14	0	51	221
5:45PM	27	59	9	0	95	2	2	0	0	4	0	22	22	0	44	23	2	11	0	36	179
Hourly Total	68	280	26	0	374	21	7	2	0	30	1	163	91	0	255	141	8	56	0	205	864
6:00PM	15	46	4	0	65	2	1	1	0	4	0	41	27	0	68	34	2	19	0	55	192

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
6:15PM	15	44	6	0	65	2	1	0	0	3	0	42	21	0	63	26	2	7	0	35	166
6:30PM	11	40	3	0	54	2	1	0	0	3	0	26	16	0	42	15	1	12	0	28	127
6:45PM	9	38	5	0	52	3	0	0	0	3	0	20	11	0	31	21	2	12	0	35	121
Hourly Total	50	168	18	0	236	9	3	1	0	13	0	129	75	0	204	96	7	50	0	153	606
7:00PM	15	24	1	0	40	4	2	0	0	6	0	16	10	0	26	15	0	7	0	22	94
7:15PM	7	34	0	0	41	3	2	0	0	5	0	26	8	0	34	17	1	6	0	24	104
7:30PM	7	27	1	0	35	3	0	0	0	3	0	4	6	0	10	20	0	4	0	24	72
7:45PM	9	32	2	0	43	0	1	0	0	1	0	8	6	0	14	18	0	10	0	28	86
Hourly Total	38	117	4	0	159	10	5	0	0	15	0	54	30	0	84	70	1	27	0	98	356
8:00PM	6	24	4	0	34	2	1	0	0	3	0	20	7	0	27	16	2	8	0	26	90
8:15PM	5	26	3	0	34	2	1	0	0	3	0	11	5	0	16	23	1	4	0	28	81
8:30PM	4	33	1	0	38	3	0	1	0	4	0	11	9	0	20	18	0	4	0	22	84
8:45PM	5	31	1	0	37	1	0	1	0	2	1	11	13	0	25	8	0	7	0	15	79
Hourly Total	20	114	9	0	143	8	2	2	0	12	1	53	34	0	88	65	3	23	0	91	334
9:00PM	3	16	2	0	21	0	0	0	0	0	0	13	5	0	18	14	0	2	0	16	55
9:15PM	3	22	1	0	26	0	0	0	0	0	0	9	8	0	17	11	0	2	0	13	56
9:30PM	4	19	1	0	24	0	0	0	0	0	0	5	3	0	8	13	1	4	0	18	50
9:45PM	2	9	0	0	11	1	1	0	0	2	0	1	7	0	8	6	0	0	0	6	27
Hourly Total	12	66	4	0	82	1	1	0	0	2	0	28	23	0	51	44	1	8	0	53	188
10:00PM	1	7	1	0	9	0	0	0	0	0	0	3	2	0	5	5	0	3	0	8	22
10:15PM	4	6	1	0	11	0	0	0	0	0	0	4	1	0	5	5	0	0	0	5	21
10:30PM	1	12	0	0	13	1	0	0	0	1	0	1	2	0	3	5	1	2	0	8	25
10:45PM	0	3	0	0	3	0	0	0	0	0	0	3	2	0	5	0	0	2	0	2	10
Hourly Total	6	28	2	0	36	1	0	0	0	1	0	11	7	0	18	15	1	7	0	23	78
11:00PM	0	9	0	0	9	1	0	0	0	1	0	2	1	0	3	4	0	0	0	4	17
11:15PM	3	2	0	0	5	0	0	0	0	0	0	3	2	0	5	3	0	0	0	3	13
11:30PM	3	7	0	0	10	0	0	0	0	0	0	0	1	0	1	2	0	1	0	3	14
11:45PM	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	6
Hourly Total	6	22	0	0	28	1	0	0	0	1	0	6	5	0	11	9	0	1	0	10	50
2025-03-06 12:00AM	0	4	0	0	4	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	8
12:15AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
12:45AM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hourly Total	0	10	0	0	10	0	0	0	0	0	0	4	1	0	5	1	0	0	0	1	16
1:00AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1:15AM	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
1:30AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0	1	0	3	5
1:45AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Hourly Total	1	6	0	0	7	0	0	0	0	0	0	3	0	0	3	2	0	2	0	4	14
2:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15AM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	3
2:30AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	4
2:45AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	1	2	0	0	3	0	1	0	0	1	0	1	1	0	2	2	1	0	0	3	9
3:00AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	1	3
3:15AM	0	1	0	0	1	0	0	0	0	0	0	3	2	0	5	0	0	0	0	0	6
3:30AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3
3:45AM	0	1	1	0	2	1	0	0	0	1	0	3	1	0	4	1	0	1	0	2	9
Hourly Total	0	2	1	0	3	1	0	0	0	1	0	9	4	0	13	2	0	2	0	4	21
4:00AM	0	5	0	0	5	0	0	1	0	1	0	2	1	0	3	0	0	1	0	1	10
4:15AM	0	0	0	0	0	0	0	0	0	0	0	7	2	0	9	2	0	1	0	3	12
4:30AM	1	3	0	0	4	1	0	0	0	1	0	3	4	0	7	2	0	1	0	3	15
4:45AM	0	2	0	0	2	0	0	0	0	0	0	10	5	0	15	3	0	1	0	4	21
Hourly Total	1	10	0	0	11	1	0	1	0	2	0	22	12	0	34	7	0	4	0	11	58
5:00AM	1	1	1	0	3	0	1	0	0	1	0	12	2	0	14	2	0	2	0	4	22
5:15AM	1	2	0	0	3	0	0	0	0	0	0	18	6	0	24	2	0	3	0	5	32
5:30AM	4	3	0	0	7	0	1	0	0	1	0	21	4	0	25	9	1	3	0	13	46
5:45AM	1	4	0	0	5	2	0	0	0	2	0	26	9	0	35	3	0	6	0	9	51
Hourly Total	7	10	1	0	18	2	2	0	0	4	0	77	21	0	98	16	1	14	0	31	151
6:00AM	3	5	0	0	8	4	0	0	0	4	0	31	7	0	38	7	1	5	0	13	63

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
6:15AM	4	11	2	0	17	5	0	0	0	5	0	51	9	0	60	8	0	3	0	11	93
6:30AM	7	17	4	0	28	4	0	0	0	4	0	56	16	0	72	8	0	9	0	17	121
6:45AM	11	27	8	0	46	4	1	0	0	5	0	70	18	0	88	13	1	11	0	25	164
Hourly Total	25	60	14	0	99	17	1	0	0	18	0	208	50	0	258	36	2	28	0	66	441
7:00AM	3	21	5	0	29	7	0	2	0	9	1	75	16	0	92	19	2	23	0	44	174
7:15AM	9	18	2	0	29	5	4	0	0	9	1	90	25	0	116	9	0	13	0	22	176
Hourly Total	12	39	7	0	58	12	4	2	0	18	2	165	41	0	208	28	2	36	0	66	350
Total	642	2281	221	0	3144	230	65	21	0	316	17	2484	1036	0	3537	1310	80	634	0	2024	9021
% Approach	20.4%	72.6%	7.0%	0%	-	72.8%	20.6%	6.6%	0%	-	0.5%	70.2%	29.3%	0%	-	64.7%	4.0%	31.3%	0%	-	-
% Total	7.1%	25.3%	2.4%	0%	34.9%	2.5%	0.7%	0.2%	0%	3.5%	0.2%	27.5%	11.5%	0%	39.2%	14.5%	0.9%	7.0%	0%	22.4%	-
Lights	625	2131	212	0	2968	225	63	19	0	307	16	2295	1011	0	3322	1290	80	626	0	1996	8593
% Lights	97.4%	93.4%	95.9%	0%	94.4%	97.8%	96.9%	90.5%	0%	97.2%	94.1%	92.4%	97.6%	0%	93.9%	98.5%	100%	98.7%	0%	98.6%	95.3%
Articulated Trucks	2	94	0	0	96	0	0	0	0	0	0	134	7	0	141	7	0	1	0	8	245
% Articulated Trucks	0.3%	4.1%	0%	0%	3.1%	0%	0%	0%	0%	0%	0%	5.4%	0.7%	0%	4.0%	0.5%	0%	0.2%	0%	0.4%	2.7%
Buses and Single-Unit Trucks	15	56	9	0	80	5	2	2	0	9	1	55	18	0	74	13	0	7	0	20	183
% Buses and Single-Unit Trucks	2.3%	2.5%	4.1%	0%	2.5%	2.2%	3.1%	9.5%	0%	2.8%	5.9%	2.2%	1.7%	0%	2.1%	1.0%	0%	1.1%	0%	1.0%	2.0%

* L: Left, R: Right, T: Thru, U: U-Turn

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Full Length (7:30 AM-7:30 AM (+1))

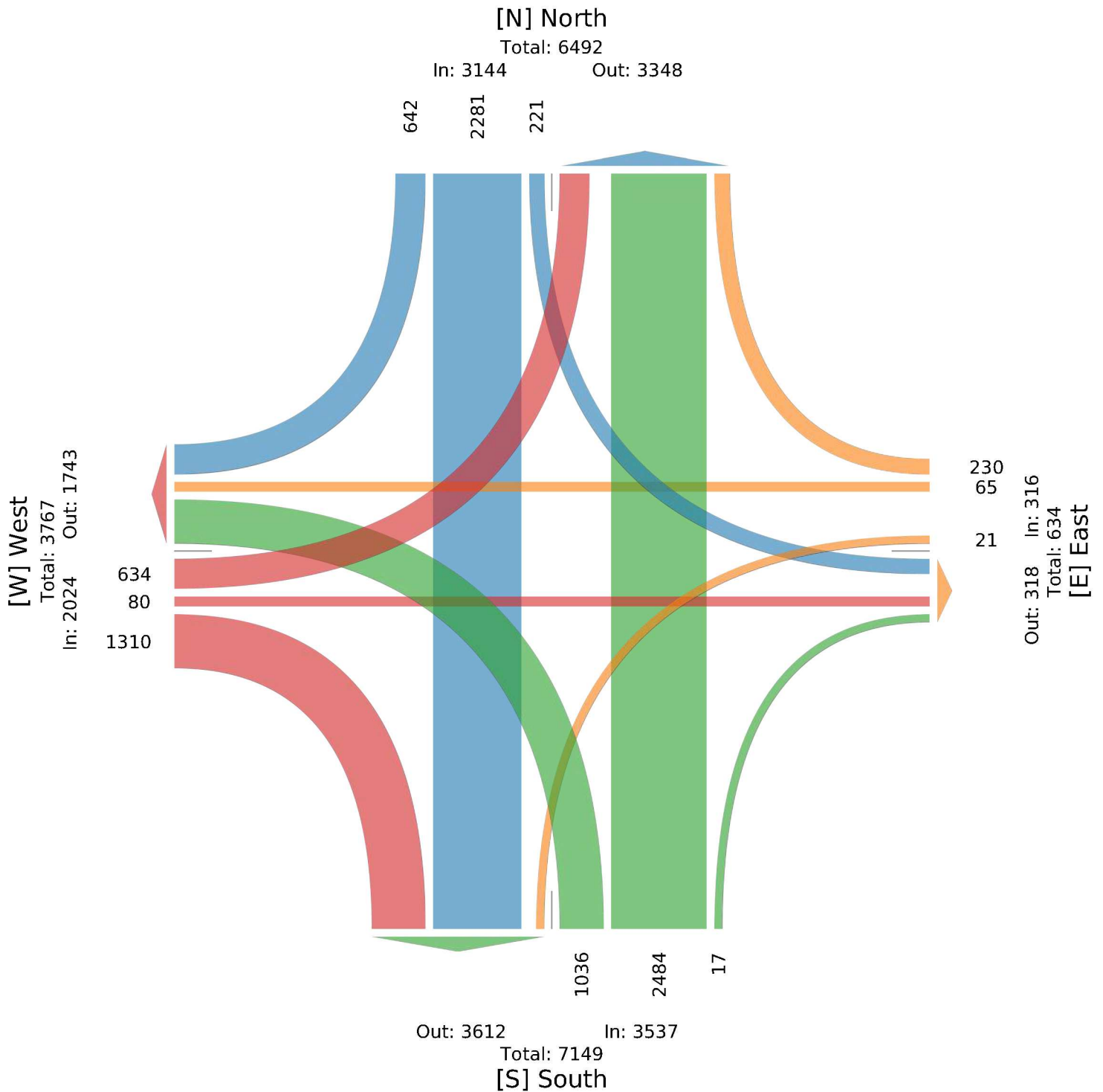
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

AM Peak (Mar 05 2025 7:30AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 7:30AM	4	29	1	0	34	10	0	1	0	11	0	84	27	0	111	26	1	11	0	38	194
7:45AM	17	23	7	0	47	4	1	0	0	5	1	93	23	0	117	18	2	7	0	27	196
8:00AM	5	21	3	0	29	7	2	1	0	10	0	87	28	0	115	17	0	11	0	28	182
8:15AM	10	25	6	0	41	3	3	0	0	6	0	75	22	0	97	15	0	5	0	20	164
Total	36	98	17	0	151	24	6	2	0	32	1	339	100	0	440	76	3	34	0	113	736
% Approach	23.8%	64.9%	11.3%	0%	-	75.0%	18.8%	6.3%	0%	-	0.2%	77.0%	22.7%	0%	-	67.3%	2.7%	30.1%	0%	-	-
% Total	4.9%	13.3%	2.3%	0%	20.5%	3.3%	0.8%	0.3%	0%	4.3%	0.1%	46.1%	13.6%	0%	59.8%	10.3%	0.4%	4.6%	0%	15.4%	-
PHF	0.529	0.845	0.607	-	0.803	0.600	0.500	0.500	-	0.727	0.250	0.911	0.893	-	0.940	0.731	0.375	0.773	-	0.743	0.939
Lights	33	88	17	0	138	24	6	2	0	32	1	314	100	0	415	74	3	34	0	111	696
% Lights	91.7%	89.8%	100%	0%	91.4%	100%	100%	100%	0%	100%	100%	92.6%	100%	0%	94.3%	97.4%	100%	100%	0%	98.2%	94.6%
Articulated Trucks	0	4	0	0	4	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	18
% Articulated Trucks	0%	4.1%	0%	0%	2.6%	0%	0%	0%	0%	0%	0%	4.1%	0%	0%	3.2%	0%	0%	0%	0%	0%	2.4%
Buses and Single-Unit Trucks	3	6	0	0	9	0	0	0	0	0	0	11	0	0	11	2	0	0	0	2	22
% Buses and Single-Unit Trucks	8.3%	6.1%	0%	0%	6.0%	0%	0%	0%	0%	0%	0%	3.2%	0%	0%	2.5%	2.6%	0%	0%	0%	1.8%	3.0%

* L: Left, R: Right, T: Thru, U: U-Turn

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

AM Peak (Mar 05 2025 7:30AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

[N] North

Total: 548

In: 151

Out: 397

36 98 17

[W] West
Total: 255
In: 113 Out: 142

34
3
76

24
6
2

Out: 21 In: 32
Total: 53
[E] East

Out: 176

In: 440

Total: 616

[S] South

100

339

1

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Midday Peak (Mar 05 2025 12:15PM - 1:15 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 12:15PM	11	28	4	0	43	4	0	0	0	4	0	23	18	0	41	25	0	15	0	40	128
12:30PM	9	37	2	0	48	5	3	0	0	8	0	31	10	0	41	19	3	1	0	23	120
12:45PM	10	35	3	0	48	5	1	0	0	6	1	42	21	0	64	17	3	1	0	21	139
1:00PM	11	29	1	0	41	7	0	0	0	7	1	20	17	0	38	20	0	12	0	32	118
Total	41	129	10	0	180	21	4	0	0	25	2	116	66	0	184	81	6	29	0	116	505
% Approach	22.8%	71.7%	5.6%	0%	-	84.0%	16.0%	0%	0%	-	1.1%	63.0%	35.9%	0%	-	69.8%	5.2%	25.0%	0%	-	-
% Total	8.1%	25.5%	2.0%	0%	35.6%	4.2%	0.8%	0%	0%	5.0%	0.4%	23.0%	13.1%	0%	36.4%	16.0%	1.2%	5.7%	0%	23.0%	-
PHF	0.932	0.872	0.625	-	0.938	0.750	0.333	-	-	0.781	0.500	0.690	0.786	-	0.719	0.810	0.500	0.483	-	0.725	0.908
Lights	41	111	10	0	162	21	4	0	0	25	2	105	62	0	169	79	6	29	0	114	470
% Lights	100%	86.0%	100%	0%	90.0%	100%	100%	0%	0%	100%	100%	90.5%	93.9%	0%	91.8%	97.5%	100%	100%	0%	98.3%	93.1%
Articulated Trucks	0	10	0	0	10	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	18
% Articulated Trucks	0%	7.8%	0%	0%	5.6%	0%	0%	0%	0%	0%	0%	6.9%	0%	0%	4.3%	0%	0%	0%	0%	0%	3.6%
Buses and Single-Unit Trucks	0	8	0	0	8	0	0	0	0	0	0	3	4	0	7	2	0	0	0	2	17
% Buses and Single-Unit Trucks	0%	6.2%	0%	0%	4.4%	0%	0%	0%	0%	0%	0%	2.6%	6.1%	0%	3.8%	2.5%	0%	0%	0%	1.7%	3.4%

* L: Left, R: Right, T: Thru, U: U-Turn

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Midday Peak (Mar 05 2025 12:15PM - 1:15 PM)

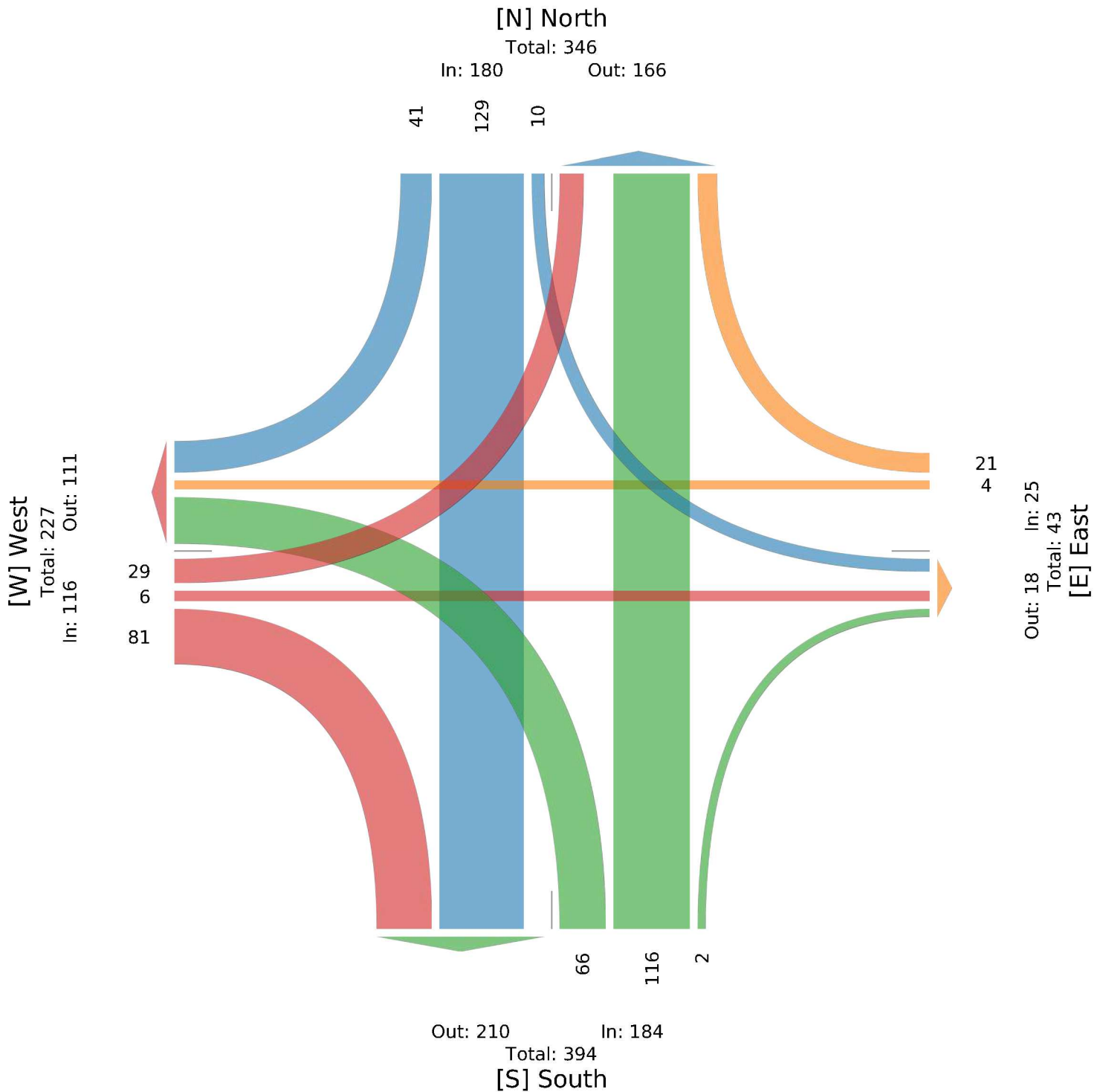
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

PM Peak (Mar 05 2025 4:45PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 4:45PM	22	73	8	0	103	3	0	0	0	3	0	38	24	0	62	30	6	20	0	56	224
5:00PM	12	64	6	0	82	10	3	1	0	14	0	58	25	0	83	37	0	15	0	52	231
5:15PM	14	83	5	0	102	7	2	0	0	9	0	30	26	0	56	47	3	16	0	66	233
5:30PM	15	74	6	0	95	2	0	1	0	3	1	53	18	0	72	34	3	14	0	51	221
Total	63	294	25	0	382	22	5	2	0	29	1	179	93	0	273	148	12	65	0	225	909
% Approach	16.5%	77.0%	6.5%	0%	-	75.9%	17.2%	6.9%	0%	-	0.4%	65.6%	34.1%	0%	-	65.8%	5.3%	28.9%	0%	-	-
% Total	6.9%	32.3%	2.8%	0%	42.0%	2.4%	0.6%	0.2%	0%	3.2%	0.1%	19.7%	10.2%	0%	30.0%	16.3%	1.3%	7.2%	0%	24.8%	-
PHF	0.716	0.886	0.781	-	0.927	0.550	0.417	0.500	-	0.518	0.250	0.772	0.894	-	0.822	0.787	0.500	0.813	-	0.852	0.975
Lights	62	292	25	0	379	22	5	2	0	29	1	177	93	0	271	147	12	65	0	224	903
% Lights	98.4%	99.3%	100%	0%	99.2%	100%	100%	100%	0%	100%	100%	98.9%	100%	0%	99.3%	99.3%	100%	100%	0%	99.6%	99.3%
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0%	0.3%	0%	0%	0.3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%
Buses and Single-Unit Trucks	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5
% Buses and Single-Unit Trucks	1.6%	0.3%	0%	0%	0.5%	0%	0%	0%	0%	0%	0%	1.1%	0%	0%	0.7%	0.7%	0%	0%	0%	0.4%	0.6%

* L: Left, R: Right, T: Thru, U: U-Turn

E 131st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

PM Peak (Mar 05 2025 4:45PM - 5:45 PM) - Overall Peak Hour

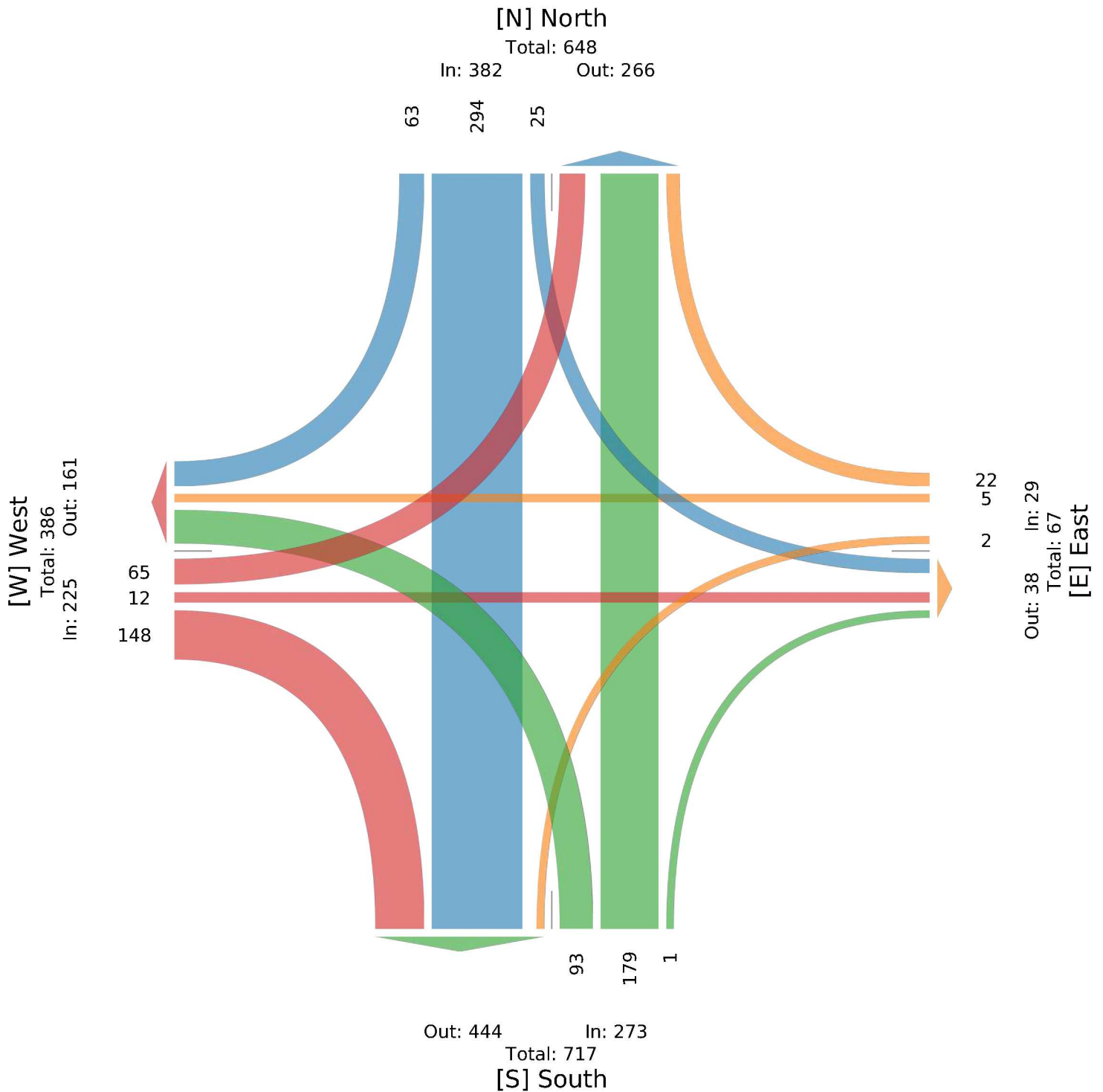
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274274, Location: 35.97381, -95.761633



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Full Length (7:30 AM-7:30 AM (+1))

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 7:30AM	1	13	40	0	54	72	0	1	0	73	4	35	0	0	39	0	0	0	0	0	166
7:45AM	0	11	33	0	44	76	0	0	0	76	0	34	0	0	34	0	0	0	0	0	154
Hourly Total	1	24	73	0	98	148	0	1	0	149	4	69	0	0	73	0	0	0	0	0	320
8:00AM	2	12	26	0	40	84	0	0	0	84	0	27	0	0	27	0	0	1	0	1	152
8:15AM	1	12	26	0	39	69	0	1	0	70	0	25	0	0	25	0	0	1	0	1	135
8:30AM	0	11	24	0	35	68	0	1	1	70	0	23	0	0	23	0	0	0	0	0	128
8:45AM	1	14	23	0	38	48	0	1	0	49	1	15	0	0	16	0	0	0	0	0	103
Hourly Total	4	49	99	0	152	269	0	3	1	273	1	90	0	0	91	0	0	2	0	2	518
9:00AM	0	15	22	0	37	43	0	0	0	43	0	20	0	0	20	0	0	0	0	0	100
9:15AM	1	13	29	0	43	45	1	0	0	46	0	13	0	0	13	0	0	0	0	0	102
9:30AM	0	13	32	0	45	39	0	0	0	39	0	16	0	0	16	0	0	0	0	0	100
9:45AM	0	9	29	0	38	25	1	0	0	26	1	9	0	0	10	0	1	3	0	4	78
Hourly Total	1	50	112	0	163	152	2	0	0	154	1	58	0	0	59	0	1	3	0	4	380
10:00AM	0	10	32	0	42	35	0	0	0	35	0	10	0	0	10	0	0	2	0	2	89
10:15AM	0	12	17	0	29	31	0	0	0	31	0	15	0	0	15	0	0	0	0	0	75
10:30AM	1	14	28	0	43	28	0	0	0	28	0	5	0	0	5	0	0	0	0	0	76
10:45AM	0	16	28	0	44	36	1	2	0	39	0	19	0	0	19	0	0	1	0	1	103
Hourly Total	1	52	105	0	158	130	1	2	0	133	0	49	0	0	49	0	0	3	0	3	343
11:00AM	0	15	24	0	39	34	0	0	0	34	1	13	0	0	14	0	1	1	0	2	89
11:15AM	1	14	33	0	48	32	0	0	0	32	0	13	0	0	13	1	0	0	0	1	94
11:30AM	2	14	20	0	36	34	0	0	0	34	0	17	0	0	17	0	0	0	0	0	87
11:45AM	0	11	27	0	38	27	0	4	0	31	1	9	0	0	10	0	0	3	0	3	82
Hourly Total	3	54	104	0	161	127	0	4	0	131	2	52	0	0	54	1	1	4	0	6	352
12:00PM	0	17	26	0	43	27	0	1	0	28	4	15	1	0	20	0	0	1	0	1	92
12:15PM	1	15	35	0	51	33	0	1	0	34	0	10	0	0	10	0	0	0	0	0	95
12:30PM	0	16	38	0	54	31	0	1	0	32	1	10	0	0	11	0	0	0	0	0	97
12:45PM	0	16	40	0	56	38	0	1	0	39	1	21	0	0	22	0	0	1	0	1	118
Hourly Total	1	64	139	0	204	129	0	4	0	133	6	56	1	0	63	0	0	2	0	2	402
1:00PM	1	14	31	0	46	22	0	0	0	22	1	12	0	0	13	0	0	0	0	0	81
1:15PM	2	9	26	0	37	32	0	0	0	32	1	11	0	0	12	0	0	1	0	1	82
1:30PM	2	16	39	0	57	31	0	0	0	31	0	19	0	0	19	1	0	1	0	2	109
1:45PM	1	8	25	0	34	21	0	0	0	21	0	12	1	0	13	0	0	2	0	2	70
Hourly Total	6	47	121	0	174	106	0	0	0	106	2	54	1	0	57	1	0	4	0	5	342
2:00PM	0	10	36	0	46	37	0	1	0	38	2	14	0	0	16	0	0	0	0	0	100
2:15PM	1	22	39	0	62	43	0	4	0	47	1	12	0	0	13	0	0	1	0	1	123
2:30PM	1	22	44	0	67	27	0	2	0	29	1	13	0	0	14	0	0	0	0	0	110
2:45PM	1	32	48	0	81	28	0	0	0	28	3	11	0	0	14	0	0	1	0	1	124
Hourly Total	3	86	167	0	256	135	0	7	0	142	7	50	0	0	57	0	0	2	0	2	457
3:00PM	0	12	61	0	73	39	0	4	0	43	2	17	0	0	19	0	0	1	0	1	136
3:15PM	0	15	49	0	64	40	0	0	0	40	0	12	0	0	12	0	0	0	0	0	116
3:30PM	1	21	60	0	82	49	0	0	0	49	2	14	0	0	16	0	0	0	0	0	147
3:45PM	0	34	68	0	102	44	0	0	0	44	0	9	0	0	9	0	0	1	0	1	156
Hourly Total	1	82	238	0	321	172	0	4	0	176	4	52	0	0	56	0	0	2	0	2	555
4:00PM	1	31	65	0	97	39	0	0	0	39	0	16	0	0	16	0	0	0	0	0	152
4:15PM	1	33	73	0	107	39	0	0	0	39	1	17	0	0	18	0	1	1	0	2	166
4:30PM	1	30	77	0	108	42	1	0	0	43	0	18	0	0	18	0	2	1	0	3	172
4:45PM	0	31	72	0	103	46	0	0	0	46	0	14	0	0	14	0	0	0	0	0	163
Hourly Total	3	125	287	0	415	166	1	0	0	167	1	65	0	0	66	0	3	2	0	5	653
5:00PM	0	19	76	0	95	50	0	0	0	50	1	32	0	0	33	0	0	0	0	0	178
5:15PM	0	35	95	0	130	42	2	0	0	44	0	14	0	0	14	0	1	0	0	1	189
5:30PM	0	16	86	0	102	50	0	0	0	50	1	13	1	0	15	0	0	1	0	1	168
5:45PM	1	21	59	0	81	30	1	0	0	31	0	13	0	0	13	0	1	0	0	1	126
Hourly Total	1	91	316	0	408	172	3	0	0	175	2	72	1	0	75	0	2	1	0	3	661
6:00PM	0	16	60	0	76	60	0	0	0	60	0	12	1	0	13	0	0	0	0	0	149

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
6:15PM	0	18	52	0	70	44	0	0	0	44	0	15	0	0	15	0	1	1	0	2	131
6:30PM	0	13	44	0	57	32	0	0	0	32	0	7	0	0	7	0	0	0	0	0	96
6:45PM	0	21	33	0	54	17	1	1	0	19	0	9	0	0	9	0	0	2	0	2	84
Hourly Total	0	68	189	0	257	153	1	1	0	155	0	43	1	0	44	0	1	3	0	4	460
7:00PM	0	8	29	0	37	17	0	0	0	17	1	11	0	0	12	0	0	0	0	0	66
7:15PM	0	10	37	0	47	17	0	0	0	17	0	11	0	0	11	0	0	0	0	0	75
7:30PM	0	11	35	0	46	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	56
7:45PM	0	10	39	0	49	8	0	0	0	8	0	3	0	0	3	0	0	0	0	0	60
Hourly Total	0	39	140	0	179	52	0	0	0	52	1	25	0	0	26	0	0	0	0	0	257
8:00PM	1	13	20	0	34	20	0	0	0	20	0	10	0	0	10	0	0	0	0	0	64
8:15PM	0	15	39	0	54	12	0	0	0	12	0	3	0	0	3	0	0	0	0	0	69
8:30PM	0	13	30	0	43	18	0	0	0	18	0	2	0	0	2	0	0	0	0	0	63
8:45PM	0	11	32	0	43	26	0	1	0	27	0	1	0	0	1	0	0	0	0	0	71
Hourly Total	1	52	121	0	174	76	0	1	0	77	0	16	0	0	16	0	0	0	0	0	267
9:00PM	0	13	20	0	33	14	0	0	0	14	0	1	0	0	1	0	0	0	0	0	48
9:15PM	0	4	28	0	32	13	0	0	0	13	0	3	0	0	3	0	0	0	0	0	48
9:30PM	0	7	24	0	31	7	0	0	0	7	0	1	0	0	1	0	0	0	0	0	39
9:45PM	1	5	8	0	14	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	22
Hourly Total	1	29	80	0	110	42	0	0	0	42	0	5	0	0	5	0	0	0	0	0	157
10:00PM	0	1	12	0	13	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	17
10:15PM	0	2	9	0	11	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	15
10:30PM	0	2	13	0	15	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	19
10:45PM	0	2	2	0	4	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
Hourly Total	0	7	36	0	43	12	0	0	0	12	0	3	0	0	3	0	0	0	0	0	58
11:00PM	0	4	8	0	12	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	16
11:15PM	0	3	2	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
11:30PM	0	3	6	0	9	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10
11:45PM	0	2	2	0	4	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	8
Hourly Total	0	12	18	0	30	11	0	0	0	11	0	1	0	0	1	0	0	0	0	0	42
2025-03-06 12:00AM	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
12:15AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30AM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
12:45AM	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hourly Total	0	3	8	0	11	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	14
1:00AM	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
1:15AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30AM	0	1	1	0	2	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	4
1:45AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	2	5	0	7	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	10
2:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15AM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
2:30AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
2:45AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Hourly Total	0	1	2	0	3	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	6
3:00AM	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	4
3:15AM	0	0	1	0	1	3	0	0	0	3	0	2	0	0	2	0	0	0	0	0	6
3:30AM	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2
3:45AM	0	2	0	0	2	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	6
Hourly Total	0	2	2	0	4	8	0	0	0	8	0	5	0	0	5	0	1	0	0	1	18
4:00AM	0	3	3	0	6	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	10
4:15AM	0	0	2	0	2	7	0	0	0	7	0	2	0	0	2	0	0	0	0	0	11
4:30AM	0	2	2	0	4	4	0	0	0	4	0	3	0	0	3	0	0	0	0	0	11
4:45AM	0	3	2	0	5	9	0	0	0	9	0	5	0	0	5	0	0	0	0	0	19
Hourly Total	0	8	9	0	17	23	0	0	0	23	0	11	0	0	11	0	0	0	0	0	51
5:00AM	0	1	1	0	2	9	0	0	0	9	0	5	0	0	5	0	0	0	0	0	16
5:15AM	0	2	2	0	4	22	0	0	0	22	0	6	0	0	6	0	0	0	0	0	32
5:30AM	0	3	8	0	11	24	0	0	0	24	0	2	0	0	2	0	0	0	0	0	37
5:45AM	0	4	6	0	10	28	0	2	0	30	0	2	0	0	2	0	0	0	0	0	42
Hourly Total	0	10	17	0	27	83	0	2	0	85	0	15	0	0	15	0	0	0	0	0	127
6:00AM	0	1	10	0	11	27	0	2	0	29	0	23	0	0	23	0	0	0	0	0	63

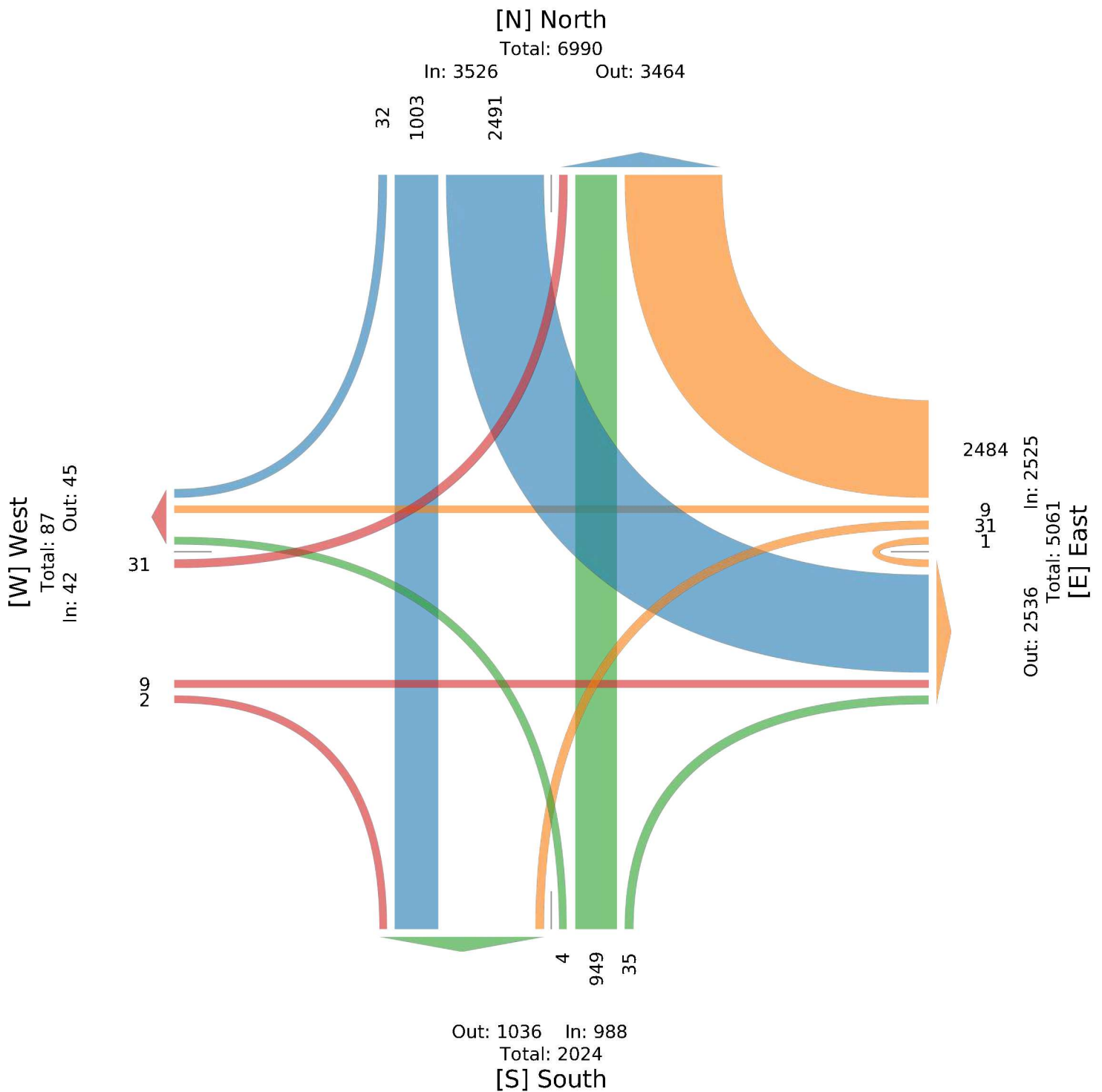
Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
6:15AM	0	7	12	0	19	38	0	0	0	38	4	22	0	0	26	0	0	1	0	1	84
6:30AM	0	12	13	0	25	43	0	0	0	43	0	22	0	0	22	0	0	0	0	0	90
6:45AM	4	8	19	0	31	57	0	0	0	57	0	24	0	0	24	0	0	0	0	0	112
Hourly Total	4	28	54	0	86	165	0	2	0	167	4	91	0	0	95	0	0	1	0	1	349
7:00AM	1	13	29	0	43	55	0	0	0	55	0	33	0	0	33	0	0	0	0	0	131
7:15AM	0	5	20	0	25	95	0	0	0	95	0	30	0	0	30	0	0	1	0	1	151
Hourly Total	1	18	49	0	68	150	0	0	0	150	0	63	0	0	63	0	0	1	0	1	282
Total	32	1003	2491	0	3526	2484	9	31	1	2525	35	949	4	0	988	2	9	31	0	42	7081
% Approach	0.9%	28.4%	70.6%	0%	-	98.4%	0.4%	1.2%	0%	-	3.5%	96.1%	0.4%	0%	-	4.8%	21.4%	73.8%	0%	-	-
% Total	0.5%	14.2%	35.2%	0%	49.8%	35.1%	0.1%	0.4%	0%	35.7%	0.5%	13.4%	0.1%	0%	14.0%	0%	0.1%	0.4%	0%	0.6%	-
Lights	30	897	2417	0	3344	2386	8	24	1	2419	26	824	4	0	854	1	8	30	0	39	6656
% Lights	93.8%	89.4%	97.0%	0%	94.8%	96.1%	88.9%	77.4%	100%	95.8%	74.3%	86.8%	100%	0%	86.4%	50.0%	88.9%	96.8%	0%	92.9%	94.0%
Articulated Trucks	1	85	26	0	112	34	0	3	0	37	8	108	0	0	116	0	0	1	0	1	266
% Articulated Trucks	3.1%	8.5%	1.0%	0%	3.2%	1.4%	0%	9.7%	0%	1.5%	22.9%	11.4%	0%	0%	11.7%	0%	0%	3.2%	0%	2.4%	3.8%
Buses and Single-Unit Trucks	1	21	48	0	70	64	1	4	0	69	1	17	0	0	18	1	1	0	0	2	159
% Buses and Single-Unit Trucks	3.1%	2.1%	1.9%	0%	2.0%	2.6%	11.1%	12.9%	0%	2.7%	2.9%	1.8%	0%	0%	1.8%	50.0%	11.1%	0%	0%	4.8%	2.2%

