AGENDA

CITY OF TAYLOR, TEXAS
PLANNING & ZONING COMMISSION MEETING
CITY HALL COUNCIL CHAMBERS
400 PORTER STREET, TAYLOR, TX 76574
SEPTEMBER 10, 2024, 6:00 PM

For Citizens Communication and to speak during the public hearings, please contact the Development Services office at 512-365-3863 prior to 5:30 p.m. on Tuesday, September 10, 2024.

The agenda packet is on the City of Taylor's website.

I. CALL TO ORDER AND DECLARE A QUORUM

II. CITIZEN COMMUNICATION

(The Planning and Zoning Commission welcomes public comment on items not listed on the agenda. However, the Commission cannot respond until the item is posted on a future agenda. All public comments are limited to 3 minutes.)

III. CONSENT AGENDA

(The Consent Agenda includes non-controversial and routine items that the Commission or Board may act on with a single vote. The Chair or a Commission member may pull any item from the Consent Agenda to discuss and act upon it individually as part of the Regular Agenda.)

1. Review and approve minutes from the meeting on August 13, 2024 *Courtney Peres*
2. **PZ-2024-2088** Consider Disapproval of the Davis Tract Phase 1 Preliminary Plat, generally located north of Elm Branch Trail, legally described as approximately 25.52 acres of land part of the James C. Eaves Survey, Abstract No. 214, more particularly described by the Williamson Central Appraisal District Parcel R656448, Taylor, Williamson County, Texas. *Courtney Peres*
3. **PZ-2024-2143** Consider Disapproval of The Retreat at Mallard Final Plat, generally located near the intersection of Mallard Lane and Jason Drive, legally described as a 19.617-acre tract of land part of and out of the William J. Baker Survey, Abstract No. 65, more particularly described by Williamson Central Appraisal District Parcel R018622, Taylor, Williamson County, Texas. *Courtney Peres*
4. **PZ-2024-2216** Consider Disapproval of the Taylor Pointe Subdivision Preliminary Plat generally located at 715 Carlos G. Parker Blvd. SW, consisting of approximately 39.015 acres of land part of the G.M. Reese Survey, Abstract No. 533, more particularly described by Williamson Central Appraisal District Parcel R331170, Taylor, Williamson County, Texas. *Parker McDowell*
5. **PZ-2024-2254** Consider Disapproval of the Taylor North Bull Branch Creek Townhomes, Subdivision Improvement Plan, generally located along the South right-of-way of N.W. Carlos G. Parker Boulevard, approximately 1,400 feet west of the intersection of N.W. Carlos G.

Parker Boulevard and North Drive, consisting of approximately 7.747 acres of land part of and out of the William J Baker Survey, Abstract No. 65, more particularly described by the Williamson Central Appraisal District Parcel R018638, Taylor, Williamson County, Texas. *Courtney Peres*

6. **PZ-2024-2255** Consider Disapproval of the Gradient Technology Park/iMarket Final Plat, generally located at the intersection of Carlos G. Parker Boulevard Southeast and FM 112, legally described as a 211.84-acre tract of land in the Parthinia Coursey Survey, Abstract No. 131, more particularly described by Williamson Central Appraisal District Parcels R357492, R318771, R006142, R620065, R624522, R620064, Taylor, Williamson County, Texas. *Courtney Peres*

7. **PZ-2024-2256** Consider Disapproval of the Gradient Technology Park/iMarket Subdivision Improvement Plan, generally located at the intersection of Carlos G. Parker Boulevard Southeast and FM 112, legally described as a 211.84-acre tract of land in the Parthinia Coursey Survey, Abstract No. 131, more particularly described by Williamson Central Appraisal District Parcels R357492, R318771, R006142, R620065, R624522, R620064, Taylor, Williamson County, Texas. *Courtney Peres*

8. **PZ-2024-2258** Consider Disapproval of the Gradient Technology Park/iMarket Preliminary Plat, generally located at the intersection of Carlos G. Parker Boulevard Southeast and FM 112, legally described as a 211.84-acre tract of land in the Parthinia Coursey Survey, Abstract No. 131, more particularly described by Williamson Central Appraisal District Parcels R357492, R318771, R006142, R620065, R624522, R620064, Taylor, Williamson County, Texas. *Courtney Peres*

IV. REGULAR AGENDA

9. **WITHDRAWN - PZ-2024-2249** Hold a public hearing and consider making a recommendation regarding a request for a Special Use Permit to allow lodging without a full-time, on-site operator generally located at 120 Mammoth, legally described as Northpark Phase Five, Block B, Lot 15, approximately 0.18 acres, more particularly described by the Williamson Central Appraisal District Parcel R552906, Taylor, Williamson County, Texas. *Parker McDowell*

10. **PZ-2024-2109** Hold a public hearing and consider making a recommendation regarding a request for an Infill Neighborhood Plan generally located at 215 Commercial Drive, legally described as Lake Aire Subdivision, Block One, Northern Part of Lot One, approximately 4.68 acres, more particularly described by Williamson Central Appraisal District Parcel R048754, Taylor, Williamson County, Texas. *Parker McDowell*

11. **PZ-2024-2102** Hold a public hearing and consider making a recommendation regarding a request for an amendment to the Neighborhood Plan referred to as Davis Tract Phase 2, generally located west of Backwood Pass, legally described as approximately 99 acres of land, part of and out of the James C. Eaves Survey, Abstract No. 533, and George M. Reese Survey, Abstract No. 214, more particularly described by the Williamson Central Appraisal District Parcels R019951, R019181, R019651, Taylor, Williamson County, Texas. *Shai Roos*

V. DISCUSSION ITEMS

12. Update regarding City Council actions on items referred by the Planning and Zoning Commission. *Courtney Peres*

VI. ADJOURN

The Commission may vote and/or act upon each of the items listed in this Agenda. The Commission reserves the right to retire into executive session concerning any of the items listed on this Agenda, whenever it is considered necessary and legally Justified under the Open Meetings Act.

I certify that the notice of this meeting was posted in the City of Taylor Hall Lobby continuously for 72 continuous hours before September 10, 2024. I further certify that the following news media was notified of this meeting: Taylor Daily Press.

Posted by:  Date: September 6, 2024

Victoria Winchester, Administrative Assistant

MINUTES

CITY OF TAYLOR, TEXAS

PLANNING AND ZONING COMMISSION MEETING

August 13th, 2024, at 6:00 P.M.

City Hall Council Chambers

400 Porter Street, Taylor, TX 76574

PRESENT	ABSENT	STAFF PRESENT
Amy Everhart		Victoria Winchester, Administrative Assistant II
Nora Roy	Mike Eaton	Justinh Sauer, Permit Technician
Kellie Billings-Ray		Preston Gunn, Planner
Donna Frazier		Parker McDowell, Senior Planner Consultant
Annette Maruska		Shai Roos, Planning Consultant
Jim Newman		Courtney Peres, Planning Manager
Alexander Allrich		Colin Harrison, Director
Barbara-Aviles Torsberg		

I. CALL TO ORDER AND DECLARE A QUORUM

Chair, Amy Everhart called to order and declared a quorum at 6:01 P.M.

II. CITIZENS COMMUNICATION

(The Planning and Zoning Commission welcomes public comments on items not listed on the Agenda. However, the Commission cannot respond until an item is posted on a future meeting Agenda. Registration forms are available at the sign in table.)

Chair Everhart opened the Citizens Communication. There was no one present to speak. Vice Chair, Nora Roy closed the Citizens Communication.

III. CONSENT AGENDA

(The Consent Agenda includes non-controversial and routine items that the Commission may act on with one single vote. The Chair or a Commissioner may pull any item from the Consent Agenda to discuss and act upon it individually as part of the Regular Agenda.)

1. Review and approve minutes from the meeting held on July 09, 2024.

2. **PZ-2024-2182** Consider Disapproval of the 3311 West Second Street Minor Plat generally located at 3311 W. 2nd Street, legally described as approximately 1.698 acres of land part of the H.G. Johnson Survey, Abstract No. 348, more particularly described

by the Williamson Central Appraisal District Parcel R432726, Taylor, Williamson County, Texas.

3. **PZ-2024-2220** Consider Disapproval of the Taylor EDC Addition Minor Plat generally located at 1601 Martin Luther King Jr. Boulevard, legally described as approximately 52.421 acres of land part of the Parthinia Coursey Survey, Abstract No. 131, more particularly described by the Williamson Central Appraisal District Parcel R018994, Taylor, Williamson County, Texas.

4. **PZ-2024-2115** Consider Disapproval of RCR- Taylor Logistics Park Amending Plat of Phase TWO, Block Two, Lots 1,2 and 3A, generally located at 201 FM 3349, Legally described as RCR- Taylor Logistics Park Phase Two Minor Plat, Block Two, Lots 1-2 and RCR -Taylor Logistics Park Phase Two Replat, Block Two, Lot 3A, more particularly described by the Williamson County, Texas.

5. **PZ-2024-2216** Consider Disapproval of the Taylor Pointe Subdivision Preliminary Plat generally located at 715 Carlos G Parker Blvd. SW, consisting of approximately 39.015 acres of land of the G.M Reese Survey Abstract NO. 533, more particularly described by Williamson Central Appraisal District Parcel R331170, Taylor, Willaimson County, Texas.

6. **PZ-2024-2105** Consider Disapproval of Gateway Tract Preliminary Plat, general located at 505 Carlos G Parker SW, legally described as 38.09-acre tract of land part of an out of Geroge M. Reese Survey, Abstract No. 533, more particular described by Williamson central Appraisal District Parcels R331030, R019657, R020063, Taylor, Willamson County.

Commissioner Nora Roy motioned to approve the Consent Agenda as presented. Commissioner Alexander Allrich seconded the motion. Motion passed unanimously.

REGULAR AGENDA

7. **PZ-2024-2212** Hold a public hearing and consider making a recommendation regarding a request for a Place Type zoning change from P2.5 – Large Lot to P3 – Neighborhood on property generally located at 1120 W. Lake Drive, legally described as approximately 1.24 acres of land situated in Hague Heights, Block One, Lots 8 through 13, more particularly described by the Williamson Central Appraisal District Parcel R017151, Taylor, Williamson County, Texas. (Parker McDowell, HDR Planner)
Chair, Amy Everhart opened public hearing at 6:03 PM
City staff consultant planner, Parker McDowell made a presentation regarding a request for place type zoning change from P2.5 – Large Lot to P3- Neighborhood on 1120 W. Lake Drive.

Speaker, JD Downs (Applicant) spoke on behalf of the request to recommend approval of the place type zoning change.

Speaker, Gary Brock is opposed to the recommendation to approve the place type zoning change.

Speaker, April Young is opposed to the recommendation for approval of the place type zoning change.

Speaker, Joann Jensen is opposed to the recommendation for approval of the place type zoning change.

Speaker Eric Moehnke is opposed to the recommendation for approval of the place type zoning change.

Speaker Jackie Kenyon is opposed to the recommendation for approval of the place type zoning change.

Speaker, Hannah Neas (current property owner) recommended approval of the place type zoning change.

Speaker, Becky Madsen is opposed to the recommendation for approval of the place type zoning change.

Speaker Edwin Etheridge is opposed to the recommendation for approval of the place type zoning change.

Speaker, Ricky McDaniel is opposed to the recommendation for approval of the place type zoning change.

Chair, Amy Everhart closed public hearing at 7:12 PM

Commissioner Frazier motioned to table the request. Commissioner Maruska seconded the motion.

Discussion occurred by the Commissioners. Motion passed unanimously (8-0).

8. **PZ-2024-2213** Hold a public hearing and consider making a recommendation for a Special Use Permit to allow lodging without a full time, on-site operator generally located at 520 W. 10th Street, legally described as a 0.37-acre tract of land out of the Murphy Addition, Block Seven, southern part of Lot 1 and 2, more particularly described by the Williamson Central Appraisal District Parcel R017691, Taylor, Williamson County, Texas. (Parker McDowell, HDR Planner)
Chair, Amy Everhart opened public hearing at 7:13 PM

Consultant Planner, Parker McDowell, made a presentation regarding the Special Use Permit to allow lodging without a full-time, on-site operator located at 520 W 10th street.
The applicant spoke regarding approving the recommendation for a Special Use Permit to allow lodging without a full-time on-site operator.
Chair, Amy Everhart closed public hearing at 7:19 PM

Commissioner Annette Maruska made a motion to approve the Special Use Permit for 3 years to allow lodging without a full-time, on-site operator at 520 W. 10th street. Commissioner Barbara Aviles-Forsberg seconded the motion. Motion passed unanimously (8-0).

9. **PZ-2023-1997** Hold a public hearing and consider making a recommendation regarding a request for an Employment Center Plan referred to as Taylor 50, generally located at 369C CR 395, legally described as approximately 49.913-acre tract of land out of the J.C. Eaves Survey, Abstract No. 213, more particularly described by the Williamson Central Appraisal District Parcel R019150, Taylor, Williamson County, Texas. (Shai Roos, HDR Planner)
Chair, Amy Everhart opened public hearing at 7:20 PM
Consultant Planner, Shai Roos made a presentation regarding a request for an Employment Center Plan referred to as Taylor 50.
Chair, Amy Everhart closed public hearing at 7:29 PM

Commissioner Nora Roy made a motion to approve the Employment Center Plan, Taylor 50 as presented. Commissioner Alexander Allrich seconded the motion. Motion passed unanimously (8-0).

10. PZ-2024-2238 Hold a public hearing and consider action regarding a request for a Subdivision Variance related to the installation of public utilities and sidewalks generally located at 14501 Hwy 79, legally described as a 69.015-acre tract of land part of and out of the H.G. Johnson Survey, Section 6, Abstract No. 348, more particularly described by the Williamson Central Appraisal District Parcels R019338 and R019992, Taylor, Williamson County, Texas. (Courtney Peres, Planning Manager)

Item was withdrawn from the agenda. No action was taken.

11. **PZ-2024-2243** Hold a public hearing and consider making a recommendation regarding amendments to the City of Taylor Land Development Code to correct errors and provide clarification to the following chapters: Chapter 1 – Intent & General Provisions, Chapter 2 – Development Process, Chapter 3 – Neighborhoods, Additions, Subdivisions, Chapter 4 – Place Type Zoning, Chapter 5 – Private Lot Development Standards, Chapter 6 – Historic Preservation, and Chapter 7 - Definitions.
Chair, Amy Everhart opened public hearing at 7:31 PM
Planning Manager, Courtney Peres made a presentation regarding the updates to the Land Development Code

Commissioner Donna Frazier motioned to approve the Land Development Code to correct errors and provide clarification. Commissioner Annette Maruska seconded the motion. Motion passed unanimously (8-0).
Chair, Amy Everhart closed public hearing at 7:35 PM

Discussion Items

12. Update regarding City Council actions on items referred to by the Planning and Zoning Commission.

ADJOURN

Chair Amy Everhart has Adjourned the meeting at 7:37 PM.

City of Taylor
PZ-2024-2088
Davis Tract Phase 1 Preliminary Plat
Staff Report

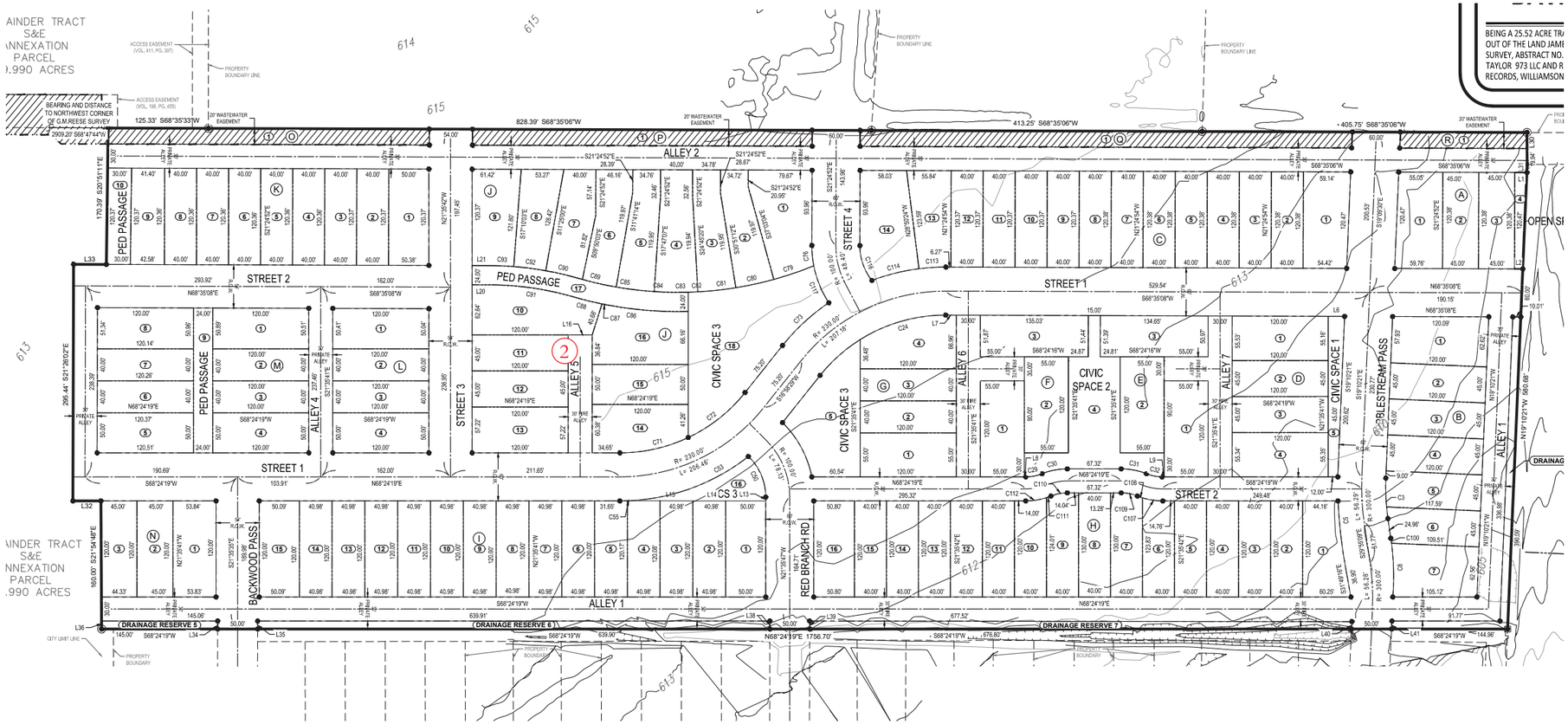
Item Details

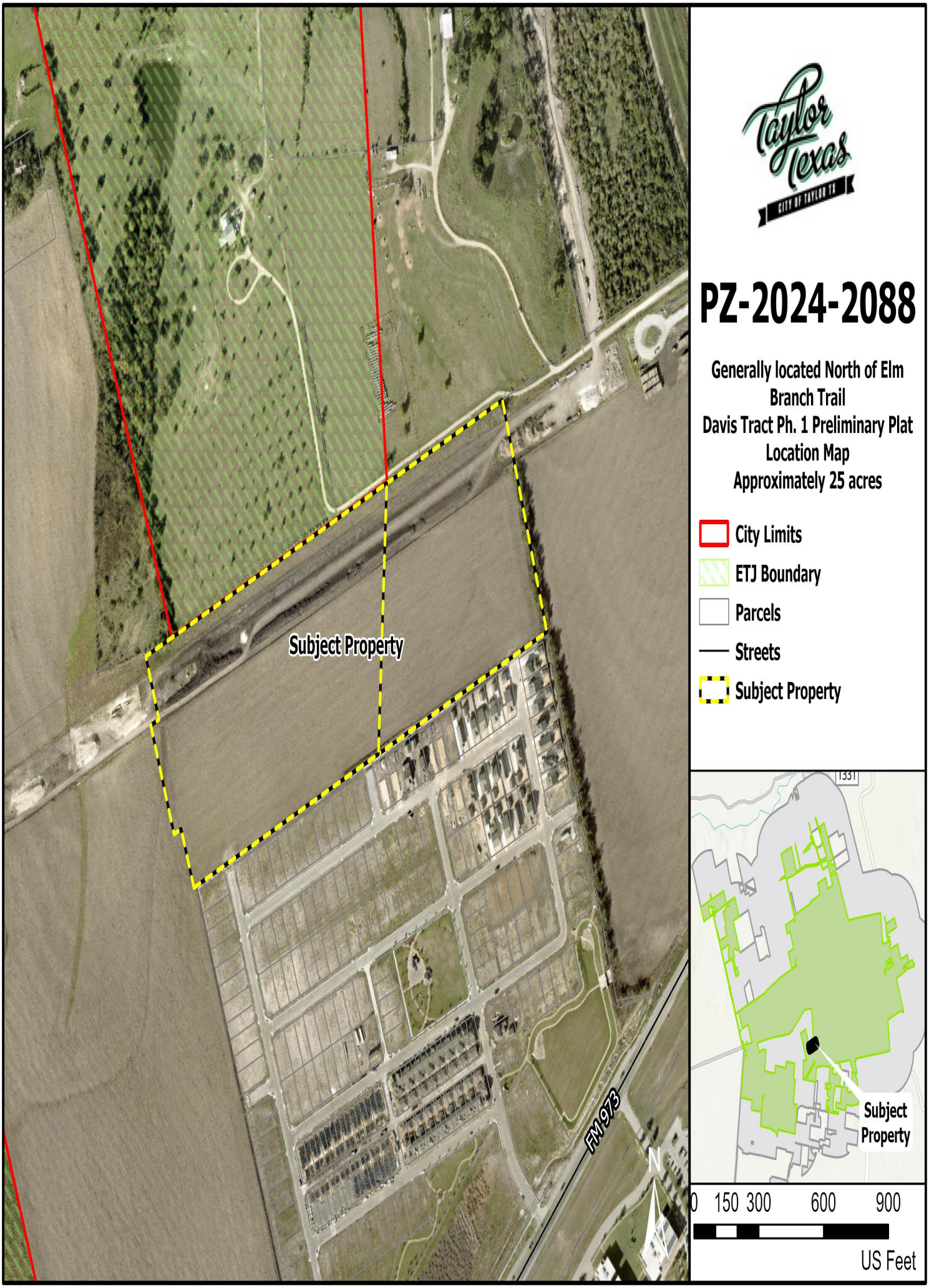
Agenda No.	2
Requested Action:	Consider Disapproval of Davis Tract Phase 1 Preliminary Plat
Address/Location:	Generally located north of Elm Branch Trail
Legal Description:	Approximately 25.52 acres of land part of the James C. Eaves Survey, Abstract No. 214, more particularly described by the Williamson Central Appraisal District Parcel R656448, Taylor, Williamson County, Texas.
Current Zoning:	P3 – Neighborhood with a Planned Development Overlay
Current Use:	Vacant Acreage
Applicant:	Will Buzzelli, Viewpoint Engineering
Case History:	This is the third submission of the Preliminary Plat.
Staff Recommendation:	The submitted Preliminary Plat does not meet the minimum requirements of the Land Development Code, Planned Development Ordinance and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Preliminary Plat.

Attachments

1. Staff Comments
2. Location Map
3. Proposed Preliminary Plat Packages

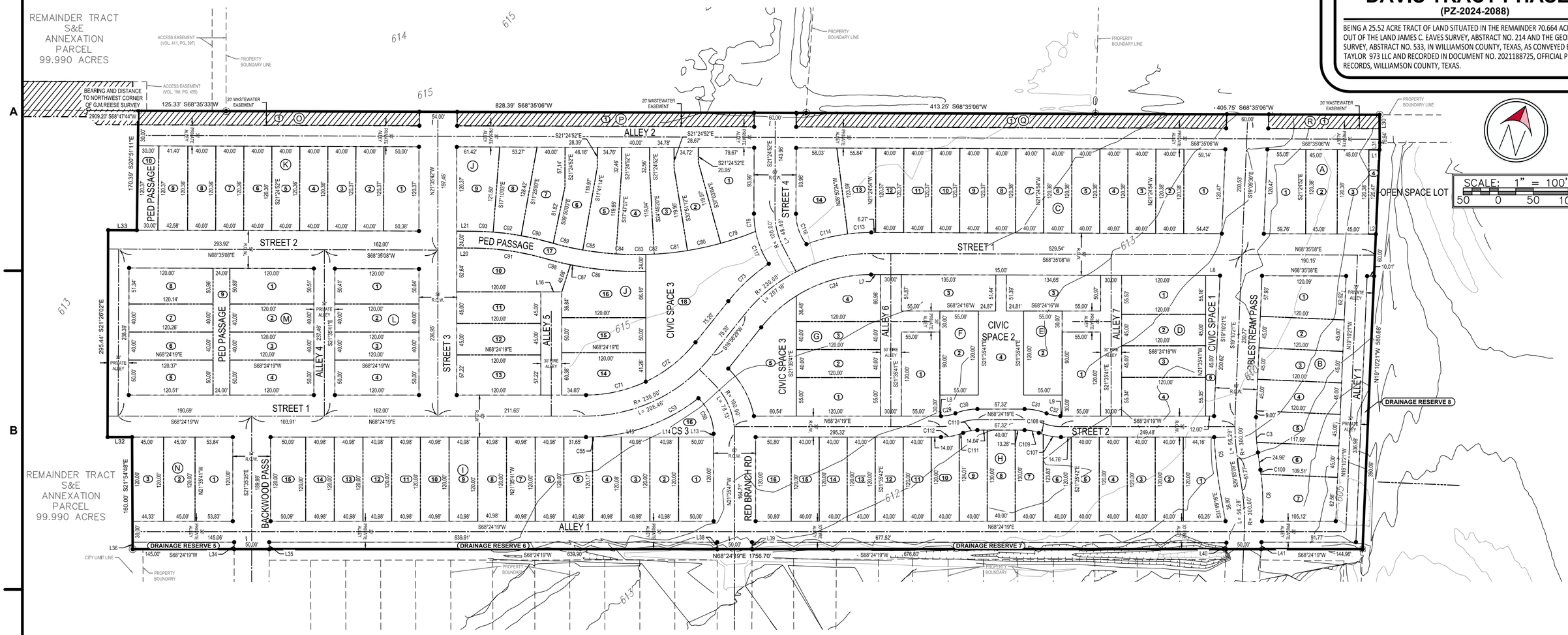
PRELIMINARY PLAT REVIEW


AINDER TRACT
S&E
NNEXATION
PARCEL
.990 ACRES
BEARING AND DISTANCE TO NORTHWEST CORNER OF G.M.REESE SURVEY
2909.20' S68°47'44"W
ACCESS EASEMENT (VOL. 411, PG. 397)
ACCESS EASEMENT (VOL. 198, PG. 455)
PROPERTY BOUNDARY LINE
20' WASTEWATER EASEMENT
125.33' S68°35'33"W
828.39' S68°35'06"W
413.25' S68°35'06"W
405.75' S68°35'06"W
BEING A 25.52 ACRE TR
OUT OF THE LAND JAM
SURVEY, ABSTRACT NO.
TAYLOR 973 LLC AND R
RECORDS, WILLIAMSON
ALLEY 2
PED PASSAGE
STREET 2
STREET 1
STREET 3
STREET 4
ALLEY 4
ALLEY 5
ALLEY 6
ALLEY 7
ALLEY 1
CIVIC SPACE 1
CIVIC SPACE 2
CIVIC SPACE 3
BACKWOOD PASS
RED BRANCH RD
PEBBLESTREAM PASS
DRAINAGE RESERVE 5
DRAINAGE RESERVE 6
DRAINAGE RESERVE 7
OPEN SP
DRAINAG
CITY LIMIT LINE
PROPERTY BOUNDARY
N68°35'08"E 190.15'
N68°24'19"E 1756.70'
S68°24'19"W 676.80'
S68°24'19"W 639.90'
S68°24'19"W 677.52'
S68°24'19"W 144.96'
N68°24'19"E 295.32'
S68°24'19"W 249.48'
N68°24'19"E 211.65'
S68°24'19"W 190.69'
N68°24'19"E 103.91'
S68°24'19"W 639.91'
S68°24'19"W 145.06'
S68°24'19"W 91.77'
S68°35'08"W 529.54'
S68°35'08"W 59.14'
S68°35'08"W 54.42'
S68°24'19"W 67.32'
N68°24'19"E 67.32'
S68°24'16"W 135.03'
S68°24'16"W 134.65'
S68°24'16"W 55.00'
N68°24'19"E 55.00'
S68°24'19"W 55.00'
N68°24'19"E 55.00'
S68°24'19"W 55.00'
N68°24'19"E 55.00'
S68°24'19


Subject Property
FM 973
N
PZ-2024-2088
Generally located North of Elm Branch Trail
Davis Tract Ph. 1 Preliminary Plat
Location Map
Approximately 25 acres
City Limits
ETJ Boundary
Parcels
Streets
Subject Property
1331
Subject Property
0 150 300 600 900
US Feet

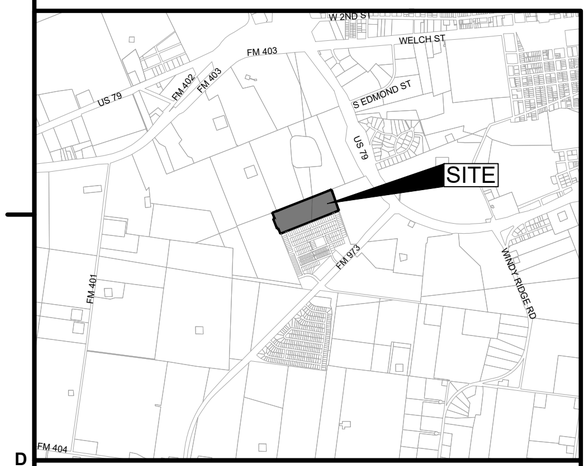
PRELIMINARY PLAT
FOR
DAVIS TRACT PHASE 1
(PZ-2024-2088)

BEING A 25.52 ACRE TRACT OF LAND SITUATED IN THE REMAINDER 70.664 ACRE "TRACT 2", OUT OF THE LAND JAMES C. EAVES SURVEY, ABSTRACT NO. 214 AND THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED TO TAYLOR 973 LLC AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.



SITE PROPERTIES	
DESCRIPTION	QUANTITY
LOT COUNTS	
OPEN SPACE/CIVIC	6
SINGLE-FAMILY RESIDENTIAL	110
TOTAL LOTS	116
ACREAGES	
LOTS/RESERVES	16.63 ACRES
RIGHT OF WAY (R.O.W.)	8.89 ACRES
TOTAL ACRES	25.52 ACRES
BLOCKS	
BLOCKS	18

STREET TABLE			
STREET	LENGTH	ROW WIDTH	CLASSIFICATION
BACKWOOD PASS	190.00'	54'	LOCAL
RED BRANCH RD	273.18'	60'	LOCAL
PEBBLESTREAM PASS	718.67'	60'	LOCAL
STREET 1	1891.85'	60'	NEIGHBORHOOD AVENUE
STREET 2	470.91'	60'	LOCAL
STREET 3	434.4'	60'	LOCAL
STREET 4	233.37'	60'	LOCAL
ALLEY 1	2116.39'	30'	ALLEY
ALLEY 2	1773.55'	30'	ALLEY
ALLEY 3	717.59'	30'	ALLEY
ALLEY 4	237.46'	30'	ALLEY
ALLEY 5	154.72'	30'	ALLEY
ALLEY 6	301.92'	30'	ALLEY
ALLEY 7	301.92'	30'	ALLEY



LOCATION MAP

SCALE: 1" = 3000'
500 0 1500 3000

NOTES:

1. UTILITY PROVIDERS - WATER: CITY OF TAYLOR, WASTEWATER: CITY OF TAYLOR; ELECTRICITY: ONCOR ELECTRIC
2. ALL STRUCTURES AND/OR OBSTRUCTIONS ARE PROHIBITED IN DRAINAGE EASEMENTS.
3. THERE ARE NOT AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0541F, EFFECTIVE DATE DECEMBER 20, 2019.
4. ALL MINIMUM YARD (BUILDING) SETBACKS SHALL BE IN ACCORDANCE WITH THE APPROVED DAVIS TRACT PHASE 1 PLANNED DEVELOPMENT STANDARDS, AS AMENDED.
5. NO DEVELOPMENT SHALL BEGIN PRIOR TO THE ISSUANCE OF A FLOODPLAIN DEVELOPMENT PERMIT FOR EACH OF THE FOLLOWING LOTS: N/A AS THERE IS NO FLOODPLAIN LOCATED ON SITE.
6. PARKLAND DEDICATION REQUIREMENTS ARE MET BY: THE DEDICATION OF BLOCK__/LOT__
7. MINIMUM ACCEPTABLE FLOW FOR FIRE PROTECTION IS FIVE HUNDRED (500) GALLONS PER MINUTE (gpm) FOR A DURATION OF NOT LESS THAN TWO (2) HOURS.
8. BUILDING SETBACKS WILL BE REVIEWED DURING EACH BUILDING PERMIT FOR CONCURRENCE WITH PD ORDINANCE 2023-45.

LEGEND

- PROPERTY / TRACT BOUNDARY
- ADJACENT PROPERTY LINE
- LOT LINE
- LEGAL RIGHT-OF-WAY
- SETBACK/BUFFER LINES
- 6 — BLOCK NUMBER
- 15 — LOT NUMBER
- BLOCK / LOT NUMBER
- EXISTING / PROPOSED
- WASTEWATER EASEMENT
- 1/2" IRON ROD FOUND (UNLESS NOTED)
- POINT OF BEGINNING
- PROPERTY CORNER - TO BE SET [1/2" IRON ROD]
- EXISTING EASEMENT

POINT OF BEGINNING
N: 10176877.0600'
E: 3209716.2180'

PRELIMINARY NOT FOR CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

OWNER/DEVELOPER
DHARMA RAJAH
973 TAYLOR, LLC
3040 POST OAK BLVD STE. 1212
HOUSTON, TEXAS 77056

ENGINEER
WILLIAM BUZZELLI, PE
VIEWPOINT ENGINEERING
2121 E 6TH STREET, SUITE 203
AUSTIN, TX 78702
PH: 512.537.0507

SURVEYOR
MATTHEW TOMERLIN, RPLS
DATAPOINT SURVEY & MAPPING
12450 NETWORK BLVD, SUITE 300
SAN ANTONIO, TX 78249
PH: 726.777.4240

ViewPoint Engineering

FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

PROJECT
DAVIS TRACT PHASE 1
FM 973 & US 79
WILLIAMSON COUNTY, TEXAS

PROJECT NO.	22016
DWN BY / CHK BY:	DM / WB
DATE	AUGUST 16, 2024
REVISED	August 16, 2024

SHEET
1 of 3

PRELIMINARY PLAT
FOR
DAVIS TRACT PHASE 1
(PZ-2024-2088)

BEING A 25.52 ACRE TRACT OF LAND SITUATED IN THE REMAINDER 70.664 ACRE "TRACT 2", OUT OF THE LAND JAMES C. EAVES SURVEY, ABSTRACT NO. 214 AND THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED TO TAYLOR 973 LLC AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

CURVE TABLE				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C3	270.00'	36.10'	7°39'42"	18.08'
C8	330.00'	67.28'	11°40'51"	33.76'
C24	200.00'	112.58'	32°15'05"	57.82'
C29	55.00'	20.91'	21°47'12"	10.58'
C30	85.00'	32.32'	21°47'12"	16.36'
C31	85.00'	32.32'	21°47'12"	16.36'
C32	55.00'	20.03'	20°51'50"	10.13'
C50	70.00'	56.67'	46°23'06"	29.99'
C53	260.00'	163.72'	36°04'42"	84.68'
C55	260.00'	163.72'	36°04'42"	84.68'
C71	200.00'	88.17'	25°15'36"	44.82'
C72	200.00'	91.35'	26°10'15"	46.49'
C73	260.00'	78.91'	17°23'22"	39.76'
C76	130.00'	25.56'	11°15'48"	12.82'
C79	450.00'	52.73'	6°42'48"	26.39'
C80	450.00'	48.57'	6°11'01"	24.31'
C81	450.00'	47.78'	6°05'01"	23.91'
C82	450.00'	12.14'	1°32'45"	6.07'
C83	450.00'	42.48'	5°24'29"	21.25'
C84	450.00'	42.48'	5°24'29"	21.25'

CURVE TABLE				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C85	450.00'	47.78'	6°05'03"	23.91'
C86	474.00'	103.23'	12°28'40"	51.82'
C87	474.00'	5.00'	0°36'16"	2.50'
C88	474.00'	37.85'	4°34'29"	18.93'
C89	450.00'	43.36'	5°31'13"	21.69'
C90	401.79'	41.45'	5°54'38"	20.74'
C91	376.00'	104.63'	15°56'39"	52.66'
C92	401.79'	40.33'	5°45'03"	20.18'
C93	401.79'	29.53'	4°12'40"	14.77'
C100	330.00'	73.49'	12°45'31"	36.90'
C107	85.00'	25.63'	17°16'33"	12.91'
C108	85.00'	6.69'	4°30'40"	3.35'
C109	55.00'	20.91'	21°47'12"	10.58'
C110	55.00'	20.91'	21°47'12"	10.58'
C111	79.77'	5.92'	4°15'15"	2.96'
C112	79.77'	26.43'	18°58'47"	13.33'
C113	260.00'	33.70'	7°25'32"	16.87'
C114	260.00'	60.88'	13°24'58"	30.58'
C116	70.00'	46.84'	38°20'26"	24.34'
C117	130.00'	50.06'	22°03'50"	25.34'

LINE TABLE		
LINE	LENGTH	BEARING
L1	15.08	S68°35'06.09"W
L2	10.36	N68°35'08.33"E
L6	20.48	N68°35'08.33"E
L7	13.18	N68°35'08.33"E
L8	1.72	S68°24'19.20"W
L9	2.61	S68°24'25.07"W
L13	4.81	N21°35'47.38"W
L14	40.98	N68°24'19.17"E
L15	40.98	N68°31'20.27"E
L16	30.00	S68°24'19.17"W
L20	22.44	N68°35'08.33"E
L21	22.52	S68°35'08.33"W
L30	39.95	S22°11'30.76"E
L31	10.06	S21°24'53.91"E
L32	34.93	S68°24'19.17"W
L33	40.89	N68°35'08.33"E
L34	10.00	S21°35'24.28"E
L35	10.00	N21°35'24.28"W
L36	10.00	N21°54'48.36"W
L38	9.99	S21°32'45.50"E

LINE TABLE		
LINE	LENGTH	BEARING
L39	10.02	N23°14'29.31"W
L40	9.27	S18°53'50.70"E
L41	10.01	N18°54'36.03"W

OPEN SPACE/ RESERVE LOTS

LOT AREA TABLE				
LOT NO.	Block	SQ. FT.	ACRES	Type
5	3	1,450	0.033	DRAINAGE RESERVE 5 (DOC #2022074792)
6	4	6,395	0.147	DRAINAGE RESERVE 6 (DOC #2022074792)
7	5	6,529	0.150	DRAINAGE RESERVE 7 (DOC #2021152781)
8	6	5,250	0.121	DRAINAGE RESERVE 8 (DOC #2021152781)
4	A	1,531	0.035	OPEN SPACE LOT
5	D	3,256	0.075	CIVIC SPACE 1
4	E	12,543	0.288	CIVIC SPACE 2
5	G	10,637	0.244	CIVIC SPACE 3
16	I	3,687	0.085	CIVIC SPACE 3
18	J	19,762	0.454	CIVIC SPACE 3
17	J	6,554	0.150	PEDESTRIAN ACCESS EASEMENT
10	K	3,611	0.083	PEDESTRIAN ACCESS EASEMENT
9	M	4,342	0.100	PEDESTRIAN ACCESS EASEMENT
1	O	8,031	0.184	WASTEWATER EASEMENT
1	P	8,486	0.195	WASTEWATER EASEMENT
1	Q	12,291	0.282	WASTEWATER EASEMENT
1	R	3,171	0.073	WASTEWATER EASEMENT

RESIDENTIAL LOTS

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	A	6,910	0.159
2	A	5,417	0.124
3	A	5,417	0.124

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	B	7,233	0.166
2	B	5,400	0.124
3	B	5,400	0.124
4	B	5,400	0.124
5	B	5,371	0.123
6	B	5,116	0.117
7	B	6,878	0.158

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	C	6,835	0.157
2	C	4,815	0.111
3	C	4,815	0.111
4	C	4,815	0.111
5	C	4,815	0.111
6	C	4,815	0.111
7	C	4,815	0.111
8	C	4,815	0.111
9	C	4,815	0.111
10	C	4,815	0.111
11	C	4,815	0.111
12	C	4,815	0.111
13	C	5,802	0.133
14	C	8,471	0.194

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	D	6,641	0.152
2	D	5,400	0.124
3	D	5,400	0.124
4	D	6,641	0.152

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	E	6,600	0.152
2	E	6,600	0.152
3	E	6,896	0.158

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	F	6,600	0.152
2	F	6,600	0.152
3	F	6,971	0.160

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	G	6,600	0.152
2	G	4,800	0.110
3	G	4,800	0.110
4	G	6,995	0.161

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	H	6,087	0.140
2	H	4,800	0.110
3	H	4,800	0.110
4	H	4,800	0.110
5	H	4,800	0.110
6	H	4,832	0.111
7	H	5,142	0.118
8	H	5,200	0.119
9	H	5,146	0.118
10	H	4,833	0.111
11	H	4,800	0.110
12	H	4,800	0.110
13	H	4,800	0.110
14	H	4,800	0.110
15	H	4,800	0.110
16	H	6,096	0.140

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	I	6,000	0.138
2	I	4,918	0.113
3	I	4,919	0.113
4	I	4,923	0.113
5	I	4,918	0.113
6	I	4,918	0.113
7	I	4,918	0.113
8	I	4,918	0.113
9	I	4,918	0.113
10	I	4,918	0.113
11	I	4,918	0.113
12	I	4,918	0.113
13	I	4,918	0.113
14	I	4,918	0.113
15	I	6,011	0.138
16	I	3,687	0.085

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	J	8,670	0.199
2	J	5,920	0.136
3	J	6,041	0.139
4	J	6,993	0.161
5	J	6,035	0.139
6	J	6,200	0.142
7	J	6,216	0.143
8	J	5,807	0.133
9	J	6,843	0.157
10	J	8,694	0.200
11	J	5,400	0.124
12	J	5,400	0.124
13	J	6,867	0.158
14	J	6,713	0.154
15	J	6,000	0.138
16	J	8,099	0.186

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	K	6,041	0.139
2	K	4,815	0.111
3	K	4,815	0.111
4	K	4,815	0.111
5	K	4,815	0.111
6	K	4,815	0.111
7	K	4,815	0.111
8	K	4,815	0.111
9	K	5,054	0.116

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	M	6,084	0.140
2	M	4,800	0.110
3	M	4,800	0.110
4	M	6,000	0.138
5	M	6,022	0.138
6	M	4,812	0.110
7	M	4,808	0.110
8	M	6,142	0.141

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	L	6,027	0.138
2	L	4,800	0.110
3	L	4,800	0.110
4	L	6,000	0.138

LOT AREA TABLE			
LOT NO.	Block	SQ. FT.	ACRES
1	N	6,460	0.148
2	N	5,400	0.124
3	N	5,360	0.123

PRELIMINARY
NOT FOR
CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

PROJECT
DAVIS TRACT PHASE 1
FM 973 & US 79
WILLIAMSON COUNTY, TEXAS

PROJECT NO.	22016
DWN BY / CHK BY:	DM / WB
DATE	AUGUST 16, 2024
REVISED	August 16, 2024

SHEET
2 of 3

K:\HOME\22016 DAVIS TRACT\DRAWINGS\CONST DWGS\22016 PRELIM-PLAT || EMMA HALL || 8/16/2024 12:54 PM

PRELIMINARY PLAT
FOR
DAVIS TRACT PHASE 1
(PZ-2024-2088)

BEING A 25.52 ACRE TRACT OF LAND SITUATED IN THE REMAINDER 70.664 ACRE "TRACT 2", OUT OF THE LAND JAMES C. EAVES SURVEY, ABSTRACT NO. 214 AND THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED TO TAYLOR 973 LLC AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

BEING A 25.22 ACRE TRACT OF LAND SITUATED IN THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, WILLIAMSON COUNTY, TEXAS, THE SAME BEING A PORTION OF THAT CERTAIN 70.644 ACRE TRACT OF LAND CALLED TRACT 2, AS CONVEYED BY DEED DATED DECEMBER 9, 2021 TO TAYLOR 973 LLC, AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2" IRON ROD FOUND AT AN EAST CORNER OF SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, FOR THE EAST CORNER OF THE TRACT OF LAND HEREIN DESCRIBED, SAME BEING AT THE COMMON NORTH CORNER OF CASTLEWOOD SUBDIVISION, PHASE NO. 1, AN ADDITION TO WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MAP THEREOF RECORDED IN DOCUMENT NO. 2021152781 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING IN THE SOUTHWEST LINE OF THAT CERTAIN CALLED 39.9793 ACRE TRACT OF LAND, AS CONVEYED BY DEED TO FASH TAYLOR AND RECORDED IN DOCUMENT NO. 2023055749, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS;

THENCE SOUTH 68°24'19" WEST (S68°24'13"W RECORD), DEPARTING SAID FASH TAYLOR CALLED 38.9793 ACRE TRACT, WITH A SOUTHEAST LINE OF SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, AND THE COMMON NORTHWEST LINE OF SAID CASTLEWOOD SUBDIVISION, PHASE NO. 1, PASSING AN APPROXIMATE DISTANCE OF 830 FEET THE SCALED TAYLOR CITY LIMIT LINE, AT A DISTANCE OF 921.79 FEET PASSING A WEST CORNER OF SAID CASTLEWOOD SUBDIVISION, PHASE NO. 1 AND THE COMMON NORTH CORNER OF CASTLEWOOD SUBDIVISION PHASE 2 & 3, AN ADDITION TO WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MAP THEREOF RECORDED IN DOCUMENT NO. 2022074792 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND CONTINUING ON FOR A TOTAL DISTANCE OF 1756.70 FEET (1759.79' RECORD) TO A 1/2" IRON ROD FOUND AT AN INTERIOR CORNER OF SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, AND THE COMMON WEST CORNER OF SAID CASTLEWOOD SUBDIVISION PHASE 2 & 3, FOR THE SOUTH CORNER OF THE TRACT OF LAND HEREIN DESCRIBED;

THENCE DEPARTING SAID CASTLEWOOD SUBDIVISION PHASE 2 & 3, THROUGH AND SEVERING SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, THE FOLLOWING COURSES AND DISTANCES NUMBERED (1) THROUGH (5):

1. NORTH 21°54'48" WEST, A DISTANCE OF 160.00 FEET TO CORNER;
2. SOUTH 68°24'19" WEST, A DISTANCE OF 34.93 FEET TO CORNER;
3. NORTH 21°26'02" WEST, A DISTANCE OF 295.44 FEET TO CORNER;
4. NORTH 68°35'08" EAST, A DISTANCE OF 40.89 FEET TO CORNER;
5. NORTH 20°51'11" WEST, A DISTANCE OF 170.39 FEET TO CORNER FOR THE WEST CORNER OF THE TRACT OF LAND HEREIN DESCRIBED, SAME BEING A NORTHWEST LINE OF SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, AND THE COMMON SOUTHEAST LINE OF THAT CERTAIN CALLED 54.911 ACRE TRACT OF LAND - TRACT 1, AS CONVEYED BY SAID DEED DATED DECEMBER 9, 2021, TO TAYLOR 973 LLC., RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, AND FROM WHICH A COMMON CORNER OF SAID TRACTS 1 AND 2 BEARS SOUTH 68°35'33" WEST (S68°34'59"W RECORD), A DISTANCE OF 8.04 FEET;

THENCE NORTH 68°35'33" EAST (N68°34'59"W RECORD), WITH THE NORTHWEST LINE OF SAID TAYLOR 973, LLC. CALLED 70.644 ACRE TRACT 2, AND A COMMON SOUTHEAST LINE OF SAID TAYLOR CALLED 54.911 ACRE TRACT 1, A DISTANCE OF 125.33 FEET TO A 1/2" IRON ROAD FOUND AT A FENCE CORNER AT A CORNER OF SAID TAYLOR 973 LLC. CALLED 70,644 ACRE TRACT 2, AND A COMMON EAST CORNER OF SAID TAYLOR 973, LLC. CALLED 54.911 ACRE TRACT 1, FOR A CORNER OF THE TRACT OF LAND HEREIN DESCRIBED, SAME BEING AT THE SOUTH CORNER OF THAT CERTAIN CALLED 45.83 ACRE TRACT OF LAND, AS CONVEYED BY DEED TO J. PATRICK AND BEVERLY K. QUINN AND RECORDED IN DOCUMENT NO. 9652460, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS;

THENCE NORTH 68°35'06" EAST (N68°34'59"E RECORD), CONTINUING WITH THE NORTHWEST LINE OF SAID TAYLOR 973, LLC. CALLED 70.644 ACRE TRACT 2, PASSING THE EAST CORNER OF SAID QUINN CALLED 45.83 ACRE TRACT AND A COMMON SOUTH CORNER OF THAT CERTAIN CALLED 6.597 ACRE TRACT OF LAND, AS CONVEYED BY DEED TO KEITH & MARCIA HAGLER AND RECORDED IN VOLUME 2621, PAGE 250, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, PASSING THE EAST CORNER OF SAID HAGLER CALLED 6.594 ACRE TRACT, AND A COMMON SOUTH CORNER OF THAT CERTAIN CALLED 29.05 ACRE TRACT OF LAND, AS CONVEYED BY DEED TO KEITH & MARCIA HAGLER AND RECORDED IN VOLUME 2621, PAGE 250, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS AND CONTINUING ALONG THE MEANDERS OF A WIRE FENCE, A TOTAL DISTANCE OF 1647.40 FEET (1647.45' RECORD) TO A 1/2" IRON ROAD FOUND AT A FENCE CORNER AT A NORTH CORNER OF SAID TAYLOR 973, LLC. CALLED 70.644 ACRE TRACT 2, AND A COMMON INTERIOR CORNER OF SAID HAGLER CALLED 29.05 ACRE TRACT, FOR THE NORTH CORNER OF THE TRACT OF LAND HEREIN DESCRIBED;

THENCE SOUTH 22°11'31" EAST (S22°17'14"E RECORD), WITH THE NORHTEAST LINE OF SAID TAYLOR 973, LLC. CALLED 70,644 ACRE TRACT 2, AND A COMMON SOUTHWEST LINE OF SAID HAGLER CALLED 29.05 ACRE TRACT, ALONG THE MEANDERS OF A WIRE FENCE, A DISTANCE OF 39.95 FEET (40.06' RECORD) TO A 1/2" IRON ROD FOUND AT A FENCE CORNER AT A CORNER OF SAID TAYLOR 973, LLC. CALLED 70.644 ACRE TRACT 2, AND A COMMON SOUTH CORNER OF SAID HAGLER CALLED 29.05 ACRE TRACT, SAME BEING AT THE WEST CORNER OF THE AFORESAID FASH TAYLOR CALLED 38.9793 ACRE TRACT, FOR A CORNER OF THE TRACT OF LAND HEREIN DESCRIBED;

THENCE SOUTH 19°10'21" EAST (S19°09'50"E RECORD), WITH THE NORTHEAST LINE OF SAID TAYLOR 973, LLC. CALLED 70.644 ACRE TRACT 2, AND THE COMMON SOUTHWEST LINE OF SAID FASH TAYLOR CALLED 38.9793 ACRE TRACT, ALONG THE MEANDERS OF A WIRE FENCE, A DISTANCE OF 580.68 FEET (580.61' RECORD) TO POINT OF BEGINNING AND CONTAINING 25.522 ACRES OF LAND.

OWNER/DEVELOPER

STATE OF TEXAS §

COUNTY OF _____ §

I, DHARMA RAJAH, SOLE OWNER OF THE CERTAIN 25.52 TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2021188725 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS DAVIS TRACT PHASE 1.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ DAY OF _____, 20___.

_____
DHARMA RAJAH, PRESIDENT
TAYLOR 973, LLC
1345 RICHELIU, LN
HOUSTON, TX 77018

STATE OF TEXAS §

COUNTY OF _____ §

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED DHARMA RAJAH, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.

_____
NOTARY OF PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON: _____

SURVEYOR CERTIFICATION

I, MATTHEW TOMERLIN, R.P.L.S., REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF TAYLOR, TEXAS.

_____
MATTHEW TOMERLIN, R.P.L.S.
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6503

ENGINEER CERTIFICATION

I, WILL BUZZELLI, P.E., LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS DAVIS TRACT PHASE 1 IS NOT ENCROACHED BY A ZONE A FLOOD AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL 48491C0541F, EFFECTIVE DECEMBER 20, 2019, AND THAT EACH LOT CONFORMS TO THE CITY OF TAYLOR REGULATIONS. THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT CITY OF AUSTIN, TRAVIS COUNTY, TEXAS THIS _____ DAY OF _____, 20 _____.

_____
WILLIAM BUZZELLI , P.E.
LICENSED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 133535

STATE OF TEXAS

KNOWN ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON

I, NANCY E. RISTER, CLERK OF THE COUNTY OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, 20___, A.D., AT ___ O'CLOCK, __M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN DOCUMENT NO. _____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

_____
NANCY E. RISTER
CLERK COUNTY COURT OF WILLIAMSON COUNTY, TEXAS

BY: _____, DEPUTY

DEVELOPMENT SERVICES DIRECTOR

I, _____, DEVELOPMENT SERVICES DIRECTOR FOR THE CITY OF TAYLOR, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

_____ _____
DATE

_____, DIRECTOR

PLANNING & ZONING COMMISSION

A PRELIMINARY PLAT FOR A SUBDIVISION TO BE KNOWN AS DAVIS TRACT PHASE 1 HAS BEEN APPROVED ACCORDING TO THE MINUTES OF THE MEETING OF THE TAYLOR PLANNING AND ZONING COMMISSION ON THE ____ DAY OF _____, 20___, A.D.

_____ _____ _____
_____, CHAIRMAN DATE

_____ _____ _____
_____, SECRETARY DATE

PRELIMINARY
NOT FOR
CONSTRUCTION

THIS PLAN HAS BEEN PREPARED FOR GENERAL DISCUSSION ONLY AND IS BASED UPON LIMITED DUE DILIGENCE.

ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

DAVIS TRACT PHASE 1
FM 973 & US 79
WILLIAMSON COUNTY, TEXAS

[redacted] 22016	SHEET
[redacted] DM / WB	3 of 3
[redacted] AUGUST 16, 2024	
[redacted] August 16, 2024	

STORMWATER MANAGEMENT REPORT

Davis Tract

Taylor, Texas

March 2024

Revised: - Aug 2024

Prepared for
TAYLOR 973, LLC

1345 Richelieu Lane
Houston, TX 77018

Prepared By:

ViewPoint Engineering
2121 East 6TH Street, Suite 203
Austin, TX 78702

VPE Project No: 22016

William Buzzelli, P.E.

ViewPoint Engineering

ViewPoint Engineering

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APPENDIX A: Supporting Documents
A.1 Location Map
A.2 FEMA Flood Insurance Rate Map
A.3 Existing Drainage Area Map
A.4 Proposed Drainage Area Map
A.5 Overall Drainage Area Map

APPENDIX B: Castlewood Drainage Reports
B.1 PZ-2020-1215 Drainage Report
B.2 PZ-2021-1353 Drainage Report

ViewPoint Engineering

1.0 Project Description

Epitome Development, LLC is proposing a Master Planned Development (Phase 1) on approximately 25.52-acres located in Taylor, Texas. Phase One will be developed according to the City of Taylor Development Manual and the approved Planned Development Plat. The proposed development will include approximately 110 single-family residential lots and open space. A Location Map is attached in the Appendix for reference.

2.0 Site Characteristics

2.1 Existing Conditions

The proposed project tract is presently undeveloped, with its primary drainage flowing naturally from west to east towards the southeastern property corner. A smaller section drains northwest towards an existing drainage channel, as indicated by surveyed and GIS lidar existing contours. Phase One of the development adjoins the Castlewood Subdivision (PZ-2020-1215) along its southern boundary, while the proposed development is adjacent to the Castlewood South development (PZ-2021-1353). The drainage reports for both the Castlewood Subdivision and Castlewood South are included in the Appendix for reference. It's important to note that prior coordination has taken place among the proposed development, the Castlewood developments, and the City of Taylor to formulate a comprehensive drainage plan.

The existing drainage pattern is categorized into two areas: EX-1 and EX-2. EX-1 drains from east to west towards the southeastern property corner and is directed to the existing detention pond within the Castlewood Subdivision (PZ-2020-1215). This detention pond was specifically designed to accommodate this flow, with all relevant designs and calculations detailed in the referenced and approved drainage report. EX-2 drains towards the northwest and flows offsite towards an existing channel. There are no anticipated off-site flows beyond this point.

2.2 Proposed Conditions

Under proposed conditions, phase one will be developed with a mix of single-family residential and open space. Stormwater runoff onsite will be directed through the site via streets, earthen and concrete-lined channels, as well as underground storm drain systems. These systems discharge into the existing storm system of Castlewood Subdivision, guiding the flow around its northern and eastern boundaries before reaching the pre-existing detention pond.

2.3 FEMA Floodplains

The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM map 48491C0541F.

3.0 Design Criteria

The proposed development was designed using standards set forth by the City of Taylor Development Manual and the City of Taylor's Engineering Manual.

4.0 Methodology

The NRCS Method per TR-55, also known as the Soil Conservation Service (SCS) Curve Number Method, was utilized to analyze the pre-development (existing) and post-development (proposed) stormwater hydrologic flows, respectively. HEC-HMS was used to calculate runoff for the project. The NRCS TR-55 Method incorporates the Time of Concentration (Tc), Curve Numbers, Depth-Duration-Frequency (DDF) tables, associated drainage areas and estimated impervious cover numbers to calculate runoff hydrographs and peak flow rates.

4.1 NRCS Curve Number

The conveyance systems have been designed using the NRCS Method to determine peak runoff rates within the development area. Site soils consist of a range of Groups C and D, with most of the site falling within Group D. Soil Group D was used for the Curve Number selection. The cover conditions within the respective drainage areas were evaluated in accordance with the Curve Numbers listed in the Engineering Manual as shown in Table 1 below:

Table 1: Table 2-5 – SCS Curve Numbers

Cover Description	Avg. % Impervious Area[1]	Curve Number for Hydrologic Soil Group
Cover Type & Hydrologic Condition		D
Pasture, grassland, or range-continuous forage for grazing.	--	84

4.2 Time of Concentration (Tc)

Time of concentrations were determined based on the NRCS TR-55, with specific limitations for minimum time and maximum sheet flow length as described in the Engineering Manual.

4.3 Design Storm Rainfall

Design storm rainfall values were taken from City of Taylor Engineering Manual (January 10, 2024 revision.

Table 2: Table 2-1A, Depth-Duration-Frequency Values – Zone 1

Recurrence Interval (year)	2 Yr	10 Yr	25 Yr	100 Yr
5-min	0.52	0.76	0.92	1.18
10-min	0.83	1.22	1.47	1.90
15-min	1.04	1.52	1.83	2.35
30-min	1.47	2.12	2.55	3.25
1-hr	1.91	2.80	3.39	4.35
2-hr	2.35	3.57	4.41	5.87
3-hr	2.61	4.05	5.08	6.91
6-hr	3.05	4.86	6.19	8.62
12-hr	3.49	5.61	7.18	10.10
24-hr	3.97	6.38	8.17	11.50

5.0 Analysis

5.1 Peak Rate Analysis

Pre-Development: The parcel was split into two drainage areas, EX-1 and EX-2. EX-1 flows towards the Castlewood Subdivision to the south. EX-2 discharges towards the northwest corner of the site to an existing shallow channel.

Post-Development: The development has been consolidated into a single drainage area, designated as PR-1, for the proposed condition. Combined runoff from the site is directed towards the southeastern property corner and the Castlewood Subdivision (PZ-2020-1215).

Please consult the Proposed Drainage Area Map provided in the Appendix for additional information, including hydrology model input parameters. The following tables summarize peak flows calculation results.

Table 3: Pre-Development Peak Discharge Summary

		Peak Flow, cfs			
Drainage Area ID	Area (Ac.)	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	56.82	149	261	334	454
EX-1	20.07	44	77	98	133
EX-2	5.43	10	17	21	29
OS-B1	39.07	65	113	145	196
OS-C1	35.59	69	122	156	212
POINT OF ANALYSIS	-	317	557	716	973

Table 4: Post-Development Peak Discharge Summary

		Undetained				Detained			
Drainage Area ID	Area (Ac.)	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	82.3	113	336	410	531	-	-	-	-
OS-A1	25.5	67	336	410	531	-	-	-	-
OS-B1	39.1	65	336	410	531	-	-	-	-
OS-C1	35.6	69	336	410	531	-	-	-	-
POINT OF ANALYSIS	-	-	-	-	-	238	416	535	734

Table 5: Qcritical Calculations

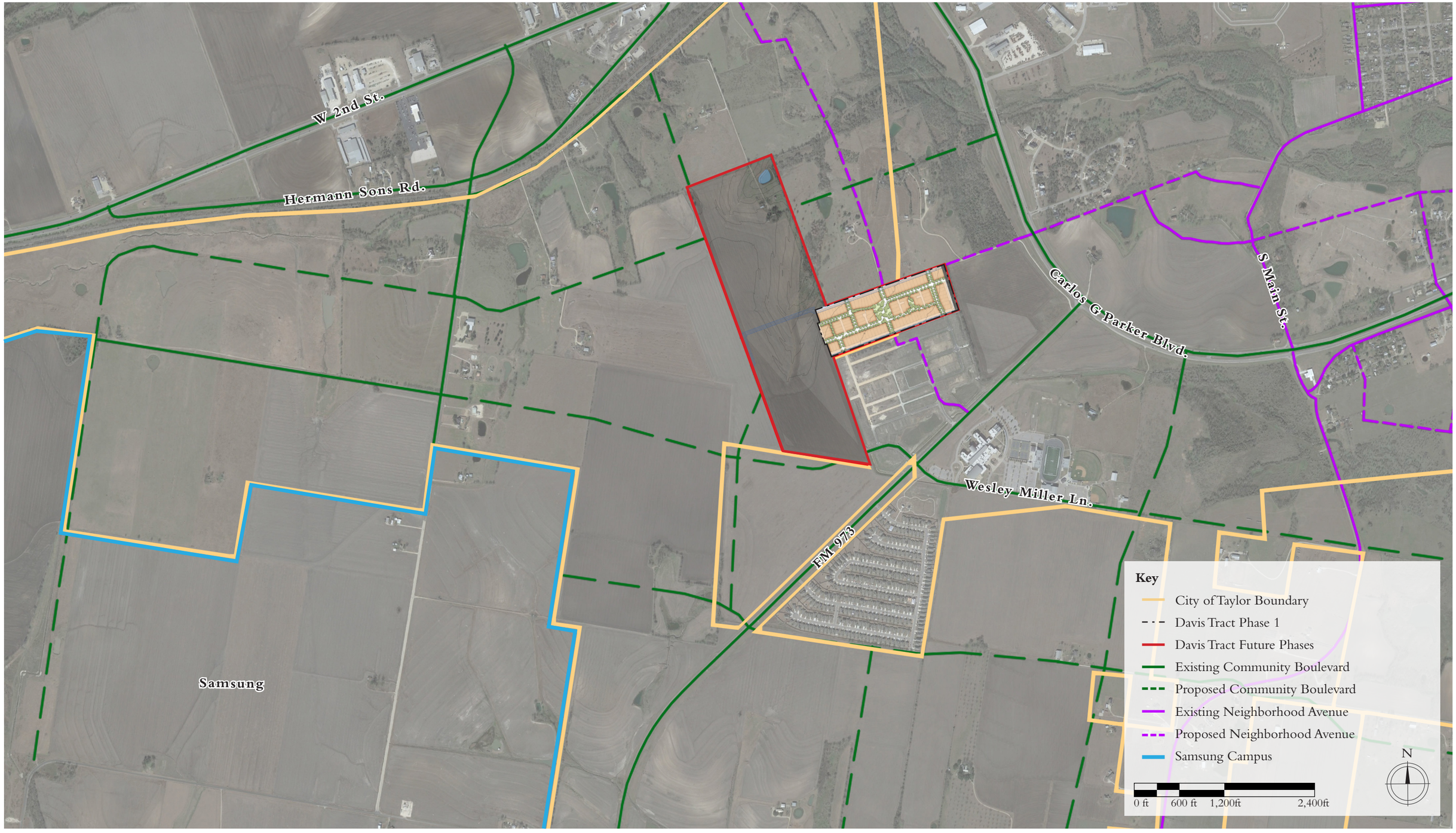
Qcritical	
Desc	Q, 2 Yr.
PRE	317
Qc	311
POST	238

6.0 CONCLUSIONS

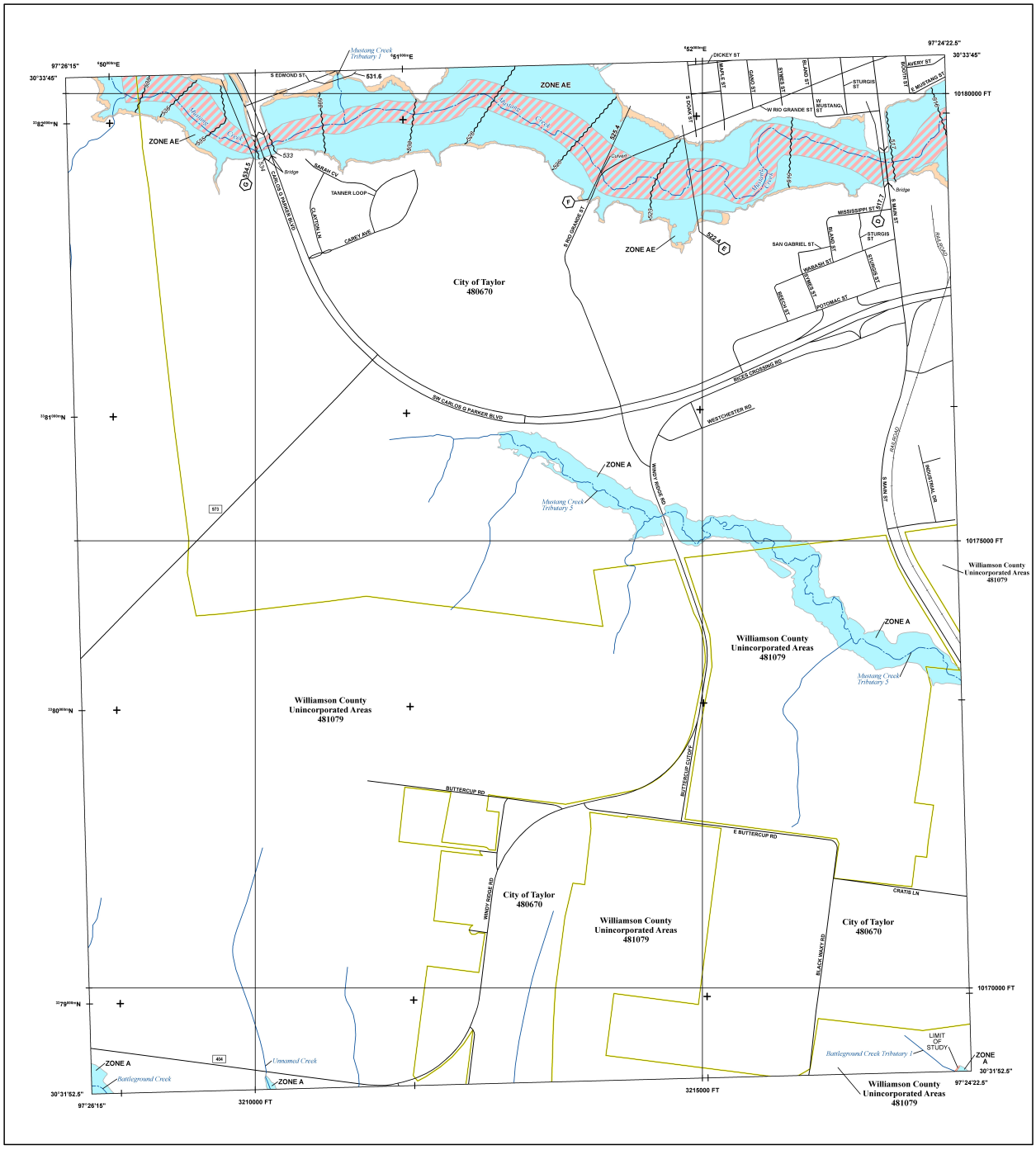
The peak discharges for PR 1 are higher compared to the discharge from EX 1 at POA 1 in the post-development conditions, as expected. This peak flow increase is attenuated to less than pre-development conditions with storage provided by current detention pond, as designed.

APPENDIX A: SUPPORTING DOCUMENTS

A.1 LOCATION MAP


W 2nd St.
Hermann Sons Rd.
Carlos G Parker Blvd.
S Main St.
Wesley Miller Ln.
FM 973
Samsung
Key
City of Taylor Boundary
Davis Tract Phase 1
Davis Tract Future Phases
Existing Community Boulevard
Proposed Community Boulevard
Existing Neighborhood Avenue
Proposed Neighborhood Avenue
Samsung Campus
N
0 ft
600 ft
1,200ft
2,400ft

A.2 FEMA Flood Insurance Rate Map



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall
- E 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)

OTHER FEATURES
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2010; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE

Map Projection: Texas State Plane Central (FIPS ZONE 4203); North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88

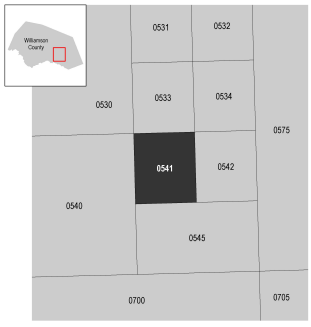
N

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR



National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY, TEXAS and Incorporated Areas

PANEL 541 OF 750

FEMA

Panel Contains:

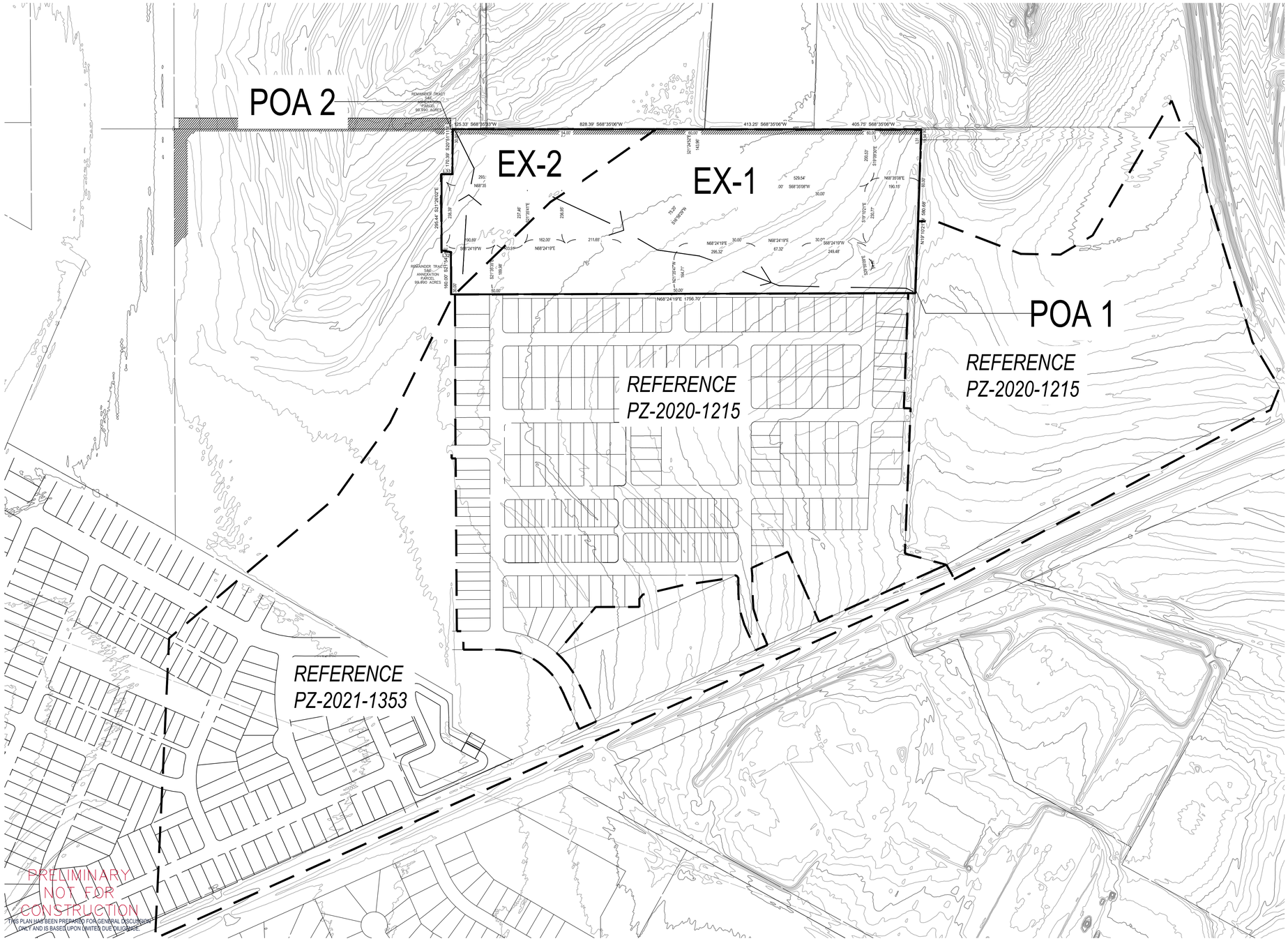
COMMUNITY	NUMBER	PANEL	SUFFIX
TAYLOR, CITY OF	480670	0541	F
WILLIAMSON COUNTY	481079	0541	F

VERSION NUMBER
2.3.3.3

MAP NUMBER
48491C0541F

MAP REVISED
DECEMBER 20, 2019

A.3 Existing Drainage Area Map



ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

SCALE 1" = 200'
200' 0 100' 200'

PROPERTY BOUNDARY
EXISTING DRAINAGE BOUNDARY
EXISTING TIME OF CONCENTRATION FLOW PATH

DRAINAGE SUMMARY						
Existing Condition						
			Peak Flow, cfs			
Drainage Area ID	Area (Sf.)	Area (Ac.)	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
EX 1	874249	20.1	27	52	70	98
EX 2	236531	5.4	7	13	17	25

EXISTING DRAINAGE MAP

DAVIS TRACT

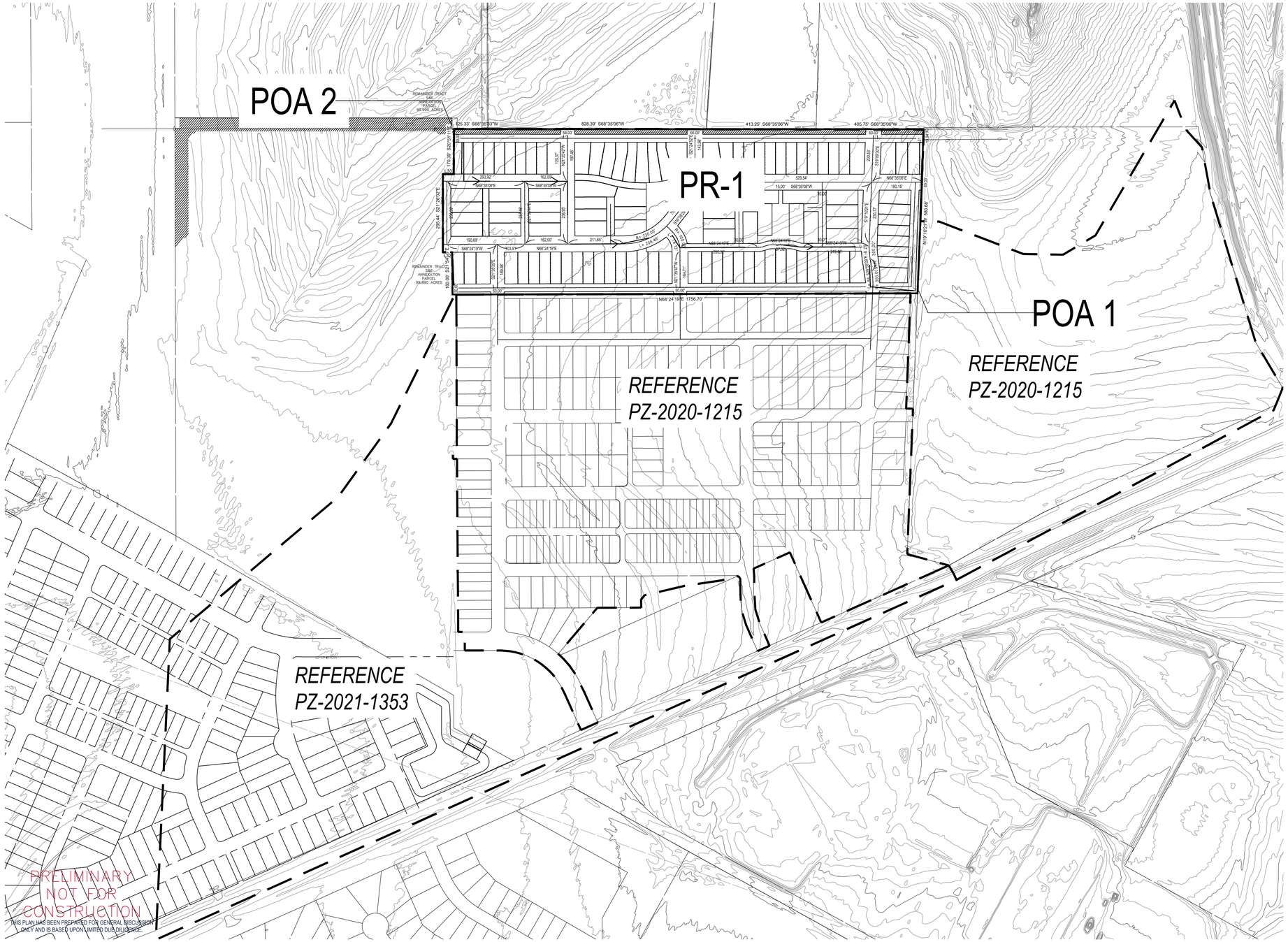
TAYLOR, TEXAS

-AUGUST 2024-

TIME OF CONCENTRATION																
Existing Condition																
Rainfall (in), 2-yr 24hr		Sheet Flow				Shallow Concentrated Flow						Channel Flow			Total	
						Unpaved			Paved							
3.95	Area (Ac.)															
Drainage Area Name		n	S	L	T1	L	S	T2	L	S	T2	V	L	T3	Tt, min	TL, min
EX 1	20.1	0.20	0.45%	100	20.2	465	2.20%	3.2	0	–	0.0	–	–	0.0	23.4	14.0
EX 2	5.4	0.20	0.30%	100	23.7	1338	1.00%	13.8	0	–	0.0	–	–	0.0	37.5	22.5

IMPERVIOUS COVER													
Existing Condition													
Drainage Area	Total Drainage Area	Building Impervious Area	Building Impervious Area	Driveway Impervious Area	Driveway Impervious Area	Roadway Impervious Area	Roadway Impervious Area	Total Impervious Cover Area	Total Impervious Cover Area	Impervious Area	Pervious Curve Number	Impervious Curve Number	Weighted Curve Number
	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Ft/Ft)	CN	CN	CN
EX 1	20.1	0	0	0	0	0	0	0	0	0	84	98	84
EX 2	5.4	0	0	0	0	0	0	0	0	0	84	98	84

A.4 Proposed Drainage Area Map



ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

SCALE 1" = 200'
200' 0 100' 200'

PROPERTY BOUNDARY
EXISTING DRAINAGE BOUNDARY
PROPOSED TIME OF CONCENTRATION FLOW PATH

DRAINAGE SUMMARY						
Proposed Condition						
			Peak Flow, cfs			
Drainage Area ID	Area (Sf.)	Area (Ac.)	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
PR 1	1110780	25.5	52	87	109	146

PROPOSED DRAINAGE MAP

DAVIS TRACT

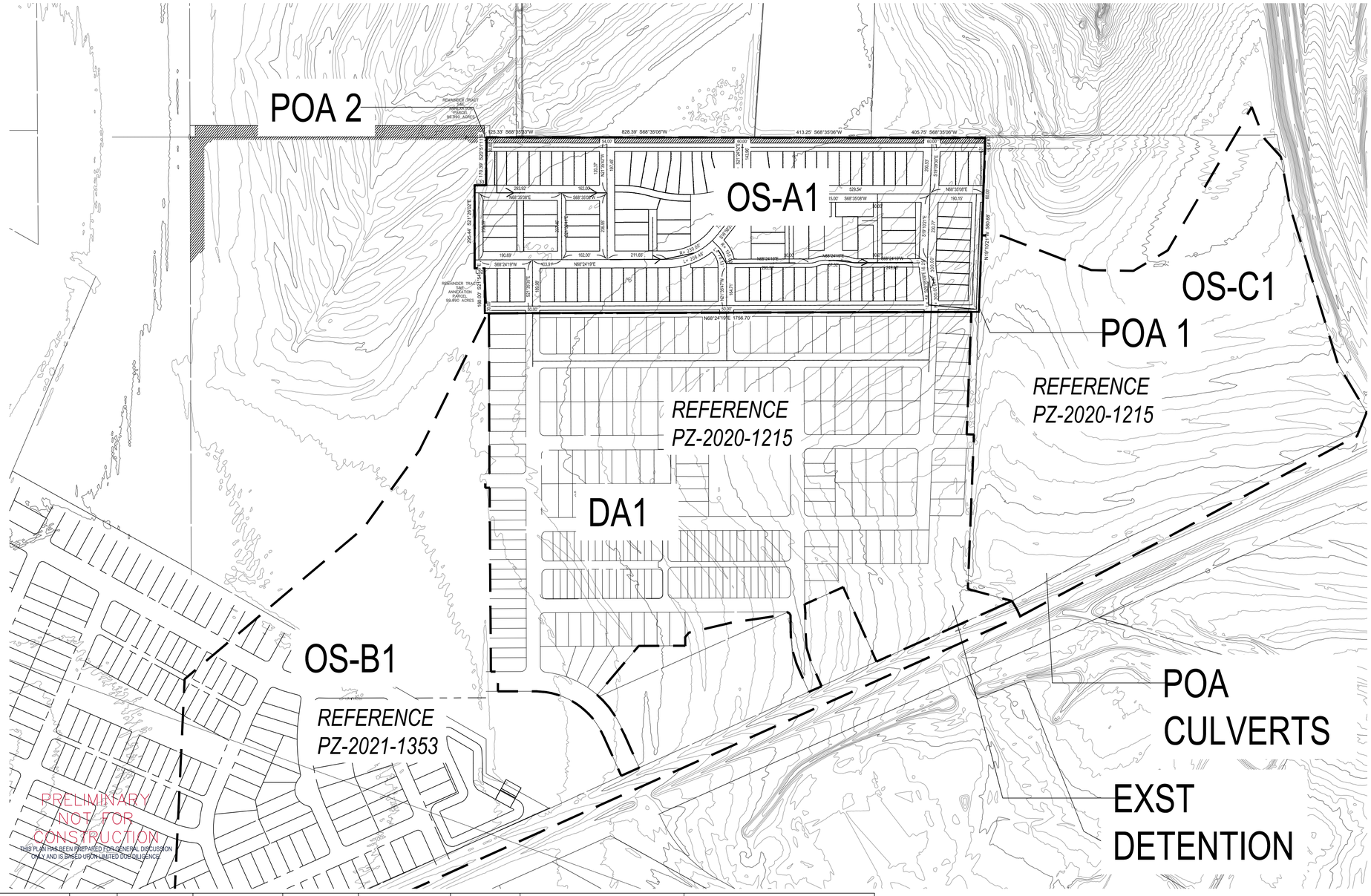
TAYLOR, TEXAS

-AUGUST 2024-

Proposed Condition																
Rainfall (in), 2-yr 24hr	Area (Ac.)	Sheet Flow				Shallow Concentrated Flow						Channel Flow			Total	
3.95						Unpaved			Paved							
Drainage Area Name		n	S	L	T1	L	S	T2	L	S	T2	V	L	T3	Tt, min	TL, min
PR 1	25.5	0.20	1.00%	100	14.6	0	0.00%	0.0	200	0.50%	2.3	6	2320	6.4	23.4	14.0

IMPERVIOUS COVER													
Proposed Condition													
Drainage Area	Total Drainage Area	Building Impervious Area	Building Impervious Area	Driveway Impervious Area	Driveway Impervious Area	Roadway Impervious Area	Roadway Impervious Area	Total Impervious Cover Area	Total Impervious Cover Area	Impervious Area	Pervious Curve Number	Impervious Curve Number	Weighted Curve Number
	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Sq. Ft.)	(Acres)	(Ft/Ft)	CN	CN	CN
PR 1	25.5	25200	0.579	47250	1.08	412980	9.48	485430	11.1	0.44	84	98	90

A.5 Overall Drainage Area Map



ViewPoint Engineering
FIRM No. F-23395
viewpointengineering.com
2121 E 6th STREET, SUITE 203
AUSTIN, TEXAS 78702

SCALE 1" = 200'
200' 0 100' 200'

PROPERTY BOUNDARY
EXISTING DRAINAGE BOUNDARY
PROPOSED TIME OF CONCENTRATION FLOW PATH

PROPOSED OVERALL DRAINAGE MAP

DAVIS TRACT

TAYLOR, TEXAS
-AUGUST 2024-

EXISTING DRAINAGE SUMMARY							SCS Curve Number			Undetained			
Drainage Area Name	Area (Ac.)	Impervious %	Impervious Area (Ac.)	Imvervious CN	Pervious Area (Ac.)	Pervious CN	CN	Tc, min	TL, min	Q2	Q10	Q25	Q100
DA #1	56.82	0.0	0.00	98	56.82	84	84.0	30.9	18.6	149	261	334	454
EX-1	20.07	0.0	0.00	98	20.07	84	84.0	23.4	14.0	44	77	98	133
EX-2	5.43	0.0	0.00	98	5.43	84	84.0	37.5	22.5	10	17	21	29
OS-B1	39.07	0.0	0.00	98	39.07	84	84.0	41.9	25.1	65	113	145	196
OS-C1	35.59	0.0	0.00	98	35.59	84	84.0	30.5	18.3	69	122	156	212

PROPOSED DRAINAGE SUMMARY							SCS Curve Number			Undetained				Detained			
Drainage Area Name	Area (Ac.)	Impervious %	Impervious Area (Ac.)	Imvervious CN	Pervious Area (Ac.)	Pervious CN	CN	Tc, min	TL, min	Q2	Q10	Q25	Q100	Q2	Q10	Q25	Q100
DA #1	82.30	57.7	47.49	98	34.81	84	92.1	29.0	17.4	113	168	204	263	–	–	–	–
OS-A1	25.50	44.4	11.32	98	14.18	84	90.2	29.0	17.4	67	103	126	164	–	–	–	–
OS-B1	39.07	0.0	0.00	98	39.07	84	84.0	41.9	25.1	65	113	145	196	–	–	–	–
OS-C1	35.59	0.0	0.00	98	35.59	84	84.0	30.5	18.3	69	122	156	212	–	–	–	–
POINT OF ANALYSIS	–	–	–	–	–	–	–	–	–	–	–	–	–	238	416	535	734

Impervious Cover Summary			
Full Build Out	Area (Ac.)	Impervious Cover (Ac.)	% IC
Parks/Open Space	2.78	0.00	0%
Pond	3.52	0.00	0%
Commercial	10.11	8.09	80%
Single Family – DA #1	40.41	28.29	70%
Single Family – OS-A1	25.50	11.10	44%
Total	82.32	47.48	57.7%

APPENDIX B: CASTLEWOOD DRAINAGE REPORTS

B.1 PZ-2020-1215 Drainage Report

DRAINAGE REPORT

CASTLEWOOD SUBDIVISION
PERMIT NO. -
68 FM 973
TAYLOR, TEXAS 76574

Prepared For:

CITY OF TAYLOR
400 Porter Street,
Taylor, TX 76574

Prepared By:

Kimley»Horn

Texas Registration #928

2600 Via Fortuna
Terrace I, Suite 300
Austin, Texas 78746



OCTOBER 2020

10/16/2020

Kimley»Horn

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SECTION 2: DRAINAGE CONDITIONS AND IMPROVEMENTS 2
SECTION 3: CONCLUSION 3

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EXHIBIT B .....FEMA FIRM MAP
EXHIBIT C .....EXISTING DRAINAGE AREAS
EXHIBIT D .....OVERALL PROPOSED DRAINAGE AREAS
EXHIBIT E .....PROPOSED INLET DRAINAGE AREAS
EXHIBIT F.....GLOBAL DRAINAGE CALCUATIONS
EXHIBIT G.....STREET CAPACITIES
EXHIBIT H.....HEC-HMS POND CALCULATIONS
EXHIBIT I.....STORMCAD CALCULATIONS
EXHIBIT J.....2-YEAR CHANNEL CALCULATIONS
EXHIBIT K.....HY-8 CULVERT MODELS

SECTION 1: INTRODUCTION

The subject site is off FM 973 near the intersection of FM 973 and US HWY 79 in Taylor, Texas. The site is located within the City of Taylor city limits. The proposed site is described as AW0533 AW0533 – Reese, G.M. Sur., Acres 28.3, AW0533 AW0533 – Reese, G.M. Sur., Acres 11.934, and AW0533 AW0533 – Reese, G.M. Sur., Acres 17.71. A location map is provided with this report (Exhibit A).