* L: Left, R: Right, T: Thru, U: U-Turn

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

AM Peak (Mar 05 2025 7:30AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 7:30AM	1	13	40	0	54	72	0	1	0	73	4	35	0	0	39	0	0	0	0	0	166
7:45AM	0	11	33	0	44	76	0	0	0	76	0	34	0	0	34	0	0	0	0	0	154
8:00AM	2	12	26	0	40	84	0	0	0	84	0	27	0	0	27	0	0	1	0	1	152
8:15AM	1	12	26	0	39	69	0	1	0	70	0	25	0	0	25	0	0	1	0	1	135
Total	4	48	125	0	177	301	0	2	0	303	4	121	0	0	125	0	0	2	0	2	607
% Approach	2.3%	27.1%	70.6%	0%	-	99.3%	0%	0.7%	0%	-	3.2%	96.8%	0%	0%	-	0%	0%	100%	0%	-	-
% Total	0.7%	7.9%	20.6%	0%	29.2%	49.6%	0%	0.3%	0%	49.9%	0.7%	19.9%	0%	0%	20.6%	0%	0%	0.3%	0%	0.3%	-
PHF	0.500	0.923	0.781	-	0.819	0.896	-	0.500	-	0.902	0.250	0.864	-	-	0.801	-	-	0.500	-	0.500	0.914
Lights	4	38	123	0	165	289	0	2	0	291	4	106	0	0	110	0	0	2	0	2	568
% Lights	100%	79.2%	98.4%	0%	93.2%	96.0%	0%	100%	0%	96.0%	100%	87.6%	0%	0%	88.0%	0%	0%	100%	0%	100%	93.6%
Articulated Trucks	0	9	1	0	10	3	0	0	0	3	0	10	0	0	10	0	0	0	0	0	23
% Articulated Trucks	0%	18.8%	0.8%	0%	5.6%	1.0%	0%	0%	0%	1.0%	0%	8.3%	0%	0%	8.0%	0%	0%	0%	0%	0%	3.8%
Buses and Single-Unit Trucks	0	1	1	0	2	9	0	0	0	9	0	5	0	0	5	0	0	0	0	0	16
% Buses and Single-Unit Trucks	0%	2.1%	0.8%	0%	1.1%	3.0%	0%	0%	0%	3.0%	0%	4.1%	0%	0%	4.0%	0%	0%	0%	0%	0%	2.6%

* L: Left, R: Right, T: Thru, U: U-Turn

E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

AM Peak (Mar 05 2025 7:30AM - 8:30 AM)

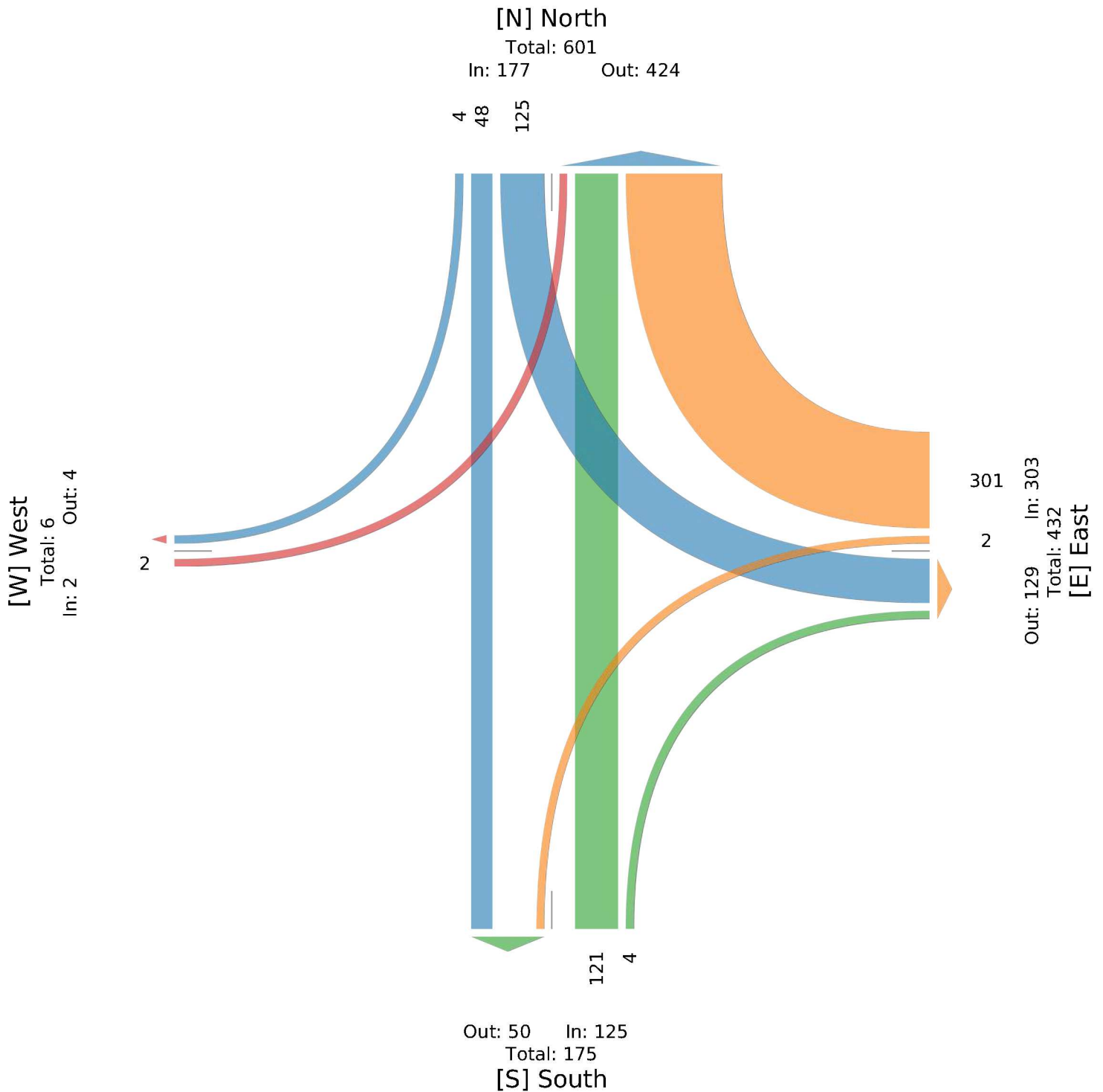
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Midday Peak (Mar 05 2025 12PM - 1 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 12:00PM	0	17	26	0	43	27	0	1	0	28	4	15	1	0	20	0	0	1	0	1	92
12:15PM	1	15	35	0	51	33	0	1	0	34	0	10	0	0	10	0	0	0	0	0	95
12:30PM	0	16	38	0	54	31	0	1	0	32	1	10	0	0	11	0	0	0	0	0	97
12:45PM	0	16	40	0	56	38	0	1	0	39	1	21	0	0	22	0	0	1	0	1	118
Total	1	64	139	0	204	129	0	4	0	133	6	56	1	0	63	0	0	2	0	2	402
% Approach	0.5%	31.4%	68.1%	0%	-	97.0%	0%	3.0%	0%	-	9.5%	88.9%	1.6%	0%	-	0%	0%	100%	0%	-	-
% Total	0.2%	15.9%	34.6%	0%	50.7%	32.1%	0%	1.0%	0%	33.1%	1.5%	13.9%	0.2%	0%	15.7%	0%	0%	0.5%	0%	0.5%	-
PHF	0.250	0.941	0.869	-	0.911	0.849	-	1.000	-	0.853	0.375	0.667	0.250	-	0.716	-	-	0.500	-	0.500	0.852
Lights	1	54	130	0	185	118	0	4	0	122	4	48	1	0	53	0	0	2	0	2	362
% Lights	100%	84.4%	93.5%	0%	90.7%	91.5%	0%	100%	0%	91.7%	66.7%	85.7%	100%	0%	84.1%	0%	0%	100%	0%	100%	90.0%
Articulated Trucks	0	7	5	0	12	3	0	0	0	3	1	7	0	0	8	0	0	0	0	0	23
% Articulated Trucks	0%	10.9%	3.6%	0%	5.9%	2.3%	0%	0%	0%	2.3%	16.7%	12.5%	0%	0%	12.7%	0%	0%	0%	0%	0%	5.7%
Buses and Single-Unit Trucks	0	3	4	0	7	8	0	0	0	8	1	1	0	0	2	0	0	0	0	0	17
% Buses and Single-Unit Trucks	0%	4.7%	2.9%	0%	3.4%	6.2%	0%	0%	0%	6.0%	16.7%	1.8%	0%	0%	3.2%	0%	0%	0%	0%	0%	4.2%

* L: Left, R: Right, T: Thru, U: U-Turn

E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

Midday Peak (Mar 05 2025 12PM - 1 PM)

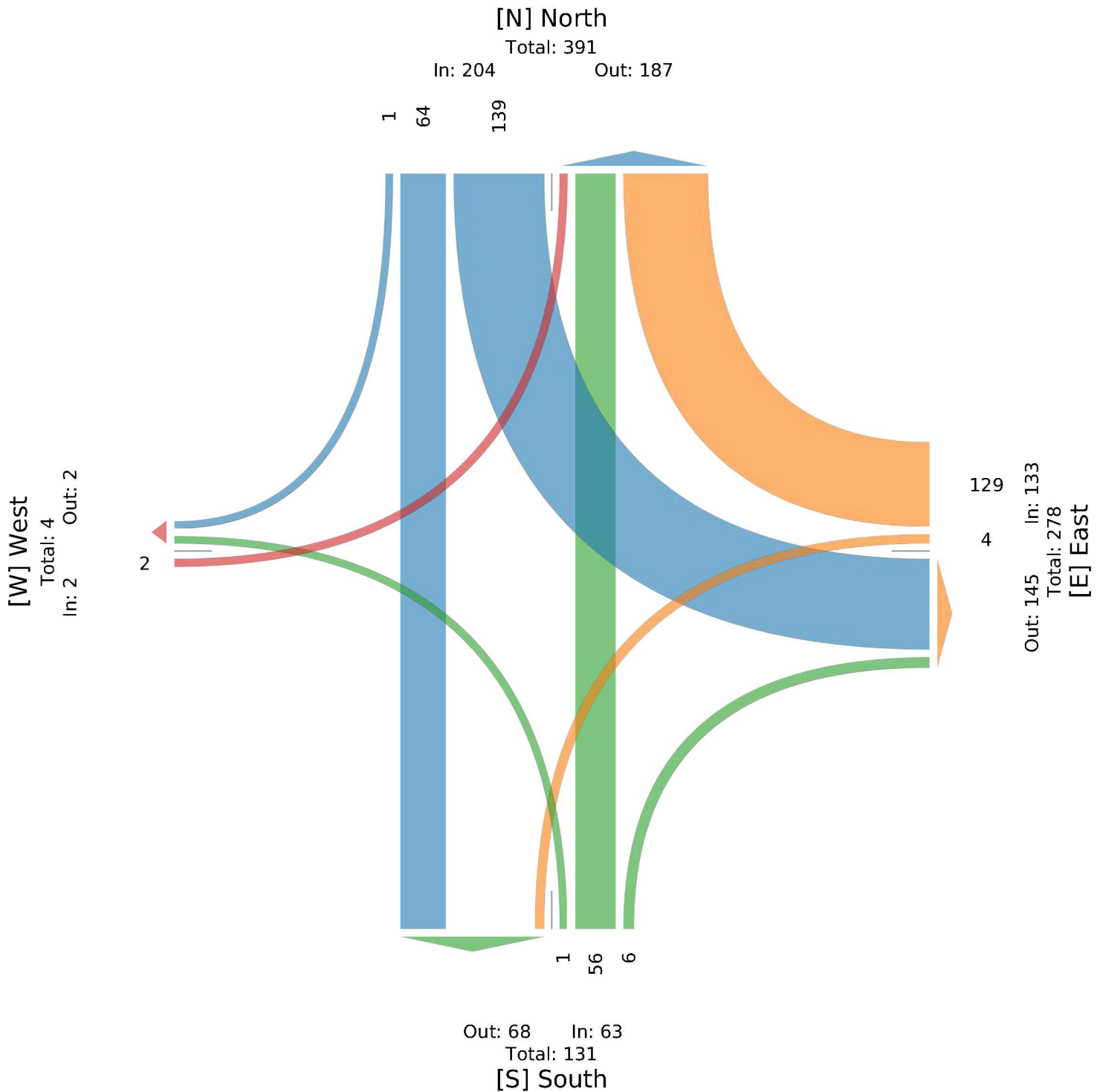
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

PM Peak (Mar 05 2025 4:30PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US

Leg Direction	North Southbound					East Westbound					South Northbound					West Eastbound					
Time	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	R	T	L	U	App	Int
2025-03-05 4:30PM	1	30	77	0	108	42	1	0	0	43	0	18	0	0	18	0	2	1	0	3	172
4:45PM	0	31	72	0	103	46	0	0	0	46	0	14	0	0	14	0	0	0	0	0	163
5:00PM	0	19	76	0	95	50	0	0	0	50	1	32	0	0	33	0	0	0	0	0	178
5:15PM	0	35	95	0	130	42	2	0	0	44	0	14	0	0	14	0	1	0	0	1	189
Total	1	115	320	0	436	180	3	0	0	183	1	78	0	0	79	0	3	1	0	4	702
% Approach	0.2%	26.4%	73.4%	0%	-	98.4%	1.6%	0%	0%	-	1.3%	98.7%	0%	0%	-	0%	75.0%	25.0%	0%	-	-
% Total	0.1%	16.4%	45.6%	0%	62.1%	25.6%	0.4%	0%	0%	26.1%	0.1%	11.1%	0%	0%	11.3%	0%	0.4%	0.1%	0%	0.6%	-
PHF	0.250	0.821	0.842	-	0.838	0.900	0.375	-	-	0.915	0.250	0.609	-	-	0.598	-	0.375	0.250	-	0.333	0.929
Lights	1	115	318	0	434	179	3	0	0	182	1	76	0	0	77	0	3	1	0	4	697
% Lights	100%	100%	99.4%	0%	99.5%	99.4%	100%	0%	0%	99.5%	100%	97.4%	0%	0%	97.5%	0%	100%	100%	0%	100%	99.3%
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0%	0%	0.3%	0%	0.2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%
Buses and Single-Unit Trucks	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	4
% Buses and Single-Unit Trucks	0%	0%	0.3%	0%	0.2%	0.6%	0%	0%	0%	0.5%	0%	2.6%	0%	0%	2.5%	0%	0%	0%	0%	0%	0.6%

* L: Left, R: Right, T: Thru, U: U-Turn

E 141st Street S and S 23rd Street - TMC

Wed Mar 5, 2025

PM Peak (Mar 05 2025 4:30PM - 5:30 PM) - Overall Peak Hour

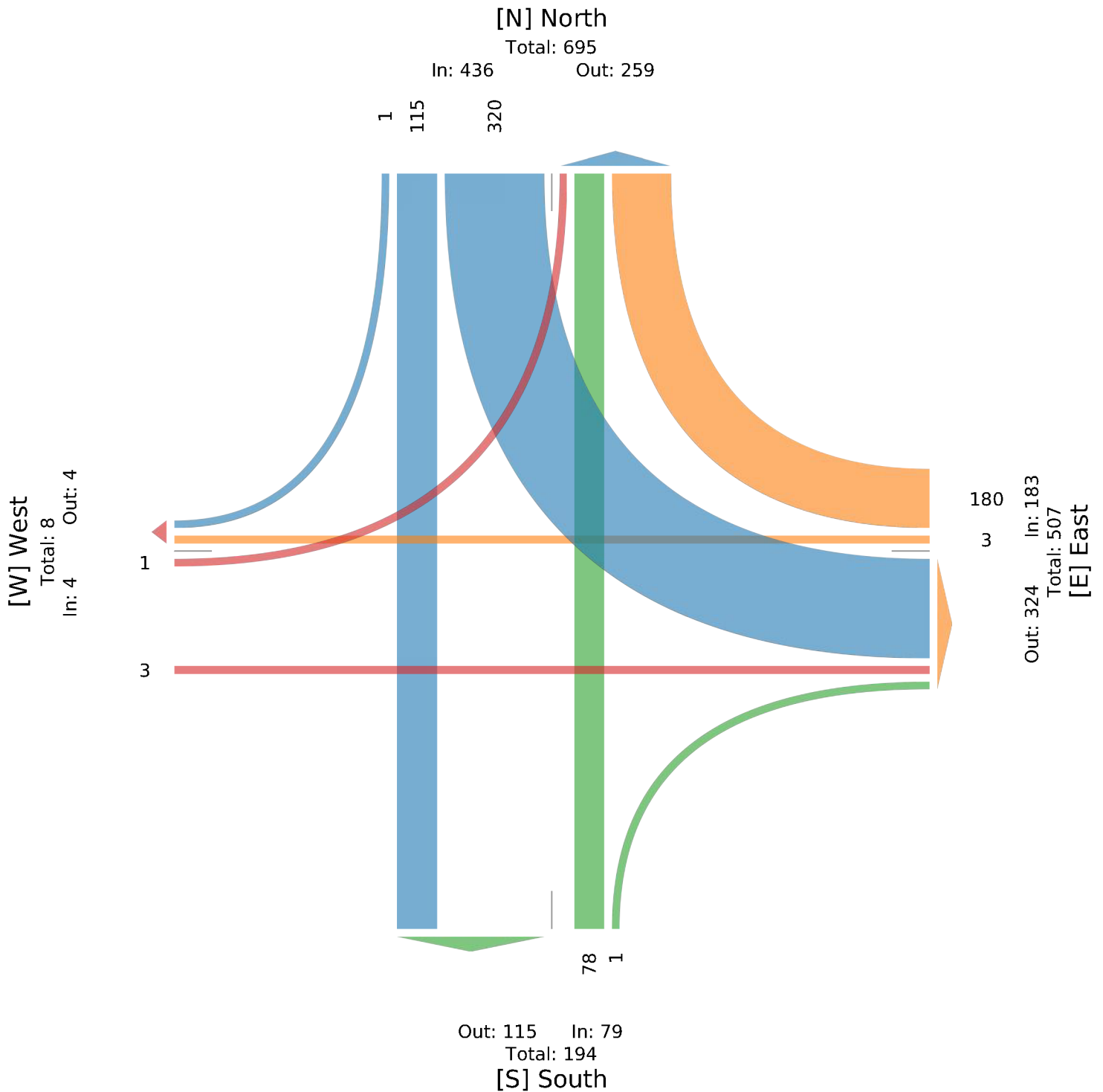
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)

All Movements

ID: 1274277, Location: 35.959253, -95.761594



Provided by: Traffic Engineering Consultants, Inc.
2770 Washington Dr., Suite 100, Norman, OK, 73069, US



CAPACITY ANALYSIS

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	3	76	2	6	24	100	339	1	17	98	36
Future Vol, veh/h	34	3	76	2	6	24	100	339	1	17	98	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	3	83	2	7	26	109	368	1	18	107	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.3	8.5	14.4	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	30%	6%	11%
Vol Thru, %	77%	3%	19%	65%
Vol Right, %	0%	67%	75%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	113	32	151
LT Vol	100	34	2	17
Through Vol	339	3	6	98
RT Vol	1	76	24	36
Lane Flow Rate	478	123	35	164
Geometry Grp	1	1	1	1
Degree of Util (X)	0.606	0.174	0.05	0.217
Departure Headway (Hd)	4.565	5.103	5.155	4.75
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	698	687	750
Service Time	2.615	3.174	3.242	2.814
HCM Lane V/C Ratio	0.606	0.176	0.051	0.219
HCM Control Delay, s/veh	14.4	9.3	8.5	9.1
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	4.2	0.6	0.2	0.8

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	0	2	0	301	0	121	4	125	48	4
Future Vol, veh/h	2	0	0	2	0	301	0	121	4	125	48	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	2	0	327	0	132	4	136	52	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.4	9.7	9	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	1%	71%
Vol Thru, %	97%	0%	0%	27%
Vol Right, %	3%	0%	99%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	2	303	177
LT Vol	0	2	2	125
Through Vol	121	0	0	48
RT Vol	4	0	301	4
Lane Flow Rate	136	2	329	192
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.003	0.38	0.264
Departure Headway (Hd)	4.869	5.327	4.15	4.94
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	732	668	866	723
Service Time	2.929	3.39	2.183	2.997
HCM Lane V/C Ratio	0.186	0.003	0.38	0.266
HCM Control Delay, s/veh	9	8.4	9.7	9.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0	1.8	1.1

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	12	148	2	5	22	93	179	1	25	294	63
Future Vol, veh/h	65	12	148	2	5	22	93	179	1	25	294	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	13	161	2	5	24	101	195	1	27	320	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	11.7	9.2	12.7	15.1
HCM LOS	B	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	29%	7%	7%
Vol Thru, %	66%	5%	17%	77%
Vol Right, %	0%	66%	76%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	273	225	29	382
LT Vol	93	65	2	25
Through Vol	179	12	5	294
RT Vol	1	148	22	63
Lane Flow Rate	297	245	32	415
Geometry Grp	1	1	1	1
Degree of Util (X)	0.444	0.371	0.051	0.586
Departure Headway (Hd)	5.383	5.463	5.827	5.085
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	658	612	710
Service Time	3.422	3.509	3.891	3.121
HCM Lane V/C Ratio	0.445	0.372	0.052	0.585
HCM Control Delay, s/veh	12.7	11.7	9.2	15.1
HCM Lane LOS	B	B	A	C
HCM 95th-tile Q	2.3	1.7	0.2	3.8

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	0	0	3	180	0	78	1	320	115	1
Future Vol, veh/h	1	3	0	0	3	180	0	78	1	320	115	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	0	0	3	196	0	85	1	348	125	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.7	9.4	8.7	14.9
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	0%	73%
Vol Thru, %	99%	75%	2%	26%
Vol Right, %	1%	0%	98%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	4	183	436
LT Vol	0	1	0	320
Through Vol	78	3	3	115
RT Vol	1	0	180	1
Lane Flow Rate	86	4	199	474
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.007	0.259	0.613
Departure Headway (Hd)	4.959	5.605	4.679	4.66
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	633	764	772
Service Time	3.029	3.684	2.728	2.713
HCM Lane V/C Ratio	0.12	0.006	0.26	0.614
HCM Control Delay, s/veh	8.7	8.7	9.4	14.9
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0	1	4.3

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	3	78	2	6	24	102	346	1	17	100	37
Future Vol, veh/h	35	3	78	2	6	24	102	346	1	17	100	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	3	85	2	7	26	111	376	1	18	109	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.4	8.6	14.9	9.2
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	30%	6%	11%
Vol Thru, %	77%	3%	19%	65%
Vol Right, %	0%	67%	75%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	449	116	32	154
LT Vol	102	35	2	17
Through Vol	346	3	6	100
RT Vol	1	78	24	37
Lane Flow Rate	488	126	35	167
Geometry Grp	1	1	1	1
Degree of Util (X)	0.621	0.18	0.05	0.222
Departure Headway (Hd)	4.581	5.135	5.193	4.774
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	693	681	747
Service Time	2.632	3.21	3.287	2.84
HCM Lane V/C Ratio	0.621	0.182	0.051	0.224
HCM Control Delay, s/veh	14.9	9.4	8.6	9.2
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	4.4	0.7	0.2	0.8

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	0	2	0	307	0	123	4	128	49	4
Future Vol, veh/h	2	0	0	2	0	307	0	123	4	128	49	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	2	0	334	0	134	4	139	53	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.4	9.9	9.1	9.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	1%	71%
Vol Thru, %	97%	0%	0%	27%
Vol Right, %	3%	0%	99%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	2	309	181
LT Vol	0	2	2	128
Through Vol	123	0	0	49
RT Vol	4	0	307	4
Lane Flow Rate	138	2	336	197
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.003	0.389	0.271
Departure Headway (Hd)	4.895	5.357	4.168	4.962
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	729	664	863	720
Service Time	2.955	3.422	2.202	3.02
HCM Lane V/C Ratio	0.189	0.003	0.389	0.274
HCM Control Delay, s/veh	9.1	8.4	9.9	9.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0	1.9	1.1

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	12	151	2	5	22	95	183	1	26	300	64
Future Vol, veh/h	66	12	151	2	5	22	95	183	1	26	300	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	13	164	2	5	24	103	199	1	28	326	70
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	11.9	9.3	13	15.7
HCM LOS	B	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	29%	7%	7%
Vol Thru, %	66%	5%	17%	77%
Vol Right, %	0%	66%	76%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	229	29	390
LT Vol	95	66	2	26
Through Vol	183	12	5	300
RT Vol	1	151	22	64
Lane Flow Rate	303	249	32	424
Geometry Grp	1	1	1	1
Degree of Util (X)	0.457	0.381	0.052	0.603
Departure Headway (Hd)	5.422	5.51	5.895	5.12
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	664	652	604	704
Service Time	3.464	3.559	3.965	3.159
HCM Lane V/C Ratio	0.456	0.382	0.053	0.602
HCM Control Delay, s/veh	13	11.9	9.3	15.7
HCM Lane LOS	B	B	A	C
HCM 95th-tile Q	2.4	1.8	0.2	4.1

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	0	0	3	184	0	80	1	326	117	1
Future Vol, veh/h	1	3	0	0	3	184	0	80	1	326	117	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	0	0	3	200	0	87	1	354	127	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.8	9.5	8.8	15.3
HCM LOS	A	A	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	0%	73%
Vol Thru, %	99%	75%	2%	26%
Vol Right, %	1%	0%	98%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	4	187	444
LT Vol	0	1	0	326
Through Vol	80	3	3	117
RT Vol	1	0	184	1
Lane Flow Rate	88	4	203	483
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.007	0.266	0.627
Departure Headway (Hd)	4.986	5.643	4.706	4.677
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	713	628	760	767
Service Time	3.059	3.729	2.76	2.731
HCM Lane V/C Ratio	0.123	0.006	0.267	0.63
HCM Control Delay, s/veh	8.8	8.8	9.5	15.3
HCM Lane LOS	A	A	A	C
HCM 95th-tile Q	0.4	0	1.1	4.5

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	3	86	2	6	24	126	428	1	17	128	37
Future Vol, veh/h	35	3	86	2	6	24	126	428	1	17	128	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	3	93	2	7	26	137	465	1	18	139	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10	9.1	22.6	10.1
HCM LOS	A	A	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	28%	6%	9%
Vol Thru, %	77%	2%	19%	70%
Vol Right, %	0%	69%	75%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	555	124	32	182
LT Vol	126	35	2	17
Through Vol	428	3	6	128
RT Vol	1	86	24	37
Lane Flow Rate	603	135	35	198
Geometry Grp	1	1	1	1
Degree of Util (X)	0.782	0.209	0.055	0.28
Departure Headway (Hd)	4.668	5.571	5.716	5.089
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	647	629	710
Service Time	2.757	3.581	3.733	3.089
HCM Lane V/C Ratio	0.787	0.209	0.056	0.279
HCM Control Delay, s/veh	22.6	10	9.1	10.1
HCM Lane LOS	C	A	A	B
HCM 95th-tile Q	7.8	0.8	0.2	1.1

Intersection

Intersection Delay, s/veh 10.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	0	2	0	318	0	131	4	161	73	4
Future Vol, veh/h	2	0	0	2	0	318	0	131	4	161	73	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	2	0	346	0	142	4	175	79	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.7	10.5	9.4	10.9
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	1%	68%
Vol Thru, %	97%	0%	0%	31%
Vol Right, %	3%	0%	99%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	2	320	238
LT Vol	0	2	2	161
Through Vol	131	0	0	73
RT Vol	4	0	318	4
Lane Flow Rate	147	2	348	259
Geometry Grp	1	1	1	1
Degree of Util (X)	0.205	0.003	0.42	0.361
Departure Headway (Hd)	5.031	5.588	4.347	5.023
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	634	824	709
Service Time	3.112	3.679	2.395	3.098
HCM Lane V/C Ratio	0.208	0.003	0.422	0.365
HCM Control Delay, s/veh	9.4	8.7	10.5	10.9
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.8	0	2.1	1.6

HCM 7th TWSC
3: 23rd E Avenue & Drive 1

2026 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	23	8	491	195	22
Future Vol, veh/h	64	23	8	491	195	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	25	9	534	212	24
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	775	224	236	0	-	0
Stage 1	224	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	366	816	1331	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	363	816	1331	-	-	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v15.87		0.12		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	29	-	425	-	-	
HCM Lane V/C Ratio	0.007	-	0.222	-	-	
HCM Control Delay (s/veh)	7.7	0	15.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.8	-	-	

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2026 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	34	11	457	204	14
Future Vol, veh/h	42	34	11	457	204	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	37	12	497	222	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	750	229	237	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	379	810	1330	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	374	810	1330	-	-	-
Mov Cap-2 Maneuver	374	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v13.77		0.18	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	42	-	493	-	-
HCM Lane V/C Ratio	0.009	-	0.168	-	-
HCM Control Delay (s/veh)	7.7	0	13.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Intersection Delay, s/veh	20.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	66	12	179	2	5	22	111	237	1	26	392	64
Future Vol, veh/h	66	12	179	2	5	22	111	237	1	26	392	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	13	195	2	5	24	121	258	1	28	426	70
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	14.3	10.2	17.6	26.5
HCM LOS	B	B	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	26%	7%	5%
Vol Thru, %	68%	5%	17%	81%
Vol Right, %	0%	70%	76%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	349	257	29	482
LT Vol	111	66	2	26
Through Vol	237	12	5	392
RT Vol	1	179	22	64
Lane Flow Rate	379	279	32	524
Geometry Grp	1	1	1	1
Degree of Util (X)	0.61	0.466	0.059	0.795
Departure Headway (Hd)	5.787	6	6.789	5.462
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	618	595	531	660
Service Time	3.873	4.091	4.789	3.538
HCM Lane V/C Ratio	0.613	0.469	0.06	0.794
HCM Control Delay, s/veh	17.6	14.3	10.2	26.5
HCM Lane LOS	C	B	B	D
HCM 95th-tile Q	4.1	2.5	0.2	7.9

Intersection

Intersection Delay, s/veh15.1

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	0	0	3	220	0	108	1	348	133	1
Future Vol, veh/h	1	3	0	0	3	220	0	108	1	348	133	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	0	0	3	239	0	117	1	378	145	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh9.1		10.4	9.4	18.6
HCM LOS	A	B	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	0%	72%
Vol Thru, %	99%	75%	1%	28%
Vol Right, %	1%	0%	99%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	4	223	482
LT Vol	0	1	0	348
Through Vol	108	3	3	133
RT Vol	1	0	220	1
Lane Flow Rate	118	4	242	524
Geometry Grp	1	1	1	1
Degree of Util (X)	0.174	0.007	0.329	0.702
Departure Headway (Hd)	5.275	6.049	4.892	4.826
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	594	727	744
Service Time	3.275	4.057	2.976	2.906
HCM Lane V/C Ratio	0.172	0.007	0.333	0.704
HCM Control Delay, s/veh	9.4	9.1	10.4	18.6
HCM Lane LOS	A	A	B	C
HCM 95th-tile Q	0.6	0	1.4	5.8

HCM 7th TWSC
3: 23rd E Avenue & Drive 1

2026 Total Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 1.4

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 42 15 28 306 501 72

Future Vol, veh/h 42 15 28 306 501 72

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 46 16 30 333 545 78

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 977 584 623 0 - 0

Stage 1 584 - - - - -

Stage 2 393 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 278 512 958 - - -

Stage 1 558 - - - - -

Stage 2 682 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 267 512 958 - - -

Mov Cap-2 Maneuver 267 - - - - -

Stage 1 536 - - - - -

Stage 2 682 - - - - -

Approach EB NB SB

HCM Control Delay, s/v19.75 0.74 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 151 - 306 - -

HCM Lane V/C Ratio 0.032 - 0.203 - -

HCM Control Delay (s/veh) 8.9 0 19.7 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0.1 - 0.7 - -

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2026 Total Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	23	36	306	468	48
Future Vol, veh/h	28	23	36	306	468	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	25	39	333	509	52

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	946	535	561	0	-	0
Stage 1	535	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	290	545	1010	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	545	1010	-	-	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	669	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.98		0.92	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	189	-	356	-	-
HCM Lane V/C Ratio	0.039	-	0.156	-	-
HCM Control Delay (s/veh)	8.7	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	36	3	92	2	6	25	137	467	1	18	140	38
Future Vol, veh/h	36	3	92	2	6	25	137	467	1	18	140	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	3	100	2	7	27	149	508	1	20	152	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.5	9.4	32.5	10.6
HCM LOS	B	A	D	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	27%	6%	9%
Vol Thru, %	77%	2%	18%	71%
Vol Right, %	0%	70%	76%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	605	131	33	196
LT Vol	137	36	2	18
Through Vol	467	3	6	140
RT Vol	1	92	25	38
Lane Flow Rate	658	142	36	213
Geometry Grp	1	1	1	1
Degree of Util (X)	0.882	0.228	0.059	0.308
Departure Headway (Hd)	4.831	5.757	5.939	5.21
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	756	622	601	690
Service Time	2.831	3.801	3.995	3.245
HCM Lane V/C Ratio	0.87	0.228	0.06	0.309
HCM Control Delay, s/veh	32.5	10.5	9.4	10.6
HCM Lane LOS	D	B	A	B
HCM 95th-tile Q	11.1	0.9	0.2	1.3

Intersection

Intersection Delay, s/veh 10.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	0	7	0	331	0	137	6	168	77	4
Future Vol, veh/h	2	0	0	7	0	331	0	137	6	168	77	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	0	8	0	360	0	149	7	183	84	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh 8.8		11.1	9.7	11.4
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	2%	67%
Vol Thru, %	96%	0%	0%	31%
Vol Right, %	4%	0%	98%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	2	338	249
LT Vol	0	2	7	168
Through Vol	137	0	0	77
RT Vol	6	0	331	4
Lane Flow Rate	155	2	367	271
Geometry Grp	1	1	1	1
Degree of Util (X)	0.22	0.003	0.451	0.383
Departure Headway (Hd)	5.097	5.792	4.416	5.09
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	622	812	698
Service Time	3.193	3.792	2.472	3.177
HCM Lane V/C Ratio	0.223	0.003	0.452	0.388
HCM Control Delay, s/veh	9.7	8.8	11.1	11.4
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.8	0	2.4	1.8

HCM 7th TWSC
3: 23rd E Avenue & Drive 1

2028 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	23	8	541	213	22
Future Vol, veh/h	64	23	8	541	213	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	25	9	588	232	24

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	849	243	255	0	-	0
Stage 1	243	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	331	795	1310	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	328	795	1310	-	-	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	545	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v17.23		0.11	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	26	-	388	-	-
HCM Lane V/C Ratio	0.007	-	0.243	-	-
HCM Control Delay (s/veh)	7.8	0	17.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2028 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	34	11	507	222	14
Future Vol, veh/h	42	34	11	507	222	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	37	12	551	241	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	824	249	257	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	343	790	1308	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	338	790	1308	-	-	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	563	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	14.67	0.17	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	38	-	455	-	-
HCM Lane V/C Ratio	0.009	-	0.182	-	-
HCM Control Delay (s/veh)	7.8	0	14.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	19	499	2	7	249
Future Vol, veh/h	2	19	499	2	7	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	21	542	2	8	271

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	829	543	0
Stage 1	543	-	-
Stage 2	286	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	340	539	-
Stage 1	582	-	-
Stage 2	763	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	337	539	-
Mov Cap-2 Maneuver	337	-	-
Stage 1	582	-	-
Stage 2	756	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.39		0	0.23
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	510	1024
HCM Lane V/C Ratio	-	-	0.045	0.007
HCM Control Delay (s/veh)	-	-	12.4	8.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	13	488	0	4	247
Future Vol, veh/h	2	13	488	0	4	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	530	0	4	268

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	808	530	0
Stage 1	530	-	-
Stage 2	277	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	350	549	-
Stage 1	590	-	-
Stage 2	770	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	349	549	-
Mov Cap-2 Maneuver	349	-	-
Stage 1	590	-	-
Stage 2	766	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.3	0	0.14
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBL	SBT
Capacity (veh/h)	- 510	1037	-
HCM Lane V/C Ratio	- 0.032	0.004	-
HCM Control Delay (s/veh)	- 12.3	8.5	-
HCM Lane LOS	- B	A	-
HCM 95th %tile Q(veh)	- 0.1	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	2	172	334	2	8	5
Future Vol, veh/h	2	172	334	2	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	187	363	2	9	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	365	0	-	0	555	364
Stage 1	-	-	-	-	364	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1193	-	-	-	492	681
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1193	-	-	-	491	681
Mov Cap-2 Maneuver	-	-	-	-	491	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	841	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.09	0		11.71		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1193	-	-	-	550	
HCM Lane V/C Ratio	0.002	-	-	-	0.026	
HCM Control Delay (s/veh)	8	-	-	-	11.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection	
Intersection Delay, s/veh	30
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	69	13	193	2	5	23	120	260	1	27	432	67
Future Vol, veh/h	69	13	193	2	5	23	120	260	1	27	432	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	14	210	2	5	25	130	283	1	29	470	73
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	16.5	10.9	22.6	43.4
HCM LOS	C	B	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	25%	7%	5%
Vol Thru, %	68%	5%	17%	82%
Vol Right, %	0%	70%	77%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	381	275	30	526
LT Vol	120	69	2	27
Through Vol	260	13	5	432
RT Vol	1	193	23	67
Lane Flow Rate	414	299	33	572
Geometry Grp	1	1	1	1
Degree of Util (X)	0.705	0.53	0.066	0.922
Departure Headway (Hd)	6.127	6.38	7.268	5.805
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	565	489	629
Service Time	4.18	4.437	5.361	3.805
HCM Lane V/C Ratio	0.704	0.529	0.067	0.909
HCM Control Delay, s/veh	22.6	16.5	10.9	43.4
HCM Lane LOS	C	C	B	E
HCM 95th-tile Q	5.7	3.1	0.2	11.9

Intersection

Intersection Delay, s/veh 16.6

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	3	0	3	3	230	0	113	7	364	140	1
Future Vol, veh/h	1	3	0	3	3	230	0	113	7	364	140	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	3	0	3	3	250	0	123	8	396	152	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.3	10.9	9.6	21
HCM LOS	A	B	A	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	25%	1%	72%
Vol Thru, %	94%	75%	1%	28%
Vol Right, %	6%	0%	97%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	4	236	505
LT Vol	0	1	3	364
Through Vol	113	3	3	140
RT Vol	7	0	230	1
Lane Flow Rate	130	4	257	549
Geometry Grp	1	1	1	1
Degree of Util (X)	0.194	0.007	0.356	0.745
Departure Headway (Hd)	5.349	6.209	4.995	4.888
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	579	711	730
Service Time	3.349	4.218	3.093	2.981
HCM Lane V/C Ratio	0.193	0.007	0.361	0.752
HCM Control Delay, s/veh	9.6	9.3	10.9	21
HCM Lane LOS	A	A	B	C
HCM 95th-tile Q	0.7	0	1.6	6.8

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	15	28	339	555	72
Future Vol, veh/h	42	15	28	339	555	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	16	30	368	603	78

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1072	642	682	0	-	0
Stage 1	642	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	244	474	911	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	234	474	911	-	-	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v22.27		0.69	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	137	-	270	-	-
HCM Lane V/C Ratio	0.033	-	0.23	-	-
HCM Control Delay (s/veh)	9.1	0	22.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2028 Total Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	23	36	339	522	48
Future Vol, veh/h	28	23	36	339	522	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	25	39	368	567	52

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1040	593	620	0	-	0
Stage 1	593	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	255	505	961	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	242	505	961	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	524	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	18.79	0.85	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	173	-	316	-	-
HCM Lane V/C Ratio	0.041	-	0.175	-	-
HCM Control Delay (s/veh)	8.9	0	18.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	13	362	5	22	523
Future Vol, veh/h	2	13	362	5	22	523
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	393	5	24	568
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1013	396	0	0	399	0
Stage 1	396	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	265	653	-	-	1160	-
Stage 1	680	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	257	653	-	-	1160	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	11.85	0		0.33		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	542	1160	-	
HCM Lane V/C Ratio	-	-	0.03	0.021	-	
HCM Control Delay (s/veh)	-	-	11.9	8.2	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	8	359	0	14	511
Future Vol, veh/h	2	8	359	0	14	511
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	9	390	0	15	555
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	976	390	0	0	390	0
Stage 1	390	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	278	658	-	-	1168	-
Stage 1	684	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	273	658	-	-	1168	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v12.16		0	0.22			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	514	48	-	
HCM Lane V/C Ratio	-	-	0.021	0.013	-	
HCM Control Delay (s/veh)	-	-	12.2	8.1	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	368	233	8	5	3
Future Vol, veh/h	6	368	233	8	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	400	253	9	5	3

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	262	0	0 671 258
Stage 1	-	-	- - 258 -
Stage 2	-	-	- - 413 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1302	-	- - 422 781
Stage 1	-	-	- - 785 -
Stage 2	-	-	- - 668 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1302	-	- - 419 781
Mov Cap-2 Maneuver	-	-	- - 419 -
Stage 1	-	-	- - 780 -
Stage 2	-	-	- - 668 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.12	0	12.22
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	29	-	-	-	507
HCM Lane V/C Ratio	0.005	-	-	-	0.017
HCM Control Delay (s/veh)	7.8	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	38
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	3	99	2	7	26	152	517	1	19	156	40
Future Vol, veh/h	38	3	99	2	7	26	152	517	1	19	156	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	3	108	2	8	28	165	562	1	21	170	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	11.1	9.8	53.6	11.3
HCM LOS	B	A	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	27%	6%	9%
Vol Thru, %	77%	2%	20%	73%
Vol Right, %	0%	71%	74%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	670	140	35	215
LT Vol	152	38	2	19
Through Vol	517	3	7	156
RT Vol	1	99	26	40
Lane Flow Rate	728	152	38	234
Geometry Grp	1	1	1	1
Degree of Util (X)	0.994	0.254	0.066	0.35
Departure Headway (Hd)	4.913	6.013	6.262	5.395
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	595	570	666
Service Time	2.941	4.066	4.328	3.437
HCM Lane V/C Ratio	0.98	0.255	0.067	0.351
HCM Control Delay, s/veh	53.6	11.1	9.8	11.3
HCM Lane LOS	F	B	A	B
HCM 95th-tile Q	16.2	1	0.2	1.6

Intersection

Intersection Delay, s/veh 11.9

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	7	5	4	7	1	347	2	145	6	183	86	4
Future Vol, veh/h	7	5	4	7	1	347	2	145	6	183	86	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	5	4	8	1	377	2	158	7	199	93	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.9	12.2	10.2	12.5
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	44%	2%	67%
Vol Thru, %	95%	31%	0%	32%
Vol Right, %	4%	25%	98%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	16	355	273
LT Vol	2	7	7	183
Through Vol	145	5	1	86
RT Vol	6	4	347	4
Lane Flow Rate	166	17	386	297
Geometry Grp	1	1	1	1
Degree of Util (X)	0.248	0.028	0.498	0.438
Departure Headway (Hd)	5.371	5.711	4.649	5.318
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	669	626	779	677
Service Time	3.406	3.756	2.649	3.349
HCM Lane V/C Ratio	0.248	0.027	0.496	0.439
HCM Control Delay, s/veh	10.2	8.9	12.2	12.5
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1	0.1	2.8	2.2

HCM 7th TWSC
3: 23rd E Avenue & Drive 1

2030 Total Traffic
AM Peak Hour

Intersection

Int Delay, s/veh 1.8

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 64 23 8 607 236 22

Future Vol, veh/h 64 23 8 607 236 22

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 70 25 9 660 257 24

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 946 268 280 0 - 0

Stage 1 268 - - - - -

Stage 2 677 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 290 770 1282 - - -

Stage 1 777 - - - - -

Stage 2 505 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 287 770 1282 - - -

Mov Cap-2 Maneuver 287 - - - - -

Stage 1 768 - - - - -

Stage 2 505 - - - - -

Approach EB NB SB

HCM Control Delay, s/v19.37 0.1 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 23 - 344 - -

HCM Lane V/C Ratio 0.007 - 0.275 - -

HCM Control Delay (s/veh) 7.8 0 19.4 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0 - 1.1 - -

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2030 Total Traffic
AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	34	11	573	245	14
Future Vol, veh/h	42	34	11	573	245	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	37	12	623	266	15

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	921	274	282	0	-	0
Stage 1	274	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	300	765	1281	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	296	765	1281	-	-	-
Mov Cap-2 Maneuver	296	-	-	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.05		0.15	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	34	-	408	-	-
HCM Lane V/C Ratio	0.009	-	0.202	-	-
HCM Control Delay (s/veh)	7.8	0	16	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	19	565	2	7	272
Future Vol, veh/h	2	19	565	2	7	272
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	21	614	2	8	296
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	926	615	0	0	616	0
Stage 1	615	-	-	-	-	-
Stage 2	311	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	298	491	-	-	964	-
Stage 1	539	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	491	-	-	964	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	13.2	0		0.22		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	462	964	-	
HCM Lane V/C Ratio	-	-	0.049	0.008	-	
HCM Control Delay (s/veh)	-	-	13.2	8.8	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.2	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑			↑
Traffic Vol, veh/h	2	13	528	0	4	266
Future Vol, veh/h	2	13	528	0	4	266
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	574	0	4	289

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	872	574	0	-	574
Stage 1	574	-	-	-	-
Stage 2	298	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	321	518	-	0	999
Stage 1	563	-	-	0	-
Stage 2	753	-	-	0	-
Platoon blocked, %			-		-
Mov Cap-1 Maneuver	320	518	-	-	999
Mov Cap-2 Maneuver	320	-	-	-	-
Stage 1	563	-	-	-	-
Stage 2	749	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.79		0	0.13
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBL	SBT
Capacity (veh/h)	- 479	999	-
HCM Lane V/C Ratio	- 0.034	0.004	-
HCM Control Delay (s/veh)	- 12.8	8.6	-
HCM Lane LOS	- B	A	-
HCM 95th %tile Q(veh)	- 0.1	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↓	↓
Traffic Vol, veh/h	2	192	351	2	8	5
Future Vol, veh/h	2	192	351	2	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	209	382	2	9	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	384	0	-	0	596	383
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	213	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1175	-	-	-	467	665
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	822	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1175	-	-	-	466	665
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	822	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.08	0		12.03		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1175	-	-	-	526	
HCM Lane V/C Ratio	0.002	-	-	-	0.027	
HCM Control Delay (s/veh)	8.1	-	-	-	12	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	8	2	539	262	10
Future Vol, veh/h	28	8	2	539	262	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	9	2	586	285	11

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	880	290	296
Stage 1	290	-	-
Stage 2	590	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	317	749	1266
Stage 1	759	-	-
Stage 2	554	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	317	749	1266
Mov Cap-2 Maneuver	317	-	-
Stage 1	757	-	-
Stage 2	554	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.11		0.03	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	7	-	363	-	-
HCM Lane V/C Ratio	0.002	-	0.108	-	-
HCM Control Delay (s/veh)	7.8	0	16.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	9	3	514	264	6
Future Vol, veh/h	14	9	3	514	264	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	10	3	559	287	7

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	855	290	293	0	-	0
Stage 1	290	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	328	749	1268	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	327	749	1268	-	-	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	756	-	-	-	-	-
Stage 2	569	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v14.12		0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	10	-	420	-	-
HCM Lane V/C Ratio	0.003	-	0.06	-	-
HCM Control Delay (s/veh)	7.8	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection

Int Delay, s/veh 5.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	4	3	14	0
Future Vol, veh/h	0	2	4	3	14	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	4	3	15	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	8	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1613	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1613	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.61
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1613	-	-	-	1013
HCM Lane V/C Ratio	-	-	-	-	0.015
HCM Control Delay (s/veh)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	50.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	72	13	211	2	6	24	131	292	1	28	486	70
Future Vol, veh/h	72	13	211	2	6	24	131	292	1	28	486	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	14	229	2	7	26	142	317	1	30	528	76
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	19.2	11.7	31.7	82.5
HCM LOS	C	B	D	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	24%	6%	5%
Vol Thru, %	69%	4%	19%	83%
Vol Right, %	0%	71%	75%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	424	296	32	584
LT Vol	131	72	2	28
Through Vol	292	13	6	486
RT Vol	1	211	24	70
Lane Flow Rate	461	322	35	635
Geometry Grp	1	1	1	1
Degree of Util (X)	0.811	0.592	0.074	1.074
Departure Headway (Hd)	6.524	6.822	8.047	6.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	558	534	448	603
Service Time	4.524	4.822	6.047	4.092
HCM Lane V/C Ratio	0.826	0.603	0.078	1.053
HCM Control Delay, s/veh	31.7	19.2	11.7	82.5
HCM Lane LOS	D	C	B	F
HCM 95th-tile Q	8	3.8	0.2	18.4

Intersection

Intersection Delay, s/veh 20.9

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	6	3	3	9	249	4	124	7	384	149	1
Future Vol, veh/h	4	6	3	3	9	249	4	124	7	384	149	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	7	3	3	10	271	4	135	8	417	162	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.6	12.1	10.3	28.1
HCM LOS	A	B	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	31%	1%	72%
Vol Thru, %	92%	46%	3%	28%
Vol Right, %	5%	23%	95%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	13	261	534
LT Vol	4	4	3	384
Through Vol	124	6	9	149
RT Vol	7	3	249	1
Lane Flow Rate	147	14	284	580
Geometry Grp	1	1	1	1
Degree of Util (X)	0.228	0.025	0.417	0.829
Departure Headway (Hd)	5.582	6.345	5.286	5.144
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	562	678	702
Service Time	3.627	4.413	3.332	3.174
HCM Lane V/C Ratio	0.229	0.025	0.419	0.826
HCM Control Delay, s/veh	10.3	9.6	12.1	28.1
HCM Lane LOS	B	A	B	D
HCM 95th-tile Q	0.9	0.1	2.1	9

HCM 7th TWSC
3: 23rd E Avenue & Drive 1

2030 Total Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 1.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 42 15 28 381 627 72

Future Vol, veh/h 42 15 28 381 627 72

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 46 16 30 414 682 78

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1196 721 760 0 - 0

Stage 1 721 - - - - -

Stage 2 475 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 206 428 852 - - -

Stage 1 482 - - - - -

Stage 2 626 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 196 428 852 - - -

Mov Cap-2 Maneuver 196 - - - - -

Stage 1 459 - - - - -

Stage 2 626 - - - - -

Approach EB NB SB

HCM Control Delay, s/v26.48 0.64 0

HCM LOS D

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 123 - 229 - -

HCM Lane V/C Ratio 0.036 - 0.271 - -

HCM Control Delay (s/veh) 9.4 0 26.5 - -

HCM Lane LOS A A D - -

HCM 95th %tile Q(veh) 0.1 - 1.1 - -

HCM 7th TWSC
4: 23rd E Avenue & Drive 2

2030 Total Traffic
PM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	23	36	381	594	48
Future Vol, veh/h	28	23	36	381	594	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	25	39	414	646	52
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1164	672	698	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	215	456	899	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	203	456	899	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s/v	21.71	0.79		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	155	-	270	-	-	
HCM Lane V/C Ratio	0.044	-	0.205	-	-	
HCM Control Delay (s/veh)	9.2	0	21.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	13	404	5	22	595
Future Vol, veh/h	2	13	404	5	22	595
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	439	5	24	647
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1136	442	0	0	445	0
Stage 1	442	-	-	-	-	-
Stage 2	695	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	223	616	-	-	1116	-
Stage 1	648	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	616	-	-	1116	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v12.54			0		0.3	
HCM LOS	B					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	494	1116	-
HCM Lane V/C Ratio		-	-	0.033	0.021	-
HCM Control Delay (s/veh)		-	-	12.5	8.3	-
HCM Lane LOS		-	-	B	A	-
HCM 95th %tile Q(veh)		-	-	0.1	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	8	391	0	14	556
Future Vol, veh/h	2	8	391	0	14	556
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	9	425	0	15	604

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1060	425	0
Stage 1	425	-	-
Stage 2	635	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	248	629	-
Stage 1	659	-	-
Stage 2	528	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	243	629	-
Mov Cap-2 Maneuver	243	-	-
Stage 1	659	-	-
Stage 2	517	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.71		0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	478	44
HCM Lane V/C Ratio	-	-	0.023	0.013
HCM Control Delay (s/veh)	-	-	12.7	8.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	392	258	8	5	3
Future Vol, veh/h	6	392	258	8	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	426	280	9	5	3

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	289	0	0 724 285
Stage 1	-	-	- - 285 -
Stage 2	-	-	- - 439 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1273	-	- - 393 754
Stage 1	-	-	- - 764 -
Stage 2	-	-	- - 650 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1273	-	- - 390 754
Mov Cap-2 Maneuver	-	-	- - 390 -
Stage 1	-	-	- - 758 -
Stage 2	-	-	- - 650 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.12	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	27	-	-	-	476
HCM Lane V/C Ratio	0.005	-	-	-	0.018
HCM Control Delay (s/veh)	7.8	0	-	-	12.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
8: 23rd E Avenue & Drive 6

2030 Total Traffic
PM Peak Hour

Intersection

Int Delay, s/veh 0.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 19 5 9 390 565 32

Future Vol, veh/h 19 5 9 390 565 32

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 21 5 10 424 614 35

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1075 632 649 0 - 0

Stage 1 632 - - - - -

Stage 2 443 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 243 481 937 - - -

Stage 1 530 - - - - -

Stage 2 647 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 240 481 937 - - -

Mov Cap-2 Maneuver 240 - - - - -

Stage 1 523 - - - - -

Stage 2 647 - - - - -

Approach EB NB SB

HCM Control Delay, s/v19.89 0.2 0

HCM LOS C

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 41 - 268 - -

HCM Lane V/C Ratio 0.01 - 0.097 - -

HCM Control Delay (s/veh) 8.9 0 19.9 - -

HCM Lane LOS A A C - -

HCM 95th %tile Q(veh) 0 - 0.3 - -

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	10	382	537	21
Future Vol, veh/h	9	6	10	382	537	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	7	11	415	584	23

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1032	595	607	0	-	0
Stage 1	595	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	258	504	972	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	651	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	254	504	972	-	-	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	543	-	-	-	-	-
Stage 2	651	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.97		0.22	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	46	-	317	-	-
HCM Lane V/C Ratio	0.011	-	0.051	-	-
HCM Control Delay (s/veh)	8.7	0	17	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	4	10	9	0
Future Vol, veh/h	0	4	4	10	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	4	11	10	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	15	0	0 14 10
Stage 1	-	-	- 10 -
Stage 2	-	-	- 4 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1603	-	- 1005 1072
Stage 1	-	-	- 1013 -
Stage 2	-	-	- 1019 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1603	-	- 1005 1072
Mov Cap-2 Maneuver	-	-	- 1005 -
Stage 1	-	-	- 1013 -
Stage 2	-	-	- 1019 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	8.62
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1603	-	-	-	1005
HCM Lane V/C Ratio	-	-	-	-	0.01
HCM Control Delay (s/veh)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
1: 23rd E Avenue & E 131st St

2030 Total Traffic (EB/WB Stop EB Right Turn Lane Added)
AM Peak Hour

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰			↰	
Traffic Vol, veh/h	38	3	99	2	7	26	152	517	1	19	156	40
Future Vol, veh/h	38	3	99	2	7	26	152	517	1	19	156	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	3	108	2	8	28	165	562	1	21	170	43

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1129	1126	191	1105	1147	563	213	0	0	563	0	0
Stage 1	233	233	-	893	893	-	-	-	-	-	-	-
Stage 2	896	893	-	213	254	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	181	205	850	188	199	526	1357	-	-	1008	-	-
Stage 1	770	712	-	336	360	-	-	-	-	-	-	-
Stage 2	335	360	-	790	697	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	132	165	850	130	160	526	1357	-	-	1008	-	-
Mov Cap-2 Maneuver	132	165	-	130	160	-	-	-	-	-	-	-
Stage 1	752	695	-	277	296	-	-	-	-	-	-	-
Stage 2	254	296	-	670	681	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v20.01		17.66	1.82	0.76
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	408	-	-	134	850	322	153	-	-
HCM Lane V/C Ratio	0.122	-	-	0.332	0.127	0.118	0.02	-	-
HCM Control Delay (s/veh)	8	0	-	44.5	9.8	17.7	8.6	0	-
HCM Lane LOS	A	A	-	E	A	C	A	A	-
HCM 95th %tile Q(veh)	0.4	-	-	1.3	0.4	0.4	0.1	-	-

HCM 7th TWSC
1: 23rd E Avenue & E 131st St

2030 Total Traffic (EB/WB Stop EB Right Turn Lane Added)
PM Peak Hour

Intersection												
Int Delay, s/veh	10.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	13	211	2	6	24	131	292	1	28	486	70
Future Vol, veh/h	72	13	211	2	6	24	131	292	1	28	486	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	14	229	2	7	26	142	317	1	30	528	76

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1233	1230	566	1199	1268	318	604	0	0	318	0	0
Stage 1	627	627	-	603	603	-	-	-	-	-	-	-
Stage 2	605	603	-	596	665	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	154	177	523	162	169	723	973	-	-	1242	-	-
Stage 1	471	476	-	486	488	-	-	-	-	-	-	-
Stage 2	484	488	-	490	458	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	113	140	523	66	133	723	973	-	-	1242	-	-
Mov Cap-2 Maneuver	113	140	-	66	133	-	-	-	-	-	-	-
Stage 1	454	458	-	400	402	-	-	-	-	-	-	-
Stage 2	378	401	-	257	441	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v42.28		18.81	2.88	0.38
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	556	-	-	116	523	295	84	-	-
HCM Lane V/C Ratio	0.146	-	-	0.795	0.438	0.118	0.025	-	-
HCM Control Delay (s/veh)	9.3	0	-	104.7	17.1	18.8	8	0	-
HCM Lane LOS	A	A	-	F	C	C	A	A	-
HCM 95th %tile Q(veh)	0.5	-	-	4.6	2.2	0.4	0.1	-	-

HCM 7th Signalized Intersection Summary

1: 23rd E Avenue & E 131st St

2030 Total Traffic (Signalized)

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	3	99	2	7	26	152	517	1	19	156	40
Future Volume (veh/h)	38	3	99	2	7	26	152	517	1	19	156	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	3	108	2	8	28	165	562	1	21	170	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	15	156	136	56	176	308	778	1	163	758	177
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	341	107	1100	49	394	1239	287	1408	2	54	1371	321
Grp Volume(v), veh/h	152	0	0	38	0	0	728	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1548	0	0	1681	0	0	1698	0	0	1747	0	0
Q Serve(g_s), s	2.0	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	0.6	0.0	0.0	9.5	0.0	0.0	2.0	0.0	0.0
Prop In Lane	0.27		0.71	0.05		0.74	0.23		0.00	0.09		0.18
Lane Grp Cap(c), veh/h	375	0	0	367	0	0	1088	0	0	1098	0	0
V/C Ratio(X)	0.41	0.00	0.00	0.10	0.00	0.00	0.67	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	1091	0	0	1126	0	0	2022	0	0	2029	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.0	0.0	0.0	11.1	0.0	0.0	5.0	0.0	0.0	3.4	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.0	0.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.7	0.0	0.0	11.2	0.0	0.0	5.7	0.0	0.0	3.5	0.0	0.0
LnGrp LOS	B			B			A			A		
Approach Vol, veh/h	152			38			728			234		
Approach Delay, s/veh	12.7			11.2			5.7			3.5		
Approach LOS	B			B			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	20.8			8.7			20.8			8.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	33.0			18.0			33.0			18.0		
Max Q Clear Time (g_c+I1), s	11.5			4.7			4.0			2.6		
Green Ext Time (p_c), s	4.7			0.6			1.3			0.1		
Intersection Summary												
HCM 7th Control Delay, s/veh	6.3											
HCM 7th LOS	A											

HCM 7th Signalized Intersection Summary

1: 23rd E Avenue & E 131st St

2030 Total Traffic (Signalized)

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	13	211	2	6	24	131	292	1	28	486	70
Future Volume (veh/h)	72	13	211	2	6	24	131	292	1	28	486	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	14	229	2	7	26	142	317	1	30	528	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	49	304	120	107	329	298	553	2	129	717	100
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	271	179	1121	26	394	1214	344	1195	3	38	1549	216
Grp Volume(v), veh/h	321	0	0	35	0	0	460	0	0	634	0	0
Grp Sat Flow(s),veh/h/ln	1571	0	0	1635	0	0	1542	0	0	1803	0	0
Q Serve(g_s), s	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	6.3	0.0	0.0	0.5	0.0	0.0	6.6	0.0	0.0	9.7	0.0	0.0
Prop In Lane	0.24		0.71	0.06		0.74	0.31		0.00	0.05		0.12
Lane Grp Cap(c), veh/h	558	0	0	556	0	0	853	0	0	946	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.06	0.00	0.00	0.54	0.00	0.00	0.67	0.00	0.00
Avail Cap(c_a), veh/h	960	0	0	973	0	0	1538	0	0	1852	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.2	0.0	0.0	9.2	0.0	0.0	6.5	0.0	0.0	7.5	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	0.2	0.0	0.0	0.9	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.2	0.0	0.0	9.2	0.0	0.0	7.1	0.0	0.0	8.3	0.0	0.0
LnGrp LOS	B			A			A			A		
Approach Vol, veh/h	321			35			460			634		
Approach Delay, s/veh	12.2			9.2			7.1			8.3		
Approach LOS	B			A			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	20.2			13.7			20.2			13.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	33.0			18.0			33.0			18.0		
Max Q Clear Time (g_c+I1), s	8.6			8.3			11.7			2.5		
Green Ext Time (p_c), s	3.2			1.3			4.0			0.1		
Intersection Summary												
HCM 7th Control Delay, s/veh				8.8								
HCM 7th LOS				A								

HCM 7th Roundabout
1: 23rd E Avenue & E 131st St

2030 Total Traffic (Roundabout)
AM Peak Hour

Intersection				
Intersection Delay, s/veh	7.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	152	38	728	234
Demand Flow Rate, veh/h	155	39	742	238
Vehicles Circulating, veh/h	196	783	66	178
Vehicles Exiting, veh/h	220	25	285	644
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	6.7	9.5	5.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	155	39	742	238
Cap Entry Lane, veh/h	1130	621	1290	1151
Entry HV Adj Factor	0.980	0.970	0.981	0.982
Flow Entry, veh/h	152	38	728	234
Cap Entry, veh/h	1108	602	1265	1130
V/C Ratio	0.137	0.063	0.575	0.207
Control Delay, s/veh	4.5	6.7	9.5	5.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	4	1

HCM 7th Roundabout
1: 23rd E Avenue & E 131st St

2030 Total Traffic (Roundabout)
PM Peak Hour

Intersection				
Intersection Delay, s/veh	8.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	321	35	460	634
Demand Flow Rate, veh/h	328	36	469	648
Vehicles Circulating, veh/h	572	548	125	154
Vehicles Exiting, veh/h	230	46	775	430
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.4	5.2	6.8	9.6
Approach LOS	B	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	328	36	469	648
Cap Entry Lane, veh/h	770	789	1215	1179
Entry HV Adj Factor	0.978	0.968	0.980	0.979
Flow Entry, veh/h	321	35	460	634
Cap Entry, veh/h	753	764	1191	1155
V/C Ratio	0.426	0.046	0.386	0.549
Control Delay, s/veh	10.4	5.2	6.8	9.6
LOS	B	A	A	A
95th %tile Queue, veh	2	0	2	3

TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Signal Warrants - Summary

Major Street Approaches

Northbound: S 23rd Street

Number of Lanes : 1

Total Approach Volume: 3,537

Southbound: S 23rd Street

Number of Lanes : 1

Total Approach Volume: 3,144

Minor Street Approaches

Eastbound: Jasper Street

Number of Lanes : 1

Total Approach Volume: 2,024

Westbound: Jasper Street

Number of Lanes : 1

Total Approach Volume: 316

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Satisfied

Warrant 1A - Minimum Vehicular Volume.....Satisfied

Required volumes reached for 8 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Not Satisfied

Required volumes reached for 4 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Not Satisfied

Required 1A volumes reached for 12 hours, 8 are needed

Required 1B volumes reached for 6 hours, 8 are needed

Warrant 2 - Four Hour Volumes.....Satisfied

Number of hours (5) volumes exceed minimum >= minimum required (4).

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Satisfied

Number of one hour periods (8) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Satisfied

Volumes exceed minimums for at least one hour period.

Warrant 4 - Pedestrian Volumes.....Not Evaluated

Warrant 5 - School Crossing.....Not Evaluated

Warrant 6 - Coordinated Signal System.....Not Evaluated

Warrant 7 - Crash Experience.....Not Evaluated

Warrant 8 - Roadway Network.....Not Evaluated

Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated

Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Warrant 1A - Minimum Volumes

Description

Intended for sites where the volume of intersecting traffic is the principal reason for consideration of a signal installation.

Summary

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **350**

Veh/Hr Minor = **105**

Major Road						Minor Road			
S 23rd Street						Jasper Street			
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?	
16:15 - 17:15	255	+	374	=	629	205	30	Yes	
15:15 - 16:15	238	+	383	=	621	212	17	Yes	
06:15 - 07:15	436	+	139	=	575	131	34	Yes	
14:15 - 15:15	222	+	303	=	525	161	25	Yes	
17:15 - 18:15	204	+	236	=	440	153	13	Yes	
13:15 - 14:15	193	+	203	=	396	157	20	Yes	
11:15 - 12:15	190	+	179	=	369	108	20	Yes	
08:15 - 09:15	210	+	140	=	350	118	19	Yes	
07:15 - 08:15	384	+	139	=	523	95	26	No	
07:30 - 08:30	384	+	139	=	523	95	26	No	
07:45 - 08:45	384	+	139	=	523	95	26	No	
08:00 - 09:00	384	+	139	=	523	95	26	No	
05:15 - 06:15	258	+	99	=	357	66	18	No	
05:30 - 06:30	258	+	99	=	357	66	18	No	
05:45 - 06:45	258	+	99	=	357	66	18	No	
06:00 - 07:00	258	+	99	=	357	66	18	No	
10:15 - 11:15	190	+	148	=	338	99	17	No	
10:30 - 11:30	190	+	148	=	338	99	17	No	
10:45 - 11:45	190	+	148	=	338	99	17	No	
11:00 - 12:00	190	+	148	=	338	99	17	No	
12:15 - 13:15	169	+	159	=	328	105	19	No	
12:30 - 13:30	169	+	159	=	328	105	19	No	
12:45 - 13:45	169	+	159	=	328	105	19	No	
13:00 - 14:00	169	+	159	=	328	105	19	No	
09:15 - 10:15	181		142		323	85	19	No	

Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Warrant 1B - Interruption of Continuous Traffic

Description

Intended for sites where the volume of the major street is so heavy that traffic on the minor street suffers excessive delay or hazard.

Summary

Only 4 one hour periods meet minimums.
Warrant is NOT met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70 % applied
Veh/Hr Major = **525**

Veh/Hr Minor = **52**

Major Road						Minor Road			
S 23rd Street						Jasper Street			
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?	
16:15 - 17:15	255	+	374	=	629	205	30	Yes	
15:15 - 16:15	238	+	383	=	621	212	17	Yes	
06:15 - 07:15	436	+	139	=	575	131	34	Yes	
14:15 - 15:15	222	+	303	=	525	161	25	Yes	
07:15 - 08:15	384	+	139	=	523	95	26	No	
07:30 - 08:30	384	+	139	=	523	95	26	No	
07:45 - 08:45	384	+	139	=	523	95	26	No	
08:00 - 09:00	384	+	139	=	523	95	26	No	
18:00 - 19:00	204	+	236	=	440	153	13	No	
17:15 - 18:15	204	+	236	=	440	153	13	No	
17:30 - 18:30	204	+	236	=	440	153	13	No	
17:45 - 18:45	204	+	236	=	440	153	13	No	
14:00 - 15:00	193	+	203	=	396	157	20	No	
13:15 - 14:15	193	+	203	=	396	157	20	No	
13:30 - 14:30	193	+	203	=	396	157	20	No	
13:45 - 14:45	193	+	203	=	396	157	20	No	
12:00 - 13:00	190	+	179	=	369	108	20	No	
11:15 - 12:15	190	+	179	=	369	108	20	No	
11:30 - 12:30	190	+	179	=	369	108	20	No	
11:45 - 12:45	190	+	179	=	369	108	20	No	
06:00 - 07:00	258	+	99	=	357	66	18	No	
05:15 - 06:15	258	+	99	=	357	66	18	No	
05:30 - 06:30	258	+	99	=	357	66	18	No	
05:45 - 06:45	258	+	99	=	357	66	18	No	
08:15 - 09:15	210		140		350	118	19	No	

Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Warrant 1C Combination of Warrants

Description

Intended for sites where the traffic volumes don't meet individual warrants but where Warrants 1A and 1B are both met to 80% of their stated values.

Summary

12 hours meet 1A minimums.
Only 6 hours meet 1B minimums.
Warrant is NOT met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Volume Requirements

Rural Factor of 70% applied
Warrant 1A 1B
Veh/Hr Major = **280 420**

Veh/Hr Minor = **84 42**

Major Road S 23rd Street						Minor Road Jasper Street				
Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1A?
16:15 - 17:15	255	+	374	=	629	205		30		Yes
15:15 - 16:15	238	+	383	=	621	212		17		Yes
06:15 - 07:15	436	+	139	=	575	131		34		Yes
14:15 - 15:15	222	+	303	=	525	161		25		Yes
07:15 - 08:15	384	+	139	=	523	95		26		Yes
17:15 - 18:15	204	+	236	=	440	153		13		Yes
13:15 - 14:15	193	+	203	=	396	157		20		Yes
11:15 - 12:15	190	+	179	=	369	108		20		Yes
08:15 - 09:15	210	+	140	=	350	118		19		Yes
10:15 - 11:15	190	+	148	=	338	99		17		Yes
12:15 - 13:15	169	+	159	=	328	105		19		Yes
09:15 - 10:15	181		142		323	85		19		Yes

Time	Major NB	+	Major SB	=	Total	Minor EB		Minor WB		Met1B?
16:15 - 17:15	255	+	374	=	629	205		30		Yes
15:15 - 16:15	238	+	383	=	621	212		17		Yes
06:15 - 07:15	436	+	139	=	575	131		34		Yes
14:15 - 15:15	222	+	303	=	525	161		25		Yes
07:15 - 08:15	384	+	139	=	523	95		26		Yes
17:15 - 18:15	204	+	236	=	440	153		13		Yes
13:15 - 14:15	193	+	203	=	396	157		20		No
13:30 - 14:30	193	+	203	=	396	157		20		No
13:45 - 14:45	193	+	203	=	396	157		20		No
14:00 - 15:00	193	+	203	=	396	157		20		No
12:00 - 13:00	190	+	179	=	369	108		20		No
11:15 - 12:15	190		179		369	108		20		No

Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Warrant 2 - Four Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during any four hours of the day is the principal reason for consideration of a signal installation.

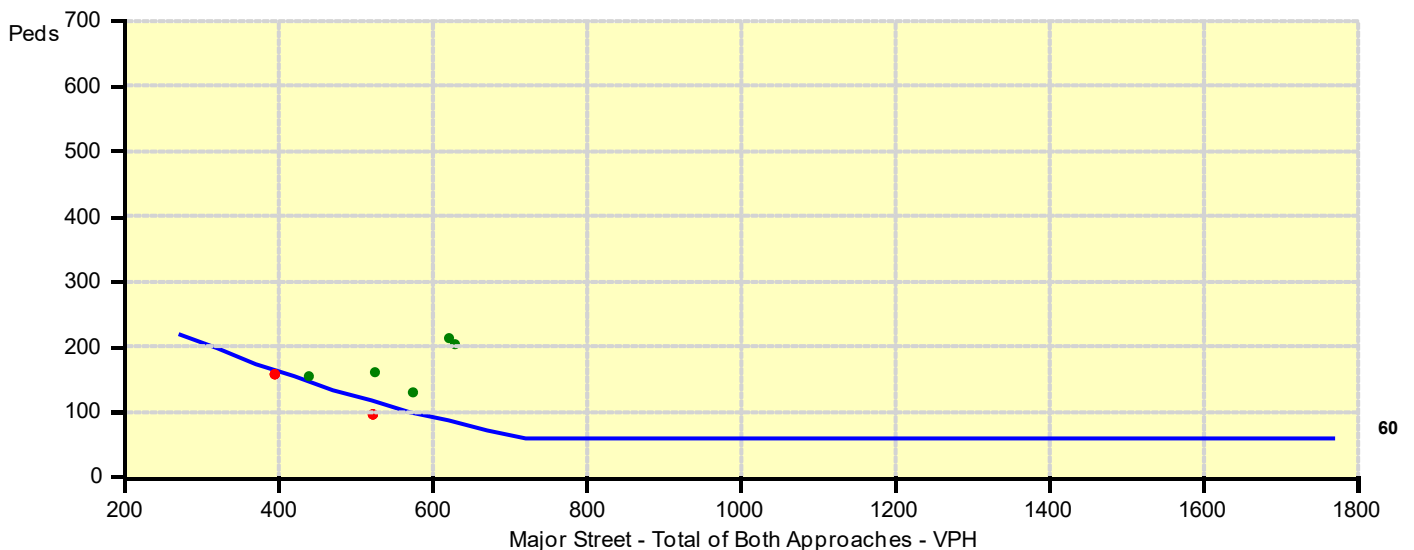
Summary

5 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Major Road S 23rd Street						Minor Road Jasper Street		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	255	+	374	=	629	205	30	Yes
15:15 - 16:15	238	+	383	=	621	212	17	Yes
06:15 - 07:15	436	+	139	=	575	131	34	Yes
14:15 - 15:15	222	+	303	=	525	161	25	Yes
17:15 - 18:15	204	+	236	=	440	153	13	Yes
07:30 - 08:30	384	+	139	=	523	95	26	No
07:15 - 08:15	384	+	139	=	523	95	26	No
07:45 - 08:45	384	+	139	=	523	95	26	No
08:00 - 09:00	384	+	139	=	523	95	26	No
13:30 - 14:30	193	+	203	=	396	157	20	No
13:45 - 14:45	193	+	203	=	396	157	20	No
14:00 - 15:00	193	+	203	=	396	157	20	No



Traffic Engineering Consultants, Inc.

S 23rd Street and Jasper Street

2025 Existing Traffic

Study Name: S 23rd St and Jasper 2025 Existing Signal

Study Date : 5/13/2025

Warrant 3B - Peak Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

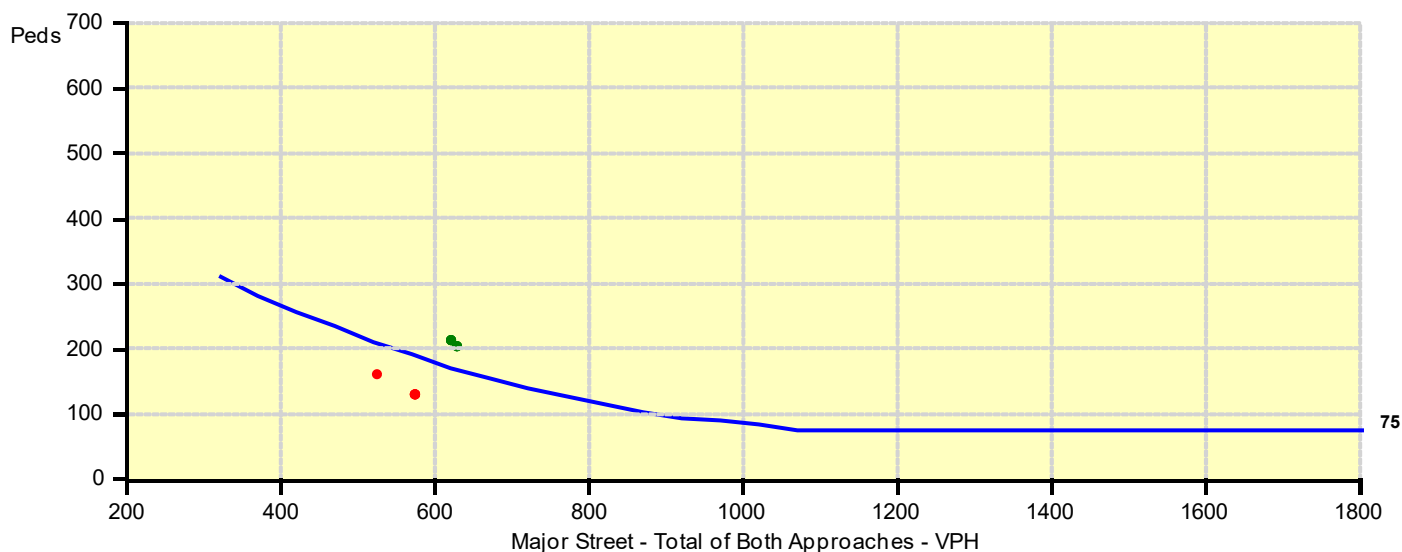
Summary

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Major Road S 23rd Street						Minor Road Jasper Street		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:15 - 17:15	255	+	374	=	629	205	30	Yes
16:30 - 17:30	255	+	374	=	629	205	30	Yes
16:45 - 17:45	255	+	374	=	629	205	30	Yes
17:00 - 18:00	255	+	374	=	629	205	30	Yes
15:15 - 16:15	238	+	383	=	621	212	17	Yes
15:30 - 16:30	238	+	383	=	621	212	17	Yes
15:45 - 16:45	238	+	383	=	621	212	17	Yes
16:00 - 17:00	238	+	383	=	621	212	17	Yes
06:15 - 07:15	436	+	139	=	575	131	34	No
06:30 - 07:30	436	+	139	=	575	131	34	No
06:45 - 07:45	436	+	139	=	575	131	34	No
07:00 - 08:00	436	+	139	=	575	131	34	No



Traffic Engineering Consultants

6931 S. 66th E. Avenue, Suite 100

Tulsa, OK 74133

Study Name: 2030 Total Traffic (Phase 3) 23rd E Avenue and 131st Street

Study Date : 5/6/2025

Signal Warrants - Summary

Major Street Approaches

Northbound: 23rd E Avenue

Number of Lanes : 1

Total Approach Volume: 1,094

Southbound: 23rd E Avenue

Number of Lanes : 1

Total Approach Volume: 799

Minor Street Approaches

Eastbound: 131st Street

Number of Lanes : 1

Total Approach Volume: 436

Westbound: 131st Street

Number of Lanes : 1

Total Approach Volume: 67

Warrant Summary (Rural Values Apply)

Warrant 1 - Eight Hour Vehicular Volumes.....Not Evaluated

Warrant 1A - Minimum Vehicular Volume.....Not Evaluated

Required volumes reached for 2 hours, 8 are needed

Warrant 1B - Interruption of Continuous Traffic.....Not Evaluated

Required volumes reached for 2 hours, 8 are needed

Warrant 1C - Combination of Warrants.....Not Evaluated

Warrant 2 - Four Hour Volumes.....Not Evaluated

Warrant 3 - Peak Hour.....Satisfied

Warrant 3A - Peak Hour Delay.....Satisfied

Number of one hour periods (8) volumes exceed minimum >= required (1). Delay data not evaluated.

Warrant 3B - Peak Hour Volumes.....Satisfied

Volumes exceed minimums for at least one hour period.

Warrant 4 - Pedestrian Volumes.....Not Evaluated

Warrant 5 - School Crossing.....Not Evaluated

Warrant 6 - Coordinated Signal System.....Not Evaluated

Warrant 7 - Crash Experience.....Not Evaluated

Warrant 8 - Roadway Network.....Not Evaluated

Warrant 9 - Intersection Near a Grade Crossing.....Not Evaluated

Traffic Engineering Consultants

6931 S. 66th E. Avenue, Suite 100

Tulsa, OK 74133

Study Name: 2030 Total Traffic (Phase 3) 23rd E Avenue and 131st Street

Study Date : 5/6/2025

Warrant 3A - Peak Hour Delay

Description

Intended for sites where for one hour of the day minor street traffic suffers undue traffic delay entering or crossing the major street.

Summary

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Number of Minor Lanes =1

Volume and Delay Requirements

Veh/Hr All Approaches = **800**

Veh/Hr Minor = **100**

Total Delay (Veh-Hrs) = **4**

Major Road 23rd E Avenue						Minor Road 131st Street			
Time	Total of All Approaches	Met?	Minor EB	Delay EB	Met?	Minor WB	Delay WB	Met?	Warrant Met?
16:00 - 17:00	1336	Yes	296	-	Yes	32	-	---	Yes
16:15 - 17:15	1336	Yes	296	-	Yes	32	-	---	Yes
16:30 - 17:30	1336	Yes	296	-	Yes	32	-	---	Yes
16:45 - 17:45	1336	Yes	296	-	Yes	32	-	---	Yes
06:45 - 07:45	1060	Yes	140	-	Yes	35	-	---	Yes
07:00 - 08:00	1060	Yes	140	-	Yes	35	-	---	Yes
07:15 - 08:15	1060	Yes	140	-	Yes	35	-	---	Yes
07:30 - 08:30	1060	Yes	140	-	Yes	35	-	---	Yes
02:00 - 03:00	0	No	0	-	---	0	-	No	No
02:15 - 03:15	0	No	0	-	---	0	-	No	No
02:30 - 03:30	0	No	0	-	---	0	-	No	No
02:45 - 03:45	0	No	0	-	---	0	-	No	No
03:00 - 04:00	0	No	0	-	---	0	-	No	No
03:15 - 04:15	0	No	0	-	---	0	-	No	No
03:30 - 04:30	0	No	0	-	---	0	-	No	No
03:45 - 04:45	0	No	0	-	---	0	-	No	No
04:00 - 05:00	0	No	0	-	---	0	-	No	No
04:15 - 05:15	0	No	0	-	---	0	-	No	No
04:30 - 05:30	0	No	0	-	---	0	-	No	No
04:45 - 05:45	0	No	0	-	---	0	-	No	No
05:00 - 06:00	0	No	0	-	---	0	-	No	No
05:15 - 06:15	0	No	0	-	---	0	-	No	No
05:30 - 06:30	0	No	0	-	---	0	-	No	No
05:45 - 06:45	0	No	0	-	---	0	-	No	No
06:00 - 07:00	0	No	0	-	---	0	-	No	No

Traffic Engineering Consultants

6931 S. 66th E. Avenue, Suite 100

Tulsa, OK 74133

Study Name: 2030 Total Traffic (Phase 3) 23rd E Avenue and 131st Street

Study Date : 5/6/2025

Warrant 3B - Peak Hour Volumes

Description

Intended for sites where the volume of intersecting traffic during one hour of the day is the principal reason for consideration of a signal installation.

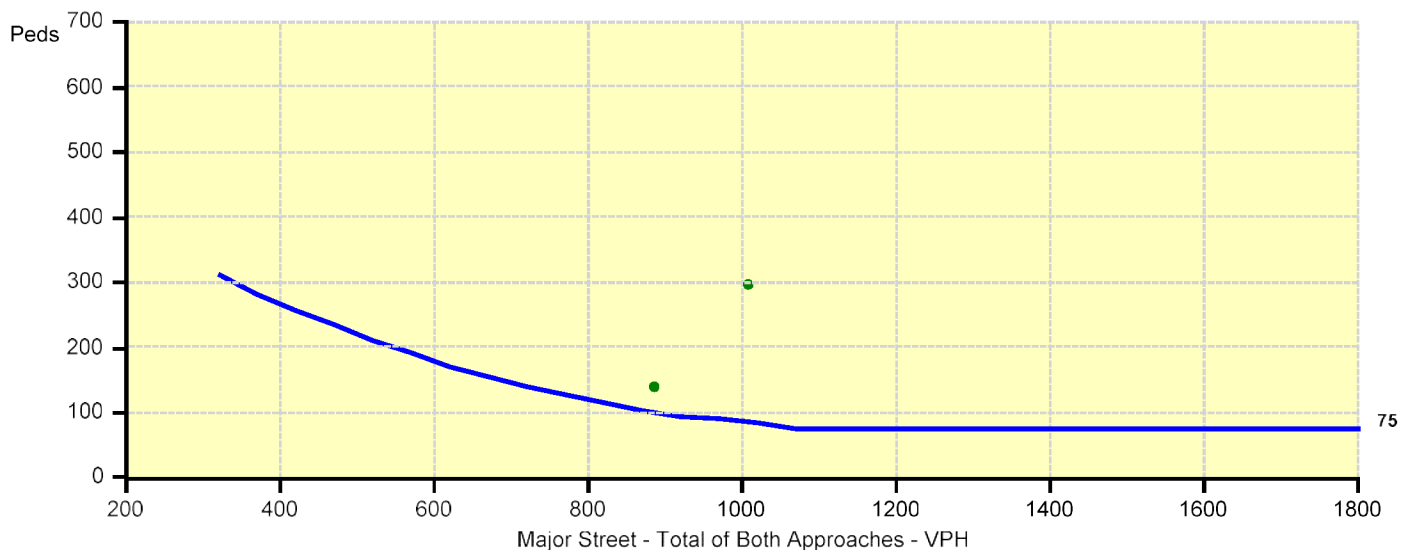
Summary

8 one hour periods meet minimums.
Warrant IS met.