The subject site is currently ±58 acres of undeveloped land used for agriculture purposes. We are proposed to add a single-family subdivision consisting of 230 lots. A planned development has been submitted for this project and approved through the city of Taylor (Ordinance No. 2019-27).

The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM map 48491C0541F (Exhibit B).

SECTION 2: DRAINAGE CONDITIONS AND IMPROVEMENTS

In existing conditions, the site consists of non-developed land with dense over grown grass. The site consists of one drainage area (DA #1), which is 152.22 acres. The site sheet flows overland from east to west and eventually discharges into a culvert located near the southwest corner of the property. Exhibit C, Existing Overall Drainage Map, demonstrates the existing conditions of the site.

In order to better analyze the site, we broke this area of 152.22 acres up into 3 areas. The first being OS-B1 (39.07 acres). This area is conveying water through our site, combing flows, to the existing TxDOT culvert along FM 973. Our site, DA #1, is 77.56 acres conveys water in the same direction, westerly to easterly. DA #1 contains runoff from the property to the north of our site but is lumped into our area for detention purposes talked about later. Finally, the third area, OS C1, is the area to the east of our site that convey water from northeast to southwest to this very same culvert.

There is an existing drainage ditch running along FM 973 which also collects some of the existing flows from the drainage areas described and some of the runoff from FM 973. The runoff within this drainage ditch is carried to the culvert as well.

In proposed conditions, we capture offsite runoff and run it around our site and eventually discharge at the culvert. Starting with OS B1 the runoff is capture in a surface channel that is graded to have mini sumps where it drops into an underground storm system. This system conveys the water to surface channels running in phase 3 of our development (commercial properties), going through 2 culverts before being discharged into the TxDOT culvert directly. Attached are proposed drainage area maps, one showing the commercial being included in our pond and the other showing the commercial excluded. The commercial excluded from the site is a temporary situation until it gets developed and a storm system replaces the channels and the water is conveyed to the pond.

The channels convey the water to two culverts, one under each of our driveways connecting to FM 973. These culverts were designed using HY-8, which is what we also used in order to design the TxDOT culverts we are having to install as well under these driveways. See attached model calculations.

DA #1 has runoff from the adjacent property, but this runoff was accounted for in our detention pond. This water similarly gets capture in a trap channel and is conveyed around the site in an underground storm system that discharges into our pond on the southeast corner.

Onsite the water travels from east to west and will be convey via storm drain. Storm water will discharge into a pond that located in Reserve 2. Detention will be analyzed for the 2-yr, 10-yr, 25-yr and 100-yr storm events. Discharge from the pond will be detained to match or better existing conditions of the site. Analysis point for both the existing and proposed conditions is the upstream side of the culvert. It should be noted the intensity values use are the updated City of Taylor values that accounts for Atlas 14.

Drainage area OS C1 is runoff that drains to the culvert but is relevant due to our point of analysis being the TxDOT culvert. We did not account for this runoff on our site because there is berm that was built by the property owner which keeps the water from draining onto our site until the culvert

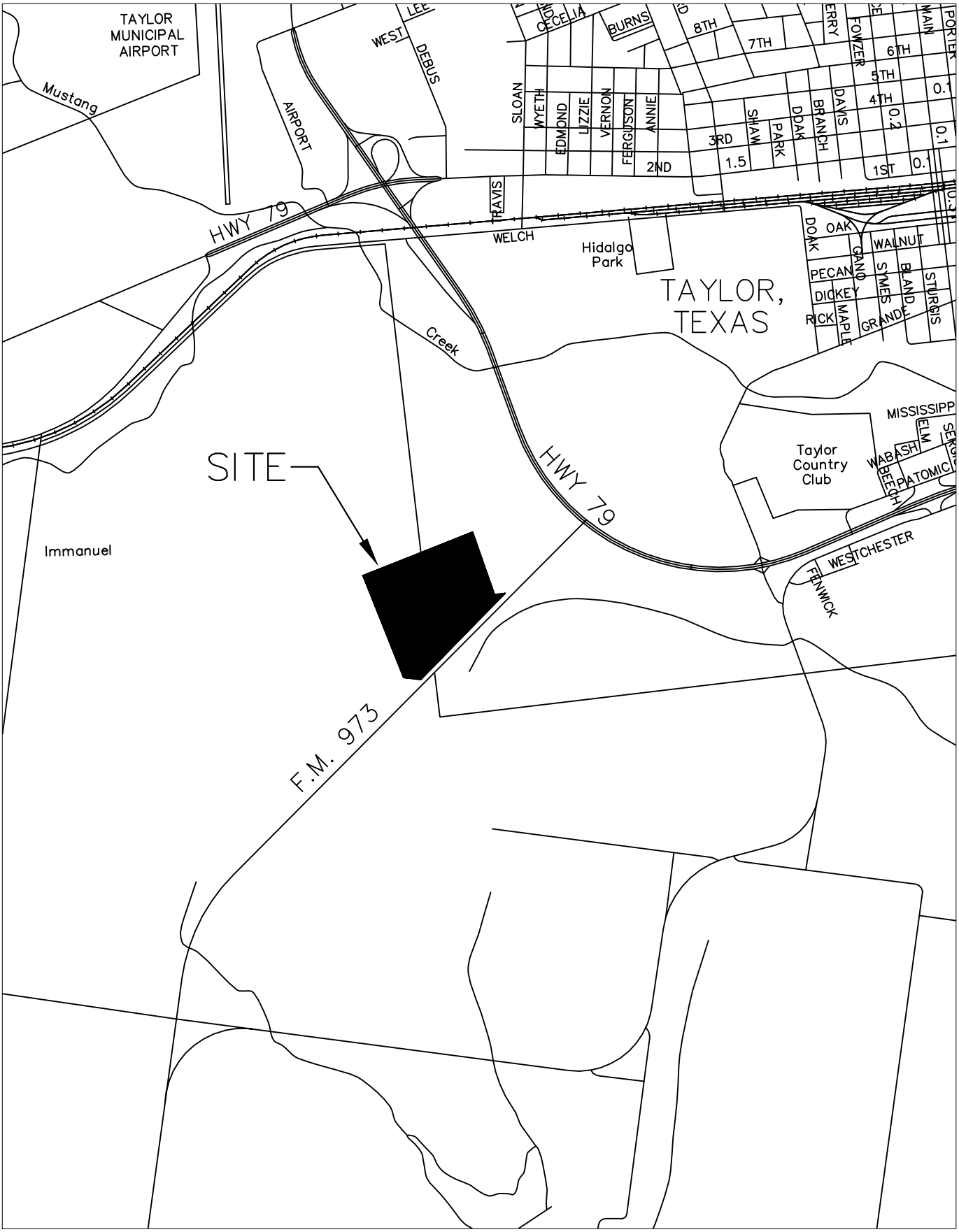
Rational method was used onsite in order to size the underground storm system running throughout the site. This site will be constructed in 2 phases for the residential portion. The phases will be built consecutively, so once the first phase is done the next will start. SCS methodology was used in order to size the pond and get water surface elevations which was plugged into our StormCad model to account for backwater. See attached charts for calculations.

We analyzed the drainage areas using rational method to size the storm drains and inlets, while SCS method was used to determine the size of the pond. Below are some charts that demonstrate the before and after conditions of the development.

SECTION 3: CONCLUSION

Castlewood Subdivision is a ±58-acre subdivision that will consist of 230 residential single-family lots. There is no FEMA floodplain located on site. Additional storm water will be picked up and conveyed around the edges of the property and eventually discharge into the existing culvert located near the southwest corner of our property at FM 973. Onsite drainage will be carried underground in a storm drain system that will discharge into the proposed detention pond located before the culvert at the southwest corner of the property (Reserve 2). To prevent any adverse impacts downstream the pond will be designed adequately to prevent any flows that will exceed existing for 2-yr, 10-yr, 25-yr, 100-yr storm events. For other values such as the intensities and roughness coefficients used, see the charts attached with this report.

EXHIBIT A
LOCATION MAP



CASTLEWOOD SUBDIVISION

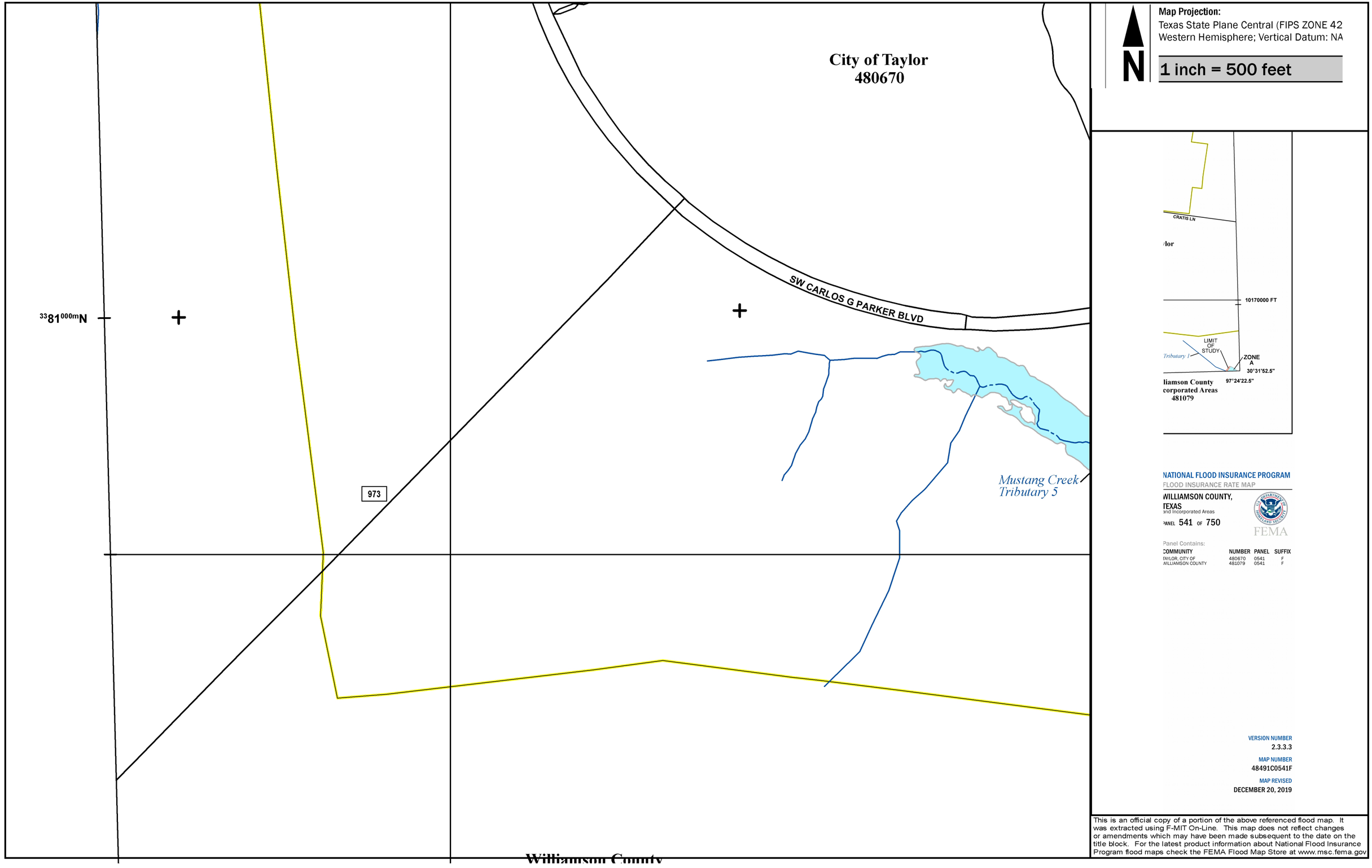
Taylor, Texas
January 2020

Kimley»Horn
5750 Genesis Court
Suite 200
Frisco, Texas 75034
972-335-3580
State of Texas Registration No. F-928

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY, TOPOGRAPHY, UTILITIES, CONTACT WITH THE CITY, ETC.

PLOTTED BY BUZZELLI, WILLIAM 1/31/2020 2:33 PM
DWG NAME K:\SAU_CIVIL\069278800 CASTLEWOOD SINGLE FAMILY\CAD\REFERENCES\XVMAP.DWG
LAST SAVED 1/31/2020 2:32 PM

EXHIBIT B
FEMA FIRM MAP



Map Projection:
Texas State Plane Central (FIPS ZONE 42
Western Hemisphere; Vertical Datum: NA

1 inch = 500 feet

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY,
TEXAS
and Incorporated Areas

PANEL 541 OF 750

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
TAYLOR, CITY OF	480670	0541	F
WILLIAMSON COUNTY	481079	0541	F

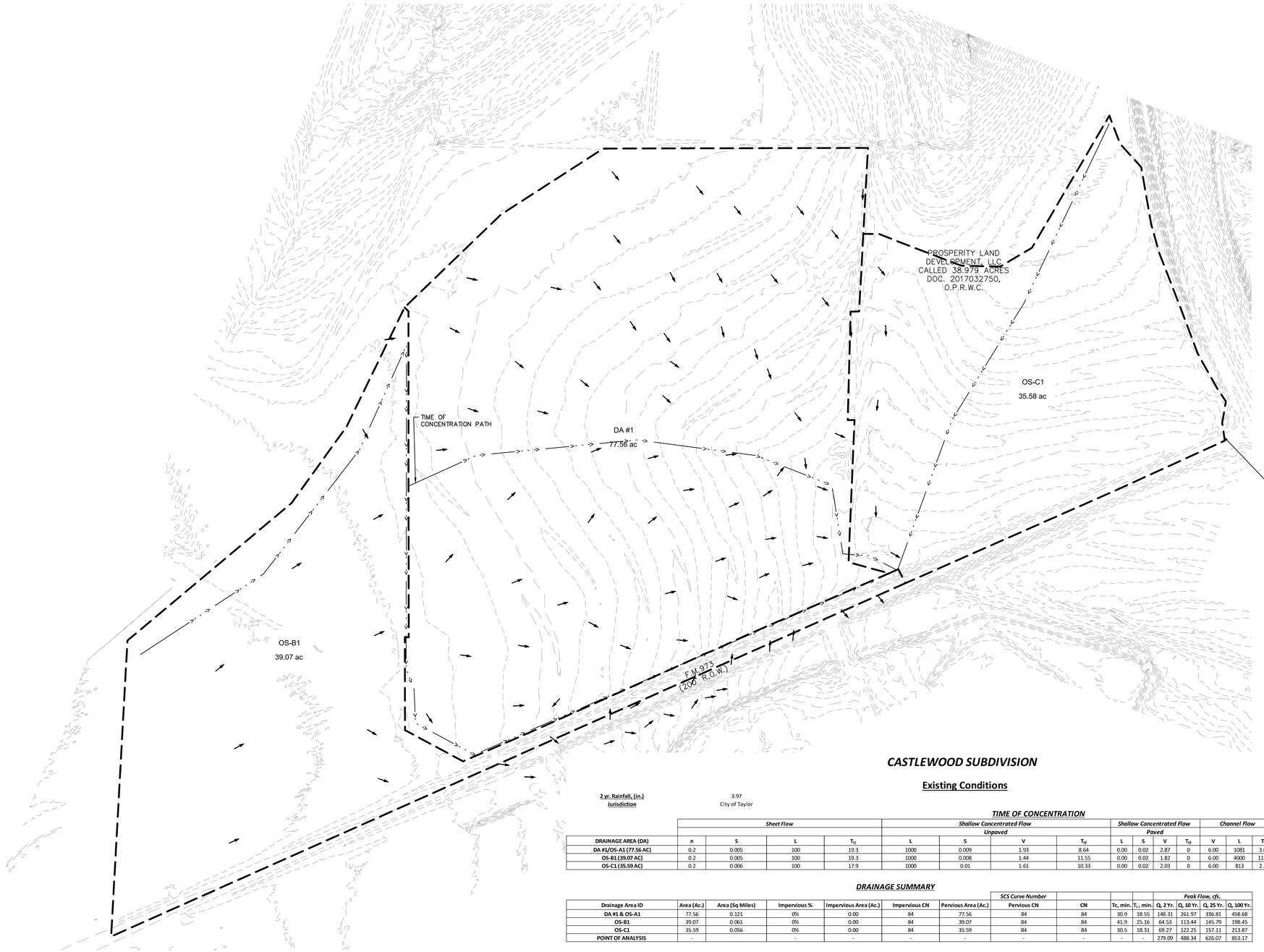
VERSION NUMBER
2.3.3.3

MAP NUMBER
48491C0541F

MAP REVISED
DECEMBER 20, 2019

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

EXHIBIT C
EXISTING DRAINAGE AREAS



N
W E
S

0 200' 400'
GRAPHIC SCALE 200'

LEGEND

- X-1 / X ac — AREA DESIGNATOR / AREA IN ACRES
- PROPERTY LINE
- PROPOSED DRAINAGE DIVIDE
- TIME OF CONCENTRATION PATH
- PROPOSED FLOW DIRECTION
- 555 — PROPOSED CONTOUR
- 555 — EXISTING CONTOUR

NOTE:
1. DRAINAGE CALCULATIONS ASSUME VALUES PER NOAA ATLAS 14 VOLUME 11 VERSION 2 DATA FOR BRUSHY CREEK WATERSHED PER TAYLOR ENGINEERING MANUAL CHAPTER 6.
2. FILL TO BE COMPACTED TO A 95% STD PROCTOR DENSITY.

POINT OF ANALYSIS

	PRE (CFS)	PROP FB (CFS)	PROP NC (CFS)
2-YR	279.09	264.15	257.06
10-YR	488.34	473.23	470.03
25-YR	626.07	610.78	615.46
100-YR	853.17	839.59	845.74

CASTLEWOOD SUBDIVISION

Existing Conditions

2 yr. Rainfall, (in.) 3.97
Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				Shallow Concentrated Flow (Unpaved)				Shallow Concentrated Flow (Paved)				Channel Flow			Actual	Design
DRAINAGE AREA (DA)	n	S	L	T_{t1}	L	S	V	T_{t2}	L	S	V	T_{t2}	V	L	T_{t3}	T_c, min.	T_c, min.	T_L, min.
DA #1/OS-A1 (77.56 AC)	0.2	0.005	100	19.3	1000	0.009	1.93	8.64	0.00	0.02	2.87	0	6.00	1081	3.00	30.92	30.92	18.55
OS-B1 (39.07 AC)	0.2	0.005	100	19.3	1000	0.008	1.44	11.55	0.00	0.02	1.82	0	6.00	4000	11.11	41.94	41.94	25.16
OS-C1 (35.59 AC)	0.2	0.006	100	17.9	1000	0.01	1.61	10.33	0.00	0.02	2.03	0	6.00	813	2.26	30.51	30.51	18.31

DRAINAGE SUMMARY

Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	SCS Curve Number: Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	Tc, min.	T_L, min.	Peak Flow, cfs.: Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1 & OS-A1	77.56	0.121	0%	0.00	84	77.56	84	84	30.9	18.55	148.31	261.97	336.81	458.68
OS-B1	39.07	0.061	0%	0.00	84	39.07	84	84	41.9	25.16	64.53	113.44	145.79	198.45
OS-C1	35.59	0.056	0%	0.00	84	35.59	84	84	30.5	18.31	69.27	122.25	157.11	213.87
POINT OF ANALYSIS	-		-	-	-	-	-	-	-	-	279.09	488.34	626.07	853.17

BENCHMARKS

IRON ROD SET IN ASPHALT DRIVE IN NORTH R.O.W. OF F.M. 973. ELEV. 616.68'

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
LUKE W. CARAWAY
125677
LICENSED
PROFESSIONAL ENGINEER
8/13/2020

KHA PROJECT 069278800
DATE JANUARY 2020
SCALE: AS SHOWN
DESIGNED BY: WB,DM
DRAWN BY: DM,WB
CHECKED BY: LC

EXISTING DRAINAGE AREA MAP

CASTLEWOOD SINGLE FAMILY PHASE 1 & 2

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
32 OF 107

Plotted By:Buzzell, William Date:August 14, 2020 02:09:13pm File Path:K:\SAU_Civil\069278800 Castlewood Single Family\Cad\PlanSheets\C-Existing Drainage Area Map.dwg
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EXHIBIT D
OVERALL PROPOSED DRAINAGE AREAS

Castlewood TxDOT Drainage Conveyance Calculations
Time of Concentration Calculations, min.

2 yr. Rainfall, (in.) 3.97

Jurisdiction City of Taylor

	AREA (ACRES)	Sheet Flow				Shallow Concentrated Flow Unpaved				Shallow Concentrated Flow Paved				Channel Flow			Actual	Design
DRAINAGE AREA (DA)		n	S	L	T_c	L	S	V	T_c	L	S	V	T_c	V	L	T_c	T_c, min.	T_c, min.
TxDOT C1 (2.49 AC)	2.49	0.055	0.2	20	0.2	0	0	0.00	0	0	0	0.00	0	6.0	2756	7.66	7.8	10.0
TxDOT C2 (0.88 AC)	3.37	0.055	0.2	20	0.2	0	0	0.00	0	0	0	0.00	0	6.0	950	2.64	2.8	10.0
OS-B1 (39.07 AC)	39.07	0.2	0.005	100	19.3	1000	0.008	1.44	11.55	0	0	0.00	0	6.0	4000	11.11	41.9	41.9

Flow Summary

Intensity Coefficients	2 Yr.	5 Yr.	10 Yr.	25 Yr.	50 Yr.	100 Yr.
a	0.8199	0.8067	0.7995	0.7919	0.7871	0.7824
b	58.0057	74.5024	87.57	105.8665	120.5981	136.6548
d (min)	12.0992	12.4782	12.8449	13.4283	13.9095	14.6225
Notes:						

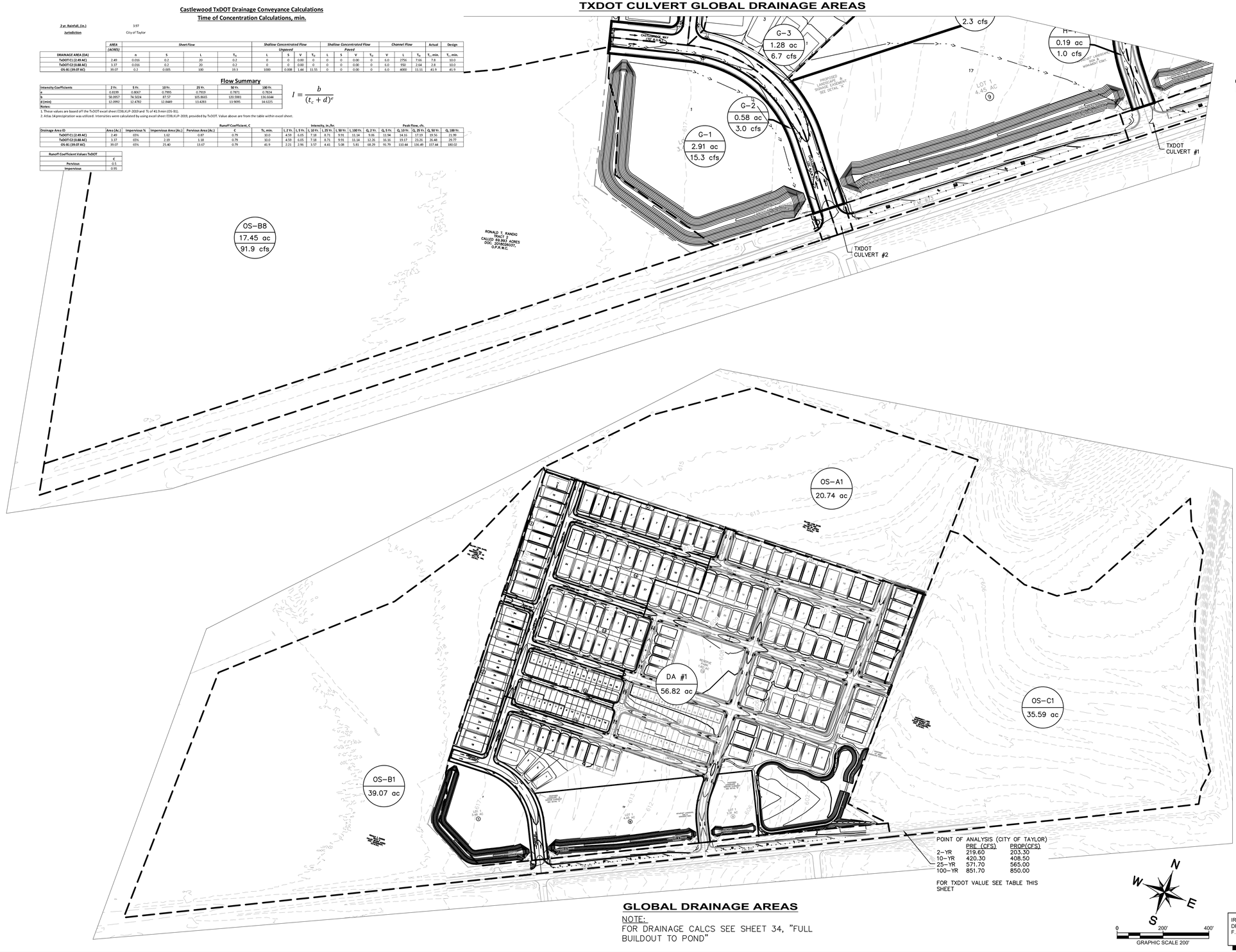
$$I = \frac{b}{(t_c + d)^e}$$

1. These values are based off the TxDOT excel sheet (DBUGP-2009 and Tc of 41.9 min (OS-B1)
2. Atlas 14 precipitation was utilized. Intensities were calculated by using excel sheet (DBUGP-2019, provided by TxDOT. Value above are from the table within excel sheet.

					Runoff Coefficient, C		Intensity, in./hr.						Peak Flow, cfs.				
Drainage Area ID	Area (Ac.)	Impervious %	Impervious Area (Ac.)	Pervious Area (Ac.)	C	T_c, min.	I_2 Yr.	I_5 Yr.	I_{10} Yr.	I_{25} Yr.	I_{50} Yr.	I_{100} Yr.	Q_2 Yr.	Q_5 Yr.	Q_{10} Yr.	Q_{25} Yr.	Q_{50} Yr.	Q_{100} Yr.
TxDOT C1 (2.49 AC)	2.49	65%	1.62	0.87	0.79	10.0	4.59	6.05	7.18	8.71	9.91	11.14	9.06	11.94	14.15	17.19	19.56	21.99
TxDOT C2 (0.88 AC)	3.37	65%	2.19	1.18	0.79	10.0	4.59	6.05	7.18	8.71	9.91	11.14	12.26	16.16	19.17	23.26	26.48	29.77
OS-B1 (39.07 AC)	39.07	65%	25.40	13.67	0.79	41.9	2.21	2.96	3.57	4.41	5.08	5.81	68.29	91.79	110.48	136.49	157.44	180.02

Runoff Coefficient Values TxDOT	
	C
Pervious	0.5
Impervious	0.95

TXDOT CULVERT GLOBAL DRAINAGE AREAS



GLOBAL DRAINAGE AREAS

NOTE:
FOR DRAINAGE CALCS SEE SHEET 34, "FULL BUILDOUT TO POND"

N W E S 0 100' 200' GRAPHIC SCALE 100'

BENCHMARKS

IRON ROD SET IN ASPHALT
DRIVE IN NORTH R.O.W. OF
F.M. 973. ELEV. 616.68'

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
LUKE W. CARAWAY
125677
LICENSED
PROFESSIONAL ENGINEER
8/13/2020

KHA PROJECT	069278800
DATE	JANUARY 2020
SCALE:	AS SHOWN
DESIGNED BY:	WB,DM
DRAWN BY:	DM,WB
CHECKED BY:	LC

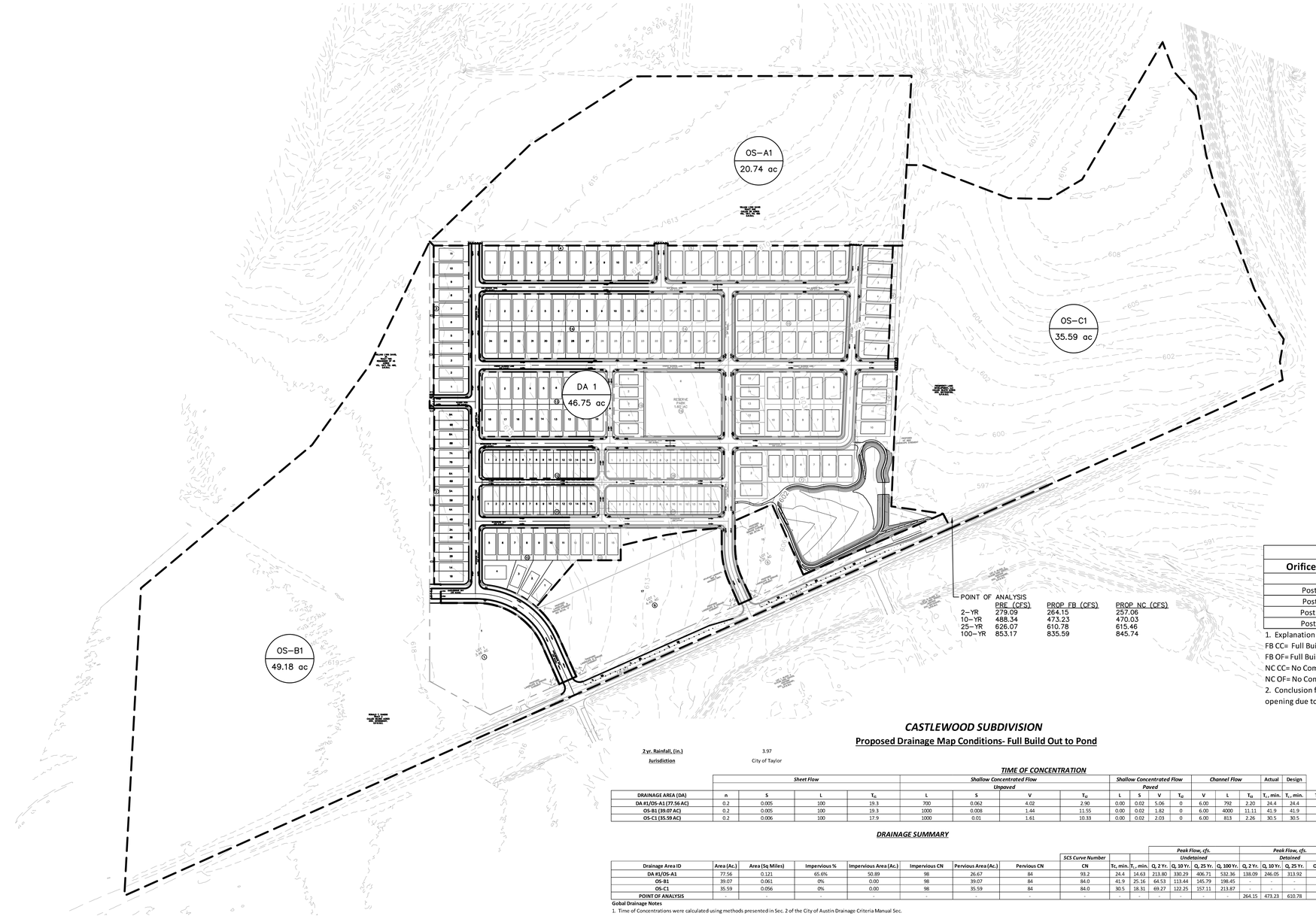
PROPOSED OVERALL DRAINAGE MAP

CASTLEWOOD SINGLE FAMILY PHASE 1 & 2

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
33 OF 107

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N
W E
S

0 200' 400'
GRAPHIC SCALE 200'

LEGEND

X-1 / X ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	PROPOSED DRAINAGE DIVIDE
2.07%	PROPOSED FLOW DIRECTION/SLOPE
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

NOTE:
1. DRAINAGE CALCULATIONS ASSUME VALUES PER NOAA ATLAS 14 VOLUME 11 VERSION 2 DATA FOR BRUSHY CREEK WATERSHED PER TAYLOR ENGINEERING MANUAL CHAPTER 6.
2. FILL TO BE COMPACTED TO A 95% STD PROCTOR DENSITY.

Castelwood Subdivision

Orifice Flow vs. Culvert Check Comparison (DA#1/OS-A1)

	2 yr.	10 yr.	25 yr.	100 yr.
Post-Developed FB CC	138.09	246.05	313.92	431.51
Post Developed FB OF	148.67	238.76	303.25	415.01
Post -Developed NC CC	114.09	213.44	280.80	389.92
Post-Develoepd NC OF	133.72	207.14	267.63	374.3

1. Explanation of Hec-HMS Labels:
FB CC= Full Build Out Culvert Check
FB OF= Full Build Out Orifice Flow
NC CC= No Commercial Culvert Check
NC OF= No Commercial Orifice Flow
2. Conclusion from this analysis was to proceed with culvert modelling of the lower opening due to the fact that it releases flows faster in 6 out of 8 storms.

DA #1/OS-A1 Impervious Cover Summary

Full Build out	Area (Ac.)	Impervious Cover (Ac.)	% IC
Parks/Open Space	2.78	0.00	0%
Pond	3.52	0.00	0%
Commercial	10.11	8.09	80%
Single Family- DA #1	40.41	28.29	70%
Future Single Family OS-A1	20.74	14.52	70%
	77.56	**50.89**	**65.6%**

No Commercial	Area (Ac.)	Impervious Cover (Ac.)	% IC
Parks/Open Space	2.78	0.00	0%
Pond	3.52	0.00	0%
Single Family- DA #1	40.41	28.29	70%
Future Single Family OS-A1	20.74	14.54	70%
	67.45	**42.83**	**63.5%**

CASTLEWOOD SUBDIVISION

Proposed Drainage Map Conditions- Full Build Out to Pond

2 yr. Rainfall, (in.) 3.97
Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				Shallow Concentrated Flow Unpaved				Shallow Concentrated Flow Paved				Channel Flow			Actual	Design	
DRAINAGE AREA (DA)	n	S	L	T_c	L	S	V	T_{cf}	L	S	V	T_{cf}	V	L	T_{cf}	T_c, min.	T_c, min.	T_c, min.
DA #1/OS-A1 (77.56 AC)	0.2	0.005	100	19.3	700	0.062	4.02	2.90	0.00	0.02	5.06	0	6.00	792	2.20	24.4	24.4	14.63
OS-B1 (39.07 AC)	0.2	0.005	100	19.3	1000	0.008	1.44	11.55	0.00	0.02	1.82	0	6.00	4000	11.11	41.9	41.9	25.16
OS-C1 (35.59 AC)	0.2	0.006	100	17.9	1000	0.01	1.61	10.33	0.00	0.02	2.03	0	6.00	813	2.26	30.5	30.5	18.31

DRAINAGE SUMMARY

								SCS Curve Number		Peak Flow, cfs. Undetained				Peak Flow, cfs. Detained			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	T_c, min.	T_c, min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1/OS-A1	77.56	0.121	65.6%	50.89	98	26.67	84	93.2	24.4	14.63	213.80	330.29	406.71	532.36	138.09	246.05	313.92	431.51
OS-B1	39.07	0.061	0%	0.00	98	39.07	84	84.0	41.9	25.16	64.53	113.44	145.79	198.45	-	-	-	-
OS-C1	35.59	0.056	0%	0.00	98	35.59	84	84.0	30.5	18.31	69.27	122.25	157.11	213.87	-	-	-	-
POINT OF ANALYSIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	264.15	473.23	610.78	835.59

Gobal Drainage Notes
1. Time of Concentrations were calculated using methods presented in Sec. 2 of the City of Austin Drainage Criteria Manual Sec.

Proposed Drainage Map Conditions- No Commercial to Pond

2 yr. Rainfall, (in.) 3.97
Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				Shallow Concentrated Flow Unpaved				Shallow Concentrated Flow Paved				Channel Flow			Actual	Design	
DRAINAGE AREA (DA)	n	S	L	T_c	L	S	V	T_{cf}	L	S	V	T_{cf}	V	L	T_{cf}	T_c, min.	T_c, min.	T_c, min.
DA #1/OS-A1 (67.45 AC)	0.2	0.005	100	19.3	700	0.062	4.02	2.90	0.00	0.02	5.06	0	6.00	792	2.20	24.4	24.4	14.63
OS-B1 (49.18 AC)	0.2	0.005	100	19.3	1000	0.008	1.44	11.55	0.00	0.02	1.82	0	6.00	4000	11.11	41.9	41.9	25.16
OS-C1 (35.59 AC)	0.2	0.006	100	17.9	1000	0.01	1.61	10.33	0.00	0.02	2.03	0	6.00	813	2.26	30.5	30.5	18.31

DRAINAGE SUMMARY

								SCS Curve Number		Peak Flow, cfs. Undetained				Peak Flow, cfs. Detained			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	T_c, min.	T_c, min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1 & OS-A1	67.45	0.105	63.5%	42.83	98	24.62	84	92.9	24.4	14.63	184.14	285.49	351.98	461.26	114.09	213.44	280.80	389.92
OS-B1	49.18	0.077	0%	0.00	98	49.18	84	84.0	41.9	25.16	81.44	143.18	184.01	250.47	-	-	-	-
OS-C1	35.59	0.056	0%	0.00	98	35.59	84	84.0	30.5	18.31	69.27	122.25	157.11	213.87	-	-	-	-
POINT OF ANALYSIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	257.06	470.03	615.46	845.74

Gobal Drainage Notes
1. Time of Concentrations were calculated using methods presented in Sec. 2 of the City of Austin Drainage Criteria Manual Sec.

BENCHMARKS

IRON ROD SET IN ASPHALT
DRIVE IN NORTH R.O.W. OF
F.M. 973. ELEV. 616.68'

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
LUKE W. CARAWAY
125677
LICENSED
PROFESSIONAL ENGINEER
8/13/2020

KHA PROJECT 069278800
DATE JANUARY 2020
SCALE: AS SHOWN
DESIGNED BY: WB,DM
DRAWN BY: DM,WB
CHECKED BY: LC

PROPOSED OVERALL DRAINAGE MAP, COMMERCIAL EXCLUDED

CASTLEWOOD SINGLE FAMILY PHASE 1 & 2

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
34 OF 107

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EXHIBIT E
PROPOSED INLET DRAINAGE AREAS

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No.	REVISIONS	DATE	BY

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STATE OF TEXAS
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8/13/2020

KHA PROJECT	069278800
DATE	JANUARY 2020
SCALE:	AS SHOWN
DESIGNED BY:	WB,DM
DRAWN BY:	DM,WB
CHECKED BY:	LC

PROPOSED DRAINAGE AREA MAP

CASTLEWOOD SINGLE FAMILY PHASE 1 & 2

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
35 OF 107

EXHIBIT F
GLOBAL DRAINAGE CALCULATIONS

Castlewood Proposed Drainage Conveyance Calculations
Time of Concentration Calculations, min.

2 yr. Rainfall, (in.) 3.97

Jurisdiction City of Taylor

	AREA (ACRES)	Sheet Flow				Shallow Concentrated Flow Unpaved				Shallow Concentrated Flow Paved				Channel Flow			Actual	Design
DRAINAGE AREA (DA)		n	S	L	T_{t1}	L	S	V	T_{t2}	L	S	V	T_{t2}	V	L	T_{t3}	T_c, min.	T_c, min.
A-1	1.80	0.2	0.0125	100	13.4	38	0.0125	1.80	0.35	0	0.02	2.87	0	6.0	478	1.33	15.0	15.0
A-2	1.56	0.2	0.0125	100	13.4	31	0.0125	1.80	0.29	0	0.02	2.87	0	6.0	457	1.27	14.9	14.9
A-3	0.67	0.2	0.0125	100	13.4	39	0.0125	1.80	0.36	0	0.02	2.87	0	6.0	175	0.49	14.2	14.2
A-4	1.35	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	32	0.09	19.4	19.4
A-5	0.74	0.2	0.0125	100	13.4	30	0.0125	1.80	0.28	0	0.02	2.87	0	6.0	262	0.73	14.4	14.4
A-6	1.82	0.2	0.0125	100	13.4	42	0.0125	1.80	0.39	0	0.02	2.87	0	6.0	115	0.32	14.1	14.1
A-7	1.84	0.2	0.0125	100	13.4	17	0.0125	1.80	0.16	0	0.02	2.87	0	6.0	317	0.88	14.4	14.4
A-8	1.85	0.2	0.0125	100	13.4	41	0.0125	1.80	0.38	0	0.02	2.87	0	6.0	323	0.90	14.6	14.6
A-9	0.18	0.02	0.0125	100	2.1	40	0.0125	1.80	0.37	0	0.02	2.87	0	6.0	408	1.13	3.6	5.0
A-10	1.25	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	121	0.34	19.6	19.6
A-11	2.01	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	219	0.61	19.9	19.9
B-1	1.03	0.2	0.0125	100	13.4	32	0.0125	1.80	0.30	0	0.02	2.87	0	6.0	281	0.78	14.4	14.4
B-2	1.31	0.2	0.0125	100	13.4	31	0.0125	1.80	0.29	0	0.02	2.87	0	6.0	392	1.09	14.7	14.7
C-1	2.11	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	48	0.13	19.4	19.4
C-2	0.93	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	48	0.13	19.4	19.4
C-3	1.49	0.2	0.0125	100	13.4	40	0.0125	1.80	0.37	0	0.02	2.87	0	6.0	634	1.76	15.5	15.5
C-4	0.16	0.02	0.0125	100	2.1	12	0.0125	1.80	0.11	0	0.02	2.87	0	6.0	410	1.14	3.4	5.0
C-5	0.78	0.2	0.0125	100	13.4	30	0.0125	1.80	0.28	0	0.02	2.87	0	6.0	438	1.22	14.9	14.9
C-6	0.52	0.2	0.0125	100	13.4	21	0.0125	1.80	0.19	0	0.02	2.87	0	6.0	118	0.33	13.9	13.9
C-7	0.67	0.2	0.005	80	16.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	0	0.00	16.1	16.1
C-8	0.21	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	56	0.16	19.4	19.4
D-1	0.58	0.2	0.0125	100	13.4	18	0.0125	1.80	0.17	0	0.02	2.87	0	6.0	120	0.33	13.9	13.9
D-2	0.76	0.2	0.0125	100	13.4	17	0.0125	1.80	0.16	0	0.02	2.87	0	6.0	171	0.48	14.0	14.0
D-3	0.75	0.2	0.0125	100	13.4	19	0.0125	1.80	0.18	0	0.02	2.87	0	6.0	182	0.51	14.0	14.0
D-4	0.76	0.2	0.0125	100	13.4	19	0.0125	1.80	0.18	0	0.02	2.87	0	6.0	171	0.48	14.0	14.0
D-5	0.76	0.2	0.0125	100	13.4	19	0.0125	1.80	0.18	0	0.02	2.87	0	6.0	171	0.48	14.0	14.0
E-1	1.45	0.2	0.0125	100	13.4	41	0.0125	1.80	0.38	0	0.02	2.87	0	6.0	403	1.12	14.9	14.9
E-2	0.75	0.2	0.0125	100	13.4	33	0.0125	1.80	0.30	0	0.02	2.87	0	6.0	134	0.37	14.0	14.0
E-3	0.16	0.02	0.0125	100	2.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	134	0.37	2.5	5.0
E-4	0.17	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	140	0.39	3.4	5.0
E-5	1.41	0.2	0.0125	100	13.4	31	0.0125	1.80	0.29	0	0.02	2.87	0	6.0	411	1.14	14.8	14.8
E-6	1.49	0.2	0.0125	100	13.4	29	0.0125	1.80	0.27	0	0.02	2.87	0	6.0	433	1.20	14.8	14.8
E-7	1.27	0.2	0.005	100	19.3	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	12	0.03	19.3	19.3
E-8	1.53	0.2	0.005	100	19.3	239	0.005	1.14	3.49	0	0.02	2.87	0	6.0	34	0.09	22.9	22.9
E-9	0.89	0.2	0.0125	100	13.4	30	0.0125	1.80	0.28	0	0.02	2.87	0	6.0	292	0.81	14.5	14.5
E-10	0.73	0.2	0.0125	100	13.4	59	0.0125	1.80	0.55	0	0.02	2.87	0	6.0	0	0.00	13.9	13.9
F-1	0.25	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	313	0.87	3.9	5.0
F-2	1.88	0.2	0.0125	100	13.4	31	0.0125	1.80	0.29	0	0.02	2.87	0	6.0	502	1.39	15.0	15.0
F-3	0.27	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	313	0.87	3.9	5.0
F-4	0.44	0.2	0.01	100	14.6	257	0.01	1.61	2.65	0	0.02	2.87	0	6.0	0	0.00	17.3	17.3
G-1	2.32	0.2	0.005	100	19.3	450	0.0075	1.40	5.37	0	0.02	2.87	0	6.0	0	0.00	24.6	24.6
G-2	0.50	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	556	1.54	4.6	5.0
G-3	1.23	0.02	0.0125	100	2.1	140	0.0125	1.80	1.29	0	0.02	2.87	0	6.0	293	0.81	4.2	5.0
G-4	4.85	0.2	0.005	100	19.3	613	0.01	1.61	6.33	0	0.02	2.87	0	6.0	20	0.06	25.7	25.7
H-1	0.19	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	205	0.57	3.6	5.0
H-2	0.17	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	205	0.57	3.6	5.0
I-1	0.27	0.02	0.005	100	3.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	58	0.16	3.2	5.0
I-2	0.12	0.02	0.0125	100	2.1	0	0.0125	1.80	0	0	0.02	2.87	0	6.0	58	0.16	2.3	5.0
J-1	1.17	0.2	0.015	100	12.4	162	0.015	1.98	1.37	0	0.02	2.87	0	6.0	58	0.16	14.0	14.0
OS-A1	0.21	0.2	0.005	100	19.3	0	0.005	1.14	0	9	0.005	1.44	0.10	6.0	0	0.00	19.4	19.4
OS-A2	0.38	0.2	0.005	100	19.3	0	0.008	1.44	0	188	0.005	1.44	2.18	6.0	0	0.00	21.5	21.5
OS-A3	0.47	0.2	0.0052	100	19.0	0	0.008	1.44	0	191	0.0052	1.47	2.17	6.0	0	0.00	21.2	21.2
OS-A4	1.84	0.2	0.0057	100	18.3	0	0.005	1.14	0	319	0.0057	1.53	3.46	6.0	0	0.00	21.8	21.8
OS-A5	1.35	0.2	0.006	100	17.9	0	0.008	1.44	0	425	0.006	1.57	4.50	6.0	0	0.00	22.4	22.4
OS-A6	1.62	0.2	0.0062	100	17.7	0	0.008	1.44	0	560	0.0062	1.60	5.83	6.0	0	0.00	23.5	23.5
OS-A7	1.14	0.2	0.0064	100	17.5	0	0.008	1.44	0	495	0.0064	1.63	5.07	6.0	0	0.00	22.5	22.5
OS-A8	1.33	0.2	0.0067	100	17.1	0	0.008	1.44	0	628	0.0067	1.66	6.29	6.0	0	0.00	23.4	23.4
OS-A9	1.26	0.2	0.0075	100	16.4	0	0.005	1.14	0	661	0.0075	1.76	6.26	6.0	0	0.00	22.7	22.7
OS-A10	4.62	0.2	0.0085	100	15.6	0	0.008	1.44	0	711	0.0085	1.87	6.32	6.0	0	0.00	21.9	21.9
OS-A11	6.51	0.2	0.0116	100	13.8	0	0.008	1.44	0	819	0.0016	0.81	16.79	6.0	0	0.00	30.6	30.6
OS-B1	0.91	0.2	0.005	100	19.3	0	0.008	1.44	0	165	0.005	1.44	1.91	6.0	0	0.00	21.2	21.2
OS-B2	1.08	0.2	0.005	100	19.3	0	0.008	1.44	0	261	0.005	1.44	3.03	6.0	0	0.00	22.3	22.3
OS-B3	0.3	0.2	0.005	100	19.3	0	0.005	1.14	0	85	0.005	1.44	0.99	6.0	0	0.00	20.3	20.3
OS-B4	1.59	0.2	0.005	100	19.3	0	0.008	1.44	0	576	0.005	1.44	6.68	6.0	0	0.00	26.0	26.0
OS-B5	4.63	0.2	0.005	100	19.3	0	0.008	1.44	0	1117	0.005	1.44	12.95	6.0	0	0.00	32.2	32.2
OS-B6	5.32	0.2	0.005	100	19.3	0	0.008	1.44	0	1111	0.005	1.44	12.88	6.0	0	0.00	32.2	32.2
OS-B7	3.63	0.2	0.005	100	19.3	0	0.005	1.14	0	1078	0.005	1.44	12.50	6.0	0	0.00	31.8	31.8
TxDOT C1	2.49	0.016	0.2	20	0.2	0	0	0.00	0	0	0	0.00	0	6.0	2756	7.66	7.8	7.8
TxDOT C2	0.88	0.016	0.2	20	0.2	0	0	0.00	0	0	0	0.00	0	6.0	950	2.64	2.8	5.0

Flow Summary

Intensity Coefficients	2 Yr.	10 Yr.	25 Yr.	100 Yr.
a	62.96	76.23	83.02	89.08
b	12.37	11.34	10.62	9.22
c	0.815	0.7723	0.748	0.7072

					Runoff Coefficient, C				Intensity, in./hr.					Peak Flow, cfs.			
Drainage Area ID	Area (Ac.)	Impervious %	Impervious Area (Ac.)	Pervious Area (Ac.)	C, 2 Yr.	C, 10 Yr.	C, 25 Yr.	C, 100 Yr.	Tc, min.	I, 2 Yr.	I, 10 Yr.	I, 25 Yr.	I, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
A-1	1.80	65%	1.17	0.63	0.62	0.68	0.72	0.80	15.0	4.24	6.09	7.33	9.34	4.71	7.45	9.53	13.37
A-2	1.56	65%	1.01	0.55	0.62	0.68	0.72	0.80	14.9	4.25	6.11	7.36	9.37	4.09	6.48	8.29	11.63
A-3	0.67	65%	0.44	0.23	0.62	0.68	0.72	0.80	14.2	4.35	6.24	7.51	9.57	1.80	2.84	3.64	5.10
A-4	1.35	65%	0.88	0.47	0.62	0.68	0.72	0.80	19.4	3.76	5.41	6.52	8.32	3.13	4.97	6.36	8.93
A-5	0.74	65%	0.48	0.26	0.62	0.68	0.72	0.80	14.4	4.32	6.21	7.48	9.53	1.97	3.12	4.00	5.61
A-6	1.82	65%	1.18	0.64	0.62	0.68	0.72	0.80	14.1	4.36	6.27	7.54	9.61	4.90	7.75	9.92	13.91
A-7	1.84	65%	1.20	0.64	0.62	0.68	0.72	0.80	14.4	4.32	6.20	7.47	9.52	4.90	7.76	9.93	13.92
A-8	1.85	65%	1.20	0.65	0.62	0.68	0.72	0.80	14.6	4.29	6.16	7.42	9.45	4.90	7.74	9.91	13.90
A-9	0.18	65%	0.12	0.06	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.68	1.08	1.38	1.95
A-10	1.25	65%	0.81	0.44	0.62	0.68	0.72	0.80	19.6	3.74	5.38	6.48	8.27	2.88	4.57	5.85	8.21
A-11	2.01	65%	1.31	0.70	0.62	0.68	0.72	0.80	19.9	3.71	5.34	6.44	8.21	4.60	7.30	9.35	13.12
B-1	1.03	65%	0.67	0.36	0.62	0.68	0.72	0.80	14.4	4.32	6.20	7.46	9.51	2.74	4.34	5.55	7.79
B-2	1.31	65%	0.85	0.46	0.62	0.68	0.72	0.80	14.7	4.28	6.14	7.39	9.42	3.46	5.47	7.00	9.81
C-1	2.11	65%	1.37	0.74	0.62	0.68	0.72	0.80	19.4	3.76	5.41	6.52	8.31	4.89	7.75	9.93	13.94
C-2	0.93	65%	0.60	0.33	0.62	0.68	0.72	0.80	19.4	3.76	5.41	6.52	8.31	2.16	3.42	4.38	6.14
C-3	1.49	65%	0.97	0.52	0.62	0.68	0.72	0.80	15.5	4.18	6.01	7.23	9.22	3.84	6.08	7.79	10.92
C-4	0.16	65%	0.10	0.06	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.61	0.96	1.23	1.73
C-5	0.78	65%	0.51	0.27	0.62	0.68	0.72	0.80	14.9	4.26	6.12	7.37	9.39	2.05	3.24	4.15	5.82
C-6	0.52	65%	0.34	0.18	0.62	0.68	0.72	0.80	13.9	4.39	6.30	7.59	9.67	1.41	2.23	2.85	4.00
C-7	0.67	65%	0.44	0.23	0.62	0.68	0.72	0.80	16.1	4.11	5.90	7.11	9.06	1.70	2.69	3.44	4.82
C-8	0.21	65%	0.14	0.07	0.62	0.68	0.72	0.80	19.4	3.75	5.40	6.51	8.30	0.49	0.77	0.99	1.39
D-1	0.58	65%	0.38	0.20	0.62	0.68	0.72	0.80	13.9	4.39	6.31	7.59	9.68	1.57	2.49	3.18	4.46
D-2	0.76	65%	0.49	0.27	0.62	0.68	0.72	0.80	14.0	4.37	6.28	7.56	9.64	2.05	3.24	4.15	5.82
D-3	0.75	65%	0.49	0.26	0.62	0.68	0.72	0.80	14.0	4.37	6.27	7.55	9.62	2.02	3.20	4.09	5.74
D-4	0.76	65%	0.49	0.27	0.62	0.68	0.72	0.80	14.0	4.37	6.28	7.56	9.63	2.05	3.24	4.15	5.82
D-5	0.76	65%	0.49	0.27	0.62	0.68	0.72	0.80	14.0	4.37	6.28	7.56	9.63	2.05	3.24	4.15	5.82
E-1	1.45	65%	0.94	0.51	0.62	0.68	0.72	0.80	14.9	4.26	6.12	7.37	9.39	3.81	6.03	7.72	10.82
E-2	0.75	65%	0.49	0.26	0.62	0.68	0.72	0.80	14.0	4.37	6.27	7.55	9.62	2.02	3.20	4.09	5.74
E-3	0.16	65%	0.10	0.06	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.61	0.96	1.23	1.73
E-4	0.17	65%	0.11	0.06	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.64	1.02	1.30	1.84
E-5	1.41	65%	0.92	0.49	0.62	0.68	0.72	0.80	14.8	4.27	6.13	7.38	9.41	3.71	5.88	7.52	10.55
E-6	1.49	65%	0.97	0.52	0.62	0.68	0.72	0.80	14.8	4.26	6.12	7.37	9.40	3.92	6.20	7.94	11.13
E-7	1.27	65%	0.83	0.44	0.62	0.68	0.72	0.80	19.3	3.77	5.42	6.53	8.33	2.95	4.68	5.99	8.41
E-8	1.53	65%	0.99	0.54	0.62	0.68	0.72	0.80	22.9	3.45	4.98	6.01	7.67	3.26	5.18	6.64	9.32
E-9	0.89	65%	0.58	0.31	0.62	0.68	0.72	0.80	14.5	4.31	6.19	7.46	9.50	2.37	3.75	4.80	6.72
E-10	0.73	65%	0.47	0.26	0.62	0.68	0.72	0.80	13.9	4.39	6.30	7.58	9.66	1.98	3.12	4.00	5.61
F-1	0.25	65%	0.16	0.09	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.95	1.50	1.92	2.71
F-2	1.88	65%	1.22	0.66	0.62	0.68	0.72	0.80	15.0	4.24	6.09	7.33	9.34	4.92	7.78	9.95	13.96
F-3	0.27	65%	0.18	0.09	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	1.02	1.62	2.07	2.93
F-4	0.44	65%	0.29	0.15	0.62	0.68	0.72	0.80	17.3	3.98	5.72	6.89	8.78	1.08	1.71	2.19	3.07
G-1	2.32	65%	1.51	0.81	0.62	0.68	0.72	0.80	24.6	3.32	4.79	5.78	7.38	4.75	7.55	9.68	13.61
G-2	0.50	65%	0.33	0.18	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	1.90	2.99	3.84	5.42
G-3	1.23	65%	0.80	0.43	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	4.66	7.37	9.44	13.33
G-4	4.85	65%	3.15	1.70	0.62	0.68	0.72	0.80	25.7	3.24	4.69	5.66	7.22	9.71	15.45	19.82	27.86
H-1	0.19	65%	0.12	0.07	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.72	1.14	1.46	2.06
H-2	0.17	65%	0.11	0.06	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.64	1.02	1.30	1.84
I-1	0.27	65%	0.18	0.09	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	1.02	1.62	2.07	2.93
I-2	0.12	65%	0.08	0.04	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	0.46	0.72	0.92	1.30
J-1	0.12	65%	0.08	0.04	0.62	0.68	0.72	0.80	14.0	4.38	6.29	7.57	9.65	0.32	0.51	0.66	0.92
OS-A1	0.21	65%	0.14	0.07	0.62	0.68	0.72	0.80	19.4	3.76	5.41	6.52	8.31	0.49	0.77	0.99	1.39
OS-A2	0.38	65%	0.25	0.13	0.62	0.68	0.72	0.80	21.5	3.57	5.15	6.20	7.91	0.84	1.33	1.70	2.39
OS-A3	0.47	65%	0.31	0.16	0.62	0.68	0.72	0.80	21.2	3.60	5.18	6.25	7.97	1.04	1.66	2.12	2.98
OS-A4	1.84	65%	1.20	0.64	0.62	0.68	0.72	0.80	21.8	3.54	5.11	6.16	7.86	4.02	6.39	8.19	11.49
OS-A5	1.35	65%	0.88	0.47	0.62	0.68	0.72	0.80	22.4	3.49	5.03	6.07	7.74	2.91	4.62	5.92	8.31
OS-A6	1.62	65%	1.05	0.57	0.62	0.68	0.72	0.80	23.5	3.40	4.91	5.92	7.56	3.40	5.40	6.93	9.73
OS-A7	1.14	65%	0.74	0.40	0.62	0.68	0.72	0.80	22.5	3.48	5.02	6.05	7.72	2.45	3.89	4.98	7.00
OS-A8	1.33	65%	0.86	0.47	0.62	0.68	0.72	0.80	23.4	3.41	4.92	5.93	7.57	2.80	4.44	5.70	8.00
OS-A9	1.26	65%	0.82	0.44	0.62	0.68	0.72	0.80	22.7	3.47	5.01	6.04	7.70	2.70	4.29	5.49	7.71
OS-A10	4.62	65%	3.00	1.62	0.62	0.68	0.72	0.80	21.9	3.53	5.09	6.14	7.83	10.07	15.98	20.48	28.76
OS-A11	6.51	65%	4.23	2.28	0.62	0.68	0.72	0.80	30.6	2.94	4.26	5.15	6.58	11.81	18.84	24.20	34.08
OS-B1	0.91	65%	0.59	0.32	0.62	0.68	0.72	0.80	21.2	3.59	5.18	6.24	7.96	2.02	3.20	4.10	5.76
OS-B2	1.08	65%	0.70	0.38	0.62	0.68	0.72	0.80	22.3	3.50	5.05	6.08	7.76	2.33	3.70	4.75	6.66
OS-B3	0.3	65%	0.20	0.11	0.62	0.68	0.72	0.80	20.3	3.68	5.30	6.38	8.14	0.68	1.08	1.38	1.94
OS-B4	1.59	65%	1.03	0.56	0.62	0.68	0.72	0.80	26.0	3.22	4.66	5.62	7.18	3.16	5.03	6.46	9.08
OS-B5	4.63	65%	3.01	1.62	0.62	0.68	0.72	0.80	32.2	2.85	4.13	4.99	6.40	8.14	13.00	16.71	23.54
OS-B6	5.32	65%	3.46	1.86	0.62	0.68	0.72	0.80	32.2	2.85	4.14	5.00	6.40	9.37	14.96	19.22	27.08
OS-B7	3.63	65%	2.36	1.27	0.62	0.68	0.72	0.80	31.8	2.87	4.17	5.03	6.45	6.44	10.27	13.20	18.60
TxDOT C1	2.49	65%	1.62	0.87	0.62	0.68	0.72	0.80	7.8	5.44	7.79	9.39	11.99	8.35	13.19	16.88	23.74
TxDOT C2	0.88	65%	0.57	0.31	0.62	0.68	0.72	0.80	5.0	6.15	8.81	10.62	13.63	3.34	5.27	6.76	9.53

Runoff Coefficient Values				
	C2	C10	C25	C100
Pervious	0.37	0.4	0.43	0.47
Impervious	0.75	0.83	0.88	0.97

EXHIBIT G

STREET CAPACITIES

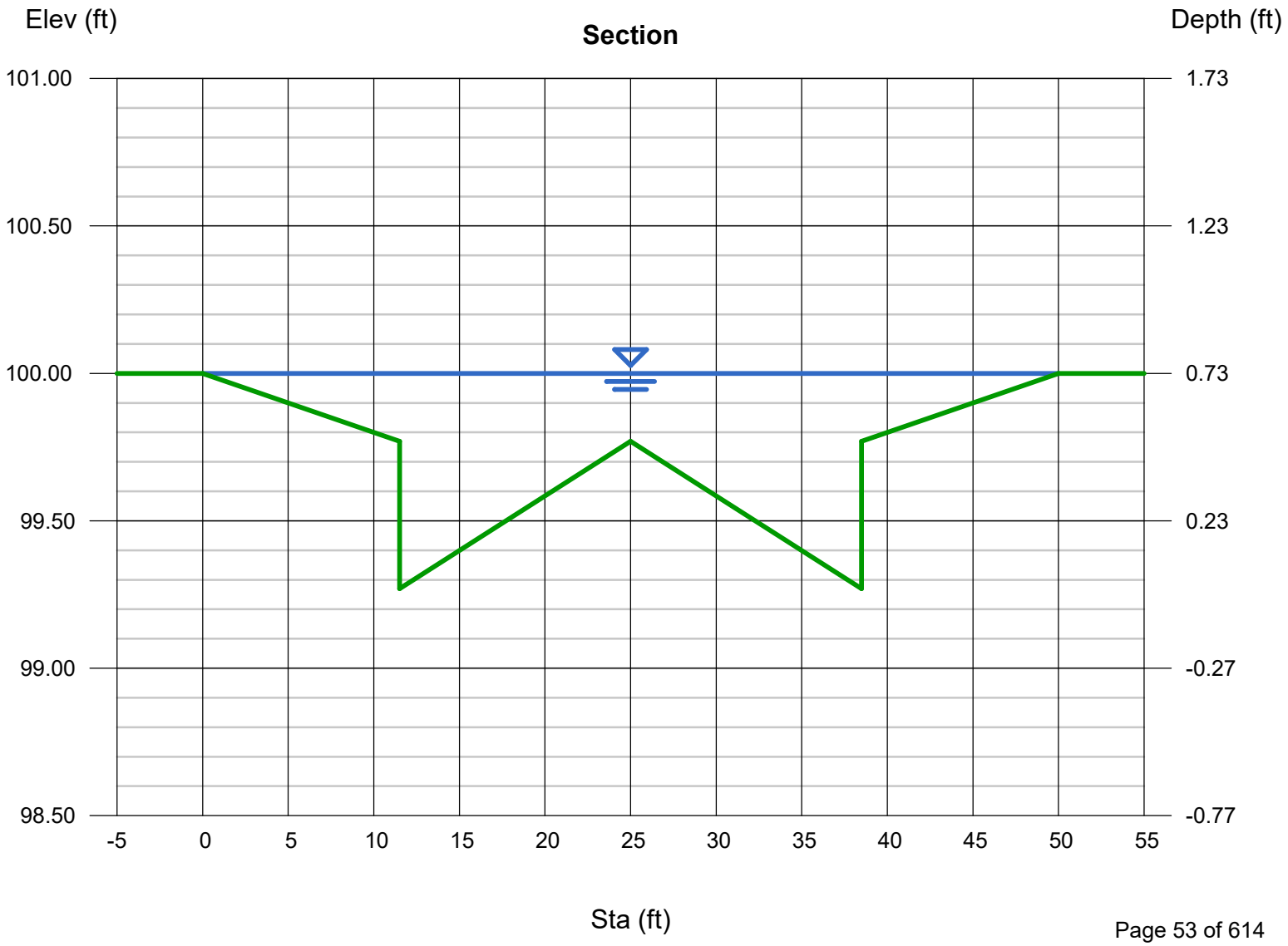
Channel Report

Local Street Section w/ 6inch Crown

User-defined		**Highlighted**	
Invert Elev (ft)	= 99.27	Depth (ft)	= 0.73
Slope (%)	= 0.50	Q (cfs)	= 46.50
N-Value	= 0.016	Area (sqft)	= 15.61
		Velocity (ft/s)	= 2.98
Calculations		Wetted Perim (ft)	= 51.02
Compute by:	Known Q	Crit Depth, Yc (ft)	= 0.72
Known Q (cfs)	= 46.50	Top Width (ft)	= 50.00
		EGL (ft)	= 0.87

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(11.50, 99.77, 0.016)-(11.50, 99.27, 0.016)-(25.00, 99.77, 0.016)-(38.50, 99.27, 0.016)-(38.50, 99.77, 0.016)-(50.00, 100.00, 0.016)



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Friday, Apr 17 2020

Collector Street Section w/ 6inch Crown

User-defined

Invert Elev (ft)	= 99.21
Slope (%)	= 0.50
N-Value	= 0.016

Calculations

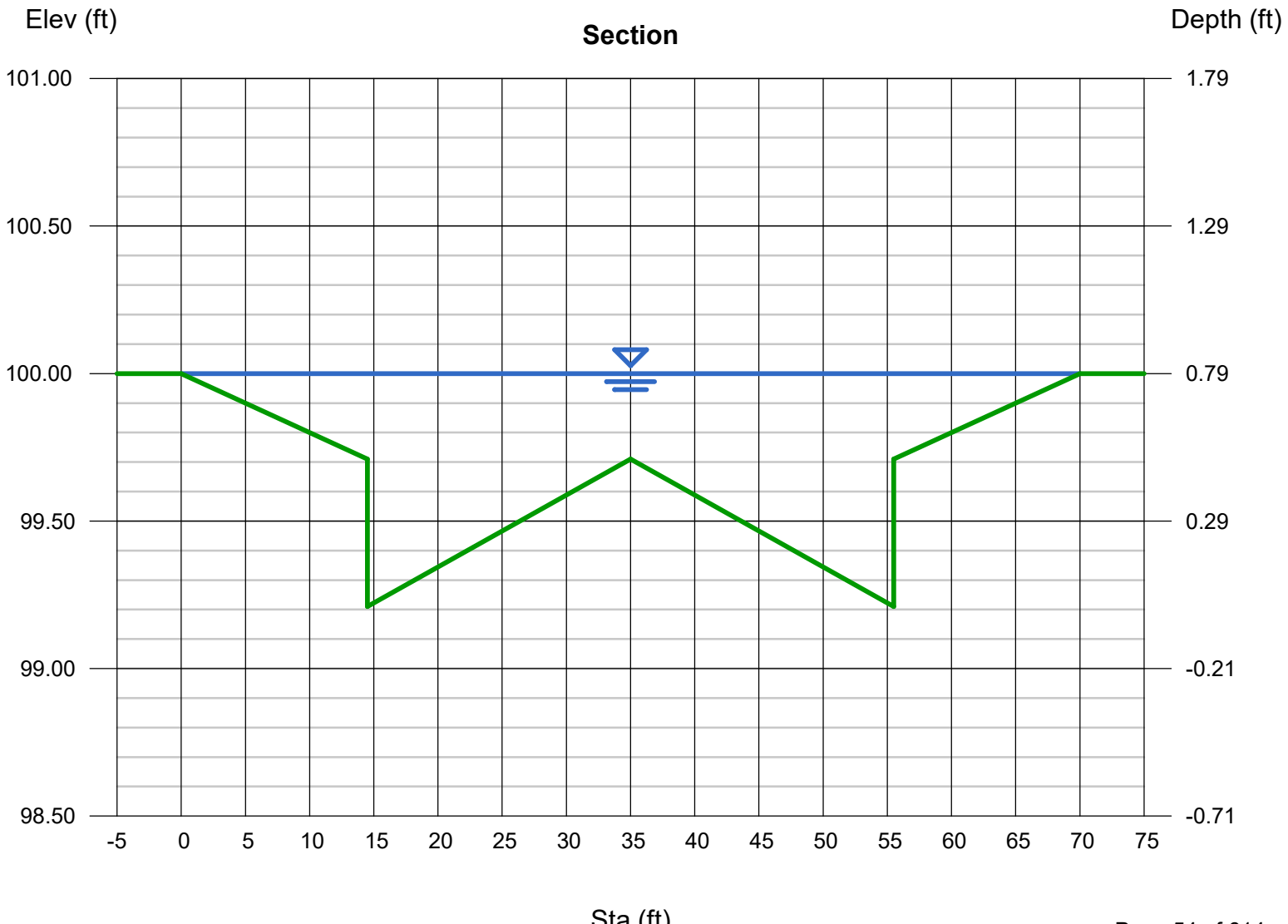
Compute by:	Known Q
Known Q (cfs)	= 89.00

Highlighted

Depth (ft)	= 0.79
Q (cfs)	= 89.00
Area (sqft)	= 26.35
Velocity (ft/s)	= 3.38
Wetted Perim (ft)	= 71.02
Crit Depth, Yc (ft)	= 0.79
Top Width (ft)	= 70.00
EGL (ft)	= 0.97

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(14.50, 99.71, 0.016)-(14.50, 99.21, 0.016)-(35.00, 99.71, 0.016)-(55.50, 99.21, 0.016)-(55.50, 99.71, 0.016)-(70.00, 100.00, 0.016)



Channel Report

Alley Street Section

User-defined

Invert Elev (ft)	= 99.70
Slope (%)	= 0.50
N-Value	= 0.016

Calculations

Compute by:	Known Q
Known Q (cfs)	= 8.00

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(15.00, 99.70, 0.016)-(30.00, 100.00, 0.016)

Highlighted

Depth (ft)	= 0.30
Q (cfs)	= 8.000
Area (sqft)	= 4.50
Velocity (ft/s)	= 1.78
Wetted Perim (ft)	= 30.01
Crit Depth, Yc (ft)	= 0.28
Top Width (ft)	= 30.00
EGL (ft)	= 0.35

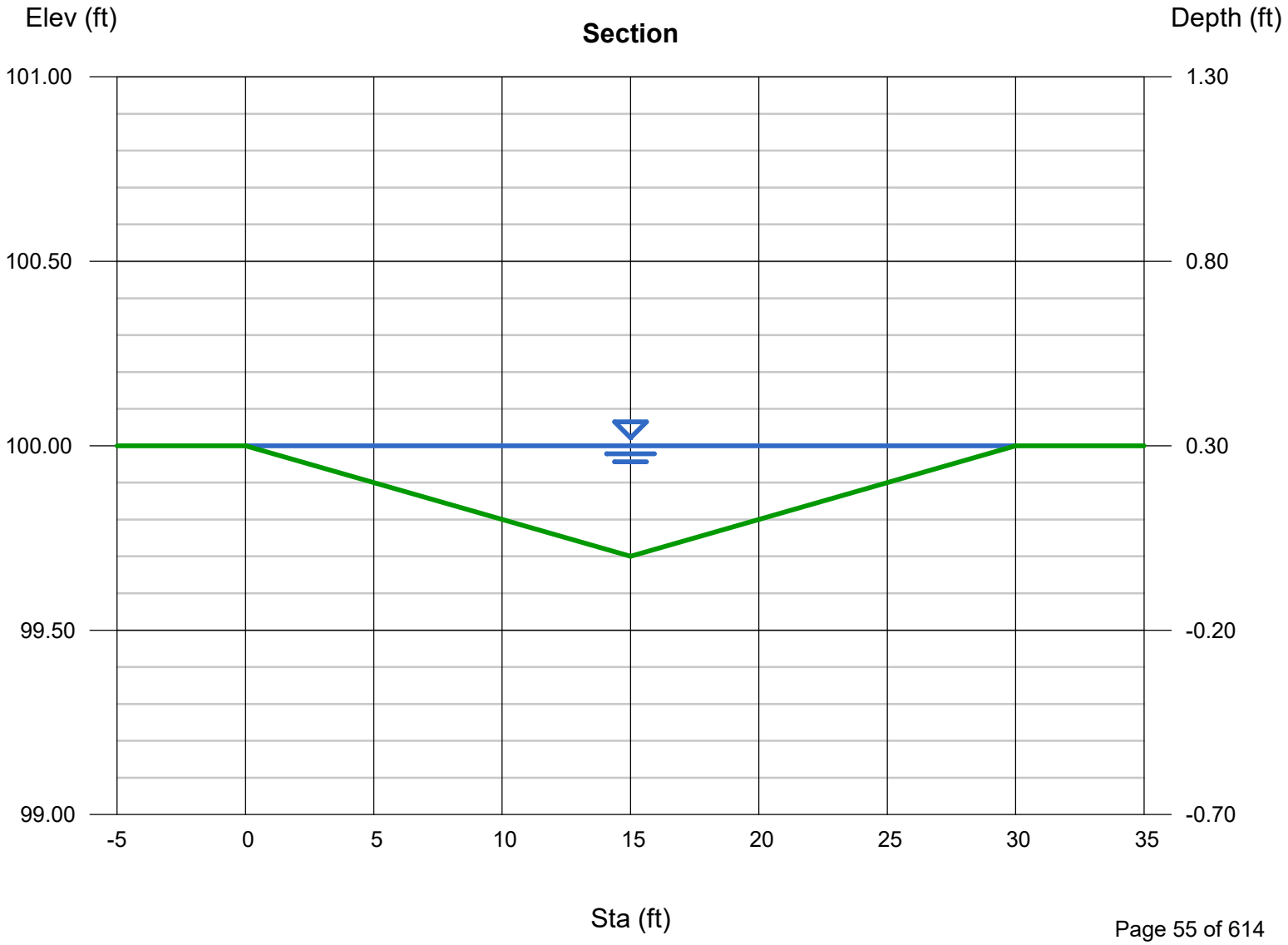


EXHIBIT H

HEC-HMS POND CALCULATIONS

Project: Castlewood Drainage Study Simulation Run: Pre-2 yr

Start of Run: 07May2020, 00:00 Basin Model: Pre-Developed
End of Run: 08May2020, 00:05 Meteorologic Model: 2 yr
Compute Time: 07May2020, 15:19:59 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1	0.118	114.2	07May2020, 12:20	2.33
OS-A1	0.064	54.5	07May2020, 12:30	2.33
OS-B1	0.056	54.6	07May2020, 12:20	2.33
FM 973 Culverts	0.238	219.6	07May2020, 12:25	2.33

Project: Castlewood Drainage Study Simulation Run: Post-2 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed NC
End of Run: 08May2020, 00:05 Meteorologic Model: 2 yr
Compute Time: 19Jul2020, 20:25:17 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.105	184.1	07May2020, 12:15	3.37
Pond	0.105	114.1	07May2020, 12:30	3.36
OS-B1	0.077	81.4	07May2020, 12:30	2.33
OS-C1	0.056	69.3	07May2020, 12:20	2.34
FM 973 Culverts	0.238	257.1	07May2020, 12:30	2.79

Project: Castlewood Drainage Study Simulation Run: Post-2 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed FB (
End of Run: 08May2020, 00:05 Meteorologic Model: 2 yr
Compute Time: 19Jul2020, 20:36:43 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.121	213.8	07May2020, 12:15	3.40
Pond	0.121	138.1	07May2020, 12:30	3.40
OS-B1	0.061	64.5	07May2020, 12:30	2.33
OS-C1	0.056	69.3	07May2020, 12:20	2.34
FM 973 Culverts	0.238	264.1	07May2020, 12:30	2.88

Project: Castlewood Drainage Study Simulation Run: Pre-10 yr

Start of Run: 07May2020, 00:00 Basin Model: Pre-Developed
End of Run: 08May2020, 00:05 Meteorologic Model: 10 yr
Compute Time: 07May2020, 15:27:27 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1	0.118	219.6	07May2020, 12:20	4.54
OS-A1	0.064	104.2	07May2020, 12:30	4.53
OS-B1	0.056	104.8	07May2020, 12:20	4.54
FM 973 Culverts	0.238	420.3	07May2020, 12:20	4.53

Project: Castlewood Drainage Study Simulation Run: Post-10 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed NC
End of Run: 08May2020, 00:05 Meteorologic Model: 10 yr
Compute Time: 19Jul2020, 20:29:23 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.105	285.5	07May2020, 12:15	5.70
Pond	0.105	213.4	07May2020, 12:30	5.70
OS-B1	0.077	143.2	07May2020, 12:30	4.53
OS-C1	0.056	122.2	07May2020, 12:20	4.54
FM 973 Culverts	0.238	470.0	07May2020, 12:25	5.05

Project: Castlewood Drainage Study Simulation Run: Post-10 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed FB (
End of Run: 08May2020, 00:05 Meteorologic Model: 10 yr
Compute Time: 19Jul2020, 20:40:19 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.121	330.3	07May2020, 12:15	5.74
Pond	0.121	246.1	07May2020, 12:30	5.74
OS-B1	0.061	113.4	07May2020, 12:30	4.53
OS-C1	0.056	122.2	07May2020, 12:20	4.54
FM 973 Culverts	0.238	473.2	07May2020, 12:25	5.15

Project: Castlewood Drainage Study Simulation Run: Pre-25 yr

Start of Run: 07May2020, 00:00 Basin Model: Pre-Developed
End of Run: 08May2020, 00:05 Meteorologic Model: 25 yr
Compute Time: 07May2020, 15:32:07 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1	0.118	298.3	07May2020, 12:20	6.24
OS-A1	0.064	141.3	07May2020, 12:30	6.23
OS-B1	0.056	142.3	07May2020, 12:20	6.24
FM 973 Culverts	0.238	571.7	07May2020, 12:20	6.23

Project: Castlewood Drainage Study Simulation Run: Post-25 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed NC
End of Run: 08May2020, 00:05 Meteorologic Model: 25 yr
Compute Time: 19Jul2020, 20:31:05 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.105	352.0	07May2020, 12:15	7.46
Pond	0.105	280.8	07May2020, 12:25	7.45
OS-B1	0.077	184.0	07May2020, 12:30	6.23
OS-C1	0.056	157.1	07May2020, 12:20	6.24
FM 973 Culverts	0.238	615.5	07May2020, 12:25	6.77

Project: Castlewood Drainage Study Simulation Run: Post-25 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed FB (
End of Run: 08May2020, 00:05 Meteorologic Model: 25 yr
Compute Time: 19Jul2020, 20:41:34 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.121	406.7	07May2020, 12:15	7.50
Pond	0.121	313.9	07May2020, 12:25	7.49
OS-B1	0.061	145.8	07May2020, 12:30	6.23
OS-C1	0.056	157.1	07May2020, 12:20	6.24
FM 973 Culverts	0.238	610.8	07May2020, 12:25	6.87

Project: Castlewood Drainage Study Simulation Run: Pre-100 yr

Start of Run: 07May2020, 00:00 Basin Model: Pre-Developed
End of Run: 08May2020, 00:05 Meteorologic Model: 100 yr
Compute Time: 07May2020, 15:32:57 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1	0.118	443.7	07May2020, 12:20	9.46
OS-A1	0.064	209.9	07May2020, 12:30	9.45
OS-B1	0.056	211.7	07May2020, 12:20	9.46
FM 973 Culverts	0.238	851.7	07May2020, 12:20	9.46

Project: Castlewood Drainage Study Simulation Run: Post-100 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed NC
End of Run: 08May2020, 00:05 Meteorologic Model: 100 yr
Compute Time: 19Jul2020, 20:32:48 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.105	461.3	07May2020, 12:15	10.74
Pond	0.105	389.9	07May2020, 12:25	10.74
OS-B1	0.077	250.5	07May2020, 12:30	9.45
OS-C1	0.056	213.9	07May2020, 12:20	9.46
FM 973 Culverts	0.238	845.7	07May2020, 12:25	10.02