Site Data Required

Rural Settings Apply = **True**
Number of Major Lanes = **1**
Number of Minor Lanes = **1**

Major Road 23rd E Avenue						Minor Road 131st Street		
Time	Major NB	+	Major SB	=	Total	Minor EB	Minor WB	Met?
16:00 - 17:00	424	+	584	=	1008	296	32	Yes
16:15 - 17:15	424	+	584	=	1008	296	32	Yes
16:30 - 17:30	424	+	584	=	1008	296	32	Yes
16:45 - 17:45	424	+	584	=	1008	296	32	Yes
06:45 - 07:45	670	+	215	=	885	140	35	Yes
07:00 - 08:00	670	+	215	=	885	140	35	Yes
07:15 - 08:15	670	+	215	=	885	140	35	Yes
07:30 - 08:30	670	+	215	=	885	140	35	Yes
00:00 - 01:00	0	+	0	=	0	0	0	No
00:15 - 01:15	0	+	0	=	0	0	0	No
00:30 - 01:30	0	+	0	=	0	0	0	No
00:45 - 01:45	0	+	0	=	0	0	0	No





City of Broken Arrow

Request for Action

File #: 26-1109, **Version:** 1

Broken Arrow Planning Commission
07-23-2026

To: Chairman and Commission Members
From: Community Development Department
Title:

Withdraw PUD-002941-2026, Planned Unit Development Major Amendment to PUD-28, 807 W Houston Street, 8.06 acres, located south and west of the intersection of Houston Street (81st Street) and Elm Place (161st E. Avenue)

Background:

Applicant: Michael McCarthy

Owner: CPSC, LLC

Developer: N/A

Engineer: N/A

Location: South and west of the southwest corner of the intersection of Houston Street (81st Street) and Elm Place (161st E Avenue)

Size of Tract 8.06 acres

Number of Lots: 1

Present Zoning: CG (Commercial General)/PUD-28

Comp Plan: Level 4 (Commercial/Employment Nodes)

PUD-002941-2026 is a request for an amendment to PUD-28 (Planned Unit Development) to allow a small farm, mead brewery and taproom with commercial sales as a permitted use at Central Park Plaza. The property is platted as Central Park Plaza and is located south and west of the southwest corner of Houston Street (81st Street) and Elm Place (161st E. Avenue).

Subsequent to publishing the public hearing notice for this PUD Amendment, the applicant submitted a request to withdraw the application.

Attachments: Case Map

Aerial Map

Comprehensive Plan Map

Request to withdraw application

Recommendation:

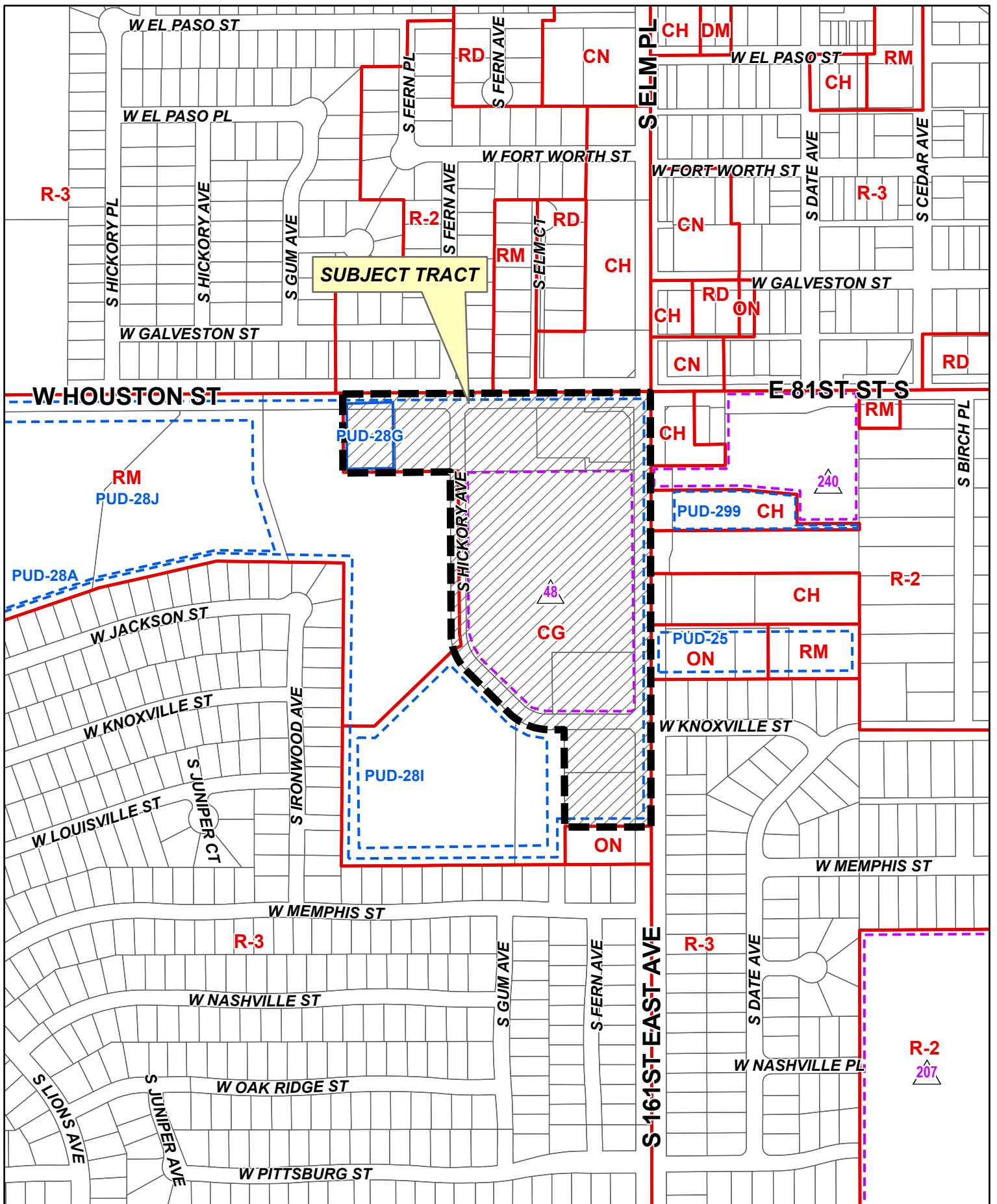
No action required.

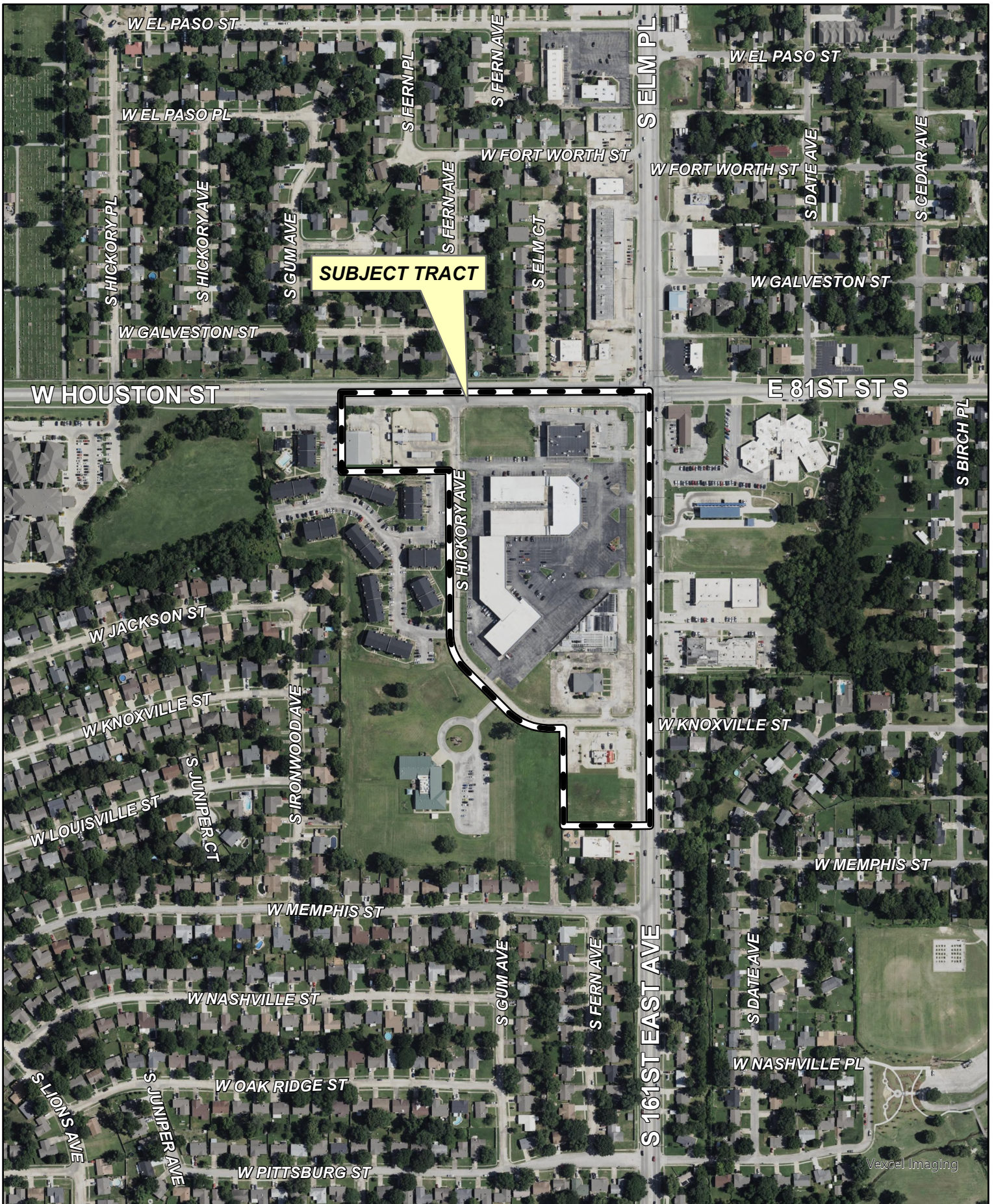
Reviewed by: Jane Wyrick

File #: 26-1109, Version: 1

Approved by: Rocky Henkel

JMW





SUBJECT TRACT

Note: Graphic overlays may not precisely align with physical features on the ground.
Aerial Photo Date: 2024



Subject
Tract

PUD-002941-2026

0 100 200 400
Feet

15 18-14



Brewery questions



MikeMcCarthy <berserkerbrewery@gmail.com>



To: Wyrick, Jane

Mon 6/29/2026 7:28 PM

You forwarded this message on Tue 6/30/2026 9:14 AM

CAUTION! This email originated from outside of the City of Broken Arrow network. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Yes, thanks for getting back to me. I do need to withdraw my application for the PUD. Thank you for your help, I wish we could have stayed there. We were heart broken, we had such big plans.

...

On Mon, Jun 29, 2026 at 2:05 PM Wyrick, Jane <JWyrick@brokenarrowok.gov> wrote:

Hi Mike,

I'm sorry we did not have a good phone signal when I called. You mentioned that you wish to withdraw your PUD application (PUD-002941-2026) because one of the churches in the Central Park Plaza would not sign off on the Able Commission form. Please respond to this email to confirm that you wish to withdraw the PUD application.

Thank you,
Jane

Jane Wyrick

Planning and Development Manager
Community Development Department

City of Broken Arrow

220 South 1st Street

P.O. Box 610

Broken Arrow, OK 74013

office: 918-259-2400 ext.2302 | fax: 918-259-8376

JWyrick@brokenarrowok.gov | www.brokenarrowok.gov

[facebook](#) | [twitter](#) | [youtube](#)



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City of Broken Arrow

Request for Action

File #: 26-1127, **Version:** 1

**Broken Arrow Planning Commission
07-23-2026**

To: Chair and Commission Members
From: Community Development Department
Title:

Public hearing, consideration, and possible action regarding PUD-002918-2026 (Planned Unit Development), major amendment to PUD-111, 7Brew Kenosha, 0.70 acres, CG (Commercial General), located north of West Kenosha Street (71st Street) and west of South Aspen Avenue (145th E Ave)

Background:

Applicant: Charles Mantione, Crafton Tull

Owner: NEO Properties

Developer: NA

Engineer: NA

Location: North of West Kenosha Street (71st Street) and west of South Aspen Avenue (145th E Ave)

Size of Tract 0.7 acres

Present Zoning: CG (Commercial General)

Proposed Zoning: [Click here to enter text.](#)

Comp Plan: Level 4 - Commercial/Employment Nodes

PUD-002918-2026 is a requested PUD major amendment to PUD-111 (SONIC). PUD-111 was approved by the Broken Arrow City Council on March 16, 1998. PUD-111 was created as part of the development of the former Sonic restaurant location at the subject property. The Sonic location closed in recent years, and the structure and property are currently unused and vacant.

During pre-development discussions the developer was made aware of the existing PUD. After reviewing the existing PUD, the applicant identified parking as the only requirements that would conflict with the proposed site plan development. Thus, the applicant has come forward with an application to amend PUD-111.

The request would modify parking standards from the required 7 employee parking spaces and 31 customer parking spaces to require only the 7 employee parking spaces. 7Brew, a quick serve beverage facility, operates solely as a drive-through business with no indoor or outdoor seating.

Attachments: Case Map

Aerial

Site Plan

Development Outline

Conceptual

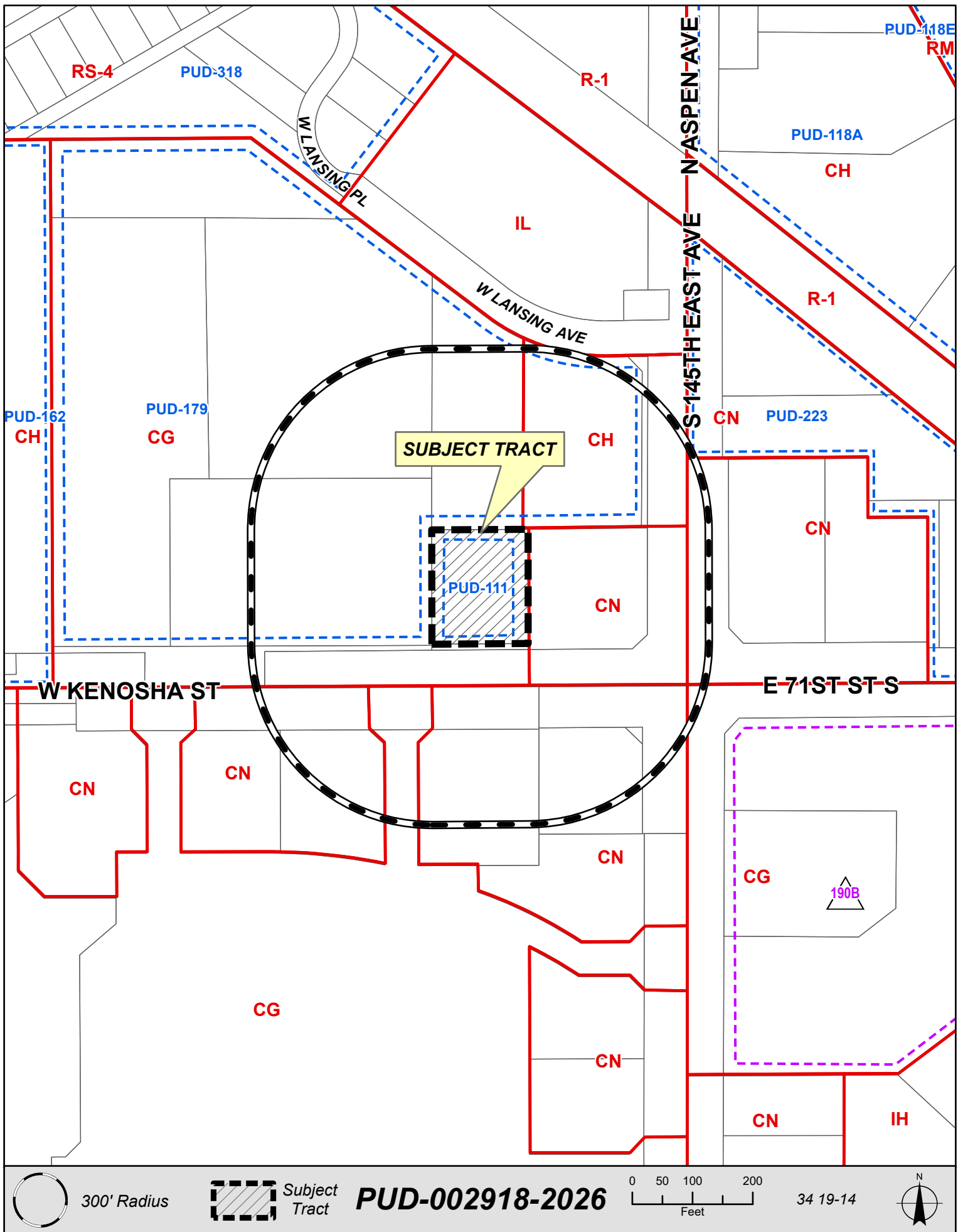
Recommendation:

Based upon the location of the property and surrounding land uses, staff recommend PUD-002918-2026 be recommended for approval to the Broken Arrow City Council.

Reviewed by: Jane Wyrick

Approved by: Rocky Henkel

JAJ





SUBJECT TRACT

W KENOSHA ST

S 145TH EAST AVE N ASPEN AVE

E 71ST ST S

Note: Graphic overlays may not precisely align with physical features on the ground.
Aerial Photo Date: 2025



Subject
Tract

PUD-002918-2026

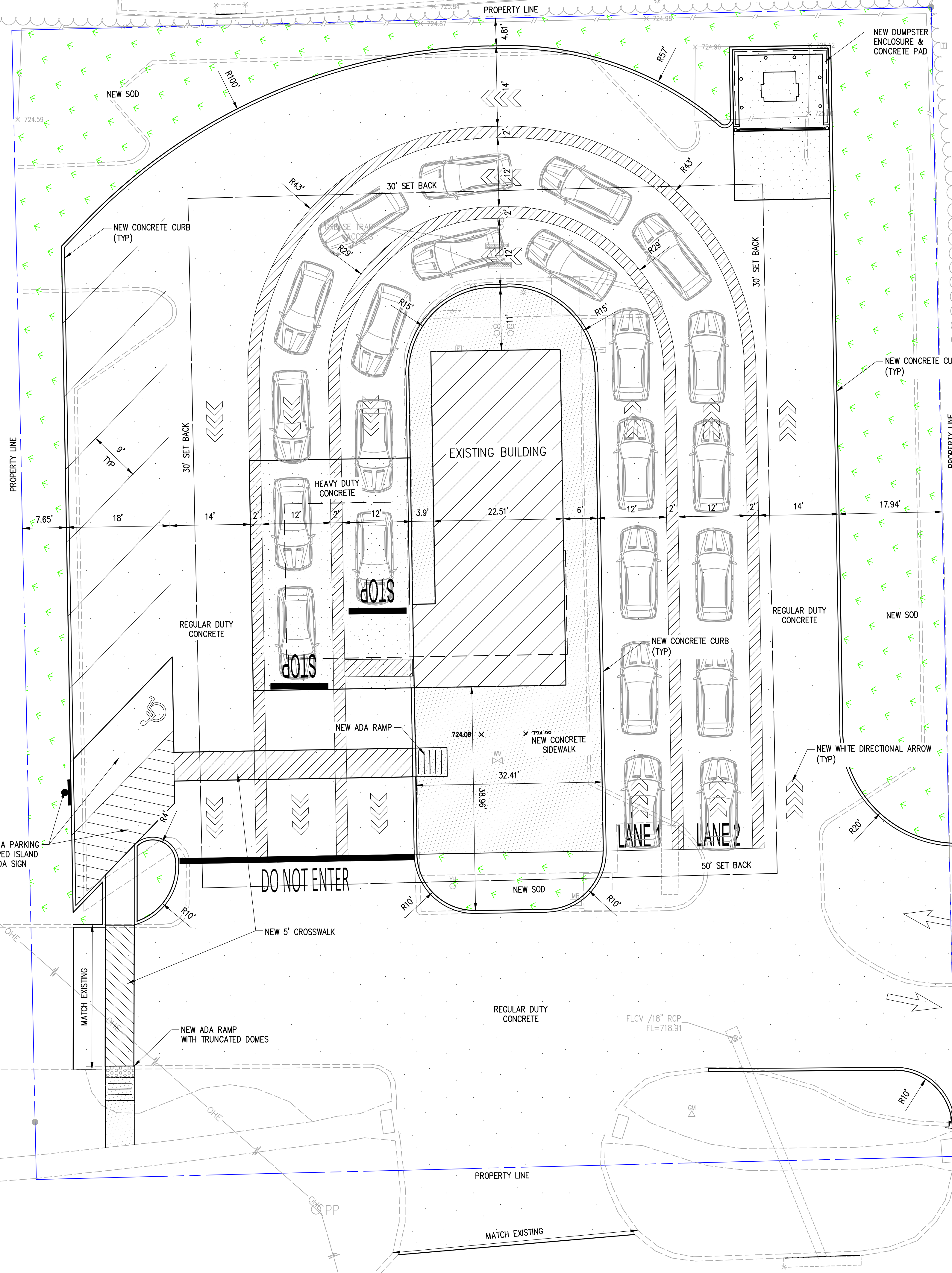
0 50 100 200
Feet

34 19-14



 IMPERVIOUS AREA CALCULATIONS

TOTAL AREA OF SITE	31,999 SF
TOTAL NEW PERVIOUS AREA	5,659 SF
TOTAL NEW IMPERVIOUS AREA	24,408 SF
TOTAL IMPERVIOUS AREA RATIO (NEW/TOTAL SF)	76.2 %



SET IRON PIN
LIGHT POLE
POWER POLE
TELEPHONE PEDESTAL
TV PEDESTAL
MANHOLE
SANITARY SEWER CLEANOUT
GAS METER
GAS VALVE
STORM SEWER PIPE
STRUCTURE NUMBER
WATER VALVE
FIRE HYDRANT ASSEMBLY
(TEE, VALVE & FIRE HYDRANT)
FIRE HYDRANT
AIR RELEASE VALVE
FIRE DEPARTMENT CONNECTION
WATER METER
BACK FLOW PREVENTER
REDUCER
RECTANGULAR DRAIN INLET,
GRADED INLET OR JUNCTION
BOX (SPECIFY ON PLAN
SHEET)
CIRCULAR DRAIN INLET,
GRADED INLET OR JUNCTION
BOX (SPECIFY ON PLAN
SHEET)

LINEWORK

THIS PLAN IS FOR CONCEPT ONLY
AND IS NOT INTENDED FOR USE AS
A CONSTRUCTION DRAWING.

OKIE 811



July 23rd, 2026

7 Brew Restaurant at 2220 W. Kenosha Blvd., Broken Arrow, OK
Part of Section 4, Township 18N, Range 14E
Sonic – W Kenosha St. and N. Aspen Ave. Broken Arrow, Oklahoma
PUD 111

Proposed Major Amendment to PUD 111: Sonic – W Kenosha St. and N. Aspen Ave. Broken Arrow, Oklahoma

The development parcel that is a part of the southeast quarter of the southeast quarter of the southeast quarter of section four, township eighteen north, range fourteen east of the Indian base and Meridian, Tulsa County, state of Oklahoma. Located approximately 300 feet east of the intersection of W. Kenosha St. and S. 145th E Ave.

The current proposed concept site plan is attached.

The requested Major Amendment to PUD 111 would:

1. Replace the existing Article I, Exhibit “Conceptual Site Plan” with the attached proposed concept site plan for development of a 7Brew Drive Through Restaurant.
2. Modify Article II, Development Standards, “Off Street Parking” to allow a total of 7 parking spaces. The current off-street parking requirements are defined as 13 employee spaces and 31 customer spaces thus 44 total off-street parking spaces. 7 Brew operates solely as a drive-through service, without any indoor or outdoor customer seating. Due to the nature of 7 Brew’s operational structure, there will only need to be 7 vehicle spots for the employees, and no customer parking will be needed.

All other provisions of the current PUD shall remain in effect as previously approved by the City of Broken Arrow

End of amendment.



City of Broken Arrow

Request for Action

File #: 26-1145, **Version:** 1

Broken Arrow Planning Commission
07-23-2026

To: Chair and Commission Members
From: Community Development Department
Title:

Public hearing, consideration, and possible action regarding PUD-002951-2026 (Planned Unit Development), Salt Dome, 1.09 acres, AG (Agricultural), one-half mile south of Kenosha Street (71st Street), east of 23rd Street (193rd E Ave/County Line Road), at the northeast corner of 23rd Street and E College Street

Background:

Applicant: City of Broken Arrow

Owner: City of Broken Arrow

Developer: City of Broken Arrow

Engineer: N/A

Location: One-half mile south of Kenosha Street (71st Street), east 23rd Street (193rd E Ave)/County Line Road

Size of Tract 1.09 acres

Present Zoning: AG (Agricultural)

Proposed Zoning: N/A

Comp Plan: Level 6 (Regional Employment/Commercial)

PUD-002951-2026 is a request for a Planned Unit Development permit for a municipal salt dome as an accessory use to the public right-of-way. The city-owned property is zoned AG (Agricultural) and is located one-half mile south of Kenosha Street (71st Street), east of 23rd Street (193rd E Avenue/County Line Road), at the northeast corner of 23rd Street and E College Street.

In August 2019, the City of Broken Arrow acquired the 2.19-acre property that is the subject of this request to accommodate the 23rd Street bridge widening project over Highway 51. Prior to the bridge widening, the bridge was narrow and curved, creating public safety concerns including line of sight issues for motorists on the bridge and for turning movements at the intersection of 23rd Street and E College Street.

After allocating the necessary area for the sloped bridge embankment and for drainage (a trickle channel), the remaining lot area is 47,403 square feet or 1.09 acres. The site has an irregular shape and limited access. The northeast boundary abuts Highway 51 that places the property within the Highway Overlay District. However, the nature of the use as a salt dome does not lend itself to meeting aesthetic requirements of the overlay district as it includes an arched metal truss structure covered in vinyl fabric. The applicant is planning for the vinyl fabric cover to be green in color to blend in with the environment. It is strictly a municipal utility facility intended to address roadway safety during icing conditions and will only be used a limited number of days per

year, depending on when winter storms occur. Fencing is proposed to be chain link or similar non-opaque material. Due to site constraints after accounting for the sale dome and needing to include a dry pond on the site, the PUD requests that no landscaping be required on the site. There is also an existing billboard easement area near the southeast corner of the site limiting the access area into the site.

SURROUNDING LAND USES/ZOMING/COMPREHENSIVE PLAN

Location	Comprehensive Plan	Zoning	Land Use
North	Level 3	A-1	Highway 51, and undeveloped beyond
South	Level 6	A-1, IL/PUD-231	Old Highway 51, and Light Industrial beyond
East	Level 3	A-1	Highway 51, and undeveloped beyond
West	Level 6	A-1	23 rd Street, and undeveloped beyond

SUMMARY OF DEVIATION FROM THE BROKEN ARROW ZONING ORDINANCE

Item	Zoning Ordinance Requirement	PUD-002951-2026 Request
Permitted Uses	Uses permitted by right in the AG district	Utility facility, minor is a permitted use in the AG district
Lot frontage	330 feet	None
Setbacks	Front - 50 feet Rear - 50 feet Side - 60 feet total with one side being at least 25 feet Abc - 50 feet adjacent to arterial	None
Building Height	50 feet per Table 3-1-1.1 of the Zoning Ordinance	Per Zoning Ordinance
Parking Requirements	Per Section 4-2-3.C.3 - the Director shall apply the off-street parking and loading standard	None
Screening Fence	Varies by location and reviewed during site plan process	Chain link or other non-opaque fencing is allowed
Landscaping Requirements	Front edge - 10 feet wide Parking lot - All parking spaces to be within 50 feet of a landscaped area	None
Highway Overlay District Requirements	Buildings oriented toward highway with materials and design to be of an equal level as the front of a building	None

According to Section 6-3-4.3 of the Zoning ordinance, the PUD provisions are established for one (1) or more of the following purposes:

1. To permit and encourage innovative land development while maintaining appropriate limitation on the character and intensity of use and assuring compatibility with adjoining and proximate properties.
2. To permit great flexibility within the development to best utilize the physical features of the particular site in exchange for greater public benefits than would otherwise be achieved through development under this Ordinance.
3. To encourage the provision and preservation of meaningful open space.
4. To encourage integrated and unified design and function of the various uses comprising the planned unit development.
5. To encourage a more productive use of land consistent with the public objectives and standards of accessibility, safety, infrastructure and land use compatibility.

In Staff's opinion, PUD-002951-2026 satisfies items 2 and 5 of Section 6-3-4.3 of the Zoning Ordinance. (2) The site is atypical in that it is small, has an irregular shape, and it has limited access. Locating the salt dome to a more central location in the city will provide a public benefit in that salt trucks will be able to service roadways in a timelier manner. (5) The use of the site as a salt dome is an accessory use to the right-of-way and will aid in providing safe travel on rights-of-way during icing conditions and will support the City's overall infrastructure.

According to FEMA maps, none of this property is located within the 100-year floodplain. Water and sanitary sewer service are available from the City of Broken Arrow.

Attachments: Case Map

Aerial Map

Plan Map

Dome Design Statement and Salt Dome Plan Rev.6

Comprehensive
PUD-002951-2026 Salt

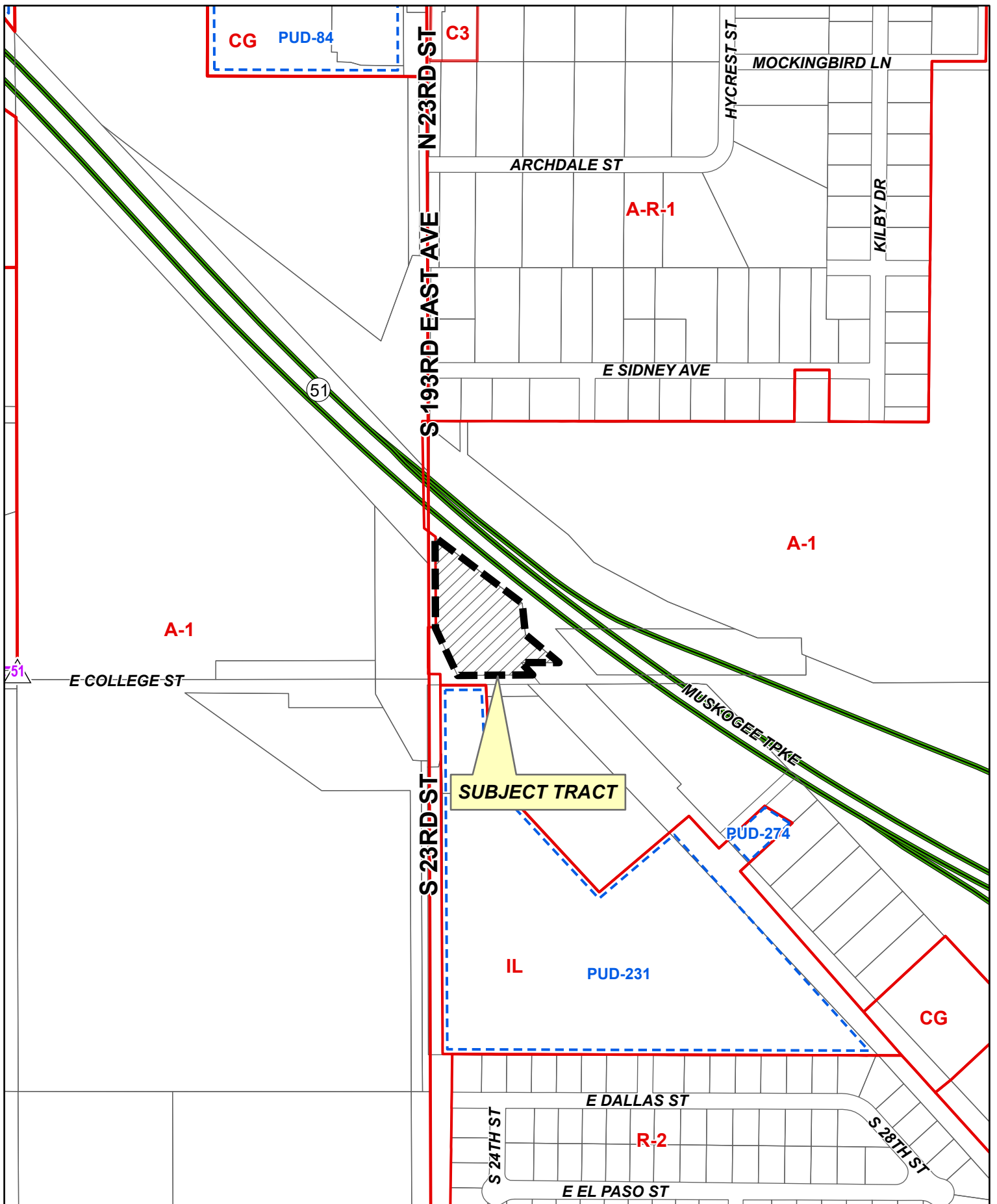
Recommendation:

Based upon the Comprehensive Plan, the location of the property, and surrounding land uses, staff recommends that PUD-002951-2026 be approved.

Reviewed by: Jane Wyrick

Approved by: Rocky Henkel

JMW





Note: Graphic overlays may
not precisely align with physical
features on the ground.
Aerial Photo Date: 2024



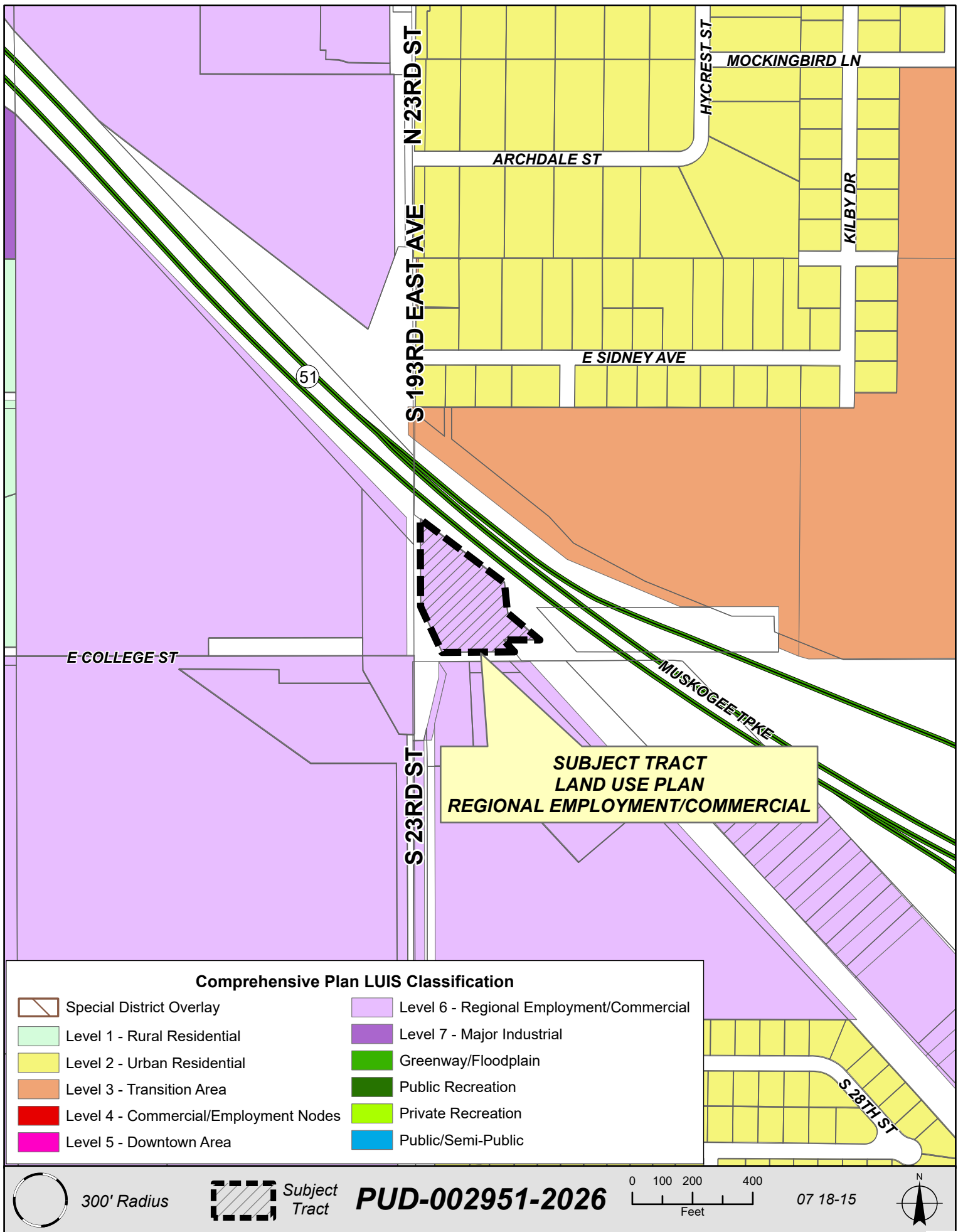
Subject
Tract

PUD-002951-2026

0 100 200 400
Feet

07 18-15





City of Broken Arrow Salt Dome Project

PUD-002951-2026



Property Owner Information:

City of Broken Arrow
220 S. 1st Street
Broken Arrow, OK 74012

Applicant:

City of Broken Arrow
220 S 1st Street
Broken Arrow, OK 74012

Property Descriptions

The City of Broken Arrow property is located at the northeast corner of 23rd Street (193rd East Avenue/County Line Road) and College Street, and approximately one-half mile south of Kenosha Street (71st Street). The site currently unplatted. The City of Broken Arrow acquired the 2.19-acre site on August 30, 2019, as part of the 23rd Street bridge widening project over Highway 51. Since acquiring the property, the City of Broken Arrow dedicated sufficient right-of-way to accommodate the bridge project including the area needed for a sloped embankment and for drainage/a trickle channel. The remaining lot area is 47,403 square feet or 1.09 acres. The proposed use of the site is for a municipal utility, minor for a salt dome facility.

Legal Description

A tract of land being a part of Lot 2 of Section 7, Township 18 North, Range 15 East of the Indian Base and Meridian, Wagoner County, State of Oklahoma, more particularly described as follows:

Commencing at the Southwest corner of said Lot 2; thence North 01°20'21" West, along the west line of said Lot 2, a distance of 150.40 feet; thence North 88°39'30" East, a distance of 24.74 feet to the Point of Beginning; thence North 01°20'21" West, a distance of 190.06 feet; thence South 43°42'28" East, a distance of 462.45 feet; thence South 88°52'00" West, a distance of 236.40 feet; thence North 27°51'47" West, a distance of 168.50 feet to the Point of Beginning, containing 47,403 square feet or 1.09 acres, more or less.

Basis of bearing is an assumed bearing of North 01°20'21" West along the West line of the NW/4 of Section 7, T-18-N, R-15-E.

Zoning and Comprehensive Plan

The property is zoned AG (Agricultural) and is designated as Level 6 (Regional Commercial/Employment) in the future land use map of the Comprehensive Plan. A minor municipal utility is an approved use in the AG zoning district.

Zoning Map – AG zoning district



Future Land Use Map of the Comprehensive Plan – Level 6



Site Information/Existing Conditions

The property has constraints due to the limited lot area, an embankment and drainage to the west, an existing billboard at the southeast corner of the site, and Highway 51 along the northeast boundary.

Design Concept

The City of Broken Arrow owns the 1.09-acre parcel and is planning to construct a salt dome facility on the site. Due to the utilitarian nature of the facility, the applicant is requesting that the aesthetic requirements for projects located within the Highway Overlay District and for masonry façade requirements be waived. It is anticipated that the site may be used four to five days per year.

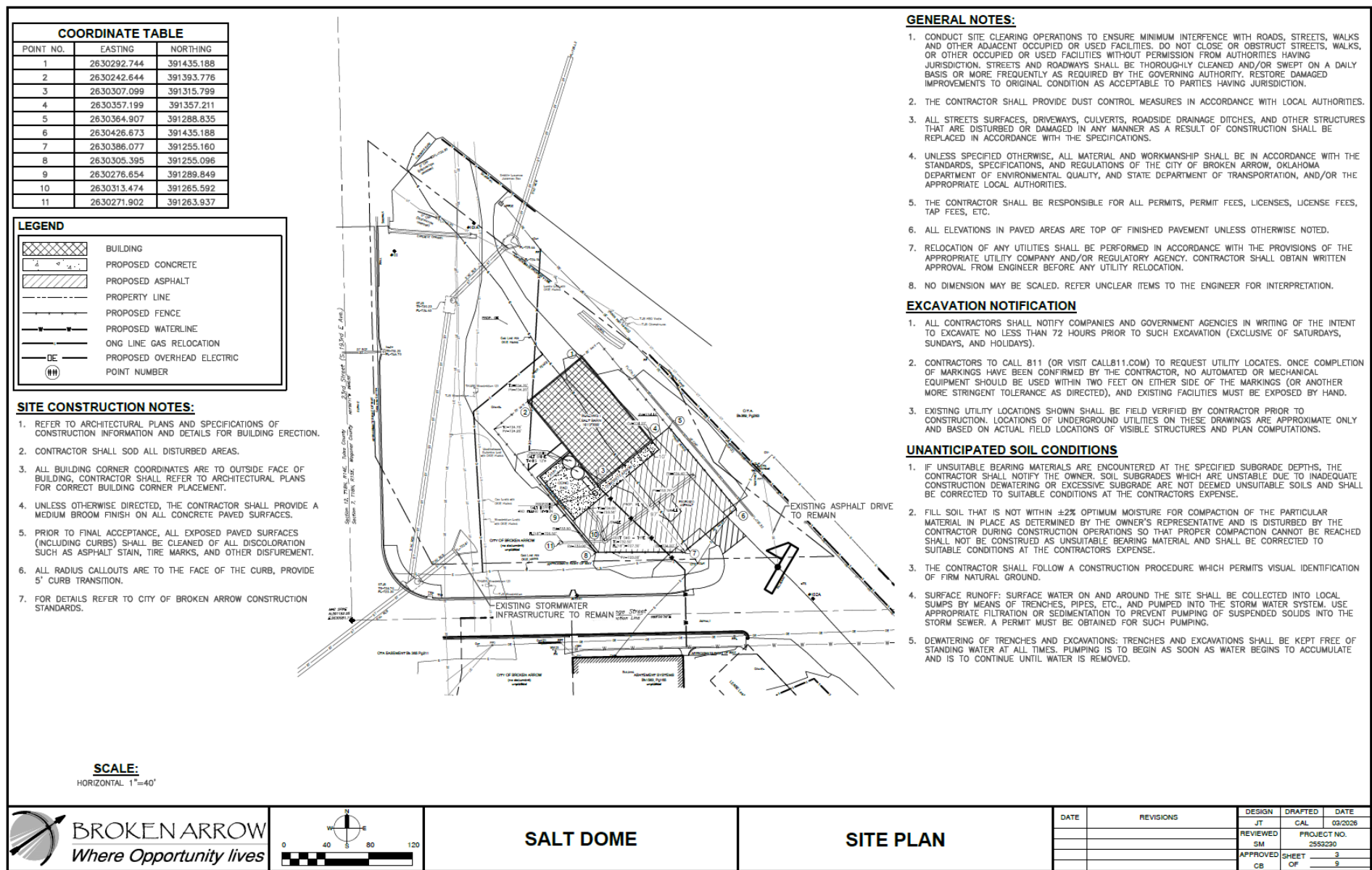
Design Standards

This development area is designed to house a salt dome for municipal use. The property shall be developed in accordance with the Broken Arrow Zoning Ordinance and the use and development regulations of the AG (Agricultural) District, except as follows:

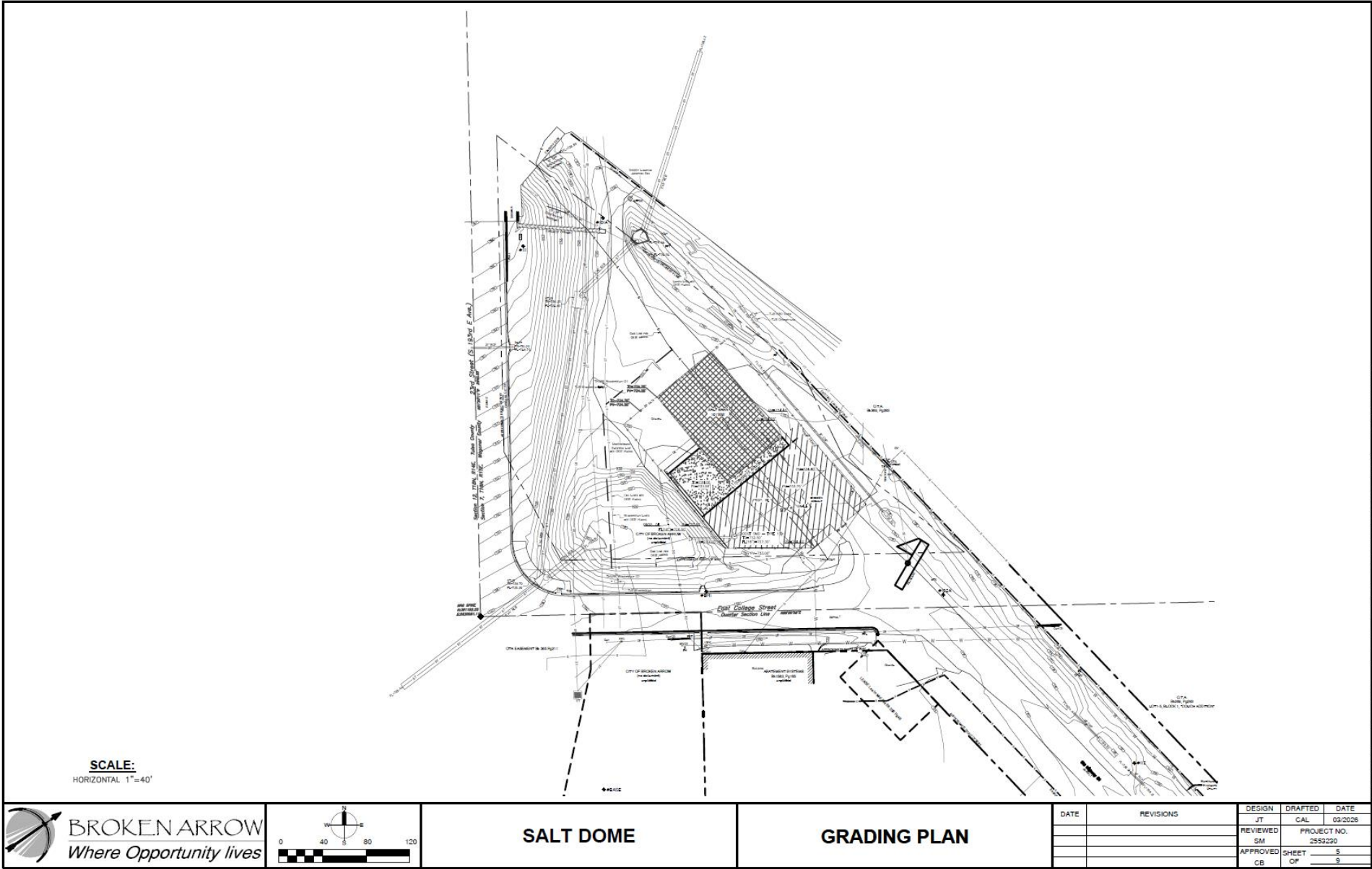
Minimum lot frontage	None
Setbacks	None
Building Height	Per Zoning Ordinance Table 3-1-1-1 – 50 feet
Allowed Uses	Utility Facility, Minor
Required Parking	None
Ground Surface/Drive Aisle Access	Gravel is permitted
Façade Materials	None
Landscaping Requirements	None
Screening	Chain link or other non-opaque fencing is allowed
Highway Overlay District	None

Exhibits

Conceptual Site Plan

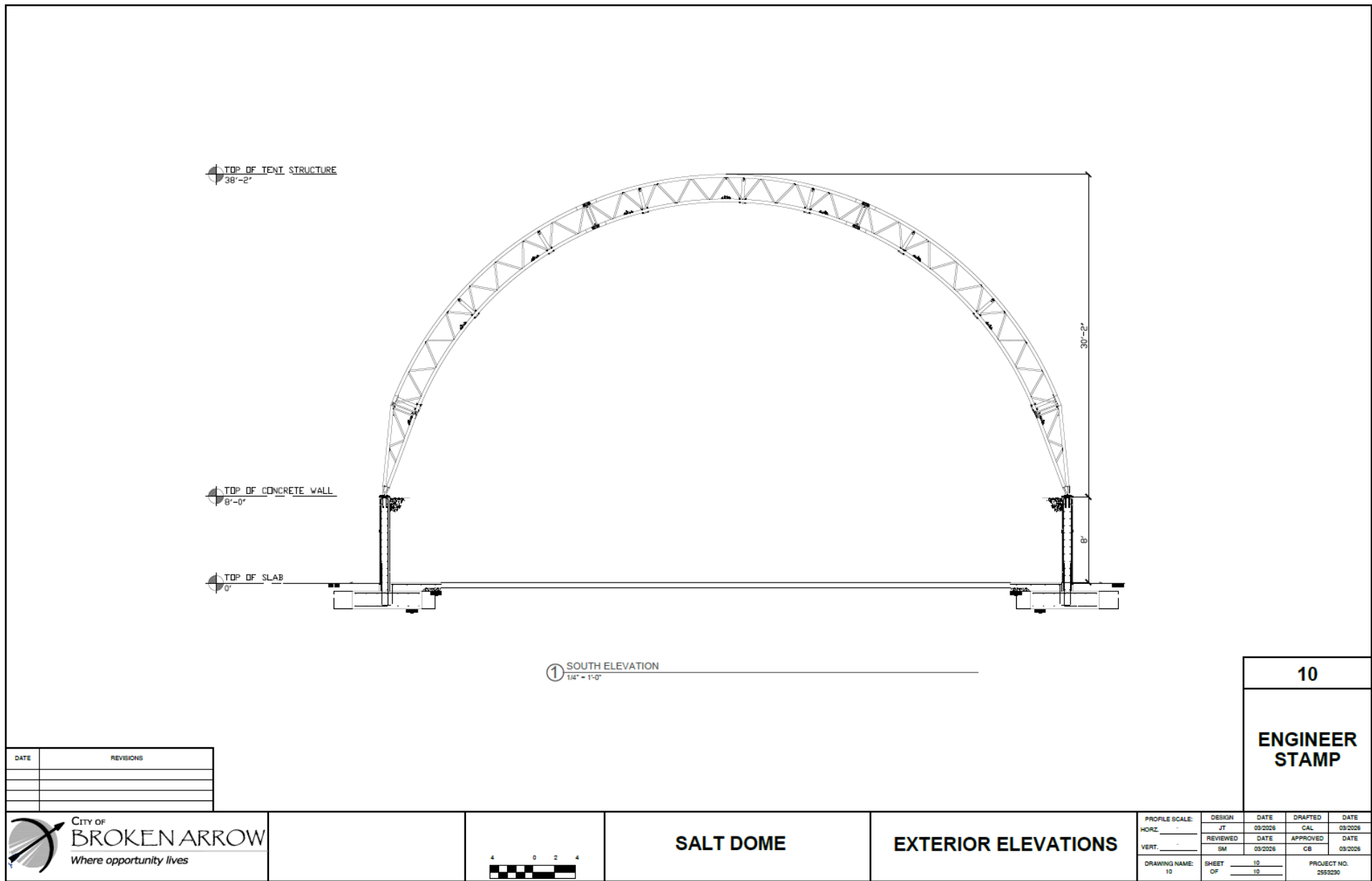


Grading Plan



T:\Active Projects\2553230 - Salt Dome Design\House Design (if applicable)\Plan Set\DWG\06 GRADING PLAN.dwg, 5/28/2026 - 11:09 AM

Salt Dome Elevation



T:\Active Projects\2553230 - Salt Dome\Design\In-House Design (if applicable)\Clear Span Salt_NDA_Signed\T065RXX PROFILE.DWG 6/22/2026 - 3:31 PM

SURVEY CONTROL DATA

1. HORIZONTAL CONTROL MONUMENTS
OKLAHOMA STATE PLANE COORDINATE SYSTEM –
LAMBERT NORTH PROJECTION
2. BASIS OF BEARING:
LOCAL GRID BEARING
3. VERTICAL CONTROLS (BM):
NAVD 1988
4. SECTION NUMERICAL DESCRIPTION (S-T-R):
SECTION 7, T-18-N, R-14-E

BEFORE YOU DIG! CALL OKIE 1-800-522-6543



UTILITIES LOCATION SHOWN ON PLAN AND PROFILE WERE OBTAINED FROM INFORMATION PROVIDED BY UTILITY SYSTEM OWNER IN CONJUNCTION WITH EXISTING PHYSICAL FEATURES VISIBLE AT THE TIME OF THE TOPOGRAPHIC SURVEY. LOCATIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

UTILITY CONTACTS

CITY OF BROKEN ARROW, OKLAHOMA, E&C UTILITY COORDINATOR, GARY MCCOLPIN 485 N. POPLAR AVE. BROKEN ARROW, OKLAHOMA 74012 (539) 357-1612	CITY OF BROKEN ARROW, OKLAHOMA WATER & SEWER, TIMOTHY ROBINS, P.E. 485 N. POPLAR AVE. BROKEN ARROW, OKLAHOMA 74012 (918) 259-6520
CITY OF BROKEN ARROW, OKLAHOMA STREETS/STORMWATER, TIM WILSON 485 N. POPLAR AVE. BROKEN ARROW, OKLAHOMA 74012 (918) 259-6525	OKLAHOMA NATURAL GAS (GOV'T RELOCATIONS) ATTN.: JAMES CANTRELL 5848 EAST 15TH STREET TULSA, OKLAHOMA 74112 (918) 640-5300 (CELL) JAMES.CANTRELL@ONEGAS.COM
COX COMMUNICATIONS ATTN.: LAND USE & COMPLIANCE 11811 E. 51ST STREET TULSA, OK 74146 (405) 406-9894 (WORK),(833) 850-0590 TULROW@COX.NET	OKLAHOMA NATURAL GAS (EXISTING CONST.) ATTN.: ZACHARY WILMOTT 5848 EAST 15TH STREET TULSA, OKLAHOMA 74112 (918) 230-2612 (CELL) ZACHARY.WILMOTT@ONEGAS.COM
KINETIC FIBER ATTN.: RANDY MCCORKLE 11200 S. 225TH E. AVE. BROKEN ARROW, OKLAHOMA 74012 (918) 515-1903 (WORK) (918) 261-2918 (CELL)	AEP / PSO ATTN.: JOSEPH CHEBAIBAI 5223 S GARNETT ROAD TULSA, OK 74149 (918) 232-4571 (CELL) (918) 250-6249 (WORK)
METRONET COMMUNICATIONS ATTN.: EMILY KIEFFNER 1117 E. LOUISVILLE ST. BROKEN ARROW, OKLAHOMA 74012 (812) 639-4426 (CELL)	AT&T ATTN.: ALFORD NICHOLS 509 S. DETROIT AVE. TULSA, OK 74120 (539) 444-1069 (OFFICE) (918) 607-7028 (CELL)

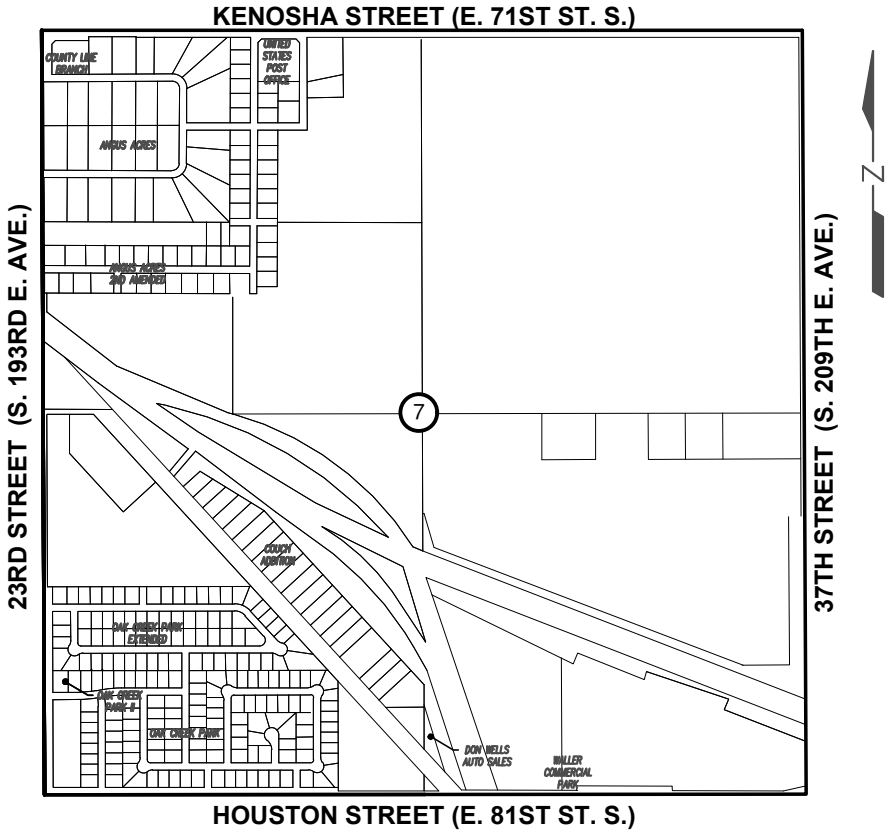
CONVENTIONAL SYMBOLS

-----	SECTION LINES
=====	PROPOSED ROAD
R/W	RIGHT-OF-WAY LINES – NEW
PRES. R/W	RIGHT-OF-WAY LINES – EXISTING
—X—	FENCES
—OE—	OVERHEAD ELECTRIC LINES
—OT—	OVERHEAD TELEPHONE LINES
—SS—	SANITARY SEWERS
—G—	GAS LINES
—W—	WATER LINES
—UT—	UNDERGROUND TELEPHONE LINES
—CTV—	CABLE TELEVISION LINES
—STM—	STORM SEWER
—UCT—	UNDERGROUND CABLE TELEVISION LINES
—UE—	UNDERGROUND ELECTRIC



BROKEN ARROW
Where Opportunity lives
SALT DOME

PROJECT NUMBER 2254404



PROJECT LOCATION SECTION 7, T-18-N, R-14-E, TULSA COUNTY

ENGINEERING & CONSTRUCTION DEPARTMENT
485 NORTH POPLAR AVENUE
BROKEN ARROW, OK. 74012

CITY OF BROKEN ARROW STANDARD CONSTRUCTION SPECIFICATIONS, FEBRUARY 20, 2024,
SHALL GOVERN ALL CONSTRUCTION AS SUPPLEMENTED BY OKLAHOMA STANDARD
SPECIFICATION FOR HIGHWAY CONSTRUCTION, APPROVED BY THE DEPARTMENT OF
TRANSPORTATION 2019.

INDEX OF SHEETS

DESCRIPTION	SHEET
TITLE SHEET	1
TOPOGRAPHIC SURVEY	2
DEMOLITION PLAN	3
SITE PLAN	4
GRADING PLAN	5
UTILITY PLAN	6
STORMWATER POLLUTION PREVENTION PLAN	7
FOUNDATION AND PLAN DETAILS	8
EXTERIOR ELEVATIONS	9
ELECTRICAL PLAN	

BROKEN ARROW COUNCIL

MAYOR	DEBRA WIMPEE
VICE-MAYOR	JOHNNIE PARKS
MEMBER AT LARGE	LISA FORD
WARD-2	JUSTIN GREEN
WARD-4	DAVID PICKEL

BEST MANAGEMENT PRACTICES MANUAL:

REFER TO [HTTPS://WWW.BROKENARROWOK.GOV/GOVERNMENT/
PUBLIC-WORKS/ENGINEERING-CONSTRUCTION/CONSTRUCTION ACTIVITY
BEST MANAGEMENT PRACTICES GUIDANCE MANUAL 2023](https://www.brokenarrowok.gov/government/public-works/engineering-construction/construction-activity-best-management-practices-guidance-manual-2023)

APPROVED

DATE _____
MICHAEL L. SPURGEON
CITY MANAGER/ GENERAL MANAGER

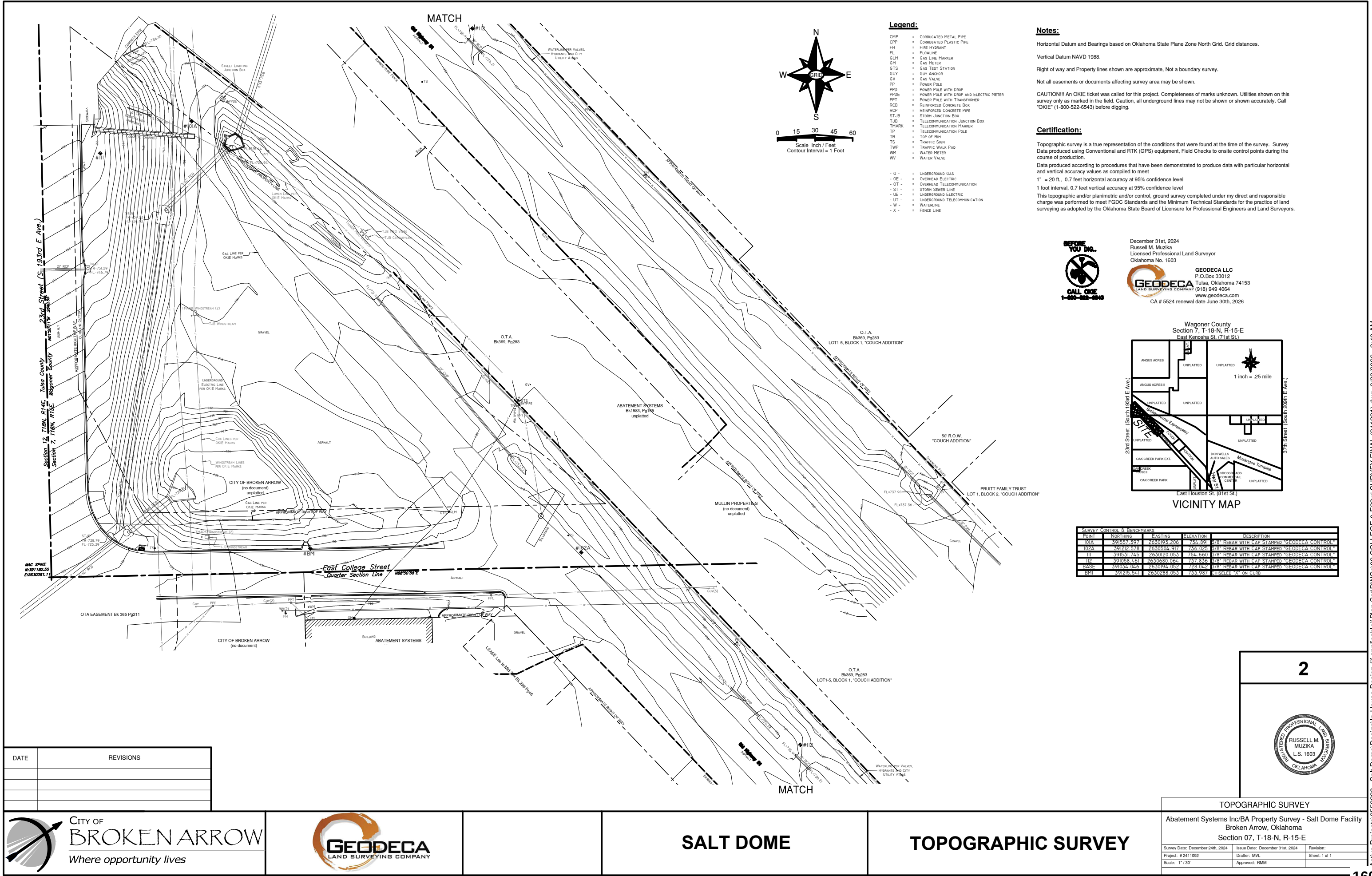
RECOMMENDED FOR APPROVAL

DATE _____
CHARLIE BRIGHT P.E.
DIRECTOR OF ENGINEERING & CONSTRUCTION

DATE _____
TIMOTHY WILSON
DIRECTOR OF STREETS & STORMWATER

DATE _____
RYAN BAZE
MAINTENANCE SERVICE DIRECTOR

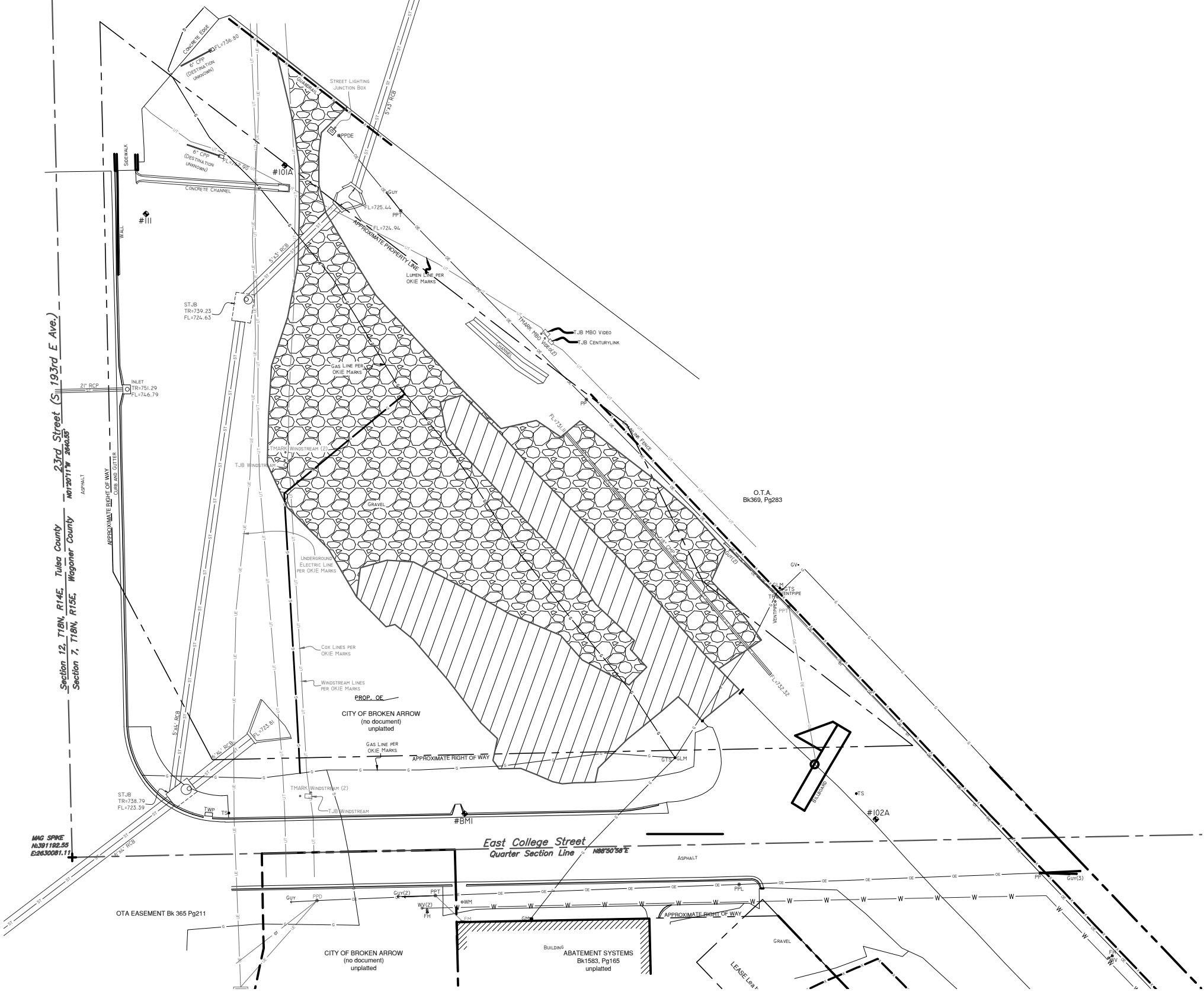
DATE _____
SHANNON MARSHALL, AIA
ARCHITECT OF RECORD



LEGEND

REMOVE EXISTING GRAVEL

REMOVE EXISTING ASPHALT

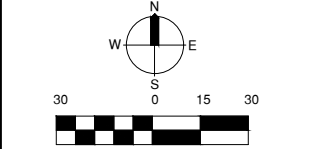


DATE	REVISIONS

CITY OF

BROKEN ARROW

Where opportunity lives



SALT DOME

DEMOLITION PLAN

PROFILE SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. -	JT	03/2026	CAL	03/2026
VERT. -	REVIEWED	DATE	APPROVED	DATE
	SM	03/2026	CB	03/2026
DRAWING NAME:	SHEET	3	PROJECT NO.	
3	OF	9	2553230	

3

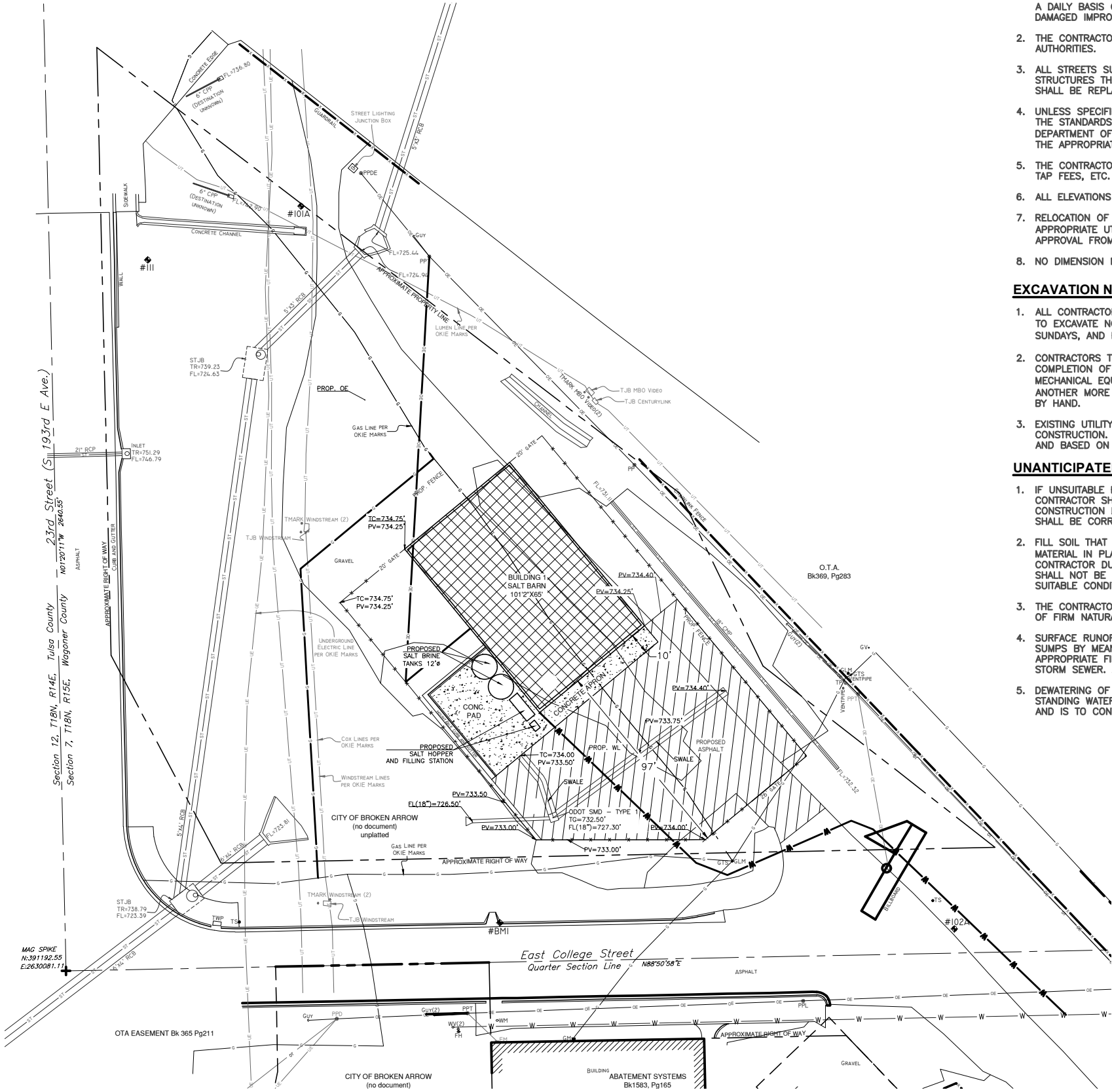
ENGINEER STAMP

COORDINATE TABLE		
POINT NO.	EASTING	NORTHING
1	2630292.744	391435.188
2	2630242.644	391393.776
3	2630307.099	391315.799
4	2630357.199	391357.211
5	2630364.907	391288.835
6	2630426.673	391435.188
7	2630386.077	391255.160
8	2630305.395	391255.096
9	2630276.654	391289.849
10	2630313.474	391265.592
11	2630271.902	391263.937

LEGEND	
	BUILDING
	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPERTY LINE
	PROPOSED FENCE
	PROPOSED WATERLINE
	ONG LINE GAS RELOCATION
	PROPOSED OVERHEAD ELECTRIC
	POINT NUMBER

SITE CONSTRUCTION NOTES:

- REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS OF CONSTRUCTION INFORMATION AND DETAILS FOR BUILDING ERECTION.
- CONTRACTOR SHALL SOD ALL DISTURBED AREAS.
- ALL BUILDING CORNER COORDINATES ARE TO OUTSIDE FACE OF BUILDING, CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR CORRECT BUILDING CORNER PLACEMENT.
- UNLESS OTHERWISE DIRECTED, THE CONTRACTOR SHALL PROVIDE A MEDIUM BROOM FINISH ON ALL CONCRETE PAVED SURFACES.
- PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED PAVED SURFACES (INCLUDING CURBS) SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, AND OTHER DISFUREMENT.
- ALL RADIUS CALLOUTS ARE TO THE FACE OF THE CURB, PROVIDE 5' CURB TRANSITION.
- FOR DETAILS REFER TO CITY OF BROKEN ARROW CONSTRUCTION STANDARDS.



GENERAL NOTES:

- CONDUCT SITE CLEARING OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. STREETS AND ROADWAYS SHALL BE THOROUGHLY CLEANED AND/OR SWEEP ON A DAILY BASIS OR MORE FREQUENTLY AS REQUIRED BY THE GOVERNING AUTHORITY. RESTORE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PROVIDE DUST CONTROL MEASURES IN ACCORDANCE WITH LOCAL AUTHORITIES.
- ALL STREETS SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES, AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS.
- UNLESS SPECIFIED OTHERWISE, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS, AND REGULATIONS OF THE CITY OF BROKEN ARROW, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, AND STATE DEPARTMENT OF TRANSPORTATION, AND/OR THE APPROPRIATE LOCAL AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, PERMIT FEES, LICENSES, LICENSE FEES, TAP FEES, ETC.
- ALL ELEVATIONS IN PAVED AREAS ARE TOP OF FINISHED PAVEMENT UNLESS OTHERWISE NOTED.
- RELOCATION OF ANY UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM ENGINEER BEFORE ANY UTILITY RELOCATION.
- NO DIMENSION MAY BE SCALED. REFER UNCLEAR ITEMS TO THE ENGINEER FOR INTERPRETATION.

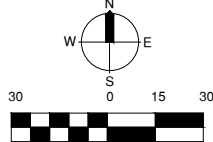
EXCAVATION NOTIFICATION

- ALL CONTRACTORS SHALL NOTIFY COMPANIES AND GOVERNMENT AGENCIES IN WRITING OF THE INTENT TO EXCAVATE NO LESS THAN 72 HOURS PRIOR TO SUCH EXCAVATION (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS).
- CONTRACTORS TO CALL 811 (OR VISIT CALL811.COM) TO REQUEST UTILITY LOCATES. ONCE COMPLETION OF MARKINGS HAVE BEEN CONFIRMED BY THE CONTRACTOR, NO AUTOMATED OR MECHANICAL EQUIPMENT SHOULD BE USED WITHIN TWO FEET ON EITHER SIDE OF THE MARKINGS (OR ANOTHER MORE STRINGENT TOLERANCE AS DIRECTED), AND EXISTING FACILITIES MUST BE EXPOSED BY HAND.
- EXISTING UTILITY LOCATIONS SHOWN SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. LOCATIONS OF UNDERGROUND UTILITIES ON THESE DRAWINGS ARE APPROXIMATE ONLY AND BASED ON ACTUAL FIELD LOCATIONS OF VISIBLE STRUCTURES AND PLAN COMPUTATIONS.

UNANTICIPATED SOIL CONDITIONS

- IF UNSUITABLE BEARING MATERIALS ARE ENCOUNTERED AT THE SPECIFIED SUBGRADE DEPTHS, THE CONTRACTOR SHALL NOTIFY THE OWNER. SOIL SUBGRADES WHICH ARE UNSTABLE DUE TO INADEQUATE CONSTRUCTION DEWATERING OR EXCESSIVE SUBGRADE ARE NOT DEEMED UNSUITABLE SOILS AND SHALL BE CORRECTED TO SUITABLE CONDITIONS AT THE CONTRACTORS EXPENSE.
- FILL SOIL THAT IS NOT WITHIN $\pm 2\%$ OPTIMUM MOISTURE FOR COMPACTION OF THE PARTICULAR MATERIAL IN PLACE AS DETERMINED BY THE OWNER'S REPRESENTATIVE AND IS DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS SO THAT PROPER COMPACTION CANNOT BE REACHED SHALL NOT BE CONSTRUED AS UNSUITABLE BEARING MATERIAL AND SHALL BE CORRECTED TO SUITABLE CONDITIONS AT THE CONTRACTORS EXPENSE.
- THE CONTRACTOR SHALL FOLLOW A CONSTRUCTION PROCEDURE WHICH PERMITS VISUAL IDENTIFICATION OF FIRM NATURAL GROUND.
- SURFACE RUNOFF: SURFACE WATER ON AND AROUND THE SITE SHALL BE COLLECTED INTO LOCAL SUMPS BY MEANS OF TRENCHES, PIPES, ETC., AND PUMPED INTO THE STORM WATER SYSTEM. USE APPROPRIATE FILTRATION OR SEDIMENTATION TO PREVENT PUMPING OF SUSPENDED SOLIDS INTO THE STORM SEWER. A PERMIT MUST BE OBTAINED FOR SUCH PUMPING.
- DEWATERING OF TRENCHES AND EXCAVATIONS: TRENCHES AND EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER AT ALL TIMES. PUMPING IS TO BEGIN AS SOON AS WATER BEGINS TO ACCUMULATE AND IS TO CONTINUE UNTIL WATER IS REMOVED.

DATE	REVISIONS



SALT DOME

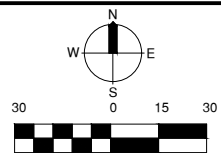
SITEPLAN

PROFILE SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. _____	JT	03/2026	CAL	03/2026
VERT. _____	REVIEWED	DATE	APPROVED	DATE
	SM	03/2026	CB	03/2026
DRAWING NAME:	SHEET	4	PROJECT NO.	
4	OF	9	2553230	

4

**ENGINEER
STAMP**

DATE	REVISIONS



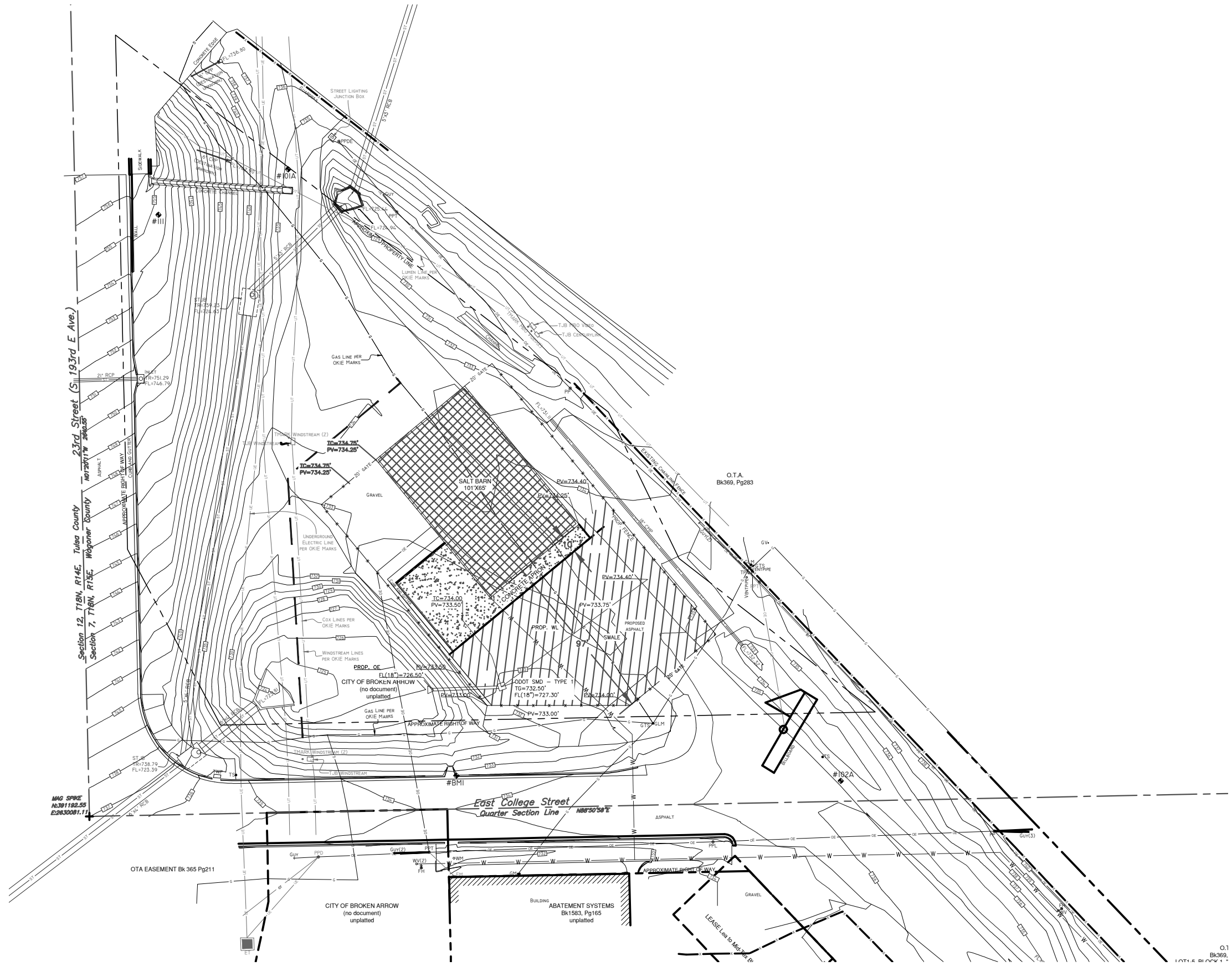
SALT DOME

GRADING PLAN

PROFILE SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. -	JT	03/2026	CAL	03/2026
VERT. -	REVIEWED	DATE	APPROVED	DATE
	SM	03/2026	CB	03/2026
DRAWING NAME:	SHEET	4	PROJECT NO.	
4	OF	9	2553230	

4

**ENGINEER
STAMP**

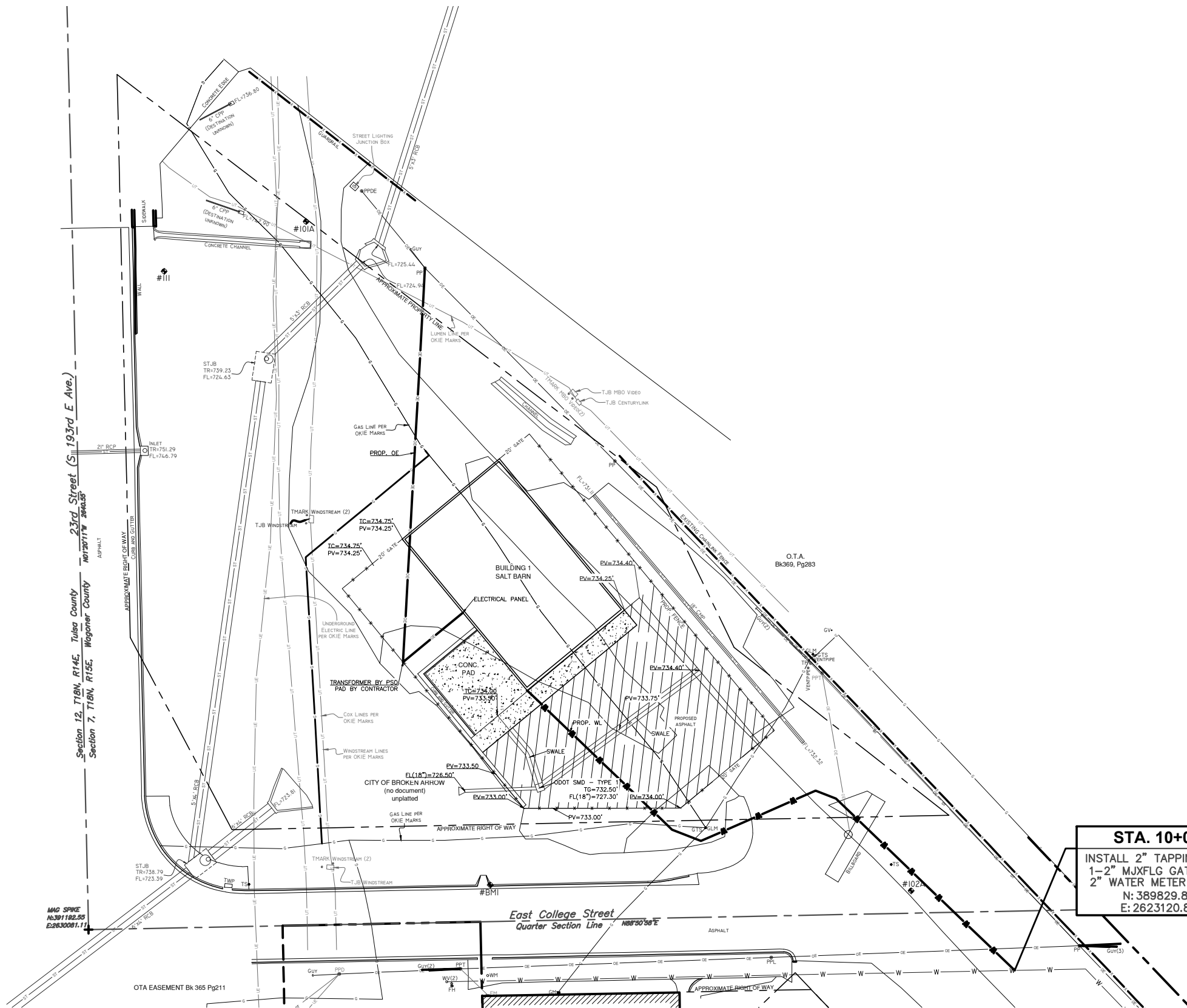


UTILITY CONTACTS

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CITY OF BROKEN ARROW, OKLAHOMA STREETS/STORMWATER, TIM WILSON 485 N. POPLAR AVE. BROKEN ARROW, OKLAHOMA 74012 (918) 259-6525	OKLAHOMA NATURAL GAS (GOV'T RELOCATIONS) ATTN: JAMES CANTRELL 5848 EAST 15TH STREET TULSA, OKLAHOMA 74112 (918) 640-5300 (CELL) JAMES.CANTRELL@ONEGAS.COM
COX COMMUNICATIONS ATTN: LAND USE & COMPLIANCE 11811 E. 51ST STREET TULSA, OK 74146 (405) 406-9894 (WORK),(833) 850-0590 TULROW@COX.NET	OKLAHOMA NATURAL GAS (EXISTING CONST.) ATTN: ZACHARY WILMOTT 5848 EAST 15TH STREET TULSA, OKLAHOMA 74112 (918) 230-2612 (CELL) ZACHARY.WILMOTT@ONEGAS.COM
KINETIC FIBER ATTN: RANDY MCCORKLE 11200 S. 225TH E. AVE. BROKEN ARROW, OKLAHOMA 74012 (918) 515-1903 (WORK) (918) 261-2918 (CELL)	AEP / PSO ATTN: JOSEPH CHEBAIBI 5223 S GARNETT ROAD TULSA, OK 74149 (918) 232-4571 (CELL) (918) 250-6249 (WORK)
METRONET COMMUNICATIONS ATTN: EMILY KIEFFNER 1117 E. LOUISVILLE ST. BROKEN ARROW, OKLAHOMA 74012 (812) 639-4426 (CELL)	AT&T ATTN: ALFORD NICHOLS 509 S. DETROIT AVE. TULSA, OK 74120 (539) 444-1069 (OFFICE) (918) 607-7028 (CELL)

LEGEND

—OE—	OVERHEAD ELECTRIC LINES
—OT—	OVERHEAD TELEPHONE LINES
—SS—	SANITARY SEWERS
—G—	GAS LINES
—W—	WATER LINES
—UT—	UNDERGROUND TELEPHONE LINES
—ST—	STORM SEWER
—UE—	UNDERGROUND ELECTRIC
—W—	PROPOSED WATER LINES
—OE—	PROPOSED OVERHEAD ELECTRIC LINES
—G—	ONG LINE GAS RELOCATION



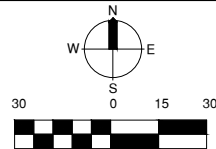
STA. 10+00.00

INSTALL 2" TAPPING SADDLE
1-2" MJXFLG GATE VALVES
2" WATER METER W/VAULT
N: 389829.8145
E: 2623120.8518

C600

ENGINEER
STAMP

DATE	REVISIONS



SALT DOME

UTILITY PLAN

PROFILE SCALE: HORZ. - VERT. -	DESIGN JT REVIEWED SM	DATE 03/2026 DATE 03/2026	DRAFTED CAL APPROVED CB	DATE 03/2026 DATE 03/2026
DRAWING NAME: C600	SHEET OF	5 9	PROJECT NO. -	

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

LOCATION MAP

LOCATION REFERENCE MAP IS PROVIDED ON THE COVER SHEET OF THESE DRAWINGS.