Project: Castlewood Drainage Study Simulation Run: Post-100 yr

Start of Run: 07May2020, 00:00 Basin Model: Post-Developed FB
End of Run: 08May2020, 00:05 Meteorologic Model: 100 yr
Compute Time: 19Jul2020, 20:43:04 Control Specifications: Control 1

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #1/OS-A1	0.121	532.4	07May2020, 12:15	10.79
Pond	0.121	431.5	07May2020, 12:25	10.78
OS-B1	0.061	198.4	07May2020, 12:30	9.45
OS-C1	0.056	213.9	07May2020, 12:20	9.46
FM 973 Culverts	0.238	835.6	07May2020, 12:25	10.13

EXHIBIT I

STORMCAD CALCULATIONS

FlexTable: Conduit Table - 25 year

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - A1	76.42	3.18	1.86	600.19	600.07	38.7	29.8	0.003	0.013	4.29	169.60	604.54	604.52	604.38	604.36	A1-11, B1-2
PIPE - A2	76.83	4.27	1.88	600.36	600.19	57.7	57.7	0.003	0.013	4.24	111.68	604.79	604.71	604.51	604.43	A1-11, B1-2
PIPE - A3	77.46	2.15	1.17	600.49	600.36	43.9	36.9	0.003	0.013	4.53	223.87	604.97	604.96	604.90	604.89	A1-11, B1-2
PIPE - A4	64.03	3.56	1.64	601.09	600.49	198.9	205.9	0.003	0.013	4.39	113.01	605.27	605.08	605.08	604.88	A1-9, B1-2
PIPE - A5	53.55	2.97	1.46	601.25	601.09	54.1	29.0	0.003	0.013	4.17	111.85	605.43	605.39	605.29	605.26	A1-9
PIPE - A6	47.26	2.63	1.33	601.95	601.25	233.0	261.2	0.003	0.013	4.15	112.77	605.63	605.51	605.53	605.40	A1-7
PIPE - A7	47.75	2.65	1.34	602.17	601.95	73.4	83.2	0.003	0.013	3.71	112.67	605.81	605.77	605.70	605.66	A1-7
PIPE - A8	48.44	2.69	1.40	602.46	602.17	107.2	97.4	0.003	0.013	3.59	107.03	605.93	605.87	605.82	605.76	A1-7
PIPE - A9	30.87	5.57	1.38	603.34	602.46	283.1	283.0	0.003	0.013	3.46	69.01	606.20	606.03	606.07	605.92	A1-5
PIPE - A10	31.20	5.50	1.42	603.83	603.34	165.0	164.8	0.003	0.013	2.81	67.45	606.37	606.27	606.21	606.15	A1-5
PIPE - A11	20.67	5.33	1.61	604.12	603.85	90.0	90.2	0.003	0.013	2.49	36.53	606.60	606.50	606.40	606.34	A1-3
PIPE - A12	17.38	7.14	1.24	605.93	604.61	180.0	180.6	0.007	0.013	1.90	35.13	607.92	606.76	607.34	606.51	A1-2
PIPE - A13	8.08	6.99	0.79	606.63	606.46	14.5	14.1	0.012	0.013	1.97	24.49	608.55	608.53	608.43	608.43	A2
PIPE - B1	12.64	4.02	1.35	602.76	602.58	36.6	21.1	0.005	0.013	2.61	15.86	605.55	605.44	605.30	605.19	B1-2
PIPE - B2	5.59	1.78	0.45	603.48	602.76	14.3	14.8	0.050	0.013	2.93	50.76	605.74	605.73	605.69	605.69	B1
PIPE - C1	98.33	7.01	2.00	601.62	601.59	11.0	18.1	0.003	0.013	2.77	196.29	604.77	604.76	604.36	604.36	C1-8, D1-5, E1-10
PIPE - C2	100.22	3.58	1.96	602.11	601.62	162.1	161.8	0.003	0.013	4.49	206.63	606.43	606.31	606.23	606.11	C1-8, D1-5, E1-10
PIPE - C3	100.57	3.59	1.97	602.20	602.11	30.0	30.6	0.003	0.013	4.28	205.87	606.61	606.59	606.41	606.39	C1-8, D1-5, E1-10
PIPE - C4	89.34	3.72	2.08	602.61	602.20	136.6	135.5	0.003	0.013	4.45	169.69	606.98	606.86	606.76	606.65	C1-8, D1-5, E1-10
PIPE - C5	74.21	4.12	1.83	602.89	602.61	94.8	98.1	0.003	0.013	4.28	111.81	607.28	607.15	607.01	606.89	C1-8, E1-10
PIPE - C6	70.56	3.92	1.74	603.03	602.89	45.2	41.8	0.003	0.013	4.30	114.50	607.48	607.43	607.25	607.19	C1-6,E1-10
PIPE - C7	27.90	1.86	1.08	603.57	603.03	182.1	182.1	0.003	0.013	4.53	89.44	607.67	607.62	607.62	607.56	C1-6
PIPE - C8	28.97	1.93	1.10	604.15	603.57	192.6	182.1	0.003	0.013	4.08	90.13	607.76	607.70	607.71	607.65	C1-6
PIPE - C9	26.01	1.73	1.03	604.33	604.15	60.3	70.8	0.003	0.013	3.60	89.76	607.81	607.80	607.76	607.75	C1-3, C5
PIPE - C10	22.22	3.14	1.69	604.36	604.33	10.0	10.0	0.003	0.013	3.40	36.53	607.90	607.89	607.74	607.73	C1-3
PIPE - C11	15.01	2.12	1.34	604.48	604.36	40.0	40.0	0.003	0.013	3.47	36.53	607.92	607.90	607.85	607.83	CI-2
PIPE - C12	10.55	6.20	0.95	606.57	604.98	222.5	222.4	0.007	0.013	2.92	34.68	608.16	607.97	607.92	607.90	C1
PIPE - C13	10.74	4.45	1.44	607.74	607.07	222.5	222.4	0.003	0.013	1.44	12.41	609.48	608.81	609.18	608.51	C1
PIPE - C14	10.80	6.11	(N/A)	608.50	608.24	89.3	98.5	0.003	0.013	1.26	5.67	611.15	609.98	610.57	609.50	C1
PIPE - C15	10.82	6.12	(N/A)	608.59	608.50	29.0	29.0	0.003	0.013	2.07	5.85	611.46	611.15	610.88	610.57	C1
PIPE - D1	18.55	5.91	(N/A)	605.41	605.11	60.0	60.0	0.005	0.013	1.61	16.00	607.82	607.27	607.22	606.72	D1-5
PIPE - D2	14.83	4.72	1.53	606.28	605.41	175.0	175.0	0.005	0.013	2.43	15.95	608.94	608.19	608.59	607.84	D1-4
PIPE - D3	11.06	3.52	1.22	607.16	606.28	175.0	175.0	0.005	0.013	2.63	16.04	609.52	609.10	609.33	608.91	D1-3
PIPE - D4	7.24	4.96	0.95	608.08	607.16	185.0	185.0	0.005	0.013	2.36	15.95	609.79	609.61	609.68	609.52	D1-2
PIPE - D5	3.23	4.07	0.69	609.46	608.58	175.0	175.0	0.005	0.013	1.21	7.45	610.41	609.86	610.15	609.79	D1
PIPE - E1	44.21	3.68	1.80	603.12	602.95	55.2	29.9	0.003	0.013	4.44	68.68	607.75	607.68	607.54	607.47	E1-10
PIPE - E2	38.07	3.17	1.64	603.90	603.20	234.8	258.8	0.003	0.013	4.51	67.58	608.09	607.87	607.94	607.71	E1-8
PIPE - E3	38.73	3.23	1.65	604.33	603.90	143.6	141.6	0.003	0.013	4.23	67.72	608.43	608.29	608.27	608.13	E1-8
PIPE - E4	39.61	3.30	1.71	604.89	604.33	196.3	185.8	0.003	0.013	4.03	66.10	608.73	608.53	608.56	608.36	E1-8
PIPE - E5	26.75	2.23	1.23	605.27	604.88	125.5	161.1	0.003	0.013	3.85	69.00	608.88	608.82	608.80	608.74	E1-6
PIPE - E6	13.09	2.67	1.37	606.20	605.30	300.0	278.9	0.003	0.013	3.55	22.46	609.26	608.96	609.15	608.85	E1-4
PIPE - E7	13.27	4.22	1.39	607.52	606.70	164.4	160.4	0.005	0.013	2.42	15.98	609.96	609.40	609.69	609.12	E1-4
PIPE - E8	12.35	3.93	1.32	607.73	607.52	42.0	31.9	0.005	0.013	2.54	15.99	610.42	610.30	610.18	610.06	E1-3
PIPE - E9	1.41	0.80	0.45	607.81	607.73	16.8	14.8	0.005	0.013	2.84	7.25	610.58	610.58	610.57	610.57	E3
PIPE - F1	14.78	5.91	1.48	605.19	605.12	13.3	14.5	0.005	0.013	1.39	16.41	607.21	606.95	606.64	606.51	F1-4
PIPE - F2	14.82	4.72	1.53	605.36	605.19	34.7	25.6	0.005	0.013	2.72	15.83	608.40	608.25	608.06	607.91	F1-4
PIPE - F3	11.12	3.54	1.23	606.09	605.36	146.3	155.4	0.005	0.013	3.05	15.98	608.96	608.60	608.76	608.41	F1-2
PIPE - F4	11.33	3.61	1.24	607.11	606.09	203.4	203.4	0.005	0.013	2.78	16.02	609.59	609.08	609.39	608.87	F1-2

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FlexTable: Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - F5	2.18	1.23	0.56	608.06	607.61	90.5	90.5	0.005	0.013	2.06	7.41	609.74	609.70	609.71	609.67	F1
PIPE - F6	2.21	1.25	0.56	608.21	608.06	29.0	29.0	0.005	0.013	1.65	7.56	609.75	609.74	609.73	609.71	F1
PIPE - G1	14.95	5.82	1.52	606.36	606.00	71.0	94.4	0.005	0.013	1.39	16.11	608.41	608.03	607.88	607.39	G2-3
PIPE - G2	14.97	5.07	1.78	606.39	606.36	7.7	36.8	0.004	0.013	1.52	14.12	608.45	608.41	607.93	607.88	G2-3
PIPE - G3	4.42	1.41	0.73	606.60	606.39	44.0	41.0	0.005	0.013	2.79	15.63	609.23	609.21	609.20	609.18	G2
PIPE - G4	0.00	0.00	(N/A)	606.78	606.60	35.4	32.5	0.005	0.013	2.65	16.13	609.25	609.25	609.25	609.25	G2
PIPE - H1	17.17	6.13	1.39	602.08	601.34	16.2	24.2	0.046	0.013	1.41	87.66	604.05	603.97	603.48	603.41	G4, H1-2
PIPE - H2	17.20	6.10	1.40	602.21	602.08	26.6	14.8	0.005	0.013	1.40	28.67	604.18	604.05	603.61	603.48	G4, H1-2
PIPE - H3	16.26	5.46	1.80	602.86	602.71	33.0	30.5	0.005	0.013	1.80	15.25	605.12	604.97	604.66	604.51	G4, H1
PIPE - H4	15.19	4.84	1.53	602.99	602.86	25.0	22.5	0.005	0.013	2.19	16.31	605.53	605.41	605.16	605.05	G4
PIPE - LA1	6.70	3.79	0.65	602.16	601.86	11.1	14.8	0.027	0.013	3.01	17.30	605.14	605.09	604.91	604.87	A10
PIPE - LA2	10.87	6.15	(N/A)	601.96	601.86	20.5	21.7	0.005	0.013	2.79	7.34	605.46	605.24	604.87	604.65	A11
PIPE - LA3	1.59	0.90	0.29	603.37	603.00	10.5	14.8	0.035	0.013	2.46	19.72	605.47	605.47	605.46	605.46	A9
PIPE - LA4	7.68	4.35	1.31	603.10	603.00	20.7	24.3	0.005	0.013	2.29	7.31	605.70	605.58	605.40	605.29	A8
PIPE - LA5	9.66	3.08	0.99	603.01	602.93	10.5	11.2	0.008	0.013	2.97	19.75	606.06	606.05	605.92	605.90	A6
PIPE - LA6	9.75	5.52	(N/A)	603.58	603.43	20.5	19.8	0.007	0.013	2.27	8.98	606.35	606.18	605.88	605.70	A7
PIPE - LA7	7.01	4.67	1.19	604.92	604.85	14.7	14.8	0.005	0.013	1.44	7.24	606.59	606.53	606.34	606.29	A4
PIPE - LA8	4.07	4.26	0.80	604.95	604.85	20.5	20.5	0.005	0.013	1.53	7.34	606.50	606.47	606.41	606.38	A5
PIPE - LA9	3.67	3.41	0.88	605.39	605.26	44.7	30.0	0.003	0.013	1.36	5.66	606.74	606.69	606.66	606.62	A3
PIPE - LA9 (1)	3.68	3.31	0.90	605.43	605.39	14.9	14.8	0.003	0.013	1.27	5.45	606.76	606.74	606.68	606.66	A3
PIPE - LA10	9.32	5.28	1.29	606.54	606.39	20.5	20.4	0.007	0.013	1.84	8.98	608.82	608.66	608.39	608.23	A1
PIPE - LB1	7.20	4.07	1.18	602.37	602.26	21.7	21.7	0.005	0.013	3.30	7.48	605.92	605.82	605.66	605.56	B2
PIPE - LC1	3.68	2.08	0.51	604.64	604.43	10.5	14.4	0.020	0.013	2.87	14.85	607.38	607.36	607.31	607.30	C7
PIPE - LC2	1.27	0.72	0.30	604.84	604.43	20.5	22.7	0.020	0.013	2.90	14.85	607.34	607.34	607.33	607.33	C8
PIPE - LC3	2.88	1.63	0.45	605.36	605.15	10.5	14.8	0.020	0.013	2.60	14.85	607.80	607.79	607.76	607.75	C6
PIPE - LC4	1.29	0.73	0.30	605.56	605.15	20.5	23.0	0.020	0.013	2.62	14.85	607.78	607.78	607.78	607.77	C4
PIPE - LC5	4.34	1.38	0.82	604.73	604.33	134.1	134.1	0.003	0.013	3.48	12.35	607.89	607.84	607.86	607.81	C5
PIPE - LC6	7.73	4.38	1.33	605.47	605.33	29.0	29.0	0.005	0.013	2.27	7.30	608.06	607.90	607.76	607.60	C3
PIPE - LC7	4.83	2.73	0.46	606.24	605.48	14.8	14.8	0.051	0.013	2.39	23.76	608.02	607.99	607.90	607.87	C2
PIPE - LE1	4.57	2.59	0.75	604.67	604.59	10.5	14.8	0.008	0.013	3.16	9.17	607.87	607.85	607.77	607.75	E9
PIPE - LE2	4.01	2.27	0.79	604.69	604.59	20.5	23.0	0.005	0.013	3.17	7.34	607.87	607.84	607.79	607.76	E10
PIPE - LE3	6.57	3.72	0.94	606.18	606.10	10.5	14.8	0.008	0.013	2.56	9.17	608.92	608.87	608.70	608.66	E7
PIPE - LE4	7.94	2.53	1.00	606.20	606.10	20.5	23.0	0.005	0.013	2.63	15.80	608.85	608.83	608.75	608.73	E8
PIPE - LE5	7.73	4.38	1.06	606.08	606.00	10.5	23.0	0.008	0.013	2.74	9.17	609.09	609.03	608.79	608.74	E6
PIPE - LE6	7.29	4.12	1.20	606.16	606.00	31.9	18.9	0.005	0.013	2.76	7.44	609.17	609.02	608.91	608.76	E5
PIPE - LE7	1.50	2.79	0.51	608.75	608.64	34.7	19.5	0.003	0.013	1.55	5.91	610.21	610.20	610.20	610.19	E4
PIPE - LE7 (1)	1.50	2.63	0.54	608.79	608.75	14.8	14.8	0.003	0.013	1.45	5.45	610.21	610.21	610.20	610.20	E4
PIPE - LE8	11.47	3.65	1.26	608.14	608.02	24.3	24.3	0.005	0.013	2.43	15.88	610.72	610.66	610.51	610.45	E1-2
PIPE - LF1	2.94	1.66	0.67	606.07	606.00	14.8	14.8	0.005	0.013	2.50	7.21	608.56	608.54	608.51	608.50	F4
PIPE - LF2	2.33	1.32	0.58	606.10	606.00	21.0	21.0	0.005	0.013	2.51	7.26	608.55	608.54	608.52	608.51	F3
PIPE - LF3	9.90	5.24	1.16	607.74	607.67	14.8	14.8	0.005	0.013	1.93	15.53	609.78	609.75	609.62	609.60	F2
PIPE - OS1	80.35	4.98	1.67	599.08	599.00	31.2	59.3	0.003	0.013	1.44	135.09	601.10	601.00	600.66	600.44	G1-4, H1-2, OSB1-7
PIPE - OS2	80.86	5.69	1.61	599.57	599.08	162.2	160.5	0.003	0.013	2.69	236.84	602.03	601.90	601.82	601.77	G1-4, H1-2, OSB1-7
PIPE - OS4	81.38	5.70	1.62	600.06	599.57	162.2	165.2	0.003	0.013	2.40	236.84	602.34	602.14	602.04	601.97	G1-4, H1-2, OSB1-7
PIPE - OS5	81.52	5.65	1.63	600.19	600.06	44.1	32.8	0.003	0.013	2.56	233.96	602.81	602.77	602.64	602.62	G1-4, H1-2, OSB1-7
PIPE - OSA L1	33.82	5.90	2.27	603.86	603.88	5.3	8.2	-0.003	0.013	2.27	36.76	606.68	606.67	606.14	606.13	OSA1-11
PIPE - OSA1	78.35	6.29	1.87	600.09	599.86	75.0	60.7	0.003	0.013	4.50	217.79	604.49	604.46	604.39	604.36	OSA1-11
PIPE - OSA2	78.88	6.22	1.89	600.71	600.09	208.0	236.1	0.003	0.013	4.44	214.37	604.71	604.63	604.59	604.53	OSA1-11

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FlexTable: Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - OSA3	79.24	4.40	1.91	601.01	600.71	100.0	61.0	0.003	0.013	3.84	112.69	605.03	604.87	604.70	604.54	OSA1-11
PIPE - OSA4	79.76	6.26	1.90	601.61	601.01	200.8	207.7	0.003	0.013	4.02	215.14	605.23	605.14	605.08	605.03	OSA1-11
PIPE - OSA5	80.20	7.41	2.90	602.23	601.61	206.2	213.5	0.003	0.013	3.57	215.14	605.45	605.32	605.24	605.18	OSA1-11
PIPE - OSA6	80.24	7.93	2.73	602.23	602.26	9.3	7.2	0.003	0.013	3.43	288.42	605.85	605.83	605.65	605.65	OSA1-11
PIPE - OSA7	80.57	5.07	2.92	602.60	602.29	102.0	112.6	0.003	0.013	3.65	216.11	606.04	606.01	605.96	605.95	OSA1-10
PIPE - OSA8	80.65	13.86	1.88	603.35	602.60	250.0	237.6	0.003	0.013	3.30	72.96	606.63	606.16	606.37	605.90	OSA1-10
PIPE - OSB1	132.41	8.62	2.35	601.66	601.34	105.7	52.3	0.003	0.013	2.27	237.14	603.70	603.57	603.35	603.41	G1-3, OSB1-7
PIPE - OSB2	124.32	8.52	2.25	604.97	604.64	65.9	28.0	0.005	0.013	2.06	304.93	606.98	606.90	606.66	606.70	G1, OSB1-7
										1.97	303.30	607.29	607.13	606.83	606.94	G1, OSB1-7
PIPE - OSB3	61.71	8.73	(N/A)	608.80	608.67	43.4	17.1	0.003	0.013	1.96	110.13	611.34	611.21	610.77	610.63	OSB1-7
PIPE - OSB4	61.80	8.74	(N/A)	608.99	608.80	62.4	60.3	0.003	0.013	2.69	110.15	611.86	611.74	611.54	611.49	OSB1-7
PIPE - OSB5	61.86	8.75	(N/A)	609.04	608.99	20.0	25.1	0.003	0.013	2.89	102.60	612.14	612.10	611.89	611.87	OSB1-7
PIPE J-1	(N/A)	(N/A)	(N/A)	602.31	602.23	28.0	19.5	0.003	0.013	(N/A)	12.24	(N/A)	(N/A)	(N/A)	(N/A)	COMMECIAL
PIPE OS-6	81.63	5.70	1.62	600.30	600.19	36.5	38.6	0.003	0.013	2.76	236.56	603.11	603.08	602.96	602.95	G1-4, H1-2,OSB1-7

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FlexTable: Conduit Table - 100 year

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - A1	102.99	4.29	2.30	600.19	600.07	38.7	29.8	0.003	0.013	5.19	169.60	605.59	605.55	605.30	605.26	A1-11, B1-2
PIPE - A2	103.44	5.75	2.32	600.36	600.19	57.7	57.7	0.003	0.013	5.20	111.68	606.04	605.90	605.53	605.39	A1-11, B1-2
PIPE - A3	104.10	2.89	1.43	600.49	600.36	43.9	36.9	0.003	0.013	5.65	223.87	606.17	606.34	606.04	606.01	A1-11, B1-2
PIPE - A4	85.69	4.76	2.01	601.09	600.49	198.9	205.9	0.003	0.013	5.47	113.01	606.65	606.31	606.30	605.96	A1-9, B1-2
PIPE - A5	71.56	3.98	1.78	601.25	601.09	54.1	29.0	0.003	0.013	5.54	111.85	606.94	606.87	606.69	606.63	A1-9
PIPE - A6	62.78	3.49	1.62	601.95	601.25	233.0	261.2	0.003	0.013	5.64	112.77	607.30	607.08	607.11	606.89	A1-7
PIPE - A7	63.30	3.52	1.63	602.17	601.95	73.4	83.2	0.003	0.013	5.39	112.67	607.60	607.53	607.41	607.34	A1-7
PIPE - A8	64.06	3.56	1.70	602.46	602.17	107.2	97.4	0.003	0.013	5.35	107.03	607.82	607.72	607.63	607.52	A1-7
PIPE - A9	41.39	3.45	1.71	603.34	602.46	283.1	283.0	0.003	0.013	5.31	69.01	608.27	608.00	608.09	607.77	A1-5
PIPE - A10	42.13	3.51	1.76	603.83	603.34	165.0	164.8	0.003	0.013	4.85	67.45	608.58	608.38	608.38	608.19	A1-5
PIPE - A11	30.13	4.26	2.08	604.12	603.85	90.0	90.2	0.003	0.013	4.63	36.53	608.94	608.76	608.66	608.48	A1-3
PIPE - A12	25.42	5.18	1.58	605.93	604.61	180.0	180.6	0.007	0.013	4.17	35.13	609.89	609.20	609.47	608.78	A1-2
PIPE - A13	11.86	3.78	0.98	606.63	606.46	14.5	14.1	0.012	0.013	3.59	24.49	610.32	610.28	610.09	610.05	A2
PIPE - B1	17.90	5.70	(N/A)	602.76	602.58	36.6	21.1	0.005	0.013	3.89	15.86	607.20	606.98	606.70	606.47	B1-2
PIPE - B2	8.00	2.55	0.54	603.48	602.76	14.3	14.8	0.050	0.013	4.06	50.76	606.94	607.36	606.84	606.82	B1
PIPE - C1	133.09	7.66	2.48	601.62	601.59	11.0	18.1	0.003	0.013	3.67	196.29	605.69	605.68	605.26	605.26	C1-8, D1-5, E1-10
PIPE - C2	135.11	4.83	2.42	602.11	601.62	162.1	161.8	0.003	0.013	4.98	206.63	607.17	607.16	606.81	606.60	C1-8, D1-5, E1-10
PIPE - C3	135.48	4.84	2.43	602.20	602.11	30.0	30.6	0.003	0.013	4.98	205.87	607.50	607.46	607.13	607.09	C1-8, D1-5, E1-10
PIPE - C4	120.10	5.00	2.57	602.61	602.20	136.6	135.5	0.003	0.013	5.37	169.69	608.17	607.96	607.78	607.57	C1-8, D1-5, E1-10
PIPE - C5	99.58	5.53	2.26	602.89	602.61	94.8	98.1	0.003	0.013	5.40	111.81	608.71	608.49	608.24	608.01	C1-8, E1-10
PIPE - C6	94.60	5.26	2.14	603.03	602.89	45.2	41.8	0.003	0.013	5.67	114.50	609.08	608.99	608.65	608.56	C1-6,E1-10
PIPE - C7	37.38	2.49	1.32	603.57	603.03	182.1	182.1	0.003	0.013	5.54	89.44	608.76	609.12	608.66	608.57	C1-6
PIPE - C8	38.55	2.57	1.34	604.15	603.57	192.6	182.1	0.003	0.013	5.15	90.13	608.93	608.82	608.82	608.72	C1-6
PIPE - C9	34.45	2.30	1.25	604.33	604.15	60.3	70.8	0.003	0.013	4.75	89.76	609.01	608.99	608.93	608.90	C1-3, C5
PIPE - C10	29.42	4.16	2.04	604.36	604.33	10.0	10.0	0.003	0.013	4.55	36.53	609.17	609.15	608.90	608.88	C1-3
PIPE - C11	19.85	2.81	1.58	604.48	604.36	40.0	40.0	0.003	0.013	4.68	36.53	609.20	609.17	609.08	609.04	CI-2
PIPE - C12	14.20	2.89	1.11	606.57	604.98	222.5	222.4	0.007	0.013	4.18	34.68	609.56	609.29	609.43	609.16	C1
PIPE - C13	14.46	4.60	(N/A)	607.74	607.07	222.5	222.4	0.003	0.013	2.32	12.41	610.62	609.72	610.29	609.39	C1
PIPE - C14	14.52	8.22	(N/A)	608.50	608.24	89.3	98.5	0.003	0.013	2.03	5.67	613.02	611.32	611.97	610.27	C1
PIPE - C15	14.54	8.23	(N/A)	608.59	608.50	29.0	29.0	0.003	0.013	3.47	5.85	613.58	613.02	612.53	611.97	C1
PIPE - D1	26.21	8.34	(N/A)	605.41	605.11	60.0	60.0	0.005	0.013	2.54	16.00	609.54	608.73	608.46	607.65	D1-5
PIPE - D2	20.89	6.65	(N/A)	606.28	605.41	175.0	175.0	0.005	0.013	3.93	15.95	611.52	610.03	610.83	609.34	D1-4
PIPE - D3	15.51	4.94	1.58	607.16	606.28	175.0	175.0	0.005	0.013	4.63	16.04	612.11	611.75	611.73	610.91	D1-3
PIPE - D4	10.14	3.23	1.16	608.08	607.16	185.0	185.0	0.005	0.013	4.73	15.95	612.43	612.25	612.27	611.89	D1-2
PIPE - D5	4.60	2.60	0.85	609.46	608.58	175.0	175.0	0.005	0.013	3.82	7.45	612.84	612.50	612.73	612.40	D1
PIPE - E1	59.13	4.93	2.24	603.12	602.95	55.2	29.9	0.003	0.013	5.62	68.68	609.07	609.23	608.70	608.57	E1-10
PIPE - E2	50.62	4.22	2.02	603.90	603.20	234.8	258.8	0.003	0.013	5.57	67.58	609.44	609.26	609.16	608.77	E1-8
PIPE - E3	51.33	4.28	2.04	604.33	603.90	143.6	141.6	0.003	0.013	5.60	67.72	610.03	609.78	609.75	609.50	E1-8
PIPE - E4	52.29	4.36	2.11	604.89	604.33	196.3	185.8	0.003	0.013	5.58	66.10	610.55	610.20	610.26	609.91	E1-8
PIPE - E5	39.79	3.32	1.66	605.27	604.88	125.5	161.1	0.003	0.013	5.21	69.00	610.39	610.62	610.22	610.09	E1-6
PIPE - E6	19.16	3.90	1.78	606.20	605.30	300.0	278.9	0.003	0.013	4.80	22.46	610.99	610.49	610.75	610.10	E1-4
PIPE - E7	19.34	6.16	(N/A)	607.52	606.70	164.4	160.4	0.005	0.013	3.99	15.98	612.48	611.27	611.89	610.69	E1-4
PIPE - E8	17.99	5.73	(N/A)	607.73	607.52	42.0	31.9	0.005	0.013	5.06	15.99	613.36	613.18	612.85	612.58	E1-3
PIPE - E9	1.99	1.13	0.54	607.81	607.73	16.8	14.8	0.005	0.013	5.05	7.25	612.81	613.36	612.79	612.78	E3
PIPE - F1	20.75	6.61	(N/A)	605.19	605.12	13.3	14.5	0.005	0.013	2.28	16.41	608.19	608.08	607.51	607.40	F1-4
PIPE - F2	20.79	6.62	(N/A)	605.36	605.19	34.7	25.6	0.005	0.013	3.16	15.83	609.32	609.03	608.64	608.35	F1-4
PIPE - F3	16.06	5.11	1.65	606.09	605.36	146.3	155.4	0.005	0.013	3.95	15.98	610.45	609.71	610.05	609.31	F1-2
PIPE - F4	16.28	5.18	1.67	607.11	606.09	203.4	203.4	0.005	0.013	4.19	16.02	611.75	610.70	611.34	610.28	F1-2

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FlexTable: Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - F5	3.08	1.74	0.67	608.06	607.61	90.5	90.5	0.005	0.013	4.32	7.41	612.05	611.98	612.01	611.93	F1
PIPE - F6	3.11	1.76	0.67	608.21	608.06	29.0	29.0	0.005	0.013	3.95	7.56	612.08	612.06	612.03	612.01	F1
PIPE - G1	28.57	9.10	(N/A)	606.36	606.00	71.0	94.4	0.005	0.013	1.84	16.11	610.35	609.23	609.07	607.84	G2-3
PIPE - G2	28.58	9.10	(N/A)	606.39	606.36	7.7	36.8	0.004	0.013	2.71	14.12	610.48	610.35	609.19	609.07	G2-3
PIPE - G3	20.55	6.54	(N/A)	606.60	606.39	44.0	41.0	0.005	0.013	4.54	15.63	611.96	611.60	611.30	610.93	G2
PIPE - G4	17.30	5.51	1.83	606.78	606.60	35.4	32.5	0.005	0.013	5.39	16.13	612.67	612.46	612.20	611.99	G2
PIPE - H1	37.32	7.60	1.14	602.08	601.34	16.2	24.2	0.046	0.013	3.24	87.66	605.61	605.48	604.71	604.58	G4, H1-2
PIPE - H2	37.38	7.61	(N/A)	602.21	602.08	26.6	14.8	0.005	0.013	2.63	28.67	605.84	605.61	604.93	604.71	G4, H1-2
PIPE - H3	36.33	11.56	(N/A)	602.86	602.71	33.0	30.5	0.005	0.013	2.10	15.25	607.74	606.88	605.66	604.81	G4, H1
PIPE - H4	35.15	11.19	(N/A)	602.99	602.86	25.0	22.5	0.005	0.013	4.14	16.31	609.55	608.95	607.60	607.00	G4
PIPE - LA1	8.57	4.85	0.75	602.16	601.86	11.1	14.8	0.027	0.013	4.09	17.30	606.39	606.31	606.02	605.95	A10
PIPE - LA2	13.70	7.75	(N/A)	601.96	601.86	20.5	21.7	0.005	0.013	3.75	7.34	606.89	606.54	605.96	605.61	A11
PIPE - LA3	2.24	1.27	0.34	603.37	603.00	10.5	14.8	0.035	0.013	3.99	19.72	607.02	607.01	606.99	606.99	A9
PIPE - LA4	11.40	6.45	(N/A)	603.10	603.00	20.7	24.3	0.005	0.013	3.62	7.31	607.51	607.26	606.86	606.62	A8
PIPE - LA5	14.31	4.56	1.26	603.01	602.93	10.5	11.2	0.008	0.013	4.80	19.75	608.10	608.05	607.77	607.73	A6
PIPE - LA6	14.29	8.09	(N/A)	603.58	603.43	20.5	19.8	0.007	0.013	3.88	8.98	608.71	608.33	607.69	607.31	A7
PIPE - LA7	9.30	5.26	(N/A)	604.92	604.85	14.7	14.8	0.005	0.013	3.54	7.24	608.93	608.82	608.50	608.39	A4
PIPE - LA8	5.75	3.25	1.00	604.95	604.85	20.5	20.5	0.005	0.013	3.70	7.34	608.77	608.71	608.61	608.55	A5
PIPE - LA9	5.23	2.96	1.14	605.39	605.26	44.7	30.0	0.003	0.013	3.69	5.66	609.20	609.08	609.06	608.95	A3
PIPE - LA9 (1)	5.25	2.97	1.18	605.43	605.39	14.9	14.8	0.003	0.013	3.67	5.45	609.23	609.20	609.10	609.06	A3
PIPE - LA10	13.63	7.71	(N/A)	606.54	606.39	20.5	20.4	0.007	0.013	3.24	8.98	610.90	610.56	609.98	609.63	A1
PIPE - LB1	10.05	5.69	(N/A)	602.37	602.26	21.7	21.7	0.005	0.013	4.56	7.48	607.52	607.53	607.02	606.82	B2
PIPE - LC1	4.96	2.81	0.60	604.64	604.43	10.5	14.4	0.020	0.013	4.31	14.85	608.89	608.86	608.76	608.74	C7
PIPE - LC2	1.57	0.89	0.33	604.84	604.43	20.5	22.7	0.020	0.013	4.31	14.85	608.76	608.82	608.74	608.74	C8
PIPE - LC3	4.12	2.33	0.54	605.36	605.15	10.5	14.8	0.020	0.013	3.75	14.85	609.00	608.99	608.92	608.90	C6
PIPE - LC4	1.99	1.13	0.37	605.56	605.15	20.5	23.0	0.020	0.013	3.79	14.85	608.97	608.96	608.95	608.94	C4
PIPE - LC5	5.93	1.89	0.98	604.73	604.33	134.1	134.1	0.003	0.013	4.67	12.35	609.15	609.06	609.10	609.00	C5
PIPE - LC6	11.17	6.32	(N/A)	605.47	605.33	29.0	29.0	0.005	0.013	3.22	7.30	609.49	609.17	608.87	608.55	C3
PIPE - LC7	6.41	3.63	0.53	606.24	605.48	14.8	14.8	0.051	0.013	3.64	23.76	609.38	609.32	609.17	609.12	C2
PIPE - LE1	6.88	3.90	0.97	604.67	604.59	10.5	14.8	0.008	0.013	4.18	9.17	609.05	609.24	608.82	608.77	E9
PIPE - LE2	5.79	3.28	1.00	604.69	604.59	20.5	23.0	0.005	0.013	4.18	7.34	609.00	609.21	608.83	608.77	E10
PIPE - LE3	8.77	4.96	1.17	606.18	606.10	10.5	14.8	0.008	0.013	3.99	9.17	610.55	610.71	610.16	610.09	E7
PIPE - LE4	9.71	3.09	1.13	606.20	606.10	20.5	23.0	0.005	0.013	3.99	15.80	610.28	610.61	610.13	610.09	E8
PIPE - LE5	11.38	6.44	(N/A)	606.08	606.00	10.5	23.0	0.008	0.013	4.00	9.17	610.77	610.65	610.13	610.00	E6
PIPE - LE6	10.77	6.09	(N/A)	606.16	606.00	31.9	18.9	0.005	0.013	4.04	7.44	610.96	610.62	610.38	610.04	E5
PIPE - LE7	2.10	1.19	0.62	608.75	608.64	34.7	19.5	0.003	0.013	3.94	5.91	612.62	612.99	612.59	612.58	E4
PIPE - LE7 (1)	2.12	1.20	0.65	608.79	608.75	14.8	14.8	0.003	0.013	3.84	5.45	612.62	612.62	612.60	612.59	E4
PIPE - LE8	16.73	5.33	1.76	608.14	608.02	24.3	24.3	0.005	0.013	4.76	15.88	613.35	613.53	612.91	612.78	E1-2
PIPE - LF1	3.25	1.84	0.71	606.07	606.00	14.8	14.8	0.005	0.013	3.52	7.21	609.59	609.57	609.53	609.52	F4
PIPE - LF2	3.28	1.86	0.71	606.10	606.00	21.0	21.0	0.005	0.013	3.52	7.26	609.59	609.57	609.54	609.52	F3
PIPE - LF3	14.24	4.53	1.51	607.74	607.67	14.8	14.8	0.005	0.013	4.10	15.53	612.14	612.09	611.83	611.77	F2
PIPE - OS1	128.09	5.44	2.33	599.08	599.00	31.2	59.3	0.003	0.013	1.84	135.09	601.73	601.61	601.13	600.84	G1-4, H1-2, OSB1-7
PIPE - OS2	128.79	6.41	2.10	599.57	599.08	162.2	160.5	0.003	0.013	4.26	236.84	603.66	603.56	603.48	603.34	G1-4, H1-2, OSB1-7
PIPE - OS4	129.48	6.42	2.11	600.06	599.57	162.2	165.2	0.003	0.013	4.02	236.84	603.91	603.77	603.71	603.59	G1-4, H1-2, OSB1-7
PIPE - OS5	129.67	6.37	2.13	600.19	600.06	44.1	32.8	0.003	0.013	3.99	233.96	604.27	604.24	604.09	604.05	G1-4, H1-2, OSB1-7
PIPE - OSA L1	43.25	6.12	(N/A)	603.86	603.88	5.3	8.2	-0.003	0.013	3.13	36.76	607.59	607.57	607.01	606.99	OSA1-11
PIPE - OSA1	99.21	3.12	2.13	600.09	599.86	75.0	60.7	0.003	0.013	5.40	217.79	605.48	605.42	605.31	605.26	OSA1-11
PIPE - OSA2	100.53	3.16	2.17	600.71	600.09	208.0	236.1	0.003	0.013	5.44	214.37	605.85	605.70	605.68	605.53	OSA1-11

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FlexTable: Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Notes
PIPE - OSA3	100.89	5.60	2.27	601.01	600.71	100.0	61.0	0.003	0.013	4.85	112.69	606.35	606.09	605.82	605.56	OSA1-11
PIPE - OSA4	100.89	3.21	2.18	601.61	601.01	200.8	207.7	0.003	0.013	5.35	215.14	606.67	606.53	606.50	606.35	OSA1-11
PIPE - OSA5	102.78	6.46	3.52	602.23	601.61	206.2	213.5	0.003	0.013	4.99	215.14	606.93	606.78	606.76	606.60	OSA1-11
PIPE - OSA6	102.84	6.47	3.27	602.23	602.26	9.3	7.2	0.003	0.013	4.88	288.42	607.26	607.25	607.11	607.11	OSA1-11
PIPE - OSA7	102.84	6.49	3.56	602.60	602.29	102.0	112.6	0.003	0.013	5.04	216.11	607.45	607.41	607.37	607.33	OSA1-10
PIPE - OSA8	103.34	8.22	2.18	603.35	602.60	250.0	237.6	0.003	0.013	4.60	72.96	608.45	607.65	608.01	607.20	OSA1-10
PIPE - OSB1	192.94	9.21	3.11	601.66	601.34	105.7	52.3	0.003	0.013	3.24	237.14	604.80	604.73	604.62	604.58	G1-3, OSB1-7
PIPE - OSB2	167.43	9.06	2.76	604.97	604.64	65.9	28.0	0.005	0.013	2.42	304.93	607.32	607.25	607.04	607.06	G1, OSB1-7
											303.30	607.59	607.46	607.23	607.27	G1, OSB1-7
PIPE - OSB3	79.25	11.21	(N/A)	608.80	608.67	43.4	17.1	0.003	0.013	2.22	110.13	611.75	611.60	611.08	610.89	OSB1-7
PIPE - OSB4	79.34	11.22	(N/A)	608.99	608.80	62.4	60.3	0.003	0.013	3.26	110.15	612.51	612.39	612.15	612.06	OSB1-7
PIPE - OSB5	79.40	11.23	(N/A)	609.04	608.99	20.0	25.1	0.003	0.013	3.50	102.60	612.85	612.81	612.52	612.49	OSB1-7
PIPE J-1	9.09	2.89	1.28	602.31	602.23	28.0	19.5	0.003	0.013	3.03	12.24	605.44	605.39	605.31	605.26	COMMECIAL
PIPE OS-6	129.97	3.45	2.12	600.30	600.19	36.5	38.6	0.003	0.013	4.20	236.56	604.61	604.58	604.43	604.39	G1-4, H1-2,OSB1-7

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FlexTable: Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n
CH-OSB2	602.00	600.30	166.2	0.010	82.53	3.34	2.27	2.66	603.41	602.96	.038
CH-OSB3	604.64	601.66	595.8	0.005	75.20	3.26	2.06	1.69	606.70	603.35	.038
CH-OSB4(2) (2)	608.67	605.35	670.0	0.005	67.46	3.16	1.96	1.48	610.63	606.83	.038
CH-OSB5	609.09	615.20	1223.10	0.005	67.07	3.16	1.95	5.30	617.15	614.39	.038
CH-OSA1	604.23	613.80	1531.10	0.006	90.12	3.71	2.13	2.72	615.93	606.95	.038

FlexTable: Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n
CH-OSB2	602.00	600.30	166.2	0.010	128.59	3.75	3.36	4.04	604.50	604.34	.038
CH-OSB3	604.64	601.66	595.8	0.005	103.95	3.55	2.40	2.85	607.04	604.51	.038
CH-OSB4(2) (2)	608.67	605.35	670.0	0.005	85.54	3.36	2.20	1.85	610.87	607.20	.038
CH-OSB5	609.09	615.20	1223.10	0.005	85.53	3.37	2.26	7.38	617.46	616.47	.038
CH-OSA1	604.23	613.80	1531.10	0.006	114.92	3.95	2.39	4.36	616.19	608.59	.038

EXHIBIT J
2-YEAR CHANNEL CALCULATIONS

FlexTable: Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's n
CH-OSB2	601.34	600.30	166.2	195.2	0.006	57.46	3.30	1.75	2.15	603.09	602.45	0.038
CH-OSB3	604.64	601.66	595.8	660.2	0.005	47.02	2.88	1.65	1.45	606.29	603.11	0.038
CH-OSB4(2)(2)	608.67	605.35	670.0	785.5	0.005	39.18	2.73	1.51	1.03	610.18	606.38	0.038
CH-OSB5	609.90	615.20	1223.10	(N/A)	0.005	38.36	2.72	1.49	3.17	616.69	612.26	0.038
CH-OSA1	604.23	613.80	1531.10	(N/A)	0.006	51.61	3.20	1.63	2.02	615.43	606.25	0.038

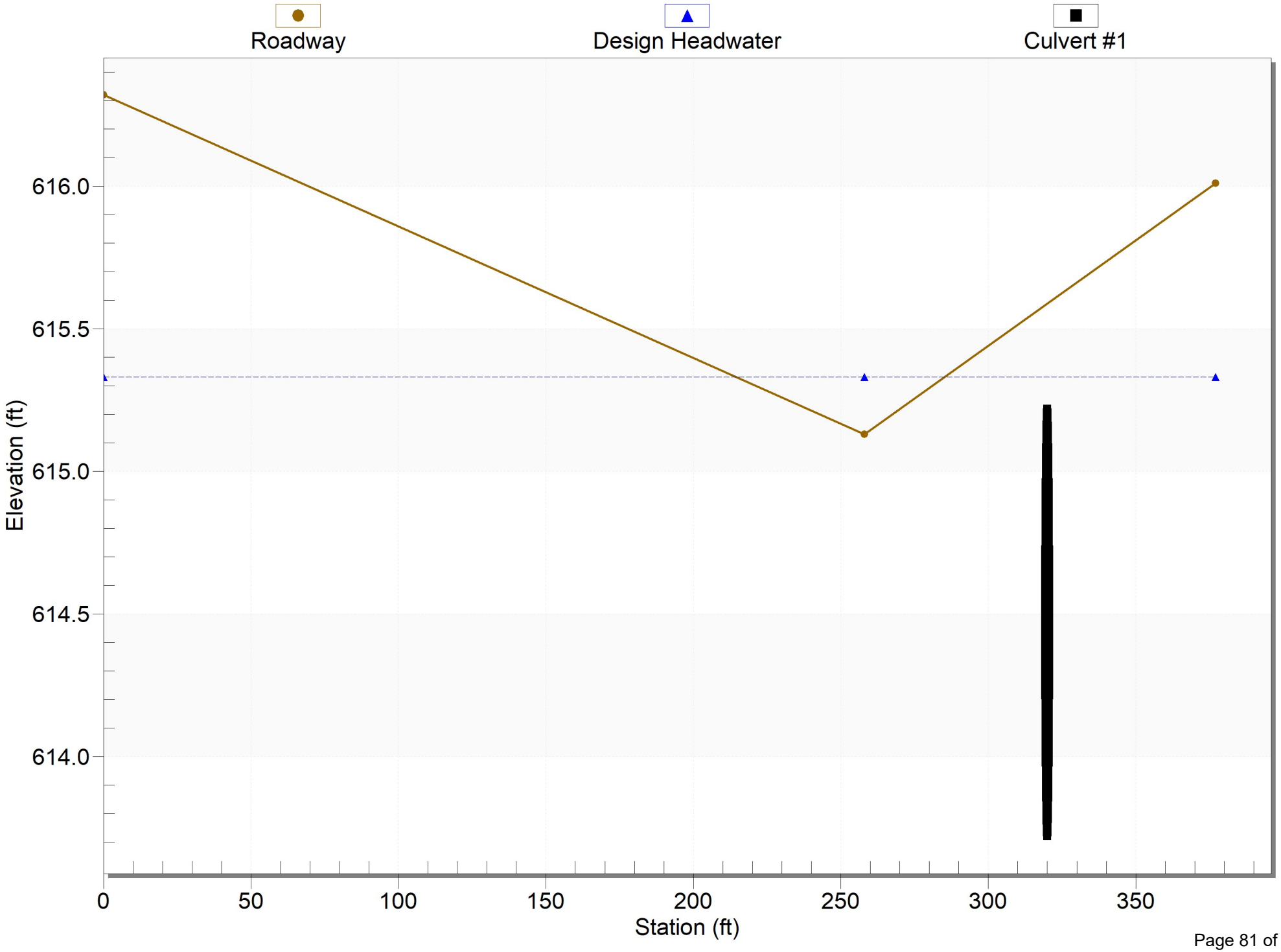
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EXHIBIT K

HY-8 CULVERT MODELS

Crossing: TxDOT Culvert #1

Front View (Not to scale)



HY-8 Analysis Results

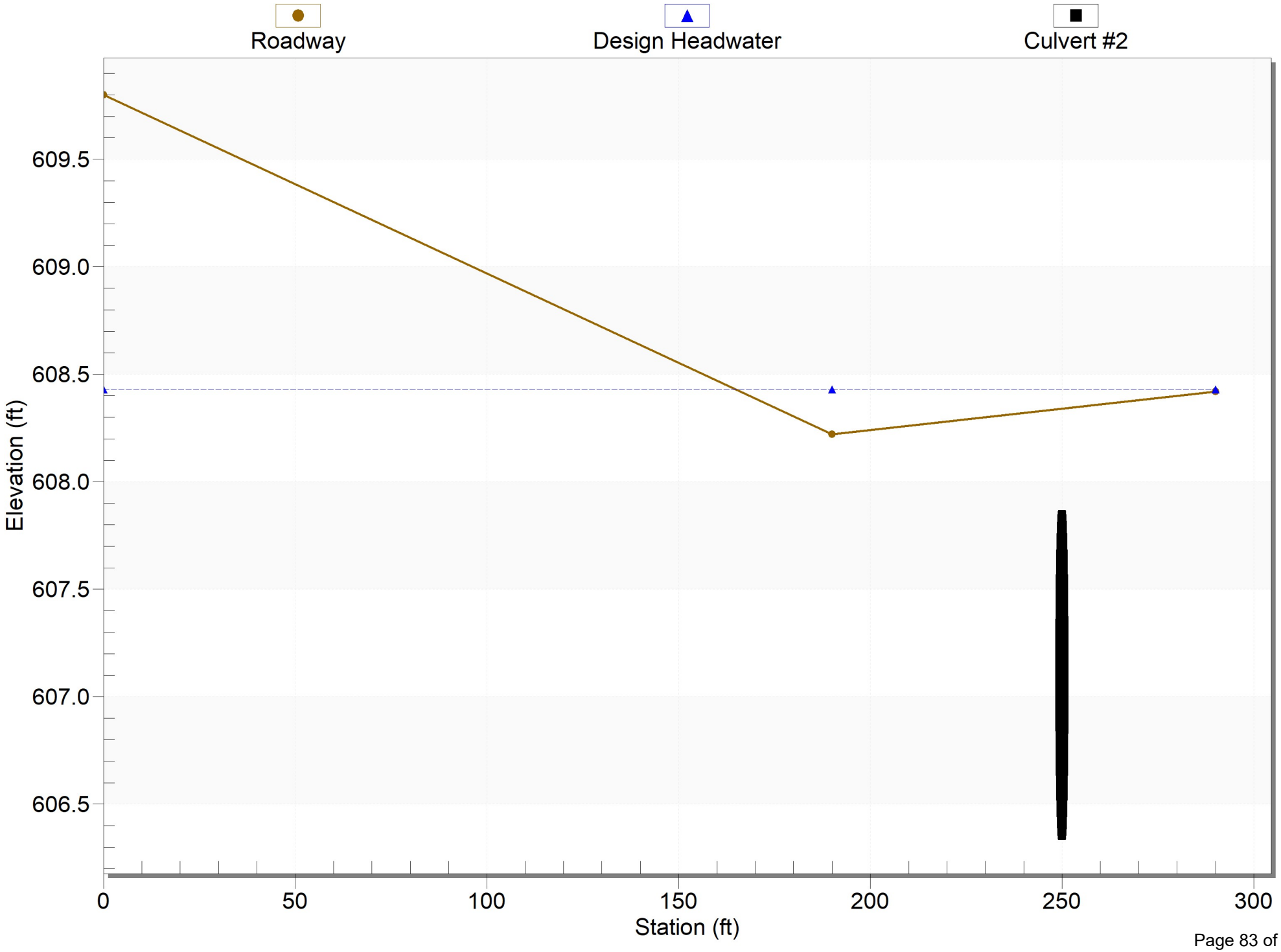
Crossing Summary Table

Culvert Crossing: TxDOT Culvert #1

Headwater Elevation (ft)	Discharge Names	Total Discharge (cfs)	Culvert #1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
615.33	10 yr	14.16	7.54	6.52	6
615.36	25 yr	17.19	7.73	9.34	3
615.13	Overtopping	6.19	6.19	0.00	Overtopping

Crossing: TxDOT Culvert #2

Front View (Not to scale)



HY-8 Analysis Results

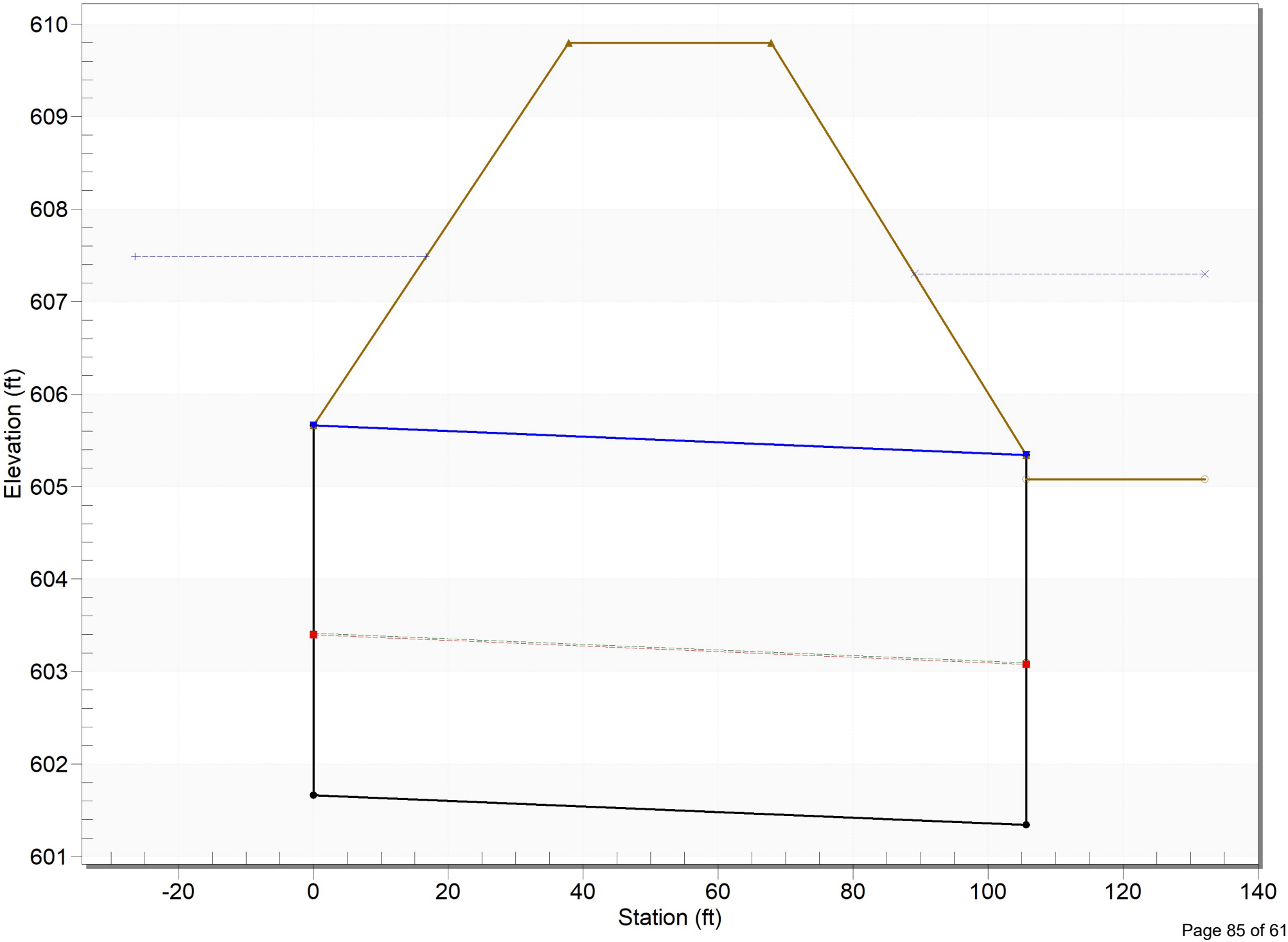
Crossing Summary Table

Culvert Crossing: TxDOT Culvert #2

Headwater Elevation (ft)	Discharge Names	Total Discharge (cfs)	Culvert #2 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
608.40	10 yr	19.17	10.07	9.04	7
608.43	25 yr	23.26	10.20	12.95	3
608.22	Overtopping	9.12	9.12	0.00	Overtopping

Crossing - Storm OSB1, Design Discharge - 102.3 cfs

Culvert - Culvert #1, Culvert Discharge - 102.3 cfs



HY-8 Analysis Results

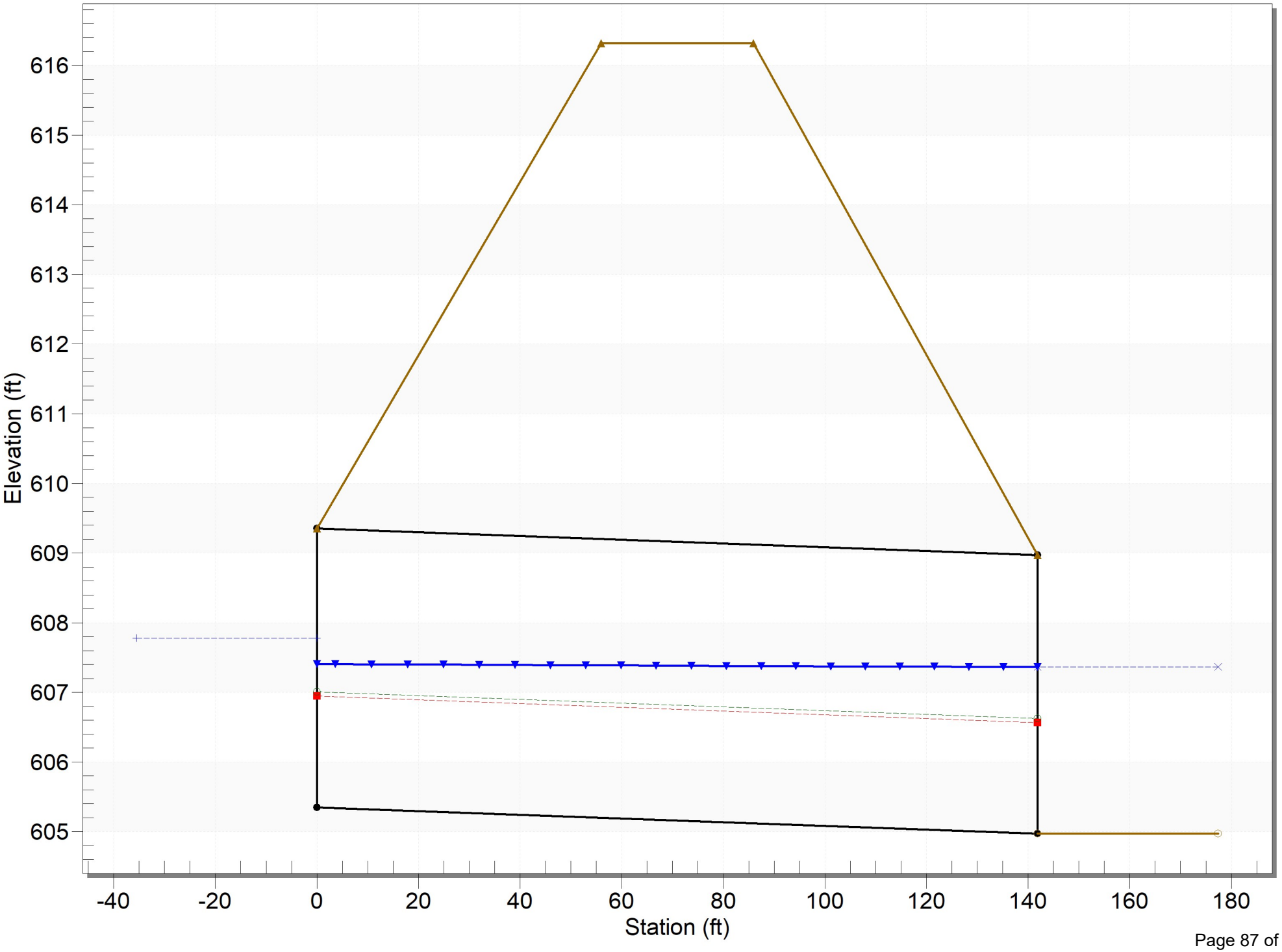
Crossing Summary Table

Culvert Crossing: Storm OSB1

Headwater Elevation (ft)	Discharge Names	Total Discharge (cfs)	Culvert #1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
607.14	25 yr	73.77	73.77	0.00	1
607.49	100 yr	102.35	102.35	0.00	1
608.22	Overtopping	164.81	164.81	0.00	Overtopping

Crossing - Storm OSB2, Design Discharge - 87.1 cfs

Culvert - Culvert #1, Culvert Discharge - 87.1 cfs



HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: Storm OSB2

Headwater Elevation (ft)	Discharge Names	Total Discharge (cfs)	Culvert #1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
607.47	25 yr	68.68	68.68	0.00	1
607.78	100 yr	87.09	87.09	0.00	1
615.13	Overtopping	502.66	502.66	0.00	Overtopping

B.2 PZ-2021-1353 Drainage Report

DRAINAGE REPORT

CASTLEWOOD SOUTH
PERMIT NO. –
68 FM 973
TAYLOR, TEXAS 76574

Prepared For:

CITY OF TAYLOR
400 Porter Street,
Taylor, TX 76574

Prepared By:

Kimley»Horn

Texas Registration #928

5301 Southwest Parkway
Building 3, Suite 100,
Austin, Texas 78735



03/18/2022

March, 2022

Kimley»Horn

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Kimley»Horn

SECTION 1: INTRODUCTION

The subject site is located adjacent to FM 973, near the intersection of FM 973 and US HWY 79 in Taylor, Texas. The site is located within the City of Taylor city limits. The proposed site is described as AW0533 Reese, G.M. Sur., Acres 5.8, AW0211 Dentler, M. Sur., Acres 30.67, and AW0315 AW0315 – H.t. & B.r.r. Co. Sur., Acres 33.523. A location map is provided with this report (Exhibit A).

The subject site is currently ±69.99 acres of undeveloped land used for agriculture purposes. We are proposing a single-family subdivision consisting of 307 residential lots. A preliminary planned development has been submitted for this project and approved through the city of Taylor.

The site is not located in the Federal Emergency Management Agency's 100-year floodplain according to FIRM map 48491C0541F (Exhibit B).

SECTION 2: DRAINAGE CONDITIONS AND IMPROVEMENTS

Existing Conditions

Existing conditions for the site consist of non-developed land with dense grass. The site consists of two onsite drainage areas: DA #1 (58.21) and DA #2 (15.44 AC). There is a third offsite drainage area, OS #1 (26.54 AC), that flows onsite briefly and then discharges to an offsite pond outside the southwest corner of the property. Runoff from DA #1 conveys through the site from north to southwest to the same pond as OS #1. Runoff from DA #2 sheet flows from east to west to an existing channel located along the northern property boundary into the existing channel installed with Castlewood Subdivision. From there it is conveyed along FM 973 into the existing TxDOT culvert. Analysis for this culvert is shown in the Castlewood Subdivision's Engineers Drainage Report. Exhibit D, Existing Overall Drainage Map, demonstrates the existing conditions of the site.

Proposed Conditions

In proposed conditions, DA #1 will be captured and conveyed into a proposed pond in the northeastern corner of the property. According to the intensity values used, the development will detain the runoff from existing DA #2 and part of the runoff from existing DA #1. The runoff from the new area for DA #2 (33.64 AC) in the proposed condition will be conveyed via storm drain. Storm water will discharge into a pond that located in the northeast corner of the property. Detention will be analyzed for the 2-year, 10-year, 25-year and 100-year storm events. Discharge from the pond will be detained to match the existing storm conditions of the site.

The remaining area for DA #1 (34.19 AC) will be captured and conveyed to the southwest corner of the site. The storm network will drain into a proposed earthen trap channel. The earthen trap channel will charter the captured storm event to a concrete-lined channel, which will carry the flow towards the existing offsite pond. After analyzing the point of analysis near the existing offsite pond for the 2-year, 10-year, 25-year and 100-year storm events, runoff will be reduced to below existing conditions. Therefore, detention is not proposed. Exhibit E, Proposed Overall Drainage map, shows the proposed regional drainage boundaries.

There is a high point on the site that divides the runoff that is conveyed in the TxDOT channel. We are removing some of the drainage area that originally went to the TxDOT ditch along FM 973 and conveying it through our site. With this area taken away we have analyzed and accounted for it with detention or have made sure existing conditions were not exceeded.

The rational method was used onsite to size the underground storm system running throughout the site. Soil Conservation Service (SCS) methodology will be used to determine the pond capacity and identify water surface elevations. HEC-HMS modeling is used to account for backwater calculations. See attached charts for calculations.

SECTION 3: DAM MODELING

Section 8.16 of the City of Taylor Subdivision Ordinance states, “Any hydraulic structure designed to impound storm water that has a height greater than or equal to six feet (6') at any point along the perimeter to an impoundment is a dam and must be designed to safely pass the minimum design flood hydrograph expressed as a percentage of the Probable Maximum Flood (PMF).” The proposed Castlewood South detention pond meets this requirement and is therefore subject to the dam safety requirements referenced in the Subdivision Ordinance. The components included in obtaining this modelling are as follows:

- Determination of Probable Maximum Precipitation (PMP) Storms
- Modelling of PMF Storms Through Dam Structure

Hydrological parameters previously established in the drainage tables presented in the report and Civil plans for the Castlewood South project were utilized for modelling the dams. The modified pulse method was utilized in determining routing through the proposed detention pond.

Determination of PMP Storms

Probable Maximum Precipitation (PMP) storms were determined using the TCEQ GIS PMP tool. This tool utilizes Arc-GIS to provide PMP values based on the most recent PMP study. Guidance documents were obtained from the TCEQ Dam Safety Program website. A basin area was established that mirrors the overall basin area of the Castlewood South site. PMP values were established using this geographical location.

Modelling of PMP Storms Through the Dam Structure

After obtaining the necessary PMP values, the precipitation amounts were inputted into HEC-HMS to identify the necessary dam modelling. TCEQ’s Hydrological and Hydraulic Guidelines of Dams in Texas was utilized for the dam analysis. The partial duration frequency storm was utilized with the previously referenced PMP storm values inputted for each relevant hour. Peak flow values were produced from this analysis.

Both SCS Curve Numbers and Lag Time calculations were derived from basins used in the detention study. Those parameters remain consistent for this analysis.

Modelling Results and Conclusions

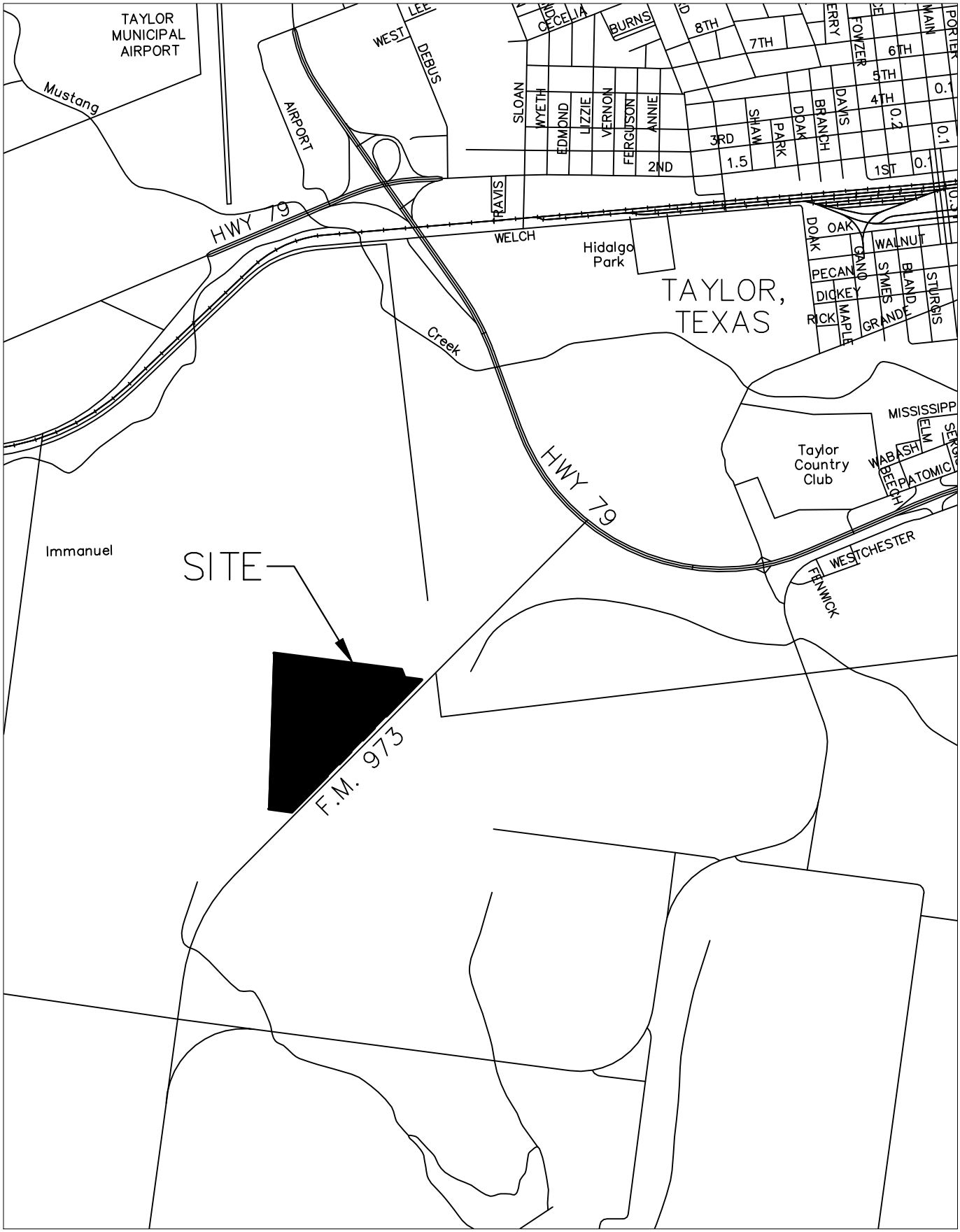
Previously established scenarios, Post-Developed FB and Post-Developed CC were both analyzed with the PMP storms for the purposes of obtaining the Probably Maximum Flood (PMF).

The 100 percent PMF storms were modeled in HEC-HMS using the TCEQ probable maximum precipitation values calculated for our site. All storm floods are fully contained within the pond. As the pond has been designed to safely pass 100 percent of the probable maximum flood, it will safely pass 75 percent of the PMF as well.

SECTION 4: CONCLUSION

The Castlewood South Subdivision is a ±69.99-acre subdivision that will consist of 307 single-family residential lots, located in the City of Taylor. The FEMA floodplain does not overlap any regions onsite. Drainage from DA #1 will be conveyed via storm drain to the offsite pond located past the southwest corner of the site. The runoff into the offsite pond decreased with proposed conditions, so no detention is required. Drainage from DA #2 will be carried underground in a storm drain system that will discharge into the proposed detention pond located before the channel in the northeast corner of the property. To prevent any adverse impacts downstream a detention pond will be designed adequately to prevent any flows that will exceed existing storm events.

EXHIBIT A
LOCATION MAP/ VICINITY MAP



SPEITEL, MATT 3/23/2021 9:45 AM
K:\SAU_CIVIL\069278803 CASTLEWOOD SOUTH\CAD\REFERENCES\VXMAP.DWG
3/23/2021 9:43 AM

PLOTTED BY
DWG NAME
LAST SAVED

CASTLEWOOD SOUTH SUBDIVISION

Taylor, Texas
March 2021

Kimley»Horn
2600 Via Fortuna, Terrace I
Suite 300
Austin, Texas 78746
512-646-2237
State of Texas Registration No. F-928

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY, TOPOGRAPHY, UTILITIES, CONTACT WITH THE CITY, ETC.

EXHIBIT B
FEMA FIRM MAP

City of Taylor
480670

SW CARLOS G PARKER BLVD

Mustang Creek
Tributary 5

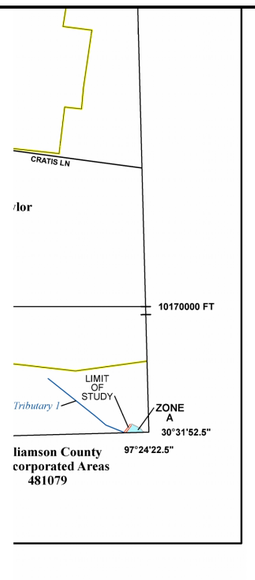
973

$^{33}81^{000m}N$

Williamson County

Map Projection:
Texas State Plane Central (FIPS ZONE 42
Western Hemisphere; Vertical Datum: NA

1 inch = 500 feet



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY,
TEXAS
and Incorporated Areas

PANEL 541 OF 750

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
TAYLOR, CITY OF	480670	0541	F
WILLIAMSON COUNTY	481079	0541	F

VERSION NUMBER
2.3.3.3

MAP NUMBER
48491C0541F

MAP REVISED
DECEMBER 20, 2019

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

EXHIBIT C
SOIL MAP

Map—Hydrologic Soil Group (Castlewood South)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 21, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 6, 2020—Apr 19, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group (Castlewood South)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BrB	Branyon clay, 1 to 3 percent slopes	D	17.4	4.8%
BuA	Burleson clay, 0 to 1 percent slopes	D	312.7	87.1%
LegC	Lewisville-Altoga complex, 2 to 5 percent slopes	C	11.7	3.3%
QuF	Queeny-Sunev complex, 5 to 15 percent slopes	D	17.2	4.8%
Totals for Area of Interest			**358.9**	**100.0%**

Rating Options—Hydrologic Soil Group (Castlewood South)

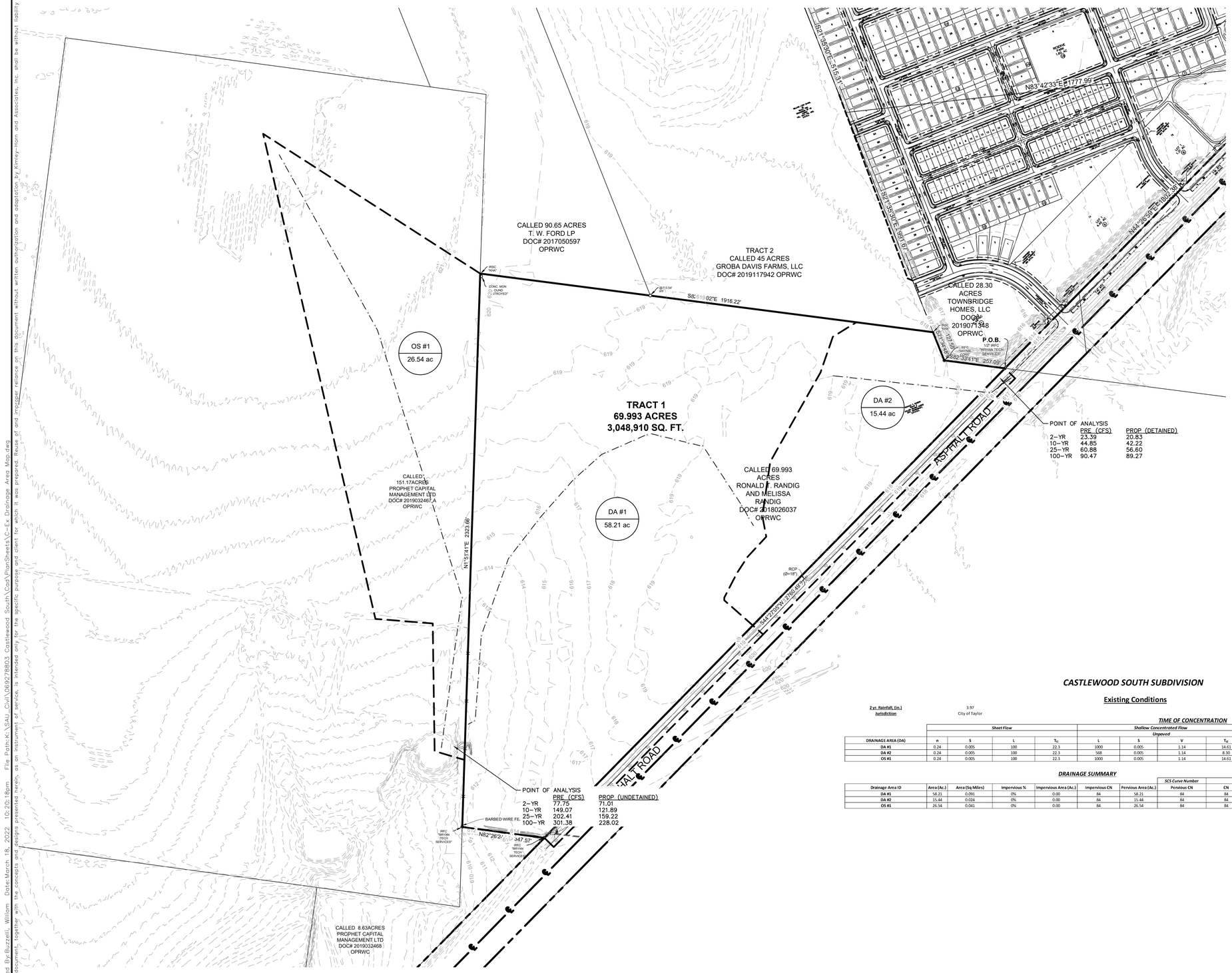
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

EXHIBIT D

EXISTING OVERALL DRAINAGE MAP



NORTH

GRAPHIC SCALE IN FEET
0 100 200 400

LEGEND

X-1 / X ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	PROPOSED DRAINAGE DIVIDE
	TIME OF CONCENTRATION PATH
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

CASTLEWOOD SOUTH SUBDIVISION

Existing Conditions

2 yr. Rainfall, (in.) 3.97
Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				Shallow Concentrated Flow				Shallow Concentrated Flow				Channel Flow			Actual	Design
					Unpaved				Paved								
DRAINAGE AREA (DA)	n	S	L	T_{t1}	L	S	V	T_{t2}	L	S	V	T_{t3}	V	L	T_{t4}	T_c, min.	T_c, min.
DA #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	2.87	0	6.00	1060	2.94	39.86	39.86
DA #2	0.24	0.005	100	22.3	568	0.005	1.14	8.30	0.00	0.02	1.44	0	6.00	105	0.29	30.90	30.90
OS #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	1.44	0	6.00	1557	4.33	41.24	41.24

DRAINAGE SUMMARY

					SCS Curve Number					Peak Flow, cfs.			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	T_c, min.	T_c, min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	58.21	0.091	0%	0.00	84	58.21	84	84	39.9	23.92	77.75	149.07	202.41	301.38
DA #2	15.44	0.024	0%	0.00	84	15.44	84	84	30.9	18.54	23.39	44.85	60.88	90.47
OS #1	26.54	0.041	0%	0.00	84	26.54	84	84	41.2	24.74	34.99	67.26	91.39	135.98

BENCHMARKS

BENCHMARKS:

BM #101 PK NAIL WITH WASHER SET AT THE SOUTHWEST CORNER OF FM 973 AND KYRA LANE.

- ELEV. = 619.03' (NAVD '88)

BM #102 PK NAIL WITH WASHER SET IN HEADWALL AT THE NORTHEAST CORNER OF REAGER DRIVE AND FM 973.

- ELEV. = 620.67' (NAVD '88)

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
WILLIAM J. BUZZELLI
133535
LICENSED PROFESSIONAL ENGINEER
3/18/22

KHA PROJECT 069278803
DATE JUNE 2021
SCALE: AS SHOWN
DESIGNED BY: WB
DRAWN BY: XXX
CHECKED BY: WB

EXISTING DRAINAGE AREA MAP

CASTLEWOOD SOUTH

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
37 OF 111

Plotted By:Buzzelli, William Date:March 16, 2022 10:20:16pm File Path:K:\SAU_Civil\069278803 Castlewood South\Cad\PlanSheets\C-Ex Drainage Area Map.dwg
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EXHIBIT E

PROPOSED OVERALL DRAINAGE MAP



NORTH

GRAPHIC SCALE IN FEET
0 100 200 400

LEGEND

X-1 / X ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	PROPOSED DRAINAGE DIVIDE
	TIME OF CONCENTRATION PATH
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

CASTLEWOOD SOUTH SUBDIVISION

Proposed Conditions

2 yr. Rainfall, (in.) 3.97

Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				Shallow Concentrated Flow Unpaved				Shallow Concentrated Flow Paved				Channel Flow				Actual	Design
DRAINAGE AREA (DA)	n	S	L	T_o	L	S	V	T_o	L	S	V	T_o	V	L	T_o	T_c min.	T_c min.	T_c min.
DA #1	0.24	0.005	100	22.3	20	0.005	1.14	0.29	0.00	0.02	1.44	0	6.00	2506	6.96	29.56	29.56	
DA #2	0.24	0.005	100	22.3	20	0.005	1.14	0.29	0.00	0.02	1.44	0	6.00	2008	5.58	28.18	28.18	
DA #3	0.24	0.005	100	22.3	0	0.005	1.14	0	0.00	0.02	1.44	0	6.00	0	0.00	22.31	22.31	
OS #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	1.44	0	6.00	1557	4.33	41.24	41.24	

DRAINAGE SUMMARY

								SCS Curve Number	Peak Flow, cfs. Undetained					Peak Flow, cfs. Detained			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	T_c min.	T_t min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	35.8	0.056	55%	19.69	98	16.11	84	89.0	29.6	17.74	71.01	121.89	159.22	228.02	-	-	-	-
DA #2	29.99	0.047	55%	16.49	98	13.50	84	89.0	28.2	16.91	59.28	102.01	133.35	191.11	20.83	42.22	56.6	89.27
DA #3	7.64	0.012	55%	4.20	98	3.44	84	89.0	22.3	13.38	8.8	15.13	19.76	28.31	-	-	-	-
OS #1	26.54	0.041	0%	0.00	98	26.54	84	84.0	41.2	-	34.99	67.26	91.39	135.98	-	-	-	-

Gobal Drainage Notes

1. Time of Concentrations were calculated using methods presented in Sec. 2 of the City of Austin Drainage Criteria Manual Sec.

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

BENCHMARKS:

BM #101 PK NAIL WITH WASHER SET AT THE SOUTHWEST CORNER OF FM 973 AND KYRA LANE.

- ELEV. = 619.03' (NAVD '88)

BM #102 PK NAIL WITH WASHER SET IN HEADWALL AT THE NORTHEAST CORNER OF REAGER DRIVE AND FM 973.

- ELEV. = 620.67' (NAVD '88)

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KHA PROJECT 069278803
DATE JUNE 2021
SCALE: AS SHOWN
DESIGNED BY: WB
DRAWN BY: XXX
CHECKED BY: WB

PROPOSED DRAINAGE AREA MAP

CASTLEWOOD SOUTH

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
38 OF 111

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EXHIBIT F

PROPOSED INLET DRAINAGE AREAS MAP

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

LEGEND

X-1 / X ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	PROPOSED DRAINAGE DIVIDE
	TIME OF CONCENTRATION PATH
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

OS 1 0.05 ac
OS 2 0.77 ac
OS 3 0.52 ac
CH-1 4.20 ac
OS 4 11.88 ac
OS 5 0.11 ac
OS 6 0.40 ac
OS 7 12.91 ac
OS 8 0.09 ac
OS 9 0.09 ac
OS 10 1.36 ac
OS 11 5.33 ac
LA A1 0.86 ac
LA A2 2.80 ac
LA A3 0.49 ac
LA A4 0.49 ac
LA A5 1.04 ac
LA A6 1.28 ac
LA A7 0.99 ac
LA A8 1.13 ac
LA A9 0.47 ac
LA A10 1.34 ac
LA A11 0.16 ac
LA A12 0.34 ac
LA B1 1.08 ac
LA B2 0.83 ac
LA B3 0.50 ac
LA B4 1.40 ac
LA B5 1.34 ac
LA B6 0.28 ac
LA B7 1.58 ac
LA B8 0.35 ac
LA B9 0.55 ac
LA B10 0.47 ac
LA B11 1.72 ac
LA B12 0.15 ac
LA C8 0.34 ac
LA D3 1.77 ac
LA D4 0.92 ac
LA E4 0.20 ac
LA G1 0.26 ac
LA G2 0.56 ac
LA H1 0.82 ac
LA M1 0.32 ac
Uncaptured 2 1.80 ac
Uncaptured 3 0.68 ac

DRAINAGE RESERVE 2.63 ACRES
PARK RESERVE 1 2.28 ACRES
PARK RESERVE 1.95 ACRES

BLOCK 1, BLOCK 2, BLOCK 3, BLOCK 4, BLOCK 5, BLOCK 7, BLOCK 9, BLOCK 10, BLOCK 11, BLOCK 12, BLOCK 16, BLOCK 17, BLOCK 18

F.M. 973 (R.O.W.)