PROJECT DESCRIPTION:

EROSION CONTROL, INSTALLATION OF 8"Ø WATERLINE, REPLACEMENT OF SIDEWALKS AND STREETS, INSTALLATION OF SODDING.

LOCAL PROJECT CONTACT:

RENATO OCHOA
(918)–644–6493

SEQUENCE OF CONSTRUCTION ACTIVITIES

1. EROSION CONTROL
2. CLEARING AND GRUBBING
3. INSTALL 8"Ø WATER LINE, SIDEWALK AND RAMPS
4. REMOVAL OF TEMPORARY MEASURES AND SITE CLEANUP
5. INSTALL SOLID SLAB SODDING

NOTE:

THIS SHOULD INCLUDE MAJOR ACTIVITIES REQUIRED TO CONSTRUCT THE PROJECT & EROSION CONTROL ITEMS.

TOTAL DISTURBED AREA (INCLUDING OFF–SITE BORROW AND FILL AREAS) 0.07 ACRES

PRE–CONSTRUCTION RUNOFF COEFFICIENT: 0.90

POST–CONSTRUCTION RUNOFF COEFFICIENT: 0.90

SOIL DESCRIPTION: LOAMY–CLAY SOIL

RECEIVING WATERS: BROKEN ARROW CREEK

DISCHARGE FROM INDUSTRIAL ACTIVITY: N/A

DISCHARGE TO FEDERALLY PROTECTED LAND: N/A

DISCHARGE TO A 303D/THREATENED/IMPAIRED SYSTEM: N/A

HISTORICAL PROPERTIES: N/A

WETLANDS ENCOUNTERED N/A

ENDANGERED SPECIES: N/A

NOTE:

THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE CHARACTERISTICS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

TEMPORARY SEEDING _____
PERMANENT SODDING, SPRIGGING OR SEEDING X
VEGETATIVE MULCHING _____
SOIL RETENTION BLANKET _____
PRESERVATION OF EXISTING VEGETATION _____

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONST. ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS IN ACCORDANCE WITH THE OKR10.

STRUCTURAL PRACTICES:

TEMPORARY BRUSH SEDIMENT BARRIERS _____
TEMPORARY SILT FENCE X
TEMPORARY SILT DIKES _____
TEMPORARY ROLLED EROSION CONTROL X
DIVERSION, INTERCEPTOR OR PERIMETER DIKES _____
DIVERSION, INTERCEPTOR OR PERIMETER SWALES _____
SANDBAG BERMS _____
ROCK FILTER DAMS _____
TEMPORARY SLOPE DRAIN _____
PAVED DITCH W/DITCH LINER PROTECTION _____
TEMPORARY DIVERSION CHANNELS _____
RIP RAP _____
TEMPORARY STREAM CROSSINGS _____
TEMPORARY SEDIMENT BASINS _____
TEMPORARY SEDIMENT TRAPS _____
TEMPORARY SEDIMENT FILTERS X
TEMPORARY SEDIMENT REMOVAL X
INLET SEDIMENT FILTER _____
STABILIZED CONSTRUCTION ENTRANCE/EXIT _____
OTHER _____

OFFSITE VEHICLE TRACKING:

EFFECTIVE CONSTRUCTION ENTRANCE/EXIT _____
HAUL ROADS DAMPENED FOR DUST CONTROL _____
LOADED TRUCKS LEAVING SITE TO BE COVERED X
EXCESS DIRT ON ROAD REMOVED DAILY X

NOTE:

CONTRACTOR RESPONSIBLE FOR MAINTAINING EROSION/SEDIMENTATION CONTROLS (BMPS) FOR THE DURATION OF THE PROJECT.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED. INSPECTION LOGS AND PRECIPITATION RECORDS WILL BE KEPT WITH THE CONTRACTOR AND COPIES SENT TO THE OFFICE OF THE STORMWATER MANAGER, AND WILL BE AVAILABLE TO LOCAL, STATE, FEDERAL INSPECTORS.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY–PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER’S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS. CONCRETE WASH WATER/WASTE IS CONSIDERED A HAZARDOUS MATERIAL AND MUST BE CONTAINED.

PROJECT COMPLETION:

ALL TEMPORARY SEDIMENT CONTROLS ARE TO BE REMOVED AFTER THE COMPLETION OF THE PROJECT. IF RE–VEGETATION OF THE DISTURBED SOILS IS INCLUDED IN THE CONTRACT, THE PROJECT IS NOT COMPLETE UNTIL VEGETATION HAS BEEN ACHIEVED ADEQUATE COVER. ALL SOILS DISTURBED BY CONSTRUCTION ACTIVITIES ARE REQUIRED TO BE STABILIZED.

NOTES:

BEST MANAGMENT PRACTICES MANUAL:

HTTPS://WWW.BROKENARROWOK.GOV/GOVERNMENT/PUBLIC–WORKS/ENGINEERING–CONSTRUCTION/CONSTRUCTION ACTIVITY BEST MANAGEMENT PRACTICES GUIDANCE MANUAL 2023

GENERAL NOTES:

THE ENCLOSED STORMWATER POLLUTION PREVENTION PLAN (SWP3) COMPLIES WITH OPDES REGULATIONS UNDER THE CITY OF BROKEN ARROW OKR04 STORMWATER PERMIT FOR SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) OPTIONAL PERMIT FOR MUNICIPAL CONSTRUCTION ACTIVITIES ON LAND OWNED BY THE CITY THAT IS DIRECTLY CONTROLLED BY THE CITY.



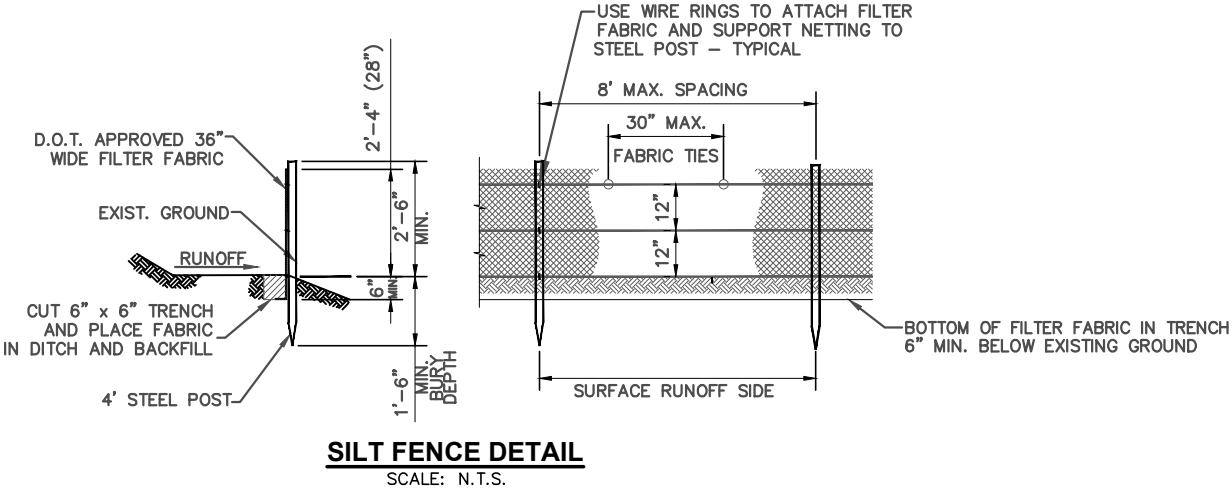
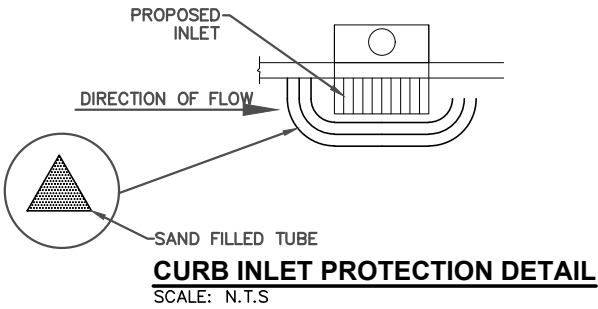
SALT DOME

STORMWATER
POLLUTION
PREVENTION PLAN

DATE	REVISIONS	DESIGN JT	DRAFTED CAL	DATE 03/2026
		REVIEWED SM	PROJECT NO. 2553230	
		APPROVED CB	SHEET OF	7 9

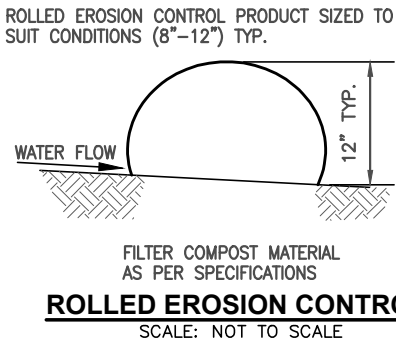
EROSION CONTROL NOTES:

- 1. SILT FENCE SHALL BE MAINTAINED AND SEDIMENT BUILD-UP REGULARLY REMOVED UNTIL PAVING OPERATIONS ARE COMPLETE AND/OR SEEDING IS IN PLACE OR 75% VEGETATION STABILIZATION IS OBTAINED.
- 2. ALL DISTURBED AREAS SHALL BE RE-VEGETATED.
- 3. ALL FLOW LINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY COMPACTED TO 95% STANDARD PROCTOR DENSITY BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES.
- 4. IN ORDER TO ALLEVIATE DUST CONDITIONS WITHIN THE CITY LIMITS DURING GRADING OPERATIONS, AND AFTER GRADING OPERATIONS ARE COMPLETED, BUT BEFORE PAVEMENT AND/OR PERMANENT EROSION CONTROL WORK IS STARTED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE CITY.
- 5. CONTRACTOR SHALL PROVIDE INLET EROSION CONTROL PROTECTION IN ACCORDANCE WITH DETAILS AS SHOWN ON THIS SHEET.
- 6. STABILIZED CONSTRUCTION SHALL BE CONSTRUCTED AND MAINTAINED DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH CITY STANDARDS.
- 7. ALL SILT FENCING SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF DISTURBED EARTH.

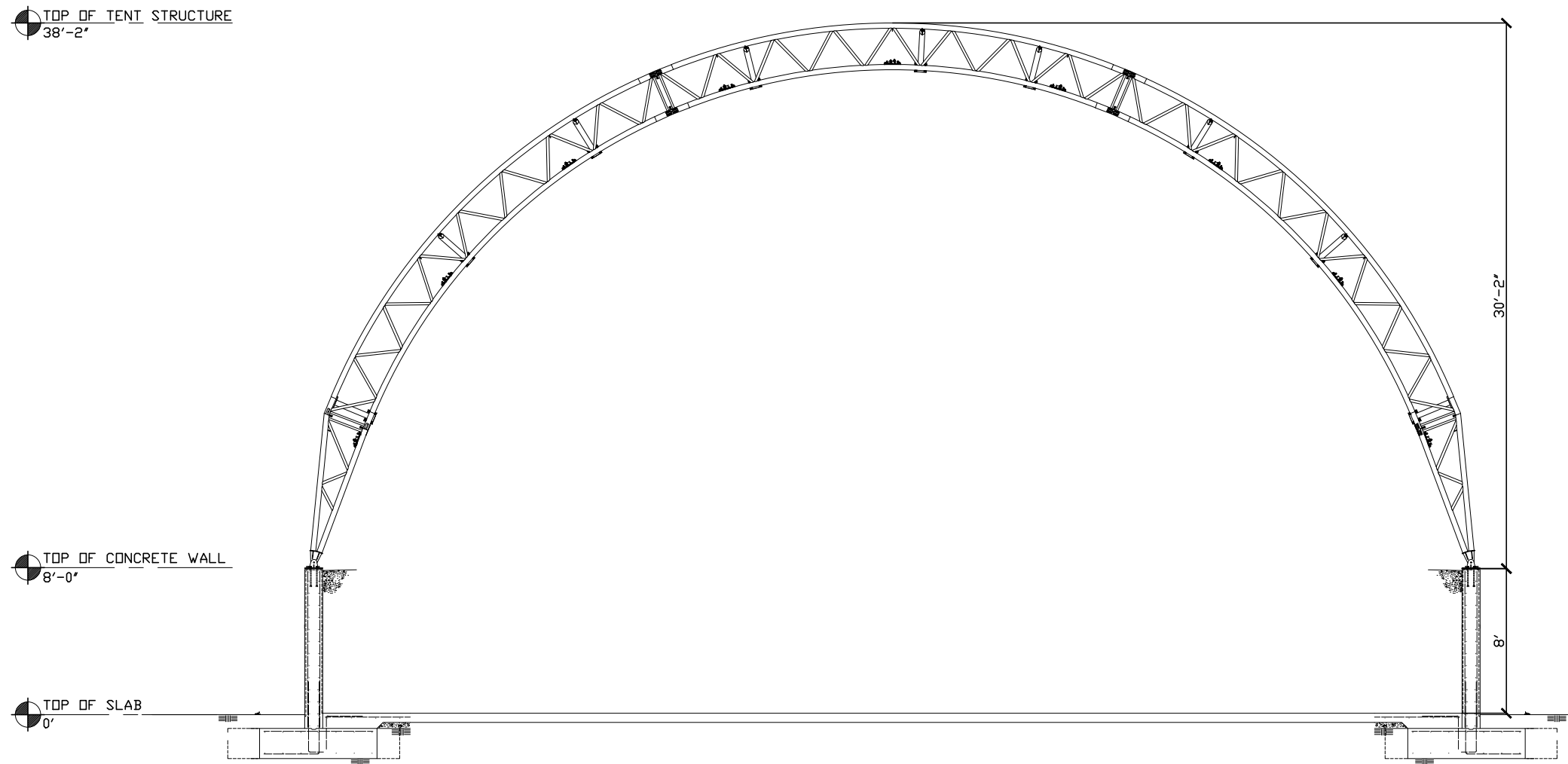


ROLLED EROSION CONTROL NOTES:

- 1. THIS DRAWING IS FOR INFORMATION PURPOSES ONLY AND NOT FOR CONSTRUCTION.
- 2. DO NOT SCALE DRAWINGS.
- 3. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
- 4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
- 5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY EACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE ENGINEER.
- 6. THE EROSION CONTROL BERM WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.
- 7. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 000-309E.



DATE	REVISIONS	DESIGN	DRAFTED	DATE
		JT	CAL	03/2026
		REVIEWED	PROJECT NO.	
		SM	2553230	
		APPROVED	SHEET	8
		CB	OF	9



① SOUTH ELEVATION
1/4" = 1'-0"

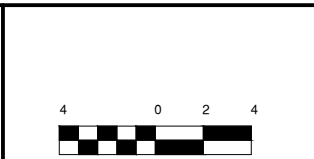
DATE	REVISIONS



CITY OF

BROKEN ARROW

Where opportunity lives



SALT DOME

EXTERIOR ELEVATIONS

PROFILE SCALE: HORZ. _____ VERT. _____ DRAWING NAME: 10	DESIGN JT	DATE 03/2026	DRAFTED CAL	DATE 03/2026
	REVIEWED SM	DATE 03/2026	APPROVED CB	DATE 03/2026
	SHEET 10 OF 10		PROJECT NO. 2553230	

10

ENGINEER
STAMP



City of Broken Arrow

Request for Action

File #: 26-1119, **Version:** 1

Broken Arrow Planning Commission
07-23-2026

To: Chair and Commission Members
From: Community Development Department
Title:

Public hearing, consideration, and possible action regarding BAZ-002954-2026 (Rezoning), Tucson28, 33.92 acres, AG (Agricultural) to CG (Commercial General), located at the northwest corner of the intersection of Tucson Street (121st Street) and Aspen Avenue (145th E Avenue)

Background:

Applicant: Michael Ledford, Cyntergy and Steve Wallman, Wallman Commercial
Owner: Tucson28 Development Partners, LLC, and Joseph Nhan Nguyen and Daisy Nguyen
Developer: Tucson28 Development Partners, LLC
Engineer: Michael Ledford, Cyntergy
Location: Northwest corner of the intersection of Tucson Street (121st Street) and Aspen Avenue (145th E Avenue)
Size of Tract 38.39 acres
Number of Lots: 2
Present Zoning: AG (Agricultural)
Proposed Zoning: CG (Commercial General)
Comp Plan: Level 6 (Regional Employment/Commercial); and FD (Greenway/Floodplain)

BAZ-002954-2026 is a request to change the zoning designation on 33.92 acres from AG (Agricultural) to CG (Commercial General) for a commercial development of approximately 42,000 square feet of retail space in addition to multiple pad sites. Commercial General zoning is allowed in Level 6. The property is located at the northwest corner of Tucson Street (121th Street) and Aspen Avenue (145th E Avenue).

In their meeting of April 19, 2016, the City Council approved a rezoning (BAZ-1956) of this site from A-1 (Agricultural) to CH (Commercial Heavy), subject to the property being platted. The property was never platted, and under the previous Zoning Ordinance, platting was required before a zone change would take effect. Therefore, an ordinance has not been prepared, and the CH zoning was never codified.

In their meeting of October 23, 2025, the Planning Commission approved a lot split (LOT-002447-2025) request to split a 0.69-acre lot from the 33.92-acre site. This current rezone request includes both the 0.69-acre lot and the 33.23-acre lot.

The Transportation Plan of the Broken Arrow NEXT Comprehensive Plan identifies a future frontage road

along the south side of the Creek Turnpike in the vicinity of this property. Other properties to the west of this site have either dedicated 80 feet of right-of-way or will be dedicating 80 feet of right-of-way to the City of Broken Arrow for the future frontage road. This project will also be required to dedicate 80 feet of right-of-way for the frontage road. The initial preliminary plat submittal shows an 80-foot right-of-way dedication; however, it does not align adequately with the existing frontage road right-of-way immediately to the west of this site.

SURROUNDING LAND USES/ZONING/COMPREHENSIVE PLAN

The surrounding properties contain the following uses, along with the following development guide and zoning designations:

Location	Comprehensive Plan	Zoning	Land Use
North	Level 6 and FD	AG	Creek Turnpike and vacant beyond
East	Level 6	CH/PUD-001818-2024	Aspen Avenue and commercial currently under construction
South	Levels 2 and FD	RS-3/PUD-181 and AG	Tucson Street, single-family residential and vacant beyond
West	Level 3 and FD	RM/PUD-307A	Floodplain, and multifamily residential

According to FEMA Maps, a portion of the west side of the property is located within the 100-year floodplain. Water and Sanitary Sewer are available from the City of Broken Arrow.

Attachments: Case Map
Aerial
Comprehensive Plan Map
Conceptual Site Layout

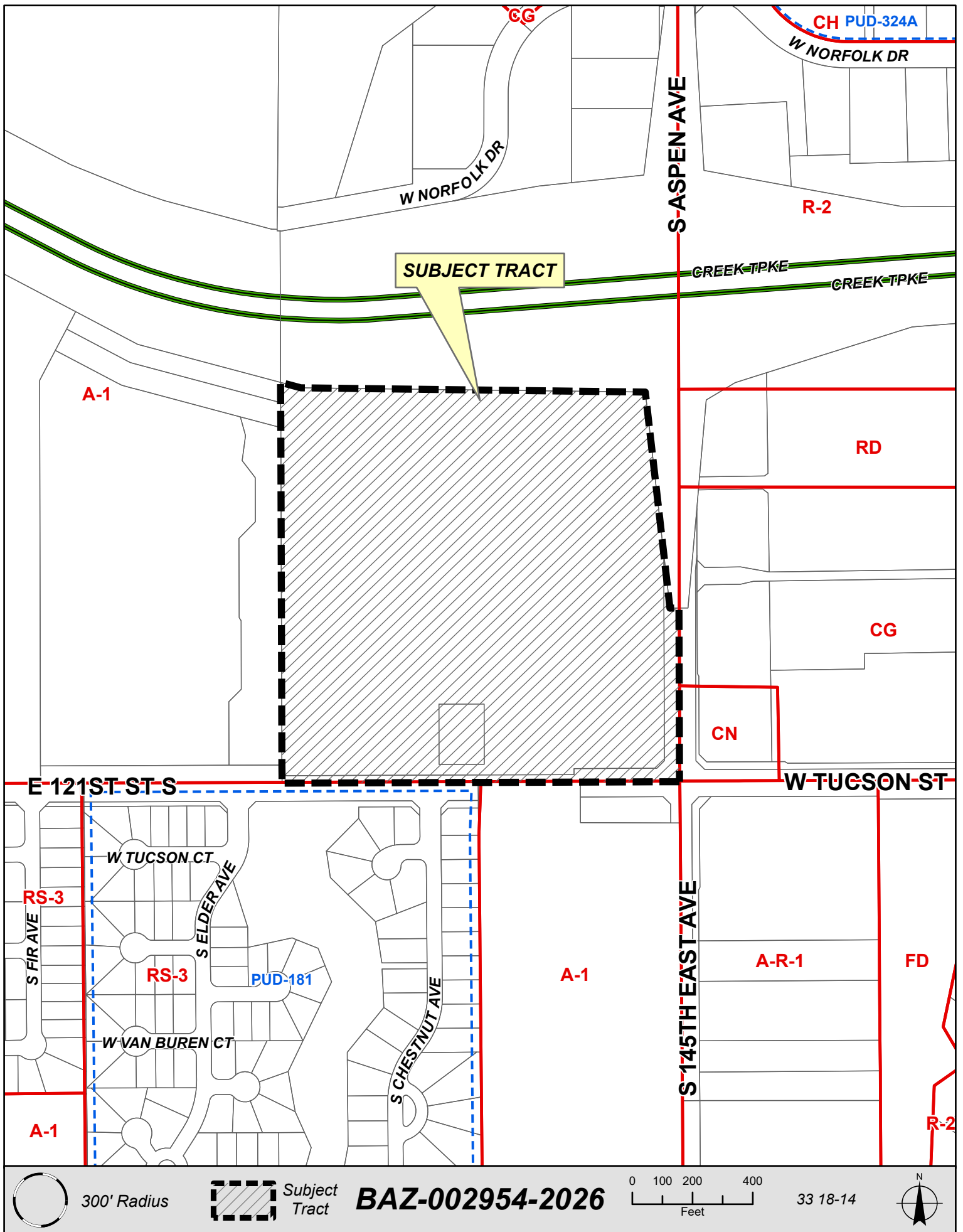
Recommendation:

Based upon the Comprehensive Plan, the location of the property, and the surrounding land uses, Staff recommends that BAZ-002954-2026 be approved.

Reviewed by: Jane Wyrick

Approved by: Rocky Henkel

JMW





SUBJECT TRACT

Note: Graphic overlays may not precisely align with physical features on the ground.
Aerial Photo Date: 2025



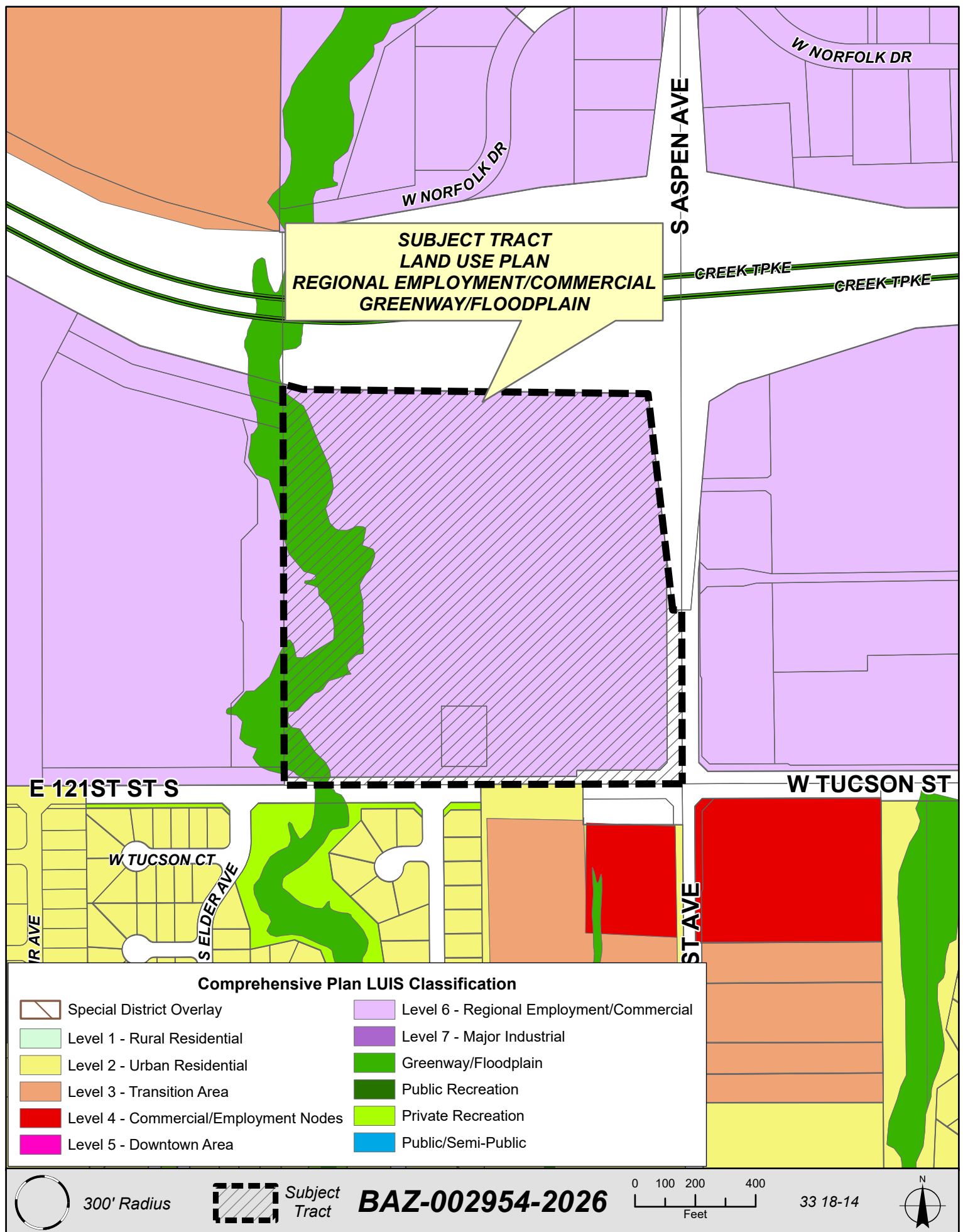
Subject
Tract

BAZ-002954-2026

0 100 200 400
Feet

33 18-14

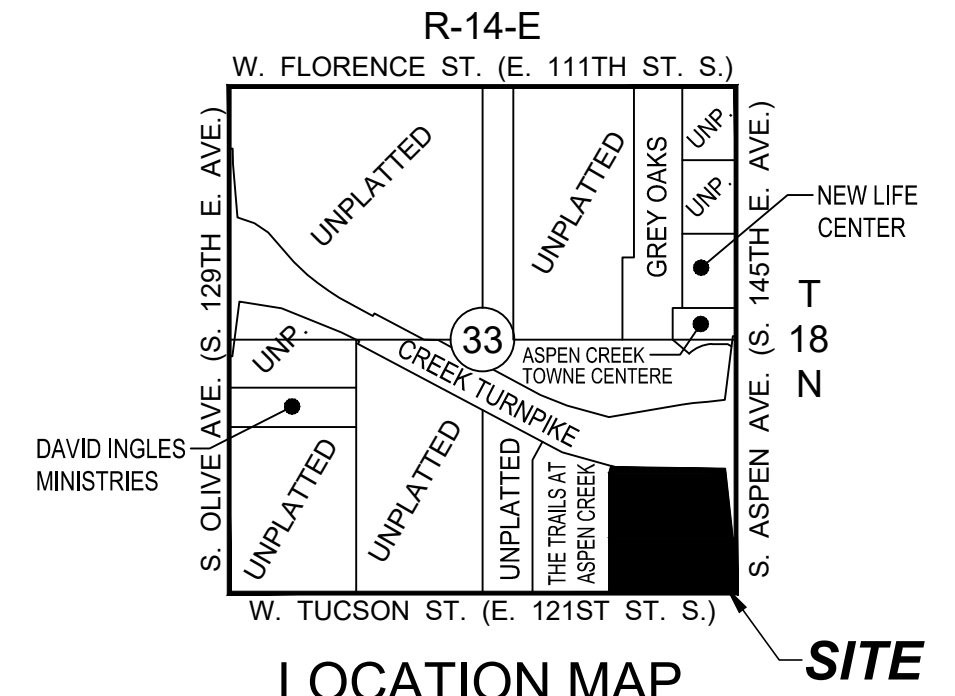




PRELIMINARY PLAT
OF
TUCSON28 PLAZA

PART OF THE EAST HALF OF THE SOUTHEAST QUARTER (E/2 SE/4) OF SECTION THIRTY-THREE (33), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA.

South Loop
Creek Turnpike
Report of Commissioners
CJ 99-44



LOCATION MAP

Scale: 1"=2000'

TULSA COUNTY
20 LOTS
1,672,228 SF / 38.3891 ACRES

FEMA FLOOD NOTE

THE PROPERTY DESCRIBED HAS BEEN EXAMINED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP NO. 40143C0452M, WITH AN EFFECTIVE DATE OF SEPTEMBER 12, 2024 FOR COMMUNITY NO. 400236, IN TULSA COUNTY, STATE OF OKLAHOMA. THE SUBJECT PROPERTY LIES WITHIN THE DESIGNATED SPECIAL FLOOD HAZARD AREA, ZONE A (WITHOUT BASE FLOOD ELEVATION) AND ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AND THE FLOODPLAIN IN SHOWN ON THE PLAT.

MONUMENT NOTE

ALL EXTERIOR PROPERTY CORNER MONUMENTS AND LOT CORNER MONUMENTS WILL BE MARKED USING A 3/8" IRON PIN WITH A PLASTIC CAP STAMPED "PLS 1893", UNLESS MONUMENT ARE PREVIOUSLY EXISTING.

BASIS OF BEARINGS

THE BASIS OF BEARING FOR THIS SURVEY IS BASED ON THE OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD83 (2011).

BENCHMARK

BENCHMARK #1	BENCHMARK #2	BENCHMARK #3
I.P.C.S.	I.P.C.S.	I.P.C.S.
N = 367,083.77	N = 367,122.31	N = 368,203.77
E = 2,613,762.32	E = 2,614,701.04	E = 2,614,509.08
EL = 652.90 NAVD88	EL = 664.89 NAVD88	EL = 678.76 NAVD88

OWNER

TUCSON28 DEVELOPMENT GROUP, LLC
7060 SOUTH YALE AVENUE, SUITE 900
TULSA, OK 74136
OFFICE: 918-481-8888
CONTACT: STEVE WALMAN

ENGINEER

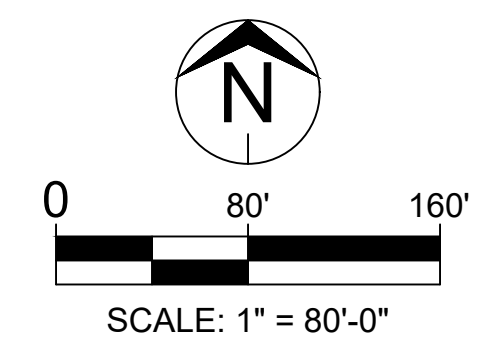
CYNERGY AEC, LLC.
810 S. CINCINNATI AVE, STE 200
TULSA, OK 74119
PHONE: (918) 877-6000
CA #3537 EXP DATE 06/30/26

SURVEYOR

TROUT LAND SURVEYING, LLC.
 807 NORTH BIRCH STREET
 JENKS, OK 74037
 (918) 234-7596
 CA #7312,
 EXPIRES 6/30/27

LEGEND

AC.	=	ACRES	L.N.A.	=	LIMITS OF NO
AVE.	=	AVENUE			ACCESS
BK	=	BOOK	MAE	=	MUTUAL ACCESS
B/L	=	BUILDING LINE			EASEMENT
C	=	CURVE	N	=	NORTH
CB	=	CHORD BEARING	PG	=	PAGE
CL	=	CHORD LENGTH	ROW	=	RIGHT OF WAY
COR.	=	CORNER	S	=	SOUTH
DOC.	=	DOCUMENT	SSE	=	SANITARY SEWER
ESMT.	=	EASEMENT			EASEMENT
E	=	EAST	ST.	=	STREET
I.P.C.S.	=	IRON PIN CONTROL SET	U/E	=	UTILITY EASEMENT
L	=	LINE	W	=	WEST

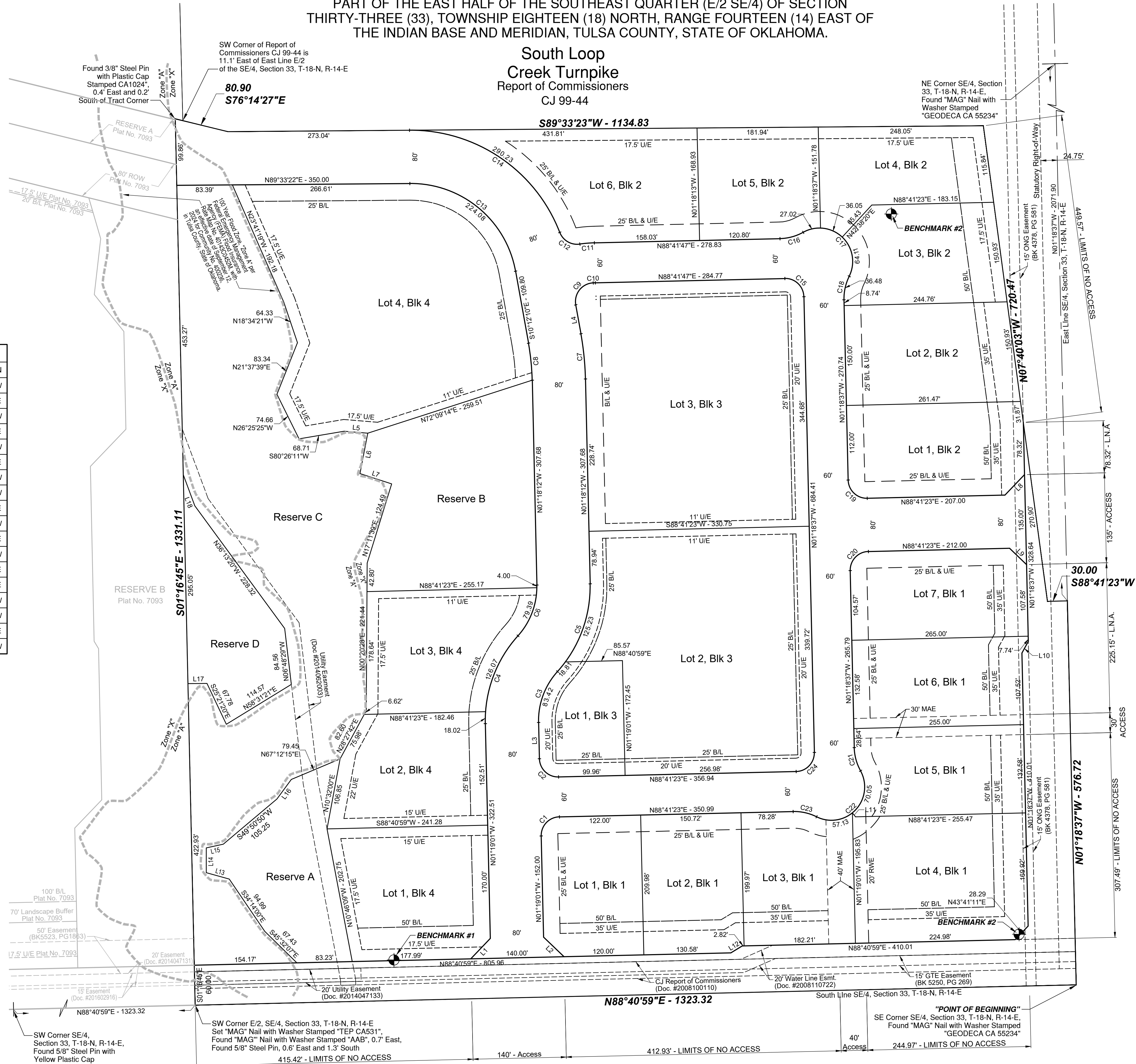


PRELIMINARY PLAT
TUCSON28 PLAZA
SHEET 1 OF 2
6/22/2026

LOT STATISTICS		
PARCEL	AREA (SF)	AREA (ACRES)
Blk 1, Lot 1	30,880.36	0.7089
Blk 1, Lot 2	31,531.90	0.7239
Blk 1, Lot 3	32,699.05	0.7507
Blk 1, Lot 4	49,193.16	1.1293
Blk 1, Lot 5	33,087.77	0.7596
Blk 1, Lot 6	33,970.60	0.7799
Blk 1, Lot 7	34,651.63	0.7955
Blk 2, Lot 1	36,425.86	0.8362
Blk 2, Lot 2	37,967.25	0.8716
Blk 2, Lot 3	33,669.26	0.7729
Blk 2, Lot 4	32,041.97	0.7356
Blk 2, Lot 5	30,052.25	0.6899
Blk 2, Lot 6	45,006.72	1.0332
Blk 3, Lot 1	20,663.10	0.4744
Blk 3, Lot 2	115,040.86	2.6410
Blk 3, Lot 3	123,826.46	2.8427
Blk 4, Lot 1	44,477.13	1.0211
Blk 4, Lot 2	37,308.35	0.8565
Blk 4, Lot 3	39,711.02	0.9116
Blk 4, Lot 4	125,044.51	2.8789
Block 1	246,014.46	5.6477
Block 2	215,163.17	4.9395
Block 3	259,530.42	5.9580
Block 4	567,323.91	13.0240
Reserve A	37,026.72	0.8500
Reserve B	67,126.42	1.5410
Reserve C	184,406.02	4.2334
Reserve D	31,863.75	0.7315
ROW Bndy	123,512.95	2.8355
ROW Plat	260,691.23	5.9846

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	42.43	S43°40'59"W
L2	42.43	S46°19'01"E
L3	54.51	N01°19'01"W
L4	44.08	S10°12'10"E
L5	35.50	N85°20'48"W
L6	61.86	N10°54'35"E
L7	50.03	N72°01'57"W
L8	42.43	S43°41'22"W
L9	35.36	S46°18'37"E
L10	20.00	S28°41'23"W
L11	7.43	S38°54'09"E
L12	20.00	S58°40'59"W
L13	35.78	S74°25'11"E
L14	37.23	S00°00'00"E
L15	26.20	S77°48'21"W
L16	36.43	S36°19'34"W
L17	28.58	N89°35'42"E
L18	49.74	N20°26'01"W

CURVE TABLE					
CURVE #	DELTA	LENGTH	RADIUS	CHORD BEARING	CHORD DISTANCE
C1	90°00'24"	43.99	28.00	S43°41'11"W	39.60
C2	89°59'36"	43.98	28.00	S46°18'49"E	39.60
C3	43°26'59"	83.42	110.00	S20°24'28"W	81.43
C4	43°26'59"	144.08	190.00	S20°24'28"W	140.66
C5	43°26'10"	144.04	190.00	N20°24'53"E	140.61
C6	43°26'10"	83.39	110.00	N20°24'53"E	81.41
C7	8°53'58"	68.34	440.00	N05°45'11"W	68.27
C8	8°53'58"	55.92	360.00	N05°45'11"W	55.86
C9	97°24'37"	47.60	28.00	S08°30'08"W	42.07
C10	1°29'21"	3.12	120.00	S87°57'07"W	3.12
C11	6°58'32"	21.91	180.00	S85°12'31"W	21.90
C12	77°07'18"	37.69	28.00	S59°43'06"E	34.91
C13	80°14'28"	224.08	160.00	N50°19'24"W	206.21
C14	69°17'11"	290.23	240.00	N55°48'02"W	272.86
C15	89°59'36"	43.98	28.00	N46°18'25"W	39.60
C16	27°52'18"	36.48	75.00	N74°45'38"E	36.13
C17	145°44'12"	127.18	50.00	N46°18'25"W	95.56
C18	27°52'18"	36.48	75.00	S12°37'32"W	36.13
C19	90°00'00"	43.98	28.00	S46°18'37"E	39.60
C20	90°00'00"	43.98	28.00	S43°41'23"W	39.60
C21	27°52'08"	36.48	75.00	S15°14'41"E	36.12
C22	145°44'15"	127.18	50.00	N43°41'23"E	95.56
C23	27°52'08"	36.48	75.00	N77°22'33"W	36.12
C24	90°00'00"	43.98	28.00	N43°41'23"E	39.60



PRELIMINARY PLAT
OF
TUCSON28 PLAZA

PART OF THE EAST HALF OF THE SOUTHEAST QUARTER (E/2 SE/4) OF SECTION
THIRTY-THREE (33), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FOURTEEN (14)
EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA.