MATCH LINE SEE SHEET 40

BENCHMARKS

ADD BENCHMARKS HERE

No.	REVISIONS	DATE	BY

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06/18/2021

KHA PROJECT 069278803
DATE: MARCH 2021
SCALE: AS SHOWN
DESIGNED BY: WB,DM
DRAWN BY: DM,WB
CHECKED BY: WB

PROPOSED INLET DRAINAGE AREAS MAP (SHEET 1 OF 2)

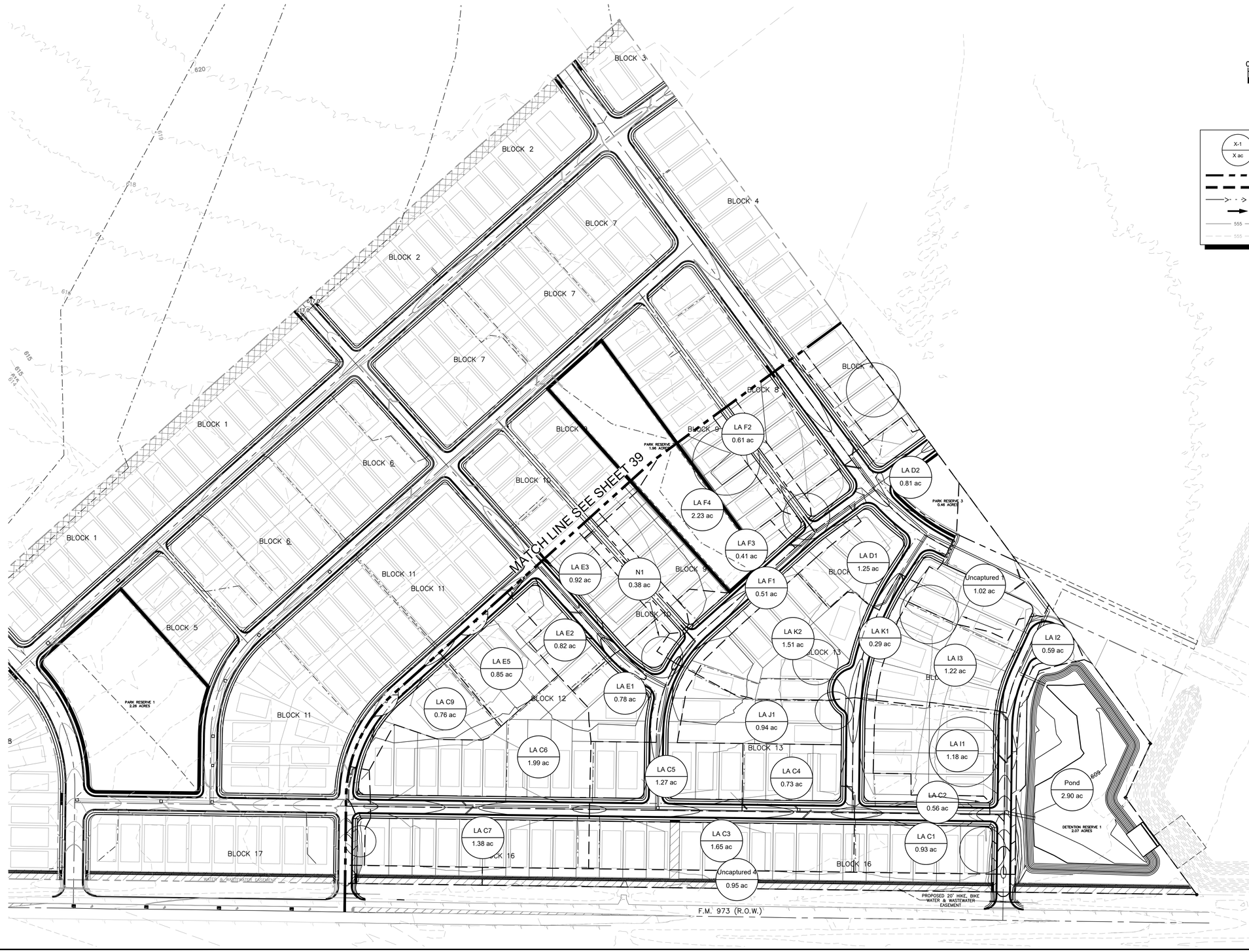
CASTLEWOOD SOUTH

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
39 OF 111

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NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

LEGEND

X-1 / X ac	AREA DESIGNATOR / AREA IN ACRES
	PROPERTY LINE
	PROPOSED DRAINAGE DIVIDE
	TIME OF CONCENTRATION PATH
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

BENCHMARKS

ADD BENCHMARKS HERE

No.	REVISIONS	DATE	BY

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STATE OF TEXAS
WILLIAM J. BUZZELLI
133535
LICENSED PROFESSIONAL ENGINEER
06/18/2021

KHA PROJECT 069278803
DATE MARCH 2021
SCALE: AS SHOWN
DESIGNED BY: WB,DM
DRAWN BY: DM,WB
CHECKED BY: WB

PROPOSED INLET DRAINAGE AREAS MAP (SHEET 2 OF 2)

CASTLEWOOD SOUTH

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
40 OF 111

EXHIBIT G

GLOBAL DRAINAGE CALCULATIONS

CASTLEWOOD SOUTH SUBDIVISION

Existing Conditions

2 yr. Rainfall, (in.) 3.97

Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				*Shallow Concentrated Flow*				*Shallow Concentrated Flow*				*Channel Flow*			Actual	Design
					Unpaved				*Paved*								
DRAINAGE AREA (DA)	n	S	L	T_{t1}	L	S	V	T_{t2}	L	S	V	T_{t2}	V	L	T_{t3}	T_c, min.	T_c, min.
DA #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	2.87	0	6.00	1060	2.94	39.86	39.86
DA #2	0.24	0.005	100	22.3	568	0.005	1.14	8.30	0.00	0.02	1.44	0	6.00	105	0.29	30.90	30.90
OS #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	1.44	0	6.00	1557	4.33	41.24	41.24

DRAINAGE SUMMARY

							SCS Curve Number				*Peak Flow, cfs.*			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	Tc, min.	T_L, min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	58.21	0.091	0%	0.00	84	58.21	84	84	39.9	23.92	77.75	149.07	202.41	301.38
DA #2	15.44	0.024	0%	0.00	84	15.44	84	84	30.9	18.54	23.39	44.85	60.88	90.47
OS #1	26.54	0.041	0%	0.00	84	26.54	84	84	41.2	24.74	34.99	67.26	91.39	135.98

CASTLEWOOD SOUTH SUBDIVISION

Proposed Conditions

2 yr. Rainfall, (in.) 3.97

Jurisdiction City of Taylor

TIME OF CONCENTRATION

	Sheet Flow				*Shallow Concentrated Flow*				*Shallow Concentrated Flow*				*Channel Flow*			Actual	Design
					Unpaved				*Paved*								
DRAINAGE AREA (DA)	n	S	L	T_{t1}	L	S	V	T_{t2}	L	S	V	T_{t2}	V	L	T_{t3}	T_c, min.	T_c, min.
DA #1	0.24	0.005	100	22.3	20	0.005	1.14	0.29	0.00	0.02	1.44	0	6.00	2506	6.96	29.56	29.56
DA #2	0.24	0.005	100	22.3	20	0.005	1.14	0.29	0.00	0.02	1.44	0	6.00	2008	5.58	28.18	28.18
DA #3	0.24	0.005	100	22.3	0	0.005	1.14	0	0.00	0.02	1.44	0	6.00	0	0.00	22.31	22.31
OS #1	0.24	0.005	100	22.3	1000	0.005	1.14	14.61	0.00	0.02	1.44	0	6.00	1557	4.33	41.24	41.24

DRAINAGE SUMMARY

											Peak Flow, cfs.				*Peak Flow, cfs.*			
								SCS Curve Number			*Undetained*				*Detained*			
Drainage Area ID	Area (Ac.)	Area (Sq Miles)	Impervious %	Impervious Area (Ac.)	Impervious CN	Pervious Area (Ac.)	Pervious CN	CN	Tc, min.	T_L, min.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.	Q, 2 Yr.	Q, 10 Yr.	Q, 25 Yr.	Q, 100 Yr.
DA #1	35.8	0.056	55%	19.69	98	16.11	84	89.0	29.6	17.74	71.01	121.89	159.22	228.02	-	-	-	-
DA #2	29.99	0.047	55%	16.49	98	13.50	84	89.0	28.2	16.91	59.28	102.01	133.35	191.11	20.83	42.22	56.6	89.27
DA #3	7.64	0.012	55%	4.20	98	3.44	84	89.0	22.3	13.38	8.8	15.13	19.76	28.31	-	-	-	-
OS #1	26.54	0.041	0%	0.00	98	26.54	84	84.0	41.2	-	34.99	67.26	91.39	135.98	-	-	-	-

Gobal Drainage Notes

1. Time of Concentrations were calculated using methods presented in Sec. 2 of the City of Austin Drainage Criteria Manual Sec.

EXHIBIT H

STREET CAPACITIES

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Oct 1 2021

Local Street Section

User-defined

Invert Elev (ft)	= 99.30
Slope (%)	= 0.50
N-Value	= 0.025

Calculations

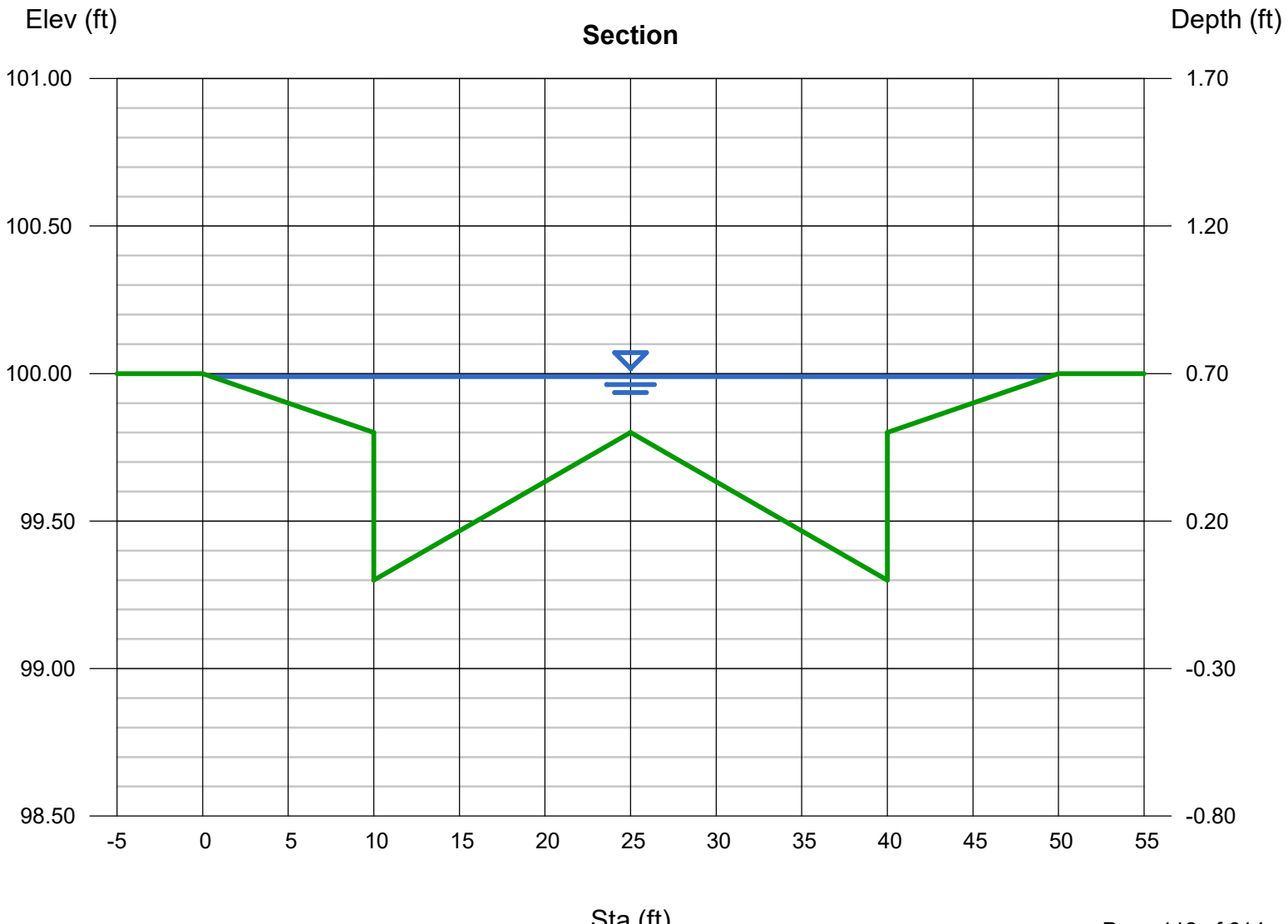
Compute by:	Known Q
Known Q (cfs)	= 27.75

Highlighted

Depth (ft)	= 0.69
Q (cfs)	= 27.75
Area (sqft)	= 15.01
Velocity (ft/s)	= 1.85
Wetted Perim (ft)	= 50.02
Crit Depth, Yc (ft)	= 0.57
Top Width (ft)	= 49.00
EGL (ft)	= 0.74

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(10.00, 99.80, 0.038)-(10.00, 99.30, 0.016)-(25.00, 99.80, 0.016)-(40.00, 99.30, 0.016)-(40.00, 99.80, 0.016)-(50.00, 100.00, 0.038)



Channel Report

Collector Street Section

User-defined

Invert Elev (ft)	= 99.21
Slope (%)	= 0.50
N-Value	= 0.026

Calculations

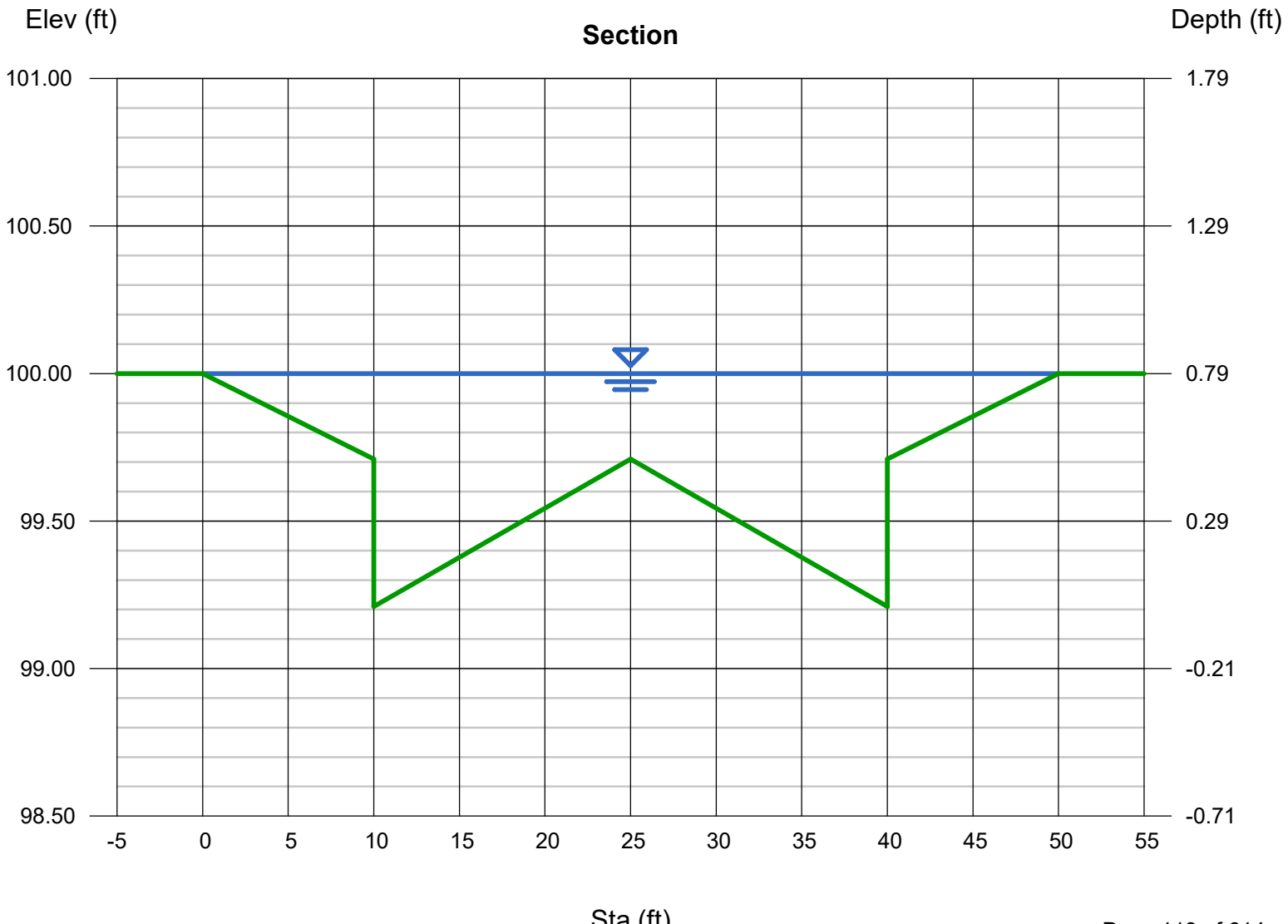
Compute by:	Known Q
Known Q (cfs)	= 40.50

Highlighted

Depth (ft)	= 0.79
Q (cfs)	= 40.50
Area (sqft)	= 19.10
Velocity (ft/s)	= 2.12
Wetted Perim (ft)	= 51.03
Crit Depth, Yc (ft)	= 0.65
Top Width (ft)	= 50.00
EGL (ft)	= 0.86

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(10.00, 99.71, 0.038)-(10.00, 99.21, 0.016)-(25.00, 99.71, 0.016)-(40.00, 99.21, 0.016)-(40.00, 99.71, 0.016)-(50.00, 100.00, 0.038)



Channel Report

Alley Street Section

User-defined

Invert Elev (ft)	= 99.70
Slope (%)	= 0.50
N-Value	= 0.016

Calculations

Compute by:	Known Q
Known Q (cfs)	= 8.00

Highlighted

Depth (ft)	= 0.30
Q (cfs)	= 8.000
Area (sqft)	= 4.50
Velocity (ft/s)	= 1.78
Wetted Perim (ft)	= 30.01
Crit Depth, Yc (ft)	= 0.28
Top Width (ft)	= 30.00
EGL (ft)	= 0.35

(Sta, El, n)-(Sta, El, n)...

(0.00, 100.00)-(15.00, 99.70, 0.016)-(30.00, 100.00, 0.016)

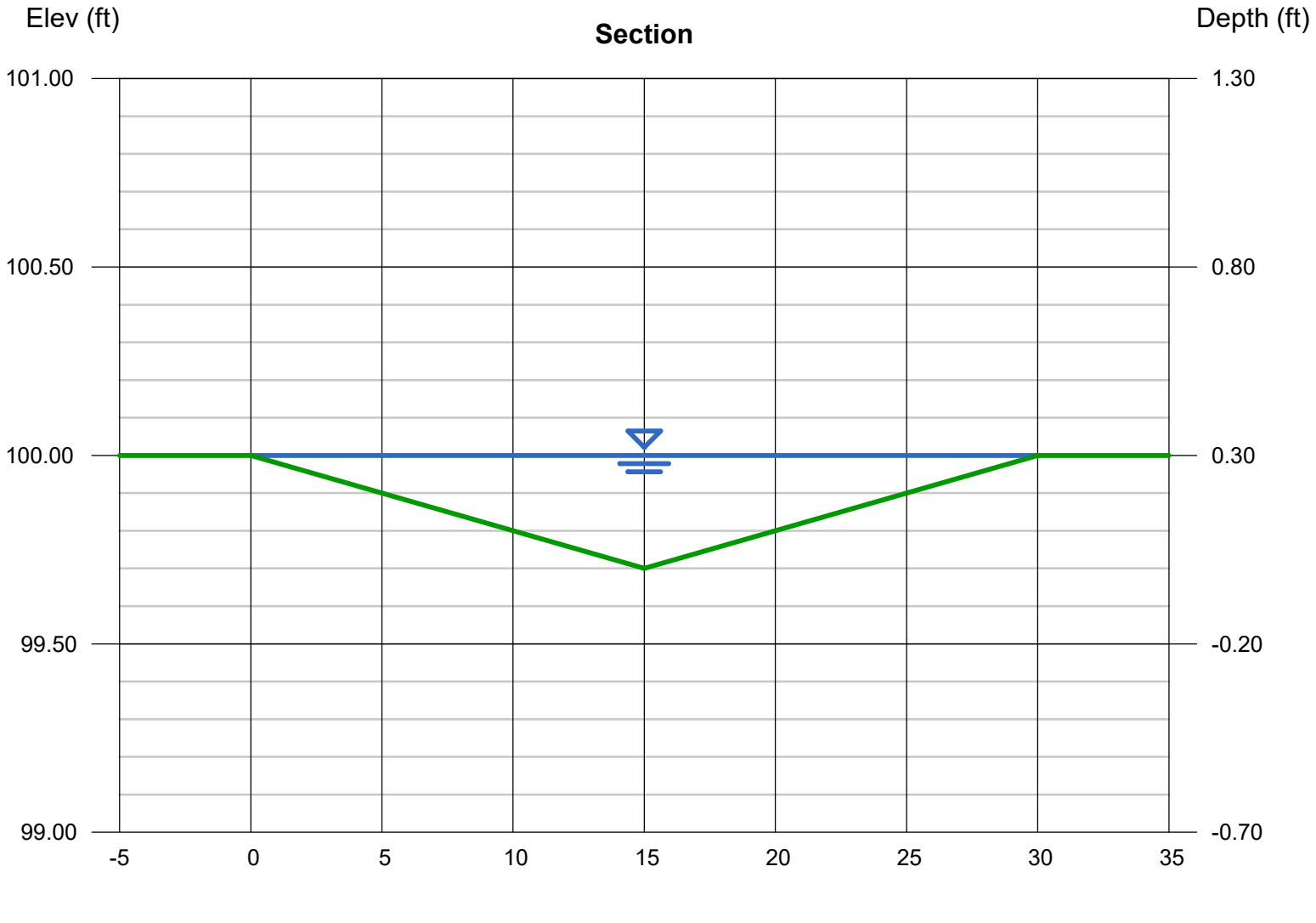


EXHIBIT I

HEC-HMS POND CALCULATIONS

Project: Castlewood South Simulation Run: EX 2 YR

Start of Run: 30Mar2021, 00:00 Basin Model: EX
End of Run: 31Mar2021, 00:00 Meteorologic Model: 2 yr
Compute Time: 01Oct2021, 09:13:59 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2	0.024125	29.6	30Mar2021, 12:20	2.33
O-6	0.024125	29.6	30Mar2021, 12:20	2.33

Project: Castlewood South Simulation Run: PROP 2 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP CC
End of Run: 31Mar2021, 00:00 Meteorologic Model: 2 yr
Compute Time: 11Feb2022, 14:24:34 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	74.7	30Mar2021, 12:20	3.20
PO-2	0.0463750	12.4	30Mar2021, 13:15	3.03
O-6	0.0463750	12.4	30Mar2021, 13:15	3.03

Project: Castlewood South Simulation Run: PROP 2 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP OF
End of Run: 31Mar2021, 00:00 Meteorologic Model: 2 yr
Compute Time: 11Feb2022, 14:29:01 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	74.7	30Mar2021, 12:20	3.20
PO-2	0.0463750	28.1	30Mar2021, 12:50	3.20
O-6	0.0463750	28.1	30Mar2021, 12:50	3.20

Project: Castlewood South Simulation Run: EX 10 YR

Start of Run: 30Mar2021, 00:00 Basin Model: EX
End of Run: 31Mar2021, 00:00 Meteorologic Model: 10 yr
Compute Time: 01Oct2021, 09:13:56 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2	0.024125	52.3	30Mar2021, 12:20	4.53
O-6	0.024125	52.3	30Mar2021, 12:20	4.53

Project: Castlewood South Simulation Run: PROP 10 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP CC
End of Run: 31Mar2021, 00:00 Meteorologic Model: 10 yr
Compute Time: 11Feb2022, 14:24:25 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	117.6	30Mar2021, 12:20	5.51
PO-2	0.0463750	26.5	30Mar2021, 13:05	5.13
O-6	0.0463750	26.5	30Mar2021, 13:05	5.13

Project: Castlewood South Simulation Run: PROP 10 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP OF
End of Run: 31Mar2021, 00:00 Meteorologic Model: 10 yr
Compute Time: 11Feb2022, 14:28:55 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	117.6	30Mar2021, 12:20	5.51
PO-2	0.0463750	37.3	30Mar2021, 12:55	5.50
O-6	0.0463750	37.3	30Mar2021, 12:55	5.50

Project: Castlewood South Simulation Run: EX 25 YR

Start of Run: 30Mar2021, 00:00 Basin Model: EX
End of Run: 31Mar2021, 00:00 Meteorologic Model: 25 yr
Compute Time: 01Oct2021, 09:14:00 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2	0.024125	67.2	30Mar2021, 12:20	6.23
O-6	0.024125	67.2	30Mar2021, 12:20	6.23

Project: Castlewood South Simulation Run: PROP 25 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP CC
End of Run: 31Mar2021, 00:00 Meteorologic Model: 25 yr
Compute Time: 11Feb2022, 14:24:37 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	145.8	30Mar2021, 12:20	7.25
PO-2	0.0463750	48.2	30Mar2021, 12:55	6.76
O-6	0.0463750	48.2	30Mar2021, 12:55	6.76

Project: Castlewood South Simulation Run: PROP 25 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP OF
End of Run: 31Mar2021, 00:00 Meteorologic Model: 25 yr
Compute Time: 11Feb2022, 14:29:05 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	145.8	30Mar2021, 12:20	7.25
PO-2	0.0463750	52.0	30Mar2021, 12:50	7.25
O-6	0.0463750	52.0	30Mar2021, 12:50	7.25

Project: Castlewood South Simulation Run: EX 100 YR

Start of Run: 30Mar2021, 00:00 Basin Model: EX
End of Run: 31Mar2021, 00:00 Meteorologic Model: 100 yr
Compute Time: 01Oct2021, 09:13:58 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2	0.024125	91.6	30Mar2021, 12:20	9.46
O-6	0.024125	91.6	30Mar2021, 12:20	9.46

Project: Castlewood South Simulation Run: PROP 100 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP CC
End of Run: 31Mar2021, 00:00 Meteorologic Model: 100 yr
Compute Time: 11Feb2022, 14:24:30 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	192.0	30Mar2021, 12:20	10.53
PO-2	0.0463750	91.1	30Mar2021, 12:45	9.84
O-6	0.0463750	91.1	30Mar2021, 12:45	9.84

Project: Castlewood South Simulation Run: PROP 100 YR

Start of Run: 30Mar2021, 00:00 Basin Model: PROP OF
End of Run: 31Mar2021, 00:00 Meteorologic Model: 100 yr
Compute Time: 11Feb2022, 14:28:58 Control Specifications: Control

Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
DA #2 - Prop	0.0463750	192.0	30Mar2021, 12:20	10.53
PO-2	0.0463750	85.8	30Mar2021, 12:45	10.52
O-6	0.0463750	85.8	30Mar2021, 12:45	10.52

EXHIBIT J

STORMCAD

CALCULATIONS

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CO-4	52.00	10.39	1.07	607.80	607.00	50.0	42.0			61.9	2	0.016	0.013	2.92	254.51	610.11	610.06	609.78	609.92
PIPE -159 (Castlewood South Storm)	75.67	8.93	1.48	608.44	608.57	16.0	48.0			16.0	2	-0.008	0.013	2.08	258.54	611.11	611.03	610.40	610.52
PIPE -160 (Castlewood South Storm)	75.71	8.93	1.48	608.78	608.57	26.0	48.0			26.0	2	0.008	0.013	3.47	258.54	612.23	612.20	612.04	612.05
PIPE -191 (Castlewood South Storm)	0.00	0.00	(N/A)	617.64	617.25	65.5	18.0			65.5	1	0.006	0.013	0.00	8.11	617.64	617.25	617.64	617.25
PIPE -192 (Castlewood South Storm)	0.00	0.00	(N/A)	619.15	619.10	60.6	18.0			60.6	1	0.001	0.013	0.00	3.15	619.15	619.10	619.15	619.10
PIPE -193 (Castlewood South Storm)	0.00	0.00	(N/A)	617.09	616.89	63.6	18.0			63.6	1	0.003	0.013	0.00	5.75	617.09	616.89	617.09	616.89
PIPE -A1 (Castlewood South Storm)	36.26	2.27	0.96	609.44	609.36	26.6		2.0	4.0	26.6	2	0.003	0.013	2.68	76.44	612.13	612.12	612.05	612.04
PIPE -A2 (Castlewood South Storm)	36.68	4.59	1.59	610.25	609.44	272.3		2.0	4.0	272.3	1	0.003	0.013	2.57	38.22	613.09	612.33	612.76	612.01
PIPE -A3 (Castlewood South Storm)	33.76	4.22	1.50	610.30	610.25	14.4		2.0	4.0	14.4	1	0.003	0.013	2.86	38.22	613.43	613.39	613.15	613.12
PIPE -A4 (Castlewood South Storm)	32.05	4.01	1.44	610.39	610.30	30.7		2.0	4.0	32.7	1	0.003	0.013	3.04	38.23	613.65	613.59	613.40	613.34
PIPE -A5 (Castlewood South Storm)(2)	29.38	3.67	1.35	611.21	610.39	272.7		2.0	4.0	271.2	1	0.003	0.013	3.20	38.26	614.28	613.80	614.07	613.59
PIPE -A6 (Castlewood South Storm)(1)	27.75	3.47	1.30	611.53	611.21	106.2		2.0	4.0	105.6	1	0.003	0.013	3.01	38.11	614.57	614.41	614.39	614.22
PIPE -A7 (Castlewood South Storm)	24.22	3.03	1.18	612.08	611.53	184.8		2.0	4.0	184.8	1	0.003	0.013	3.01	38.22	614.90	614.68	614.76	614.54
PIPE -A8 (Castlewood South Storm)	20.51	2.56	1.05	612.93	612.08	284.1		2.0	4.0	284.1	1	0.003	0.013	2.80	38.22	615.23	614.98	615.13	614.88
PIPE -A9 (Castlewood South Storm)	17.60	2.20	0.95	613.17	612.93	80.5		2.0	4.0	70.5	1	0.003	0.013	2.29	37.87	615.35	615.30	615.28	615.22
PIPE -A10 (Castlewood South Storm)	13.92	4.33	0.80	613.71	613.17	178.0		2.0	4.0	144.9	1	0.003	0.013	2.17	38.33	615.46	615.39	615.39	615.34
PIPE -A11 (1) (Castlewood South Storm)	14.21	4.08	1.09	614.28	613.71	191.5	24.0			277.3	2	0.003	0.013	1.71	24.79	615.75	615.51	615.58	615.42
PIPE -A12 (Castlewood South Storm)	9.69	3.69	0.87	614.68	614.28	133.3	24.0			107.2	2	0.003	0.013	1.51	24.72	615.95	615.85	615.85	615.79

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -A13 (Castlewood South Storm)	3.71	3.46	0.88	615.55	615.18	122.9	18.0			106.4	1	0.003	0.013	0.88	5.76	616.61	616.24	616.43	616.05
PIPE -A14 (Castlewood South Storm)	3.80	3.46	0.89	615.90	615.55	118.1	18.0			107.3	1	0.003	0.013	1.03	5.72	616.99	616.70	616.82	616.58
PIPE -A15 (Castlewood South Storm)	2.59	3.33	0.68	615.94	615.90	11.7	18.0			12.1	1	0.003	0.013	1.12	6.14	617.08	617.07	617.02	617.02
PIPE -A16 (Castlewood South Storm)	2.60	3.14	0.71	615.98	615.94	13.7	18.0			13.5	1	0.003	0.013	1.14	5.68	617.14	617.13	617.09	617.08
PIPE -B1 (Castlewood South Storm)	40.30	5.30	1.59	610.10	610.18	28.3	36.0			28.3	2	-0.003	0.013	1.93	73.06	612.35	612.30	612.06	612.03
PIPE -B2 (Castlewood South Storm)	40.60	5.30	1.60	610.18	610.80	205.0	36.0			205.0	2	-0.003	0.013	2.32	73.06	612.97	612.68	612.68	612.51
PIPE -B3 (Castlewood South Storm)	40.88	5.11	1.72	611.34	610.80	179.5		2.0	4.0	169.0	1	0.003	0.013	1.99	38.19	613.63	613.20	613.12	612.79
PIPE -B4 (Castlewood South Storm)	37.02	4.63	1.62	611.37	611.34	10.6		2.0	4.0	10.6	1	0.003	0.013	3.22	37.70	614.92	614.89	614.58	614.55
PIPE -B5 (Castlewood South Storm)	34.19	4.27	1.51	611.67	611.37	98.6		2.0	4.0	109.0	1	0.003	0.013	3.46	38.32	615.35	615.11	615.06	614.83
PIPE -B6 (Castlewood South Storm)	31.27	3.91	1.42	611.74	611.67	25.5		2.0	4.0	25.5	1	0.003	0.013	3.76	38.22	615.72	615.67	615.48	615.43
PIPE -B7 (Castlewood South Storm)	29.55	3.69	1.36	611.90	611.74	52.5		2.0	4.0	44.0	1	0.003	0.013	3.90	38.07	615.95	615.85	615.74	615.64
PIPE -B8 (Castlewood South Storm)	24.57	3.07	1.19	612.09	611.90	62.7		2.0	4.0	71.3	1	0.003	0.013	4.02	38.36	616.14	616.06	616.00	615.92
PIPE -B9 (Castlewood South Storm)	24.76	3.09	1.20	612.45	612.09	121.2		2.0	4.0	121.2	1	0.003	0.013	4.01	38.22	616.40	616.24	616.25	616.09
PIPE -B10 (Castlewood South Storm)	24.94	3.12	1.20	612.81	612.45	121.2		2.0	4.0	121.2	1	0.003	0.013	3.91	38.22	616.67	616.51	616.52	616.36
PIPE -B11 (Castlewood South Storm)	24.97	3.12	1.21	612.87	612.81	20.1		2.0	4.0	20.1	1	0.003	0.013	3.80	38.22	616.80	616.77	616.64	616.62
PIPE -B12 (Castlewood South Storm)	20.58	2.57	1.05	613.42	612.87	182.7		2.0	4.0	182.7	1	0.003	0.013	3.90	38.22	617.04	616.88	616.94	616.78
PIPE -B13 (Castlewood South Storm)	21.42	2.68	1.08	614.12	613.42	232.3		2.0	4.0	232.3	1	0.003	0.013	3.57	38.22	617.32	617.10	617.21	616.99

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -B14 (Castlewood South Storm)	20.34	3.39	1.36	614.15	614.12	10.0		2.0	3.0	10.0	1	0.003	0.013	3.12	26.72	617.44	617.42	617.26	617.24
PIPE -B15 (Castlewood South Storm)	14.36	2.39	1.05	614.45	614.15	100.5		2.0	3.0	100.5	1	0.003	0.013	3.29	26.72	617.62	617.53	617.53	617.44
PIPE -B16 (Castlewood South Storm)	13.16	2.19	0.99	614.56	614.45	35.0		2.0	3.0	36.6	1	0.003	0.013	3.14	26.55	617.70	617.67	617.62	617.60
PIPE -B17 (Castlewood South Storm)	13.43	2.24	1.00	614.87	614.56	105.0		2.0	3.0	103.4	1	0.003	0.013	3.11	26.78	617.82	617.74	617.74	617.66
PIPE -B18 (Castlewood South Storm)	12.26	2.04	0.94	615.20	614.87	109.5		2.0	3.0	109.5	1	0.003	0.013	2.94	26.72	617.94	617.87	617.88	617.81
PIPE -B19 (Castlewood South Storm)	9.94	3.16	1.36	615.23	615.20	10.0	24.0			10.0	1	0.003	0.013	2.67	12.39	618.04	618.02	617.89	617.87
PIPE -B20 (Castlewood South Storm)	7.98	2.54	1.17	615.32	615.23	30.9	24.0			30.9	1	0.003	0.013	2.80	12.39	618.17	618.13	618.07	618.03
PIPE -B21 (Castlewood South Storm)	0.89	0.50	0.40	615.82	616.09	89.2	18.0			89.2	1	-0.003	0.013	2.43	5.78	618.26	618.25	618.25	618.25
PIPE -B22 (Castlewood South Storm)	1.08	0.61	0.44	616.09	616.59	166.8	18.0			166.8	1	-0.003	0.013	2.16	5.75	618.28	618.26	618.27	618.25
PIPE -B23 (Castlewood South Storm)	1.13	0.64	0.45	616.70	616.59	37.6	18.0			41.0	1	0.003	0.013	1.69	5.68	618.29	618.29	618.28	618.28
PIPE -C1 (Castlewood South Storm)	64.82	4.32	1.95	609.04	608.85	62.0		3.0	5.0	62.0	1	0.003	0.013	6.15	89.95	615.39	615.29	615.10	615.00
PIPE -C2 (Castlewood South Storm)	54.51	3.63	1.72	609.39	609.04	117.2		3.0	5.0	127.6	1	0.003	0.013	6.34	90.01	615.71	615.58	615.51	615.38
PIPE -C3 (Castlewood South Storm)	51.09	3.41	1.62	609.42	609.39	9.6		3.0	5.0	9.6	1	0.003	0.013	6.26	91.59	615.84	615.83	615.66	615.65
PIPE -C4 (Castlewood South Storm)	50.35	3.36	1.63	610.01	609.42	198.2		3.0	5.0	187.7	1	0.003	0.013	6.35	89.83	616.13	615.95	615.96	615.77
PIPE -C5 (Castlewood South Storm)	47.35	3.16	1.55	610.29	610.01	92.0		3.0	5.0	52.5	1	0.003	0.013	6.07	90.10	616.32	616.24	616.16	616.08
PIPE -C6 (Castlewood South Storm)	41.06	2.74	1.41	610.37	610.29	27.0		3.0	5.0	27.0	1	0.003	0.013	5.99	89.33	616.42	616.40	616.30	616.28
PIPE -C7 (Castlewood South Storm)	38.92	2.59	1.36	610.70	610.37	110.5		3.0	5.0	194.5	1	0.003	0.013	6.01	89.75	616.55	616.49	616.44	616.38

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -C8 (Castlewood South Storm)	35.05	2.34	1.26	611.27	610.70	190.5		3.0	5.0	146.0	1	0.003	0.013	5.82	90.08	616.69	616.61	616.61	616.52
PIPE -C9 (Castlewood South Storm)	19.16	2.71	1.54	611.84	611.27	187.3	36.0			187.3	1	0.003	0.013	5.40	36.53	616.94	616.78	616.82	616.67
PIPE -C10 (Castlewood South Storm)	19.75	2.79	1.57	612.45	611.84	204.6	36.0			215.1	1	0.003	0.013	5.05	36.56	617.19	617.01	617.07	616.89
PIPE -C11 (Castlewood South Storm)	13.67	4.35	(N/A)	613.50	613.45	17.5	24.0			11.0	1	0.003	0.013	3.60	12.09	617.41	617.34	617.11	617.05
PIPE -C12 (Castlewood South Storm)	5.17	1.65	0.90	614.26	613.50	251.4	24.0			247.4	1	0.003	0.013	4.03	12.44	617.70	617.57	617.66	617.53
PIPE -C13 (Castlewood South Storm)	5.19	2.94	1.11	614.85	614.75	33.1	18.0			33.1	1	0.003	0.013	2.91	5.78	617.87	617.79	617.74	617.66
PIPE -C14 (Castlewood South Storm)	5.21	2.95	1.12	614.94	614.85	27.0	18.0			27.0	1	0.003	0.013	2.97	5.75	618.03	617.96	617.89	617.83
PIPE -C15 (Castlewood South Storm)	3.61	2.04	0.86	614.98	614.94	14.6	18.0			14.6	1	0.003	0.013	3.10	5.77	618.12	618.10	618.05	618.04
PIPE -C16 (Castlewood South Storm)	3.62	2.05	0.86	615.02	614.98	12.0	18.0			12.0	1	0.003	0.013	3.14	5.75	618.19	618.18	618.13	618.12
PIPE -D1 (Castlewood South Storm)	37.71	1.57	0.99	609.92	609.74	59.6		3.0	4.0	59.6	2	0.003	0.013	5.26	135.58	615.05	615.04	615.01	615.00
PIPE -D2 (Castlewood South Storm)	38.57	1.61	1.01	610.36	609.92	147.3		3.0	4.0	150.7	2	0.003	0.013	5.17	135.38	615.16	615.13	615.12	615.09
PIPE -D3 (Castlewood South Storm)	39.02	3.25	1.68	610.60	610.36	80.4		3.0	4.0	67.2	1	0.003	0.013	4.75	67.05	615.35	615.27	615.19	615.11
PIPE -D4 (Castlewood South Storm)(2)	34.37	2.86	1.47	610.64	610.60	13.5		3.0	4.0	18.1	1	0.003	0.013	4.76	70.66	615.49	615.48	615.37	615.36
PIPE -D5 (Castlewood South Storm)	32.01	4.53	2.17	611.30	610.64	218.7	36.0			226.2	1	0.003	0.013	4.70	36.61	616.16	615.65	615.84	615.34
PIPE -D6 (Castlewood South Storm)	25.50	3.61	1.85	611.74	611.30	147.2	36.0			147.2	1	0.003	0.013	4.88	36.50	616.60	616.38	616.40	616.18
PIPE -D7 (Castlewood South Storm)	13.35	2.72	1.40	612.40	612.24	54.7	30.0			54.7	1	0.003	0.013	4.41	22.19	616.82	616.76	616.71	616.65
PIPE -D8 (Castlewood South Storm)	5.31	1.08	0.82	612.50	612.40	30.8	30.0			19.8	1	0.003	0.013	4.46	22.90	616.88	616.88	616.86	616.86

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PIPE -D9 (Castlewood South Storm)	5.33	3.02	1.17	613.56	613.50	21.9	18.0			21.9	1	0.003	0.013	3.31	5.59	617.00	616.95	616.86	616.81
PIPE -E1 (Castlewood South Storm)	16.61	3.38	0.89	611.85	611.27	25.5	30.0			25.5	1	0.023	0.013	5.36	61.69	616.85	616.81	616.67	616.63
PIPE -E2 (Castlewood South Storm)	13.61	2.77	1.41	612.25	611.85	134.4	30.0			134.4	1	0.003	0.013	4.98	22.38	617.09	616.95	616.97	616.83
PIPE -E3 (Castlewood South Storm)	13.81	2.81	1.41	612.56	612.25	101.1	30.0			101.1	1	0.003	0.013	4.80	22.71	617.29	617.18	617.17	617.05
PIPE -E4 (Castlewood South Storm)	12.27	2.50	1.32	612.73	612.56	57.0	30.0			57.0	1	0.003	0.013	4.76	22.39	617.46	617.41	617.37	617.32
PIPE -E5 (Castlewood South Storm)	12.42	2.53	1.34	612.95	612.73	75.5	30.0			75.5	1	0.003	0.013	4.70	22.14	617.60	617.53	617.50	617.43
PIPE -E6 (Castlewood South Storm)	12.63	2.57	1.34	613.29	612.95	110.8	30.0			119.9	1	0.003	0.013	4.61	22.55	617.77	617.67	617.67	617.56
PIPE -E7 (Castlewood South Storm)	8.94	1.82	1.10	613.32	613.29	10.0	30.0			10.0	1	0.003	0.013	4.49	22.46	617.83	617.82	617.78	617.77
PIPE -E8 (Castlewood South Storm)	4.91	1.56	0.88	614.19	613.82	124.5	24.0			115.5	1	0.003	0.013	4.00	12.33	617.92	617.86	617.88	617.82
PIPE -E9 (Castlewood South Storm)	5.01	1.59	0.89	614.43	614.19	79.5	24.0			79.5	1	0.003	0.013	3.74	12.35	618.01	617.97	617.97	617.93
PIPE -E10 (Castlewood South Storm)	4.06	2.30	0.46	614.43	614.97	14.9	18.0			14.9	1	-0.037	0.013	3.56	20.08	618.09	618.06	618.01	617.98
PIPE -F1 (Castlewood South Storm)	14.98	3.05	1.48	611.91	611.74	55.2	30.0			56.7	1	0.003	0.013	4.89	22.76	616.85	616.77	616.70	616.63
PIPE -F2 (Castlewood South Storm)	13.18	2.68	1.38	612.22	611.91	104.8	30.0			103.3	1	0.003	0.013	4.91	22.31	617.04	616.93	616.93	616.82
PIPE -F3 (Castlewood South Storm)	10.76	3.43	1.45	612.72	612.84	40.4	24.0			40.4	1	-0.003	0.013	4.26	12.32	617.25	617.16	617.07	616.98
PIPE -F4 (Castlewood South Storm)	9.19	2.93	1.28	612.84	613.07	76.3	24.0			76.3	1	-0.003	0.013	4.38	12.42	617.48	617.36	617.35	617.22
PIPE -F5 (Castlewood South Storm)	9.28	2.96	1.29	613.27	613.07	66.1	24.0			66.1	1	0.003	0.013	4.40	12.44	617.72	617.61	617.58	617.47
PIPE -G1 (Castlewood South Storm)	6.46	3.66	(N/A)	613.72	613.43	96.8	18.0			118.8	1	0.003	0.013	1.71	5.72	615.72	615.35	615.51	615.14

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PIPE -G2 (Castlewood South Storm)	4.44	2.51	0.99	613.75	613.72	10.0	18.0			9.2	1	0.003	0.013	2.00	5.75	615.84	615.82	615.74	615.72
PIPE -G3 (Castlewood South Storm)	4.46	2.52	0.95	613.80	613.75	14.8	18.0			14.6	1	0.003	0.013	2.08	6.10	615.96	615.93	615.86	615.83
PIPE -H1 (Castlewood South Storm)	4.29	2.43	0.95	612.29	612.16	41.2	18.0			30.7	1	0.003	0.013	3.36	5.90	615.68	615.61	615.58	615.52
PIPE -H2 (Castlewood South Storm)	4.31	2.44	1.00	612.37	612.29	28.9	18.0			29.0	1	0.003	0.013	3.38	5.53	615.81	615.76	615.72	615.67
PIPE -I1 (Castlewood South Storm)	13.98	2.85	0.95	611.35	610.04	104.8	30.0			104.8	1	0.013	0.013	5.39	45.87	615.67	615.55	615.55	615.43
PIPE -I2 (Castlewood South Storm)	8.48	2.70	1.21	611.88	611.85	10.0	24.0			10.0	1	0.003	0.013	3.80	12.39	615.77	615.76	615.66	615.65
PIPE -I3 (Castlewood South Storm)	5.81	1.85	0.97	612.13	611.88	84.8	24.0			81.3	1	0.003	0.013	3.75	12.28	615.74	615.80	615.69	615.63
PIPE -I4 (Castlewood South Storm)	5.83	3.30	1.24	612.21	612.13	25.2	18.0			30.6	1	0.003	0.013	3.54	5.77	615.92	615.84	615.75	615.67
PIPE -J1 (Castlewood South Storm)	4.36	1.39	0.50	611.72	611.01	35.5	24.0			35.5	1	0.020	0.013	5.15	31.95	616.20	616.19	616.17	616.16
PIPE -J2 (Castlewood South Storm)	4.38	2.48	0.56	612.80	612.22	29.0	18.0			30.4	1	0.020	0.013	3.94	14.83	616.31	616.26	616.21	616.16
PIPE -K1 (Castlewood South Storm)	8.25	2.63	1.19	611.30	611.61	103.1	24.0			95.3	1	-0.003	0.013	4.94	12.42	616.48	616.34	616.37	616.24
PIPE -K3 (Castlewood South Storm)	7.01	2.23	1.08	611.61	611.82	70.2	24.0			79.5	1	-0.003	0.013	4.86	12.32	616.61	616.54	616.53	616.47
PIPE -K4 (Castlewood South Storm)	7.04	2.24	1.10	611.82	611.90	28.9	24.0			30.3	1	-0.003	0.013	4.79	12.06	616.71	616.68	616.63	616.61
PIPE -LA A1 (Castlewood South Storm)	4.76	2.69	1.05	610.99	610.89	32.1	18.0			31.3	1	0.003	0.013	2.75	5.71	613.82	613.76	613.71	613.64
PIPE -LA A2 (Castlewood South Storm)	4.08	1.30	0.79	610.36	610.25	33.7	24.0			33.7	1	0.003	0.013	3.01	12.33	613.30	613.29	613.28	613.27
PIPE -LA A3 (Castlewood South Storm)	2.31	1.31	0.66	610.83	610.80	11.8	18.0			11.8	1	0.003	0.013	2.67	5.75	613.50	613.50	613.48	613.47
PIPE -LA A4 (Castlewood South Storm)	2.48	3.16	(N/A)	611.71	611.81		12.0			38.1	1	-0.003	0.013	2.53	1.79	614.58	614.39	614.42	614.24
PIPE -LA A5 (Castlewood South Storm)	5.18	2.93	1.11	612.06	612.03	12.5	18.0			12.5	1	0.003	0.013	2.52	5.75	614.71	614.68	614.57	614.54
PIPE -LA A6 (Castlewood South Storm)	6.04	3.42	1.31	612.62	612.58	12.8	18.0			12.8	1	0.003	0.013	2.25	5.75	615.06	615.01	614.87	614.83

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PIPE -LA A7 (Castlewood South Storm)	4.71	2.67	1.04	613.71	613.67	13.5	18.0			13.5	1	0.003	0.013	1.64	5.72	615.44	615.42	615.33	615.31
PIPE -LA A8 (Castlewood South Storm)	5.35	3.68	1.15	614.78	614.82	14.2	18.0			14.8	1	-0.003	0.013	1.15	5.72	616.19	616.14	615.98	615.93
PIPE -LA A9 (Castlewood South Storm)	3.30	3.39	0.81	615.26	615.17	29.4	18.0			23.2	1	0.003	0.013	0.79	5.81	616.24	616.10	616.06	615.96
PIPE -LA A10 (Castlewood South Storm)	5.63	3.56	1.26	615.22	615.18	14.5	18.0			14.5	1	0.003	0.013	1.26	5.52	616.67	616.63	616.48	616.44
PIPE -LA A11 (Castlewood South Storm)	1.29	2.63	0.48	615.92	616.01	30.3	18.0			30.6	1	-0.003	0.013	1.12	5.76	617.06	617.05	617.04	617.04
PIPE -LA B1 (Castlewood South Storm)	5.85	3.31	1.36	611.92	611.84	29.4	18.0			29.4	1	0.003	0.013	2.81	5.47	614.91	614.82	614.74	614.65
PIPE -LA B2 (Castlewood South Storm)	5.38	3.04	1.17	611.91	611.87	14.4	18.0			14.4	1	0.003	0.013	3.04	5.67	615.09	615.05	614.95	614.91
PIPE -LA B3 (Castlewood South Storm)	3.05	1.73	0.78	612.33	612.24	29.0	18.0			29.0	1	0.003	0.013	3.50	5.75	615.81	615.79	615.77	615.74
PIPE -LA B4 (Castlewood South Storm)	6.41	3.63	(N/A)	612.44	612.40	14.8	18.0			14.8	1	0.003	0.013	3.48	5.45	616.14	616.09	615.94	615.88
PIPE -LA B5 (Castlewood South Storm)	6.29	3.56	(N/A)	614.42	614.37	14.8	18.0			14.8	1	0.003	0.013	2.34	5.75	616.97	616.92	616.77	616.72
PIPE -LA B6 (Castlewood South Storm)	2.15	1.22	0.64	614.71	614.62	29.0	18.0			29.0	1	0.003	0.013	2.71	5.72	617.37	617.36	617.35	617.33
PIPE -LA B7 (Castlewood South Storm)	7.50	4.24	(N/A)	614.69	614.65	14.8	18.0			14.8	1	0.003	0.013	2.68	5.45	617.68	617.61	617.40	617.33
PIPE -LA B8 (Castlewood South Storm)	2.39	0.76	0.60	614.98	614.87	35.0	24.0			70.0	1	0.003	0.013	2.97	12.31	617.85	617.85	617.84	617.84
PIPE -LA B9 (Castlewood South Storm)	3.86	2.18	0.90	615.79	615.70	29.0	18.0			29.0	1	0.003	0.013	2.22	5.75	618.03	617.99	617.96	617.92
PIPE -LA B10 (Castlewood South Storm)	3.54	2.01	0.85	615.77	615.73	14.8	18.0			14.8	1	0.003	0.013	2.32	5.75	618.13	618.12	618.07	618.05
PIPE -LA B11 (Castlewood South Storm)	7.39	2.35	1.12	615.32	615.44	39.7	24.0			39.7	1	-0.003	0.013	2.88	12.35	618.33	618.28	618.24	618.20
PIPE -LA C1 (Castlewood South Storm)	4.58	2.59	1.04	610.97	610.89	28.7	18.0			28.7	1	0.003	0.013	4.80	5.54	615.85	615.80	615.75	615.69

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -LA C2 (Castlewood South Storm)	3.55	2.01	0.87	610.96	610.92	15.1	18.0			15.1	1	0.003	0.013	4.92	5.61	615.92	615.90	615.86	615.84
PIPE -LA C3 (Castlewood South Storm)	7.45	2.37	1.12	611.88	611.79	29.0	24.0			29.0	1	0.003	0.013	4.51	12.39	616.42	616.39	616.33	616.30
PIPE -LA C4 (Castlewood South Storm)	3.59	2.03	0.86	611.91	611.87	14.8	18.0			14.8	1	0.003	0.013	4.54	5.72	616.49	616.47	616.42	616.40
PIPE -LA C5 (Castlewood South Storm)	5.97	3.38	1.27	612.25	612.20	14.8	18.0			21.2	1	0.003	0.013	4.27	5.79	616.69	616.64	616.51	616.47
PIPE -LA C6 (Castlewood South Storm)	9.44	5.34	(N/A)	614.05	614.00	14.8	18.0			12.4	1	0.003	0.013	3.29	5.78	617.85	617.73	617.41	617.29
PIPE -LA C7 (Castlewood South Storm)	6.61	3.74	(N/A)	614.04	613.95	29.0	18.0			29.0	1	0.003	0.013	3.15	5.75	617.43	617.31	617.21	617.09
PIPE -LA C8 (Castlewood South Storm)	2.44	1.38	0.68	615.03	614.94	32.7	18.0			32.7	1	0.003	0.013	3.12	5.75	618.10	618.09	618.08	618.06
PIPE -LA D1 (Castlewood South Storm)	6.47	3.66	(N/A)	612.19	612.10	30.3	18.0			30.8	1	0.003	0.013	3.21	5.82	615.63	615.52	615.42	615.31
PIPE -LA D2 (Castlewood South Storm)	4.69	2.65	1.03	612.20	612.14	19.9	18.0			20.1	1	0.003	0.013	3.32	5.72	615.61	615.57	615.50	615.46
PIPE -LA D3 (Castlewood South Storm)	8.81	4.99	(N/A)	613.01	612.90	36.1	18.0			36.1	1	0.003	0.013	3.73	5.77	617.28	617.02	616.89	616.64
PIPE -LA E1 (Castlewood South Storm)	3.83	1.22	0.76	612.44	612.35	29.0	24.0			29.0	1	0.003	0.013	4.54	12.39	616.92	616.91	616.89	616.88
PIPE -LA E2 (Castlewood South Storm)	4.08	2.31	0.93	614.29	614.37	29.0	18.0			29.0	1	-0.003	0.013	3.47	5.75	617.88	617.84	617.80	617.75
PIPE -LA E3 (Castlewood South Storm)	4.71	2.67	1.03	614.32	614.36	14.8	18.0			14.8	1	-0.003	0.013	3.47	5.78	617.92	617.89	617.81	617.78
PIPE -LA E4 (Castlewood South Storm)	1.52	0.86	0.32	614.43	615.01	29.0	18.0			23.0	1	-0.020	0.013	3.60	14.91	618.04	618.04	618.03	618.03
PIPE -LA F1 (Castlewood South Storm)	3.29	1.86	0.81	612.95	612.91	15.0	18.0			15.0	1	0.003	0.013	3.95	5.75	616.92	616.91	616.87	616.85
PIPE -LA F2 (Castlewood South Storm)	3.96	2.24	0.92	613.36	613.23	43.8	18.0			32.2	1	0.003	0.013	3.82	5.74	617.18	617.12	617.10	617.04
PIPE -LA F3 (Castlewood South Storm)	2.42	1.37	0.68	613.43	613.34	29.1	18.0			29.1	1	0.003	0.013	3.94	5.74	617.33	617.31	617.30	617.29

FlexTable: **25 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -LA G1 (Castlewood South Storm)	2.08	1.18	0.62	613.81	613.72	29.0	18.0			29.6	1	0.003	0.013	2.05	5.82	615.80	615.79	615.78	615.77
PIPE -LA I1 (Castlewood South Storm)	5.70	3.23	1.22	611.94	611.85	29.0	18.0			29.0	1	0.003	0.013	3.77	5.75	615.87	615.78	615.70	615.62
PIPE -LA I2 (Castlewood South Storm)	4.49	2.54	0.99	611.93	611.88	14.8	18.0			14.8	1	0.003	0.013	3.75	5.78	615.76	615.81	615.66	615.63
PIPE -LA K2 (Castlewood South Storm)	2.13	1.21	0.63	612.15	612.11	14.5	18.0			10.3	1	0.003	0.013	4.39	5.78	616.53	616.52	616.50	616.50
PIPE -M1 (Castlewood South Storm)	1.68	0.95	0.55	615.13	614.95	59.5	18.0			59.5	1	0.003	0.013	2.68	5.75	617.66	617.65	617.65	617.63
PIPE -M2 (Castlewood South Storm)	1.69	0.95	0.56	615.17	615.13	14.8	18.0			14.8	1	0.003	0.013	2.53	5.75	617.68	617.67	617.66	617.66
PIPE -N1 (Castlewood South Storm)	2.38	1.35	0.44	614.42	613.56	57.9	18.0			55.3	1	0.015	0.013	3.80	12.87	617.42	617.39	617.39	617.36
PIPE -N2 (Castlewood South Storm)	2.44	1.38	0.44	615.27	614.42	56.2	18.0			58.8	1	0.015	0.013	2.98	12.86	617.46	617.43	617.44	617.40
PIPE -N3 (Castlewood South Storm)	2.51	1.42	0.70	615.40	615.27	46.2	18.0			36.7	1	0.003	0.013	2.20	5.68	617.53	617.50	617.50	617.47
PIPE -OFF1 (1) (1) (Castlewood South Storm)	82.70	6.88	1.72	608.37	608.33	16.1		3.0	7.0	16.1	1	0.003	0.013	2.21	135.82	611.01	610.98	610.55	610.54
PIPE -OFF1 (1) (Castlewood South Storm)	80.64	3.84	1.69	608.50	608.37	41.2		3.0	7.0	41.2	1	0.003	0.013	3.60	135.82	612.25	612.20	612.02	611.97
PIPE -OFF1 (Castlewood South Storm)	79.19	3.77	1.67	608.54	608.50	15.6		3.0	7.0	15.6	1	0.003	0.013	3.66	135.82	612.40	612.38	612.17	612.16
PIPE -OFF5 (1) (1) (Castlewood South Storm)	45.49	7.24	(N/A)	612.74	612.70	12.5	24.0			23.6	2	0.003	0.013	1.70	24.94	615.50	615.39	614.67	614.40
PIPE -OFF5 (1) (Castlewood South Storm)	45.20	7.19	(N/A)	612.83	612.74	31.0	24.0			31.0	2	0.003	0.013	2.51	24.78	616.36	616.05	615.56	615.25
PIPE -OFF5 (Castlewood South Storm)	44.00	7.00	(N/A)	612.87	612.83	12.9	24.0			12.9	2	0.003	0.013	3.24	24.90	616.95	616.83	616.19	616.07
PIPE -OFF9 (1) (1) (Castlewood South Storm)	5.25	1.67	0.91	614.97	614.92	17.7	24.0			27.0	1	0.003	0.013	2.16	12.39	617.14	617.13	617.09	617.08
PIPE -OFF9 (1) (Castlewood South Storm)	4.94	1.57	0.88	615.10	614.97	41.5	24.0			41.2	1	0.003	0.013	2.15	12.37	617.18	617.16	617.14	617.12

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PIPE -OFF9 (Castlewood South Storm)	4.64	3.66	0.85	615.21	615.10	36.2	24.0			31.8	1	0.003	0.013	2.07	12.41	617.22	617.20	617.18	617.17

FlexTable: 100 Year Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CO-4	52.00	10.39	1.07	607.80	607.00	50.0	42.0			61.9	2	0.016	0.013	2.92	254.51	610.11	610.06	609.78	609.92
PIPE -159 (Castlewood South Storm)	108.75	9.84	1.81	608.44	608.57	16.0	48.0			16.0	2	-0.008	0.013	2.73	258.54	611.76	611.72	611.12	611.17
PIPE -160 (Castlewood South Storm)	108.87	4.33	1.81	608.78	608.57	26.0	48.0			26.0	2	0.008	0.013	4.22	258.54	613.12	613.08	612.83	612.79
PIPE -191 (Castlewood South Storm)	0.00	0.00	(N/A)	617.64	617.25	65.5	18.0			65.5	1	0.006	0.013	0.00	8.11	617.64	617.25	617.64	617.25
PIPE -192 (Castlewood South Storm)	0.00	0.00	(N/A)	619.15	619.10	60.6	18.0			60.6	1	0.001	0.013	0.00	3.15	619.15	619.10	619.15	619.10
PIPE -193 (Castlewood South Storm)	0.00	0.00	(N/A)	617.09	616.89	63.6	18.0			63.6	1	0.003	0.013	0.00	5.75	617.09	616.89	617.09	616.89
PIPE -A1 (Castlewood South Storm)	51.76	3.23	1.24	609.44	609.36	26.6		2.0	4.0	26.6	2	0.003	0.013	2.83	76.44	612.39	612.35	612.23	612.19
PIPE -A2 (Castlewood South Storm)	52.17	6.52	(N/A)	610.25	609.44	272.3		2.0	4.0	272.3	1	0.003	0.013	2.70	38.22	614.32	612.80	613.66	612.14
PIPE -A3 (Castlewood South Storm)	48.01	6.00	1.94	610.30	610.25	14.4		2.0	4.0	14.4	1	0.003	0.013	3.88	38.22	614.76	614.69	614.20	614.14
PIPE -A4 (Castlewood South Storm)	45.56	5.69	1.86	610.39	610.30	30.7		2.0	4.0	32.7	1	0.003	0.013	4.28	38.23	615.22	615.09	614.71	614.58
PIPE -A5 (Castlewood South Storm)(2)	41.57	5.20	1.74	611.21	610.39	272.7		2.0	4.0	271.2	1	0.003	0.013	4.53	38.26	616.30	615.51	615.88	614.92
PIPE -A6 (Castlewood South Storm)(1)	39.21	4.90	1.67	611.53	611.21	106.2		2.0	4.0	105.6	1	0.003	0.013	4.98	38.11	616.89	616.56	616.52	616.19
PIPE -A7 (Castlewood South Storm)	34.09	4.26	1.51	612.08	611.53	184.8		2.0	4.0	184.8	1	0.003	0.013	5.28	38.22	617.53	617.10	617.25	616.81
PIPE -A8 (Castlewood South Storm)	28.25	3.53	1.32	612.93	612.08	284.1		2.0	4.0	284.1	1	0.003	0.013	5.42	38.22	618.16	617.69	617.96	617.50
PIPE -A9 (Castlewood South Storm)	24.14	3.02	1.18	613.17	612.93	80.5		2.0	4.0	70.5	1	0.003	0.013	5.22	37.87	618.39	618.29	618.25	618.15
PIPE -A10 (Castlewood South Storm)	19.40	2.42	1.01	613.71	613.17	178.0		2.0	4.0	144.9	1	0.003	0.013	5.21	38.33	618.60	618.47	618.51	618.38
PIPE -A11 (1) (Castlewood South Storm)	19.93	3.17	1.36	614.28	613.71	191.5	24.0			277.3	2	0.003	0.013	4.82	24.79	619.06	618.68	618.90	618.53
PIPE -A12 (Castlewood South Storm)	13.75	2.19	1.07	614.68	614.28	133.3	24.0			107.2	2	0.003	0.013	4.80	24.72	619.28	619.16	619.21	619.08

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Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -A13 (Castlewood South Storm)	5.25	2.97	1.12	615.55	615.18	122.9	18.0			106.4	1	0.003	0.013	3.57	5.76	619.19	619.34	619.06	618.75
PIPE -A14 (Castlewood South Storm)	5.40	3.05	1.16	615.90	615.55	118.1	18.0			107.3	1	0.003	0.013	3.59	5.72	619.59	619.28	619.45	619.14
PIPE -A15 (Castlewood South Storm)	3.68	2.08	0.84	615.94	615.90	11.7	18.0			12.1	1	0.003	0.013	3.70	6.14	619.68	619.67	619.61	619.60
PIPE -A16 (Castlewood South Storm)	3.70	2.09	0.88	615.98	615.94	13.7	18.0			13.5	1	0.003	0.013	3.74	5.68	619.76	619.74	619.69	619.68
PIPE -B1 (Castlewood South Storm)	58.96	5.75	2.04	610.10	610.18	28.3	36.0			28.3	2	-0.003	0.013	2.08	73.06	612.75	612.67	612.26	612.18
PIPE -B2 (Castlewood South Storm)	59.36	5.76	2.05	610.18	610.80	205.0	36.0			205.0	2	-0.003	0.013	3.00	73.06	613.82	613.45	613.52	613.18
PIPE -B3 (Castlewood South Storm)	59.62	7.45	(N/A)	611.34	610.80	179.5		2.0	4.0	169.0	1	0.003	0.013	2.57	38.19	615.54	614.23	614.68	613.36
PIPE -B4 (Castlewood South Storm)	53.98	6.75	(N/A)	611.37	611.34	10.6		2.0	4.0	10.6	1	0.003	0.013	3.98	37.70	616.09	616.03	615.38	615.32
PIPE -B5 (Castlewood South Storm)	49.81	6.23	1.99	611.67	611.37	98.6		2.0	4.0	109.0	1	0.003	0.013	4.53	38.32	617.00	616.50	616.40	615.90
PIPE -B6 (Castlewood South Storm)	45.60	5.70	1.86	611.74	611.67	25.5		2.0	4.0	25.5	1	0.003	0.013	4.90	38.22	617.18	617.37	616.67	616.56
PIPE -B7 (Castlewood South Storm)	43.17	5.40	1.80	611.90	611.74	52.5		2.0	4.0	44.0	1	0.003	0.013	4.93	38.07	617.33	617.36	616.88	616.68
PIPE -B8 (Castlewood South Storm)	36.01	4.50	1.56	612.09	611.90	62.7		2.0	4.0	71.3	1	0.003	0.013	5.04	38.36	617.42	617.52	617.11	616.94
PIPE -B9 (Castlewood South Storm)	36.47	4.56	1.58	612.45	612.09	121.2		2.0	4.0	121.2	1	0.003	0.013	5.16	38.22	617.90	617.64	617.58	617.25
PIPE -B10 (Castlewood South Storm)	36.93	4.62	1.60	612.81	612.45	121.2		2.0	4.0	121.2	1	0.003	0.013	5.38	38.22	618.50	618.16	618.17	617.83
PIPE -B11 (Castlewood South Storm)	37.01	4.63	1.60	612.87	612.81	20.1		2.0	4.0	20.1	1	0.003	0.013	5.58	38.22	618.78	618.72	618.45	618.39
PIPE -B12 (Castlewood South Storm)	30.34	3.79	1.39	613.42	612.87	182.7		2.0	4.0	182.7	1	0.003	0.013	5.71	38.22	619.15	618.96	618.93	618.58
PIPE -B13 (Castlewood South Storm)	31.18	3.90	1.41	614.12	613.42	232.3		2.0	4.0	232.3	1	0.003	0.013	5.63	38.22	619.75	619.29	619.52	619.05

FlexTable: **100 Y**ea**r** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -B14 (Castlewood South Storm)	29.59	4.93	1.80	614.15	614.12	10.0		2.0	3.0	10.0	1	0.003	0.013	4.84	26.72	619.38	619.90	619.00	618.96
PIPE -B15 (Castlewood South Storm)	20.76	3.46	1.38	614.45	614.15	100.5		2.0	3.0	100.5	1	0.003	0.013	4.76	26.72	619.28	619.45	619.09	618.91
PIPE -B16 (Castlewood South Storm)	18.99	3.17	1.30	614.56	614.45	35.0		2.0	3.0	36.6	1	0.003	0.013	4.79	26.55	619.45	619.39	619.29	619.24
PIPE -B17 (Castlewood South Storm)	19.26	3.21	1.30	614.87	614.56	105.0		2.0	3.0	103.4	1	0.003	0.013	4.83	26.78	619.71	619.54	619.55	619.38
PIPE -B18 (Castlewood South Storm)	17.46	2.91	1.21	615.20	614.87	109.5		2.0	3.0	109.5	1	0.003	0.013	4.81	26.72	619.95	619.81	619.82	619.68
PIPE -B19 (Castlewood South Storm)	14.15	4.51	(N/A)	615.23	615.20	10.0	24.0			10.0	1	0.003	0.013	3.99	12.39	619.54	620.07	619.23	619.19
PIPE -B20 (Castlewood South Storm)	11.35	3.61	1.51	615.32	615.23	30.9	24.0			30.9	1	0.003	0.013	3.91	12.39	619.42	619.62	619.22	619.14
PIPE -B21 (Castlewood South Storm)	1.36	0.77	0.49	615.82	616.09	89.2	18.0			89.2	1	-0.003	0.013	3.35	5.78	619.19	619.42	619.18	619.17
PIPE -B22 (Castlewood South Storm)	1.56	0.88	0.53	616.09	616.59	166.8	18.0			166.8	1	-0.003	0.013	3.10	5.75	619.24	619.20	619.23	619.19
PIPE -B23 (Castlewood South Storm)	1.61	0.91	0.55	616.70	616.59	37.6	18.0			41.0	1	0.003	0.013	2.65	5.68	619.26	619.25	619.25	619.24
PIPE -C1 (Castlewood South Storm)	100.14	6.68	2.69	609.04	608.85	62.0		3.0	5.0	62.0	1	0.003	0.013	6.15	89.95	615.92	615.69	615.23	615.00
PIPE -C2 (Castlewood South Storm)	83.80	5.59	2.35	609.39	609.04	117.2		3.0	5.0	127.6	1	0.003	0.013	6.86	90.01	616.69	616.38	616.20	615.90
PIPE -C3 (Castlewood South Storm)	78.49	5.23	2.21	609.42	609.39	9.6		3.0	5.0	9.6	1	0.003	0.013	7.05	91.59	616.89	616.96	616.46	616.44
PIPE -C4 (Castlewood South Storm)	76.56	5.10	2.20	610.01	609.42	198.2		3.0	5.0	187.7	1	0.003	0.013	6.94	89.83	617.20	617.05	616.79	616.36
PIPE -C5 (Castlewood South Storm)	71.63	4.78	2.09	610.29	610.01	92.0		3.0	5.0	52.5	1	0.003	0.013	7.07	90.10	617.61	617.44	617.26	617.08
PIPE -C6 (Castlewood South Storm)	62.01	4.13	1.90	610.37	610.29	27.0		3.0	5.0	27.0	1	0.003	0.013	6.51	89.33	617.10	617.72	616.84	616.80
PIPE -C7 (Castlewood South Storm)	58.38	3.89	1.81	610.70	610.37	110.5		3.0	5.0	194.5	1	0.003	0.013	6.53	89.75	617.27	617.26	617.04	616.90

FlexTable: **100 Year** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -C8 (Castlewood South Storm)	51.92	3.46	1.66	611.27	610.70	190.5		3.0	5.0	146.0	1	0.003	0.013	6.52	90.08	617.60	617.41	617.41	617.22
PIPE -C9 (Castlewood South Storm)	28.11	3.98	1.97	611.84	611.27	187.3	36.0			187.3	1	0.003	0.013	6.27	36.53	618.12	617.79	617.88	617.54
PIPE -C10 (Castlewood South Storm)	28.69	4.06	2.00	612.45	611.84	204.6	36.0			215.1	1	0.003	0.013	6.18	36.56	618.65	618.27	618.40	618.02
PIPE -C11 (Castlewood South Storm)	19.85	6.32	(N/A)	613.50	613.45	17.5	24.0			11.0	1	0.003	0.013	4.46	12.09	618.67	618.90	618.04	617.91
PIPE -C12 (Castlewood South Storm)	7.37	2.35	1.11	614.26	613.50	251.4	24.0			247.4	1	0.003	0.013	4.33	12.44	618.18	618.70	618.09	617.83
PIPE -C13 (Castlewood South Storm)	7.39	4.18	(N/A)	614.85	614.75	33.1	18.0			33.1	1	0.003	0.013	3.34	5.78	618.52	618.36	618.25	618.09
PIPE -C14 (Castlewood South Storm)	7.41	4.19	(N/A)	614.94	614.85	27.0	18.0			27.0	1	0.003	0.013	3.58	5.75	618.84	618.71	618.57	618.44
PIPE -C15 (Castlewood South Storm)	5.13	2.90	1.10	614.98	614.94	14.6	18.0			14.6	1	0.003	0.013	3.92	5.77	619.03	618.99	618.89	618.86
PIPE -C16 (Castlewood South Storm)	5.14	2.91	1.11	615.02	614.98	12.0	18.0			12.0	1	0.003	0.013	4.04	5.75	619.18	619.15	619.05	619.02
PIPE -D1 (Castlewood South Storm)	54.85	2.29	1.29	609.92	609.74	59.6		3.0	4.0	59.6	2	0.003	0.013	5.26	135.58	615.11	615.08	615.03	615.00
PIPE -D2 (Castlewood South Storm)	56.51	2.35	1.32	610.36	609.92	147.3		3.0	4.0	150.7	2	0.003	0.013	5.26	135.38	615.34	615.27	615.26	615.18
PIPE -D3 (Castlewood South Storm)	56.96	4.75	2.22	610.60	610.36	80.4		3.0	4.0	67.2	1	0.003	0.013	4.87	67.05	615.75	615.58	615.40	615.23
PIPE -D4 (Castlewood South Storm)(2)	50.13	4.18	1.94	610.64	610.60	13.5		3.0	4.0	18.1	1	0.003	0.013	5.16	70.66	616.05	616.03	615.78	615.76
PIPE -D5 (Castlewood South Storm)	46.36	6.56	(N/A)	611.30	610.64	218.7	36.0			226.2	1	0.003	0.013	5.08	36.61	617.44	616.39	616.78	615.72
PIPE -D6 (Castlewood South Storm)	36.72	5.19	2.48	611.74	611.30	147.2	36.0			147.2	1	0.003	0.013	5.16	36.50	617.33	617.61	616.91	616.46
PIPE -D7 (Castlewood South Storm)	19.01	3.87	1.78	612.40	612.24	54.7	30.0			54.7	1	0.003	0.013	4.97	22.19	617.56	617.67	617.33	617.21
PIPE -D8 (Castlewood South Storm)	7.59	1.55	0.99	612.50	612.40	30.8	30.0			19.8	1	0.003	0.013	5.24	22.90	617.69	617.68	617.65	617.64

FlexTable: **100 Y**ea**r** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -D9 (Castlewood South Storm)	7.62	4.31	(N/A)	613.56	613.50	21.9	18.0			21.9	1	0.003	0.013	4.01	5.59	617.92	617.80	617.63	617.51
PIPE -E1 (Castlewood South Storm)	24.58	5.01	1.10	611.85	611.27	25.5	30.0			25.5	1	0.023	0.013	6.18	61.69	617.94	617.85	617.55	617.46
PIPE -E2 (Castlewood South Storm)	19.99	4.07	1.84	612.25	611.85	134.4	30.0			134.4	1	0.003	0.013	6.04	22.38	618.47	618.15	618.21	617.89
PIPE -E3 (Castlewood South Storm)	20.19	4.11	1.84	612.56	612.25	101.1	30.0			101.1	1	0.003	0.013	6.13	22.71	618.89	618.64	618.62	618.38
PIPE -E4 (Castlewood South Storm)	17.89	3.64	1.69	612.73	612.56	57.0	30.0			57.0	1	0.003	0.013	6.38	22.39	619.26	619.15	619.05	618.94
PIPE -E5 (Castlewood South Storm)	18.03	3.67	1.71	612.95	612.73	75.5	30.0			75.5	1	0.003	0.013	6.45	22.14	619.54	619.39	619.33	619.18
PIPE -E6 (Castlewood South Storm)	18.25	3.72	1.71	613.29	612.95	110.8	30.0			119.9	1	0.003	0.013	6.52	22.55	619.90	619.68	619.69	619.47
PIPE -E7 (Castlewood South Storm)	12.90	2.63	1.36	613.32	613.29	10.0	30.0			10.0	1	0.003	0.013	6.10	22.46	619.50	619.94	619.39	619.38
PIPE -E8 (Castlewood South Storm)	7.03	2.24	1.08	614.19	613.82	124.5	24.0			115.5	1	0.003	0.013	5.56	12.33	619.58	619.53	619.50	619.38
PIPE -E9 (Castlewood South Storm)	7.12	2.27	1.09	614.43	614.19	79.5	24.0			79.5	1	0.003	0.013	5.41	12.35	619.75	619.67	619.67	619.60
PIPE -E10 (Castlewood South Storm)	5.78	3.27	0.55	614.43	614.97	14.9	18.0			14.9	1	-0.037	0.013	5.28	20.08	619.91	619.87	619.75	619.70
PIPE -F1 (Castlewood South Storm)	21.53	4.39	1.94	611.91	611.74	55.2	30.0			56.7	1	0.003	0.013	5.47	22.76	617.66	617.69	617.37	617.21
PIPE -F2 (Castlewood South Storm)	18.83	3.84	1.76	612.22	611.91	104.8	30.0			103.3	1	0.003	0.013	5.56	22.31	617.92	617.84	617.69	617.47
PIPE -F3 (Castlewood South Storm)	15.36	4.89	(N/A)	612.72	612.84	40.4	24.0			40.4	1	-0.003	0.013	5.08	12.32	618.36	618.17	617.98	617.80
PIPE -F4 (Castlewood South Storm)	13.08	4.16	1.76	612.84	613.07	76.3	24.0			76.3	1	-0.003	0.013	5.35	12.42	618.71	618.56	618.44	618.19
PIPE -F5 (Castlewood South Storm)	13.17	4.19	1.77	613.27	613.07	66.1	24.0			66.1	1	0.003	0.013	5.50	12.44	619.06	618.95	618.79	618.57
PIPE -G1 (Castlewood South Storm)	9.24	5.23	(N/A)	613.72	613.43	96.8	18.0			118.8	1	0.003	0.013	4.55	5.72	619.15	618.41	618.73	617.98

FlexTable: **100 Y**ea**r** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -G2 (Castlewood South Storm)	6.32	3.58	(N/A)	613.75	613.72	10.0	18.0			9.2	1	0.003	0.013	4.91	5.75	618.86	619.23	618.66	618.63
PIPE -G3 (Castlewood South Storm)	6.34	3.59	1.29	613.80	613.75	14.8	18.0			14.6	1	0.003	0.013	4.83	6.10	618.84	618.94	618.64	618.58
PIPE -H1 (Castlewood South Storm)	6.11	3.46	1.28	612.29	612.16	41.2	18.0			30.7	1	0.003	0.013	4.40	5.90	616.89	617.24	616.70	616.56
PIPE -H2 (Castlewood South Storm)	6.13	3.47	(N/A)	612.37	612.29	28.9	18.0			29.0	1	0.003	0.013	4.50	5.53	617.08	617.05	616.89	616.79
PIPE -I1 (Castlewood South Storm)	20.00	4.07	1.15	611.35	610.04	104.8	30.0			104.8	1	0.013	0.013	5.99	45.87	616.54	616.29	616.28	616.03
PIPE -I2 (Castlewood South Storm)	12.12	3.86	1.60	611.88	611.85	10.0	24.0			10.0	1	0.003	0.013	3.83	12.39	615.95	616.63	615.71	615.69
PIPE -I3 (Castlewood South Storm)	8.27	2.63	1.20	612.13	611.88	84.8	24.0			81.3	1	0.003	0.013	3.75	12.28	615.86	615.99	615.75	615.63
PIPE -I4 (Castlewood South Storm)	8.29	4.69	(N/A)	612.21	612.13	25.2	18.0			30.6	1	0.003	0.013	3.52	5.77	616.15	615.99	615.81	615.65
PIPE -J1 (Castlewood South Storm)	6.20	1.97	0.60	611.72	611.01	35.5	24.0			35.5	1	0.020	0.013	6.22	31.95	617.32	617.32	617.26	617.23
PIPE -J2 (Castlewood South Storm)	6.22	3.52	0.68	612.80	612.22	29.0	18.0			30.4	1	0.020	0.013	5.01	14.83	617.53	617.43	617.34	617.24
PIPE -K1 (Castlewood South Storm)	11.78	3.75	1.55	611.30	611.61	103.1	24.0			95.3	1	-0.003	0.013	5.16	12.42	616.96	617.53	616.74	616.46
PIPE -K3 (Castlewood South Storm)	9.97	3.17	1.36	611.61	611.82	70.2	24.0			79.5	1	-0.003	0.013	5.32	12.32	617.22	617.08	617.06	616.93
PIPE -K4 (Castlewood South Storm)	10.00	3.18	1.39	611.82	611.90	28.9	24.0			30.3	1	-0.003	0.013	5.36	12.06	617.40	617.37	617.24	617.18
PIPE -LA A1 (Castlewood South Storm)	6.79	3.84	(N/A)	610.99	610.89	32.1	18.0			31.3	1	0.003	0.013	4.03	5.71	615.28	615.43	615.05	614.92
PIPE -LA A2 (Castlewood South Storm)	5.80	1.85	0.97	610.36	610.25	33.7	24.0			33.7	1	0.003	0.013	4.18	12.33	614.51	614.49	614.46	614.44
PIPE -LA A3 (Castlewood South Storm)	3.29	1.86	0.81	610.83	610.80	11.8	18.0			11.8	1	0.003	0.013	4.05	5.75	614.92	614.91	614.86	614.85
PIPE -LA A4 (Castlewood South Storm)	3.53	4.50	(N/A)	611.71	611.81		12.0			38.1	1	-0.003	0.013	4.51	1.79	616.91	616.54	616.60	616.22
PIPE -LA A5 (Castlewood South Storm)	7.37	4.17	(N/A)	612.06	612.03	12.5	18.0			12.5	1	0.003	0.013	4.78	5.75	617.14	617.10	616.87	616.81
PIPE -LA A6 (Castlewood South Storm)	8.58	4.86	(N/A)	612.62	612.58	12.8	18.0			12.8	1	0.003	0.013	4.81	5.75	617.84	617.76	617.48	617.39

FlexTable: **100 Y**ea**r** Conduit Table

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PIPE -LA A7 (Castlewood South Storm)	6.70	3.79	(N/A)	613.71	613.67	13.5	18.0			13.5	1	0.003	0.013	4.63	5.72	618.57	618.52	618.35	618.30
PIPE -LA A8 (Castlewood South Storm)	7.61	4.31	(N/A)	614.78	614.82	14.2	18.0			14.8	1	-0.003	0.013	4.17	5.72	619.32	619.24	619.03	618.96
PIPE -LA A9 (Castlewood South Storm)	4.71	2.66	1.02	615.26	615.17	29.4	18.0			23.2	1	0.003	0.013	3.58	5.81	618.92	619.33	618.81	618.75
PIPE -LA A10 (Castlewood South Storm)	7.99	4.52	(N/A)	615.22	615.18	14.5	18.0			14.5	1	0.003	0.013	3.57	5.52	619.15	619.41	618.83	618.75
PIPE -LA A11 (Castlewood South Storm)	1.83	1.04	0.58	615.92	616.01	30.3	18.0			30.6	1	-0.003	0.013	3.71	5.76	619.66	619.65	619.64	619.63
PIPE -LA B1 (Castlewood South Storm)	8.33	4.71	(N/A)	611.92	611.84	29.4	18.0			29.4	1	0.003	0.013	3.70	5.47	616.07	615.88	615.72	615.54
PIPE -LA B2 (Castlewood South Storm)	7.70	4.36	(N/A)	611.91	611.87	14.4	18.0			14.4	1	0.003	0.013	4.06	5.67	616.30	616.38	616.01	615.93
PIPE -LA B3 (Castlewood South Storm)	4.37	2.47	0.98	612.33	612.24	29.0	18.0			29.0	1	0.003	0.013	4.43	5.75	616.82	617.22	616.73	616.68
PIPE -LA B4 (Castlewood South Storm)	9.11	5.15	(N/A)	612.44	612.40	14.8	18.0			14.8	1	0.003	0.013	4.54	5.45	617.46	617.56	617.05	616.94
PIPE -LA B5 (Castlewood South Storm)	8.94	5.06	(N/A)	614.42	614.37	14.8	18.0			14.8	1	0.003	0.013	4.21	5.75	619.09	619.03	618.69	618.58
PIPE -LA B6 (Castlewood South Storm)	3.06	1.73	0.78	614.71	614.62	29.0	18.0			29.0	1	0.003	0.013	4.34	5.72	619.03	619.77	618.99	618.96
PIPE -LA B7 (Castlewood South Storm)	10.66	6.03	(N/A)	614.69	614.65	14.8	18.0			14.8	1	0.003	0.013	4.26	5.45	619.63	619.60	619.06	618.91
PIPE -LA B8 (Castlewood South Storm)	3.41	1.09	0.72	614.98	614.87	35.0	24.0			70.0	1	0.003	0.013	4.86	12.31	619.76	619.76	619.74	619.74
PIPE -LA B9 (Castlewood South Storm)	5.51	3.12	1.18	615.79	615.70	29.0	18.0			29.0	1	0.003	0.013	3.49	5.75	619.42	620.01	619.27	619.19
PIPE -LA B10 (Castlewood South Storm)	5.05	2.86	1.09	615.77	615.73	14.8	18.0			14.8	1	0.003	0.013	3.41	5.75	619.30	619.59	619.17	619.14
PIPE -LA B11 (Castlewood South Storm)	10.49	3.34	1.42	615.32	615.44	39.7	24.0			39.7	1	-0.003	0.013	3.85	12.35	619.43	619.49	619.26	619.17
PIPE -LA C1 (Castlewood South Storm)	6.52	3.69	(N/A)	610.97	610.89	28.7	18.0			28.7	1	0.003	0.013	5.55	5.54	616.76	616.88	616.55	616.44

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Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -LA C2 (Castlewood South Storm)	5.09	2.88	1.12	610.96	610.92	15.1	18.0			15.1	1	0.003	0.013	5.44	5.61	616.52	616.94	616.40	616.36
PIPE -LA C3 (Castlewood South Storm)	10.58	3.37	1.42	611.88	611.79	29.0	24.0			29.0	1	0.003	0.013	5.01	12.39	617.04	617.68	616.86	616.80
PIPE -LA C4 (Castlewood South Storm)	5.10	2.89	1.10	611.91	611.87	14.8	18.0			14.8	1	0.003	0.013	5.03	5.72	617.06	617.21	616.94	616.90
PIPE -LA C5 (Castlewood South Storm)	8.48	4.80	(N/A)	612.25	612.20	14.8	18.0			21.2	1	0.003	0.013	4.92	5.79	617.57	617.47	617.21	617.12
PIPE -LA C6 (Castlewood South Storm)	13.41	7.59	(N/A)	614.05	614.00	14.8	18.0			12.4	1	0.003	0.013	3.83	5.78	618.96	619.02	618.07	617.83
PIPE -LA C7 (Castlewood South Storm)	9.39	5.31	(N/A)	614.04	613.95	29.0	18.0			29.0	1	0.003	0.013	3.96	5.75	618.58	618.83	618.14	617.91
PIPE -LA C8 (Castlewood South Storm)	3.48	1.97	0.84	615.03	614.94	32.7	18.0			32.7	1	0.003	0.013	3.97	5.75	619.00	618.96	618.94	618.90
PIPE -LA D1 (Castlewood South Storm)	9.21	5.21	(N/A)	612.19	612.10	30.3	18.0			30.8	1	0.003	0.013	3.57	5.82	616.32	616.09	615.90	615.67
PIPE -LA D2 (Castlewood South Storm)	6.69	3.79	(N/A)	612.20	612.14	19.9	18.0			20.1	1	0.003	0.013	3.84	5.72	616.29	616.21	616.07	615.99
PIPE -LA D3 (Castlewood South Storm)	12.53	7.09	(N/A)	613.01	612.90	36.1	18.0			36.1	1	0.003	0.013	4.29	5.77	618.49	617.97	617.71	617.19
PIPE -LA E1 (Castlewood South Storm)	5.45	1.74	0.93	612.44	612.35	29.0	24.0			29.0	1	0.003	0.013	5.67	12.39	618.08	618.06	618.03	618.02
PIPE -LA E2 (Castlewood South Storm)	5.80	3.28	1.24	614.29	614.37	29.0	18.0			29.0	1	-0.003	0.013	5.10	5.75	619.64	619.97	619.47	619.38
PIPE -LA E3 (Castlewood South Storm)	6.70	3.79	(N/A)	614.32	614.36	14.8	18.0			14.8	1	-0.003	0.013	5.05	5.78	619.65	619.59	619.43	619.37
PIPE -LA E4 (Castlewood South Storm)	2.17	1.23	0.39	614.43	615.01	29.0	18.0			23.0	1	-0.020	0.013	5.36	14.91	619.82	619.81	619.80	619.79
PIPE -LA F1 (Castlewood South Storm)	4.71	2.67	1.03	612.95	612.91	15.0	18.0			15.0	1	0.003	0.013	4.57	5.75	617.61	617.79	617.50	617.47
PIPE -LA F2 (Castlewood South Storm)	5.68	3.21	1.21	613.36	613.23	43.8	18.0			32.2	1	0.003	0.013	4.70	5.74	618.21	618.09	618.05	617.93
PIPE -LA F3 (Castlewood South Storm)	3.46	1.96	0.84	613.43	613.34	29.1	18.0			29.1	1	0.003	0.013	4.85	5.74	618.28	618.48	618.22	618.19

FlexTable: **100 Y**ea**r** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -LA G1 (Castlewood South Storm)	2.96	1.68	0.76	613.81	613.72	29.0	18.0			29.6	1	0.003	0.013	4.91	5.82	618.69	619.17	618.65	618.63
PIPE -LA I1 (Castlewood South Storm)	8.10	4.58	(N/A)	611.94	611.85	29.0	18.0			29.0	1	0.003	0.013	3.83	5.75	616.18	616.67	615.86	615.69
PIPE -LA I2 (Castlewood South Storm)	6.39	3.62	(N/A)	611.93	611.88	14.8	18.0			14.8	1	0.003	0.013	3.75	5.78	615.89	616.03	615.69	615.63
PIPE -LA K2 (Castlewood South Storm)	3.04	1.72	0.77	612.15	612.11	14.5	18.0			10.3	1	0.003	0.013	4.89	5.78	617.05	617.04	617.01	616.99
PIPE -M1 (Castlewood South Storm)	2.39	1.35	0.67	615.13	614.95	59.5	18.0			59.5	1	0.003	0.013	4.36	5.75	619.37	619.34	619.34	619.31
PIPE -M2 (Castlewood South Storm)	2.40	1.36	0.68	615.17	615.13	14.8	18.0			14.8	1	0.003	0.013	4.24	5.75	619.41	619.40	619.38	619.37
PIPE -N1 (Castlewood South Storm)	3.46	1.96	0.53	614.42	613.56	57.9	18.0			55.3	1	0.015	0.013	5.47	12.87	619.15	619.09	619.09	619.03
PIPE -N2 (Castlewood South Storm)	3.53	2.00	0.54	615.27	614.42	56.2	18.0			58.8	1	0.015	0.013	4.71	12.86	619.26	619.19	619.19	619.13
PIPE -N3 (Castlewood South Storm)	3.59	2.03	0.87	615.40	615.27	46.2	18.0			36.7	1	0.003	0.013	4.00	5.68	619.38	619.33	619.32	619.26
PIPE -OFF1 (1) (1) (Castlewood South Storm)	118.54	7.66	2.21	608.37	608.33	16.1		3.0	7.0	16.1	1	0.003	0.013	2.87	135.82	611.76	611.74	611.20	611.19
PIPE -OFF1 (1) (Castlewood South Storm)	115.50	5.50	2.17	608.50	608.37	41.2		3.0	7.0	41.2	1	0.003	0.013	4.47	135.82	613.41	613.32	612.94	612.85
PIPE -OFF1 (Castlewood South Storm)	113.38	5.40	2.14	608.54	608.50	15.6		3.0	7.0	15.6	1	0.003	0.013	4.36	135.82	613.34	613.59	612.89	612.85
PIPE -OFF5 (1) (1) (Castlewood South Storm)	64.85	10.32	(N/A)	612.74	612.70	12.5	24.0			23.6	2	0.003	0.013	1.89	24.94	616.57	616.32	614.92	614.59
PIPE -OFF5 (1) (Castlewood South Storm)	64.42	10.25	(N/A)	612.83	612.74	31.0	24.0			31.0	2	0.003	0.013	3.19	24.78	618.19	617.56	616.55	615.92
PIPE -OFF5 (Castlewood South Storm)	62.70	9.98	(N/A)	612.87	612.83	12.9	24.0			12.9	2	0.003	0.013	4.20	24.90	618.82	619.13	617.28	617.03
PIPE -OFF9 (1) (1) (Castlewood South Storm)	7.45	2.37	1.12	614.97	614.92	17.7	24.0			27.0	1	0.003	0.013	2.24	12.39	617.27	617.25	617.18	617.16
PIPE -OFF9 (1) (Castlewood South Storm)	7.00	2.23	1.08	615.10	614.97	41.5	24.0			41.2	1	0.003	0.013	2.27	12.37	617.36	617.32	617.28	617.24

FlexTable: **100 Y**ea**r** Conduit Table

Label	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Diameter (in)	Rise (ft)	Span (ft)	Length (Scaled) (ft)	Number of Barrels	Slope (Calculated) (ft/ft)	Manning's n	Depth (Out) (ft)	Capacity (Full Flow) (cfs)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE -OFF9 (Castlewood South Storm)	6.59	2.10	1.04	615.21	615.10	36.2	24.0			31.8	1	0.003	0.013	2.23	12.41	617.43	617.40	617.36	617.33

FlexTable: **25-Year** Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's, n
CH-1	608.33	608.12	74.7	0.003	62.03	6.13	1.87	2.05	610.19	610.17	.038
CH-2	608.12	608.44	97.8	-0.003	116.50	7.84	2.12	2.05	610.56	610.17	.038
CH-3	607.80	608.12	30.0	-0.011	116.23	11.93	2.05	1.65	610.17	609.45	.038
CH-4	608.78	609.36	114.7	-0.005	117.36	7.31	3.36	3.95	612.72	612.73	.038
CH-5	609.36	610.10	153.4	-0.005	65.06	6.06	2.61	3.36	612.71	612.72	.038

FlexTable: 100-Year Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's, n
CH-1	608.33	608.12	74.7	0.003	89.50	6.87	2.47	2.64	610.80	610.76	.038
CH-2	608.12	608.44	97.8	-0.003	137.29	8.22	2.72	2.64	611.16	610.76	.038
CH-3	607.80	608.12	30.0	-0.011	170.83	13.47	2.64	2.18	610.76	609.98	.038
CH-4	608.78	609.36	114.7	-0.005	138.51	7.70	3.40	3.99	612.76	612.77	.038
CH-5	609.36	610.10	153.4	-0.005	79.31	6.47	2.64	3.40	612.74	612.76	.038

EXHIBIT K

2-YEAR CHANNEL CALCULATIONS

FlexTable: Channel Table

Label	Invert (Start) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Flow (cfs)	Velocity (ft/s)	Depth (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Manning's, n
CH-1	608.33	608.12	74.7	0.003	29.79	4.77	1.19	1.37	609.51	609.49	.038
CH-2	608.12	608.44	97.8	-0.003	73.82	6.85	1.54	1.51	609.98	609.63	.038
CH-3	607.80	608.12	30.0	-0.011	63.75	9.68	1.37	1.07	609.49	608.87	.038
CH-4	608.78	609.36	114.7	-0.005	74.44	6.31	2.63	3.21	611.99	612.00	.038
CH-5	609.36	610.10	153.4	-0.005	36.82	4.90	1.88	2.63	611.98	611.99	.038

City of Taylor
PZ-2024-2143
The Retreat at Mallard Final Plat
Staff Report

Item Details

Agenda No.	3
Requested Action:	Consider Disapproval of The Retreat at Mallard Final Plat
Address/Location:	Generally located along Mallard Lane
Legal Description:	19.617-acre tract of land part of and out of the William J. Baker Survey, Abstract No 65, more particularly described by Williamson Central Appraisal District Parcel R018622, Taylor, Williamson County, Texas.
Current Zoning:	P2.5 – Large Lot
Current Use:	Vacant Acreage
Applicant:	Trevor Tast, TX2 Engineering
Case History:	This is the second submission of the final plat.
Staff Recommendation:	The submitted Final Plat does not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Final Plat.

Attachments

1. Staff Comments
2. Location Map
3. Proposed Final Plat

City of Taylor
400 Porter Street
Taylor, TX 76574
(512) 352-3675
www.ci.taylor.tx.us

Trevor Tast
TX2 Engineering.com
645 Floral Ave Ste C
New Braunfels TX 78130
Trevor@TX2engineering.com

Date: Tuesday, September 3, 2024

Address: Mallard Lane, Taylor 76574

Permit Number PZ-2024-2143

Dear Trevor Tast,

Staff has completed its review of plans for The Retreat at Mallard Final Plat that is to be generally located at Mallard Lane, Taylor, TX76574. There are some corrections that need to be made prior to recordation of the plat. Comments from this review follow.

Planning Department Comments
The following comments have been provided by Courtney Peres. Should you have any questions or require additional information regarding any of these comments, please contact Courtney Peres by email at courtney.peres@taylortx.gov.

1. Revise Director name to Scott Dunlop.
2. Seek compliance with outstanding Engineering comments.

Engineering Department Review
The following comments have been provided by Javier Vasquez. Should you have any questions or require additional information regarding any of these comments, please contact Javier Vasquez at (713) 576-3691 or by email at javier.vasquez@hdrinc.com.

*See Associated Documents section for a PDF containing the following engineering comments:

Final Plat - Engineering Review 02

Note: Previous comments on Sheet 1 (comments 5-12) were not responded to in the comment response letter issued.

Sheet 1 of 2

1. Unresolved: Outfall requirements to be coordinated with adjacent Subdivision lot owner (The Grove).

Sheet 2 of 2

1. Unresolved: Engineer's Certificate - Update to "Licensed"
2. Update DS Director Name to new Director

Fire Department Comments (PZ)
The following comments have been provided by Bobby Copeland. Should you have any questions or require additional information regarding any of these comments, please contact Bobby Copeland at (512) 352-6992 or by email at robert.copeland@taylortx.gov.

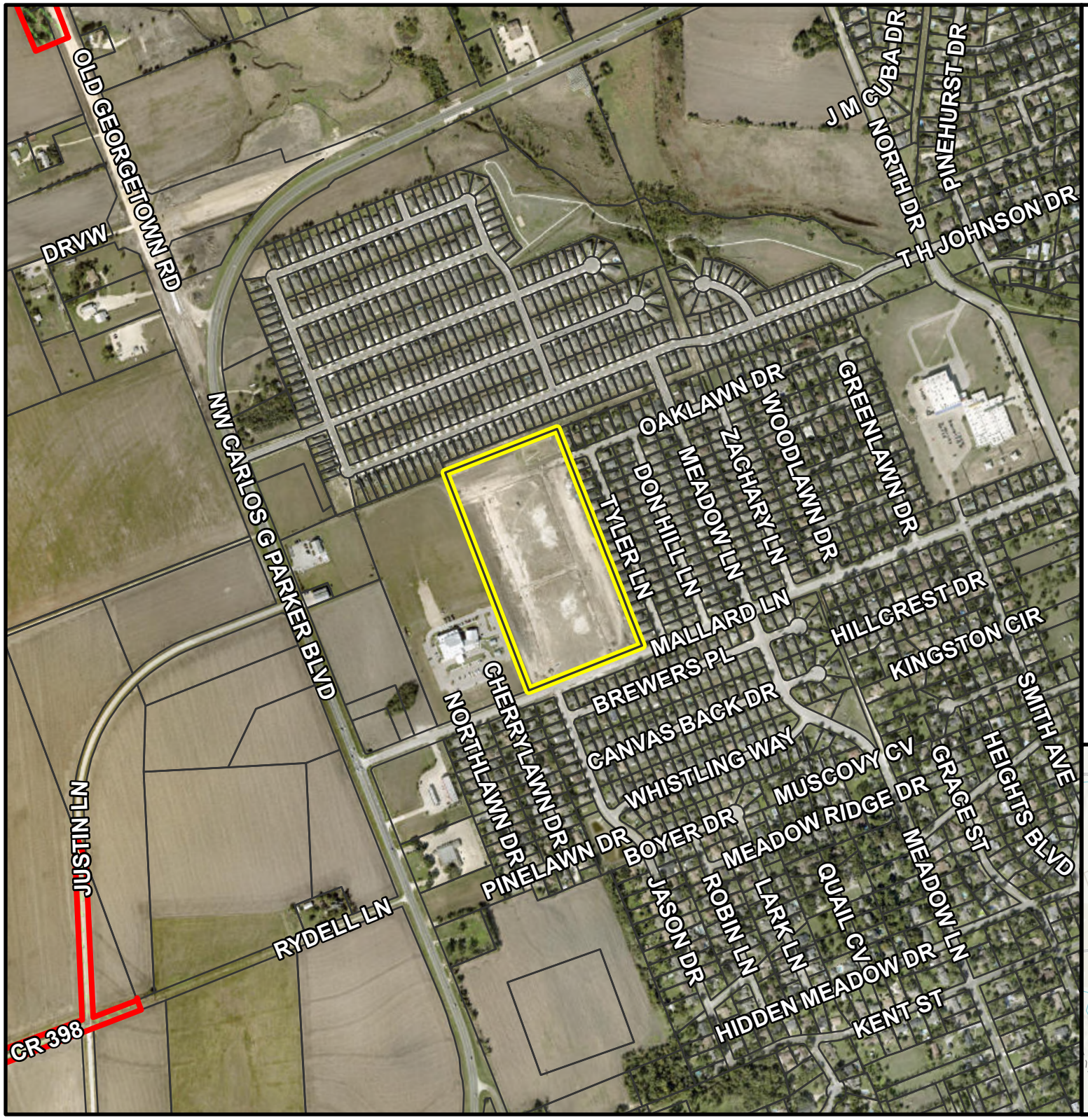
1. Previously reviewed with no comments.

Please revise the plat to address the comments noted above. Following revision, submit the plat electronically with a resolution letter in PDF format.

Should you have questions regarding specific comments, please contact the staff member referenced under the section in which the comment occurs. Should you have questions or require additional information regarding the plan review process itself, please feel free to contact me directly. I can be reached by e-mail at courtney.peres@taylortx.gov.

Thank you,

Courtney Peres, CNU-A
Planning Manager
City of Taylor

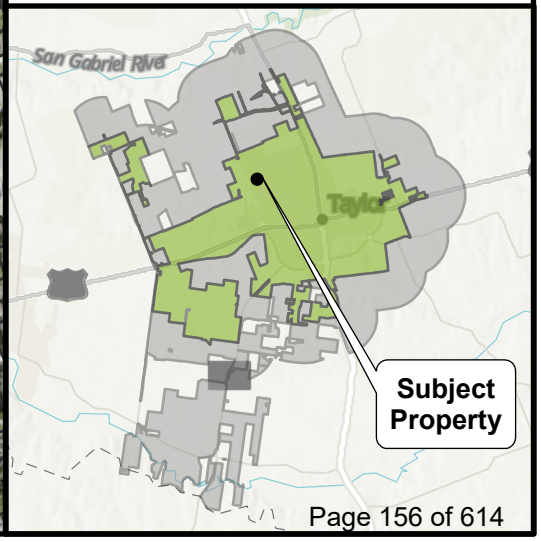


PZ-2024-2143

Mallard Ln.
Final Plat
Location Map
Approximately 19.6 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

N 0 750 1,500
Feet



THE RETREAT AT MALLARD FINAL PLAT

BEING A FINAL PLAT CONSISTING OF APPROXIMATELY 19.62 ACRES, PART OF AND OUT OF THE WILLIAM J. BAKER SURVEY, ABSTRACT NO. 65, MORE CLEARLY DESCRIBED IN THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOCUMENT NUMBER 2021110292, TAYLOR, WILLIAMSON COUNTY, TEXAS.

STREET TYPE	STREET NAME	STREET LENGTH (FT)	PAVEMENT AREA (BC-BC)(SQ FT)
YIELD STREET	OAKLAWN DRIVE	671	19450
YIELD STREET	JASON DRIVE	1151	33392
YIELD STREET	CAYUGA DRIVE	1151	33369
YIELD STREET	PEKIN WAY	351	10168
TOTAL		3323	96379

ROW	STREET LENGTH (FT)	AREA (SQ. FT.)
TOTAL	3323	157772

DETENTION RESERVE	SQ. FT.
1	36687

LOT AND BLOCK TABLE		
BLOCK #	SQ. FT.	LENGTH (FT)
1	141987	1086
2	156418	521
3	159031	515
4	146505	1086
5	56146	671

BLOCK 1	
LOT	SQ. FT.
1	9922
2	8610
3	8674
4	8897
5	8839
6	9153
7	9450
8	9450
9	9450
10	9449
11	9449
12	9449
13	9449
14	9449
15	12296

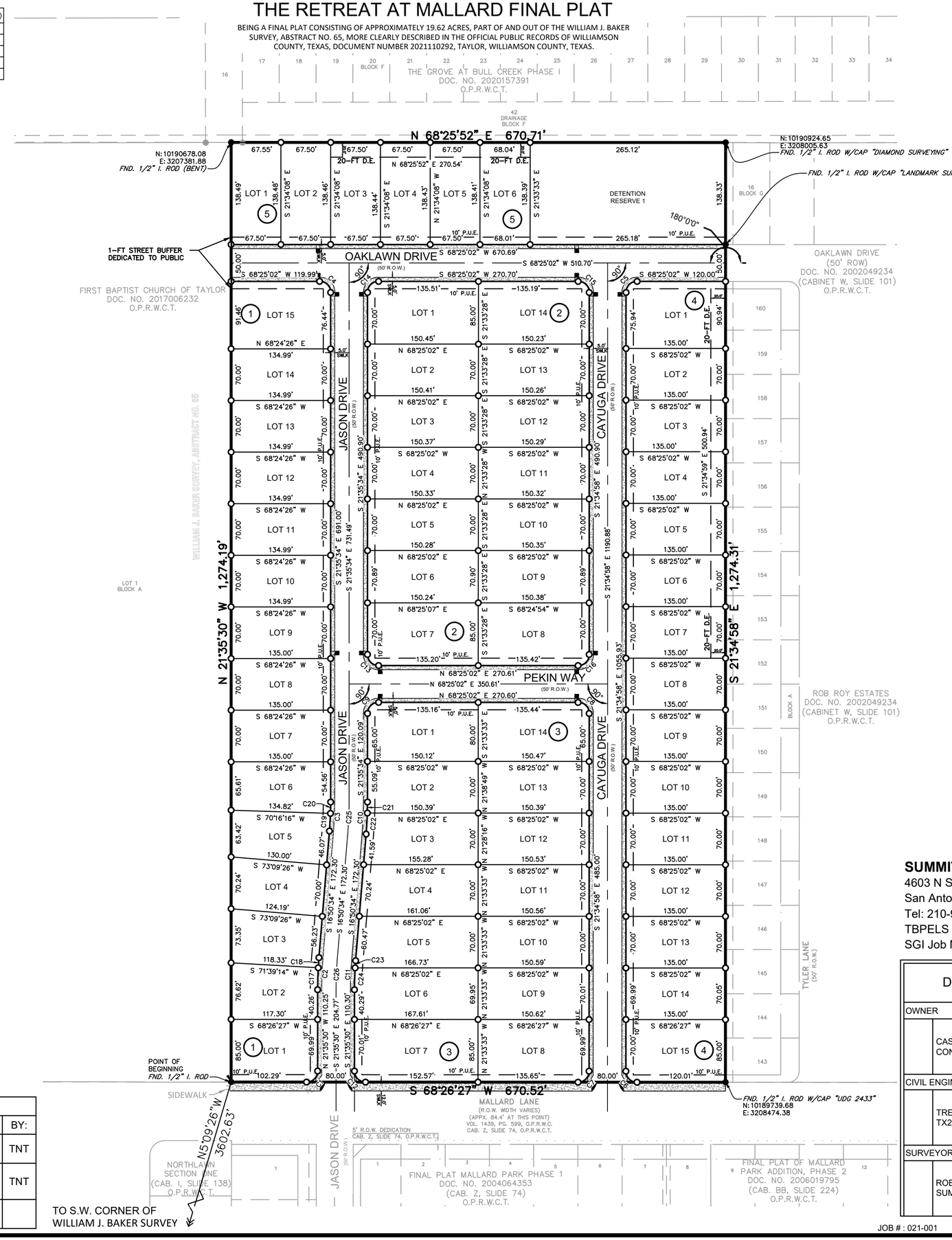
BLOCK 2	
LOT	SQ. FT.
1	12745
2	10530
3	10527
4	10524
5	10521
6	10653
7	12721
8	12735
9	10660
10	10523
11	10521
12	10519
13	10517
14	12719

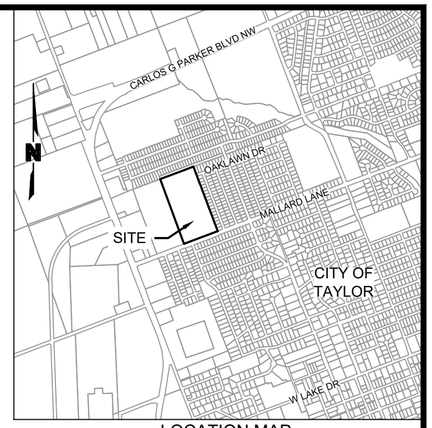
BLOCK 3	
LOT	SQ. FT.
1	11963
2	10512
3	10679
4	11072
5	11476
6	11711
7	14197
8	12756
9	10539
10	10540
11	10538
12	10532
13	10530
14	11988

BLOCK 4	
LOT	SQ. FT.
1	12229
2	9450
3	9450
4	9450
5	9450
6	9450
7	9450
8	9450
9	9450
10	9450
11	9450
12	9450
13	9450
14	9453
15	11427

BLOCK 5	
LOT	SQ. FT.
1	9351
2	9347
3	9345
4	9345
5	9343
6	9415

CURVE TABLE					
CURVE #	RADIUS	DIRECTION	LENGTH	CHORD	DELTA ANGLE
C1	15.00'	N23°25'29"E	23.57'	21.22'	90°01'57"
C2	525.00'	N19°13'02"W	43.51'	43.50'	4°44'56"
C3	475.00'	N19°13'02"W	39.37'	39.36'	4°44'56"
C4	15.00'	N66°35'16"W	23.56'	21.21'	89°59'25"
C5	15.00'	S23°25'02"W	23.56'	21.21'	90°00'00"
C6	15.00'	S66°34'16"E	23.56'	21.21'	89°58'34"
C7	15.00'	N23°25'44"E	23.57'	21.22'	90°01'26"
C8	15.00'	N66°34'58"W	23.56'	21.21'	90°00'00"
C9	15.00'	S23°24'44"W	23.56'	21.22'	90°00'35"
C10	525.00'	S19°13'02"E	43.51'	43.50'	4°44'56"
C11	475.00'	S19°13'02"E	39.37'	39.36'	4°44'56"
C12	15.00'	S66°34'31"E	23.55'	21.21'	89°58'03"
C13	15.00'	S66°35'14"E	23.56'	21.21'	89°59'25"
C14	15.00'	S23°24'46"W	23.56'	21.21'	90°00'35"
C15	15.00'	N66°34'58"W	23.56'	21.21'	90°00'00"
C16	15.00'	N23°25'01"E	23.56'	21.21'	90°00'00"
C17	525.00'	S19°58'08"E	29.74'	29.73'	3°14'44"
C18	525.00'	S17°35'40"E	13.77'	13.77'	1°30'12"
C19	475.00'	S18°17'09"E	23.93'	23.92'	2°53'10"
C20	475.00'	S20°39'37"E	15.44'	15.44'	1°51'46"
C21	525.00'	N20°46'40"W	14.91'	14.91'	1°37'38"
C22	525.00'	N18°24'13"W	28.60'	28.60'	3°07'17"
C23	475.00'	N17°25'53"W	9.76'	9.76'	1°10'39"
C24	475.00'	N19°48'21"W	29.61'	29.60'	3°34'17"
C25	500.00'	S19°13'02"E	41.44'	41.43'	4°44'56"
C26	500.00'	S19°13'02"E	42.48'	42.46'	4°52'03"





LOCATION MAP

SCALE: 1" = 2000'

0' 50' 100' 200'

SCALE IN FEET

1" = 100'

LEGEND

- ● 1/2" IRON ROD FOUND UNLESS OTHERWISE NOTED
- ■ SPINDLE FOUND
- ◉ 60D NAIL FOUND
- ◎ 4" FENCE POST FOUND
- ○ 5/8" IRON ROD W/CAP STAMPED "SUMMIT GEOMATICS, INC" SET
- D.E. DRAINAGE EASEMENT
- P.U.E. PUBLIC UTILITY EASEMENT
- ADJACENT PROPERTY LINES
- 1140 EXISTING CONTOURS
- SURVEY LINES
- R.O.W. RIGHT-OF-WAY
- O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS
- PEDESTRIAN SIDEWALK
- # BLOCK NUMBER

REVISION TABLE			
REV. NO.	DATE	DESCRIPTION	BY:
1	6/5/2024	RESUBMITTAL OF PLAT; UPDATED PER CITY STAFF COMMENTS	TNT
2	8/2/2024	RESUBMITTAL OF PLAT; UPDATED PER CITY STAFF COMMENTS	TNT

SUMMIT GEOMATICS, INC.
4603 N Stahl Park Suite 103
San Antonio, Texas 78217
Tel: 210-971-4870 ● summit-geomatics.com
TBPELS Firm No. 10194657
SGI Job No. 21.0004

SUMMIT GEOMATICS

DEVELOPMENT TEAM CONTACT INFORMATION		
OWNER		
	CASTLEROCK COMMUNITIES, LLC CONTACT: LANCE WRIGHT	2401 FOUNTAIN VIEW DR #215, HOUSTON, TX 77057 LWRIGHT@C-ROCK.COM
CIVIL ENGINEER		
	TREVOR TAST, P.E. TX2 ENGINEERING	645 FLORAL AVE, STE. C NEW BRAUNFELS, TX 78130 (816) 510-9151 TREVOR@TX2ENGINEERING.COM
SURVEYOR		
	ROBERT A. HARPER, RPLS, PLS SUMMIT GEOMATICS, INC.	4603 N. STAHL PARK SUITE 103 SAN ANTONIO, TX 78217 (210) 971-4870 RHARPER@SUMMIT-GEOMATICS.COM

THE RETREAT AT MALLARD FINAL PLAT

BEING A FINAL PLAT CONSISTING OF APPROXIMATELY 19.62 ACRES, PART OF AND OUT OF THE WILLIAM J. BAKER SURVEY, ABSTRACT NO. 65, MORE CLEARLY DESCRIBED IN THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOCUMENT NUMBER 2021110292, TAYLOR, WILLIAMSON COUNTY, TEXAS.

NOTES:

1. REFERENCE SHEET 1 FOR LINE TABLE & CURVE TABLE INFORMATION.
2. UTILITY PROVIDERS -- WATER: CITY OF TAYLOR; WASTEWATER: CITY OF TAYLOR; ELECTRICITY: ONCOR ELECTRIC DELIVERY COMPANY
3. ALL STRUCTURES AND/OR OBSTRUCTIONS ARE PROHIBITED IN DRAINAGE EASEMENTS.
4. THERE ARE NO AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NO.48491C0533F AND NO. 48491C0530F, EFFECTIVE DATE DECEMBER 20, 2019, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
5. A 10-FT PUBLIC UTILITY EASEMENT (P.U.E.) SHALL BE IN ACCORDANCE WITH THE CITY OF TAYLOR ZONING ORDINANCE, AS AMENDED.
6. ALL MINIMUM YARD (BUILDING) SETBACKS SHALL BE IN ACCORDANCE WITH THE CITY OF TAYLOR ZONING ORDINANCE, AS AMENDED.
7. MINIMUM FIRE FLOW OF 500 GALLONS PER MINUTES FOR NOT LESS THAN TWO (2) HOURS SHALL BE PROVIDED.
8. BEARING ORIENTATION IS BASED UPON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NORTH AMERICAN DATUM OF 1983 (NAD 83), 2011 ADJUSTMENT, EPOCH 2010.00. DISTANCES SHOWN HEREON ARE IN SURFACE. TO CONVERT DISTANCES TO GRID MULTIPLY BY THE COMBINED SCALE FACTOR OF 0.9998392637.
9. THIS M&B DESCRIPTION WAS PREPARED IN CONJUNCTION WITH A SURVEY OF EVEN DATE.
10. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND LOT MARKERS SET WITH 1/2" IRON PIN PLASTIC CAP LABELED SUMMIT GEOMATICS.
11. PROJECT NOTE: 64 LOTS, 5 BLOCKS BEING 19.617 ACRES.
12. PROPERTY OWNERS ARE ADVISED THAT THEY ARE RESPONSIBLE FOR MAINTENANCE OF DEDICATED EASEMENTS ON THEIR PROPERTY AND MAY NOT UTILIZE THESE EASEMENTS FOR ANY PURPOSE DETRIMENTAL TO THEIR INTENDED USE (I.E. NO STRUCTURES, SEPTIC TANKS FIELDS, ETC.). GRANTEES OF SAID DEDICATED EASEMENTS RESERVE THE RIGHT OF ACCESS TO SUCH EASEMENTS.
13. THE SUBDIVIDER IS RESPONSIBLE TO NOTE THE LOCATION OF SIDEWALKS ON THE PLAT. PUBLIC SIDEWALKS THAT ARE NOT IN FRONT OF INDIVIDUAL, RESIDENTIAL LOTS MUST BE SHOWN ON THE PLAT/SUBDIVISION IMPROVEMENT PLANS & BUILD DURING SUBDIVISION IMPROVEMENT CONSTRUCTION. THE HOMEBUILDER SHALL BE RESPONSIBLE FOR CONSTRUCTING SIDEWALKS ADJACENT TO INDIVIDUAL HOUSE LOTS IN ALL RESIDENTIAL DISTRICTS AND THE SUBDIVIDER SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ALL OTHER SIDEWALKS INCLUDING ALL REQUIRED ADA RAMPS. SIDEWALKS SHALL BE INSTALLED ON AT LEAST ONE (1) SIDE OF THE STREET, BE A MINIMUM OF FIVE (5) FEET IN WIDTH AND BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ALL SIDEWALKS MUST BE IN COMPLIANCE WITH SPECIFICATIONS PROVIDED BY THE CITY ENGINEER.
14. ALL DRAINAGE AND DETENTION RESERVES SHOWN HEREIN ARE PRIVATE FACILITIES AND SHALL BE THE RESPONSIBILITY OF THE HOMEOWNERS ASSOCIATION. THE HOMEOWNERS ASSOCIATION SHALL BE REQUIRED TO MEET THE STANDARDS SPECIFIED BY THE CITY OF TAYLOR FOR DETENTION FACILITIES IN ACCORDANCE WITH CITY OF TAYLOR LAND DEVELOPMENT CODE CHAPTER 3.8.4 SECTION 2. THE CITY OF TAYLOR, TEXAS SHALL NOT BE RESPONSIBLE FOR MAINTENANCE ACTIVITIES FOR DRAINAGE AND DETENTION FACILITIES SHOWN HEREIN.
15. ALL STREET NAMES SHOWN HEREIN (OAKLAWN DRIVE, JASON DRIVE, PEKIN PLACE, AND CAYUGA COVE) HAVE BEEN APPROVED BY THE WILLIAMSON COUNTY 9-1-1 ADDRESSING DEPARTMENT.

DESCRIPTION OF A 19.62 ACRE TRACT OF LAND
SITUATED IN THE WILLIAM J. BAKER SURVEY, ABSTRACT NO. 65
WILLIAMSON COUNTY, TEXAS

BEING A 19.62 ACRE TRACT OF LAND OUT OF THE WILLIAM J. BAKER SURVEY, ABSTRACT NO. 65, WILLIAMSON COUNTY, TEXAS, TRACT BEING ALL OF A CALLED 19.617 ACRE TRACT OF LAND TO CASTLE ROCK COMMUNITIES, L.P. RECORDED IN DOCUMENT NO. 2021110292 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.T.) AND BEING DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD FOUND ON THE NORTH RIGHT-OF-WAY (R.O.W.) LINE OF MALLARD LANE (APPROXIMATELY 84.4' AT THIS POINT AS SHOWN IN FINAL PLAT MALLARD PARK PHASE 1, A SUBDIVISION PLAT RECORDED IN DOCUMENT NO. 2004064353 (CABINET Z, SLIDE 74), PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS (P.R.W.C.T.)) BEING THE SOUTHEAST CORNER OF LOT 1, BLOCK A OF FIRST BAPTIST CHURCH OF TAYLOR, A SUBDIVISION PLAT RECORDED IN DOCUMENT NO. 2017006232 O.P.R.W.C.T., MARKING THE SOUTHWEST CORNER OF SAID 19.617 ACRE TRACT AND THE HEREIN DESCRIBED TRACT;

THENCE, NORTH 21°35'30" WEST, DEPARTING FROM THE NORTH RIGHT-OF-WAY LINE OF SAID MALLARD LANE, WITH THE COMMON LINE OF SAID LOT 1 AND SAID 19.617 ACRE TRACT, A DISTANCE OF 1,274.19 FEET TO A 1/2-INCH IRON ROD BENT FOUND ON THE SOUTH LINE OF LOT 42, DRAINAGE LOT, BLOCK F OF THE GROVE AT BULL CREEK PHASE I, A SUBDIVISION PLAT RECORDED IN DOCUMENT NO. 2020157391, O.P.R.W.C.T. BEING THE NORTHEAST CORNER OF SAID LOT 1 MARKING THE NORTHWEST CORNER OF SAID 19.617 ACRE TRACT AND THE HEREIN DESCRIBED TRACT;

THENCE, NORTH 68°25'52" EAST, WITH THE COMMON LINE OF SAID DRAINAGE LOT AND SAID 19.617 ACRE TRACT, A DISTANCE OF 670.71 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "DIAMOND SURVEYING" FOUND FOR THE NORTHWEST CORNER OF LOT 16, BLOCK "G" OF ROB ROY ESTATES, A SUBDIVISION PLAT RECORDED IN DOCUMENT NO. 2002049234 (CABINET W, SLIDE 102), P.R.W.C.T., MARKING THE NORTHEAST CORNER OF SAID 19.617 ACRE TRACT AND THE HEREIN DESCRIBED TRACT;

THENCE, SOUTH 21°34'58" EAST, ALONG AND WITH THE COMMON LINE OF SAID ROB ROY ESTATES AND SAID 19.617 ACRE TRACT, A DISTANCE OF 1,274.31 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "UDG 2433" FOUND ON THE NORTH RIGHT-OF-WAY LINE SAID MALLARD LANE, FOR THE SOUTHWEST CORNER OF LOT 143, BLOCK "A", MARKING THE SOUTHEAST CORNER OF SAID 19.617 ACRE TRACT AND THE HEREIN DESCRIBED TRACT;

THENCE, SOUTH 68°26'27" WEST, ALONG AND WITH THE NORTH RIGHT-OF-WAY LINE OF SAID MALLARD LANE AND THE SOUTH LINE OF SAID 19.617 ACRE TRACT, A DISTANCE OF 670.52 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 19.62 ACRES OF LAND.

DEVELOPMENT TEAM CONTACT INFORMATION		
OWNER		
	CASTLEROCK COMMUNITIES, LLC CONTACT: LANCE WRIGHT	2401 FOUNTAIN VIEW DR #215, HOUSTON, TX 77057 LWRIGHT@C-ROCK.COM
CIVIL ENGINEER		
	TREVOR TAST, P.E. TX2 ENGINEERING	645 FLORAL AVE, STE. C NEW BRAUNFELS, TX 78130 (816) 510-9151 TREVOR@TX2ENGINEERING.COM
SURVEYOR		
	ROBERT A. HARPER, RPLS, PLS SUMMIT GEOMATICS, INC.	4603 N. STAHL PARK SUITE 103 SAN ANTONIO, TX 78217 (210) 971-4870 RHARPER@SUMMIT-GEOMATICS.COM

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS:

I, CASTLEROCK COMMUNITIES LLC, SOLE OWNER OF THE CERTAIN 19.62 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN DEEDS RECORDED IN DOCUMENT #2021110292, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE, SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS THE RETREAT AT MALLARD.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS____DAY OF_____, 20____.

_____
LANCE WRIGHT, CO-CEO
CASTLEROCK COMMUNITIES LLC
FORMERLY KNOWN AS CASTLEROCK COMMUNITITES LP

STATE OF TEXAS {
KNOW ALL MEN BY THE PRESENTS
COUNTY OF WILLIAMSON {

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS____DAY OF_____, 20____.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES _____

STATE OF TEXAS {
KNOW ALL MEN BY THE PRESENTS
COUNTY OF BEXAR {

I, ROBERT A. HARPER, LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES, OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF TAYLOR, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT _____,
COUNTY, TEXAS, THIS____DAY OF_____, 20____.

_____
_____

ROBERT A. HARPER
RPLS NO. 6582
SUMMIT GEOMATICS, INC.
4603 N. STAHL PARK SUITE 103
SAN ANTONIO, TEXAS 78217

(SEALED)

I, TREVOR TAST, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS NOT ENCROACHED BY A ZONE A FLOOD AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0533F & 48491C0530F, EFFECTIVE DATE OF DECEMBER 20, 2019, AND THAT EACH LOT CONFORMS TO THE CITY OF TAYLOR REGULATIONS. THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT
NEW BRAUNFELS, COMAL COUNTY, TEXAS, THIS ___DAY OF _____, A.D., 20___.

_____
TREVOR TAST
REGISTERED PROFESSIONAL ENGINEER
NO. 124101 STATE OF TEXAS

(SEALED)

DEVELOPMENT SERVICES DIRECTOR'S CERTIFICATION

I, COLIN HARRISON, DEVELOPMENT SERVICES DIRECTOR FOR THE CITY OF TAYLOR, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS

_____ _____
COLIN HARRISON, DIRECTOR DATE

PLANNING AND ZONING COMMISSION

THE SUBDIVISION TO BE KNOWN AS THE RETREAT AT MALLARD HAS BEEN ACCEPTED AND APPROVED, ACCORDING TO THE MINUTES OF THE MEETING OF THE TAYLOR PLANNING AND ZONING COMMISSION ON THE _____ DAY OF _____, 20_____, A.D.

_____ DATE _____
_____,CHAIRMAN

_____ DATE _____
_____, SECRETARY

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, NANCY E. RISTER, COUNTY CLERK OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20____, A.D., AT _____M. AND DULY RECORDED THIS THE_____DAY OF_____, 20____, A.D., _____O'CLOCK____M. IN THE OFFICIAL PUBLIC RECORDS OF OF SAID COUNTY, IN DOCUMENT #

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY E. RISTER
CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: _____
DEPUTY

City of Taylor
PZ-2024-2216
Taylor Pointe Preliminary Plat
Staff Report

Item Details

Agenda No.	4
Requested Action:	Consider Disapproval of Taylor Pointe Preliminary Plat
Address/Location:	Generally located at 715 Carlos G. Parker Blvd. SW
Legal Description:	Approximately 39.015 acres of land part of the G.M. Reese Survey, Abstract No. 533, more particularly described by Williamson Central Appraisal District Parcel R331170, Taylor, Williamson County, Texas.
Current Zoning:	P4 – Mix, P5 – Urban Center, EC – Employment Center, CS – Civic Space
Current Use:	Vacant Acreage
Applicant:	Sandy Brantley, Kirkman Engineering
Case History:	This is the second submission of the Preliminary Plat.
Staff Recommendation:	The submitted Preliminary Plat does not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Preliminary Plat.

Attachments

1. Staff Comments
2. Location Map
3. Proposed Plat Package

City of Taylor
400 Porter Street
Taylor, TX 76574
(512) 352-3675
www.ci.taylor.tx.us

Sandy Brantley
Kirkman Engineering
1130 Cottonwood Creek Trail, Suite C3
Cedar Park TX 78613
sandy.brantley@trustke.com

Date: Tuesday, September 3, 2024

Address: 715 Carlos G Parker Blvd SW, Taylor 76574

Permit Number PZ-2024-2216

Dear Sandy Brantley,

Staff has completed its review of plans for the Taylor Pointe Subdivision Preliminary Plat that is to be located at 715 Carlos G Parker Blvd SW, Taylor 76574. Staff's recommendation is for Denial at the September 10, 2024, Planning and Zoning Commission Meeting There are some corrections that need to be made prior to recordation of the plat. Comments from this review follow.

Planning Department Comments
The following comments have been provided by Parker McDowell. Should you have any questions or require additional information regarding any of these comments, please contact Parker McDowell at (512) 309-6797 or by email at parker.mcdowell@hdrinc.com.

1. Project number not revised in the bottom right of the plan
2. Owner information is missing. Provide name of contact and contact information
3. use a lighter line type for the topography to make the plan less busy.
4. label the ROW as existing or proposed
5. revising phasing lines to clearly indicate or provide a phasing plan to clearly illustrate the phasing
6. provide ROW width label
7. provide label for plat notes
8. provide the street class (Thoroughfare type) on the street table
9. Use a heavier line type for subdivision boundary to make it easier to see the limits of the plat
10. use a consistent line type for lots
11. provide match lines for details that are located on other sheets
12. update the lot count on the plat to reflect the addition of the small lots in block D, E, F & G and the lots that came from the remainder portions
13. why is there a separation between lot 5 and lot 6 in block D?
14. easements should be proposed by the plat
15. civic spaces should be separate lots
16. provide line data for the Caden Way Access easement
17. show the proposed public utility easements
18. label the easement shown in Block H, Lot 1
19. label the easements in block c, lots 1 & 2
20. Revise the field note total acreage to match the acreage. Total acreage in the notes equals 38.979 acres while title block says the plat consists of 39.015 acres.
21. Provide Engineer's Preliminary Review note (to be removed with final submittal) "For Review. This document is released for the purpose of review under the authority of (name of engineer & seal number). It is not to be used for bidding, permit or construction."

1. See attached Urban Design Consultant Comments - separate PDF.

Engineering Department Review
The following comments have been provided by Javier Vasquez. Should you have any questions or require additional information regarding any of these comments, please contact Javier Vasquez at (713) 576-3691 or by email at javier.vasquez@hdrinc.com.

*Please see the Associated Documents section of the permit page to download a copy of the plat PDF containing the

following engineering comments:

Preliminary Plat - Engineering Review 02

General: Plat formatting requires attention and is suggested that a comment resolution meeting be provided to review comments and coordinate questions from the applicant team.

Sheet 1 of 5

1. Phases are difficult to discern on the plat. Streets are typically included in phasing.
2. Label all contours
3. Subdivision boundary line to be heavyweight/solid line
4. Remove "septic". This is intended to be used as an option.
5. Update City permit number in the border
6. Notate right of way widths for all streets. (e.g. 60' ROW) (Typical)
7. Notate and dimension street width
8. Civic spaces to be dedicated lots
9. Verify and provide dedication of fire alleys on the plat taken from the neighborhood plan (Typical)
10. Verify with regulating plan if a portion of this is intended for drainge.Update lot configuration accordingly.
11. Show Pathway dedication on plat
12. Need to update with total number of lots shown
13. This will be designated as a pathway and is still ROW
14. Verify with regulating plan for location of all lot lines

Sheet 5 of 5

1. Verify and update to co-owner for certificates noted
2. Update certificates as there are lien holders shown
3. Will need to verify how these lots are owned without having a platted lot (see Owner blocks)

*Please see the Associated Documents section of the permit page to download a copy of the study PDF containing the following engineering comments:

Drainage Study - Engineering Review 02

1. Append the soils data and detention exhibit within the drainage report.
2. It is noted that the detention design is not being approved with the review of the report. It is considered as a schematic to demonstrate how the subdivision will plan for meeting detention and drainage requirements. The following are comments related to the detention exhibit:
    i. Please demonstrate that the outflow of the pond is restricted to Qcritical (2% of the existing 2-yr peak flow) or demonstrate that the outlet is sized to drawdown the 2yr flow within 72 hrs.
    ii. Please provide detail of the emergency spillway required per EM 3.15.1.F
    iii. Per EM 3.15.3.B, the minimum slope in grass-lined areas is 2%
    iv. Demonstrate the requirements for maintenance access and planning in EM 3.15.6 are met.

**Please see the Associated Documents section of the permit page to download a copy of the Memo PDF containing the following engineering comments:*

Traffic Impact Analysis (TIA) - Engineering Review 02

1. *Please download a copy of the review memo prepared by HDR dated 8/21/24 to detail comments and response to applicant's responses for 16 comments pertaining to the TIA Report review.*

**Please see the Associated Documents section of the permit page to download a copy of the PDF containing the following engineering comments:*

Utility Schematics - Engineering Review 02 (Submittal 01)

1. *Please remove P&P sheets from the plans. This submittal is intended to be schematic only to verify utility service to lots.*
2. *See applicable overall plan for water and sewer for locations to verify how lots are being services.*
3. *For proposed water main on FM 973, water main to be placed within easement outside of TxDOT ROW.*
4. *Verification to be made about servicing lots along FM 973 noted with private line off of Heather St. to avoid dead end.*

Fire Department Comments (PZ)

The following comments have been provided by Bobby Copeland. Should you have any questions or require additional information regarding any of these comments, please contact Bobby Copeland at (512) 352-6992 or by email at robert.copeland@taylortx.gov.

1. The previous fire department comment had been addressed.
2. The spelling of fire code is incorrect and is noted as being "file code" as shown on plat note #7.

Please revise the plat to address the comments noted above. Following revision, submit the plat electronically with a resolution letter in PDF format.

Should you have questions regarding specific comments, please contact the staff member referenced under the section in which the comment occurs. Should you have questions or require additional information regarding the plan review process itself, please feel free to contact me directly. I can be reached by telephone at (512) 309-6797, or by e-mail at parker.mcdowell@taylortx.gov.

Thank you,

Parker McDowell

Attachment



The design is subject to change. Not for construction.

Urban Design Comments

The following comments reflect general principles of urban design as reflected in the intent of Taylor's Land Development Code (LDC), Comprehensive Plan (CP), and the 715 CGP Neighborhood and Employment Center Plan (NECP) and may be applicable in locations other than those noted on the accompanying plan. Subsequent submissions may result in comments not listed here based on new or revised information in those submissions:

Within Zone EC:

1. Driveway connections to thoroughfares should use the minimum practical curb radii.

2. Stormwater management facilities, whether primarily wet or dry, shall be designed such that they add value to the neighborhood, rather than detract from it.

   2a. Dry facilities shall be landscaped to act as an open lawn or space for other unstructured recreation when dry, and shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.

   2b. Wet facilities shall be designed to look like natural ponds with gently sloping edges rather than steep "engineered" banks. Wet ponds shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.

   2c. Maintenance berms and/or maintenance access shall be accounted for in both wet and dry facilities.

3. Screen vehicular areas for drive-through facilities or gas stations placed on the street side of a building or any other location that is directly visible from adjacent properties with screen walls, mounding, and/or dense landscaping at least three (3) feet in height at the time of planting. *LDC § 5.4.5.2*

Within Zone P4:

4. Street shall connect to the adjacent property as established in the Neighborhood and Employment Center Plan, including coordination with the owner of the adjacent property. *NECP page B.6.*

5. *Resolved*



The design is subject to change. Not for construction.

Urban Design Comments, continued

Within Zone P5:

(6) Entrances to Retail or Office uses with Gallery, Arcade, or Shopfront Frontage Types are required fronting these Civic Spaces. This applies to all Frontages on the Civic Spaces. Parking lots do not satisfy this requirement. *NECP page B.7, item 8a.*

(6a) This Civic Space was proposed at a different location in the Neighborhood Plan and was fronted on all sides. *NECP page B.12*

(7) Entrances to Retail or Office uses with Gallery, Arcade, or Shopfront Frontage Types are required on Frontages that face these Civic Spaces from across a Thoroughfare. *NECP page B.7, item 8b.*

(8) Entrances are required fronting Path 1 and these Civic Spaces. *NECP page B.7, item 8c.*

(9) *Resolved.*

(10) Parking shall be located in the third layer of the lot. *LDC §4.3.1.8 and §5.4.2.* Parking lots and dumpsters not screened by buildings shall be screened from view.

(11) The buildings on Lot 15 C must be placed in front of the parking.

(12) *Combined with 10 for clarity.*

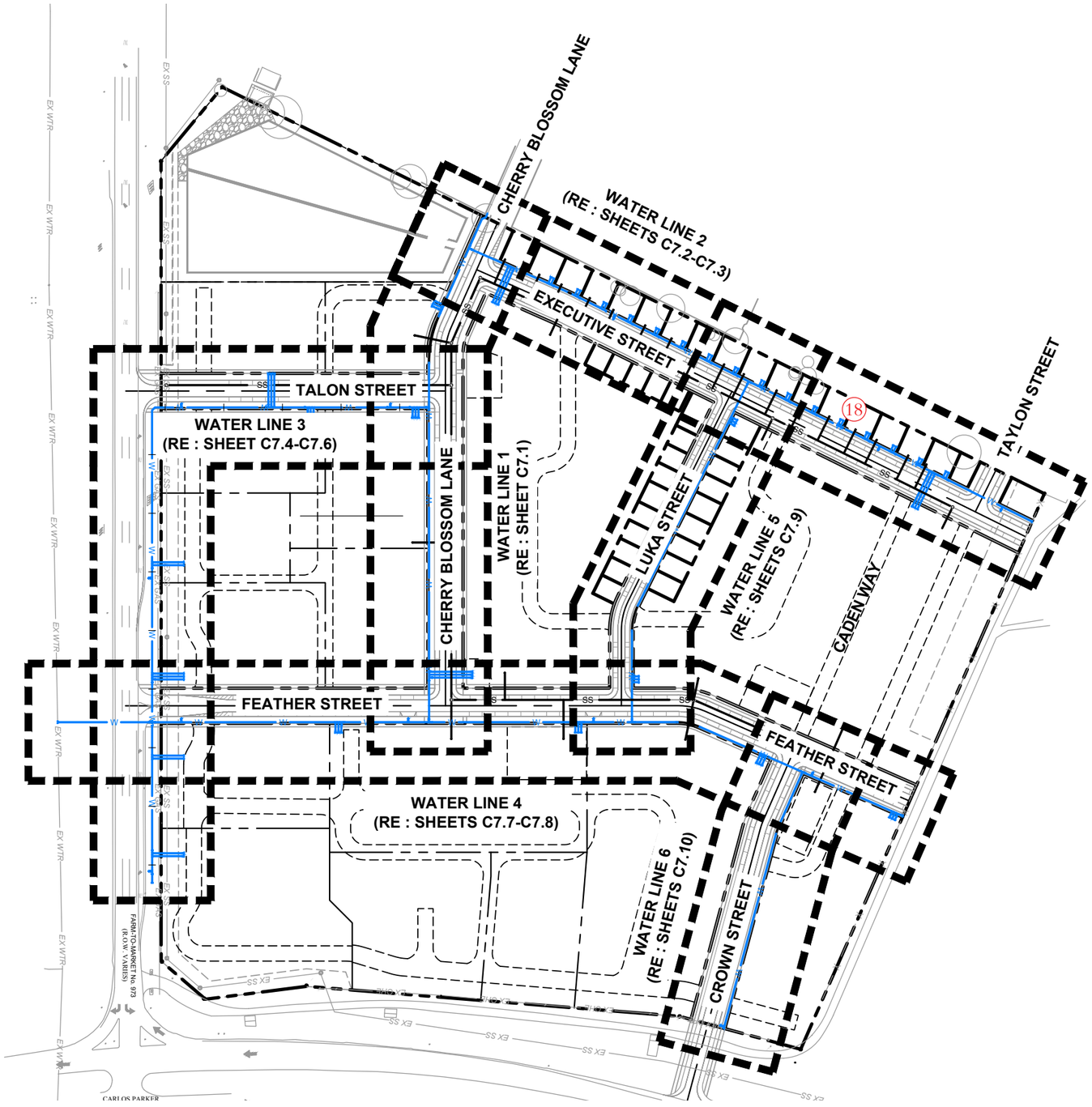
(13) Alley and parking lot connections to thoroughfares should be detailed similar to driveways with aprons, as oppose to intersections with radii, and should be the minimum practical size to minimize disruption of the pedestrian experience on the sidewalk.

(14) *Resolved*

(15) Is this size of parking island necessary?

(16) *Resolved*

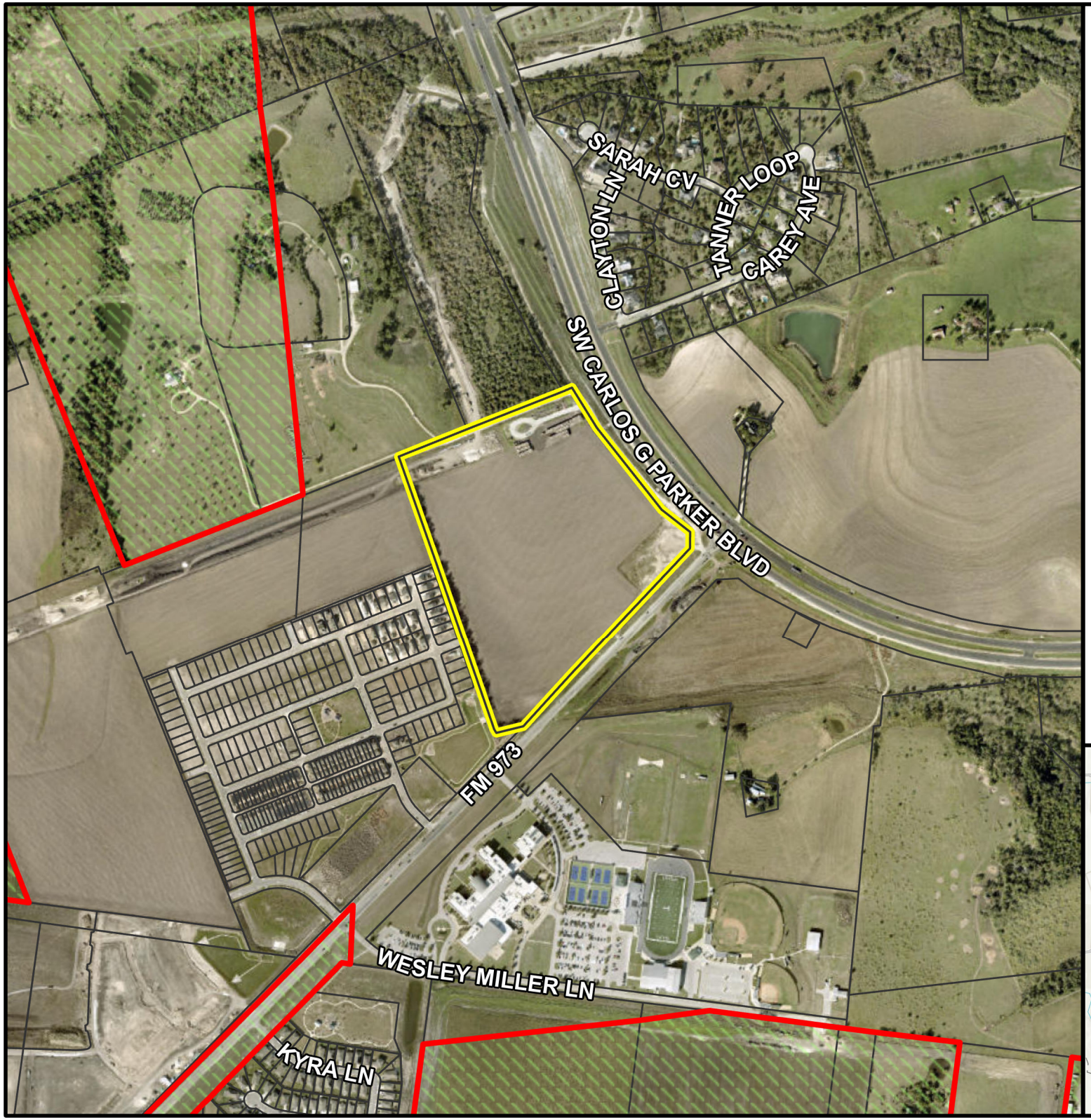
(17) The upper stories of these two buildings should connect.



Urban Design Comments, continued

18 Utilities in zones P4 and P5 should be located in RsOW and alleys to avoid easements in on private lots. Water lines are shown close to the ROW line. Please confirm that this does not create an easement or setback on private lots.

The design is subject to change. Not for construction.

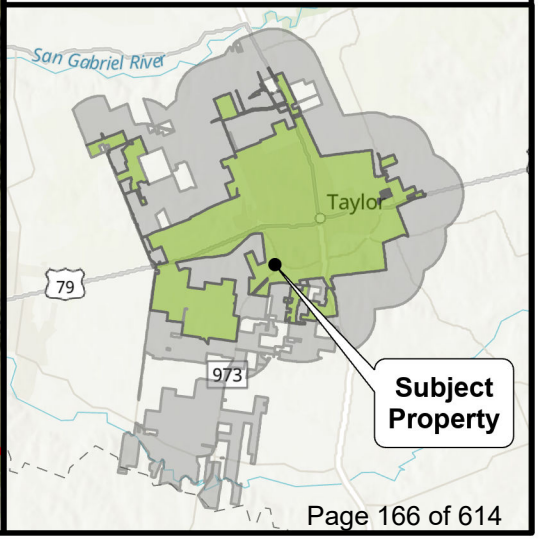


PZ-2024-2216

715 Carlos G Parker Blvd.
Preliminary Subdivision Plat
Location Map
Approximately 39 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

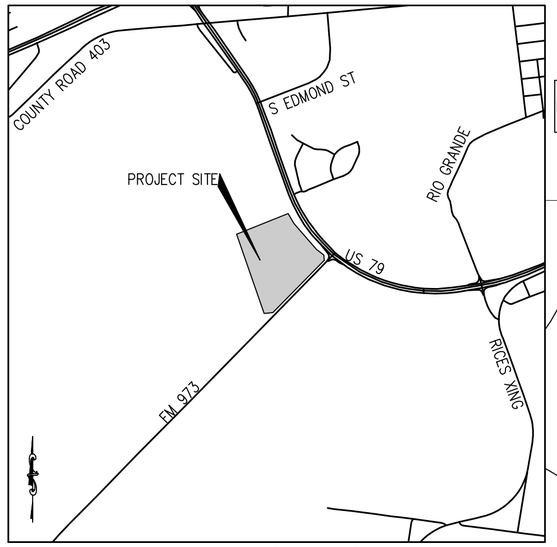
N 0 760 1,520
Feet



TAYLOR POINTE SUBDIVISION PRELIMINARY PLAT

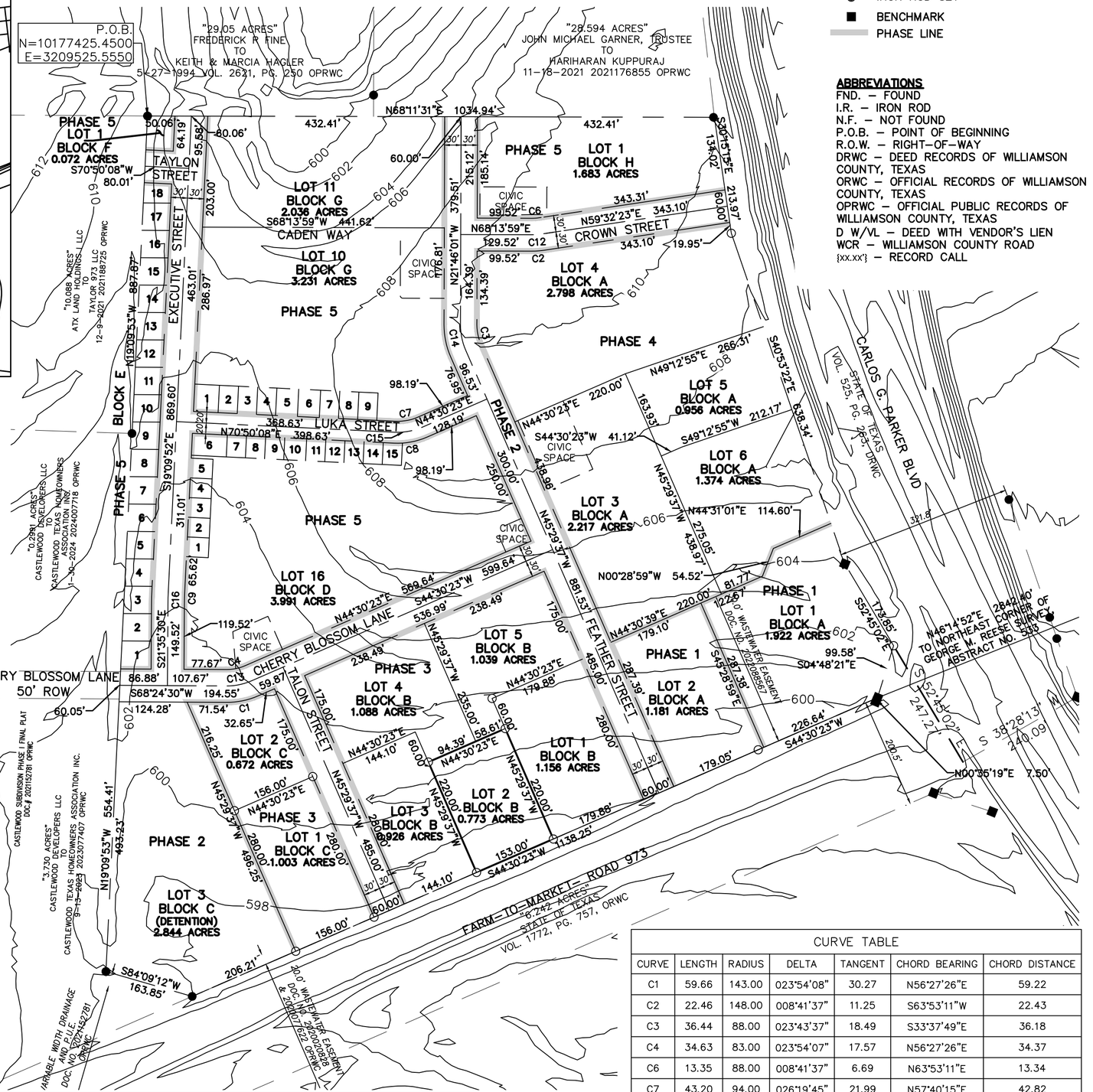
BEING A PRELIMINARY PLAT CONSISTING OF 39.015 ACRES, INCLUDING 6.05 ACRES OF RIGHT-OF-WAY DEDICATION, TO CREATE 13 LOTS, 7 BLOCKS, 0 RESERVES, PART OF LAND OUT OF THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, TAYLOR, WILLIAMSON COUNTY, TEXAS

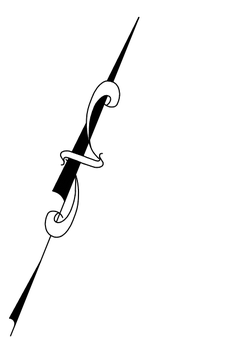
VICINITY MAP

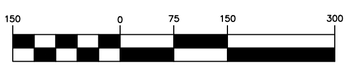


SCALE: 1" = 2000'

1. UTILITY PROVIDERS -WATER: CITY OF TAYLOR ; WASTEWATER/SEPTIC: CITY OF TAYLOR ; ELECTRICITY: ONCOR.
2. ALL STRUCTURES AND/OR OBSTRUCTIONS ARE PROHIBITED IN DRAINAGE EASEMENTS.
3. THERE ARE NOT AREAS WITHIN THE BOUNDARIES OF THIS SUBDIVISION IN THE 100-YEAR FLOODPLAIN AS DEFINED BY FIRM MAP NUMBER 48491C0541F, EFFECTIVE DATE OF 12/20/2019
4. A 10-FT PUBLIC UTILITY EASEMENT (P.U.E.) SHALL BE DEDICATED ALONG ALL STREET FRONTAGES.
5. ALL MINIMUM YARD (BUILDING) SETBACKS SHALL BE IN ACCORDANCE WITH THE CITY OF TAYLOR ZONING ORDINANCE, AS AMENDED.
6. PARKLAND DEDICATION REQUIREMENTS ARE MET BY: PAYMENT OF FEES IN LIEU PER RESIDENTIAL LOT, PAYABLE AT THE TIME OF FINAL PLAT RECORDATION.
7. THE FIRE FLOW SHALL BE ACCORDING TO THE MINIMUM FIRE FLOW REQUIREMENTS PER THE ADOPTED 2018 INTERNATIONAL FILE CODE.
8. DEVELOPMENT PLAN SHALL BE IN ACCORDANCE WITH ORDINANCE 2024-12 - 715 CARLOS G PARKER BLVD. NEIGHBORHOOD PLAN.
9. SEE SHEET 3 FOR BEARING AND DISTANCES OF EASEMENTS DEDICATED BY THIS PLAT.
10. SEE SHEET 2 FOR LOT TABLE.
11. SEE SHEET 2 FOR INSET OF SMALL LOTS WITHIN BLOCKS D, E, F, AND G.







SCALE: 1"=150'

LEGEND

- IRON ROD FOUND
- IRON ROD SET
- BENCHMARK
- PHASE LINE

ABBREVIATIONS

FND. - FOUND
I.R. - IRON ROD
N.F. - NOT FOUND
P.O.B. - POINT OF BEGINNING
R.O.W. - RIGHT-OF-WAY
DRWC - DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
ORWC - OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
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D W/VL - DEED WITH VENDOR'S LIEN
WCR - WILLIAMSON COUNTY ROAD
{XX.XX'} - RECORD CALL

STREET TABLE			
STREET NAME	ROW WIDTH	LENGTH	DESIGNATION
CHERRY BLOSSOM LANE	60'-0"	841.0 LF	
EXECUTIVE STREET	60'-0"	1,039.9 LF	
TALON STREET	60'-0"	485.0 LF	
LUKA STREET	40'-0"	579.2 LF	
FEATHER STREET	60'-0"	1,309.9 LF	
CROWN STREET	60'-0"	490.5 LF	
SCEPTER STREET	60'-0"	80.0 LF	
CADEN WAY	24'-0"	502.2 LF	CROSS ACCESS EASEMENT

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD DISTANCE
C1	59.66	143.00	023°54'08"	30.27	N56°27'26"E	59.22
C2	22.46	148.00	008°41'37"	11.25	S63°53'11"W	22.43
C3	36.44	88.00	023°43'37"	18.49	S33°37'49"E	36.18
C4	34.63	83.00	023°54'07"	17.57	N56°27'26"E	34.37
C6	13.35	88.00	008°41'37"	6.69	N63°53'11"E	13.34
C7	43.20	94.00	026°19'45"	21.99	N57°40'15"E	42.82
C8	46.35	134.00	019°49'06"	23.41	S54°24'56"W	46.12
C9	20.67	488.00	002°25'38"	10.34	S20°22'41"E	20.67
C12	17.90	118.00	008°41'37"	8.97	N63°53'11"E	17.89
C13	47.14	113.00	023°54'08"	23.92	S56°27'26"W	46.80
C14	48.87	118.00	023°43'37"	24.79	N33°37'49"W	48.52
C15	52.39	114.00	026°19'45"	26.66	N57°40'15"E	51.93
C16	21.94	518.00	002°25'38"	10.97	S20°22'41"E	21.94

SHEET 1 OF 6

OWNER:
DOSS DEVELOPMENT, LLC
4637 STONE OAK DRIVE
CARROLLTON, TX 75010

SURVEYOR:
BRUCE BRYAN, RPLS
BRYAN TECHNICAL SERVICES, INC.
911 NORTH MAIN
TAYLOR, TEXAS 76574
BRUCE@BRYANTECHNICALSERVICES.COM

ENGINEER:
JONATHAN E. SCHINDLER
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TBPE FIRM NO.F-15874
SANDY.BRANTLEY@TRUSTKE.COM

PATENT SURVEY:
GEORGE M. REESE SURVEY
ABSTRACT NO. 533

TOTAL NUMBER OF BLOCKS: 7

TOTAL NUMBER OF LOTS: 13

LINEAR FEET OF NEW STREETS: 4746

TOTAL ACREAGE: 39.015 ACRES

SUBMITTAL DATE:
JULY 5, 2024

BENCHMARK DESCRIPTION:
COTTON SPIKE IN POWER POLE
N = 10177315.040'
E = 3210860.312'
ELEVATION = 607.42
(NAVD 88, GEOID MODEL 2012)

PRELIMINARY PLAT OF
TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF
THE GEORGE M. REESE SURVEY
ABSTRACT NO. 533
WILLIAMSON COUNTY, TEXAS

BRYAN TECHNICAL SERVICES, INC.
911 NORTH MAIN
TAYLOR, TX 76574
PHONE: (512) 352-9090
FAX: (512) 352-9091
FIRM No. 10128500
surveying@austin.rr.com
www.bryantechnicalservices.com

NO.	DATE	REVISIONS	BY

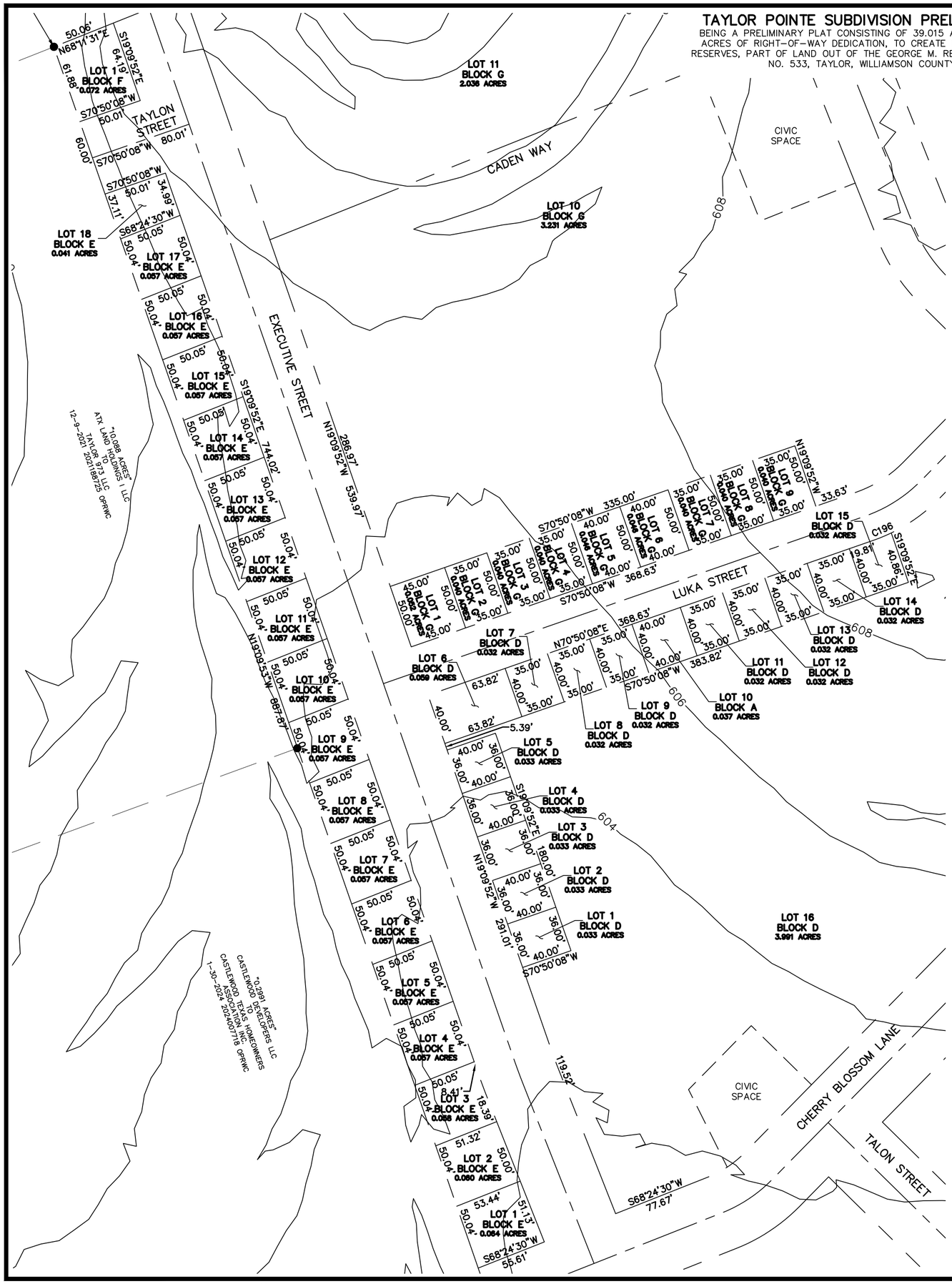
DRAWN BY: AMR	CHECKED BY: BLB
SCALE: 1" = 150'	APPROVED BY: BLB
PROJECT NO. 24-159	DATE: JUNE 5, 2024

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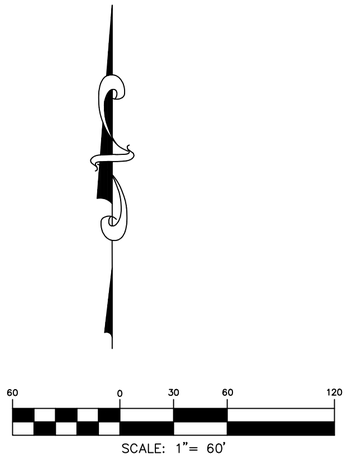
CITY PROJECT NO: PZ-2024-XXXX

TAYLOR POINTE SUBDIVISION PRELIMINARY PLAT

BEING A PRELIMINARY PLAT CONSISTING OF 39.015 ACRES, INCLUDING 6.05 ACRES OF RIGHT-OF-WAY DEDICATION, TO CREATE 13 LOTS, 7 BLOCKS, 0 RESERVES, PART OF LAND OUT OF THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, TAYLOR, WILLIAMSON COUNTY, TEXAS



LOT TABLE				
	BLOCK	LOT	AREA	USE
	A	1	83,729.64 SF	
	A	2	51,463.59 SF	
	A	3	96,572.56 SF	
	A	4	121,898.23 SF	
	A	5	41,648.93 SF	
	A	6	59,857.00 SF	
	B	1	50,367.53 SF	
	B	2	33,660.00 SF	
	B	3	40,349.09 SF	
	B	4	47,399.87 SF	
	B	5	45,253.02 SF	
	C	1	43,680.00 SF	
	C	2	29,282.84 SF	
	C	3	123,871.27 SF	DETENTION
	D	1	1,440.00 SF	
	D	2	1,440.00 SF	
	D	3	1,440.00 SF	
	D	4	1,440.00 SF	
	D	5	1,440.00 SF	
	D	6	2,552.90 SF	
	D	7	1,400.00 SF	
	D	8	1,400.00 SF	
	D	9	1,400.00 SF	
	A	10	1,600.00 SF	
	D	11	1,400.00 SF	
	D	12	1,400.00 SF	
	D	13	1,400.00 SF	
	D	14	1,400.00 SF	
	D	15	1,404.37 SF	
	D	16	173,842.19 SF	
	E	1	2,787.54 SF	
	E	2	2,618.97 SF	
	E	3	2,522.44 SF	
	E	4	2,502.43 SF	
	E	5	2,502.44 SF	
	E	6	2,502.45 SF	
	E	7	2,502.47 SF	
	E	8	2,502.48 SF	
	E	9	2,502.49 SF	
	E	10	2,502.50 SF	
	E	11	2,502.52 SF	
	E	12	2,502.53 SF	
	E	13	2,502.54 SF	
	E	14	2,502.56 SF	
	E	15	2,502.57 SF	
	E	16	2,502.58 SF	
	E	17	2,502.59 SF	
	E	18	1,802.56 SF	
	F	1	3,152.29 SF	
	G	1	2,250.00 SF	
	G	2	1,750.00 SF	
	G	3	1,750.00 SF	
	G	4	1,750.00 SF	
	G	5	2,000.00 SF	
	G	6	2,000.00 SF	
	G	7	1,750.00 SF	
	G	8	1,750.00 SF	
	G	9	1,750.00 SF	
	G	10	140,725.57 SF	
	G	11	88,687.72 SF	
	H	1	73,327.74 SF	



LEGEND

- ● IRON ROD FOUND
- ○ IRON ROD SET
- ■ BENCHMARK

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PRELIMINARY PLAT OF TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF THE GEORGE M. REESE SURVEY ABSTRACT NO. 533 WILLIAMSON COUNTY, TEXAS

BRYAN TECHNICAL SERVICES, INC.