DEED OF DEDICATION
AND
RESTRICTIVE COVENANTS

KNOW ALL MEN BY THESE PRESENTS:

TUCSON28 DEVELOPMENT PARTNERS, LLC., an Oklahoma limited liability company, hereinafter referred to as the "OWNER" are the owners of the following described land in the City of Broken Arrow, Tulsa County, State of Oklahoma, to wit:

LEGAL DESCRIPTION

PART OF THE EAST HALF OF THE SOUTHEAST QUARTER (E/2 SE/4) OF SECTION THIRTY-THREE (33), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF, LYING SOUTH OF THE SOUTHERLY LINE OF THE FOLLOWING TRACT OF LAND, TO-WIT:

A STRIP, PIECE OR PARCEL OF LAND LYING IN THE EAST HALF OF THE SOUTHEAST QUARTER (E/2 SE/4) OF SECTION THIRTY-THREE (33), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FOURTEEN (14) EAST OF THE INDIAN BASE AND MERIDIAN, TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:

BEGINNING AT THE NORTHEAST CORNER OF SAID SE/4; THENCE SOUTH 01°18'48" EAST ALONG THE EAST LINE OF SAID SECTION 33 A DISTANCE OF 2071.90 FEET; THENCE SOUTH 88°41'12" WEST A DISTANCE OF 30.00 FEET; THENCE NORTH 07°40'14" WEST A DISTANCE OF 720.47 FEET; THENCE SOUTH 89°33'12" WEST A DISTANCE OF 1134.83 FEET; THENCE NORTH 76°14'38" WEST A DISTANCE OF 69.37 FEET TO A POINT ON THE WEST LINE OF THE E/2 OF THE SE/4; THENCE NORTH 01°26'50" WEST ALONG SAID WEST LINE A DISTANCE OF 502.74 FEET; THENCE SOUTH 88°50'01" EAST A DISTANCE OF 4.13 FEET; THENCE NORTH 78°45'11" EAST A DISTANCE OF 860.65 FEET; THENCE NORTH 82°52'05" EAST A DISTANCE OF 350.14 FEET; THENCE NORTH 05°46'50" EAST A DISTANCE OF 667.34 FEET; THENCE NORTH 88°41'12" EAST A DISTANCE OF 30.00 FEET; THENCE SOUTH 01°18'48" EAST A DISTANCE OF 28.10 FEET TO THE POINT OF BEGINNING.

SAID TRACT OF LAND BEING 1,672,228 SF, 38.3891 ACRES, MORE OR LESS.

BEARINGS SHOWN HEREON ARE BASED ON THE OKLAHOMA STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD83 (2011).

As Owner, we hereby certify that we have caused the above described land to be surveyed, divided, mapped, dedicated and access right reserved as presented on the plat and has designated the subdivision as "TUCSON28 PLAZA", a subdivision in the City of Broken Arrow, Tulsa County, Oklahoma.

SECTION I. PUBLIC STREETS, EASEMENTS AND UTILITIES

- 1.1

Public Streets, General Utility Easements and Overland Drainage Easements

The Owner does hereby dedicate for public use the right-of-way of "TUCSON28 PLAZA, as depicted on the accompanying plat, and does further dedicate for public use the utility easements as depicted on the accompanying plat as "UIE" or "Utility Easement", for the several purposes of constructing, maintaining, operating , repairing, replacing, and/or removing any and all public utilities, including storm sewers, sanitary sewers, communication lines, electric power lines and transformers, gas lines, and water lines, together with all fittings, including the poles, wires, conduits, pipes, valves, meters and equipment for each of such facilities and any other appurtenances thereto, with the rights of ingress and egress to and upon the utility easements for the uses and purposes aforesaid, provided however, the Owner hereby reserves to itself, and to its assigns, the right to use or delegate to others the right to use the designated easements and rights of way to provide any of the services set forth herein, including, but not limited to the right to construct, maintain, operate, lay and re-lay water lines and sewer lines, together with the right of ingress and egress for such construction, maintenance, operation, laying and re-laying over, across and along all of the utility easements depicted on the plat for the purpose of furnishing water and/or sewer services to the area including in the plat. The Owner does hereby dedicate for public use the overland drainage easements as depicted on the accompanying plat as "ODE", for several purposes of permitting the flow, conveyance, detention and discharge of storm water runoff rom the various lots within TUCSON28 PLAZA. The Owner herein imposes a restrictive covenant, which covenant shall be binding on each lot owner and shall be enforceable by the City of Broken Arrow, Oklahoma, and by the supplier of any affected utility service, that within the streets and utility easements depicted on the accompanying plat. No building structure or other above or below ground obstruction that interferes with the above set forth uses and purposes of a street or easement shall be placed, erected, installed or maintained, provided however, nothing herein shall be deemed to prohibit drives, parking areas, curbing, landscaping and customary screening fences and walls.
- 1.2

Underground Service

1.2.1 Overhead poles may be located along the perimeter of the subdivision as necessary. If located in utility easements, for the purpose of the supply of underground service. Street light poles or standards may be served by underground cable, and except as provided in the immediately preceding sentence, all electric and communication supply lines shall be located underground, in the easement-ways reserved for general utility services and streets, shown n the attached plat. The owner does hereby restrict the utility easements shown and designated on the accompanying plat to a single supplier of electrical service.

1.2.2 All supply lines in the subdivision including electric, communication lines and gas lines shall be located underground in the easements reserved for general utility services and streets shown on the plat of the subdivision. Service pedestals and transformers, as source of supply at secondary voltages, may also be located in said easements.

1.2.3 Underground service cables and gas service lines to all structures which may be located on all lots in the subdivision may be run from the nearest gas main, service pedestal or transformer to the point of usage determined by the location and construction of such structures as may be located upon each said lot; provided that upon the installation of such a service cable or gas service line to a particular structure, the supplier of service shall hereafter be deemed to have a definitive, permanent, and effective right-of-way easement on said lot, covering a five-foot strip extending 2.5 feet on each side of such service cable or line, extending from the service pedestal, transformer or gas main to the service entrance on the structure or a point of metering.

1.2.4 The supplier of electric, communication lines and gas services, through its authorized agents and employees, shall at all times have right to access to all such easements shown on the plat to the subdivision or provided for in this deed of dedication for the purpose of installing, maintaining, removing or replacing any portion of the underground electric, communication

lines or gas service facilities so installed by it. The supplier of electric, communication lines also reserve the perpetual right, privilege and authority to cut down, trim, or treat any trees and undergrowth on said easement.

- 1.2.5

The owner of each lot in the subdivision shall be responsible for the protection of the underground electric facilities located on his property and shall prevent the alteration of grade or any construction activity which may interfere with said electric, communication line or gas facilities. The supplier of service will be responsible for ordinary maintenance of underground facilities, but the owner of each lot in the subdivision will pay for damage or relocation of such facilities caused or necessitated by acts of such owner or his agents or contractors. The foregoing covenants concerning underground facilities shall be enforceable by the supplier of electric, communication line or gas service.
- 1.3

Water and Sewer Service

1.3.1 The owner of each lot shall be responsible for the protection of the public water mains and of the public sanitary sewer facilities located on their lot and shall prevent the alteration of grade or any construction activity which may interfere with said public water main, public sanitary sewer main or storm sewer within the utility easement areas depicted on the accompanying plat. The alteration of grade from the contours existing upon the completion of the installation of a public water main or sewer main, or any construction activity which would interfere with public water and sewer mains, shall be prohibited.

1.3.2 The City of Broken Arrow, or its successors, will be responsible for ordinary maintenance of public water mains or public sewer mains, but the owner of each lot will pay for damage or relocation of such facilities cause or necessitated by acts of the owner or his agents or contractors.

1.3.3 The City of Broken Arrow, or its successors through its proper agents and employees shall at all times have right of access with their equipment to all such easement-ways shown on said plat, or provided for in this deed of dedication for the purpose of installing, maintaining, removing, or replacing any portion of said underground water and sewer facilities.

1.3.4 The foregoing covenants concerning water and sewer facilities shall be enforceable by the City of Broken Arrow or its successors, and the owner of each lot agrees to be bound hereby.
- 1.4

Surface Drainage

Each lot shall receive and drain, in an unobstructed manner, the storm and surface waters from lots and drainage areas of higher elevation and from streets and easements. No lot owner shall construct or permit to be constructed any fencing or other obstructions which would impair the drainage of the storm and surface waters over and across his lot. The forgoing covenants set forth in this subsection shall be enforceable by any affected lot owner and by the City of Broken Arrow, Oklahoma.
- 1.5

Limits of No Access

The undersigned Owner hereby relinquishes rights of vehicular ingress or egress from any portion of the property adjacent to South Aspen Avenue and West Tucson Street as "Limits of No Access" (L.N.A.) on the accompanying plat, which "Limits of No Access" may be amended or released by the Broken Arrow Planning Commission, or its successors, or as otherwise provided by the statutes and laws of the State of Oklahoma pertaining thereto.
- 1.6

Paving and Landscaping within Easements

The owner of the lot shall be responsible for repair of damage to the landscaping and paving occasioned by the necessary installation of, or maintenance, to the underground water, sanitary sewer, storm sewer, gas, communication line or electric facilities within the easements depicted on the accompanying plat, provided however, that the City of Broken Arrow or he supplier of the utility service shall use reasonable care in the performance of such activities.
- 1.7

Storm Sewer

1.7.1 The City of Broken Arrow, or its successors, through its proper agents and employees, shall at all times have right of access with their equipment to all storm sewer easements for the purpose of installing, maintaining, removing or replacing any portion of the underground storm sewer system.

1.7.2 No permanent fence, permanent wall, permanent building, or permanent structure which would cause an obstruction shall be placed or maintained in the storm sewer easement area, and any construction activity which would interfere with the storm sewer system shall be prohibited.

1.7.3 The City of Broken Arrow, or its successors, shall be responsible for ordinary maintenance of the public storm sewer system, but the owner of each lot will pay for damage or relocation of such system caused or necessitated by acts of the owner of each lot or its agents or contractors.

1.7.4 The foregoing covenants concerning the public storm sewer system shall be enforceable by the City of Broken Arrow, or its successors, and the owner of each lot agrees to be bound hereby.

1.7.5 The owner of each lot shall be responsible for the protection of the storm sewer located on their lot and shall prevent the alteration of grade or any construction activity which may interfere with said storm sewer. Within the utility easement areas depicted on the accompanying plat, the alteration of grade from the contours existing upon the completion of the installation of storm sewer, or any construction activity which would interfere with the storm sewer, shall be prohibited.
- 1.8

Fence and Landscape Easement

The Owner herein established and reserves for subsequent conveyance to the homeowner's association to be formed pursuant to Section V, a perpetual exclusive easement to erect and maintain fencing walls, and landscaping along the boundaries of the subdivision adjacent to South Aspen Avenue and West Tucson Street within the fence easements depicted on the accompanying plat as "F&L/E".
- 1.9

Mutual Access Easement (Private Streets)

All streets within the Mutual Access Easement are by grant of the Owner as private streets for the common use and benefit of the owners of the residential lots within TUCSON28, all owners, guests and invitees, for the purpose of providing vehicular and pedestrian access to and from the various residential lots to and from public streets, and is reserved for subsequent conveyance to a homeowners association to be formed for the purposes of administrative and maintenance of the private streets and other common areas of the subdivision.
- The Owner hereby grants to the City of Broken Arrow, Oklahoma, the United States Postal Service, and any public utility providing utility service to the subdivision, and to any refuse collection service which provides service within the subdivision, the right to enter and traverse

the private streets and to operate thereon all service, emergency and government vehicles including, but not limited to, police and fire vehicles and equipment.

The Owner, for itself and its successors, herein covenants with the City of Broken Arrow, Oklahoma, which covenants shall run with the land and inure to the benefit of the City of Broken Arrow, Oklahoma, and shall be enforceable by the City of Broken Arrow, Oklahoma, to:

- 1.9.1

Construct and maintain street surfacing extending the full length of the private streets depicted within the accompanying plat, and meeting or exceeding the following standards:
- 1.9.1.1

Surfacing width shall not be less than 22' measured from edge of pavement to edge of pavement;
- 1.9.1.2

Gutters, base and paving materials shall be of a quality and thickness meeting the now existing standards of the City of Broken Arrow, Oklahoma for minor residential streets;
- 1.9.1.3

The vertical grade of the streets shall not exceed 10%.
- 1.9.2

Prohibit the erection of any arch or similar structure over any private streets as depicted on the accompanying plat which would prohibit any governmental vehicle, specifically any fire ehicle, from free usage of the private streets.

SECTION II. RESERVE AREAS

- 2.1

Use of Land

2.1.1 Reserve Area "A", "B", "C" & "D" (Overland Drainage, Open Space and Utility Easement)

2.1.2 If for the common use and benefit of the owners of lots within the subdivision and for the benefit of the City of Broken Arrow, Oklahoma, the Owner does hereby establish and grant perpetual easements on, over and across Reserves "A", "B", "C" and "D" for the purposes of permitting the flow, conveyance, and discharge of storm water runoff from the various lots within TUCSON28 PLAZA.

2.1.2.2 In the event the Homeowners' Association obligated to maintain Reserves "A", "B", "C" and "D" after completion of the maintenance and receipt of a statement of costs, fails to pay the cost of maintenance applicable to Reserves "A", "B", "C" and "D", as above set forth, the City of Broken Arrow, Oklahoma may file of record a copy of the statement of costs and thereafter the costs shall be a lien against each residential lot within TUCSON28 PLAZA, provided however, the lien against each residential lot shall be limited to 1/38 of lots of the costs. The City of Broken Arrow or the Public Works Department may then collect such costs by adding such costs to the commercial lot owners' water billing fees within TUCSON28.

2.1.2.6A lien established as above provided may be foreclosed by the City of Broken Arrow, Oklahoma.

2.1.2.7 In addition to the above described purposes and restrictions of Reserves "A", "B", "C" and "D", this area shall additionally serve as recreational open space and be used for utility easements, landscaping, signage, and fencing for the residents of TUCSON28 PLAZA. Upkeep and general maintenance of Reserves "A", "B", "C" and "D", shall be in strict accordance with the above listed standards. All costs incurred for upkeep and general maintenance of Reserves "A", "B", "C" and "D", shall be borne by the Tucson28 Homeowners' Association, as set forth within SECTION IV' herede.
- 2.2

All Reserves

2.2.1 All costs and expenses associated with all reserves, including maintenance of various improvements and recreational facilities will be the responsibility of the Homeowners' Association. See SECTION IV for additional details and requirements.

2.2.2 In the event the Homeowners' Association should fail to properly maintain the detention easement areas and facilities thereon located as above provided, the City of Broken Arrow, Oklahoma, or its designated contractor may enter the detention easement areas and perform such maintenance, and the cost thereof shall be paid by the Homeowners' Association.

2.2.3 In the event the Homeowners' Association fails to pay the cost of said maintenance after completion of the maintenance and receipt of a statement of costs, the City of Broken Arrow, Oklahoma may file or record a copy of the statement of costs, and thereafter the costs shall be a lien against each of the lots within the development. Such costs of maintenance shall become a lien on all the commercial lots as hereinafter defined, which may be foreclosed by the City of Broken Arrow, Oklahoma or the Public Works Department may add such billing prorate upon the residential lot owners' water bill, which method of collection shall be determined by the City of Broken Arrow, Oklahoma.

SECTION III. HOMEOWNERS' ASSOCIATION

- 3.1

Formation of Homeowners' Association

The Owner/Developer has formed or caused to be formed TUCSON28 Plaza Homeowners' Association, Inc., (hereinafter the "Homeowners' Association"), consisting of all owners of commercial lots with "TUCSON28 PLAZA", established in accordance with the statutes of the State of Oklahoma for the general purposes of maintaining the common areas and enhancing the value, desirability, and attractiveness of "TUCSON28 PLAZA." The Homeowners' Association is responsible for the maintenance of the common areas.
- 3.2

Membership

Every person or entity who is a record owner (herein referred to as a "lot owner") of the fee interest of a residential lot platted as part of "TUCSON28 PLAZA" subdivision, shall be a member of the "Homeowners' Association" for maintenance of common areas with "TUCSON28 PLAZA." Membership shall be appurtenant to may not be separated from the ownership of a lot.
- 3.3

Covenant for Assessments

Each lot owner, by acceptance of a deed to such lot, is deemed to covenant and agree to pay to the "Homeowners' Association" assessments to be established by the Owner/Developer in accordance with this Deed of Dedication and restrictive Covenants or any subsequent declaration that is executed and recorded by the Owner/Developer or by the Board of Directors, in accordance with the Bylaws of the "Homeowners' Association", as the case may be. An assessment shall be a lien on the lot against which it is made, but the lien shall be subordinate to the lien of any first mortgage. Assessments not paid within thirty (30) days of the date that notification of the assessment is delivered electronically or mailed to a lot owner, shall accrue interest at the rate of 18% per annum. The lien may be foreclosed in the same manner as a mortgage lien. The "Homeowners' Association" shall be entitled to recover all court costs and other costs of foreclosure, including reasonable attorney fees.

SECTION IV. ENFORCEMENT, DURATION, AMENDMENT AND SEVERABILITY

5.1 Enforcement

The restrictions herein set forth are covenants to run with the land and shall be binding upon the undersigned Owner, its grantees, successors and assigns. Within the provisions of Section I. Public Streets, Easements and Utilities are set forth certain covenants and the enforcement rights pertaining thereto, and additionally the covenants within Section I whether or not specifically therein so stated shall inure to the benefit of and shall be enforceable by the "City of Broken Arrow". If the undersigned Owner/Developer, or its successors or assigns, shall violate any of the covenants, it shall be lawful for the Homeowners' Association, or any owner of a lot to maintain any action at law or in equity against the person or persons violating or attempting to violate any such covenant, to prevent him or them from so doing or to compel compliance with the covenant. In any judicial action brought by the "Homeowners' Association", or a lot owner which action seeks to enforce the covenants or restrictions set forth herein or to recover damages for the breach thereof, the prevailing party shall be entitled to recover reasonable attorney fees and costs and expenses incurred in such action.

5.2 Duration

These restrictions, to the extent permitted by applicable law, shall be perpetual but in any event shall be in force and effect for a term of not less than thirty (30) years from the date of the recording of this Deed of Dedication and shall automatically be extended thereafter for successive periods of ten (10) years each unless terminated or amended as hereinafter provided.

5.3 Amendment

The covenants contained within Section I. Public Streets, Easements and Utilities and Section II, Reserve Areas, may be amended or terminated at any time by a written instrument signed and acknowledged by the owner of the land to which the amendment or termination is to be applicable and approved by the City of Broken Arrow Planning Commission, or its successors and the "City of Broken Arrow". The provisions of any instrument amending or terminating covenants as above set forth shall be effective from and after the date it is properly recorded.

5.4 Severability

Invalidation of any restriction set forth herein, or in any part thereof, by an order, judgement, or decree of any Court, or otherwise, shall not invalidate or affect any of the other restrictions or any part thereof as set forth herein, which shall remain in full force and effect.

IN WITNESS WHEREOF: "TUSCON28 DEVELOPMENT PARTNERS, LLC", an Oklahoma limited liability company executed this instrument this ____ day of _____, _____.

"TUSCON28 DEVELOPMENT PARTNERS, LLC"
an Oklahoma limited liability company

Steve Walman
State of Oklahoma)
) s.s.
County of Tulsa)

Before me, the undersigned, a notary in and for said county and state on this ____ day of _____, personally appeared Steve Walmanl, Managing member of "TUSCON28 DEVELOPMENT PARTNERS, LLC" an Oklahoma limited liability company acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and seal the day and year last above written.

"name of notary", Notary Public My Commission No. "xxxxxxx" expires "month" "day" "year".

CERTIFICATE OF SURVEY

I, E. Dane Trout, of "Trout Land Surveying, LLC" a professional land surveyor registered in the State of Oklahoma, herby certify that I have carefully and accurately surveyed, subdivided, and platted the tract of land described above, and that the accompanying plat designated herein as "TUCSON28 PLAZA" a subdivision in the city of Broken Arrow, Tulsa County, State of Oklahoma, is a representation of the survey made on the ground using generally accepted land surveying practices and meets or exceeds the Oklahoma Minimum Standards for the Practice of Land Surveying as adopted.

Witness my hand and seal this ____ day of _____, _____.

State of Oklahoma)
) s.s
County of Tulsa)

Before me the undersigned, a notary public in and for said county and state, on this ____ day of _____, personally appeared, E. Dane Trout, to me known to be the identical person who subscribed his name as a Registered Professional Land Surveyor to the foregoing Certificate of Survey and acknowledgement to me that he executed the same as his free and voluntary act and deed for the the uses and purposes therein set forth.

"name of notary", Notary Public My Commission No. "xxxxxxx" expires "month" "day" "year".



City of Broken Arrow

Request for Action

File #: 26-1134, **Version:** 1

Broken Arrow Planning Commission
07-23-2026

To: Chair and Commission Members
From: Community Development Department
Title:

Public hearing, consideration, and possible action regarding PUD-002953-2026 and BAZ-002952-2026, Creekside Commercial, 101.90 acres, AG (Agricultural) and CH (Commercial Heavy) to CH (Commercial Heavy), IL (Industrial light), RMF (Residential multifamily), and RS-C (Single-family residential - Compact), located south of East Kenosha Street (71st Street), north of East Houston Street (81st Street), one-half mile east of 37th Street (209th E Ave), and along the east boundary of the Creek Turnpike (SH-364)

Background:

Applicant: Purvi Patel, Wallace Design Collective

Owner: Broken Arrow Investments, LLC

Developer: Kenosha Development, LLC

Engineer: Nicole Watts, Wallace Design Collective

Location: South of East Kenosha Street (71st Street), north of East Houston Street (81st Street), one-half mile east of 37th Street (209th E Ave), and along the east boundary of the Creek Turnpike (SH-364)

Size of Tract 101.90

Present Zoning: Agricultural (AG) and Commercial Heavy (CH)

Proposed Zoning: CH, IL, RMF and RS-C and PUD-002953-2026

Comp Plan: Level 6, Level 3, Level 2 - via COMP-002721-2026

PUD-002953-2026 and BAZ-002952-2026 are a Planned Unit Development (PUD) and rezoning request on approximately 101.90 acres of vacant land to the north of East Houston Street (81st Street) and east of the Creek Turnpike (SH-364). COMP-002721-2026, a request to change the comprehensive plan on the southern portion of the property from Level 6 (Regional Commercial/Employment) to Level 3 (Transitional Area) and Level 2 (Urban Residential). This request was approved at the May 19, 2026 meeting of the Broken Arrow City Council. This amendment is not yet reflected within the attached Comprehensive Plan Map.

The proposed development outline for PUD-002953-2026 details four development areas with different zoning and allowed uses. Exhibit 'E' within the development outline shows the division of the property into the four development areas. Development Area A, located in the northwestern portion, focuses on commercial uses surrounding the central jurisdictional stream and waterway. Development Area B, situated in the northeastern portion, is dedicated to industrial uses, utilizing its southernmost lots to serve as a critical transitional buffer into adjacent residential zones. Development Area C, occupying the southwestern portion, is reserved for either a high-density multi-family development or supportive commercial uses. Development Area D, located in the

southeastern portion, is designated exclusively for single-family compact residential housing.

The site is bisected by an existing jurisdictional stream and waterway which will serve as the backbone for a communal open space for residents and visitors. This open space will include trails and other sidewalk connections to facilitate travel and recreation. The site is also proposed to be served by a collector style road connecting from Kenosha Street to Houston Street.

Attachments: Case Map

Aerial

Comprehensive Plan Map

Development Outline

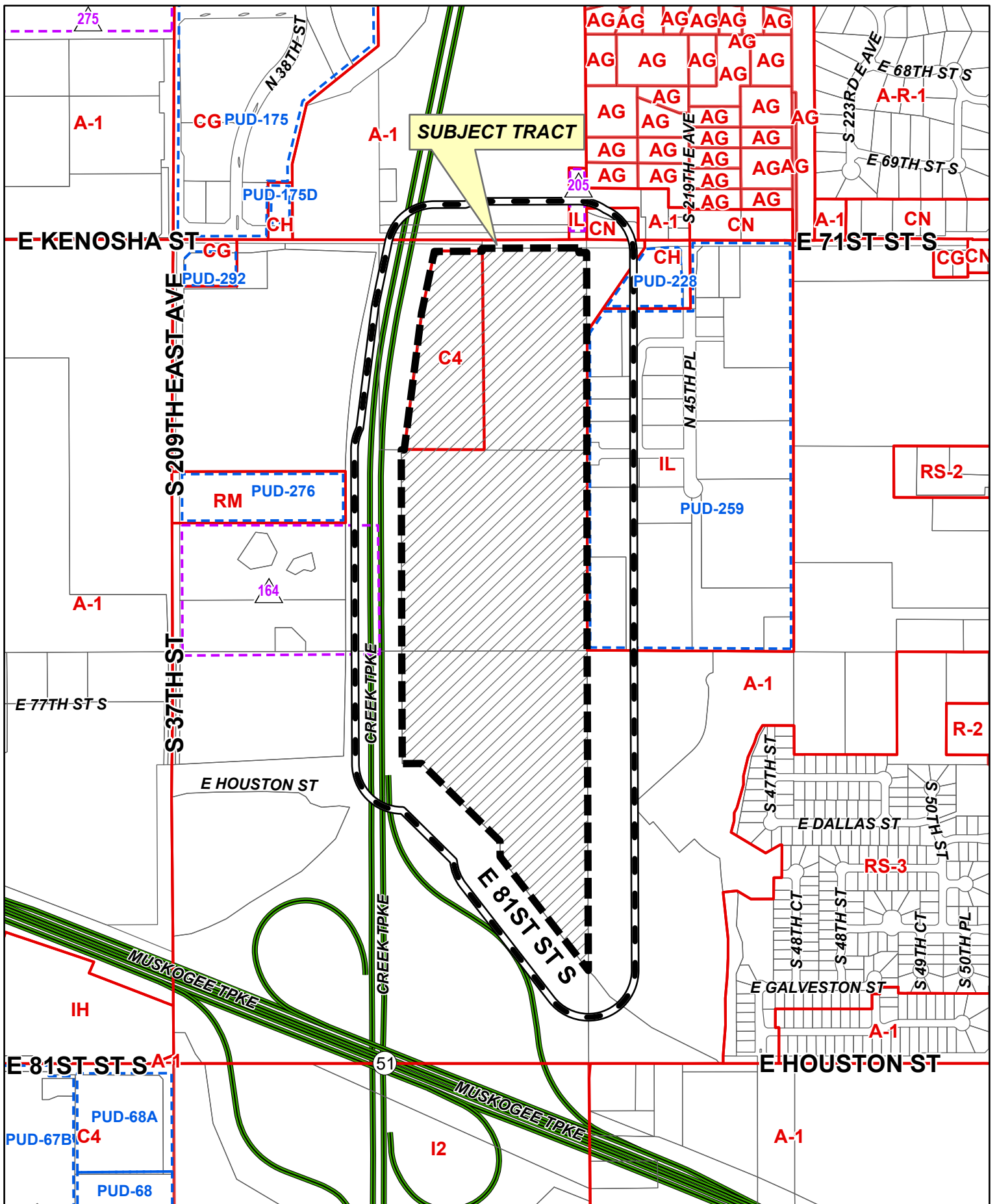
Recommendation:

Based upon the location of the property, surrounding land uses, existing and planned transportation infrastructure, Staff recommends that PUD-002953-2026 and BAZ-002952-2026 be recommended for approval.

Reviewed by: Jane Wyrick

Approved by: Rocky Henkel

JAJ



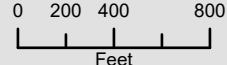


Note: Graphic overlays may not precisely align with physical features on the ground.
Aerial Photo Date: 2025



Subject
Tract

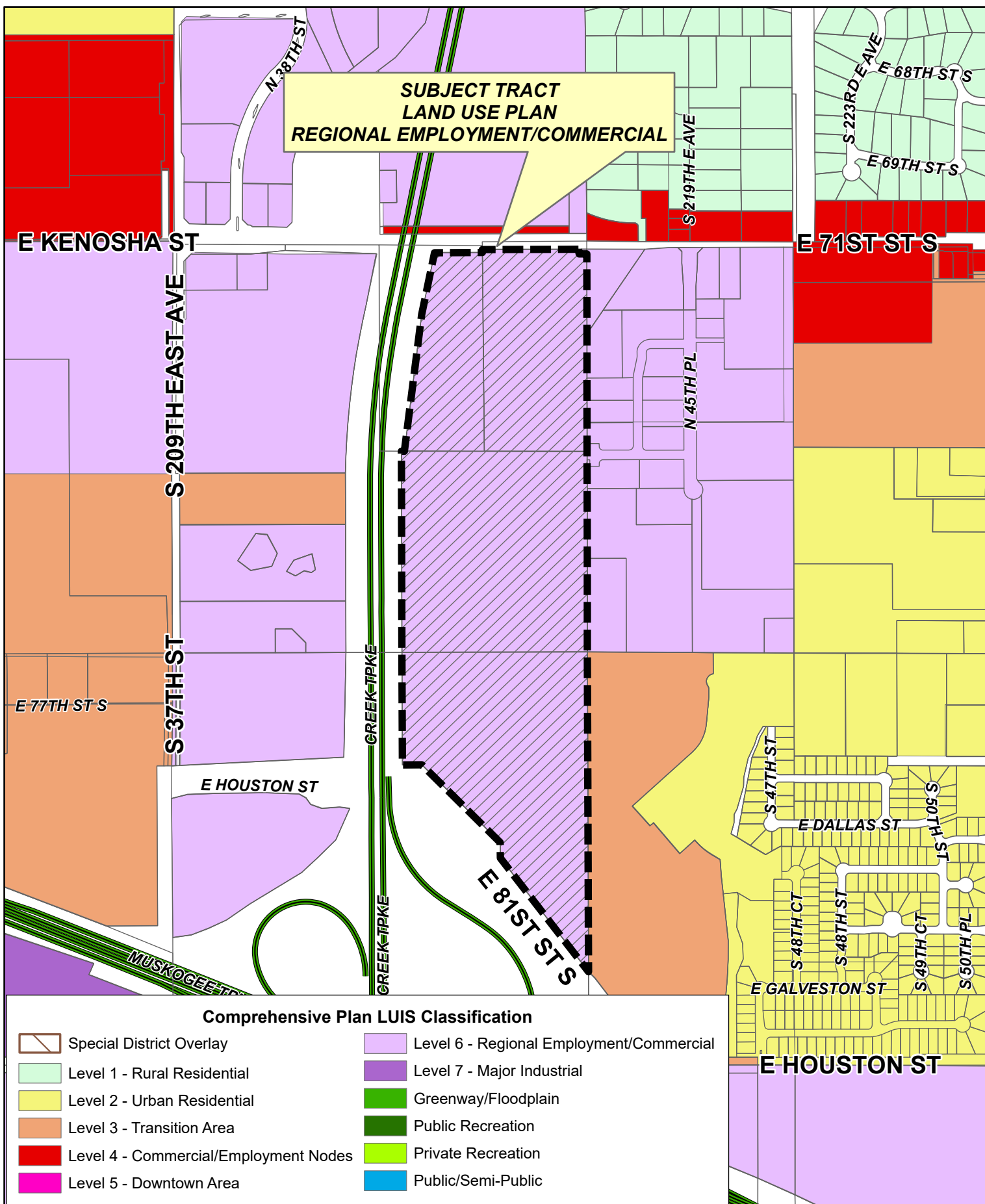
PUD-002953-2026



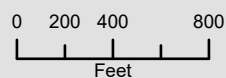
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**SUBJECT TRACT
LAND USE PLAN
REGIONAL EMPLOYMENT/COMMERCIAL**



PUD-002953-2026



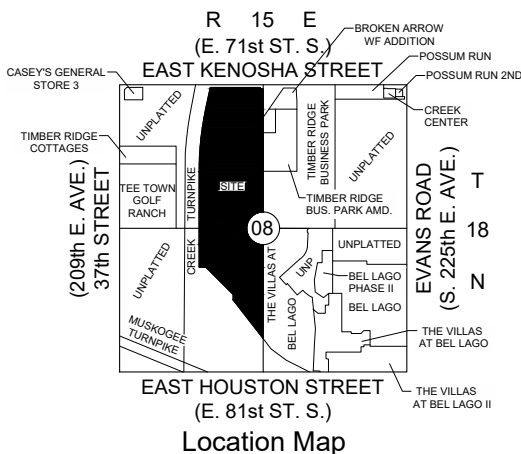
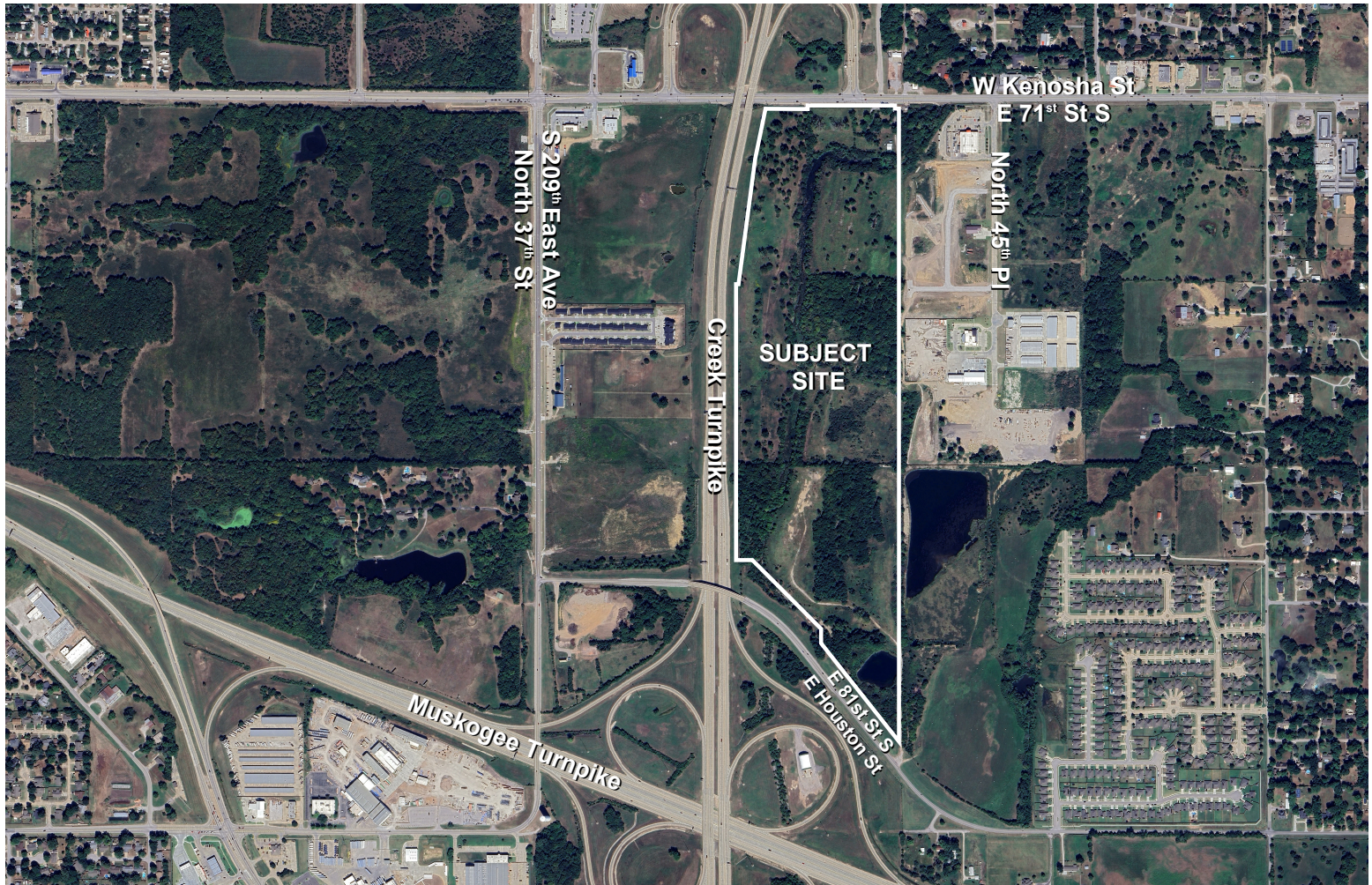
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PUD-002953-2026

Creekside Commercial Master Plan Planned Unit Development

A TRACT OF LAND THAT IS PART OF THE NORTHWEST QUARTER (NW/4) AND THE SOUTHWEST QUARTER (SW/4) OF SECTION EIGHT (8), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FIFTEEN (15) EAST OF THE INDIAN BASE AND MERIDIAN, CITY OF BROKEN ARROW, WAGONER COUNTY, STATE OF OKLAHOMA, MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT: COMMENCING (P.O.C.) AT THE NORTHWEST CORNER OF SAID SECTION, THENCE N88°40'19"E ALONG SAID SECTION FOR A DISTANCE OF 1669.56 FEET TO A POINT; THENCE S01°19'41"E FOR A DISTANCE OF 50.00 FEET TO A POINT ON THE SOUTHERLY R/W LINE OF EAST 71ST STREET, SAID POINT BEING AN EASTERLY LINE OF THE CREEK TURNPIKE R/W AND THE POINT OF BEGINNING (P.O.B.); THENCE N88°40'19"E FOR A DISTANCE OF 921.45 FEET; THENCE S10°47'48"E FOR A DISTANCE OF 30.41 FEET; THENCE N88°40'19"E FOR A DISTANCE OF 48.43 FEET; THENCE S01°20'04"E FOR A DISTANCE OF 2563.12 FEET TO A POINT THAT IS THE SOUTHWEST CORNER OF TIMBER RIDGE BUSINESS PARK; THENCE S01°20'07"E FOR A DISTANCE 2021.25 FEET TO A POINT ON THE NORTHERLY R/W OF SAID CREEK TURNPIKE; THENCE N39°14'29"W FOR A DISTANCE OF 896.77 FEET; THENCE N01°58'57"W FOR A DISTANCE OF 99.96 FEET; THENCE N46°31'50"W FOR A DISTANCE OF 704.94 FEET; THENCE S89°34'23"W FOR A DISTANCE OF 126.14 FEET TO A POINT ON THE EASTERLY LINE OF THE CREEK TURNPIKE R/W; THENCE N01°23'27"W FOR A DISTANCE OF 717.93 FEET; THENCE N01°22'52"W FOR A DISTANCE OF 893.08 FEET; THENCE N01°22'52"W FOR A DISTANCE OF 145.51 FEET; THENCE ON A CURVE TO THE RIGHT WITH A RADIUS OF 5554.58 FEET, AN ARC LENGTH OF 281.52 FEET, AN ARC ANGLE OF 02°54'14", A CHORD DISTANCE OF 281.49 FEET AND A CHORD BEARING OF N00°05'01"E; THENCE ON A CURVE TO THE RIGHT WITH A RADIUS OF 5554.58 FEET, AN ARC LENGTH OF 884.91 FEET, AN ARC ANGLE OF 09°07'40", A CHORD DISTANCE OF 883.97 FEET AND A CHORD BEARING OF N06°01'25"E; THENCE N10°49'45"E FOR A DISTANCE OF 402.64 FEET TO THE POINT OF BEGINNING (P.O.B.). SAID TRACT 101.96 ACRES, MORE OR LESS.



OWNER

WOLF CREEK ESTATES LLC
520 N 45TH PLACE
BROKEN ARROW, OK 74014

APPLICANT

WALLACE DESIGN COLLECTIVE, PC
123 N MARTIN LUTHER KING JR BLVD
TULSA, OK 74103



NORTH
JULY 2026



wallace
design
collective 181

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I. LEGAL DESCRIPTION:

A TRACT OF LAND THAT IS PART OF THE NORTHWEST QUARTER (NW/4) AND THE SOUTHWEST QUARTER (SW/4) OF SECTION EIGHT (8), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FIFTEEN (15) EAST OF THE INDIAN BASE AND MERIDIAN, CITY OF BROKEN ARROW, WAGONER COUNTY, STATE OF OKLAHOMA, MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT:

COMMENCING (P.O.C.) AT THE NORTHWEST CORNER OF SAID SECTION, THENCE N88°40'19"E ALONG SAID SECTION FOR A DISTANCE OF 1669.56 FEET TO A POINT; THENCE S01°19'41"E FOR A DISTANCE OF 50.00 FEET TO A POINT ON THE SOUTHERLY R/W LINE OF EAST 71ST STREET, SAID POINT BEING AN EASTERLY LINE OF THE CREEK TURNPIKE R/W AND THE **POINT OF BEGINNING (P.O.B.)**; THENCE N88°40'19"E FOR A DISTANCE OF 921.45 FEET; THENCE S10°47'48"E FOR A DISTANCE OF 30.41 FEET; THENCE N88°40'19"E FOR A DISTANCE OF 48.43 FEET; THENCE S01°20'04"E FOR A DISTANCE OF 2563.12 FEET TO A POINT THAT IS THE SOUTHWEST CORNER OF TIMBER RIDGE BUSINESS PARK; THENCE S01°20'07"E FOR A DISTANCE 2021.25 FEET TO A POINT ON THE NORTHERLY R/W OF SAID CREEK TURNPIKE; THENCE N39°14'29"W FOR A DISTANCE OF 896.77 FEET; THENCE N01°58'57"W FOR A DISTANCE OF 99.96 FEET; THENCE N46°31'50"W FOR A DISTANCE OF 704.94 FEET; THENCE S89°34'23"W FOR A DISTANCE OF 126.14 FEET TO A POINT ON THE EASTERLY LINE OF THE CREEK TURNPIKE R/W; THENCE N01°23'27"W FOR A DISTANCE OF 717.93 FEET; THENCE N01°22'52"W FOR A DISTANCE OF 893.08 FEET; THENCE N01°22'52"W FOR A DISTANCE OF 145.51 FEET; THENCE ON A CURVE TO THE RIGHT WITH A RADIUS OF 5554.58 FEET, AN ARC LENGTH OF 281.52 FEET, AN ARC ANGLE OF 02°54'14", A CHORD DISTANCE OF 281.49 FEET AND A CHORD BEARING OF N00°05'01"E; THENCE ON A CURVE TO THE RIGHT WITH A RADIUS OF 5554.58 FEET, AN ARC LENGTH OF 884.91 FEET, AN ARC ANGLE OF 09°07'40", A CHORD DISTANCE OF 883.97 FEET AND A CHORD BEARING OF N06°01'25"E; THENCE N10°49'45"E FOR A DISTANCE OF 402.64 FEET TO THE **POINT OF BEGINNING (P.O.B.)**. SAID TRACT 101.96 ACRES, MORE OR LESS.