911 NORTH MAIN
TAYLOR, TX 76574

PHONE: (512) 352-9090
FAX: (512) 352-9091

FIRM No. 10128500
surveying@austin.rr.com
www.bryantechnicalservices.com

NO.	DATE	REVISIONS	BY

DRAWN BY: AMR	CHECKED BY: BLB
SCALE: 1" = 60'	APPROVED BY: BLB
PROJECT NO. 24-159	DATE: JUNE 5, 2024

SHEET 2 OF 6

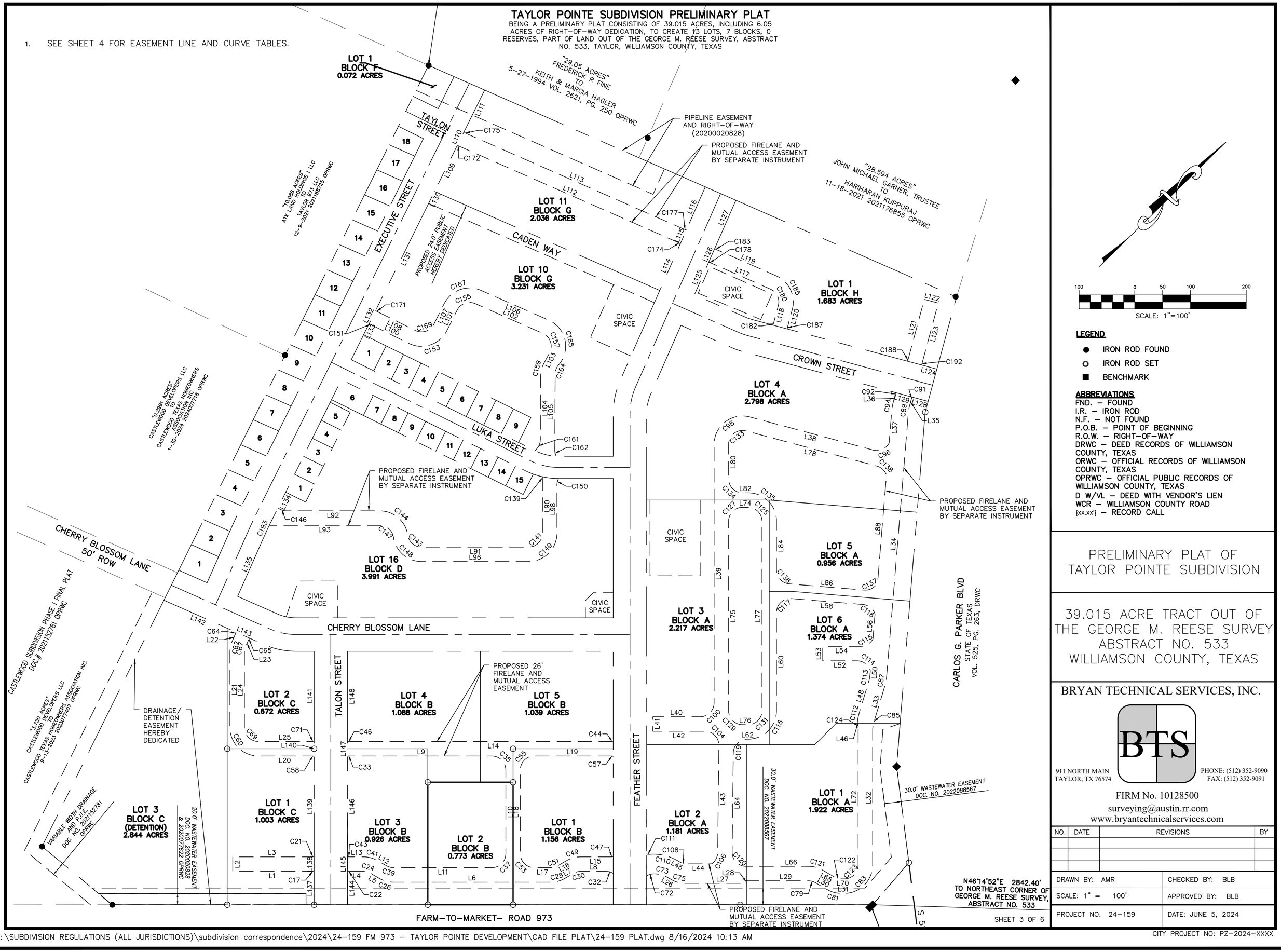
CITY PROJECT NO: PZ-2024-XXXX

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TAYLOR POINTE SUBDIVISION PRELIMINARY PLAT

BEING A PRELIMINARY PLAT CONSISTING OF 39.015 ACRES, INCLUDING 6.05 ACRES OF RIGHT-OF-WAY DEDICATION, TO CREATE 13 LOTS, 7 BLOCKS, 0 RESERVES, PART OF LAND OUT OF THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, TAYLOR, WILLIAMSON COUNTY, TEXAS

1. SEE SHEET 4 FOR EASEMENT LINE AND CURVE TABLES.



100 0 50 100 200

SCALE: 1"=100'

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- ■ BENCHMARK

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PRELIMINARY PLAT OF TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF THE GEORGE M. REESE SURVEY ABSTRACT NO. 533 WILLIAMSON COUNTY, TEXAS

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PROJECT NO. 24-159	DATE: JUNE 5, 2024

SHEET 3 OF 6

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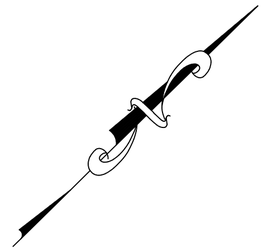
LINE TABLE		
LINE	LENGTH	BEARING
L1	141.00	S44°30'23"W
L2	26.00	N45°29'00"W
L3	141.00	N44°30'23"E
L4	23.40	N44°30'24"E
L5	18.64	N74°30'16"E
L6	282.12	N44°30'24"E
L7	18.64	N14°30'24"E
L8	45.19	N44°30'24"E
L9	254.10	N44°30'23"E
L10	150.50	S45°29'37"E
L11	176.29	S44°30'25"W
L12	18.37	S74°30'16"W
L13	23.40	S44°30'24"W
L14	466.99	S44°30'23"W
L15	52.62	S44°30'24"W
L16	18.64	S14°30'24"W
L17	29.56	S44°30'24"W
L18	150.50	N45°29'37"W
L19	136.88	N44°30'23"E
L20	95.00	S44°30'23"W
L21	135.30	N45°29'37"W
L22	12.71	N21°35'30"W
L23	12.71	S21°35'30"E
L24	135.30	S45°29'37"E
L25	95.00	N44°30'23"E
L26	7.11	N74°30'24"E
L27	109.48	N44°31'01"E
L28	4.50	N45°28'59"W
L29	111.44	N44°31'01"E
L30	23.95	N74°51'00"E
L31	5.00	N44°31'01"E
L32	241.34	N45°28'59"W
L33	58.09	N28°33'56"W
L34	473.30	N40°47'05"W
L35	8.00	N30°27'37"W
L36	11.34	S30°27'37"E
L37	57.18	S40°47'05"E
L38	229.11	S59°32'23"W
L39	463.87	S45°29'37"E
L40	85.00	S44°30'30"W
L41	26.00	S45°29'37"E
L42	93.61	N44°30'30"E
L43	192.49	S44°50'36"E
L44	47.14	S44°31'01"W
L45	7.11	S74°30'24"W
L46	2.01	S44°31'01"W
L48	55.38	N28°33'56"W
L50	6.64	N40°47'05"W
L52	61.69	S44°31'01"W
L53	26.00	N45°29'37"W

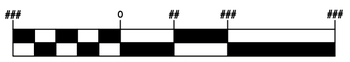
LINE TABLE		
LINE	LENGTH	BEARING
L54	68.03	N44°31'01"E
L56	44.85	N40°47'05"W
L58	128.55	S49°12'55"W
L60	176.35	S45°29'37"E
L62	1.49	S44°33'01"W
L64	178.32	S44°50'36"E
L66	111.44	N44°31'01"E
L68	23.95	N74°51'00"E
L70	5.00	N44°31'01"E
L72	245.21	N45°28'59"W
L74	10.81	S44°38'48"W
L75	340.15	S45°29'37"E
L76	10.00	N44°33'01"E
L77	340.14	N45°29'37"W
L78	242.96	S59°32'23"W
L80	61.91	S45°29'37"E
L82	10.67	N44°33'11"E
L84	87.54	S45°29'37"E
L86	134.81	N49°12'55"E
L88	193.69	N40°47'05"W
L90	97.34	S45°29'37"E
L91	192.07	S44°29'42"W
L92	167.29	S44°30'23"W
L93	198.10	N44°30'23"E
L96	192.07	N44°29'42"E
L98	86.98	N45°29'37"W
L100	74.67	N70°50'08"E
L101	41.15	N18°53'57"W
L102	132.70	N68°13'59"E
L103	21.23	S17°29'46"E
L104	113.65	S45°10'53"E
L105	136.52	N45°10'53"W
L106	132.70	S68°13'59"W
L107	41.15	S18°53'57"E
L108	74.67	S70°50'08"W
L109	91.90	N19°09'52"W
L110	27.09	N19°09'52"W
L111	84.01	N19°09'52"W
L112	428.57	N68°13'59"E
L113	425.11	N68°13'59"E
L114	91.60	N21°46'01"W
L115	27.01	N21°46'01"W
L116	84.49	N21°46'01"W
L117	116.02	N68°14'49"E
L118	31.39	S30°25'08"E
L119	116.03	N68°14'49"E
L120	31.34	S30°25'08"E
L121	110.12	N30°25'56"W
L122	26.00	N59°34'04"E
L123	110.08	S30°25'56"E

LINE TABLE		
LINE	LENGTH	BEARING
L124	27.86	S59°32'23"W
L125	63.60	S21°46'01"E
L126	27.01	N21°46'01"W
L127	94.53	N21°46'01"W
L128	29.57	S59°32'23"W
L129	31.01	S59°32'23"W
L130	24.02	S19°09'52"E
L131	214.37	S19°09'52"E
L132	27.01	S19°09'52"E
L133	21.57	S19°09'52"E
L134	31.40	S19°09'52"E
L135	119.52	N21°35'30"W
L137	59.51	N45°29'37"W
L138	27.01	N45°29'37"W
L139	179.97	N45°29'37"W
L140	27.01	N45°29'37"W
L141	161.49	N45°29'37"W
L142	141.58	N68°24'33"E
L143	26.60	N68°24'30"E
L144	59.49	N45°29'37"W
L145	27.01	N45°29'37"W
L146	179.99	N45°29'37"W
L147	27.01	N45°29'37"W
L148	161.49	N45°29'37"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD DISTANCE
C17	5.03	25.00	011°32'13"	2.53	S50°16'29"W	5.03
C21	5.03	25.00	011°32'13"	2.53	N38°44'16"E	5.03
C22	5.04	25.00	011°32'27"	2.53	N38°44'11"E	5.03
C24	13.09	25.00	029°59'51"	6.70	N59°30'20"E	12.94
C26	26.70	51.00	029°59'52"	13.66	N59°30'20"E	26.40
C28	26.70	51.00	030°00'00"	13.67	N29°30'24"E	26.40
C30	13.09	25.00	030°00'00"	6.70	N29°30'24"E	12.94
C32	13.67	25.00	031°19'54"	7.01	N60°10'22"E	13.50
C33	5.03	25.00	011°32'19"	2.53	N38°44'13"E	5.03
C35	39.27	25.00	090°00'01"	25.00	N89°30'23"E	35.36
C37	39.27	25.00	090°00'01"	25.00	S00°29'36"E	35.36
C39	13.61	26.00	029°59'51"	6.97	S59°30'20"W	13.46
C41	26.70	51.00	029°59'51"	13.66	S59°30'20"W	26.40
C43	5.03	25.00	011°32'21"	2.53	S50°16'35"W	5.03
C44	5.03	25.00	011°32'13"	2.53	S38°44'16"W	5.03
C46	5.03	25.00	011°32'17"	2.53	S50°16'31"W	5.03
C47	5.62	25.00	012°52'13"	2.82	S38°04'18"W	5.60
C49	26.70	51.00	030°00'00"	13.67	S29°30'24"W	26.40
C51	13.09	25.00	030°00'00"	6.70	S29°30'24"W	12.94
C53	39.27	25.00	089°59'59"	25.00	S89°30'24"W	35.36
C55	39.27	25.00	089°59'59"	25.00	N00°29'37"W	35.36
C57	5.03	25.00	011°32'13"	2.53	N50°16'29"E	5.03
C58	5.03	25.00	011°32'13"	2.53	S50°16'29"W	5.03
C60	80.11	51.00	090°00'00"	51.00	S89°30'23"W	72.12
C62	21.28	51.00	023°54'07"	10.79	N33°32'34"W	21.12
C64	3.89	25.00	008°54'47"	1.95	N26°02'53"W	3.89
C65	3.89	25.00	008°54'47"	1.95	S17°08'07"E	3.89
C67	10.43	25.00	023°54'07"	5.29	S33°32'34"E	10.35
C69	39.27	25.00	090°00'00"	25.00	N89°30'23"E	35.36
C71	5.03	25.00	011°32'13"	2.53	N38°44'16"E	5.03
C72	13.56	25.00	031°05'05"	6.95	N28°53'40"E	13.40
C73	26.21	49.89	030°06'18"	13.42	N59°29'21"E	25.91
C75	26.69	51.00	029°59'23"	13.66	N59°30'43"E	26.39
C79	13.24	25.00	030°19'59"	6.78	N59°41'00"E	13.08
C81	27.00	51.00	030°19'59"	13.82	N59°41'00"E	26.69
C83	80.11	51.00	090°00'00"	51.00	N00°28'59"W	72.12
C85	22.78	59.24	022°02'08"	11.53	N34°27'55"W	22.64
C87	21.33	100.00	012°13'09"	10.70	N34°40'31"W	21.29
C89	15.95	73.22	012°29'08"	8.01	N34°32'31"W	15.92
C91	5.03	25.00	011°32'13"	2.53	N24°41'31"W	5.03
C92	5.03	25.00	011°32'13"	2.53	S36°13'44"E	5.03
C94	18.02	100.00	010°19'28"	9.03	S35°37'21"E	18.00
C96	33.71	25.00	077°15'02"	19.98	S20°54'52"W	31.21
C98	93.49	51.00	105°02'00"	66.50	S07°01'23"W	80.94
C100	39.27	25.00	090°00'08"	25.00	S00°29'33"E	35.36
C104	39.55	25.00	090°38'54"	25.28	N89°49'57"E	35.55
C106	23.76	25.00	054°26'42"	12.86	S17°37'15"E	22.87
C108	8.37	16.00	029°59'23"	4.29	S59°30'43"W	8.28
C110	52.50	87.05	034°33'09"	27.07	S57°13'50"W	51.70
C111	5.05	14.02	020°38'24"	2.55	S50°16'28"W	5.02
C112	20.77	102.00	011°39'52"	10.42	N34°23'52"W	20.73
C113	14.93	70.00	012°13'09"	7.49	N34°40'31"W	14.90
C114	31.49	25.00	072°10'04"	18.22	S80°36'03"W	29.45
C115	27.15	25.00	062°13'40"	15.09	N13°24'11"E	25.84
C116	29.20	25.00	066°55'34"	16.52	S82°40'42"W	27.57

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD BEARING	CHORD DISTANCE
C117	41.32	25.00	094°42'32"	27.14	S01°51'39"W	36.78
C118	80.15	51.00	090°02'39"	51.04	S00°28'18"E	72.15
C119	39.01	25.00	089°23'38"	24.74	S00°08'47"E	35.17
C120	40.19	25.01	092°04'50"	25.93	N89°06'59"E	36.00
C121	27.00	51.00	030°19'59"	13.82	N59°41'00"E	26.69
C122	13.24	25.00	030°19'59"	6.78	N59°41'00"E	13.08
C123	39.27	25.00	090°00'00"	25.00	N00°28'59"W	35.36
C124	9.35	100.00	005°21'30"	4.68	N42°48'14"W	9.35
C125	38.46	25.00	088°08'04"	24.20	N89°33'39"W	34.78
C127	39.30	24.94	090°16'51"	25.06	S00°29'37"E	35.36
C129	39.25	25.00	089°57'21"	24.98	N89°31'42"E	35.34
C131	39.29	25.00	090°02'39"	25.02	N00°28'18"W	35.37
C133	45.83	25.00	105°02'00"	32.60	S07°01'23"W	39.68
C134	39.27	25.00	090°00'00"	25.00	N89°30'23"E	35.36
C135	79.71	50.38	090°39'18"	50.96	N89°52'50"E	71.65
C136	37.22	25.00	085°17'28"	23.03	S88°08'21"E	33.87
C137	29.20	25.00	066°55'34"	16.52	N15°45'08"E	27.57
C138	24.70	25.00	056°36'06"	13.46	S87°50'26"W	23.71
C139	3.86	25.00	008°50'49"	1.93	S49°55'02"E	3.86
C141	39.26	25.00	089°59'19"	25.00	S00°29'58"E	35.35
C143	35.64	25.00	081°41'22"	21.61	S85°20'23"W	32.70
C144	72.70	51.00	081°40'41"	44.08	S85°20'43"W	66.70
C146	16.52	25.00	037°51'58"	8.58	S63°26'22"W	16.22
C147	35.64	25.00	081°40'41"	21.61	N85°20'43"E	32.70
C148	72.71	51.00	081°41'22"	44.09	N85°20'23"E	66.71
C149	80.10	51.00	089°59'19"	50.99	N00°29'58"W	72.12
C150	11.47	22.92	028°40'58"	5.86	N31°09'08"W	11.35
C151	5.03	25.00	011°32'13"	2.53	N65°04'01"E	5.03
C153	79.87	51.00	089°44'05"	50.76	N25°58'06"E	71.96
C155	38.02	25.00	087°07'56"	23.78	N24°40'01"E	34.46
C157	41.13	25.00	094°16'15"	26.94	S64°37'53"E	36.65
C159	24.64	51.00	027°41'08"	12.57	S31°20'19"E	24.40
C161	22.74	25.00	052°07'15"	12.23	S19°07'16"E	21.97
C162	11.42	25.00	026°09'53"	5.81	N58°15'50"W	11.32
C164	17.85	25.00	040°54'31"	9.32	N24°43'38"W	17.47
C165	95.68	51.00	107°29'39"	69.55	N58°01'11"W	82.25
C167	77.56	51.00	087°07'56"	48.51	S24°40'01"W	70.30
C169	39.15	25.00	089°44'05"	24.88	S25°58'06"W	35.27
C171	5.03	25.00	011°32'13"	2.53	S76°36'15"W	5.03
C172	3.90	25.00	008°56'04"	1.95	N63°45'57"E	3.89
C174	5.03	25.00	011°32'13"	2.53	N74°00'06"E	5.03
C175	6.17	25.00	014°08'22"	3.10	N75°18'10"E	6.15
C177	5.03	25.00	011°32'13"	2.53	N62°27'53"E	5.03
C178	5.04	25.00	011°33'02"	2.53	N62°28'17"E	5.03
C180	35.49	25.00	081°20'03"	21.48	S71°05'10"E	32.58
C182	5.02	25.00	011°29'44"	2.52	S24°40'16"E	5.01
C183	5.03	25.00	011°31'24"	2.52	N74°00'30"E	5.02
C185	72.40	51.00	081°20'03"	43.82	S71°05'10"E	66.47
C187	5.05	25.00	011°34'42"	2.53	S36°12'29"E	5.04
C188	5.02	25.00	011°30'32"	2.52	N24°40'40"W	5.01
C192	5.05	25.00	011°33'54"	2.53	S36°12'53"E	5.04
C193	20.01	488.00	002°20'59"	10.01	N20°25'00"W	20.01





SCALE: 1"=###'

LEGEND

- ● IRON ROD FOUND
- ○ IRON ROD SET
- ■ BENCHMARK

ABBREVIATIONS

FND. – FOUND
I.R. – IRON ROD
N.F. – NOT FOUND
P.O.B. – POINT OF BEGINNING
R.O.W. – RIGHT-OF-WAY
DRWC – DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
ORWC – OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
OPRWC – OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
D W/VL – DEED WITH VENDOR'S LIEN
WCR – WILLIAMSON COUNTY ROAD
{xx.xx'} – RECORD CALL

PRELIMINARY PLAT OF TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF THE GEORGE M. REESE SURVEY ABSTRACT NO. 533 WILLIAMSON COUNTY, TEXAS

BRYAN TECHNICAL SERVICES, INC.

911 NORTH MAIN
TAYLOR, TX 76574

PHONE: (512) 352-9090
FAX: (512) 352-9091

FIRM No. 10128500
surveying@austin.rr.com
www.bryantechnicalservices.com

NO.	DATE	REVISIONS	BY

DRAWN BY: AMR	CHECKED BY: BLB
SCALE: 1" = ###'	APPROVED BY: BLB
PROJECT NO. 24-159	DATE: JUNE 5, 2024

TAYLOR POINTE SUBDIVISION PRELIMINARY PLAT

BEING A PRELIMINARY PLAT CONSISTING OF 39.015 ACRES, INCLUDING 6.05 ACRES OF RIGHT-OF-WAY DEDICATION, TO CREATE 13 LOTS, 7 BLOCKS, 0 RESERVES, PART OF LAND OUT OF THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, TAYLOR, WILLIAMSON COUNTY, TEXAS

38.979 ACRES

THESE NOTES DESCRIBE THAT CERTAIN TRACT OF LAND SITUATED IN THE **GEORGE M. REESE SURVEY, ABSTRACT NO. 533** LOCATED IN WILLIAMSON COUNTY, TEXAS; SUBJECT TRACT BEING ALL OF A CALLED "38.979 ACRES" AS CONVEYED IN A WARRANTY DEED (WITH VENDOR'S LIEN) FROM MARIO D. CRUZ TO FASH TAYLOR, LTD, DATED 06-29-2023 AS RECORDED IN DOCUMENT NO. 2023055749, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY (OPRWC) BEING SURVEYED ON THE GROUND UNDER THE DIRECT SUPERVISION OF BRUCE LANE BRYAN, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4249; SUBJECT TRACT BEING MORE FULLY DESCRIBED AS FOLLOWS {BEARINGS AND COORDINATES DESCRIBED HEREIN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (4203), NAD 83, 93 {ADJ.};

BEGINNING AT THE NORTHWEST CORNER OF SAID "38.979", SAME BEING AN EXTERIOR CORNER OF A CALLED "85.047 ACRES" CONVEYED IN A WARRANTY DEED FROM FREDERICK R. FINE TO KEITH HAGLER DATED 5-27-1994 AND RECORDED IN VOLUME 2621, PAGE 250, OFFICIAL RECORDS OF WILLIAMSON COUNTY (ORWC), SAME BEING THE NORTHEAST CORNER OF A CALLED "10.088 ACRES" AS CONVEYED FROM ATX LAND HOLDINGS I, LLC TO TAYLOR 973, LLC DATED 12-09-2021 AND RECORDED IN DOCUMENT NO. 2021188725, OPRWC; FOUND A ½" IRON ROD (AT FENCE CORNER POST) AT SAME (NORTH = 10,177,425.45', EAST = 3,209,525.55); A ½" IRON ROD FOUND AT AN INTERIOR CORNER OF SAID "85.047 ACRES", IN OR NEAR THE COMMON SURVEY LINE OF THE **GEORGE M. REESE SURVEY, ABSTRACT NO. 533** AND THE **JAMES C. EAVES SURVEY, A-214**, BEARS NORTH 22° 21' 55" WEST, 40.00 FEET;

THENCE NORTH 68° 11' 31" EAST WITH THE COMMON LINE OF SAID "38.979" AND EASTERNMOST SOUTH LINE OF SAID "85.047 ACRES", GENERALLY ALONG A FENCE, A DISTANCE OF **1034.94 FEET** TO A CALCULATED POINT AT THE NORTHEAST CORNER OF SUBJECT TRACT IN THE SOUTHWESTERN RIGHT-OF-WAY LINE OF CARLOS PARKER BLVD, ALSO KNOWN AS LOOP NO. 427 AS RECORDED IN VOLUME 525, PAGE 263, DRWC; ½" IRON ROD FOUND AT THE SOUTHEAST CORNER OF SAID "85.047 ACRES" BEARS SOUTH 68° 11' 31" WEST, 1.71 FEET; FOUND A TYPE I TXDOT CONCRETE MONUMENT (ENGINEER'S STATION 206+28.98) BEARING NORTH 30° 15' 15" WEST, 402.92 FEET;

THENCE SOUTH 30° 15' 15" EAST WITH SAID SOUTHWESTERN RIGHT-OF-WAY LINE OF CARLOS PARKER BLVD, A DISTANCE OF **213.97 FEET** TO A ½" IRON ROD SET (CAPPED "BRYAN TECHNICAL SERVICES") AT AN ANGLE POINT IN SAME;

THENCE SOUTH 40° 47' 05" EAST WITH SAID SOUTHWESTERN RIGHT-OF-WAY LINE OF CARLOS PARKER BLVD, A DISTANCE OF **638.55 FEET** TO A FOUND A TYPE I TXDOT CONCRETE MONUMENT (ENGINEER'S STATION 218+00) AT AN ANGLE POINT IN SAME;

THENCE SOUTH 52° 38' 45" EAST WITH SAID SOUTHWESTERN RIGHT-OF-WAY LINE OF CARLOS PARKER BLVD, A DISTANCE OF **176.08 FEET** TO A ½" IRON ROD SET (CAPPED "BRYAN TECHNICAL SERVICES") AT THE INTERSECTION WITH THE NORTHWESTERN RIGHT-OF-WAY OF FARM TO MARKET ROAD NO. 973, REFERRED TO AS A CALLED "6.242 ACRES" AS RECORDED IN VOLUME 1772, PAGE 757, ORWC;

THENCE SOUTH 04° 09' 48" EAST WITH SAID NORTHWESTERN RIGHT-OF-WAY OF FARM TO MARKET ROAD NO. 973, A DISTANCE OF **95.59 FEET** TO A ½" IRON ROD SET (CAPPED "BRYAN TECHNICAL SERVICES") AT AN ANGLE POINT IN SAME;

THENCE SOUTH 44° 27' 05" WEST WITH SAID NORTHWESTERN RIGHT-OF-WAY OF FARM TO MARKET ROAD NO. 973, A DISTANCE OF **1365.60 FEET** TO A ½" IRON ROD SET (CAPPED "BRYAN TECHNICAL SERVICES") AT AN EXTERIOR CORNER OF SUBJECT TRACT, SAME BEING THE EASTERNMOST SOUTHEAST CORNER OF CASTLEWOOD SUBDIVISION PHASE I FINAL PLAT, A DEDICATED PLAT AS RECORDED IN DOCUMENT NO. 2021152781, OPRWC;

THENCE SOUTH 84° 10' 07" WEST WITH THE COMMON LINE OF SUBJECT TRACT AND CASTLEWOOD SUBDIVISION PHASE I FINAL PLAT, A DISTANCE OF **163.72 FEET** TO A FOUND ½" IRON ROD AT A COMMON CORNER OF BOTH TRACTS;

THENCE NORTH 19° 09' 53" WEST WITH THE COMMON LINE OF SAID SUBJECT TRACT AND CASTLEWOOD SUBDIVISION PHASE I FINAL PLAT, ALONG AN OLD TREE LINE, PASSING A FOUND ½" IRON ROD AT THE NORTHEAST CORNER OF SAID CASTLEWOOD SUBDIVISION PHASE I FINAL PLAT, SAME BEING THE SOUTHEAST CORNER OF AFOREMENTIONED "10.088 ACRES" AT 983.69 FEET AND CONTINUING AN ADDITIONAL 580.47 FEET FOR A TOTAL DISTANCE OF **1564.16 FEET** TO THE PLACE OF BEGINNING CONTAINING ACCORDING TO THE DIMENSIONS HEREIN STATED AN AREA OF **38.979 ACRES** OF LAND.

STATE OF TEXAS:

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON

THAT FASH TAYLOR, LTD, SOLE OWNER OF THE CERTAIN 38.979 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 2023055749 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR TO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS TAYLOR POINTE SUBDIVISION.

TO CERTIFY WHICH, WITNESS BY MY HAND, THIS THE _____ DAY OF _____, 20__.

_____

_____
FASH TAYLOR, LTD
812 W. MCDERMOTT DRIVE
PMB 1305
ALLEN, TEXAS 75013

STATE OF TEXAS

COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON:

STATE OF TEXAS:

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON

THAT DOSS DEVELOPMENT, LLC, SOLE OWNER OF THE CERTAIN 0.773 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 2024030082 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR TO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS TAYLOR POINTE SUBDIVISION.

TO CERTIFY WHICH, WITNESS BY MY HAND, THIS THE _____ DAY OF _____, 20__.

_____

_____
DOSS DEVELOPMENT, LLC
4637 STONE OAK DRIVE
CARROLLTON, TX 75010

STATE OF TEXAS

COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON:

STATE OF TEXAS:

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON

THAT MILAN PROPERTY GROUP LLC, SOLE OWNER OF THE CERTAIN 1.156 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 2024049722 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR TO THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS TAYLOR POINTE SUBDIVISION.

TO CERTIFY WHICH, WITNESS BY MY HAND, THIS THE _____ DAY OF _____, 20__.

_____

_____
MILAN PROPERTY GROUP LLC
4125 E. BELKNAP STREET, SUITE 109
HALTOM CITY, TEXAS 76111

STATE OF TEXAS

COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON:

STATE OF TEXAS:

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON

I, WATERMARK BANK, LIEN HOLDER OF THAT CERTAIN 38.979 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 2023055749 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT AS SHOWN HEREON, AND DO FURTHER HEREBY JOIN, APPROVE, AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS TAYLOR POINTE SUBDIVISION.

TO CERTIFY WHICH, WITNESS BY MY HAND, THIS THE _____ DAY OF _____, 2024.

_____ _____ _____
SIGNATURE PRINT NAME

TRUSTEE
WATERMARK BANK
6501 N. CLASSEN BLVD., STE 300
OKLAHOMA CITY, OK 73116

STATE OF TEXAS

COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 2023.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON:

STATE OF TEXAS:

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF WILLIAMSON

I, GLOBAL ONE BANK, LIEN HOLDER OF THAT CERTAIN 0.773 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 2024030082 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT AS SHOWN HEREON, AND DO FURTHER HEREBY JOIN, APPROVE, AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS TAYLOR POINTE SUBDIVISION.

TO CERTIFY WHICH, WITNESS BY MY HAND, THIS THE _____ DAY OF _____, 2024.

_____ _____ _____
SIGNATURE PRINT NAME

TRUSTEE
GLOBAL ONE BANK
5060 MAIN STREET
CHAPELL HILL, TEXAS 77426

STATE OF TEXAS

COUNTY OF WILLIAMSON

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 2023.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON:

PRELIMINARY PLAT OF
TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF
THE GEORGE M. REESE SURVEY
ABSTRACT NO. 533
WILLIAMSON COUNTY, TEXAS

BRYAN TECHNICAL SERVICES, INC.

911 NORTH MAIN
TAYLOR, TX 76574

PHONE: (512) 352-9090
FAX: (512) 352-9091

FIRM No. 10128500
surveying@austin.rr.com
www.bryantechnicalservices.com

NO.	DATE	REVISIONS	BY

DRAWN BY: AMR	CHECKED BY: BLB
SCALE: 1" = NTS	APPROVED BY: BLB
PROJECT NO. 24-159	DATE: JUNE 5, 2024

TAYLOR POINTE SUBDIVISION PRELIMINARY PLAT

BEING A PRELIMINARY PLAT CONSISTING OF 39.015 ACRES, INCLUDING 6.05 ACRES OF RIGHT-OF-WAY DEDICATION, TO CREATE 13 LOTS, 7 BLOCKS, 0 RESERVES, PART OF LAND OUT OF THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, TAYLOR, WILLIAMSON COUNTY, TEXAS

COUNTY OF WILLIAMSON {

KNOW ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON {

I, BRUCE LANE BYRAN, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF TAYLOR, TEXAS.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT _____, _____ COUNTY, TEXAS, THIS _____ DAY OF _____, 20_____.

STATE OF TEXAS
REGISTERED
BRUCE LANE BRYAN
4249
PROFESSIONAL
LAND SURVEYOR

_____
REGISTERED PROFESSIONAL SURVEYOR
NO. 4249 STATE OF TEXAS

I, JONATHAN E. SCHINDLER, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS NOT ENCROACHED BY A ZONE A FLOOD AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER 48491C0541F, EFFECTIVE DATE 12/20/2019, AND THAT EACH LOT CONFORMS TO THE CITY OF TAYLOR REGULATIONS. THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT _____, _____ COUNTY, TEXAS, THIS _____ DAY OF _____, 20_____.

_____
REGISTERED PROFESSIONAL ENGINEER
NO. 108864 STATE OF TEXAS

THIS SUBDIVISION TO BE KNOWN AS TAYLOR POINTE SUBDIVISION HAS BEEN ACCEPTED AND APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MINUTES OF THE MEETING OF THE TAYLOR PLANNING AND ZONING COMMISSION ON THE _____ DAY OF _____, 20____, A.D.

_____ _____
_____, CHAIRMAN DATE

_____ _____
_____, SECRETARY DATE

STATE OF TEXAS {

KNOW ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON {

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20___ A.D., AT _____O'CLOCK, ___.M., AND DULY RECORDED THIS THE DAY OF _____, 20___ A.D., AT ___O'CLOCK, ___.M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO. _____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY:

_____
DEPUTY

PRELIMINARY PLAT OF
TAYLOR POINTE SUBDIVISION

39.015 ACRE TRACT OUT OF
THE GEORGE M. REESE SURVEY
ABSTRACT NO. 533
WILLIAMSON COUNTY, TEXAS

BRYAN TECHNICAL SERVICES, INC.

BTS

911 NORTH MAIN
TAYLOR, TX 76574

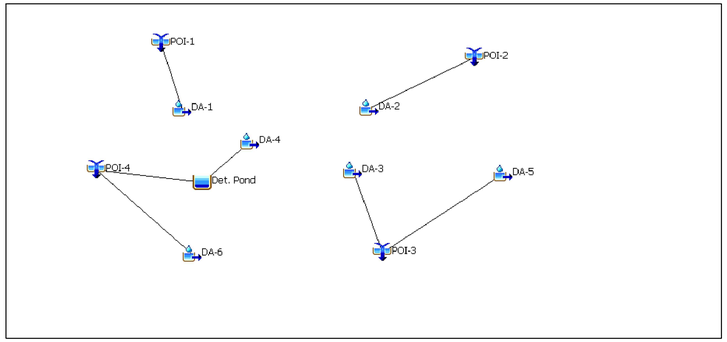
PHONE: (512) 352-9090
FAX: (512) 352-9091

FIRM No. 10128500
surveying@austin.rr.com
www.bryantechnicalservices.com

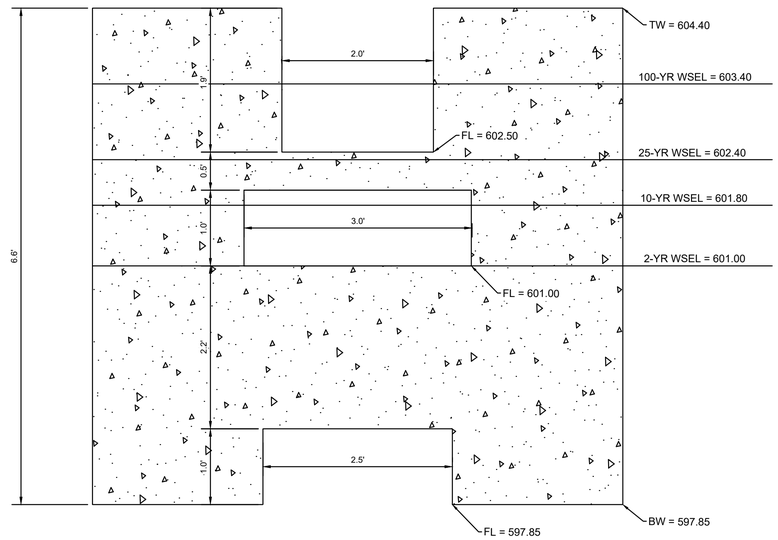
NO.	DATE	REVISIONS	BY

DRAWN BY: AMR	CHECKED BY: BLB
SCALE: 1" = N/A	APPROVED BY: BLB
PROJECT NO. 24-159	DATE: JUNE 5, 2024

PROPOSED HEC-HMS DIAGRAM



OUTFALL STRUCTURE
(N.T.S.)



Water Surface Elev.	
Storm Event	Elevation
2-Year	601
10-Year	601.8
25-Year	602.4
100-Year	603.4

Orifice 1		
Q	27.05	cfs
C	0.6	
A	2.5	ft^2
h	5.05	ft

Orifice 2		
Q	19.91	cfs
C	0.6	
A	3	ft^2
h	1.9	ft

Weir 1		
Q	5.12	cfs
C	3	
L	2	ft
h	0.9	ft

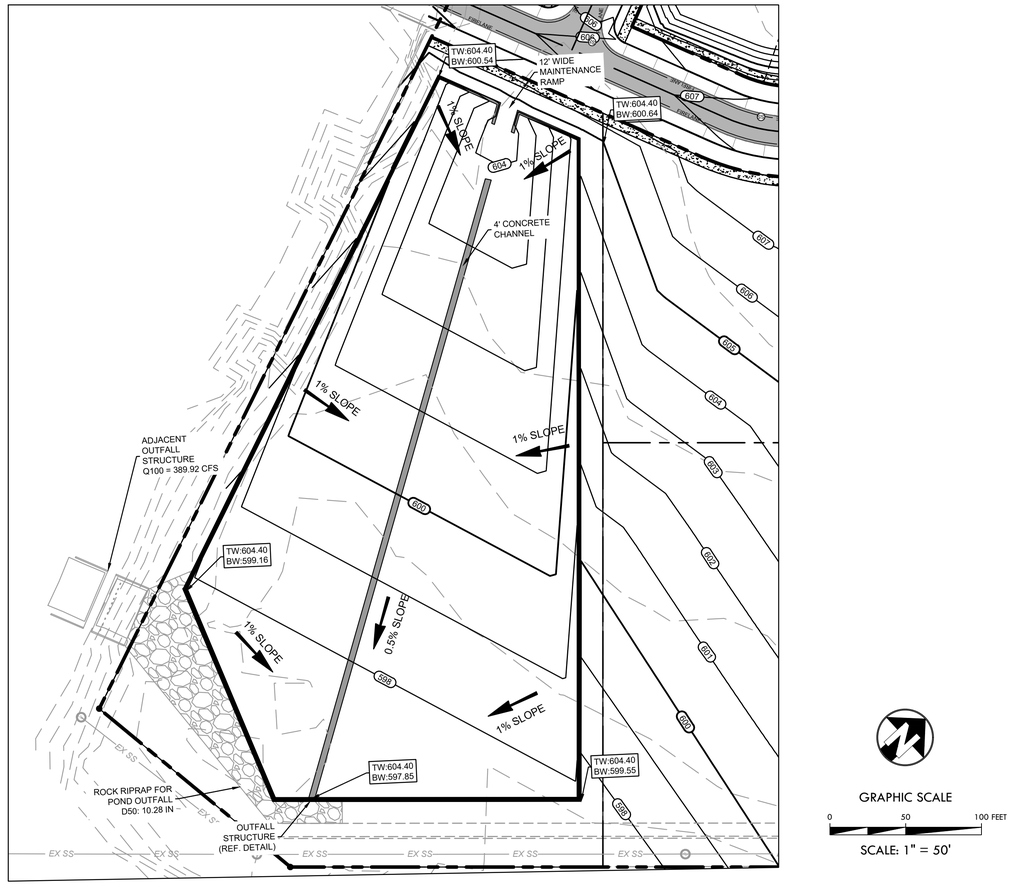
Detention Pond Stage Storage						
Elevation *	Depth	Area	Avg. Area	Inc. Vol.	Total Vol.	Total Vol.
Ft. msl	Ft.	S. F.	S. F.	C. F.	C. F.	Ac. Ft.
597.85	0.00	0.0		-	-	0.00
598.00	0.15	488.3	244.2	36.6	36.6	0.00
599.00	1.15	23,800.0	12,144.2	12,144.2	12,180.8	0.28
600.00	2.15	71,848.0	47,824.0	47,824.0	60,004.8	1.38
601.00	3.15	88,157.0	80,002.5	80,002.5	140,007.3	3.21
602.00	4.15	88,157.0	88,157.0	88,157.0	228,164.3	5.24
603.00	5.15	88,157.0	88,157.0	88,157.0	316,321.3	7.26
603.40	5.55	88,157.0	88,157.0	35,262.8	351,584.1	8.07
604.40	6.55	88,157.0	88,157.0	88,157.0	439,741.1	10.10

Proposed Hydrology Summary				
Point of Interest	Peak Flow (cfs)			
	Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	12.7	18.6	22.5	28.9
POI-2	9.4	15.3	19.2	26.7
POI-3	25.4	38.8	47.4	61.5
POI-4	20.3	40.6	53.1	74.4
Existing Hydrology Summary				
Point of Interest	Peak Flow (cfs)			
	Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	14.2	26.1	34.0	46.9
POI-2	9.8	18.1	23.6	32.6
POI-3	33.9	62.5	81.6	112.9
POI-4	21.9	41.1	54.0	75.2

Proposed Conditions - Routing Analysis Inputs								
Drainage Areas			Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (sf)	Area (ac)	Base Curve Number	Impervious Cover (sf)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time
DA-1	159,865	3.67	93	127892.16	5.00	0.0057344	80%	3.00
DA-2	148,975	3.42	83	44692.56	5.00	0.0053438	30%	3.00
DA-3	173,804	3.99	93	147733.74	5.00	0.0062344	85%	3.00
DA-4	1,169,586	26.85	93	935668.80	5.00	0.0419531	80%	3.00
DA-5	171,626	3.94	83	8581.32	5.00	0.0061563	5%	3.00
DA-6	44,431	1.02	83	444.31	5.00	0.0015938	1%	3.00
Existing Conditions - Routing Analysis Inputs								
Drainage Areas			Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (sf)	Area (ac)	Base Curve Number	Impervious Cover (sf)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time
EX-1	290,110	6.66	80	0.00	8.87	0.0104063	0%	5.32
EX-2	215,186	4.94	80	0.00	15.33	0.0077188	0%	9.20
EX-3	788,872	18.11	80	0.00	15.82	0.0282969	0%	9.49
EX-4	627,700	14.41	80	0.00	22.09	0.0225156	0%	13.26

Time of Concentration Calculations - Existing Conditions							
Contributing Area	Sheet Flow				Shallow Concentrated Flow (Unpaved)		
	Length	Slope (ft/ft)	Roughness Coefficient	T_{sheet}	Length (ft)	Slope (ft/ft)	$T_{unpaved}$
EX-1	100	0.01	0.06	5.99	440	0.025	2.87
EX-2	100	0.01	0.06	5.99	700	0.006	9.34
EX-3	100	0.02	0.06	4.54	1196	0.012	11.28
EX-4	100	0.01	0.06	5.99	1454	0.0087	16.10

Rip Rap Calculator		
D50	10.28	in
Q	74.4	cfs
D	3.5	ft
WSEL	603.4	ft
INV	597.85	ft



GRAPHIC SCALE

0 50 100 FEET

SCALE: 1" = 50'

PRELIMINARY FOR REVIEW ONLY
THESE DOCUMENTS ARE FOR DESIGN REVIEW ONLY AND NOT INTENDED FOR THE PURPOSES OF CONSTRUCTION, BIDDING OR PERMIT. THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

JONATHAN E. SCHINDLER
P.E.# 108864
DATE: August 14, 2024

FASH TAYLOR, LTD
812 W. MCDERMOTT DRIVE
PMB 1305
ALLEN, TX 75013

DEVELOPER:
CONTACT: JOHN CHONG

TAYLOR POINTE
715 CARLOS G PARKER BLVD
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV.: DATE: DESCRIPTION:

KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

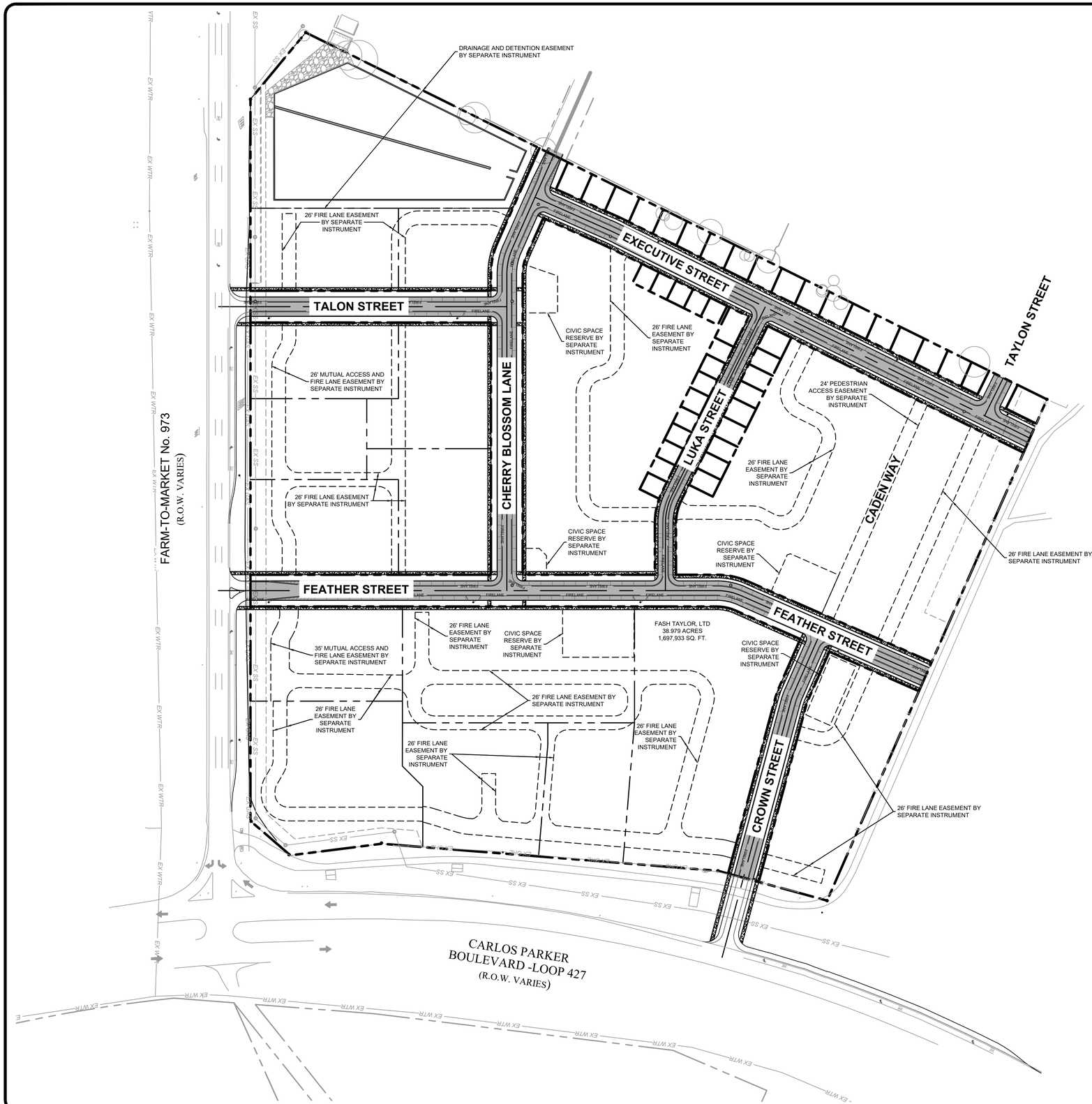
ISSUE DATE:

DETENTION EXHIBIT

SHEET:
V1.0

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FILENAME: 24086_Pond Exhibit_FSH24001.dwg
PLOTTED BY: Haley Hudeck
PLOTTED DATE: 8/14/2024



811 Know what's below. Call before you dig.

SITE BENCHMARKS

BM NO. 1 TEMPORARY BENCH MARK 1/2" IRON, N=10177819.470' E=3210509.089'
ELEVATION = 610.34' (NAD '83)

BM NO. 2 TEMPORARY BENCH MARK COTTON SPIKE IN POWER POLE, N=10177315.040' E=3210860.312'
ELEVATION = 607.42' (NAD '83)

LEGEND

- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY MANHOLE
- PROPOSED CURB INLET
- PROPOSED GRATE INLET
- PROPERTY BOUNDARY
- PROPOSED PAVEMENT
- PROPOSED SIDEWALK

NOTE: THESE PLANS ARE FOR CONCEPTUAL REVIEW ONLY

GRAPHIC SCALE
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TEXAS FIRM NO. 15874

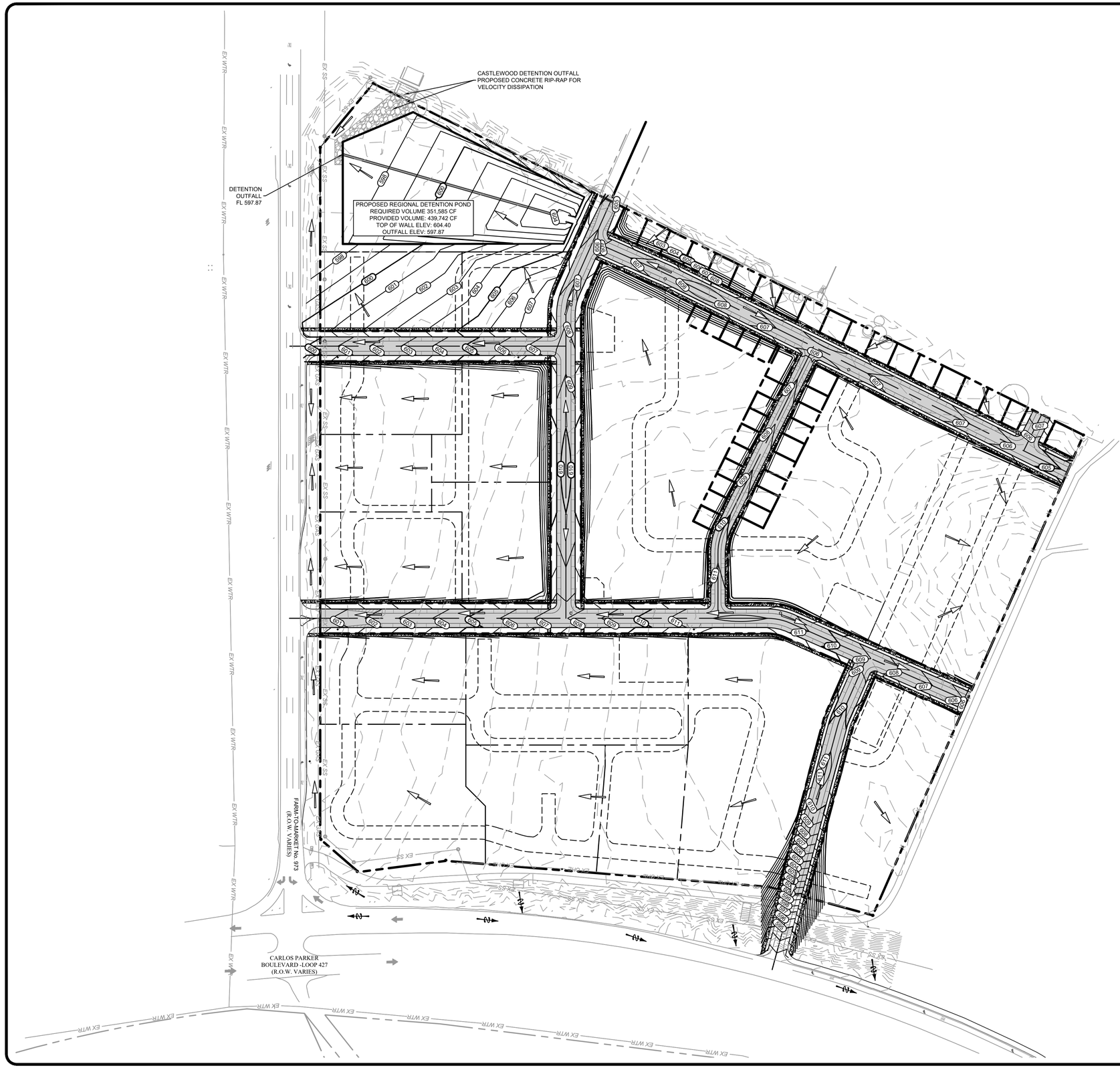
JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY ROADWAY CONCEPT PLAN

SHEET:
C3.0

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PLOTTED BY: Bailey Tidwell
PLOTTED DATE: 8/15/2024
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LEGEND

- PROPOSED CONTOUR — 500
- EXISTING CONTOUR — 500
- PROPOSED DRAINAGE FLOW ARROW
- EXISTING DRAINAGE FLOW ARROW
- PROPERTY BOUNDARY

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GRAPHIC SCALE
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TAYLOR POINTE
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CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV:	DATE:	DESCRIPTION:

kirkman ENGINEERING
KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY OVERALL GRADING PLAN

SHEET:
C4.0

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PLOTTED BY: Haley Hoskins
PLOTTED DATE: 8/16/2024
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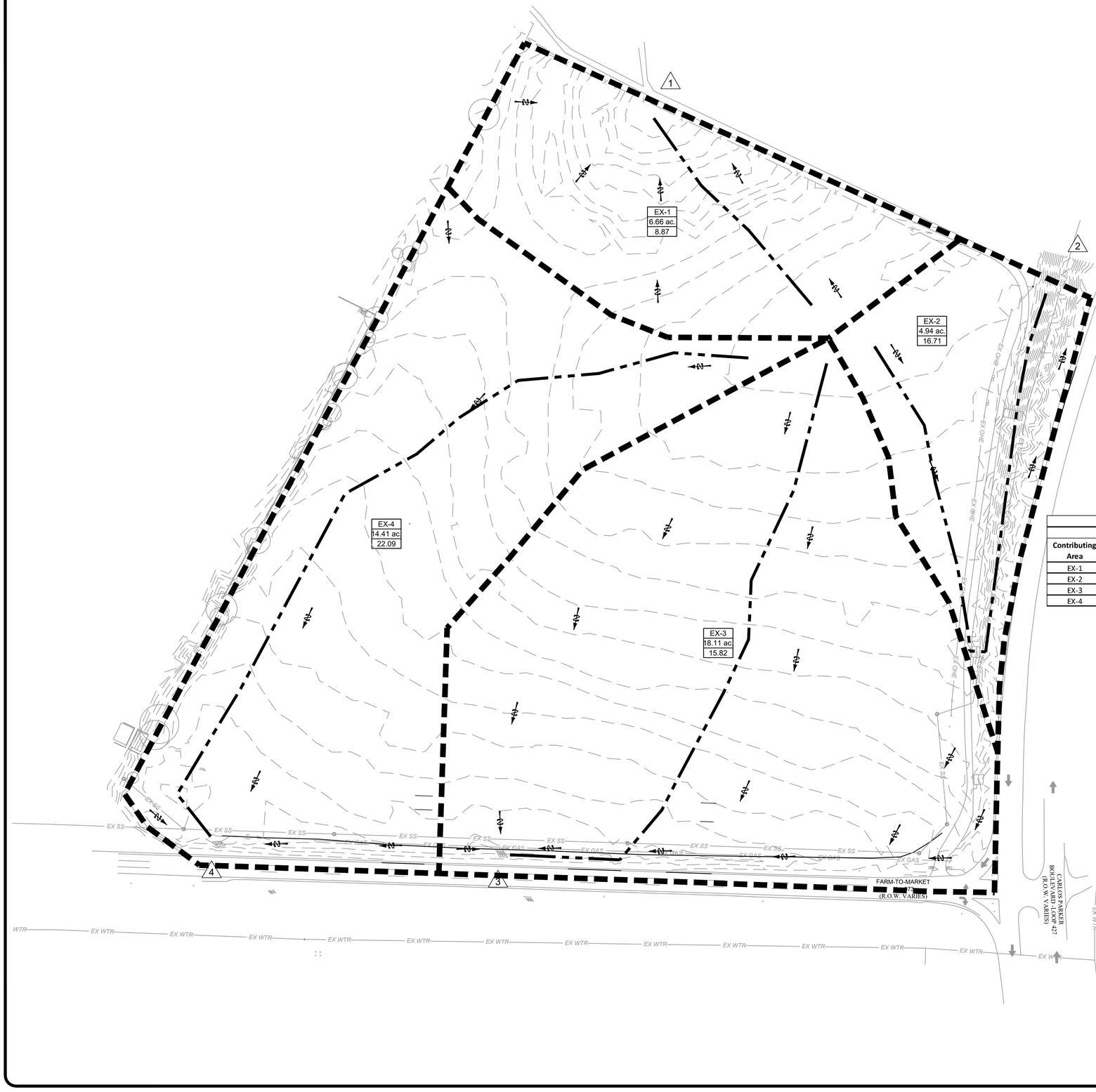
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N=10177315.040' E=3210860.312'

ELEVATION = 607.42' (NAD '83)



LEGEND

EXISTING DRAINAGE AREA LABEL	BASIN NAME: DA1
	ACRES: 0.63 ac.
	TIME OF CONCENTRATION: 5.57
EXISTING DRAINAGE AREA DIVIDE	
EXISTING DRAINAGE FLOW ARROW	
EXISTING CONTOUR	500
EXISTING STORM PIPE	
PROPERTY BOUNDARY	
POINT OF INTEREST	1
FLOW PATH	

Existing Hydrology Summary

Point of Interest	Peak Flow (cfs)			
	Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	14.2	26.1	34.0	46.9
POI-2	9.8	18.1	23.6	32.6
POI-3	33.9	62.5	81.6	112.9
POI-4	21.9	41.1	54.0	75.2

Existing Conditions - Routing Analysis Inputs

Drainage Areas			Land Use		TOC Calculation Table	HEC-HMS Inputs		
Contributing Area	Area (sf)	Area (ac)	Base Curve Number	Impervious Cover (sf)	TOC (min)	Area (sq. mi.)	Impervious Cover (%)	Lag Time
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EX-3	788,872	18.11	80	0.00	15.82	0.0282969	0%	9.49
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NOTE: DRAINAGE CRITERIA TAKEN FROM CITY OF TAYLOR ENGINEERING DESIGN MANUAL DATED JANUARY 2024.

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TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY EXISTING DRAINAGE AREA MAP

SHEET:
C6.0

Know what's **below.** **Call** before you dig.

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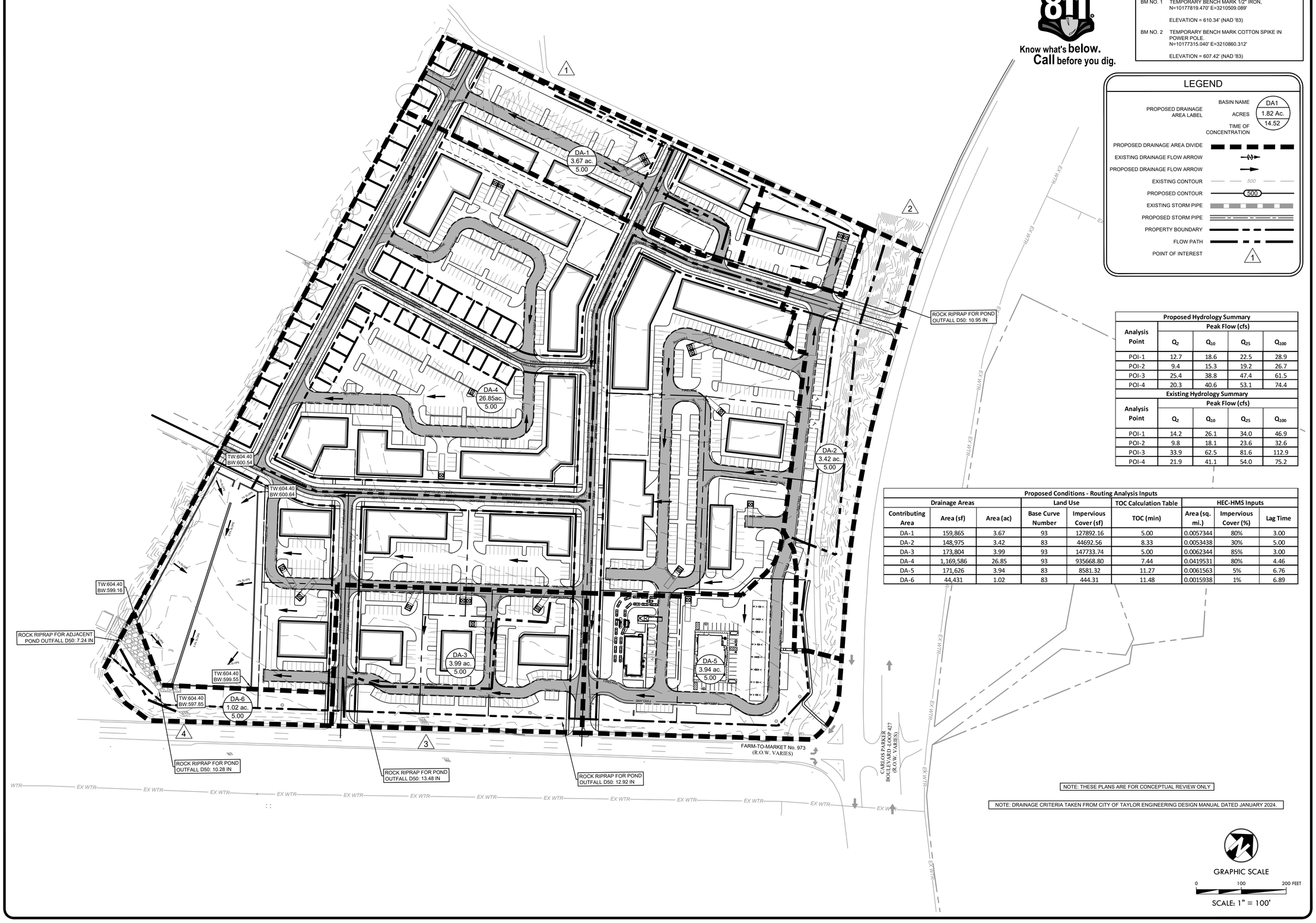
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N=10177315.040' E=3210860.312'

ELEVATION = 607.42' (NAD '83)

LEGEND

- PROPOSED DRAINAGE AREA LABEL — BASIN NAME: DA1; ACRES: 1.82 Ac.; TIME OF CONCENTRATION: 14.52
- PROPOSED DRAINAGE AREA DIVIDE
- EXISTING DRAINAGE FLOW ARROW
- PROPOSED DRAINAGE FLOW ARROW
- EXISTING CONTOUR — 500
- PROPOSED CONTOUR — 500
- EXISTING STORM PIPE
- PROPOSED STORM PIPE
- PROPERTY BOUNDARY
- FLOW PATH
- POINT OF INTEREST — 1



Proposed Hydrology Summary

Analysis Point	Peak Flow (cfs) Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	12.7	18.6	22.5	28.9
POI-2	9.4	15.3	19.2	26.7
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DA-6	44,431	1.02	83	444.31	11.48	0.0015938	1%	6.89

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NOTE: DRAINAGE CRITERIA TAKEN FROM CITY OF TAYLOR ENGINEERING DESIGN MANUAL DATED JANUARY 2024.

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CONTACT: JOHN CHONG

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715 CARLOS G PARKER BLVD
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WILLIAMSON COUNTY, TEXAS

REV.:	DATE:	DESCRIPTION:

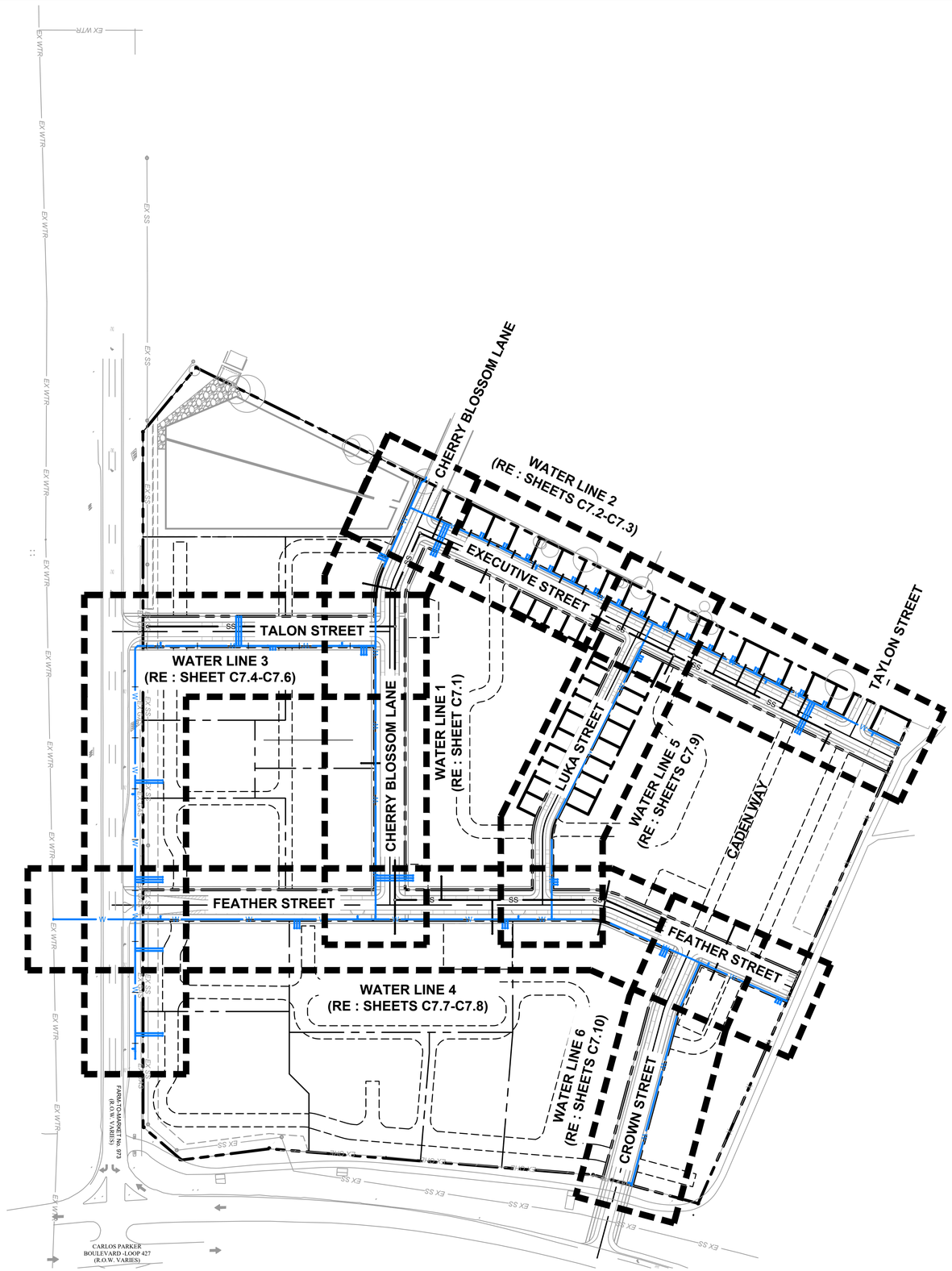
kirkman ENGINEERING
KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY PROPOSED DRAINAGE AREA MAP

SHEET:
C6.1



Know what's **below.**
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SITE BENCHMARKS

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N=10177819.470' E=3210509.089'

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N=10177315.040' E=3210860.312'

ELEVATION = 607.42' (NAD '83)

LEGEND

EXISTING SANITARY SEWER	EX SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE
EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE
EXISTING OVERHEAD ELECTRIC	EX OHE
PROPOSED TELEPHONE	TELE
EXISTING TELEPHONE	EX UGE
PROPERTY BOUNDARY	

WATER & SANITARY SEWER GENERAL NOTES

1. ALL WATER MAINS, UNLESS OTHERWISE NOTED, SHALL HAVE A MINIMUM COVER OF 48" BELOW FINISHED GRADE. PROVIDE VALVE EXTENSIONS TO ALL VALVES ON LINES DEEPER THAN 48".
2. WHEN WATER AND SANITARY SEWERS LINES ARE INSTALLED, THEY SHALL BE INSTALLED PER TCEQ SEPARATION REQUIREMENTS.
3. CONTRACTOR TO VERIFY ALL EXISTING SEWER FLOW LINES BEFORE BEGINNING CONSTRUCTION.
4. ALL SANITARY SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
5. THE UTILITY CONTRACTOR SHALL INSTALL THE WATER SERVICES TO A POINT AS SHOWN ON THE PLANS. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER FINE GRADING HAS BEEN COMPLETED.
6. ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS.
7. CONTRACTOR SHALL RAISE/LOWER OR ADJUST ALL EXISTING FRANCHISE UTILITY LINES IN CONFLICT WITH PROPOSED UTILITIES AS PART OF THE BASE BIDS FOR ALL KNOWN OR UNKNOWN LINES.
8. REFER TO MEP PLANS FOR EXACT SIZE, LOCATION, AND INVERT OF UTILITIES AT BUILDING.
9. FIRE SPRINKLER LINES AND FIRE DEPARTMENT CONNECTIONS SHALL BE SIZED, DESIGNED, AND INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR.
10. BACKFLOW DEVICE FOR DOMESTIC AND FIRE SERVICE TO BE LOCATED INSIDE THE BUILDING PER CITY OF TAYLOR STANDARDS UNLESS OTHERWISE NOTED.

NOTE TO CONTRACTOR
THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) PRIOR TO COMMENCING CONSTRUCTION. IF FIELD CONDITIONS DIFFER FROM LOCATIONS SHOWN ON THE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

NOTE TO CONTRACTOR - FRANCHISE UTILITIES
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GRAPHIC SCALE
0 120 240 FEET
SCALE: 1" = 120'

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JONATHAN E. SCHINDLER
P.E.# 108864
DATE: August 16, 2024

FASH TAYLOR, LTD
812 W. MCDERMOTT DRIVE
PMB 1305
ALLEN, TX 75013

DEVELOPER:
CONTACT: JOHN CHONG

TAYLOR POINTE
715 CARLOS G PARKER BLVD
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV.:	DATE:	DESCRIPTION:

kirkman ENGINEERING
KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY OVERALL WATER PLAN

SHEET:
C7.0

FILE PATH: K:\Jobs\fsh24001_taylor40\Drawings\02_ENGR\03 - Production\K:\Jobs\fsh24001_taylor40\Drawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH24001
FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: RIAN ROANE
PLOTTED DATE: 8/16/2024

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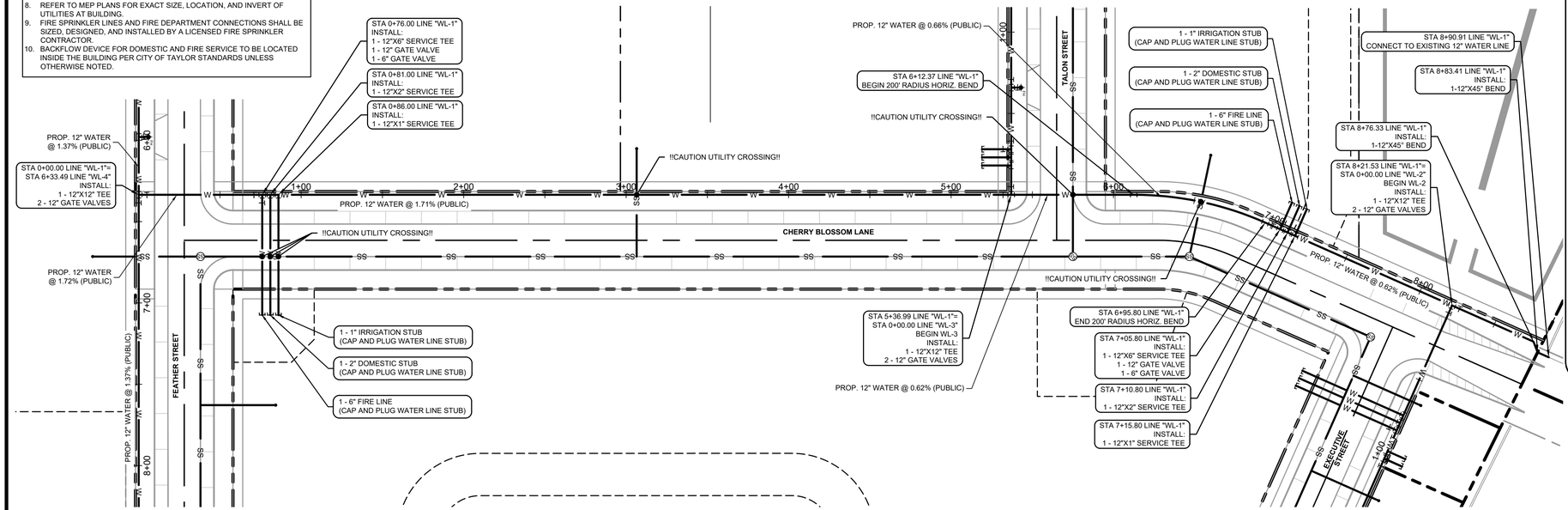
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ELEVATION = 610.34' (NAD '83)

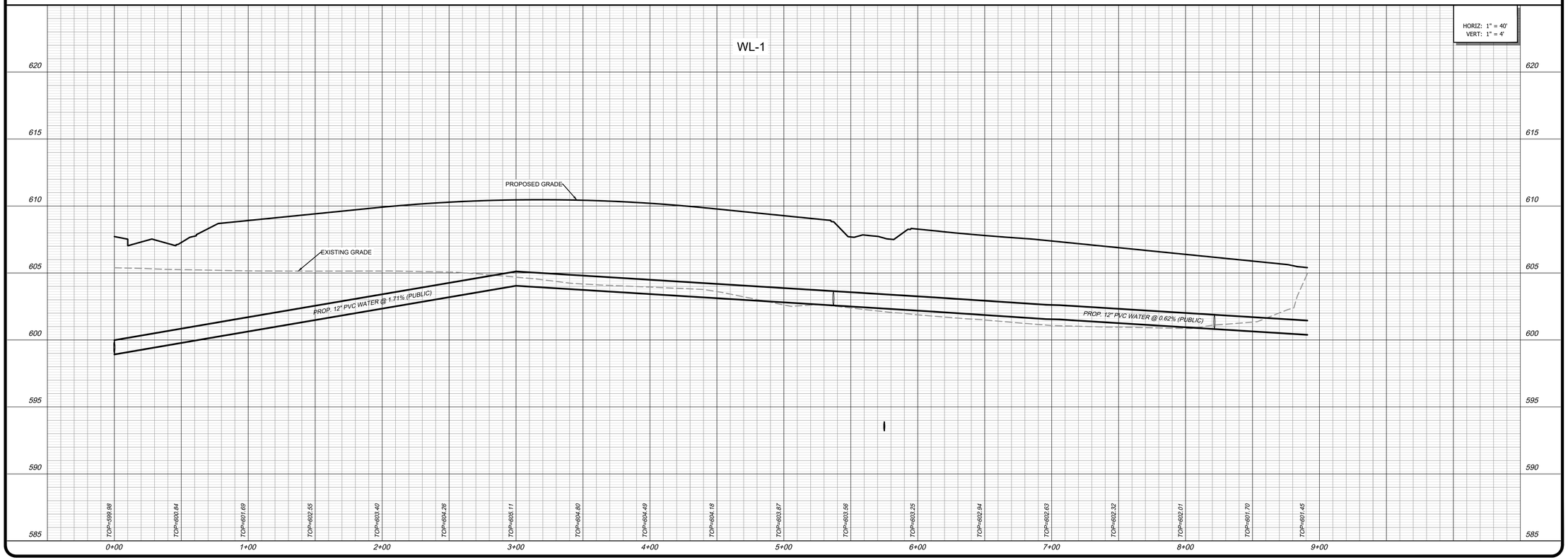
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LEGEND

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- PROPOSED SANITARY SEWER — SS
- EXISTING WATER — EX WTR
- PROPOSED WATER — W — W
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT — FH
- PROPOSED GAS — GAS
- EXISTING GAS — EX GAS
- PROPOSED UNDERGROUND ELECTRIC — UGE — UGE — UGE
- EXISTING UNDERGROUND ELECTRIC — EX UGE
- PROPOSED OVERHEAD ELECTRIC — OHE — OHE — OHE
- EXISTING OVERHEAD ELECTRIC — EX OHE
- PROPOSED TELEPHONE — TELE — TELE — TELE
- EXISTING TELEPHONE — EX UGE
- PROPERTY BOUNDARY

GRAPHIC SCALE
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JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE I

SHEET:
C7.1

FILE PATH: K:\Shm\SHA\FSH24001_Taylor\4SDrawings\02_ENGR\03 - Production\Civil\Shm\FSH24001_Taylor\4SDrawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH24001

FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Hodge
PLOTTED DATE: 8/16/2024

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- EXISTING TELEPHONE — EX UGE
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GRAPHIC SCALE
0 40 80 FEET
SCALE: 1" = 40'

STA 0+84.00 LINE "WL-2" INSTALL:
1 - 12"X6" SERVICE TEE
1 - 12" GATE VALVE
1 - 6" GATE VALVE

STA 0+79.00 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 0+74.00 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE

STA 8+21.53 LINE "WL-1"= STA 0+00.00 LINE "WL-2" BEGIN WL-2 INSTALL:
1 - 12"X12" TEE
2 - 12" GATE VALVES

STA 1+90.08 LINE "WL-2" END 100' RADIUS HORIZ. BEND

STA 1+85.84 LINE "WL-2" BEGIN 100' RADIUS HORIZ. BEND

STA 2+47.58 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 2+52.58 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 2+74.44 LINE "WL-2" INSTALL:
1 - 12"X6" TEE
1 - FIRE HYDRANT ASSEMBLY
1 - 6" GATE VALVE
(7 LF OF 6" WATER LINE)

STA 3+52.67 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 4+02.72 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 4+52.76 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 5+52.85 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 6+02.90 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

CHERRY BLOSSOM LANE

!!CAUTION UTILITY CROSSING!!

EXECUTIVE STREET

LUKA STREET

1 - 6" FIRE LINE STUB (CAP AND PLUG WATER LINE STUB)

1 - 2" DOMESTIC STUB (CAP AND PLUG WATER LINE STUB)

1 - 1" IRRIGATION STUB (CAP AND PLUG WATER LINE STUB)

PROP. FIRE HYDRANT W/ 6" DUCTILE IRON FIRE LEAD

STA 0+98.00 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 1+03.00 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 1+48.00 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 1+53.00 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 1+97.54 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 2+02.54 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 2+97.63 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 3+02.63 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 3+47.67 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 3+97.72 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 4+47.76 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 4+97.81 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 5+02.81 LINE "WL-2" INSTALL:
1 - 12"X1" SERVICE TEE
1 - 12" GATE VALVE

STA 5+28.54 LINE "WL-2" END WL-5 INSTALL:
1 - 12"X12" TEE
2 - 12" GATE VALVES

STA 5+47.85 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

STA 5+97.90 LINE "WL-2" INSTALL:
1 - 12"X2" SERVICE TEE

MATCHLINE SHEET C7.3 STA. 6+50

MATCHLINE STA. 6+50

HORIZ: 1" = 40'
VERT: 1" = 4'

WL-2

PROPOSED GRADE

EXISTING GRADE

PROP. 12" PVC WATER @ 0.00% (PUBLIC)

PROP. 12" PVC WATER @ 0.35% (PUBLIC)

TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.88 TOP=601.96 TOP=602.14 TOP=602.31 TOP=602.49

625 620 615 610 605 600 595 590

0+00 1+00 2+00 3+00 4+00 5+00 6+00

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ISSUE DATE:

WATER PLAN AND PROFILE II

SHEET:
C7.2

FILE PATH: K:\Jobs\fsh24001_taylor40\Drawings\02_ENGR\03 - Production\fsh24001_taylor40Drawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH24001

FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Haley Hoppe
PLOTTED DATE: 8/16/24

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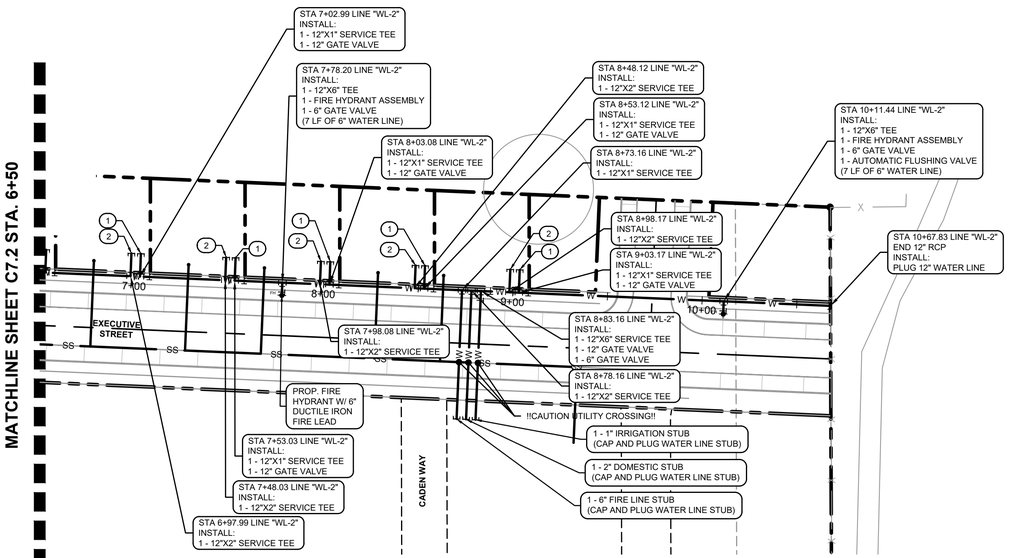
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PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
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EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE OHE OHE
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WATER PLAN AND PROFILE III

SHEET:
C7.3

FILE PATH: K:\Jobs\fsh24001_taylor40\Drawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH24001
FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: IRAN ZADAE
PLOTTED DATE: 8/16/2024

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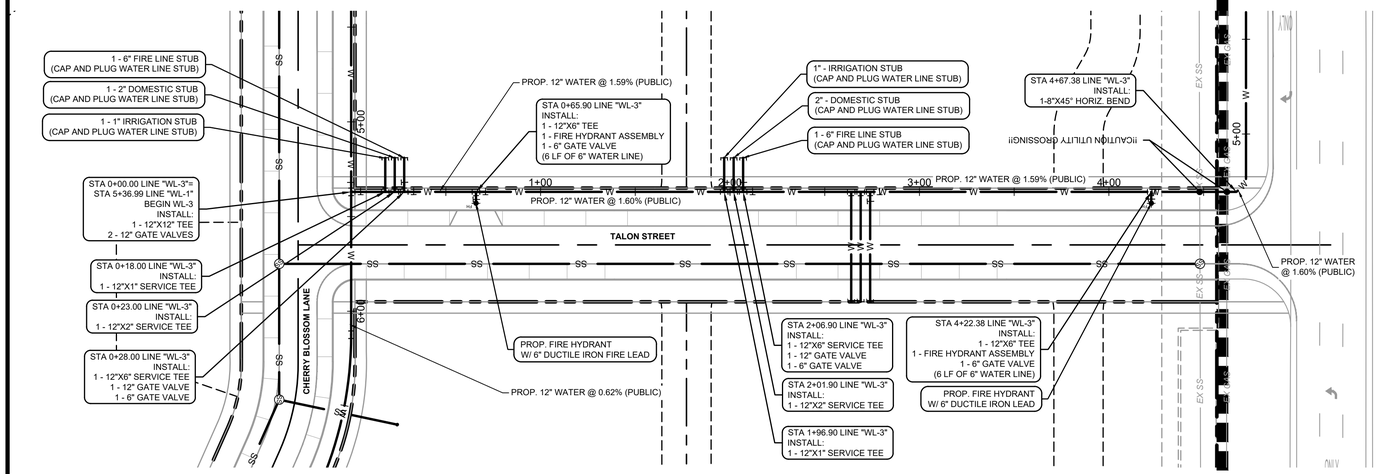
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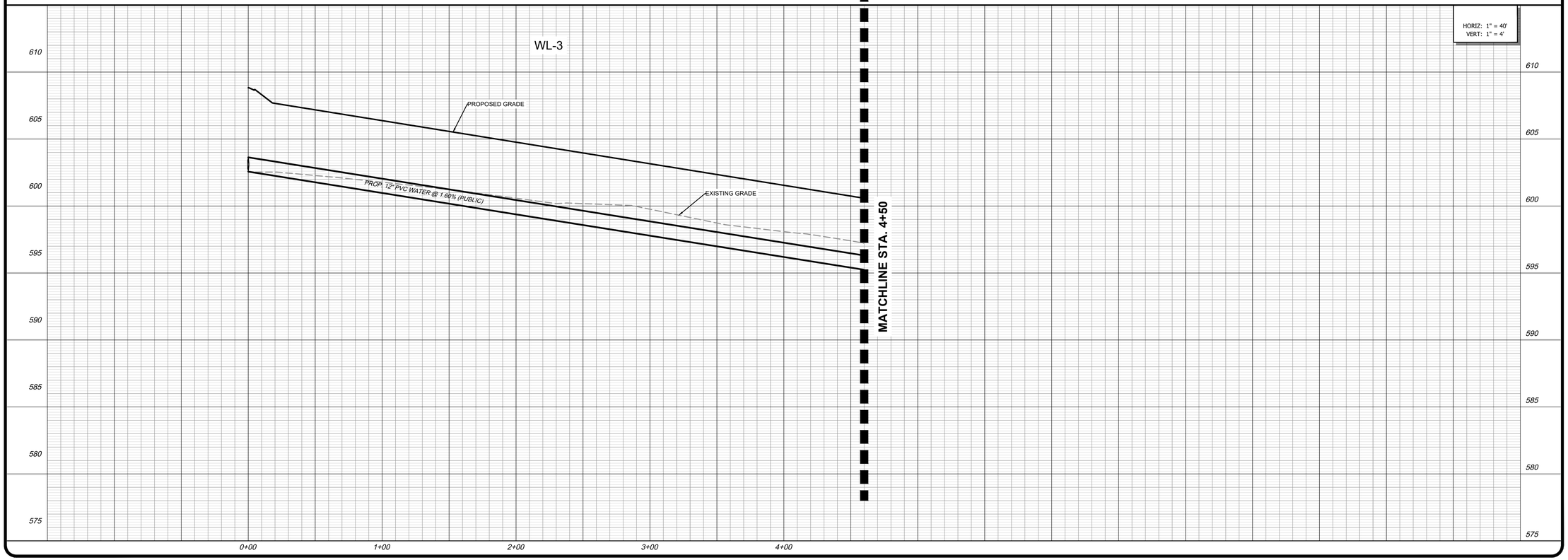
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PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W — W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE — UGE — UGE
EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE — OHE — OHE
EXISTING OVERHEAD ELECTRIC	EX OHE
PROPOSED TELEPHONE	TELE — TELE — TELE
EXISTING TELEPHONE	EX UGE
PROPERTY BOUNDARY	

GRAPHIC SCALE
0 40 80 FEET
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JONATHAN E. SCHINDLER
P.E.# 108864
DATE: August 16, 2024

FASH TAYLOR, LTD
812 W. MCDERMOTT DRIVE
PMB 1305
ALLEN, TX 75013

DEVELOPER:
CONTACT: JOHN CHONG

TAYLOR POINTE
715 CARLOS G PARKER BLVD
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV.:	DATE:	DESCRIPTION:

kirkman ENGINEERING
KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

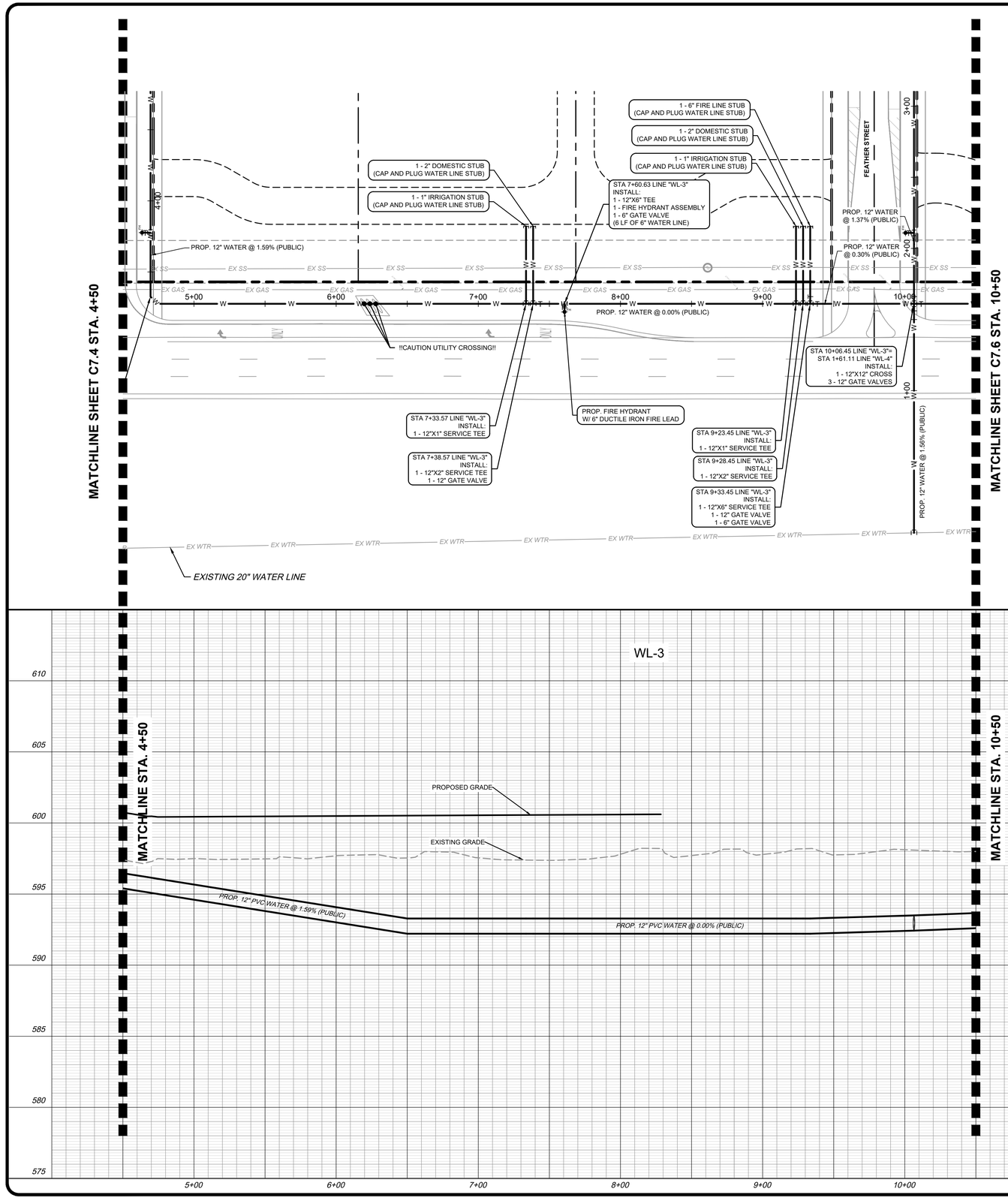
JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE IV

SHEET:
C7.4

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PLOTTED BY: Haley Hobbs
PLOTTED DATE: 8/16/2024



Know what's **below.** **Call** before you dig.