BASIS OF BEARINGS

BASIS OF BEARINGS FOR THIS EXHIBIT IS THE OKLAHOMA STATE PLANE COORDINATE SYSTEM (NAD83 OKLAHOMA NORTH ZONE 3501), AND USING THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION EIGHT (8), TOWNSHIP EIGHTEEN (18) NORTH, RANGE FIFTEEN (15) EAST AS N88°40'19"E.

II. DEVELOPMENT CONCEPT:

Creekside Commercial Development is a premium 101.9-acre mixed-use project submitted as a Planned Unit Development (PUD) in accordance with the City of Broken Arrow Zoning Code. Strategically situated east of the Creek Turnpike between East Kenosha Street and East Houston Street, the subject property is uniquely positioned relative to diverse surrounding land uses. The site is bordered to the east by parcels zoned Agricultural (AG) District, Commercial Heavy (CH) District, and Industrial Light (IL) District under an existing PUD. The western boundary is formed by the Creek Turnpike right-of-way, while the areas immediately to the north and south remain primarily undeveloped and retain their original Agricultural (AG) District designations.

On May 19, 2026, the Broken Arrow City Council approved a Comprehensive Plan amendment for the southern portion of the site, transitioning its land-use designation from Level 6 (Regional Employment/Commercial) to Level 2 (Urban Residential) and Level 3 (Transition Area) to facilitate residential development. Concurrently with this PUD master design statement, a rezoning application has been submitted to transition the underlying Agricultural (AG) and Central Service (C4) Districts to Commercial Heavy (CH) District, Industrial Light (IL) District, Residential Multifamily (RMF), and Single-Family Residential – Compact (RS-C). This comprehensive reclassification establishes a diverse, mixed-use environment supporting high-end commercial, retail, industrial, and single-family residential sectors, with the flexibility to incorporate multi-family units.

Conceived as a forward-thinking urban development, the PUD prioritizes human-scale design and active community integration to cultivate a vibrant, live-work-play ecosystem. To establish a tangible baseline for walkability, the project incorporates an interconnected network of pedestrian sidewalks and recreational trails that bridge the natural waterway buffer with the built environment. Furthermore, the implementation of reduced building setbacks brings storefronts and structural facades closer to the public rights-of-way, creating an intimate, high-energy streetscape. By minimizing the visual dominance of surface parking and emphasizing these pedestrian-oriented spatial relationships, the development pattern inherently encourages foot traffic, reduces vehicular dependency, and fosters a cohesive, accessible sense of place.

To ensure orderly and compatible growth, the project is organized into four distinct development areas. Development Area A, located in the northwestern portion, focuses on commercial uses surrounding the central jurisdictional stream and waterway. Development Area B, situated in the northeastern portion, is dedicated to industrial uses, utilizing its southernmost lots to serve as a critical transitional buffer into adjacent residential zones. Development Area C, occupying the southwestern portion, is reserved for either a high-density multi-family development or supportive commercial uses. Development Area D, located in the southeastern portion, is designated exclusively for single-family compact residential housing.

A defining element of the overall development concept is the preservation and enhancement of the existing jurisdictional stream and waterway areas, which collectively exceed 15% of the total site acreage. These natural assets will be integrated into the property's comprehensive stormwater management and detention system, and further enhanced with walking trails to provide recreational connectivity for both residents and patrons. Finally, internal circulation within the PUD will be fully served by public rights-of-way, anchored by a primary collector street designed to seamlessly connect the access points from East Kenosha Street and East Houston Street.

III. DEVELOPMENT STANDARDS

III.A DEVELOPMENT AREA “A” STANDARDS:

Net Land Area:	24.86 acres +/-
Underlying Zoning:	Unless otherwise specified, the CH District standards and regulations shall apply.
Permitted Uses: ○ Government administration & civic buildings ○ Municipal or community recreation center ○ Places of assembly ○ Public safety facility ○ Art gallery or museum, public ○ Library, public ○ Medical office or clinic ○ Community playfields and parks ○ Broadcasting or recording studio (no tower) ○ Animal Pet Shop, Retail ○ Veterinary clinic/animal hospital ○ Financial institution, with drive-thru ○ Financial institution, without drive-thru ○ Bar/Nightclub ○ Catering Service ○ Fruit and vegetable market ○ Restaurant, drive-in ○ Restaurant, without drive- thru ○ Restaurant, with drive-thru ○ Micro food and beverage production ○ Brewery/Winery ○ Office, business or professional ○ Research laboratory ○ General outdoor recreation ○ Golf course or driving range, lighted ○ Major entertainment facility, outdoor ○ Art gallery or museum, private ○ Fitness & recreational sports center ○ General indoor recreation ○ Major entertainment facility, indoor ○ Theater ○ Dry cleaning and laundry service ○ General personal services ○ Instructional services ○ Alcoholic beverages, retail sale ○ Convenience store with drive-thru and/or gas sales ○ Horticulture nursery sales ○ Open-air market or flea market ○ Retail, general ○ Retail, large ○ Car wash, automatic ○ Car wash, self-service ○ Car wash, full-service ○ Gasoline sales ○ Parking structure ○ Hotel or motel ○ Office warehouse	
Lot Area:	None
Minimum Frontage on Interior Street:	50 feet
Maximum Building Coverage:	None
Maximum Building Height:	○ 2 stories or 35 feet for buildings abutting the residential development area. ○ No limitations for all others.
Minimum Yard Setbacks: Other than the setback listed below, there shall be no internal setbacks within the development, other than those required to meet building and fire code.	
From East Kenosha Street:	50 feet

From internal roads/streets:	30 feet
Rear lots:	20 feet
Lot line(s) adjacent the residential development area:	25 feet if separated by a street 30 feet, including a 10-foot landscape buffer if there is a shared lot line
Off-street Parking:	Vehicular parking will be as required for the applicable use type as set forth within the City of Broken Arrow Code. Bicycle parking shall be limited to 1 per 2,500 square feet for all uses, unless the City of Broken Arrow Code has a less restrictive bicycle parking requirement. Cross parking will be allowed within Development Area A and B.
Other Bulk and Area Requirements:	As required within the CH District
Exterior Materials:	Structures proposed on lots directly abutting the Creek Turnpike right-of-way shall meet the Highway Design Overlay District requirements, except that lots abutting Kenosha may also have building orientation facing Kenosha. All other structures, including those separated from the turnpike by an internal right-of-way, shall meet the Broken Arrow Code requirements for building materials.
Screening:	Outdoor storage areas shall be screened from view from all property lines and adjacent rights-of-way by an opaque fence or wall between six feet and eight feet in height that incorporates at least one of the predominant materials and one of the predominant colors used in the primary structure. Screening for dumpsters and equipment shall meet the City of Broken Arrow Code requirements.
Signage:	All signage shall meet the requirements of the City of Broken Arrow Code. A maximum of 3 Integrated Development Identification signs shall be allowed in total across Development Areas A, B, and C combined. These signs shall not exceed 35 feet in height and 300 square feet of display surface area. A Conditional Use Permit shall not be required for these signs.

Landscape Buffer:	There shall be no landscape buffer requirement in Development Area A except for those listed in the setbacks section of this Development Area. A 7.5-foot landscape edge shall be provided within this Development Area. A Greenbelt with a walking-trail will be provided within this Development Area. The exact size and trail details, including paved or natural, shall be addressed during platting.
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III.B DEVELOPMENT AREA “B” STANDARDS:

Net Land Area:	24.47 acres +/-
Underlying Zoning:	Unless otherwise specified, the IL District standards and regulations shall apply.
Permitted Uses: ○ Government administration and civic buildings ○ Municipal or community recreation center ○ Public safety facility ○ Community playfields and Parks ○ Soup Kitchen ○ Broadcasting or recording studio (no tower) ○ Animal Pet Shop, Retail ○ Animal training school ○ Kennel ○ Veterinary clinic/animal hospital ○ Financial institution, with drive-thru ○ Financial institution, without drive-thru ○ Micro food and beverage production ○ Brewery/Winery ○ Office, business or professional ○ Research laboratory ○ General outdoor recreation ○ Golf course or driving range, lighted ○ Major entertainment facility, outdoor ○ Fitness & recreational sports center ○ General indoor recreation ○ Major entertainment facility, indoor ○ Dry cleaning and laundry service ○ General personal services ○ Instructional services ○ Convenience store with drive-thru and/or gas sales ○ Horticulture nursery sales ○ Open-air market or flea market ○ Retail, general ○ Boat and/or RV storage ○ Car wash, automatic ○ Car wash, self-service ○ Car wash, full-service ○ Gasoline sales ○ Parking structure ○ Vehicle service and repair, major (ODOT-Approved Vehicles) ○ Vehicle service and repair, minor ○ Hotel or motel ○ General industrial service ○ Assembly light ○ Artisan manufacturing ○ Manufacturing, light ○ Fulfillment Center (Less than 100,000 sq. ft.) ○ Mini-storage ○ Motor freight terminal ○ Office warehouse ○ Storage yard ○ Warehouse * The southernmost lots within this development area, directly adjacent to the residential development area, shall be limited to commercial type uses only.	
Lot Area:	None
Minimum Frontage on Interior Street:	50 feet
Maximum Building Coverage:	None

Maximum Building Height:	○ 2 stories or 35 feet for buildings abutting the residential development area. ○ No limitations for all others.
Minimum Yard Setbacks: Other than the setback listed below, there shall be no internal setbacks within the development, other than those required to meet building and fire code.	
From internal roads/streets:	20 feet
Rear lots:	20 feet
Lot line(s) adjacent the residential development area:	25 feet if separated by a street 30 feet, including a 10-foot landscape buffer if there is a shared lot line
Off-street Parking:	Vehicular parking will be as required for the applicable use type as set forth within the City of Broken Arrow Code. Bicycle parking shall be limited to 1 per 2,500 square feet for ONLY commercial uses, unless the City of Broken Arrow Code has a less restrictive bicycle parking requirement. Industrial uses shall not have a bicycle parking requirement. Cross parking will be allowed within Development Area A and B.
Other Bulk and Area Requirements:	As required within the IL District
Exterior Materials:	All structures shall meet the Broken Arrow Code requirements for building materials.
Screening:	Outdoor storage areas shall be screened from view from all property lines and adjacent rights-of-way by an opaque fence or wall between six feet and eight feet in height that incorporates at least one of the predominant materials and one of the predominant colors used in the primary structure. Screening for dumpsters and equipment shall meet the City of Broken Arrow Code requirements.
Signage:	All signage shall meet the requirements of the City of Broken Arrow Code. A maximum of 3 Integrated Development Identification signs shall be allowed in total across Development Areas A, B, and C combined. These signs shall not exceed 35 feet in height and 300 square feet of display surface area. A Conditional Use Permit shall not be required for these signs.

Landscape Buffer:	There shall be no landscape edge or buffer requirement in Development Area B except for those listed in the setbacks section of this Development Area.
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III.C DEVELOPMENT AREA “C” STANDARDS:

Net Land Area:	8.18 acres +/-
Underlying Zoning:	Unless otherwise specified, the RMF District standards and regulations shall apply.
Permitted Uses: ○ Dwelling, multi-family ○ Government administration & civic buildings ○ Municipal or community recreation center ○ Places of assembly ○ Public safety facility ○ Art gallery or museum, public ○ Library, public ○ Medical office or clinic ○ Community playfields and parks ○ Broadcasting or recording studio (no tower) ○ Animal Pet Shop, Retail ○ Veterinary clinic/animal hospital ○ Financial institution, with drive-thru ○ Financial institution, without drive-thru ○ Bar/Nightclub ○ Catering Service ○ Restaurant, without drive- thru ○ Micro food and beverage production ○ Office, business or professional ○ General outdoor recreation ○ Art gallery or museum, private ○ Fitness & recreational sports center ○ General indoor recreation ○ Theater ○ Dry cleaning and laundry service ○ General personal services ○ Instructional services ○ Alcoholic beverages, retail sale ○ Convenience store with drive-thru and/or gas sales ○ Retail, general ○ Parking structure ○ Hotel or motel	
Lot Area:	○ 2,300 square feet per multi-family dwelling unit ○ None for any other uses
Minimum Frontage on Interior Street:	200 feet all uses
Maximum Building Coverage:	70% for all uses
Maximum Number of Dwelling Units:	155 dwelling units
Maximum Building Height:	Buildings in this Development Area shall not exceed 4-stories in height.
Minimum Yard Setbacks:	
From interior street (north):	20 feet
Eastern Boundary of Development Area C:	20 feet
Western Boundary of Development Area C:	35 feet
Southern Boundary of Development Area C:	35 feet along East Houston Street

Off-street Parking:	Vehicular parking will be as required for the applicable use type as set forth within the City of Broken Arrow Code. Bicycle parking shall be 1 per 40 units, with a minimum of 4 spaces.
Other Bulk and Area Requirements:	As required within the RMF District
Exterior Materials:	Structures proposed on lots directly abutting the Creek Turnpike right-of-way shall meet the Highway Design Overlay District requirements. All other structures, including those separated from the turnpike by an internal right-of-way, shall meet the Broken Arrow Code requirements for building materials.
Screening:	Outdoor storage areas and trash enclosures shall be screened from view from all property lines and adjacent rights-of-way by an opaque fence or wall between six feet and eight feet in height that incorporates at least one of the predominant materials and one of the predominant colors used in the primary structure. Screening for dumpsters and equipment shall meet the City of Broken Arrow Code requirements. If developed as multi-family, highway screen requirement shall be met.
Signage:	All signage shall meet the requirements of the City of Broken Arrow Code. A maximum of 3 Integrated Development Identification signs shall be allowed in total across Development Areas A, B, and C combined. These signs shall not exceed 35 feet in height and 300 square feet of display surface area. A Conditional Use Permit shall not be required for these signs.
Landscape Buffer:	There shall be no landscape buffer requirement in Development Area C except for those listed in the setbacks section of this Development Area. A 7.5-foot landscape edge shall be provided within this Development Area.

III.D DEVELOPMENT AREA “D” STANDARDS:

Net Land Area:	44.44 acres +/-
Underlying Zoning:	Unless otherwise specified, the RS-C District standards and regulations shall apply.
Permitted Uses:	Dwelling, single-family detached
Lot Area:	4,500 square feet
Minimum Frontage:	50 feet
Maximum Building Coverage:	55%
Minimum Common Open Space:	15%
Maximum Building Height:	35 feet
Minimum Yard Setbacks:	
Front:	20 feet
Corner or abutting a public street:	35 feet if abutting an arterial street 25 feet if abutting a collector street 15 feet if abutting an internal street
Side (one, total):	5 feet; 10 feet
Rear:	15 feet
Off-street Parking:	Parking will be as set forth within the City of Broken Arrow Code.
Other Bulk and Area Requirements:	As required within the RS-C District
Exterior Materials:	At least sixty percent (60%) of the exterior of the building, excluding doors and windows, shall be constructed of but not limited to masonry, concrete panels, Exterior Insulated Finished Systems, and/or stucco. In addition, twenty percent (20%) of the street facing facade shall be constructed of natural brick or masonry rock.
Screening:	Screening shall only be required for lots abutting a collector or arterial street, which must provide a 6-foot-tall wooden screening fence.
Signage:	All signage shall meet the requirements of the City of Broken Arrow Code.

Landscape Buffer:	There shall be no landscape edge or buffer requirements in Development Area D. A Greenbelt with a walking-trail will be provided within this Development Area. The exact size and trail details, including paved or natural, shall be addressed during platting.
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IV. ACCESS AND CIRCULATION:

The subject property maintains significant arterial presence, featuring approximately 950 linear feet of frontage along East Kenosha Street and approximately 1,820 linear feet along East Houston Street. Primary ingress and egress shall be facilitated via two strategically positioned access points—one on each respective frontage—interconnected by a dedicated collector street designed to streamline internal circulation. Furthermore, the developer shall establish Limits of No Access (LNA) along the remaining extents of both frontages on East Kenosha Street and East Houston Street.

Internal parcels within the development will be served by a network of a public collector street and local streets that will be compliant with the Broken Arrow City Code and applicable municipal regulations. The proposed collector street shall be constructed in phases corresponding with the progression of each respective Development Area. Temporary turn-arounds shall be provided as needed by the fire department for emergency access. Additionally, to maintain the safety and efficiency of the primary internal corridor, individual residential driveway access to the collector street shall be prohibited. The length of said residential collector may exceed standard block length requirements, provided it is limited to a maximum of 1,975 feet prior to encountering a designated intersection or horizontal roadway curvature.

V. SIDEWALKS:

A sidewalk shall be provided along the East Kenosha frontage of this PUD. No sidewalk improvements or connectivity shall be required along the East Houston Street to the Creek Turnpike; however, a sidewalk shall be provided along East Houston Street connecting the proposed collector street to the developments to the east.

Sidewalks internal to the development shall be provided as illustrated on the Conceptual Site Plan and as follows:

Development Area A: Sidewalks shall be provided along each lot frontage and built with the development of individual lots. A sidewalk shall not be provided along the western edge of the internal street where it abuts the property line along Creek Turnpike.

Development Area B: Sidewalks shall be provided along each lot frontage and built with the development of individual lots. A sidewalk shall be provided along the western edge of the collector street in this Development Area and will be constructed with the collector street. Sidewalks shall not be required along the internal street connecting to the development to the east.

Development Area C: Sidewalks shall be provided along the lot frontage of this Development Area and will be built with the development of this area.

Development Area D: Sidewalks shall be provided along both sides of internal streets within the residential development and shall be constructed with each lot. A sidewalk along the western edge of the collector street shall be provided in this Development Area and will be constructed with the collector street.

Sidewalks provided within this PUD shall meet the City of Broken Arrow construction requirements.

VI. LANDSCAPING/GREENBELT:

Landscape design shall comply with the City of Broken Arrow Code, except where specifically modified by this PUD. A greenbelt featuring walking trails shall be established within Development Areas A and D, as depicted on the Conceptual Site Plan; specific dimensions and trail specifications will be finalized during the platting process.

VII. PRIVATE AMENITIES:

Not less than 15% of the net land area within the PUD shall be preserved as common open space for the enjoyment of the residents and patrons of this development. These areas may include, but are not limited to, walking trails, onsite stormwater detention pond reserve areas and landscaped areas. All City of Broken Arrow engineering standards shall be met for the detention pond reserve areas.

VIII. TOPOGRAPHY, UTILITIES, AND DRAINAGE:

The site is bisected by a USGS blue-line stream/waterway, although no FEMA-designated flood zones are present. This stream/waterway will be preserved and enhanced as a natural amenity for residents and patrons. Existing drainage patterns shall be maintained, with an internal stormwater collection system engineered to convey runoff to established drainage areas in accordance with City of Broken Arrow design standards. A comprehensive hydraulic analysis will be submitted for municipal review and approval during the formal engineering phase.

The development will be served by public water and sanitary sewer systems. Necessary agreements between the City of Broken Arrow, the Rural Water District, and the developer shall be finalized and approved during the engineering phase.

IX. SCHEDULE OF DEVELOPMENT AND PHASING:

Initial site development is anticipated to commence in late 2026, market conditions permitting.

Phasing shall be permitted within this PUD and shall be determined during the platting process.

X. PLATTING:

No building permit shall be issued until the PUD project area has been included within a subdivision plat submitted to and approved by the Broken Arrow Planning Commission and the Broken Arrow City Council, and duly filed of record. The property shall be platted in accordance with the City of Broken Arrow subdivision code. The deed of dedication of the required subdivision plat shall include covenants of record, enforceable by the City of Broken Arrow, setting forth the development standards of the planned unit development.

XI. EXHIBITS:

The following exhibit are hereby attached and incorporated into this PUD. These exhibits are:

- Exhibit A: Aerial Photography and Boundary Depiction
- Exhibit B: Existing Zoning Map
- Exhibit C: Existing Land Use Map
- Exhibit D: Conceptual Site Plan
- Exhibit E: Development Areas Plan
- Exhibit F: Conceptual Utilities Plan



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exp: 6-30-27



EXHIBIT 'A'
AERIAL PHOTOGRAPHY AND
BOUNDARY DEPICTION
CREEKSIDE
COMMERCIAL
MASTER PLAN

PUD- 002953 -2026

Date: June 15, 2026



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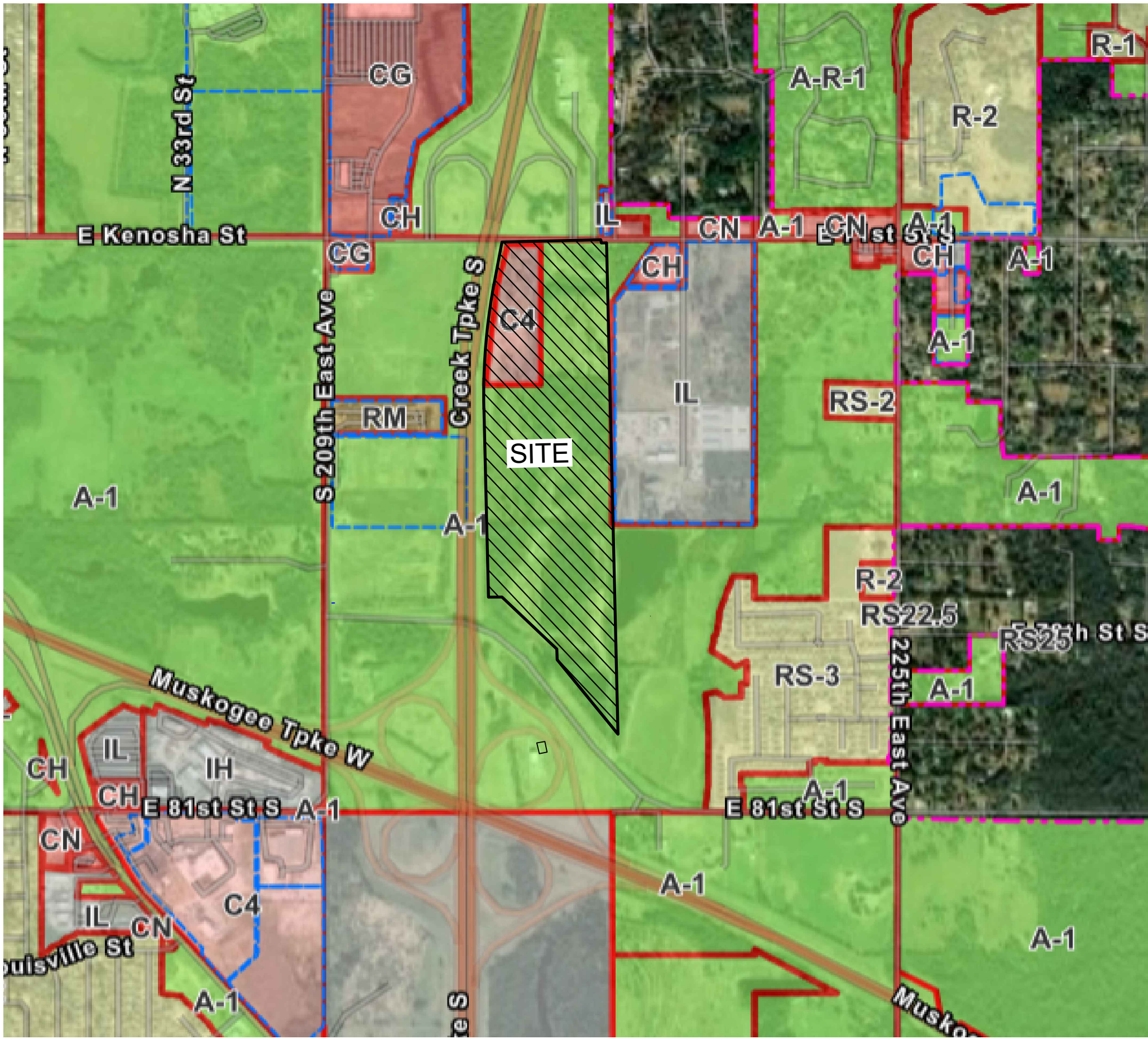


EXHIBIT 'B'
EXISTING ZONING
CREEKSIDE
COMMERCIAL
MASTER PLAN

PUD- 002953 -2026

Date: June 15, 2026



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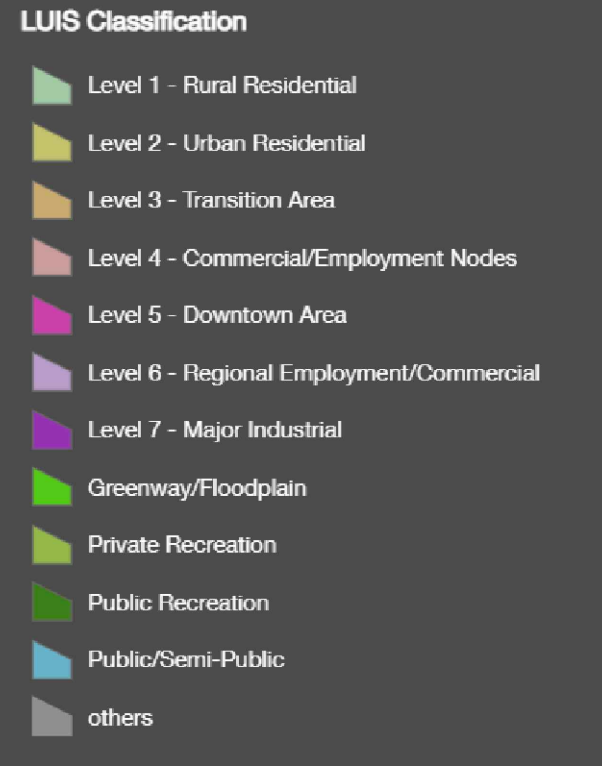
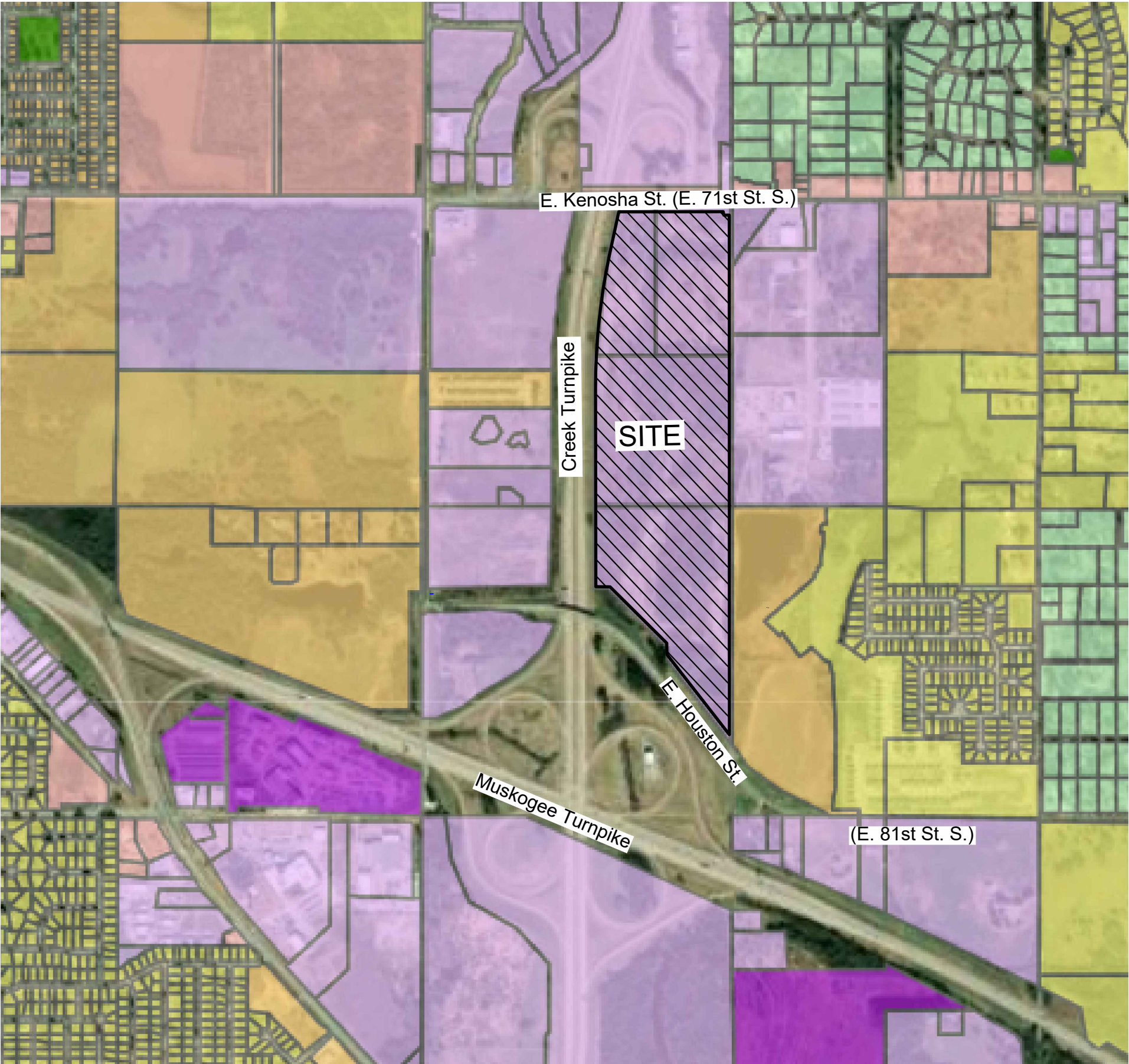


EXHIBIT 'C'
EXISTING LAND USE
CREEKSIDE
COMMERCIAL
MASTER PLAN

PUD- 002953 -2026

Date: June 15, 2026



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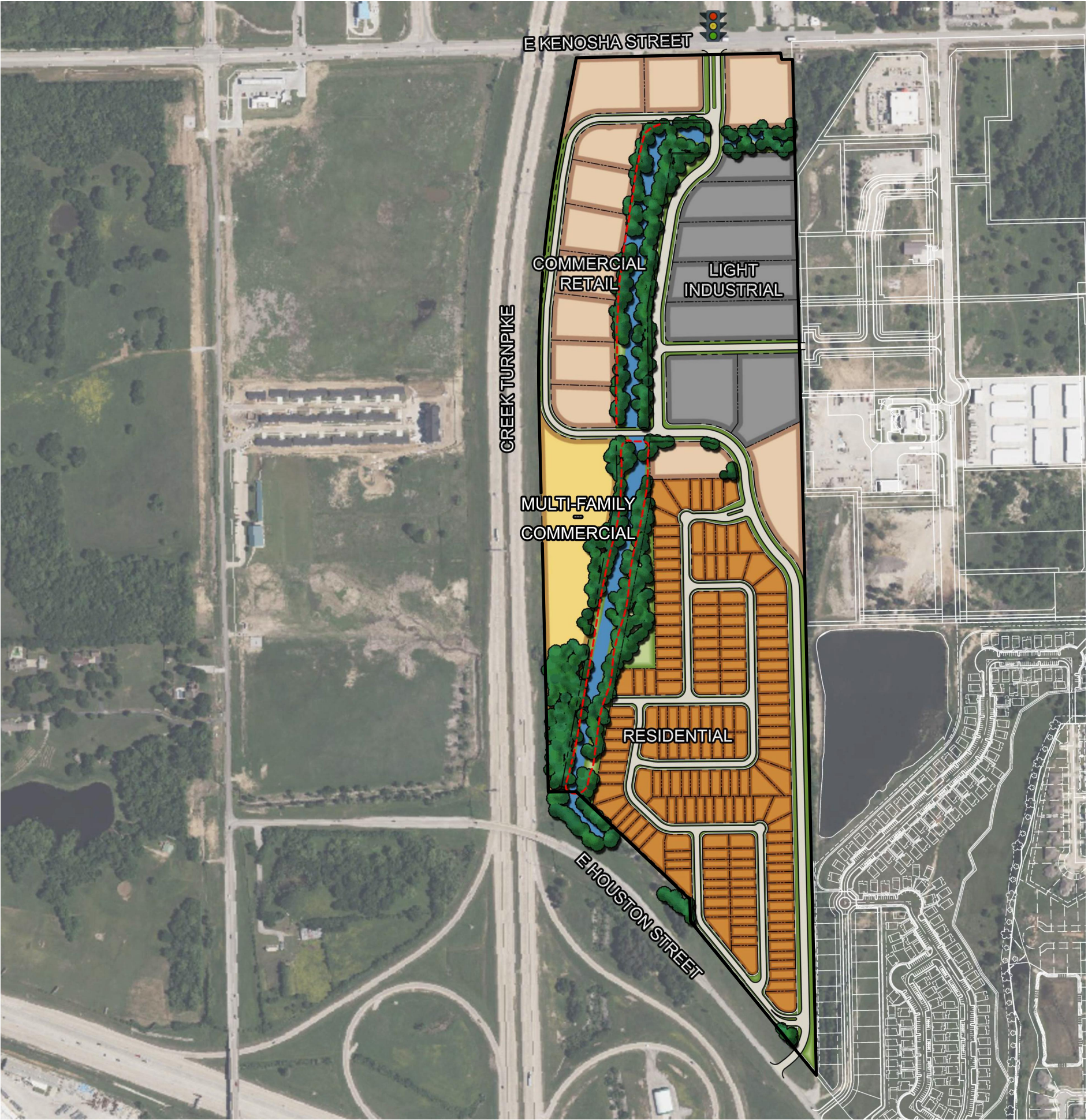


EXHIBIT 'D'
CONCEPTUAL SITE PLAN
CREEKSIDE
COMMERCIAL
MASTER PLAN

PUD- 002953 -2026

Date: July 13, 2026



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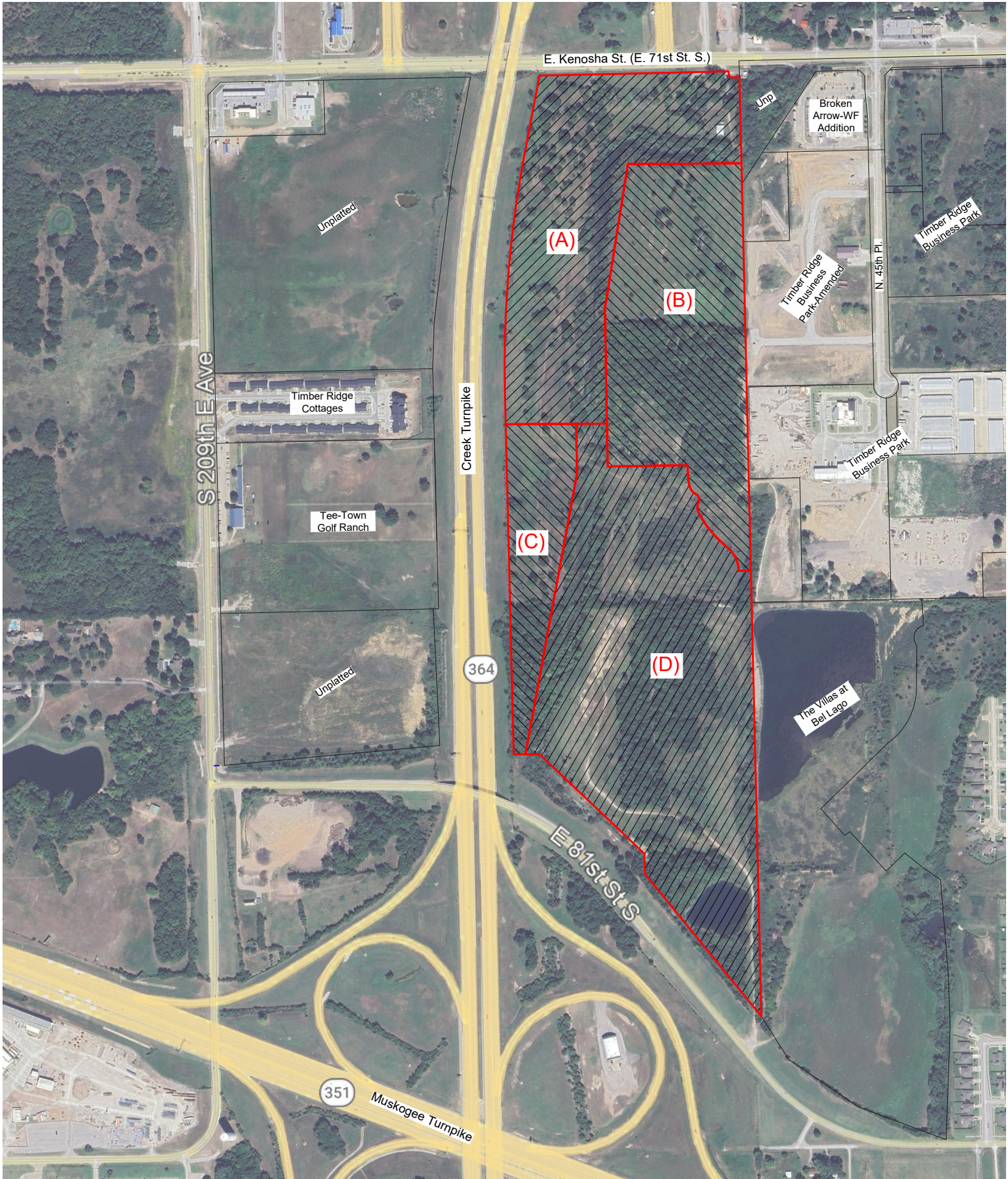


EXHIBIT 'E'
DEVELOPMENT AREA PLAN

**CREEKSIDE
COMMERCIAL
MASTER PLAN**

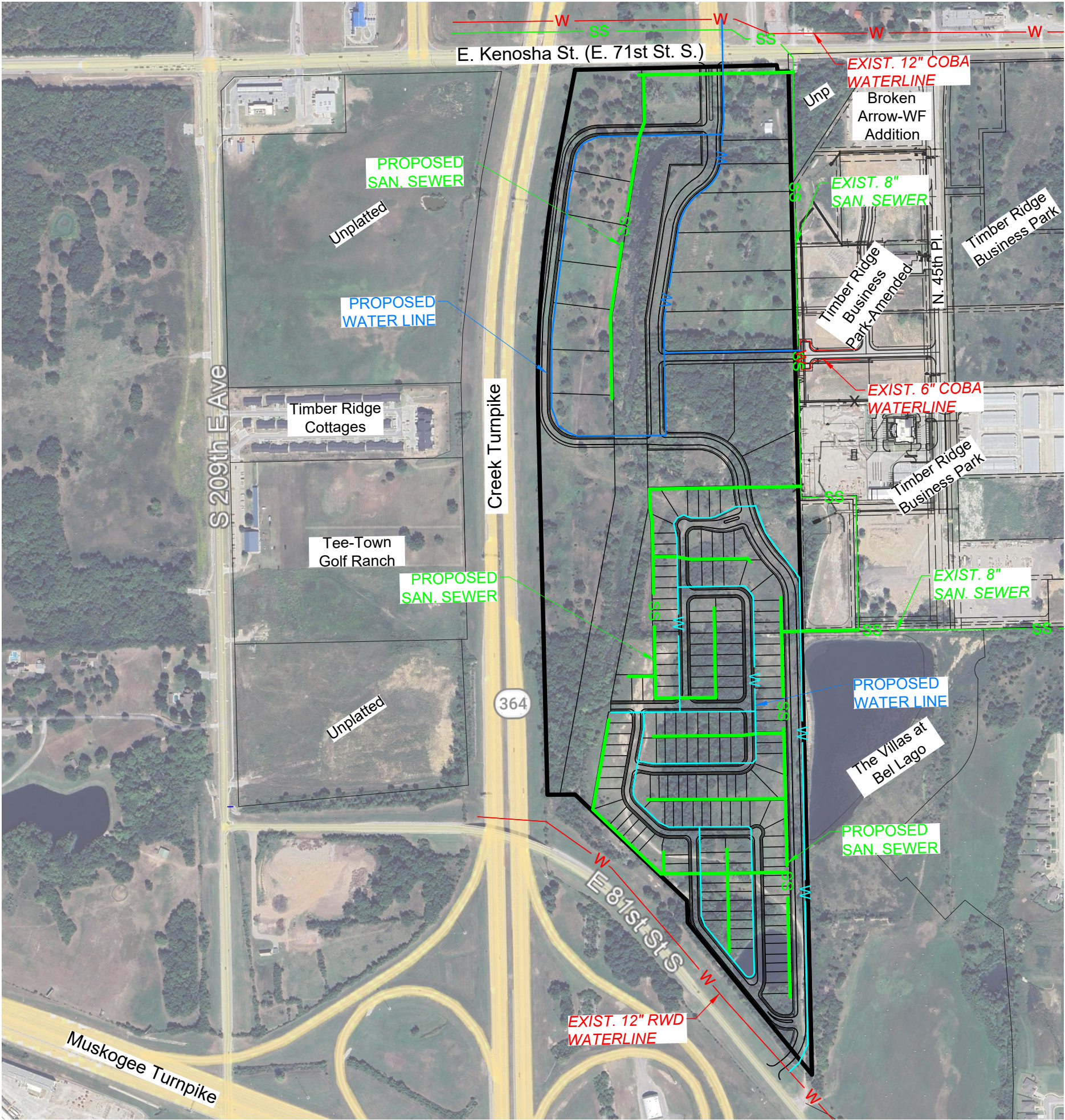
PUD- 002953 -2026

Date: June 15, 2026



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LEGEND

- = PROPOSED CITY OF BROKEN ARROW WATER LINE
- = PROPOSED RWD WATER LINE

EXHIBIT 'F'
CONCEPTUAL UTILITY PLAN
CREEKSIDE
COMMERCIAL
MASTER PLAN

PUD- 002953 -2026

Date: June 15, 2026