SITE BENCHMARKS

BM NO. 1 TEMPORARY BENCH MARK 1/2" IRON, N=10177819.470' E=3210509.089'
ELEVATION = 610.34' (NAD '83)

BM NO. 2 TEMPORARY BENCH MARK COTTON SPIKE IN POWER POLE, N=10177315.040' E=3210860.312'
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EXISTING SANITARY SEWER	EX SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE
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PROPOSED OVERHEAD ELECTRIC	OHE
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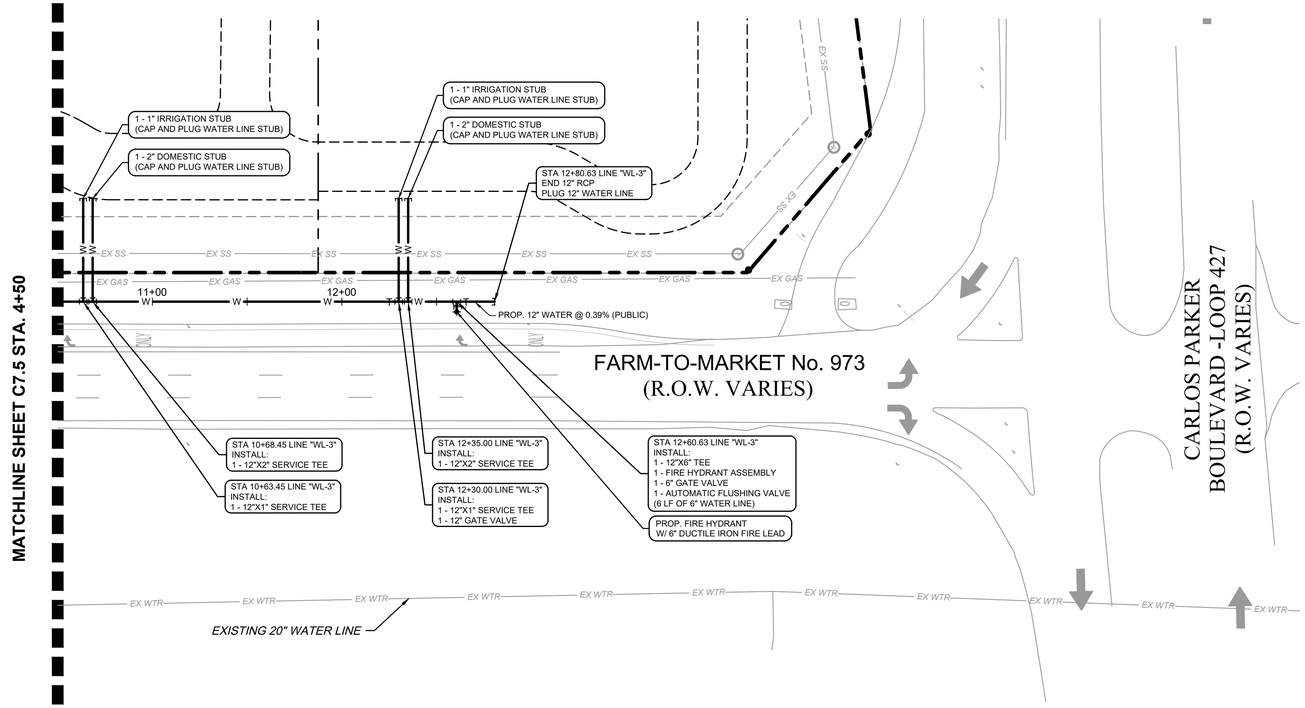
JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE V

SHEET:
C7.5

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PLOTTED BY: Helen Gabriel
PLOTTED DATE: 8/15/2024



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PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
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TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE VI

SHEET:
C7.6

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PLOTTED BY: Blake Hooker
PLOTTED DATE: 8/16/2024

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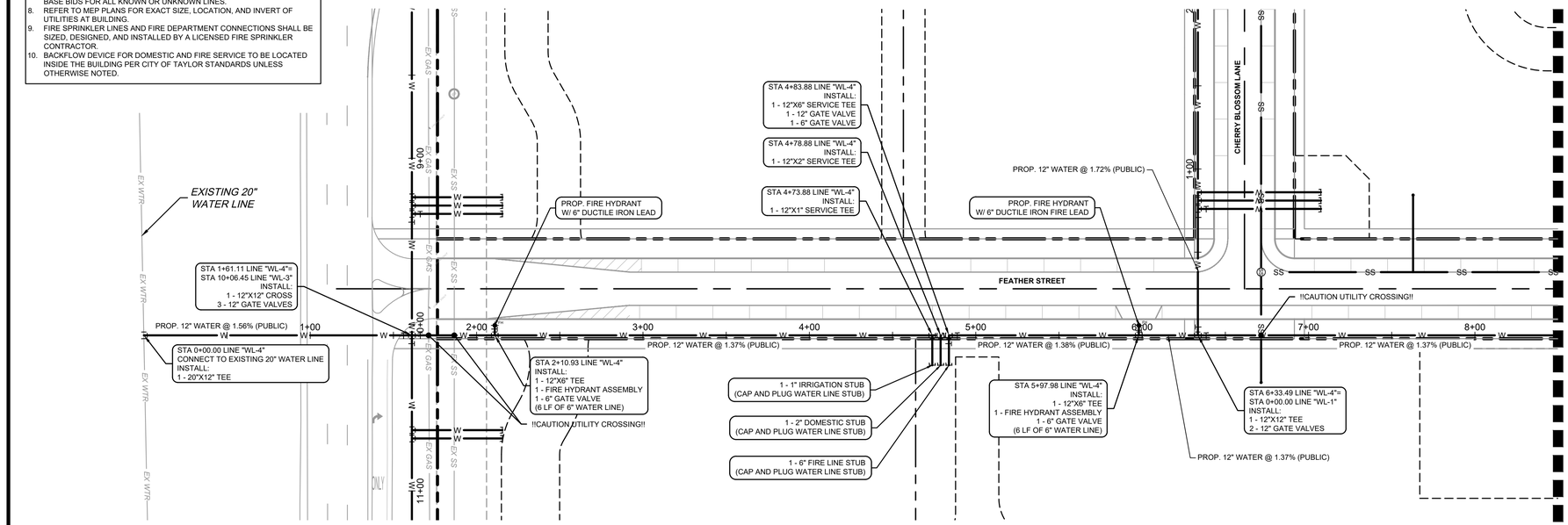
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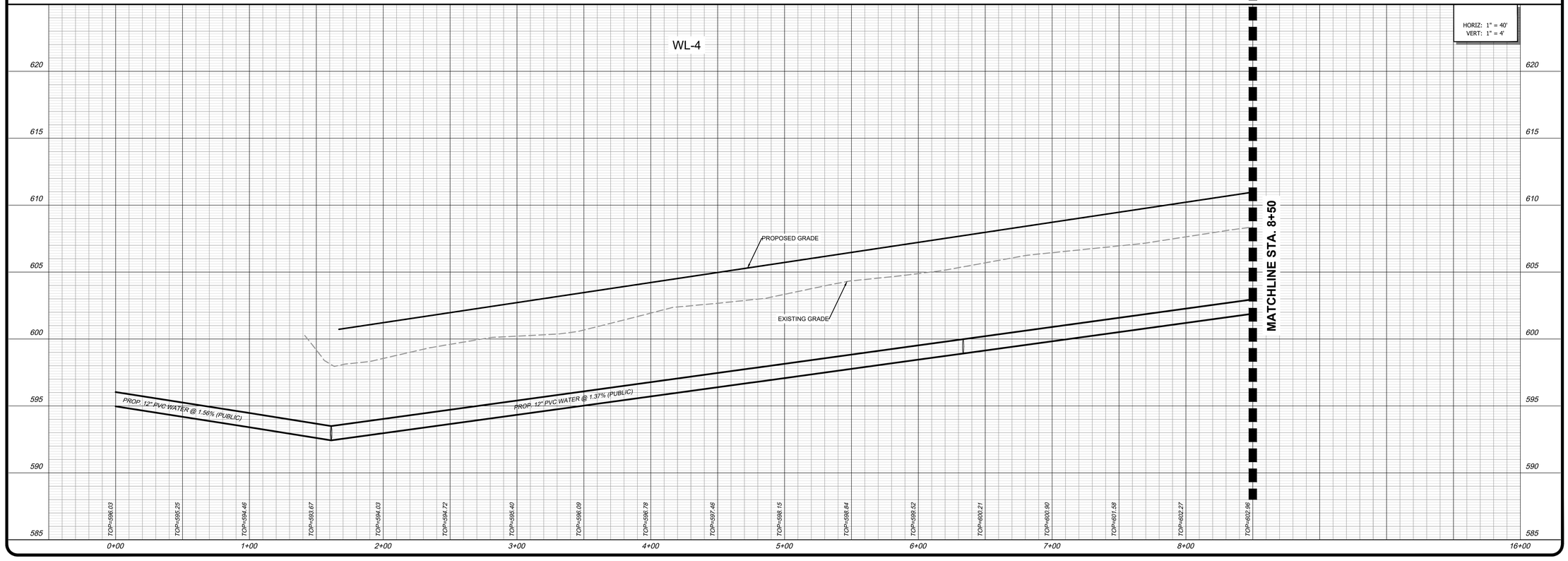
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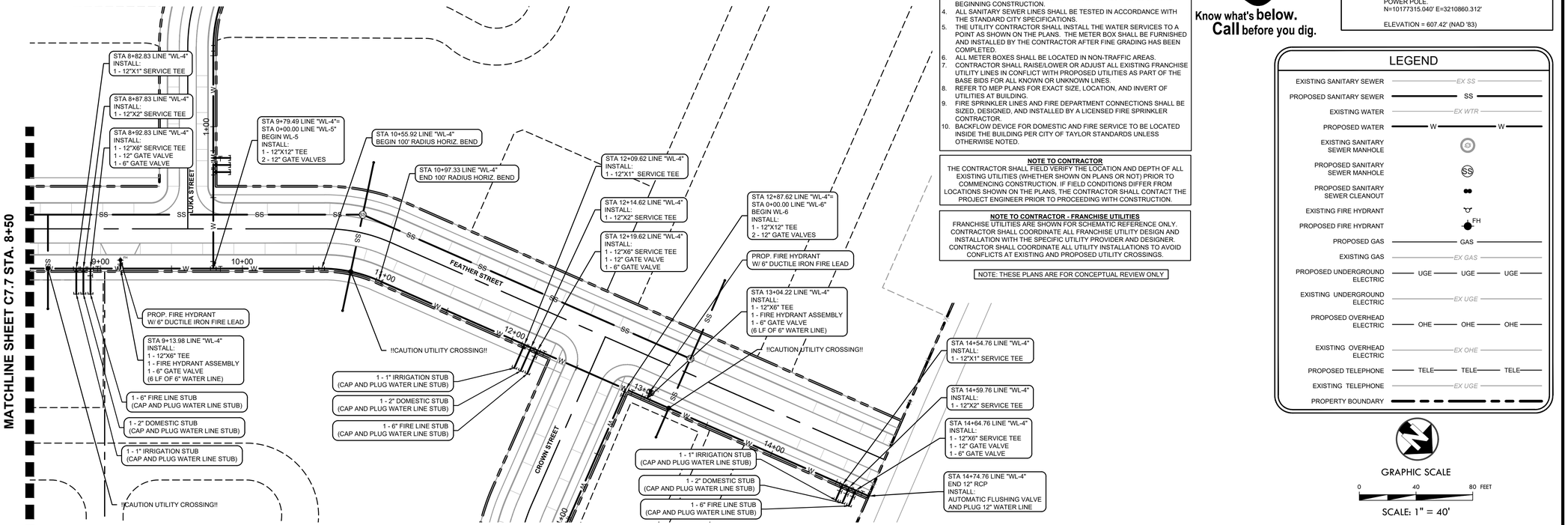
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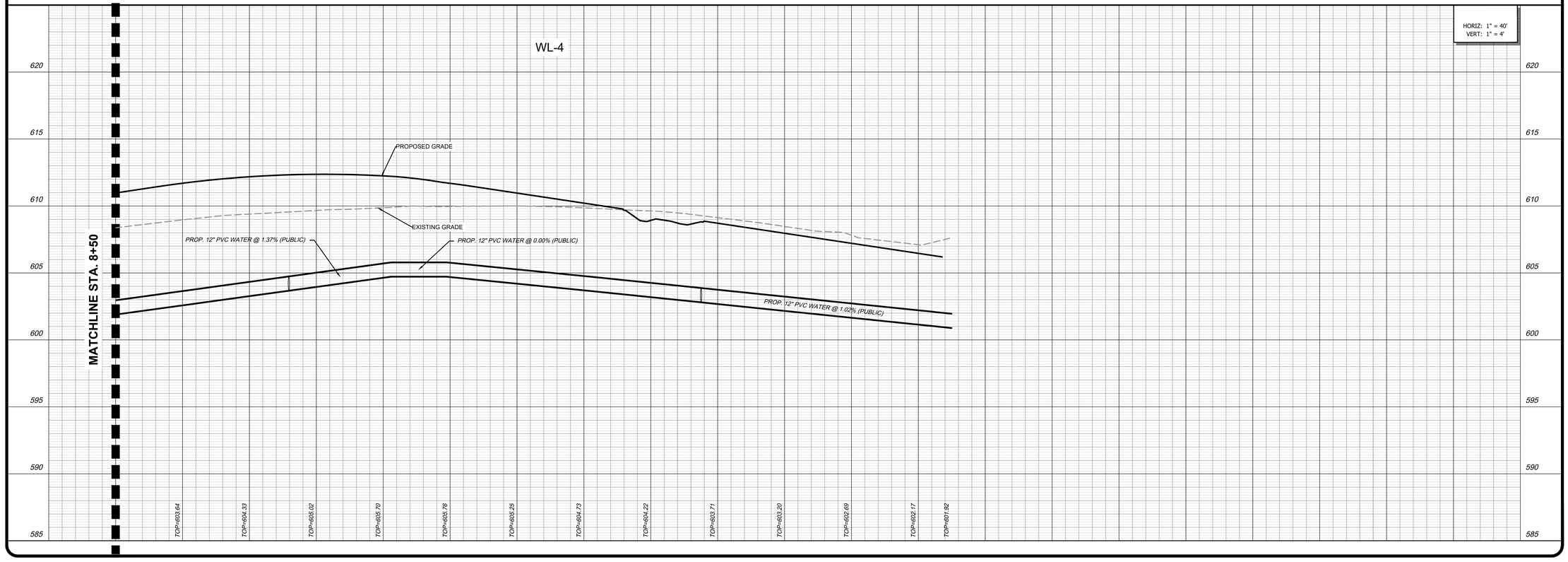
WATER PLAN AND PROFILE VII

SHEET:
C7.7

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PLOTTED BY: SHIN PARK
PLOTTED DATE: 8/16/24





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WATER PLAN AND PROFILE VIII

SHEET:
C7.8

FILE PATH: K:\Shm\SHA\WO_Jobs\4WDrawings\02_ENGR\03 - Production\K:\Shm\SHA\WO_Jobs\4WDrawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH.WO1
FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Hooper
PLOTTED DATE: 8/16/2024

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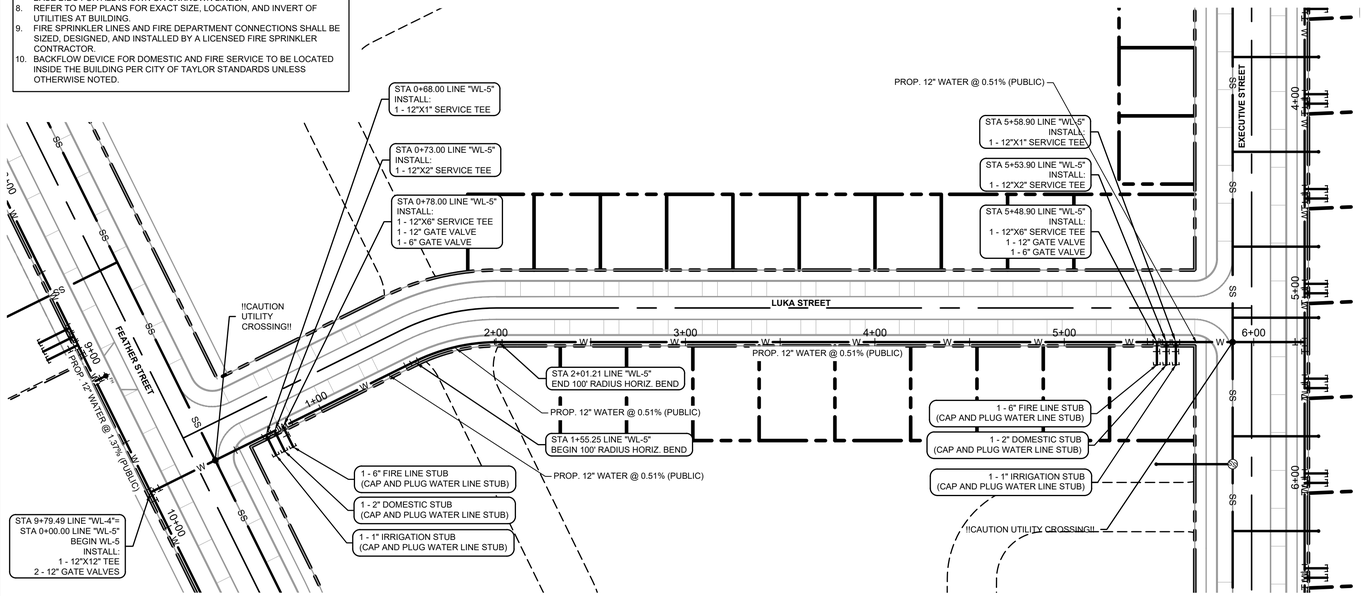
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Know what's **below.** **Call** before you dig.

SITE BENCHMARKS

BM NO. 1 TEMPORARY BENCH MARK 1/2" IRON, N=10177819.470' E=3210509.089'
ELEVATION = 610.34' (NAD '83)

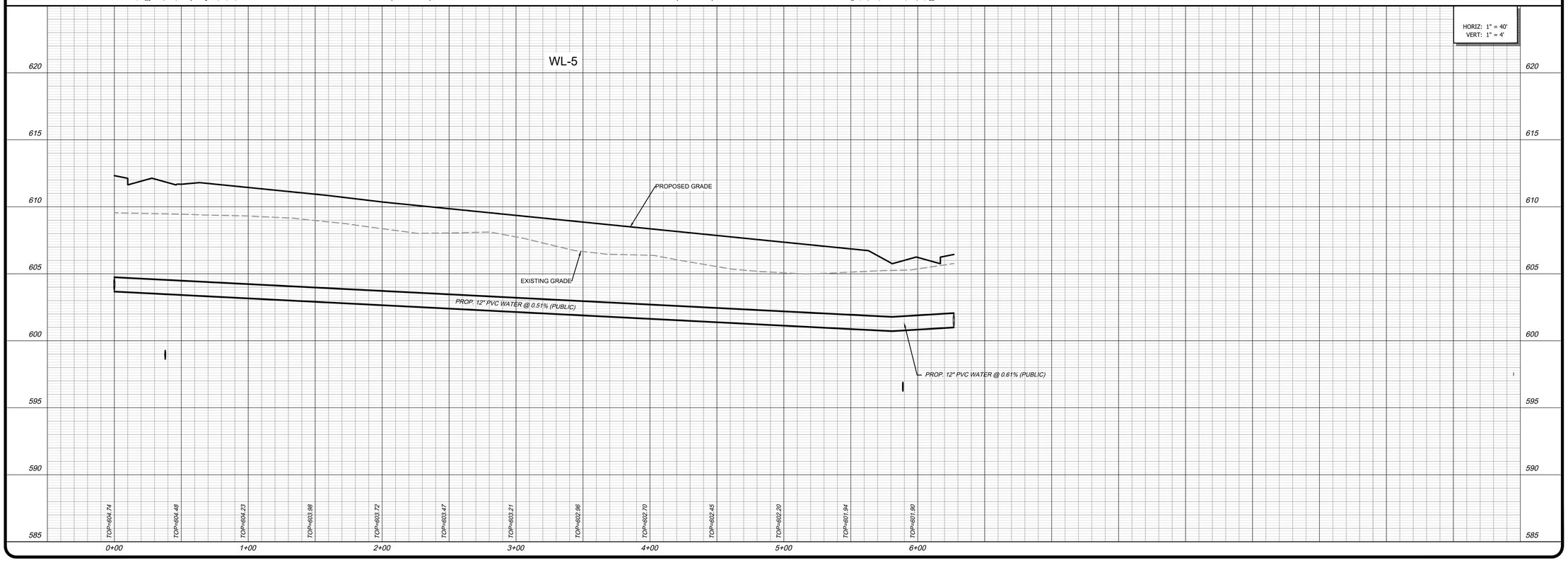
BM NO. 2 TEMPORARY BENCH MARK COTTON SPIKE IN POWER POLE, N=10177315.040' E=3210860.312'
ELEVATION = 607.42' (NAD '83)



LEGEND

EXISTING SANITARY SEWER	EX SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W W W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE UGE UGE
EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE OHE OHE
EXISTING OVERHEAD ELECTRIC	EX OHE
PROPOSED TELEPHONE	TELE TELE TELE
EXISTING TELEPHONE	EX UGE
PROPERTY BOUNDARY	

GRAPHIC SCALE
0 40 80 FEET
SCALE: 1" = 40'



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JONATHAN E. SCHINDLER
P.E.# 108864
DATE: August 16, 2024

FASH TAYLOR, LTD
812 W. MCDERMOTT DRIVE
PMB 1305
ALLEN, TX 75013

DEVELOPER:
CONTACT: JOHN CHONG

TAYLOR POINTE
715 CARLOS G PARKER BLVD
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV.:	DATE:	DESCRIPTION:

KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE IX

SHEET:
C7.9

FILE PATH: K:\Shm\SHJ4001_Taylor4\Drawings\02_ENGR\03 - Production\C3d\xrfs\SHJ4001_tay4x4\Drawings\02_ENGR\03 - Production\C7.9 UTILITY PLAN_FSH4001
FILENAME: C7.9 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Hodge
PLOTTED DATE: 8/16/2024

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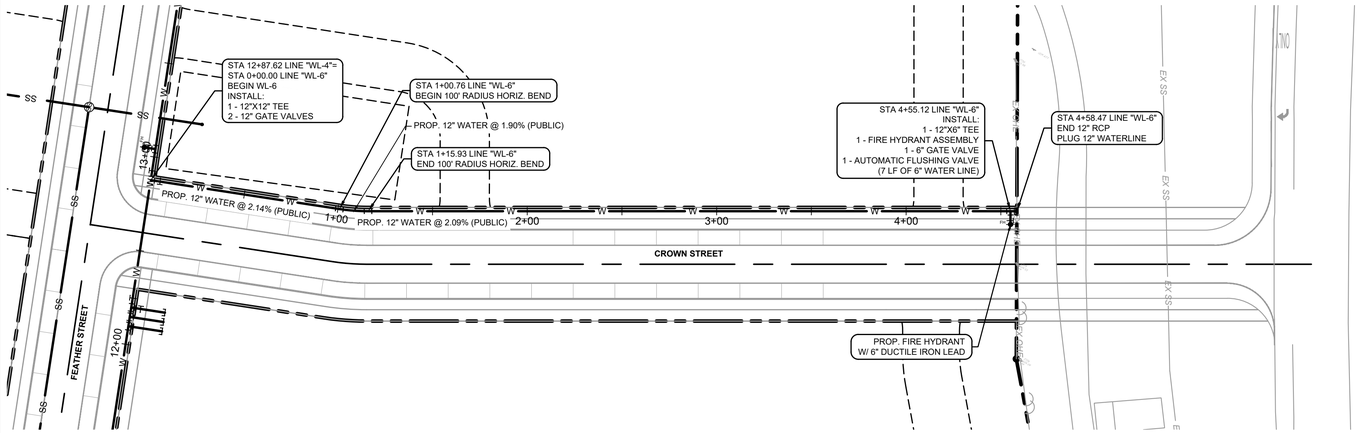
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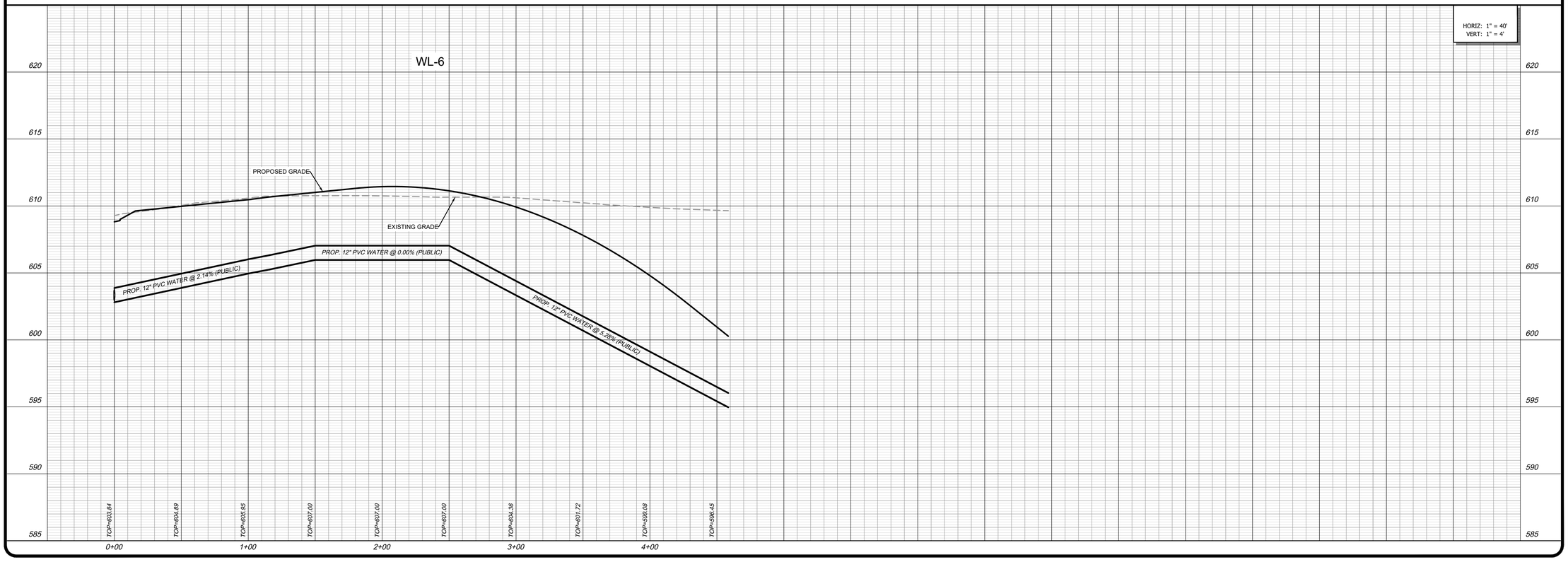
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- PROPOSED SANITARY SEWER MANHOLE — SS
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- PROPOSED FIRE HYDRANT — FH
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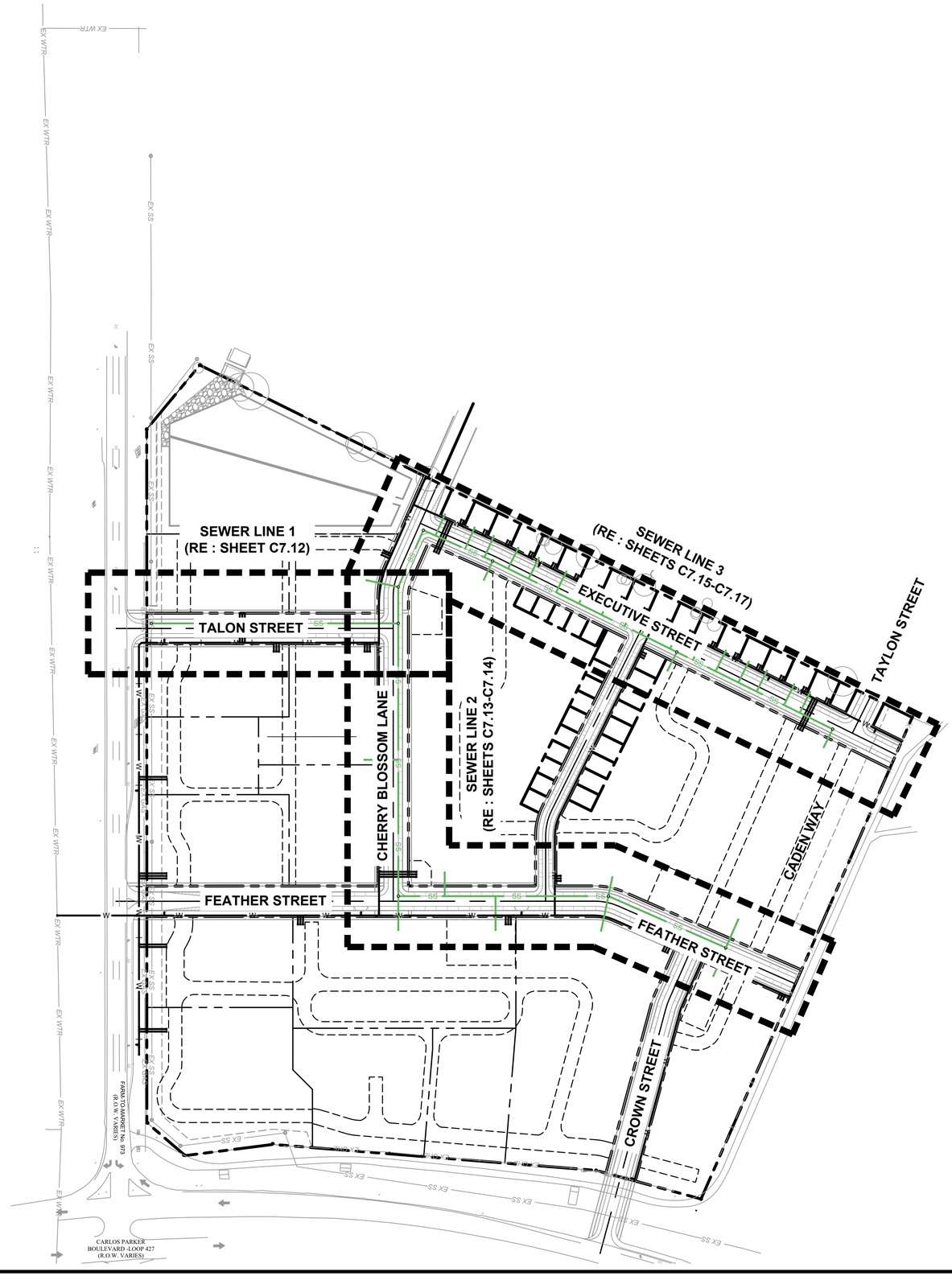
JOB NUMBER: FSH24001

ISSUE DATE:

WATER PLAN AND PROFILE X

SHEET:
C7.10

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FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Haley Hodge
PLOTTED DATE: 8/16/2024



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PROPOSED WATER	W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE
EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE
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0 120 240 FEET
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TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

PRELIMINARY OVERALL SANITARY SEWER PLAN

SHEET:
C7.11

FILE NAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Bailey Hobbs
PLOTTED DATE: 8/16/2024

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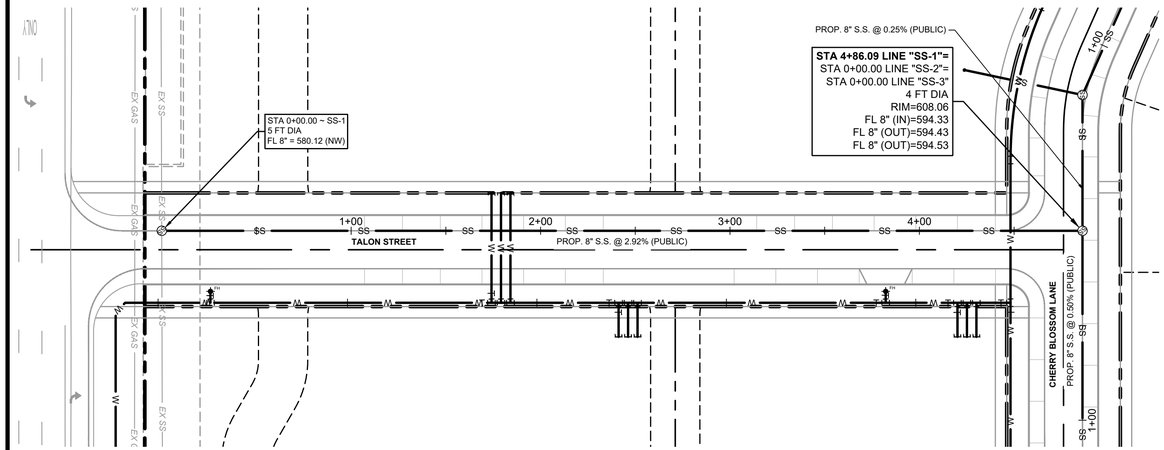
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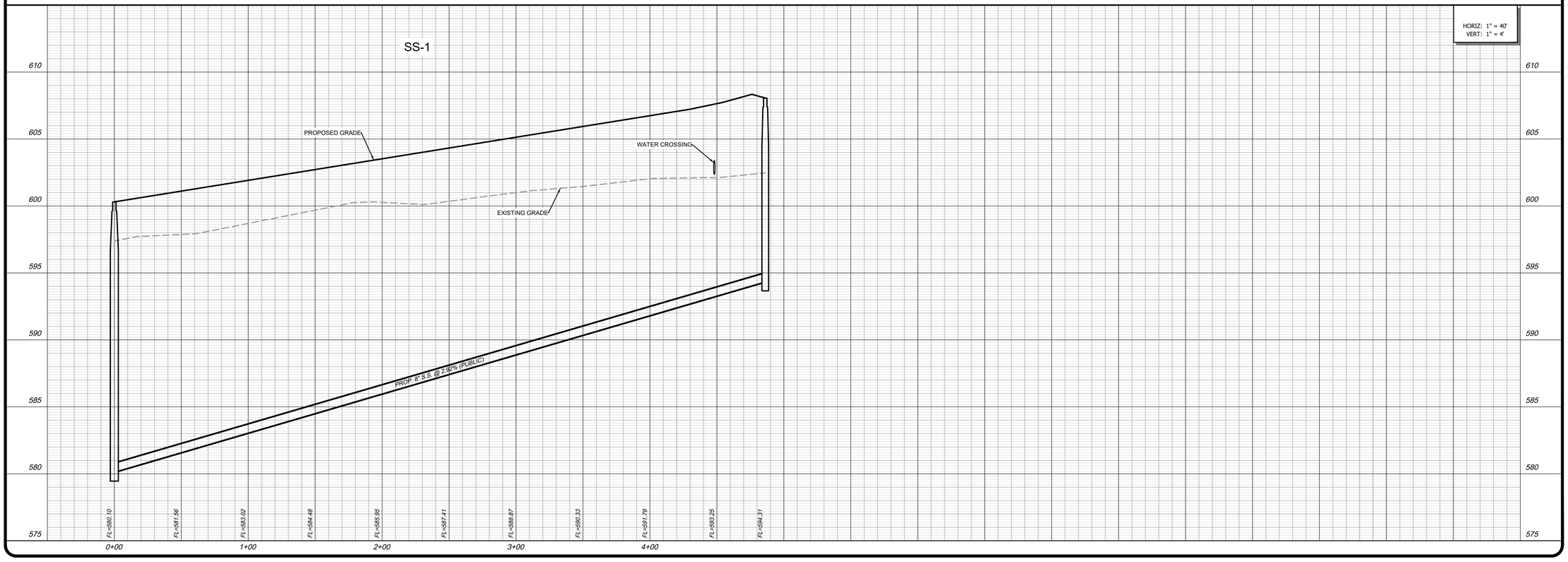
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JOB NUMBER: FSH24001

ISSUE DATE:

SANITARY SEWER PLAN AND PROFILE I

SHEET:
C7.12

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FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Hodge
PLOTTED DATE: 8/16/2024

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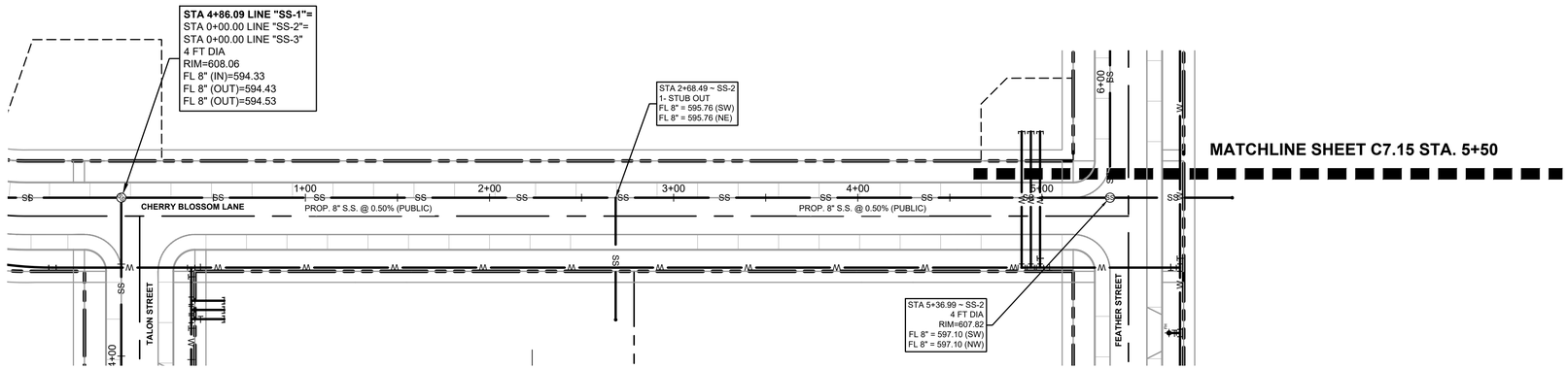
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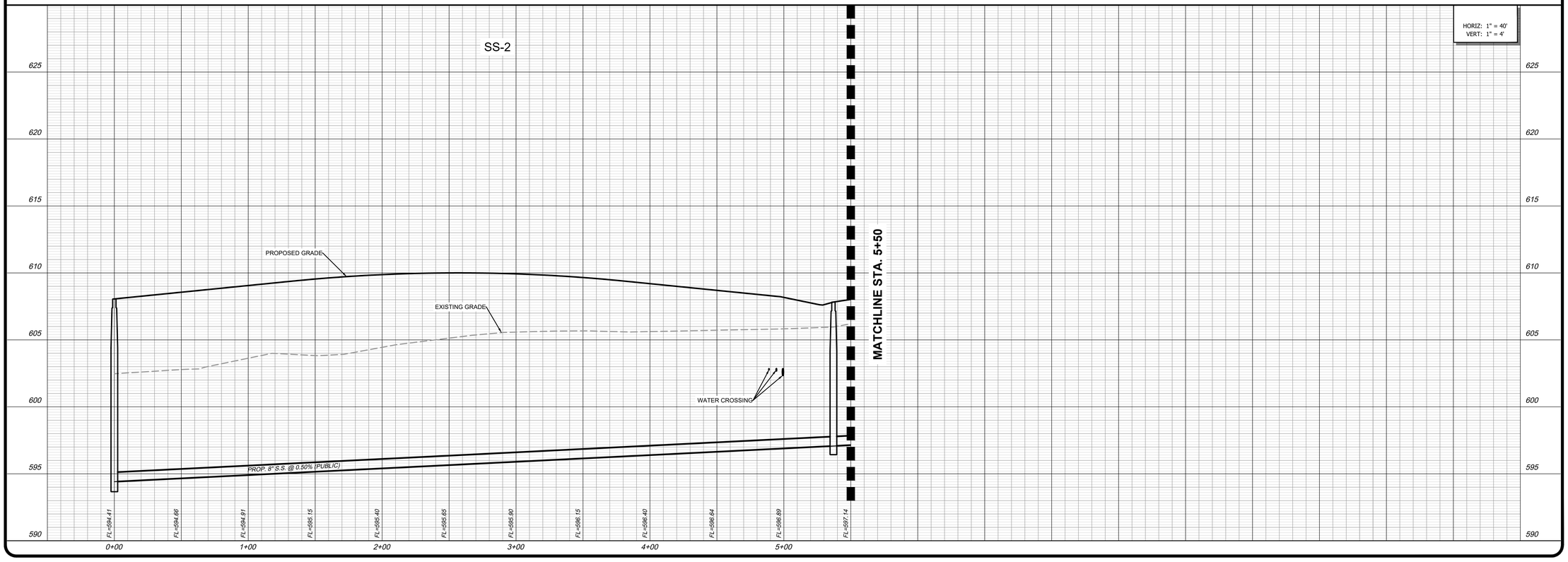
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SHEET:
C7.13

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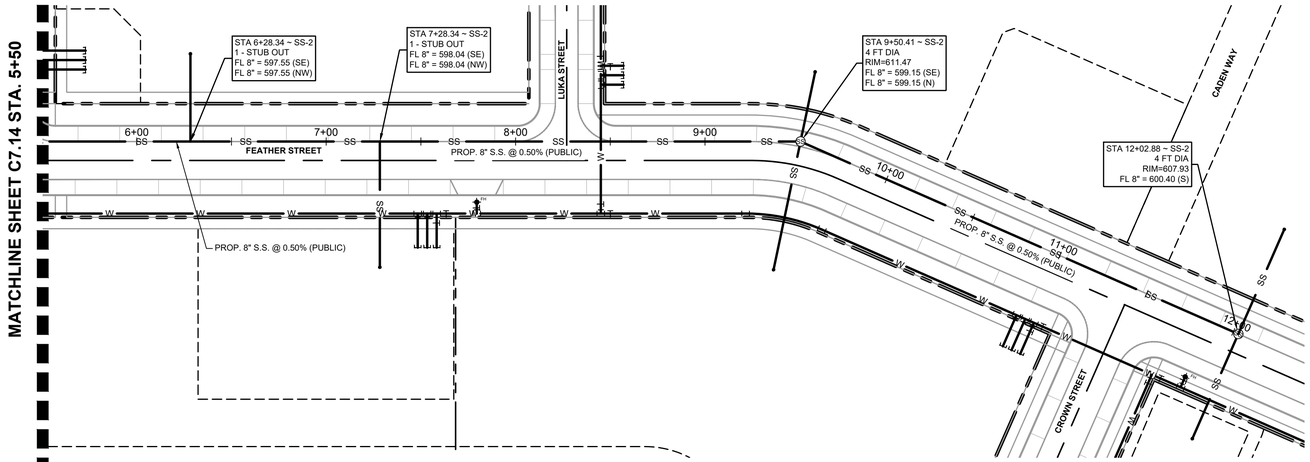
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ELEVATION = 610.34' (NAD '83)

BM NO. 2 TEMPORARY BENCH MARK COTTON SPIKE IN POWER POLE,
N=10177315.040' E=3210860.312'

ELEVATION = 607.42' (NAD '83)



LEGEND

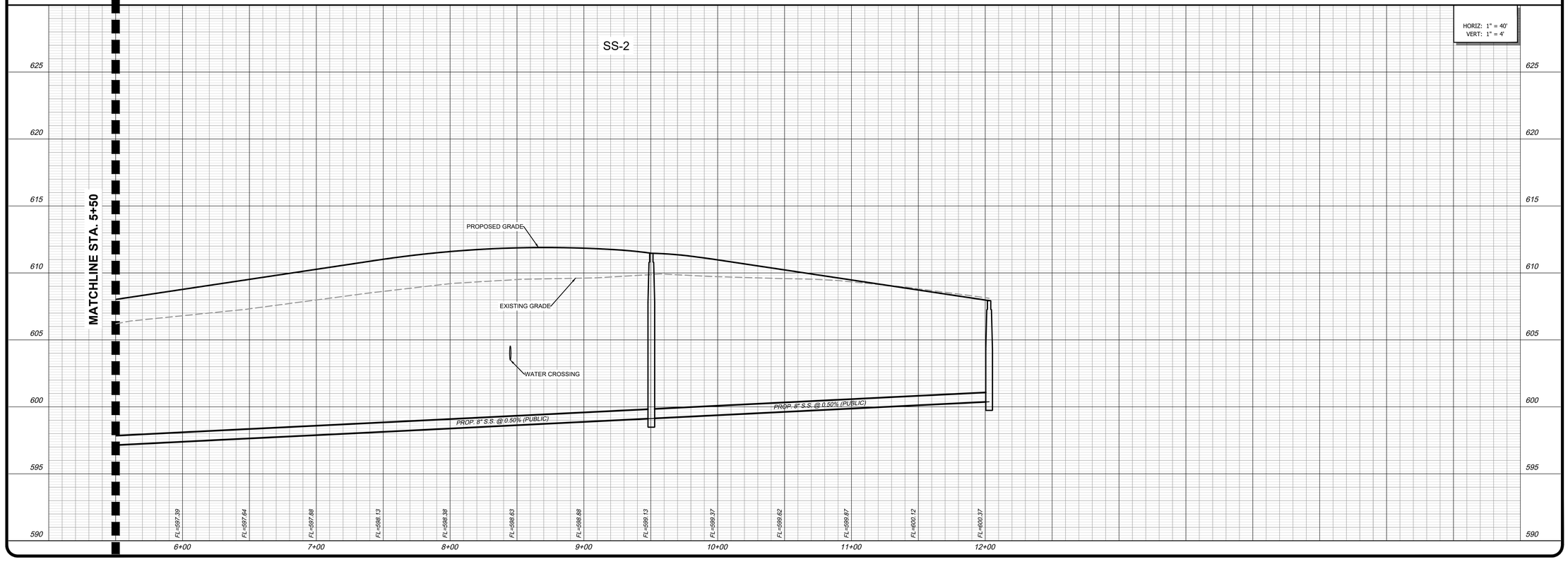
EXISTING SANITARY SEWER	EX SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	EX WTR
PROPOSED WATER	W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
PROPOSED UNDERGROUND ELECTRIC	UGE
EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE
EXISTING OVERHEAD ELECTRIC	EX OHE
PROPOSED TELEPHONE	TELE
EXISTING TELEPHONE	EX UGE
PROPERTY BOUNDARY	

GRAPHIC SCALE

0 40 80 FEET

SCALE: 1" = 40'

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PMB 1305
ALLEN, TX 75013

DEVELOPER:
CONTACT: JOHN CHONG

TAYLOR POINTE

715 CARLOS G PARKER BLVD
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

REV.:	DATE:	DESCRIPTION:

kirkman ENGINEERING

KIRKMAN ENGINEERING, LLC
5200 STATE HIGHWAY 121
COLLEYVILLE, TX 76034
TEXAS FIRM NO. 15874

JOB NUMBER: FSH24001

ISSUE DATE:

SANITARY SEWER PLAN AND PROFILE III

SHEET:

C7.14

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FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Haley Hoppe
PLOTTED DATE: 8/16/2024

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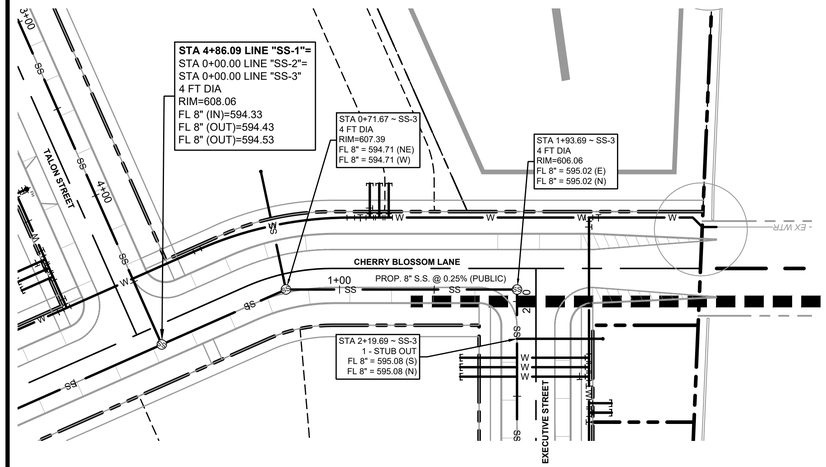
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MATCHLINE SHEET C7.17 STA. 2+00

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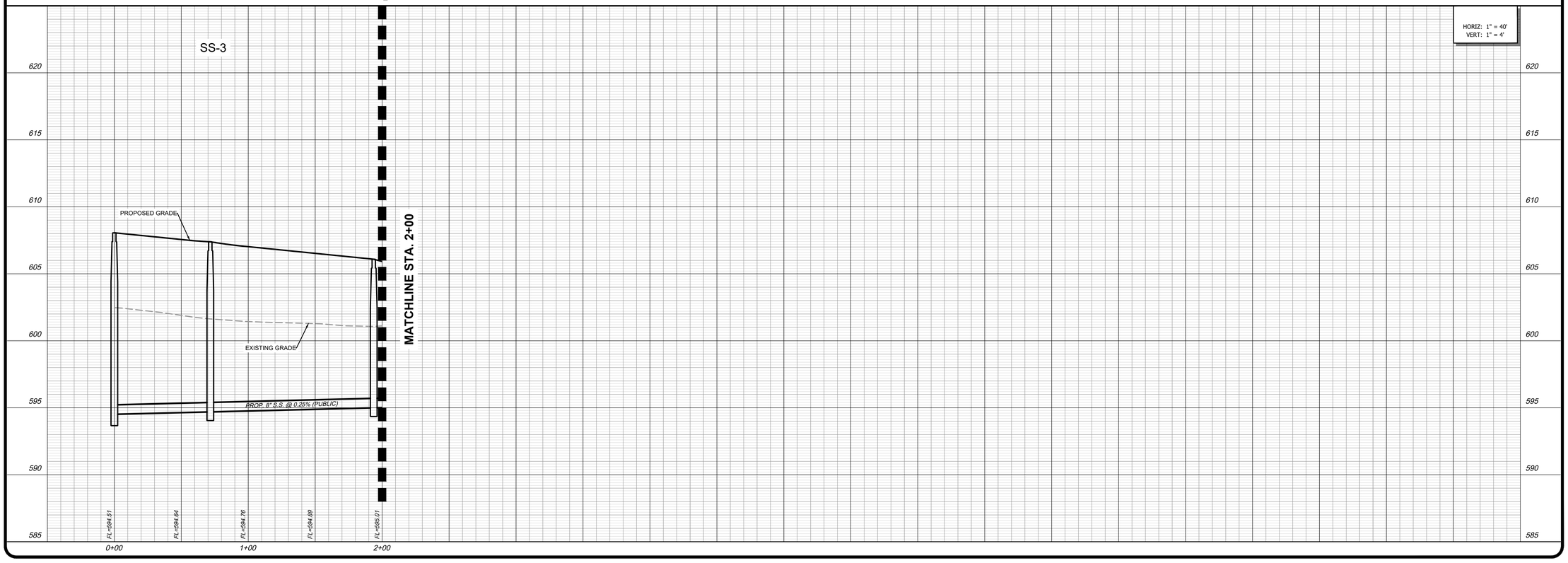
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EXISTING WATER	EX WTR
PROPOSED WATER	W W
EXISTING SANITARY SEWER MANHOLE	
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED SANITARY SEWER CLEANOUT	
EXISTING FIRE HYDRANT	
PROPOSED FIRE HYDRANT	FH
PROPOSED GAS	GAS
EXISTING GAS	EX GAS
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EXISTING OVERHEAD ELECTRIC	EX OHE
PROPOSED TELEPHONE	TELE TELE TELE
EXISTING TELEPHONE	EX UGE
PROPERTY BOUNDARY	

GRAPHIC SCALE
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SCALE: 1" = 40'



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SANITARY SEWER PLAN AND PROFILE IV

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C7.15

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FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Hodge
PLOTTED DATE: 8/16/2024

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PROPERTY BOUNDARY	

MATCHLINE SHEET C7.16 STA. 2+00

MATCHLINE SHEET C7.18 STA. 10+50

PROP. 8" S.S. @ 0.25% (PUBLIC)

EXECUTIVE STREET

LUKA STREET

STA 2+19.69 ~ SS-3
1 - STUB OUT
FL 8" = 595.08 (S)
FL 8" = 595.08 (N)

STA 2+83.69 ~ SS-3
1 - STUB OUT
FL 8" = 595.24 (S)
FL 8" = 595.24 (N)

STA 3+42.84 ~ SS-3
4 FT DIA
RIM=607.52
FL 8" = 595.39 (S)
FL 8" = 595.39 (N)

STA 3+25.11 ~ SS-3
1 - STUB OUT
FL 8" = 595.35 (S)
FL 8" = 595.35 (N)

STA 4+21.68 ~ SS-3
1 - STUB OUT
FL 8" = 595.59 (S)
FL 8" = 595.59 (N)

STA 3+76.66 ~ SS-3
1 - STUB OUT
FL 8" = 595.47 (S)
FL 8" = 595.47 (N)

STA 4+82.10 ~ SS-3
1 - STUB OUT
FL 8" = 595.74 (S)
FL 8" = 595.74 (N)

STA 5+32.15 ~ SS-3
1 - STUB OUT
FL 8" = 595.86 (S)
FL 8" = 595.86 (N)

STA 5+82.19 ~ SS-3
1 - STUB OUT
FL 8" = 595.99 (S)
FL 8" = 595.99 (N)

STA 6+32.24 ~ SS-3
1 - STUB OUT
FL 8" = 596.12 (S)
FL 8" = 596.12 (N)

STA 6+69.75 ~ SS-3
1 - STUB OUT
FL 8" = 596.21 (S)
FL 8" = 596.21 (N)

STA 7+32.32 ~ SS-3
1 - STUB OUT
FL 8" = 596.37 (S)
FL 8" = 596.37 (N)

STA 7+47.08 ~ SS-3
4 FT DIA
RIM=606.36
FL 8" = 596.40 (S)
FL 8" = 596.40 (N)

STA 7+82.37 ~ SS-3
1 - STUB OUT
FL 8" = 596.49 (S)
FL 8" = 596.49 (N)

STA 8+32.41 ~ SS-3
1 - STUB OUT
FL 8" = 596.62 (S)
FL 8" = 596.62 (N)

STA 8+82.46 ~ SS-3
1 - STUB OUT
FL 8" = 596.74 (S)
FL 8" = 596.74 (N)

STA 9+22.50 ~ SS-3
1 - STUB OUT
FL 8" = 596.84 (S)
FL 8" = 596.84 (N)

STA 9+82.55 ~ SS-3
1 - STUB OUT
FL 8" = 596.99 (S)
FL 8" = 596.99 (N)

STA 10+17.22 ~ SS-3
1 - STUB OUT
FL 8" = 597.08 (S)
FL 8" = 597.08 (N)

GRAPHIC SCALE
0 40 80 FEET
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VERT: 1" = 4'

SS-3

MATCHLINE STA. 2+00

MATCHLINE STA. 10+50

PROPOSED GRADE

EXISTING GRADE

WATER CROSSING

WATER CROSSING

WATER CROSSING

PROP. 8" S.S. @ 0.25% (PUBLIC)

620 615 610 605 600 595 590 585

FL=595.14 FL=595.26 FL=595.39 FL=595.51 FL=595.64 FL=595.76 FL=595.89 FL=596.01 FL=596.14 FL=596.26 FL=596.39 FL=596.51 FL=596.64 FL=596.76 FL=596.89 FL=597.01 FL=597.14

3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00

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SANITARY SEWER PLAN AND PROFILE V

SHEET:
C7.16

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FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
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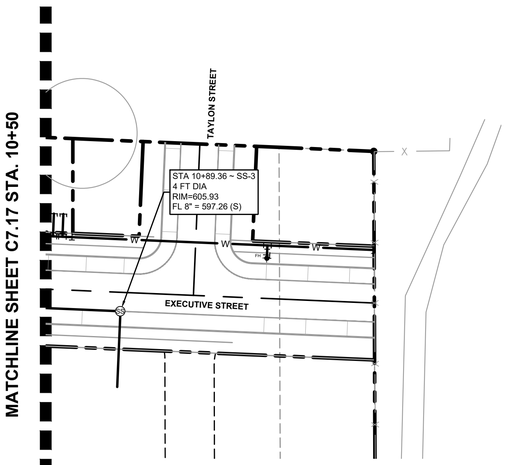
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EXISTING UNDERGROUND ELECTRIC	EX UGE
PROPOSED OVERHEAD ELECTRIC	OHE OHE OHE
EXISTING OVERHEAD ELECTRIC	EX OHE
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PROPERTY BOUNDARY	

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C7.17

FILE PATH: K:\Shm\SH-24001_Jayle+80\Drawings\02_ENGR\03 - Production\ K:\Shm\SH-24001_Jayle+80\Drawings\02_ENGR\03 - Production\C7.0 UTILITY PLAN_FSH24001

FILENAME: C7.0 UTILITY PLAN_FSH24001.dwg
PLOTTED BY: Isaac Foster
PLOTTED DATE: 8/16/2024

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Report—Engineering Properties

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties–Williamson County, Texas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
BrB—Branyon clay, 1 to 3 percent slopes														
Branyon	85	D	0-12	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	94-96-100	78-92-100	73-90-100	64-79-92	59-63-69	35-39-43
			12-72	Clay, silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	95-96-100	78-92-100	69-90-100	62-82-94	59-69-74	39-43-47
			72-80	Clay, silty clay, silty clay loam, clay loam	CH, CL	A-7-6, A-6	0- 0- 0	0- 0- 0	95-96-100	79-92-100	65-91-100	60-85-97	40-60-64	23-34-47
HedC2—Heiden clay, 2 to 5 percent slopes, moderately eroded														
Heiden, moderately eroded	85	D	0-6	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	96-98-100	90-96-100	80-94-100	65-81-94	50-60-80	30-40-55
			6-18	Clay, silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	96-98-100	90-96-100	80-94-100	65-81-98	50-60-80	30-40-55
			18-58	Clay, silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	96-98-100	90-96-100	80-94-100	65-81-98	50-60-80	30-40-55
			58-80	Clay	CH	A-7-6	0- 0- 0	0- 0- 0	98-100-100	97-100-100	86-98-100	71-86-95	50-70-80	30-45-55

Data Source Information

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 24, Sep 5, 2023

ENGINEERING REPORT

FOR

TAYLOR POINTE

Project Site Address:
715 Carlos G Parker Boulevard
Taylor, Texas

Developer:

Fash Taylor, LTD

812 W. McDermott Drive, PMB 1305

Allen, Texas 75013

John Chong

(469) 267-1520

Engineer:

Kirkman Engineering, LLC

Texas Firm No. 15874

Jonathan Schindler, P.E.

1130 Cottonwood Creek Trail, Suite C3

Cedar Park, TX 78613

(817) 488-4960

Date Prepared: July 5, 2024

1. Introduction

This report was prepared in support of a preliminary plat application for the subdivision of the property located at 715 Carlos G. Parker Boulevard in Taylor, Texas. The site is located on the western corner of Highway 79 (Carlos G. Parker Boulevard) and FM 973. This report has been prepared to address the site's engineering, utility demands, traffic impacts, and conformance to the City of Taylor's design requirements.

1.1 Project Description

This project site consists of 38.9793 acres. The existing land use is agricultural. The existing zoning of this site is P5. There are no known irrigation improvements, water mains or trees existing on this site. Highway 79 is located adjacent to the Northeast boundary line and FM 973 is located adjacent to the Southeast property line. The property has undergone review and approval for a Neighborhood Plan. The Neighborhood Plan was prepared by Michael Watkins Architect, LLC; dated February 1, 2024.

1.2 Location and Topography

The property's physical address is 715 Carlos G. Parker Boulevard, Taylor, Texas. The property is within the city limits of Taylor and in Williamson County. The site is located on the Western corner of Highway 79 (Carlos G. Parker Boulevard) and FM 973. The property is currently vacant and is used as agricultural farmland for producing crops.

The site has an elevation high point near the Northeast corner of the property. The property is generally sloped from the northeast to southwest. The highest elevation is +/- 610 feet, and the lowest elevation is +/-587 feet. Refer to Exhibit A – Topographic Survey.

1.3 Proposed Land Use

The subject tract will be a mixed-use development, consisting, but not limited to the following land uses:

1. 16 Fueling Position Super Convenience Market/Gas Station
2. 17 Unit Single Family Detached Housing
3. Automated Carwash with 1 Tunnel
4. 12,500 sq. ft. of Fast-Food Restaurant
5. 25,000 sq. ft. of Strip Retail Plaza
6. 80,000 sq. ft. of General Office Building
7. Hotel – 110 Rooms
8. 450 Unit Multi-Family Housing
9. 47,000 sq. ft. of Shopping Plaza

There will be 0.78 acres of civic space located on site for the general use of the public.

1.4 Off-Site Area Impacting the Development Site

The neighboring property to the west, Castlewood Development discharges stormwater from the development's detention pond outfall to the southwestern corner of the property.

1.7 FEMA Map & Flood Zone

The proposed development is not located within FEMA's regulated floodplain boundary area per the latest Federal Emergency Management Agency, Flood Insurance Rate Map for Hays County of Williamson, TX, Community Panel Number 48491C0541F, effective date December 20, 2019.

1.8 TCEQ Edward's Aquifer

This property is not located within TCEQ's Edward's Aquifer regulated zones. TCEQ Permitting for water quality is not required for this project site.

2. Drainage

2.1 On-Site Runoff Impacts

The property is generally sloped from the northeast to southwest. There are 4 existing drainage basins for this site. Existing stormwater produced by this site travels through sheet flow to each point of interest. The total existing stormwater discharge for the 25- year and 100-year are 147.80 cfs and 267.60 cfs, respectively. Refer to Table 2.1 and Exhibit B for the Existing Drainage Area Map.

The total proposed stormwater discharge for the 25- year and 100-year are 145.00 cfs and 193.20 cfs, respectively. An above ground stormwater detention pond was designed to mitigate the increased stormwater discharge developed by the proposed development. The required detention volume is 351,584.1 cubic feet of storage. The amount of detention volume provided is 439, 741.1 cubic feet that includes 1-ft of freeboard. A weir outfall system was designed to reduce the stormwater discharge to maintain or be less than the existing conditions. Refer to Exhibit C for the Proposed Drainage Area Map and Drainage Calculations.

Table 2.1 Existing Stormwater Discharge

Existing Hydrology Summary				
Analysis Point	Peak Flow (cfs)			
	Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	14.2	26.1	34.0	46.9
POI-2	9.8	18.1	23.6	32.6
POI-3	33.9	62.5	81.6	112.9
POI-4	21.9	41.1	54.0	75.2

Table 2.2 Proposed Stormwater Discharge Post-Detention

Proposed Hydrology Summary				
Analysis Point	Peak Flow (cfs)			
	Q_2	Q_{10}	Q_{25}	Q_{100}
POI-1	13.8	20.3	24.5	31.5
POI-2	9.6	15.0	18.5	24.1
POI-3	26.9	40.0	48.5	62.5
POI-4	20.4	41.1	53.5	75.1

3. Water and Wastewater Utilities

3.1 Existing Infrastructure

Currently, there is an existing City of Taylor 18” wastewater main located adjacent to the southeastern boundary line along FM 973. On the southeast side of FM 973 lies an existing City of Taylor 20” water main.

3.2 Proposed Water and Wastewater Improvements

The subdivision plans will design public water and wastewater mains and plan for private service stub outs per City of Taylor requirements. Per the intended uses as stated above, the LUEs required will equate to 722 LUEs. The projected Average Dry Weather Flow will be 475.81

gpm. The Inflow and Infiltration will be 15.70 gpm. The Total Peak Wet Weather Flow will be 491.51 gpm in the ultimate conditions. There will be a wastewater main proposed throughout the site to serve the property. The proposed lots along FM 973 will have direct access to the existing 18” wastewater main and the proposed lots along Carlos G parker Blvd will have direct access to the existing 20” wastewater main. Refer to Utility Schematic for details.

Off-site water will be proposed starting at the Castlewood Development west of the property along within the right-of-way. A public 12” water line will be proposed for this development. Private water line service tees are proposed and planned for the overall development. Domestic and Irrigation meters will be required during Site Development Plan Application at the time of development for each lot. Proposed fire hydrants have been provided along the right-of-way per the latest version of the International Fire Code.

4.Traffic Impacts

A traffic impact analysis was prepared for the overall development of this site. The three proposed access points along Highway 79 and FM 973 along with the nearby public intersection and private driveway intersections were evaluated. Roadway Access and TIA review is undergoing with TxDOT. Refer to the Traffic Impact Analysis Report prepared by Camacho-Hernandez & associates, LLC, dated May 2024 for details on traffic generation data, traffic impacts, warrants, and mitigation requirements.

5. Code Compliance

This project was designed to the standards and ordinances per the City of Taylor Land Development and Engineering Code. There will be no variances being requested at this time.

Exhibit A– Topographic Survey

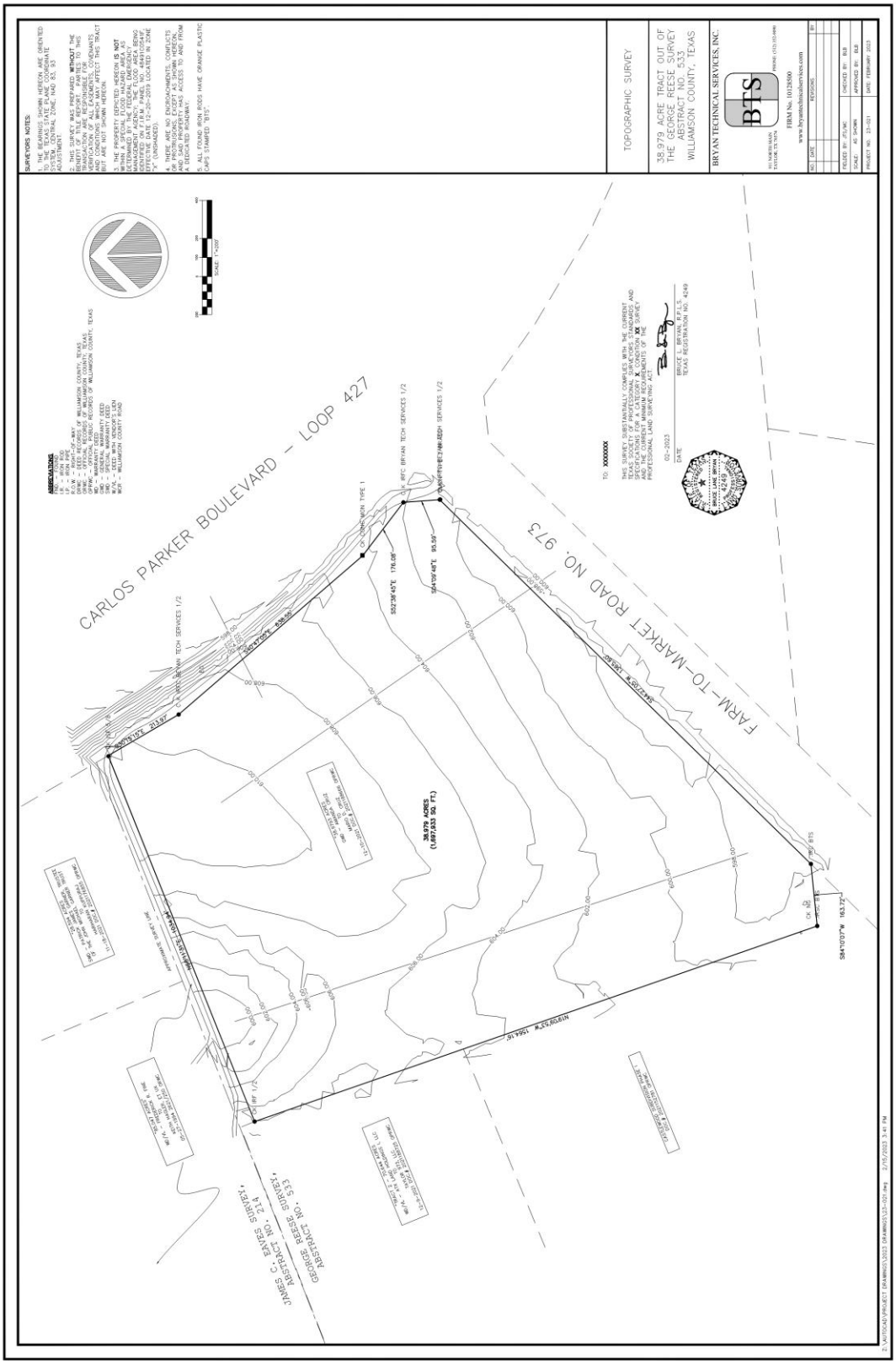


Exhibit B– Existing Drainage Area Map (N.T.S.)

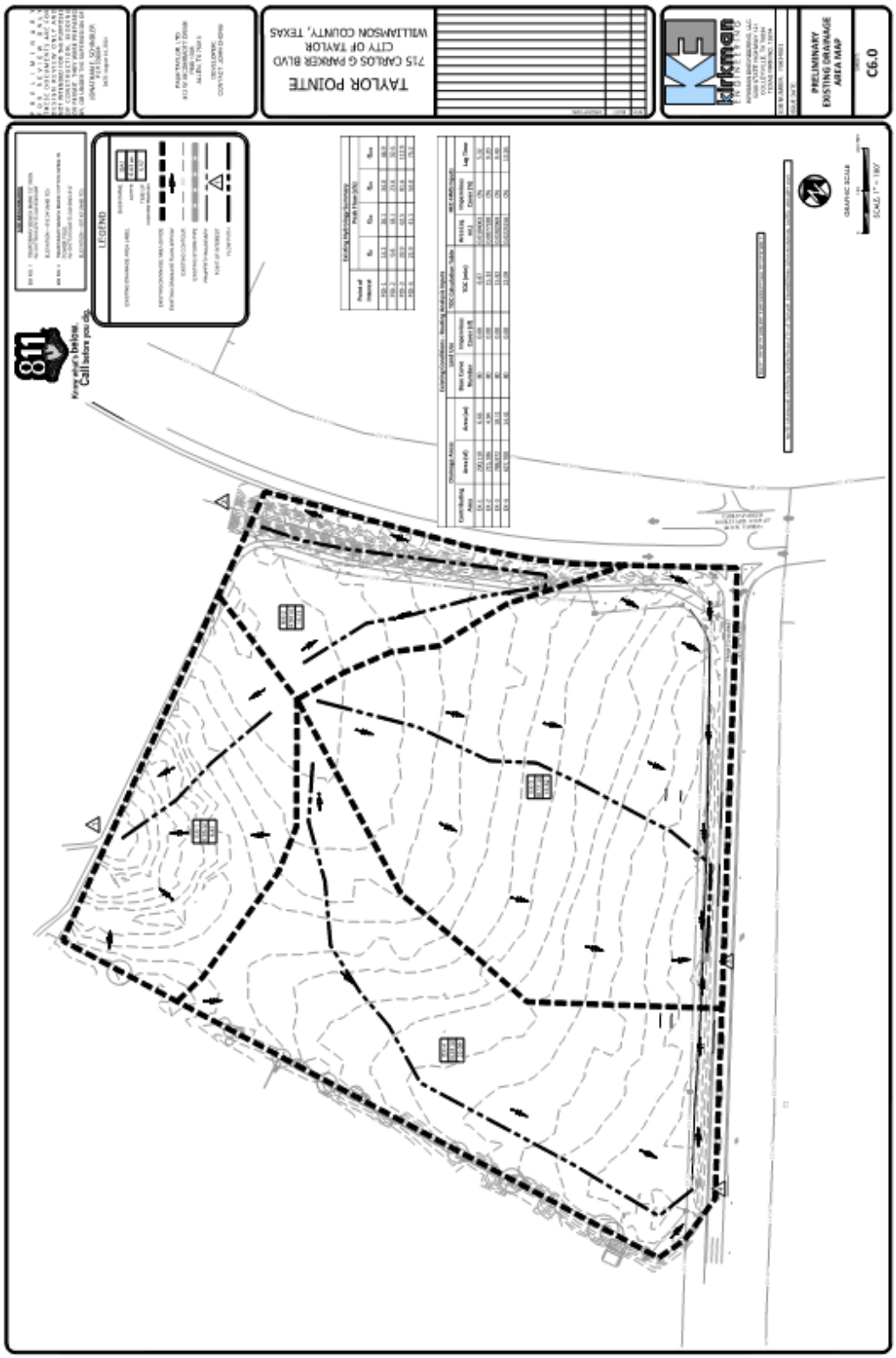
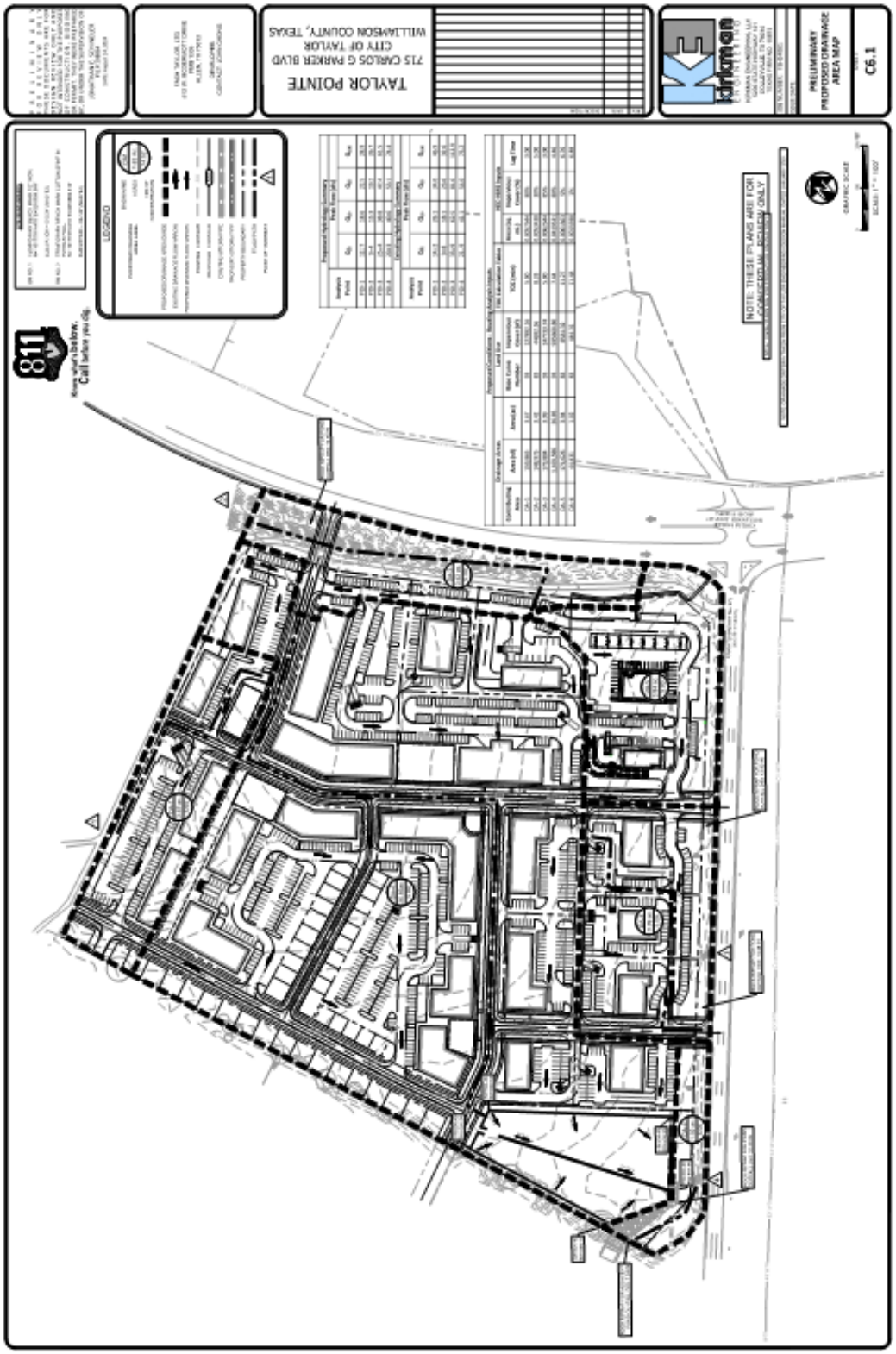


Exhibit C - Proposed Drainage Area Map (N.T.S.)



City of Taylor
PZ-2024-2254
North Bull Branch Creek Townhomes Subdivision Improvement Plan
Staff Report

Item Details

Agenda No.	5
Requested Action:	Consider Disapproval of North Bull Branch Creek Townhomes Subdivision Improvement Plan
Address/Location:	Generally located along the South right-of-way of N.W. Carlos G. Parker Boulevard, approximately 1,400 feet west of the intersection of N.W. Carlos G. Parker Boulevard and North Drive
Legal Description:	Approximately 7.747 acres of land part of and out of the William J Baker Survey, Abstract No. 65, more particularly described by the Williamson Central Appraisal District Parcel R018638, Taylor, Williamson County, Texas
Current Zoning:	P2.5 – Large Lot
Current Use:	Vacant Acreage
Applicant:	Sam Dehaybi, Paradise Engineers, LLC
Case History:	This is the first submission of the Subdivision Improvement Plans
Staff Recommendation:	The submitted Subdivision Improvement Plans do not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Subdivision Improvement Plans.

Attachments

1. Staff Comments
2. Location Map

City of Taylor
400 Porter Street
Taylor, TX 76574
(512) 352-3675
www.ci.taylor.tx.us

Sam Dehaybi
Paradise Engineers LLC
5900 Balcones Drive Suite 100
Austin TX 78731
sdehaybi@paradise-engineers.com

Date: Tuesday, September 3, 2024

Address: TBD CARLOS G PARKER, Wichita 67207

Permit Number PZ-2024-2254

Dear Sam Dehaybi,

Staff has completed its review of North BB Creek Townhouses – Subdivision Improvement Plan that is to be generally located along Carlos G. Parker NW. There are some corrections that need to be made prior to acceptance of the plans. Comments from this review follow.

Planning Department Comments
The following comments have been provided by Courtney Peres. Should you have any questions or require additional information regarding any of these comments, please contact Courtney Peres by email at courtney.peres@taylortx.gov.

1. Revise Plan set to "Subdivision Improvement Plan" from Site development Plan.
2. Revise Street Names from Preliminary Plat.
3. Confirm the ROW width of Trivik. Previous comments from Preliminary Plat review called the ROW width to be 55.93' and stated "we were told to eliminate the green space/void between the original East ROW line and Tract Boundary East line."

Engineering Department Review
The following comments have been provided by Javier Vasquez. Should you have any questions or require additional information regarding any of these comments, please contact Javier Vasquez by email at javier.vasquez@hdrinc.com.

*See Associated Documents section of the permit page to download a PDF containing the following engineering comments:

Subdivision Improvement Plans - Engineering Review 01

1. Sheet - [01] 1 COVER - Include legal description in the project title
2. Sheet - [01] 1 COVER - Address to be updated at final plan approval
3. Sheet - [01] 1 COVER - Include a signage and striping plan with applicable details
4. Sheet - [05] 5 SITE PLAN - Recommend verifying striping of this area to prevent parking along this area of the street (Example shown)
5. Sheet - [05] 5 SITE PLAN - Verify and update plan to include location of sidewalk along Carlos G. Parker frontage
6. Sheet - [06] 6 GRADING PLAN - Please verify lot-to-lot drainage requirements in Section 3.19.4 of the EM are met
7. Sheet - [06] 6 GRADING PLAN - Provide information on plan regarding typical lot grading per Engineering Manual 3.19
8. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - Snap to lines.
9. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - Notate PVI
10. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - show grades
11. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Need 8' for parallel parking.
12. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - minimum grade of 0.5%
13. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Profile grades. Confirm profile.

14. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Per PD respective street types to reflect parking lane width accordingly (7' and 8'). Recommend clarifying this in a striping plan
15. Sheet - [1] 1 COVER - No Pavement Section for City Streets and no supporting geotechnical investigation for City Streets.
16. Sheet - [11] 11 DETENTION POND - Please provide detail of the proposed vertical wall
17. Sheet - [11] 11 DETENTION POND - As stated in Section 3.15.3.D.ii, orifice openings <12" shall not be used without a method of debris blockage. Please justify.
18. Sheet - [11] 11 DETENTION POND - Please verify that maintenance access criteria in Section 3.15.6.A is met
19. Sheet - [11] 11 DETENTION POND - Please provide pond grading and verify that positive drainage requirements under Section 3.15.3.B of the EM are met
20. Sheet - [11] 11 DETENTION POND - Denote location of pond maintenance access point
21. Sheet - [12] 12 STORM PLAN - Please provide inlet capacity calculations
22. Sheet - [12] 12 STORM PLAN - Section 3.9.3.B of the EM discourages the use of grate inlets without prior approval and use of clogging factor. Please justify.
23. Sheet - [12] 12 STORM PLAN - Street Connection Area - Reference proposed information or ancillary planset for this culvert installation
24. Sheet - [12] 12 STORM PLAN - Install Manhole at STA. 5+04
25. Sheet - [12] 12 STORM PLAN - Manhole required on Line A per Taylor EM 3.10.3.B
26. Sheet - [12] 12 STORM PLAN - Manhole required on Line B per Taylor EM 3.10.3.B
27. Sheet - [12] 12 STORM PLAN - Manhole required on Line A Sta. 6+00 per Taylor EM 3.10.3.B
28. Sheet - [12] 12 STORM PLAN - Verify if this junction at Sta. 6+38 - Line A will work at the manhole in regards to wall penetrations. A larger diameter manhole may be required
29. Sheet - [13] 13 STORM PROFILES - Please verify that the minimum cover for paved surfaces criteria in Section 3.10.1.C is met
30. Sheet - [13] 13 STORM PROFILES - Section 3.10.1.D.i requires soffit alignment at all pipe size transitions
31. Sheet - [13] 13 STORM PROFILES - Verify that criteria for clearance in Section 5.2.D in the EM are met
32. Sheet - [14] 14 WATER PLAN - Notate requirements for SUE of existing line and confirmation of qualified contractor to make tap to this existing line per Taylor EM 1.9
33. Sheet - [14] 14 WATER PLAN - Notate requirements for RULIS permitting of the proposed utility installation crossing under Carlos G. Parker
34. Sheet - [14] 14 WATER PLAN - Provide two (2) gate valves at this "tee" intersection
35. Sheet - [14] 14 WATER PLAN - Provide two (2) gate valves at this "tee" intersection
36. Sheet - [14] 14 WATER PLAN - Verify and update proposed layout at this location to provide continuation of water line to future development to the east along Walter Heap Street. This also provides additional separation from proposed sanitary sewer
37. Sheet - [14] 14 WATER PLAN - Is there an opportunity to provide an easement here for future loop of water line
38. Sheet - [14] 14 WATER PLAN - Verify and update proposed water line services to incorporate a dual service line at common property line (Typical)
39. Sheet - [14] 14 WATER PLAN - Notate location of sanitary sewer crossings and note crossing requirements per TCEQ. (Typical)
40. Sheet - [14] 14 WATER PLAN - Include fire hydrants at intersections per Taylor EM Sec. 5.5 (Typical)
41. Sheet - [14] 14 WATER PLAN - Provide blowoff valve at end of line per Taylor EM 5.2.4
42. Sheet - [15] 15 WATERLINE A PROFILE - Notate minimum depth of cover in profile
43. Sheet - [15] 15 WATERLINE A PROFILE - Revise offset to be 2-ft minimum and provide necessary casing and joint requirements per TCEQ at wastewater crossing
44. Sheet - [15] 15 WATERLINE A PROFILE - Verify fitting size. Typically nominal sizes divisible by 2 (e.g.90°, 45°, 22.5°, 11.25°)
45. Sheet - [15] 15 WATERLINE A PROFILE - Provide location of existing water line in profile
46. Sheet - [15] 15 WATERLINE A PROFILE - Notate location of flushing valves and or plugs in profile
47. Sheet - [15] 15 WATERLINE A PROFILE - Notate that and and all operation of existing utilities is to be performed by City of Taylor Public Works. Requests are to be made to Public Works for work requiring operation of utilities for items such as test cuts or tie-ins and closing of valves.
48. Sheet - [16] 16 WATERLINE B PROFILE - Notate minimum depth of cover in profile

49. Sheet - [17] 17 SEWER PLAN - Verify and update proposed wastewater line services to incorporate a dual service line at common property line (Typical)
50. Sheet - [17] 17 SEWER PLAN - Manhole required here
51. Sheet - [17] 17 SEWER PLAN - Verify and update proposed service lines to be installed on one private line to connect to public line
52. Sheet - [17] 17 SEWER PLAN - Manhole required here at Sta. 1+00. End of line cleanout with appropriate frame and cover acceptable if Taylor EM Sec.6.8 is followed.
53. Sheet - [17] 17 SEWER PLAN - Keep alignment of wastewater per typical street/utility assignments. Manhole might need to be moved closer into the street to allow for stubout.
54. Sheet - [17] 17 SEWER PLAN - Provide note that existing manhole is within the floodplain and is to be verified for water tight bolted frame and cover and all connections to be properly sealed.
55. Sheet - [18] 18 SEWER PROFILES - Update crossing to meet minimum separation requirements
56. Sheet - [20] 20 SITE DETAILS (1 OF 2) - 8" per Engineering manual.
57. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Use all applicable City of Taylor Details including jointing details and intersection detail PV009a, PV010, PV011
58. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Include details for typical street ROW sections and assignments used (all types including private alley)
59. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Include PV002 - Typical Street Section section. Update as necessary to meet or exceed minimum requirements
60. Sheet - [21] 21 SITE DETAILS (2 OF 2) - Use all applicable City of Taylor Details
61. Sheet - [21] 21 SITE DETAILS (2 OF 2) - Use all applicable City of Taylor Details. Coordination to be made for acceptable details not available within City Standard Details.
62. Sheet - [22] 22 STORM DETAILS - Use all applicable City of Taylor Details including UT304, UT306
63. Sheet - [23] 23 WATER DETAILS - Verify fire hydrant updates with Fire Department Review
64. Sheet - [24] 24 SEWER DETAILS - Include detail UT204, UT206, UT211

*See Associated Documents section of the permit page to download a PDF containing the following engineering comments:

Drainage Report - Engineering Review 01

1. Include sheet/page numbers on the report document.
2. Drainage (Paragraph 5) - Please provide calculations for Qcritical and additional drawdown time

Geotechnical Report - Engineering Review 01

1. Please submit a final copy of the geotechnical report. The report says "preliminary"
2. Based on current borings, engineer to review City of Taylor Engineering Manual to verify and identify additional borings and additional lab testing.
3. Report to be revised to include recommendations for public streets and utilities. The section under "General" on page 25 suggests that this report is for the private construction areas.

Traffic Impact Analysis - Engineering Review 01

1. A planset for improvements required by TIA were submitted; however, The planset was marked preliminary and not for construction. Please submit an issued for construction set for City records.
2. A permit has been issued for these items by TxDOT and is acknowledged. All TxDOT permit requirements are the responsibility of the permittee.
3. It is noted that construction and acceptance of these improvements are to be completed prior to acceptance of the subdivision improvements by the City of Taylor.

Fire Department Comments (PZ)

The following comments have been provided by Bobby Copeland. Should you have any questions or require additional information regarding any of these comments, please contact Bobby Copeland at (512) 352-6992 or by email at robert.copeland@taylortx.gov.

1. The plans shall show an additional fire hydrant to be located on the west side of Trivik Street north of Alley B. This comment pertains to sheet 14 of 24.

2. The plans shall include Taylor's new fire hydrant detail. I have uploaded the approved detail to the additional files area. This comment pertains to sheet 23 of 24.

3. Attached units that are more than 2connected living units shall incorporate fire suppression systems to be installed. The plans show the individual water lines to each units are 1 inch. A fire suppression company shall be consulted to ensure the 1 inch water line is sufficient to supply the fire suppression system to each unit.

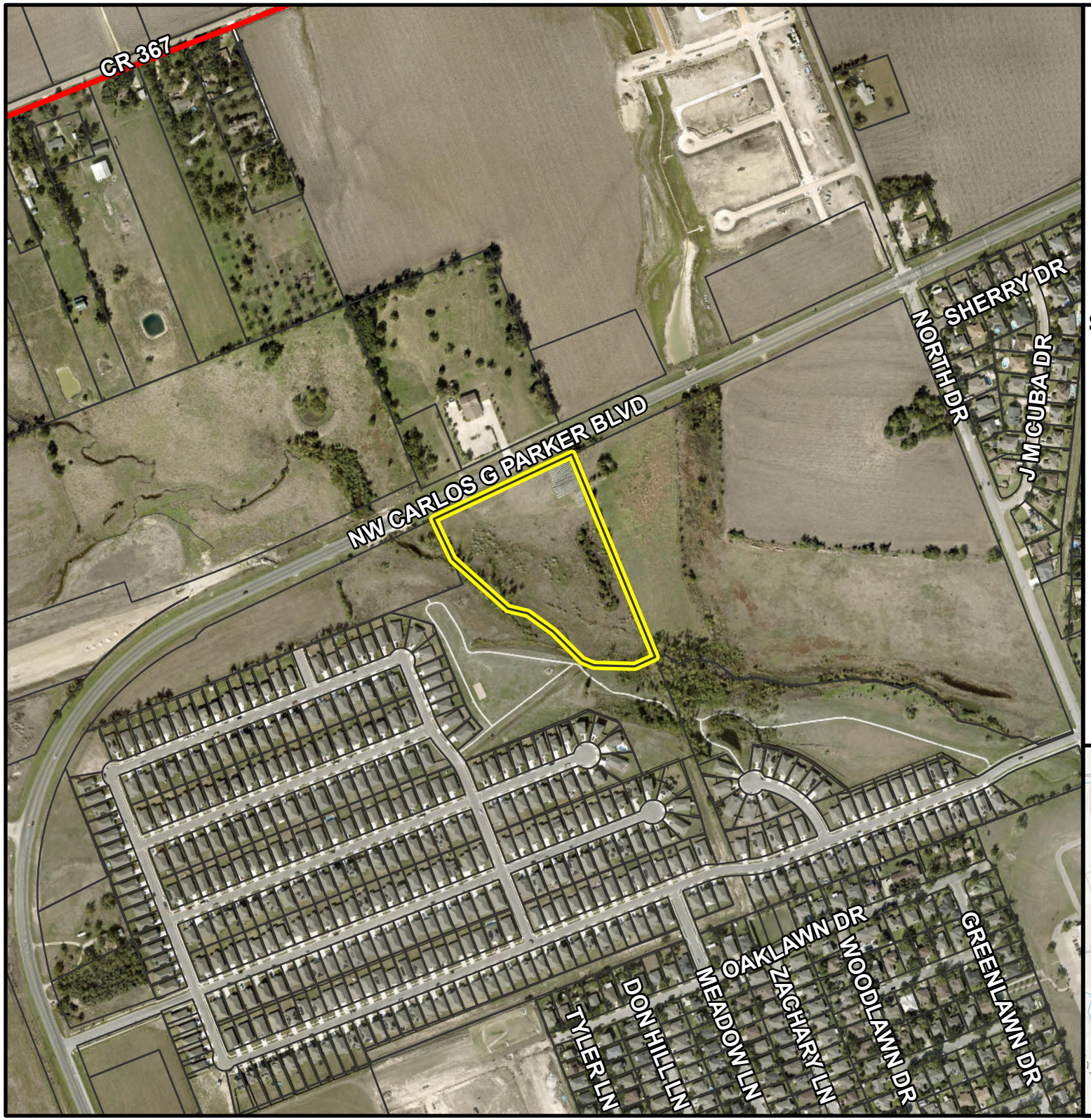
Please revise the plat to address the comments noted above. Following revision, submit the plat electronically with a resolution letter in PDF format.

Should you have questions regarding specific comments, please contact the staff member referenced under the section in which the comment occurs. Should you have questions or require additional information regarding the plan review process itself, please feel free to contact me directly. I can be reached by telephone at (512) 309-6268, or by e-mail at courtney.peres@taylortx.gov.

Thank you,



Courtney Peres, CNU-A
Planning Manager
City of Taylor

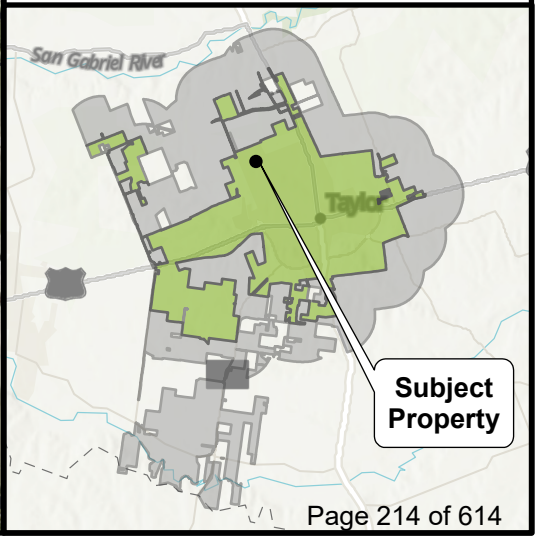


PZ-2024-2254

TBD Carlos G Parker Blvd.
Subdivision Improvement Plans
Location Map
Approximately 7 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

N 0 500 1,000
Feet



City of Taylor
PZ-2024-2255
Gradient Technology Park/iMarket Final Plat
Staff Report

Item Details

Agenda No.	6
Requested Action:	Consider Disapproval of Gradient Technology Park/iMarket Final Plat
Address/Location:	Generally located at the intersection of Carlos G. Parker Boulevard Southeast and FM 112
Legal Description:	211.84-acre tract of land in the Parthinia Coursey Survey, Abstract No. 131, more particularly described by Williamson Central Appraisal District Parcels R357492, R318771, R006142, R620065, R624522, R620064, Taylor, Williamson County, Texas.
Current Zoning:	EC – Employment Center
Current Use:	Vacant Acreage
Applicant:	Joe Farias, Kimley-Horn
Case History:	This is the first submission of the Final Plat.
Staff Recommendation:	The submitted Final Plat does not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Final Plat.

Attachments

1. Staff Comments
2. Location Map
3. Final Plat

City of Taylor
400 Porter Street
Taylor, TX 76574
(512) 352-3675
www.ci.taylor.tx.us

Joe Farias
Kimley-Horn
10814 Jollyville Road
Austin TX 78759
joe.farias@kimley-horn.com

Date: Tuesday, September 3, 2024

Address: 112 FM/427 Loop, Taylor 76574

Permit Number PZ-2024-2255

Dear Joe Farias,

Staff has completed its review of plans for the I Market America - 112 FM/427 Loop - Final Plat Expedited process that is to be located at 112 FM/427 Loop, Taylor, TX 76574. Comments from this review follow.

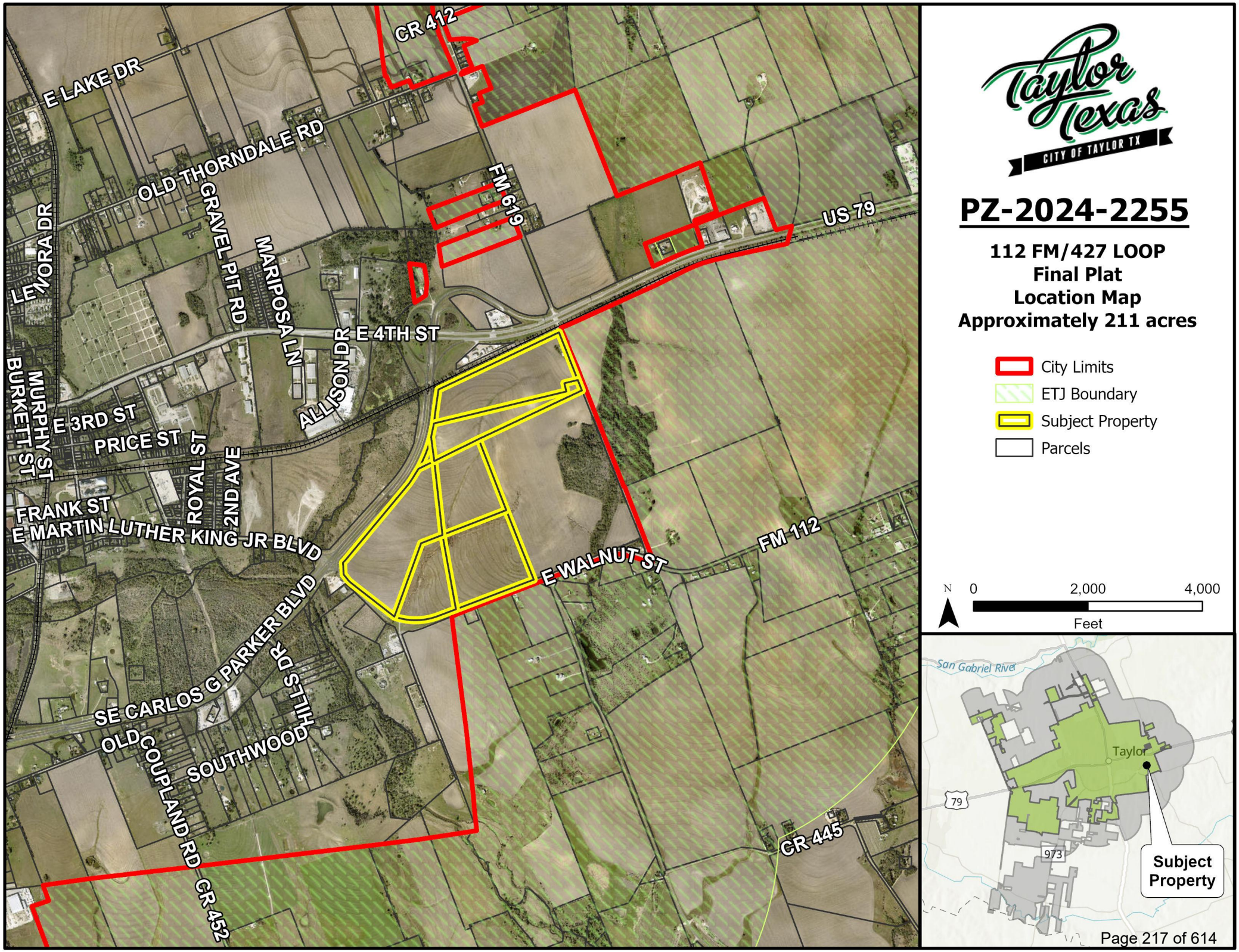
Planning Department Comments
The following comments have been provided by Courtney Peres. Should you have any questions or require additional information regarding any of these comments, please contact Courtney Peres at (512) 309-6268 or by email at courtney.peres@taylortx.gov.

1. PZ-2024-2255 (Gradient Tech/iMarket Final Plat): The Final Plat is still in the Expedited Review process as its review delayed until the first round of review was completed for the Preliminary Plat. The Preliminary Plat is still being reviewed and comments are being resolved. This application is not ready for approval at this time (Mark Evans, HDR/City of Taylor Expedited Review Team).

Thank you,

CPeres

Courtney Peres, CNU-A
Planning Manager
City of Taylor


CR 412
E LAKE DR
OLD THORNDALE RD
FM 619
US 79
LENORA DR
GRAVEL PIT RD
MARIPOSA LN
ALLISON DR
E 4TH ST
MURPHY ST
BURKETT ST
E 3RD ST
PRICE ST
ROYAL ST
2ND AVE
FRANK ST
E MARTIN LUTHER KING JR BLVD
FM 112
E WALNUT ST
SE CARLOS G PARKER BLVD
SOUTHWOOD HILLS DR
OLD COUPLAND RD
CR 452
CR 445
PZ-2024-2255
112 FM/427 LOOP
Final Plat
Location Map
Approximately 211 acres
City Limits
ETJ Boundary
Subject Property
Parcels
N
0
2,000
4,000
Feet
San Gabriel River
Taylor
79
973
Subject Property

UNION PACIFIC RAILROAD
(CALLED 200-FT R.O.W. WIDTH)
VOL. 17, PG. 581
D.R.W.C.T.

N64°37'32"E 2330.18'

"HALFF"

MATCHLINE SHEET 2

LOT 3

S21°34'49"E 895.27'

F.M. HIGHWAY 619
(VARIABLE R.O.W. WIDTH)
VOL. 468, PG. 239
O.P.R.W.C.T.

"HALFF"

S21°32'58"E 196.16'

"HALFF"

S64°45'58"W 1995.04'

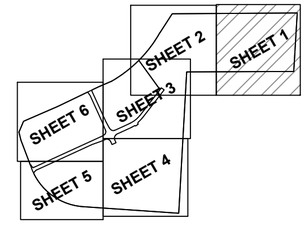
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PARTHINIA COURSEY SURVEY
ABSTRACT 131

HARDY PACE SURVEY
ABSTRACT 493

APPROXIMATE
SURVEY LINE

SITE KEY



LEGEND

P.O.B.	= POINT OF BEGINNING
○	= 1/2" IRON ROD W/ "KHA" CAP SET
●	= 1/2" IRON ROD FOUND (CAP NOTED)
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⊗	= MAG NAIL FOUND
⊙	= IRON PIPE FOUND (SIZE NOTED)
OPRWCT	= OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
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LINETYPE LEGEND

———	BOUNDARY LINE
———	ADJOINER LINE
— — —	EASEMENT LINE
- - - -	EXISTING EASEMENT LINE
— · — · —	MATCH LINE
▬ ▬ ▬	RAILROAD LINE

PRELIMINARY

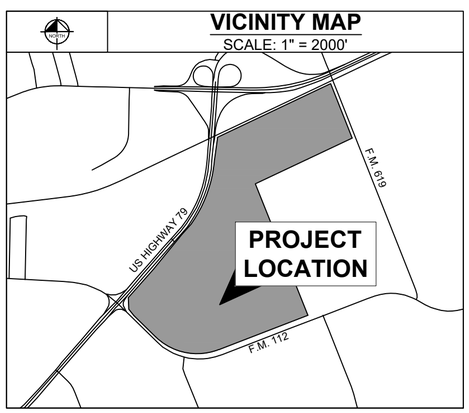
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100 0 50 100 200
1" = 100' @ 18X24

VICINITY MAP

SCALE: 1" = 2000'



TAYLOR INDUSTRIAL IMARKET SUBDIVISION

BEING 211.84 ACRES OUT OF THE
PARTHINIA COURSEY SURVEY, ABSTRACT 131
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TBPELS FIRM # 10194624
TEL. NO. (512) 418-1771
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
1" = 100'	RPP	MMII	7/31/2024	065001200	1 OF 7

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UNION PACIFIC RAILROAD
(CALLED 200-FT R.O.W. WIDTH)
VOL. 17, PG. 581
D.R.W.C.T.

N7°59'43"E 420.14'

LOOP 427
(VARIABLE R.O.W. WIDTH)
C.S.J. NO. 320-4-1

C2

C6

C8

C1

LOT 3

MATCHLINE SHEET 1

N60°50'59"W 633.25'

LOT 2

L1 L18 L17

625.41'
N12°48'22"E

RIGHT-OF-WAY

S12°48'22"W
657.32'

MATCHLINE SHEET 3

"HALFF"

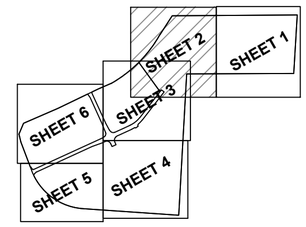
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S21°47'23"E 1332.50'

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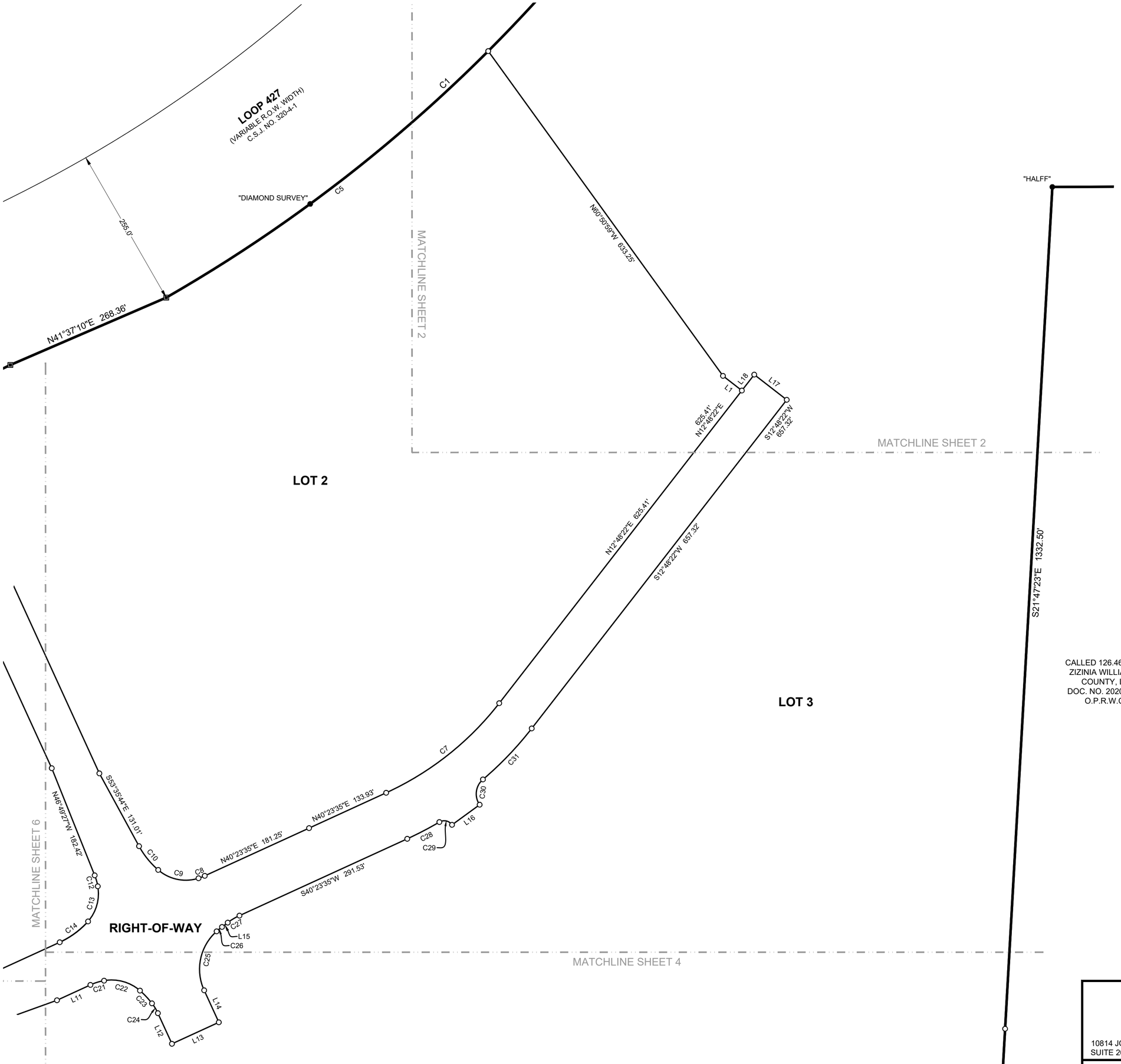
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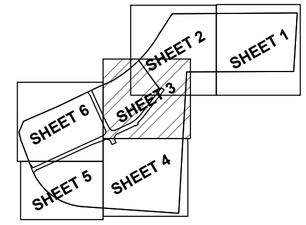
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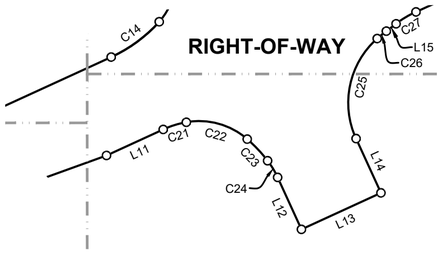
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MATCHLINE SHEET 3

LOT 3

MATCHLINE SHEET 5

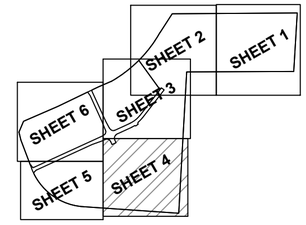
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S68°53'46"W 1776.16'

F.M. 112
(VARIABLE R.O.W. WIDTH)
VOL. 335, PG. 127
VOL. 418, PG. 334
D.R.W.C.T.

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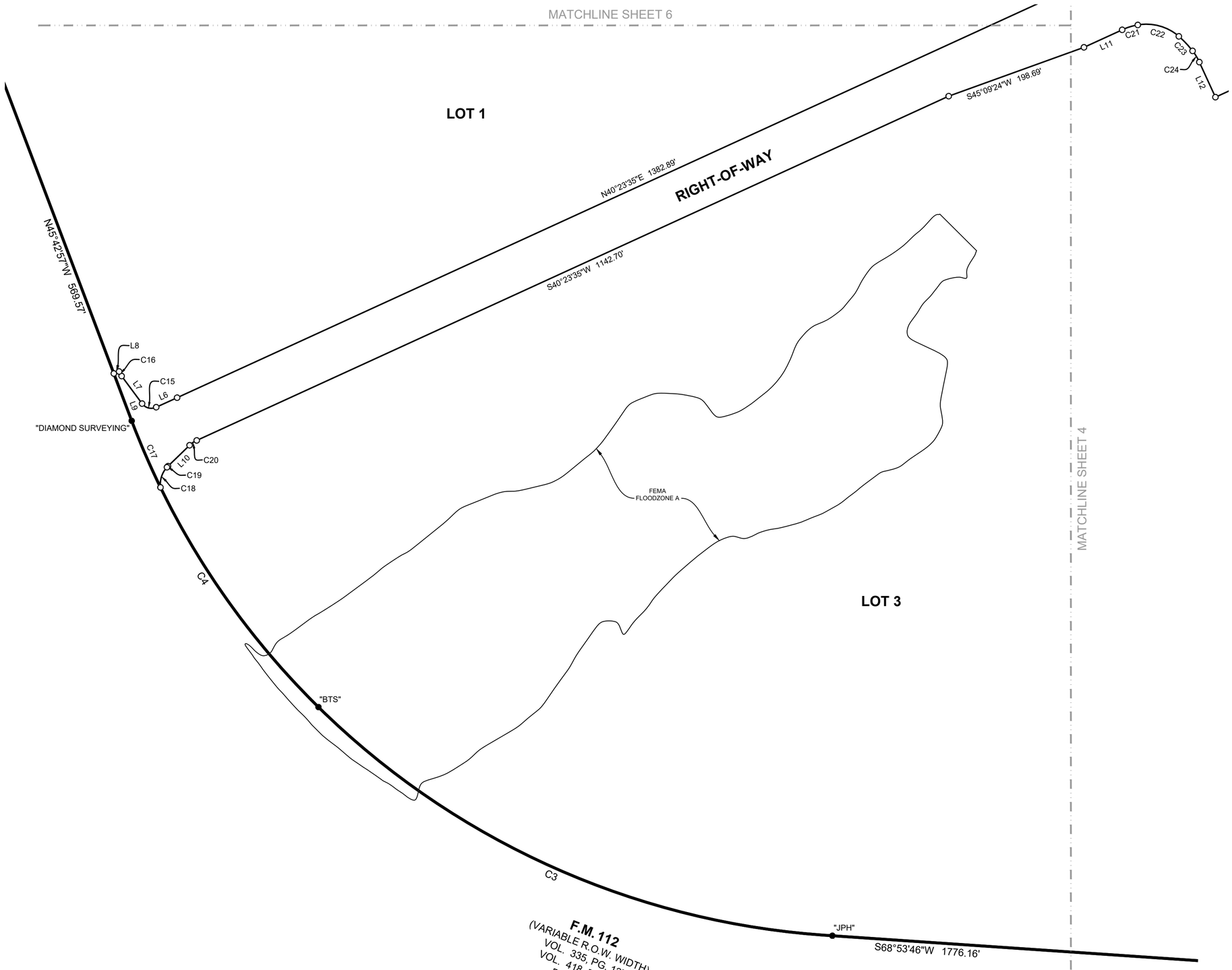
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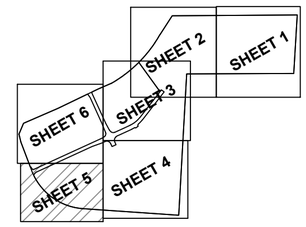
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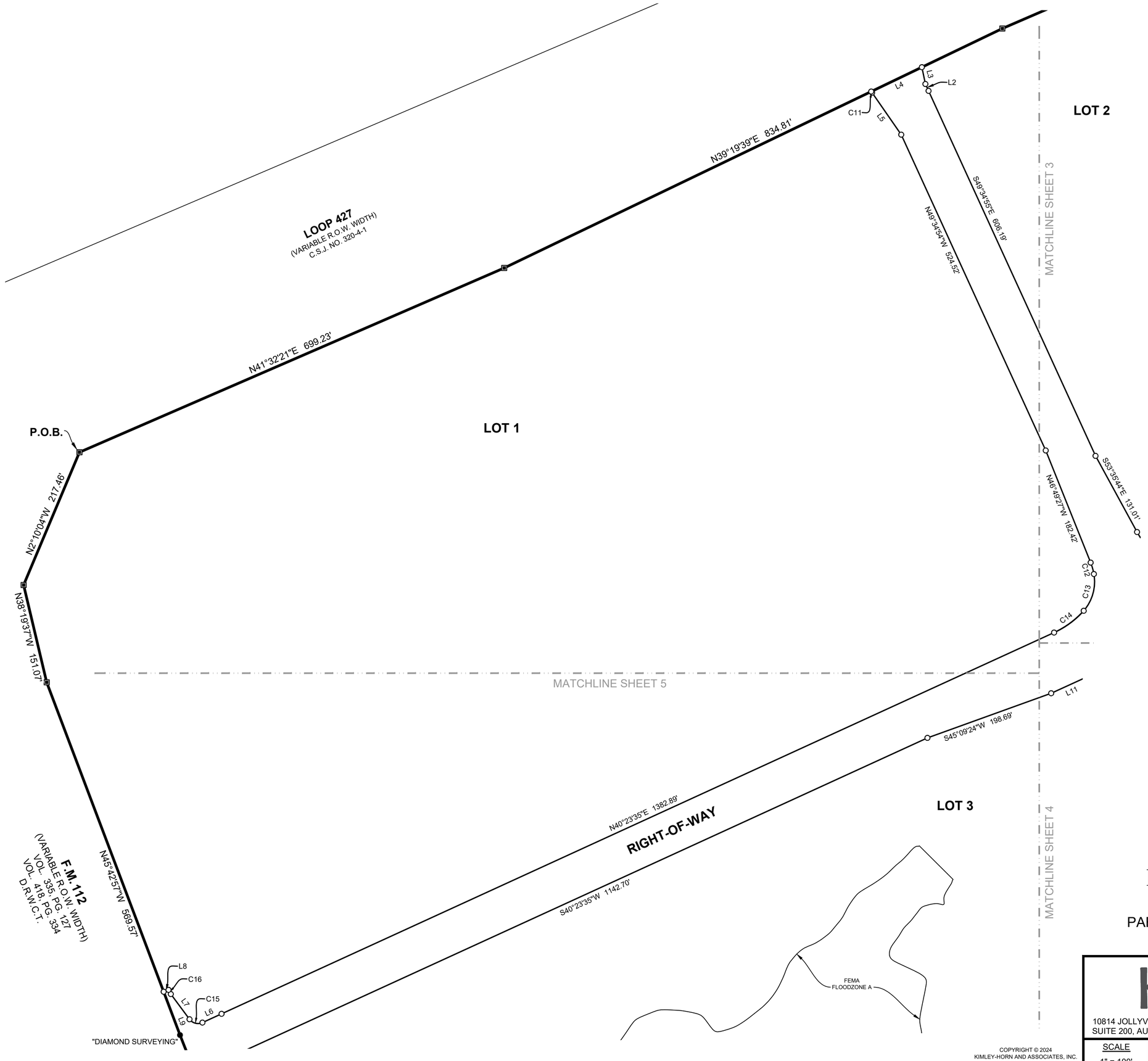
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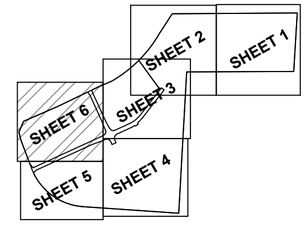
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CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	26°16'52"	2427.01'	1113.25'	N22°00'03"E	1103.52'
C2	4°13'40"	2427.01'	179.08'	N06°44'59"E	179.04'
C3	41°08'12"	1106.00'	794.08'	S88°59'32"W	777.13'
C4	24°39'30"	1106.00'	475.99'	N58°06'37"W	472.32'
C5	15°10'10"	2427.01'	642.57'	N27°33'24"E	640.70'
C6	11°06'42"	2427.01'	470.68'	N14°24'58"E	469.94'
C7	27°35'13"	478.00'	230.15'	N26°35'58"E	227.93'
C8	7°01'01"	86.50'	10.59'	N43°54'05"E	10.59'
C9	58°31'48"	66.50'	67.93'	N76°40'29"E	65.02'
C10	20°21'20"	136.50'	48.49'	S63°52'57"E	48.24'
C11	3°15'19"	38.50'	2.19'	N61°25'56"W	2.19'
C12	11°51'44"	87.00'	18.01'	N40°53'35"W	17.98'
C13	50°54'40"	67.00'	59.53'	N09°31'51"W	57.59'
C14	23°24'04"	137.00'	55.95'	N28°41'33"E	55.57'
C15	78°01'07"	16.00'	21.79'	N79°24'08"E	20.14'
C16	15°52'22"	26.00'	7.20'	S53°39'08"E	7.18'
C17	5°11'31"	1106.00'	100.22'	N48°22'38"W	100.19'
C18	49°18'59"	35.00'	30.13'	S07°11'50"E	29.20'
C19	3°25'47"	35.00'	2.10'	S19°10'33"W	2.09'
C20	19°35'29"	35.00'	11.97'	S30°41'13"W	11.91'
C21	14°38'42"	88.50'	22.62'	S47°42'56"W	22.56'
C22	50°54'06"	68.50'	60.86'	S80°29'20"W	58.87'
C23	11°27'01"	138.50'	27.68'	N68°20'06"W	27.63'
C24	13°00'10"	80.00'	18.16'	N56°06'31"W	18.12'
C25	73°04'13"	80.00'	102.03'	S13°04'19"E	95.25'
C26	4°32'22"	138.50'	10.97'	S25°43'58"W	10.97'
C27	12°23'25"	100.00'	21.63'	S34°11'52"W	21.58'
C28	5°52'58"	558.00'	57.29'	S37°27'06"W	57.27'
C29	85°47'48"	15.00'	22.46'	S77°24'30"W	20.42'
C30	84°17'28"	30.00'	44.13'	S17°32'52"E	40.26'
C31	11°47'29"	543.00'	111.75'	S18°42'07"W	111.55'

LINE TABLE		
NO.	BEARING	LENGTH
L1	N77°11'38"W	37.84'
L2	S49°34'55"E	11.44'
L3	S36°58'36"E	25.93'
L4	N39°19'39"E	84.81'
L5	N59°48'16"W	77.16'
L6	N40°23'35"E	31.74'
L7	S61°35'19"E	47.42'
L8	N44°17'03"E	7.86'
L9	N45°42'57"W	69.95'
L10	S20°53'27"W	41.53'
L11	S40°23'35"W	58.11'
L12	N49°36'25"W	53.26'
L13	S40°22'21"W	81.50'
L14	S49°36'25"E	55.62'
L15	S28°00'09"W	11.36'
L16	S28°55'36"W	54.02'
L17	S77°11'38"E	65.00'
L18	N12°48'22"E	31.91'

LOT TABLE	
LOT NO.	ACRES
1	29.477
2	20.571
3	155.314
R.O.W.	6.480

SURVEYOR'S NOTES:

1. ACCORDING TO COMMUNITY PANEL NO. 4806700542, MAP NO. 48491C0542F, REVISION DATE 12/20/2019, COMMUNITY PANEL NO. 4806700534, MAP NO. 48491C0534F, REVISION DATE 12/20/2019, AND COMMUNITY PANEL NO. 4806700575, MAP NO. 48491C0575F, REVISION DATE 12/20/2019 OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM), THE SUBJECT TRACT IS LOCATED WITHIN ZONE "X" (UN-SHADED) WHICH IS DEFINED BY FEMA AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN," COMMONLY KNOWN AS THE 500-YEAR FLOODPLAIN. ZONE "X" (UN-SHADED) IS OUTSIDE OF ANY FEMA ESTABLISHED FLOOD HAZARD ZONE. ALL ZONE DELINEATIONS SHOWN HEREON ARE APPROXIMATE. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS, GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE ANY LIABILITY ON THE PART OF KIMLEY-HORN OR THE UNDERSIGNED.
2. BASIS OF BEARINGS IS THE TEXAS COORDINATE SYSTEM OF 1983, CENTRAL ZONE (4203) OR SOUTH CENTRAL (4204). ALL COORDINATES AND DISTANCES SHOWN HEREON ARE SURFACE VALUES. THE SURFACE ADJUSTMENT FACTOR IS 1.0001142472, SCALED FROM A POINT WITH THE FOLLOWING COORDINATES N: 10184420.912 E: 3227465.232
3. ALL LOTS LOCATED IN THIS SUBDIVISION WILL BE MONUMENTED WITH A 1/2" IRON ROD WITH A SURVEYOR'S CAP STAMPED "KHA" OR A MAG NAIL WITH WASHER STAMPED "KHA" PRIOR TO LOT SALES, UNLESS OTHERWISE STATED.

NOTES:

1.

LEGAL DESCRIPTION:
211.84 ACRES

BEING A 211.84 ACRES TRACT OF LAND SITUATED IN THE PARHINIA COURSEY SURVEY, ABSTRACT 131, WILLIAMSON COUNTY, TEXAS; AND BEING ALL OF A CALLED 43.99 ACRES TRACT OF LAND DESCRIBED TO IMARKETAMERICA, INC., AS SHOWN ON INSTRUMENT RECORDED UNDER DOCUMENT NO. 2022132993 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, (O.P.R.W.C.T.); ALL OF A CALLED 105.25 ACRES TRACT OF LAND DESCRIBED TO IMARKETAMERICA, INC., AS SHOWN ON INSTRUMENT RECORDED UNDER DOCUMENT NO. 2023055308, O.P.R.W.C.T.; AND ALL OF A CALLED 62.60 ACRES TRACT OF LAND DESCRIBED TO IMARKETAMERICA, INC., AS SHOWN ON INSTRUMENT RECORDED UNDER DOCUMENT NO. 2023038605, O.P.R.W.C.T.; AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND IN THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 79, VARIABLE RIGHT-OF-WAY WIDTH, ACCORDING TO CSJ NO. 320-4-1, SAME BEING THE NORTHERLY RIGHT-OF-WAY LINE OF F.M. 112, VARIABLE RIGHT-OF-WAY WIDTH, NO RECORDING INFORMATION FOUND; FOR THE WEST CORNER OF SAID 105.25 ACRES TRACT;

THENCE, DEPARTING SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF F.M. 112, WITH SAID SOUTHEASTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 79, SAME BEING THE NORTHWEST BOUNDARY LINE OF SAID 105.25 ACRES TRACT, THE FOLLOWING FOUR (4) COURSES AND DISTANCES:

1. NORTH 41°32'21" EAST, A DISTANCE OF 699.23 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND;
2. NORTH 39°19'39" EAST, A DISTANCE OF 834.81 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND;
3. NORTH 41°37'10" EAST, A DISTANCE OF 268.36 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND, FOR THE BEGINNING OF A CURVE;
4. WITH SAID CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 26°16'52", A RADIUS OF 2,427.01 FEET, A CHORD BEARING AND DISTANCE OF NORTH 22°00'03" EAST, 1,103.52 FEET, AND AN ARC LENGTH OF 1,113.25 FEET TO A 1/2-INCH IRON ROD FOUND, FOR THE NORTHWEST CORNER OF SAID 105.25 ACRES TRACT, SAME BEING THE SOUTH CORNER OF SAID 43.99 ACRES TRACT, FOR THE BEGINNING OF A COMPOUND CURVE;
5. THENCE, CONTINUING WITH SAID SOUTHEASTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 79, SAME BEING THE WEST BOUNDARY LINE OF SAID 43.99 ACRES TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:
6. WITH SAID CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°13'40", A RADIUS OF 2,427.01 FEET, A CHORD BEARING AND DISTANCE OF NORTH 06°44'59" EAST, 179.04 FEET, AND AN ARC LENGTH OF 179.08 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND;
7. NORTH 07°59'43" EAST, A DISTANCE OF 420.14 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND IN THE SOUTHEASTERLY RAILROAD RIGHT-OF-WAY LINE, VOL. 17, PG. 581, DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, (D.R.W.C.T.);

THENCE, DEPARTING SAID U.S. HIGHWAY 79, WITH SAID SOUTHEASTERLY RAILROAD RIGHT-OF-WAY LINE AND SAID NORTHWEST BOUNDARY LINE OF THE 43.99 ACRES TRACT, NORTH 64°37'32" EAST, A DISTANCE OF 2,330.18 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "HALFF" FOUND, IN THE SOUTHWESTERLY RIGHT-OF-WAY LINE OF F.M. HIGHWAY 619, A CALLED 80-FT RIGHT-OF-WAY WIDTH, AS SHOWN ON VOL. 468, PG. 239, D.R.W.C.T.; FOR THE NORTH CORNER OF SAID 43.99 ACRES TRACT;

THENCE, DEPARTING SAID SOUTHEASTERLY RAILROAD RIGHT-OF-WAY LINE, WITH SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF F.M. 619, SAME BEING THE NORTHEAST BOUNDARY LINE OF SAID 43.99 ACRES TRACT, SOUTH 21°34'49" EAST, A DISTANCE OF 895.27 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "HALFF" FOUND, FOR THE EAST CORNER OF SAID 43.99 ACRES TRACT, SAME BEING THE NORTH CORNER OF SAID 105.25 ACRES TRACT;

THENCE, CONTINUING WITH SAID SOUTHWESTERLY RIGHT-OF-WAY LINE OF F.M. 619, SAME BEING THE NORTHEAST BOUNDARY LINE OF SAID 105.25 ACRES TRACT, SOUTH 21°32'58" EAST, A DISTANCE OF 196.16 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "HALFF" FOUND, FOR THE EAST CORNER OF SAID 105.25 ACRES TRACT, SAME BEING THE NORTH CORNER OF A CALLED 126.46 ACRES TRACT OF LAND DESCRIBED TO ZIZANIA WILLIAMSON COUNTY, LTD, AS SHOWN ON INSTRUMENT RECORDED UNDER DOCUMENT NO. 2020065923, O.P.R.W.C.T.;

THENCE, DEPARTING SAID F.M. 619, WITH THE SOUTHEAST BOUNDARY LINE OF SAID 105.25 ACRES TRACT, SAME BEING THE WEST BOUNDARY LINE OF SAID 126.46 ACRES TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. SOUTH 64°45'58" WEST, A DISTANCE OF 1,995.04 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "HALFF" FOUND, FOR THE WEST CORNER OF SAID 126.46 ACRES TRACT;
2. SOUTH 21°47'23" EAST, A DISTANCE OF 1,332.50 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "KHA" FOUND, IN SAID WEST BOUNDARY LINE OF THE 126.46 ACRES TRACT, FOR AN ANGLE CORNER OF SAID 105.25 ACRES TRACT, SAME BEING THE NORTH CORNER OF SAID 62.60 ACRES TRACT;

THENCE, DEPARTING SAID SOUTHEAST BOUNDARY LINE OF THE 105.25 ACRES TRACT, CONTINUING WITH SAID WEST BOUNDARY LINE OF THE 126.46 ACRES TRACT, SAME BEING THE NORTHEAST BOUNDARY LINE OF SAID 62.60 ACRES TRACT, SOUTH 21°46'15" EAST, A DISTANCE OF 1,305.49 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION TYPE I CONCRETE MONUMENT FOUND, IN SAID NORTHERLY RIGHT-OF-WAY LINE OF F.M. 112, FOR THE EAST CORNER OF SAID 62.60 ACRES TRACT, SAME BEING THE SOUTH CORNER OF SAID 126.46 ACRES TRACT;

THENCE, WITH SAID NORTHERLY RIGHT-OF-WAY LINE OF F.M. 112 AND THE SOUTH BOUNDARY LINE OF SAID 62.60 ACRES TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. SOUTH 68°53'46" WEST, A DISTANCE OF 1,776.16 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "JPH" FOUND, FOR THE BEGINNING OF A CURVE,
2. WITH SAID CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 41°08'12", A RADIUS OF 1,106.00 FEET, A CHORD BEARING AND DISTANCE OF SOUTH 88°59'32" WEST, 777.13 FEET, AND AN ARC LENGTH OF 794.08 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "BTS" FOUND, FOR THE SOUTHEAST CORNER OF SAID 62.60 ACRES TRACT, SAME BEING THE SOUTH CORNER OF SAID 105.25 ACRES TRACT, THE BEGINNING OF A COMPOUND CURVE;

THENCE, CONTINUING WITH SAID NORTHERLY RIGHT-OF-WAY LINE OF F.M. 112, SAME BEING THE SOUTHWEST BOUNDARY LINE OF SAID 105.25 ACRES TRACT, THE FOLLOWING FOUR (4) COURSES AND DISTANCES:

1. WITH SAID CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 24°39'30", A RADIUS OF 1,106.00 FEET, A CHORD BEARING AND DISTANCE OF NORTH 58°06'37" WEST, 472.32 FEET, AND AN ARC LENGTH OF 475.99 FEET TO A 1/2-INCH IRON ROD WITH PLASTIC CAP STAMPED "DIAMOND SURVEYING" FOUND;
2. NORTH 45°42'57" WEST, A DISTANCE OF 569.57 FEET TO A CALCULATED POINT;
3. NORTH 38°19'37" WEST, A DISTANCE OF 151.07 FEET TO A CALCULATED POINT;
4. NORTH 02°10'04" WEST, A DISTANCE OF 217.46 FEET TO THE **POINT OF BEGINNING** AND CONTAINING 211.84 ACRES OF LAND, MORE OR LESS, IN WILLIAMSON COUNTY, TEXAS. THIS DOCUMENT WAS PREPARED IN THE OFFICE OF KIMLEY-HORN INC. IN AUSTIN, TEXAS.

ENGINEER'S CERTIFICATION:

I, JOE FARIAS P.E. AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF ENGINEERING, AND HEREBY CERTIFY THAT THIS PLAT IS FEASIBLE FROM AN ENGINEERING STANDPOINT, IS COMPLETE AND COMPLIES WITH THE ENGINEERING PORTIONS OF TITLE 30, OF THE LOCAL GOVERNMENTAL CODE OF 2002, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE,

_____
JOE FARIAS, P.E.
REGISTERED PROFESSIONAL ENGINEER NO. 111389
10814 JOLLYVILLE ROAD
CAMPUS IV, SUITE 200
AUSTIN, TEXAS 78759
PH. 512-969-1696
JOE.FARIAS@KIMLEY-HORN.COM

SURVEYOR'S CERTIFICATION:

I, MICHAEL A. MONTGOMERY II, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS PLAT COMPLIES WITH THE SUBDIVISION REGULATIONS ADOPTED BY WILLIAMSON COUNTY, TEXAS.

PLAT COMPLETION DATE: _____ ___, 2024.

_____
MICHAEL A. MONTGOMERY II, R.P.L.S.
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6890

PRELIMINARY
THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT

§ **KNOW ALL MEN BY THESE PRESENTS**

THAT _____, AUTHORIZED SIGNATORY OF _____ SOLE OWNER OF THAT CERTAIN 43.99 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN DEEDS RECORDED IN DOCUMENT NO. 2022132993, A 105.25 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN DEEDS RECORDED IN DOCUMENT NO. 2023055308, AND A 62.60 ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN DEEDS RECORDED IN DOCUMENT NO. 2023038605, ALL OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS ON THAT CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHT-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS _____.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ DAY OF _____, 20___.

_____
_____

§ **KNOW ALL MEN BY THESE PRESENTS**

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED BRANDON JENKINS, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 20___.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES ON: _____
_____

PLANNING & ZONING COMMISSION

THIS SUBDIVISION TO BE KNOW AS "CASTLEWOOD SOUTH SUBDIVISION PHASE 1 FINAL PLAT" HAS BEEN ACCEPTED AN APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS, ACCORDING TO THE MINUTES OF THE MEETING OF THE TAYLOR PLANNING AND ZONING COMMISSION OF THE _____ DAY OF _____, 20___

_____ _____
_____, CHAIRMAN DATE

_____ _____
_____, SECRETARY DATE

DEVELOPMENT SERVICES DIRECTOR

I, _____, DEVELOPMENT SERVICES DIRECTOR FOR THE CITY OF TAYLOR, TEXAS, DO HEREBY CERTIFY THIS PLAT IS APPROVED FOR FILING OF RECORD WITH THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

_____ _____
DATE

_____ _____
_____, DIRECTOR DATE

WILLIAMSON COUNTY CLERK

STATE OF TEXAS §
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

I, NANCY E. RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 2024 A.D., AT _____ O'CLOCK _____M., AND DULY RECORDED THIS THE _____ DAY OF _____, 2024 A.D., AT _____ O'CLOCK _____M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO. _____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE SAID COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY E. RISTER, CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: _____, DEPUTY

TAYLOR INDUSTRIAL IMARKET SUBDIVISION

BEING 211.84 ACRES OUT OF THE
PARTHINIA COURSEY SURVEY, ABSTRACT 131
WILLIAMSON COUNTY, TEXAS

Kimley»Horn
10814 JOLLYVILLE ROAD, CAMPUS IV
SUITE 200, AUSTIN, TEXAS 78759
TBPELS FIRM # 10194624
TEL. NO. (512) 418-1771
WWW.KIMLEY-HORN.COM

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO.	SHEET NO.
N/A	RPP	MMII	7/31/2024	065001200	7 OF 7

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DWG NAME: K:\AUS_SURVEY\AUSTIN SURVEY PROJECTS\065001200 - TAYLOR INDUSTRIAL IMARKET\DWG\PLAT\SIV-PLAT-065001200.DWG PLOTTED BY PAZITNEY, ROB 7/31/2024 12:20 PM LAST SAVED 7/31/2024 10:21 AM

City of Taylor
PZ-2024-2254
North Bull Branch Creek Townhomes Subdivision Improvement Plan
Staff Report

Item Details

Agenda No.	5
Requested Action:	Consider Disapproval of North Bull Branch Creek Townhomes Subdivision Improvement Plan
Address/Location:	Generally located along the South right-of-way of N.W. Carlos G. Parker Boulevard, approximately 1,400 feet west of the intersection of N.W. Carlos G. Parker Boulevard and North Drive
Legal Description:	Approximately 7.747 acres of land part of and out of the William J Baker Survey, Abstract No. 65, more particularly described by the Williamson Central Appraisal District Parcel R018638, Taylor, Williamson County, Texas
Current Zoning:	P2.5 – Large Lot
Current Use:	Vacant Acreage
Applicant:	Sam Dehaybi, Paradise Engineers, LLC
Case History:	This is the first submission of the Subdivision Improvement Plans
Staff Recommendation:	The submitted Subdivision Improvement Plans do not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Subdivision Improvement Plans.

Attachments

1. Staff Comments
2. Location Map

City of Taylor
400 Porter Street
Taylor, TX 76574
(512) 352-3675
www.ci.taylor.tx.us

Sam Dehaybi
Paradise Engineers LLC
5900 Balcones Drive Suite 100
Austin TX 78731
sdehaybi@paradise-engineers.com

Date: Tuesday, September 3, 2024

Address: TBD CARLOS G PARKER, Wichita 67207

Permit Number PZ-2024-2254

Dear Sam Dehaybi,

Staff has completed its review of North BB Creek Townhouses – Subdivision Improvement Plan that is to be generally located along Carlos G. Parker NW. There are some corrections that need to be made prior to acceptance of the plans. Comments from this review follow.

Planning Department Comments
The following comments have been provided by Courtney Peres. Should you have any questions or require additional information regarding any of these comments, please contact Courtney Peres by email at courtney.peres@taylortx.gov.

1. Revise Plan set to "Subdivision Improvement Plan" from Site development Plan.
2. Revise Street Names from Preliminary Plat.
3. Confirm the ROW width of Trivik. Previous comments from Preliminary Plat review called the ROW width to be 55.93' and stated "we were told to eliminate the green space/void between the original East ROW line and Tract Boundary East line."

Engineering Department Review
The following comments have been provided by Javier Vasquez. Should you have any questions or require additional information regarding any of these comments, please contact Javier Vasquez by email at javier.vasquez@hdrinc.com.

*See Associated Documents section of the permit page to download a PDF containing the following engineering comments:

Subdivision Improvement Plans - Engineering Review 01

1. Sheet - [01] 1 COVER - Include legal description in the project title
2. Sheet - [01] 1 COVER - Address to be updated at final plan approval
3. Sheet - [01] 1 COVER - Include a signage and striping plan with applicable details
4. Sheet - [05] 5 SITE PLAN - Recommend verifying striping of this area to prevent parking along this area of the street (Example shown)
5. Sheet - [05] 5 SITE PLAN - Verify and update plan to include location of sidewalk along Carlos G. Parker frontage
6. Sheet - [06] 6 GRADING PLAN - Please verify lot-to-lot drainage requirements in Section 3.19.4 of the EM are met
7. Sheet - [06] 6 GRADING PLAN - Provide information on plan regarding typical lot grading per Engineering Manual 3.19
8. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - Snap to lines.
9. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - Notate PVI
10. Sheet - [07] 7 TRIVIK STREET PLAN & PROFILE - show grades
11. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Need 8' for parallel parking.
12. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - minimum grade of 0.5%
13. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Profile grades. Confirm profile.

14. Sheet - [08] 8 WALTER HEAP STREET PLAN & PROFILE - Per PD respective street types to reflect parking lane width accordingly (7' and 8'). Recommend clarifying this in a striping plan
15. Sheet - [1] 1 COVER - No Pavement Section for City Streets and no supporting geotechnical investigation for City Streets.
16. Sheet - [11] 11 DETENTION POND - Please provide detail of the proposed vertical wall
17. Sheet - [11] 11 DETENTION POND - As stated in Section 3.15.3.D.ii, orifice openings <12" shall not be used without a method of debris blockage. Please justify.
18. Sheet - [11] 11 DETENTION POND - Please verify that maintenance access criteria in Section 3.15.6.A is met
19. Sheet - [11] 11 DETENTION POND - Please provide pond grading and verify that positive drainage requirements under Section 3.15.3.B of the EM are met
20. Sheet - [11] 11 DETENTION POND - Denote location of pond maintenance access point
21. Sheet - [12] 12 STORM PLAN - Please provide inlet capacity calculations
22. Sheet - [12] 12 STORM PLAN - Section 3.9.3.B of the EM discourages the use of grate inlets without prior approval and use of clogging factor. Please justify.
23. Sheet - [12] 12 STORM PLAN - Street Connection Area - Reference proposed information or ancillary planset for this culvert installation
24. Sheet - [12] 12 STORM PLAN - Install Manhole at STA. 5+04
25. Sheet - [12] 12 STORM PLAN - Manhole required on Line A per Taylor EM 3.10.3.B
26. Sheet - [12] 12 STORM PLAN - Manhole required on Line B per Taylor EM 3.10.3.B
27. Sheet - [12] 12 STORM PLAN - Manhole required on Line A Sta. 6+00 per Taylor EM 3.10.3.B
28. Sheet - [12] 12 STORM PLAN - Verify if this junction at Sta. 6+38 - Line A will work at the manhole in regards to wall penetrations. A larger diameter manhole may be required
29. Sheet - [13] 13 STORM PROFILES - Please verify that the minimum cover for paved surfaces criteria in Section 3.10.1.C is met
30. Sheet - [13] 13 STORM PROFILES - Section 3.10.1.D.i requires soffit alignment at all pipe size transitions
31. Sheet - [13] 13 STORM PROFILES - Verify that criteria for clearance in Section 5.2.D in the EM are met
32. Sheet - [14] 14 WATER PLAN - Notate requirements for SUE of existing line and confirmation of qualified contractor to make tap to this existing line per Taylor EM 1.9
33. Sheet - [14] 14 WATER PLAN - Notate requirements for RULIS permitting of the proposed utility installation crossing under Carlos G. Parker
34. Sheet - [14] 14 WATER PLAN - Provide two (2) gate valves at this "tee" intersection
35. Sheet - [14] 14 WATER PLAN - Provide two (2) gate valves at this "tee" intersection
36. Sheet - [14] 14 WATER PLAN - Verify and update proposed layout at this location to provide continuation of water line to future development to the east along Walter Heap Street. This also provides additional separation from proposed sanitary sewer
37. Sheet - [14] 14 WATER PLAN - Is there an opportunity to provide an easement here for future loop of water line
38. Sheet - [14] 14 WATER PLAN - Verify and update proposed water line services to incorporate a dual service line at common property line (Typical)
39. Sheet - [14] 14 WATER PLAN - Notate location of sanitary sewer crossings and note crossing requirements per TCEQ. (Typical)
40. Sheet - [14] 14 WATER PLAN - Include fire hydrants at intersections per Taylor EM Sec. 5.5 (Typical)
41. Sheet - [14] 14 WATER PLAN - Provide blowoff valve at end of line per Taylor EM 5.2.4
42. Sheet - [15] 15 WATERLINE A PROFILE - Notate minimum depth of cover in profile
43. Sheet - [15] 15 WATERLINE A PROFILE - Revise offset to be 2-ft minimum and provide necessary casing and joint requirements per TCEQ at wastewater crossing
44. Sheet - [15] 15 WATERLINE A PROFILE - Verify fitting size. Typically nominal sizes divisible by 2 (e.g.90°, 45°, 22.5°, 11.25°)
45. Sheet - [15] 15 WATERLINE A PROFILE - Provide location of existing water line in profile
46. Sheet - [15] 15 WATERLINE A PROFILE - Notate location of flushing valves and or plugs in profile
47. Sheet - [15] 15 WATERLINE A PROFILE - Notate that and and all operation of existing utilities is to be performed by City of Taylor Public Works. Requests are to be made to Public Works for work requiring operation of utilities for items such as test cuts or tie-ins and closing of valves.
48. Sheet - [16] 16 WATERLINE B PROFILE - Notate minimum depth of cover in profile

49. Sheet - [17] 17 SEWER PLAN - Verify and update proposed wastewater line services to incorporate a dual service line at common property line (Typical)
50. Sheet - [17] 17 SEWER PLAN - Manhole required here
51. Sheet - [17] 17 SEWER PLAN - Verify and update proposed service lines to be installed on one private line to connect to public line
52. Sheet - [17] 17 SEWER PLAN - Manhole required here at Sta. 1+00. End of line cleanout with appropriate frame and cover acceptable if Taylor EM Sec.6.8 is followed.
53. Sheet - [17] 17 SEWER PLAN - Keep alignment of wastewater per typical street/utility assignments. Manhole might need to be moved closer into the street to allow for stubout.
54. Sheet - [17] 17 SEWER PLAN - Provide note that existing manhole is within the floodplain and is to be verified for water tight bolted frame and cover and all connections to be properly sealed.
55. Sheet - [18] 18 SEWER PROFILES - Update crossing to meet minimum separation requirements
56. Sheet - [20] 20 SITE DETAILS (1 OF 2) - 8" per Engineering manual.
57. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Use all applicable City of Taylor Details including jointing details and intersection detail PV009a, PV010, PV011
58. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Include details for typical street ROW sections and assignments used (all types including private alley)
59. Sheet - [20] 20 SITE DETAILS (1 OF 2) - Include PV002 - Typical Street Section section. Update as necessary to meet or exceed minimum requirements
60. Sheet - [21] 21 SITE DETAILS (2 OF 2) - Use all applicable City of Taylor Details
61. Sheet - [21] 21 SITE DETAILS (2 OF 2) - Use all applicable City of Taylor Details. Coordination to be made for acceptable details not available within City Standard Details.
62. Sheet - [22] 22 STORM DETAILS - Use all applicable City of Taylor Details including UT304, UT306
63. Sheet - [23] 23 WATER DETAILS - Verify fire hydrant updates with Fire Department Review
64. Sheet - [24] 24 SEWER DETAILS - Include detail UT204, UT206, UT211

*See Associated Documents section of the permit page to download a PDF containing the following engineering comments:

Drainage Report - Engineering Review 01

1. Include sheet/page numbers on the report document.
2. Drainage (Paragraph 5) - Please provide calculations for Qcritical and additional drawdown time

Geotechnical Report - Engineering Review 01

1. Please submit a final copy of the geotechnical report. The report says "preliminary"
2. Based on current borings, engineer to review City of Taylor Engineering Manual to verify and identify additional borings and additional lab testing.
3. Report to be revised to include recommendations for public streets and utilities. The section under "General" on page 25 suggests that this report is for the private construction areas.

Traffic Impact Analysis - Engineering Review 01

1. A planset for improvements required by TIA were submitted; however, The planset was marked preliminary and not for construction. Please submit an issued for construction set for City records.
2. A permit has been issued for these items by TxDOT and is acknowledged. All TxDOT permit requirements are the responsibility of the permittee.
3. It is noted that construction and acceptance of these improvements are to be completed prior to acceptance of the subdivision improvements by the City of Taylor.

Fire Department Comments (PZ)

The following comments have been provided by Bobby Copeland. Should you have any questions or require additional information regarding any of these comments, please contact Bobby Copeland at (512) 352-6992 or by email at robert.copeland@taylortx.gov.

1. The plans shall show an additional fire hydrant to be located on the west side of Trivik Street north of Alley B. This comment pertains to sheet 14 of 24.

2. The plans shall include Taylor's new fire hydrant detail. I have uploaded the approved detail to the additional files area. This comment pertains to sheet 23 of 24.

3. Attached units that are more than 2connected living units shall incorporate fire suppression systems to be installed. The plans show the individual water lines to each units are 1 inch. A fire suppression company shall be consulted to ensure the 1 inch water line is sufficient to supply the fire suppression system to each unit.

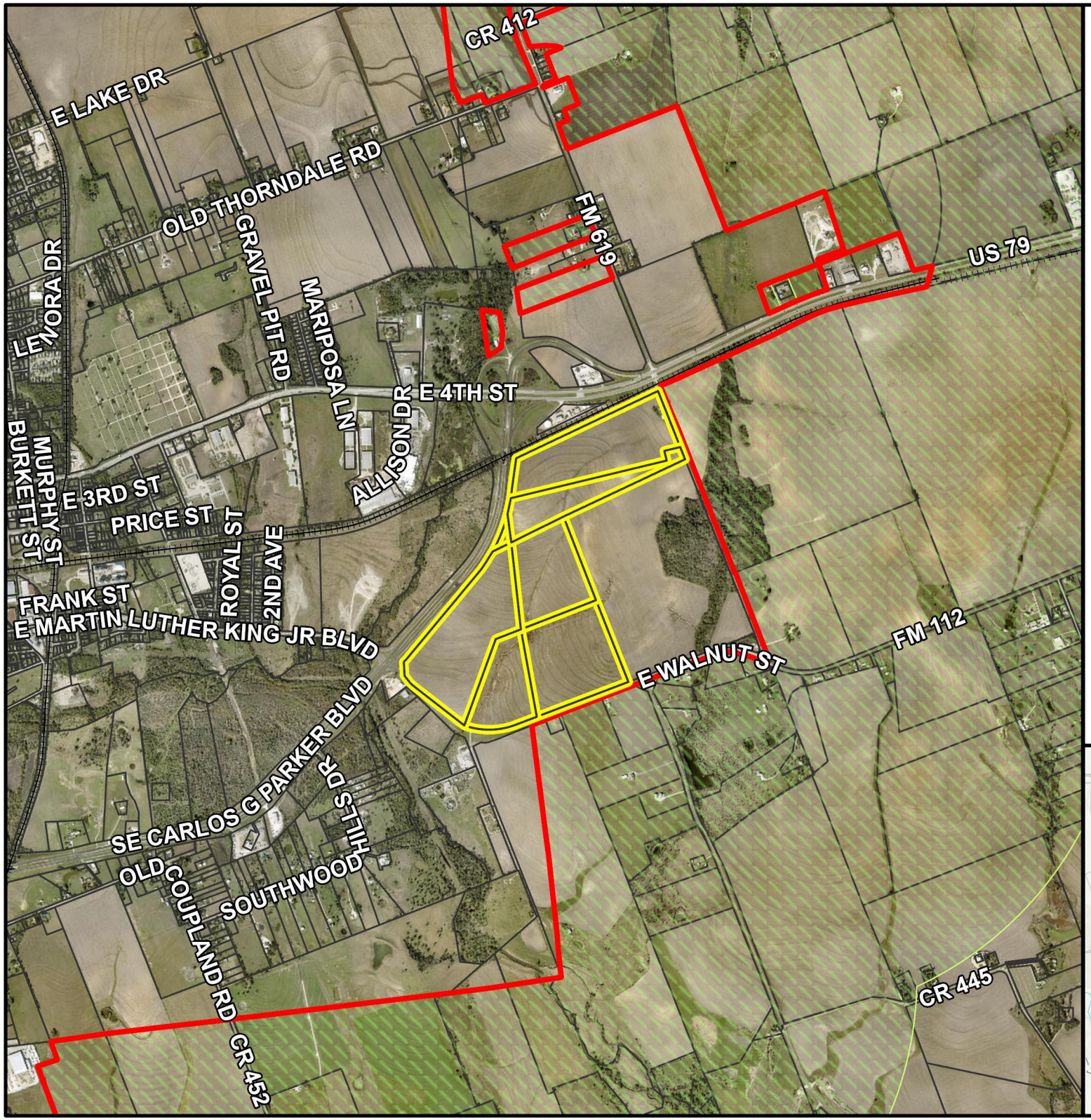
Please revise the plat to address the comments noted above. Following revision, submit the plat electronically with a resolution letter in PDF format.

Should you have questions regarding specific comments, please contact the staff member referenced under the section in which the comment occurs. Should you have questions or require additional information regarding the plan review process itself, please feel free to contact me directly. I can be reached by telephone at (512) 309-6268, or by e-mail at courtney.peres@taylortx.gov.

Thank you,



Courtney Peres, CNU-A
Planning Manager
City of Taylor

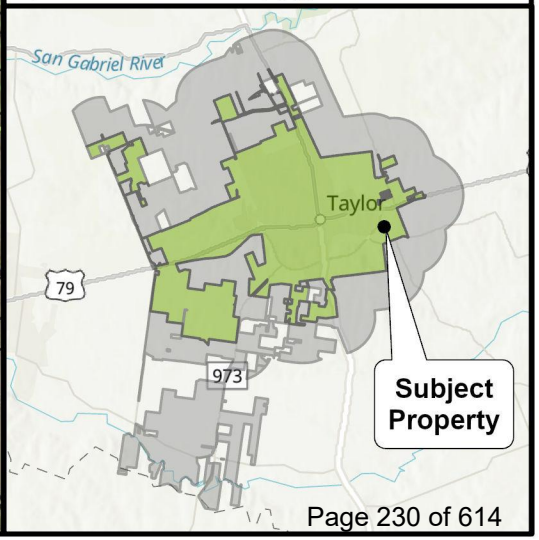


PZ-2024-2256

112 FM/427 LOOP
Subdivision Improvement Plan
Location Map
Approximately 211 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

N 0 2,000 4,000
Feet



City of Taylor
PZ-2024-2258
Gradient Technology Park/iMarket Preliminary Plat
Staff Report

Item Details

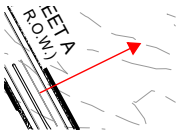
Agenda No.	8
Requested Action:	Consider Disapproval of Gradient Technology Park/iMarket Preliminary Plat
Address/Location:	Generally located at the intersection of Carlos G. Parker Boulevard Southeast and FM 112
Legal Description:	211.84-acre tract of land in the Parthinia Coursey Survey, Abstract No. 131, more particularly described by Williamson Central Appraisal District Parcels R357492, R318771, R006142, R620065, R624522, R620064, Taylor, Williamson County, Texas.
Current Zoning:	EC – Employment Center
Current Use:	Vacant Acreage
Applicant:	Joe Farias, Kimley-Horn
Case History:	This is the first submission of the Preliminary Plat
Staff Recommendation:	The submitted Preliminary Plat does not meet the minimum requirements of the Land Development Code and Engineering Manual. Therefore, staff recommends Disapproval of the proposed Preliminary Plat.

Attachments

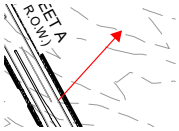
1. Staff Comments
2. Location Map
3. Preliminary Plat Package

PZ-2024-2258-5a-taylor industrial - preliminary plan.pdf Markup Summary

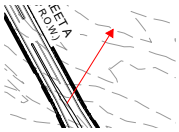
Arrow (6)



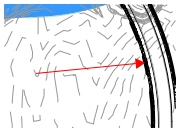
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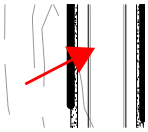
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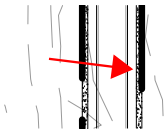
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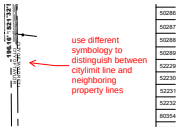


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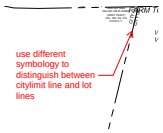
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use different symbology to distinguish between citylimit line and neighboring property lines

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Subject: Callout
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:13:27 AM
Status:
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Layer:
Space:

use different symbology to distinguish between citylimit line and lot lines

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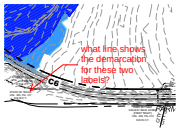
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Author: sroos
Date: 8/23/2024 10:14:07 AM
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cleanup overlapping labels throughout



Subject: Callout
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:15:41 AM
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which lines show these 10 acres?



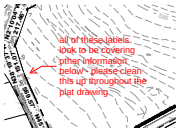
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what line shows the demarcation for these two labels?



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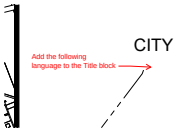
what is this square showing versus the property lines?



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Date: 8/23/2024 10:20:18 AM
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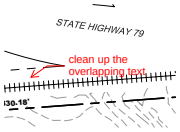
all of these labels look to be covering other information below - please clean this up throughout the plat drawing

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Subject: Callout
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Add the following language to the Title block



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Author: sroos
Date: 8/23/2024 12:19:09 PM
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clean up the overlapping text



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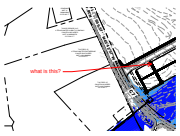
this is unclear and a lot of overlapping text - please clean up

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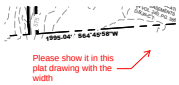
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move bleow location map



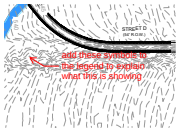
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what is this?



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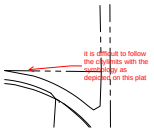
Please show it in this plat drawing with the width



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add these symbols to the legend to explain what this is showing

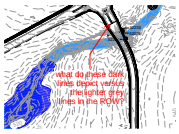
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Date: 8/23/2024 12:46:04 PM
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it is difficult to follow the citylimits with the symbology as depicted on this plat

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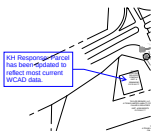
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what do these dark lines depict versus the lighter grey lines in the ROW?



Subject: Callout
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KH Response: Label has been relocated to reference the 10 acre lot.



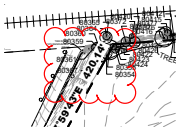
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KH Response: Parcel has been updated to reflect most current WCAD data.

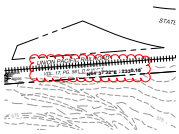
Cloud (16)



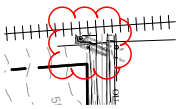
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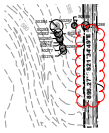
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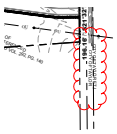
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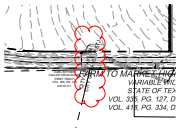
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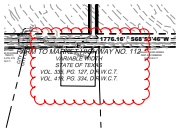
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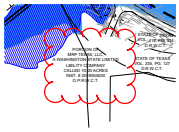
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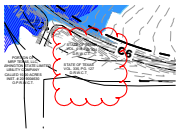
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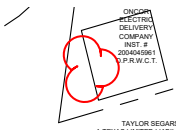
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Author: sroos
Date: 8/23/2024 10:14:31 AM
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Subject: Cloud
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Author: sroos
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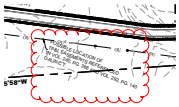
Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:18:04 AM
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Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:19:41 AM
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Layer:
Space:



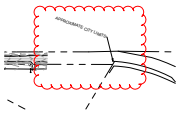
Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:34:31 PM
Status:
Color:
Layer:
Space:



Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:41:38 PM
Status:
Color:
Layer:
Space:



Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:44:14 PM
Status:
Color:
Layer:
Space:



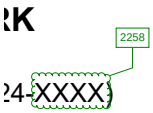
Subject: Cloud
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:45:03 PM
Status:
Color:
Layer:
Space:

Cloud+ (2)



Subject: Cloud+
Page Label: [13] 5 PRELIMINARY PLAN NOTES
Author: Mark.Evans
Date: 8/16/2024 1:42:36 PM
Status:
Color:
Layer:
Space:

Fill in this information



Subject: Cloud+
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 11:34:36 AM
Status:
Color:
Layer:
Space:

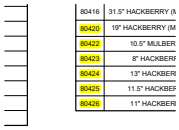
2258

For Review (1)

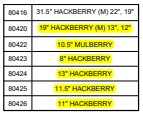


Subject: For Review
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 1:10:11 PM
Status:
Color:
Layer:
Space:

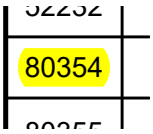
Highlight (10)



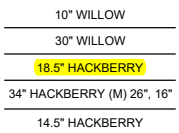
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:47:42 AM
Status:
Color:
Layer:
Space:



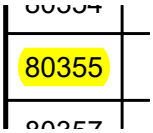
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:47:44 AM
Status:
Color:
Layer:
Space:



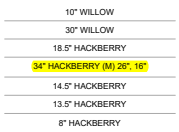
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:48:01 AM
Status:
Color:
Layer:
Space:



Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:48:03 AM
Status:
Color:
Layer:
Space:



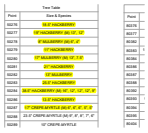
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:48:07 AM
Status:
Color:
Layer:
Space:



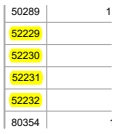
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:48:08 AM
Status:
Color:
Layer:
Space:



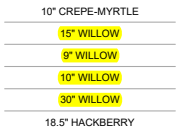
Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:50:27 AM
Status:
Color:
Layer:
Space:



Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:50:32 AM
Status:
Color:
Layer:
Space:

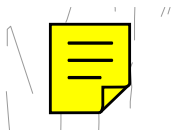


Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 11:32:29 AM
Status:
Color:
Layer:
Space:



Subject: Highlight
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 11:32:32 AM
Status:
Color:
Layer:
Space:

Note (7)



Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:41:08 PM
Status:
Color:
Layer:
Space:

Need to create block and lot numbers and add those to the plat drawing. Civic area needs to be its own lot.

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:37:10 PM
Status:
Color:
Layer:
Space:

KH Response: Block and lot numbers have been added to the plat.



Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:19:13 AM
Status:
Color:
Layer:
Space:

acres?

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:37:23 PM
Status:
Color:
Layer:
Space:

KH Response: Acres has been added to property description

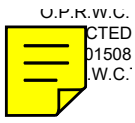


Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:20:38 AM
Status:
Color:
Layer:
Space:

what does C7 refer to?

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:37:36 PM
Status:
Color:
Layer:
Space:

KH Response: See curve table on this sheet.

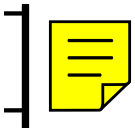


Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 10:21:49 AM
Status:
Color:
Layer:
Space:

acres?

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:37:43 PM
Status:
Color:
Layer:
Space:

KH Response: Acres has been added to property description



Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:20:47 PM
Status:
Color:
Layer:
Space:

please clarify what the highlighted lines mean. Also add a column to show which trees will stay and which will be removed.

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:37:54 PM
Status:
Color:
Layer:
Space:

KH Response: Highlights on tree table were provided by a reviewer. Additional column to show which trees will be removed is now shown.



Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:39:01 PM
Status:
Color:
Layer:
Space:

add the property address
and Taylor project number

Subject: Re: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:38:09 PM
Status:
Color:
Layer:
Space:

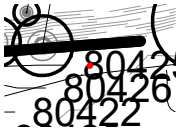
KH Response: Property address to be provided by the city at a later date. The Taylor project number has been added.



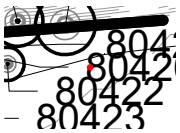
Subject: Note
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:43:33 PM
Status:
Color:
Layer:
Space:

All utility and drainage easements for the proposed infrastructure need to be shown on this plat drawing

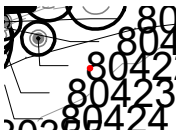
Pen (6)



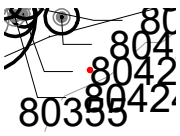
Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:45:40 AM
Status:
Color:
Layer:
Space:



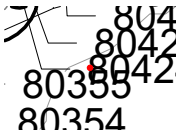
Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:45:46 AM
Status:
Color:
Layer:
Space:



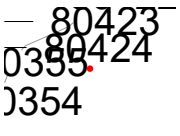
Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:45:48 AM
Status:
Color:
Layer:
Space:



Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:45:50 AM
Status:
Color:
Layer:
Space:



Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:45:55 AM
Status:
Color:
Layer:
Space:



Subject: Pen
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/19/2024 10:46:02 AM
Status:
Color:
Layer:
Space:

Stamp (1)

Completeness Check
City Planner
Finished: 20240816
Status: Complete.

Subject: Stamp
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 1:04:01 PM
Status:
Color:
Layer:
Space:

Strikethrough (1)



Subject: Strikethrough
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:38:30 PM
Status:
Color:
Layer:
Space:

Text Box (28)

Completeness Check
Landscape
Finished: 20240816
Status: Incomplete.
Tree mitigation plan missing from tree survey.

Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/16/2024 1:40:53 PM
Status:
Color:
Layer:
Space:

Completeness Check
Landscape
Finished: 20240816
Status: Incomplete.
Tree mitigation plan missing from tree survey.

Completeness Check
Traffic Engineering
Finished: 20240816
Status: Complete.

Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/16/2024 2:01:34 PM
Status:
Color:
Layer:
Space:

Completeness Check
Traffic Engineering
Finished: 20240816
Status: Complete.

Completeness Check
City Engineer
Finished: 20240816
Status: Complete.

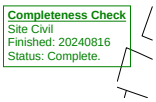
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: jvasquez
Date: 8/16/2024 3:14:05 PM
Status:
Color:
Layer:
Space:

Completeness Check
City Engineer
Finished: 20240816
Status: Complete.

Completeness Check
Utilities/Capacity: St. Tours, Lindner
Finished: 8/16/24
Status: Complete

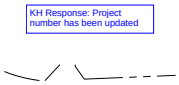
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: jvasquez
Date: 8/16/2024 3:17:41 PM
Status:
Color:
Layer:
Space:

Completeness Check
Utilities/Capacity: St. Tours, Lindner
Finished: 8/16/24
Status: Complete



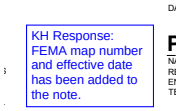
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Erin Ottmers
Date: 8/16/2024 4:29:15 PM
Status:
Color:
Layer:
Space:

Completeness Check
Site Civil
Finished: 20240816
Status: Complete.



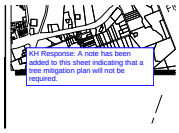
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/19/2024 3:21:26 PM
Status:
Color:
Layer:
Space:

KH Response: Project number has been updated



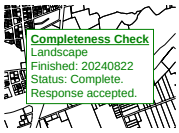
Subject: Text Box
Page Label: [13] 5 PRELIMINARY PLAN NOTES
Author: Autumn Howell
Date: 8/19/2024 3:37:48 PM
Status:
Color:
Layer:
Space:

KH Response: FEMA map number and effective date has been added to the note.



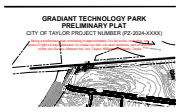
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/19/2024 3:40:13 PM
Status:
Color:
Layer:
Space:

KH Response: A note has been added to this sheet indicating that a tree mitigation plan will not be required.



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Mark.Evans
Date: 8/22/2024 4:25:43 PM
Status:
Color:
Layer:
Space:

Completeness Check
Landscape
Finished: 20240822
Status: Complete. Response accepted.



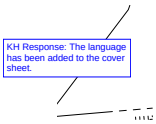
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:15:41 PM
Status:
Color:
Layer:
Space:

Being a preliminary plat consisting of approximately 211.84 acres, including xxx acres of right-of-way dedication, to create xxx lots, xxx acre reserves, part of and out of the xxx Survey, Abstract No. xxx, Taylor, Williamson County, Texas



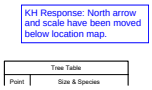
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: sroos
Date: 8/23/2024 12:50:14 PM
Status:
Color:
Layer:
Space:

it is not clear what we are showing here - we only need to show the street ROW not the cross section design on a plat or cross walks etc. please remove.



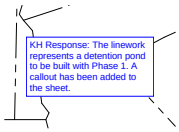
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 9:55:07 AM
Status:
Color:
Layer:
Space:

KH Response: The language has been added to the cover sheet.



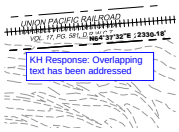
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:02:35 AM
Status:
Color:
Layer:
Space:

KH Response: North arrow and scale have been moved below location map.



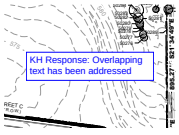
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:05:40 AM
Status:
Color:
Layer:
Space:

KH Response: The linework represents a detention pond to be built with Phase 1. A callout has been added to the sheet.



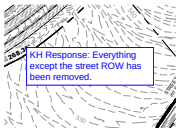
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:07:57 AM
Status:
Color:
Layer:
Space:

KH Response: Overlapping text has been addressed



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:09:37 AM
Status:
Color:
Layer:
Space:

KH Response: Overlapping text has been addressed



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:23:07 AM
Status:
Color:
Layer:
Space:

KH Response: Everything except the street ROW has been removed.



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 12:31:10 PM
Status:
Color:
Layer:
Space:

KH Response: Everything except the street ROW has been removed.



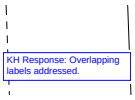
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:42:54 AM
Status:
Color:
Layer:
Space:

KH Response: Overlapping text has been addressed



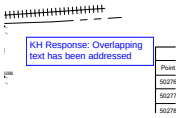
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:44:33 AM
Status:
Color:
Layer:
Space:

KH Response: Labels have been cleaned up throughout drawing



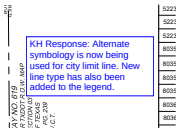
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 10:59:15 AM
Status:
Color:
Layer:
Space:

KH Response: Overlapping labels addressed.



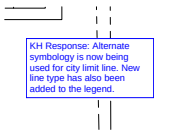
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 11:02:46 AM
Status:
Color:
Layer:
Space:

KH Response: Overlapping text has been addressed



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 12:20:24 PM
Status:
Color:
Layer:
Space:

KH Response: Alternate symbology is now being used for city limit line. New line type has also been added to the legend.



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 12:20:32 PM
Status:
Color:
Layer:
Space:

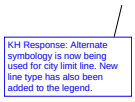
KH Response: Alternate symbology is now being used for city limit line. New line type has also been added to the legend.



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 12:32:00 PM
Status:
Color:
Layer:
Space:

KH Response: Arrows have been added to the labels for clarification

---



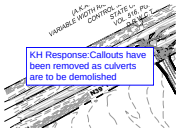
Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 12:32:17 PM
Status:
Color:
Layer:
Space:

KH Response: Alternate symbology is now being used for city limit line. New line type has also been added to the legend.



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:17:54 PM
Status:
Color:
Layer:
Space:

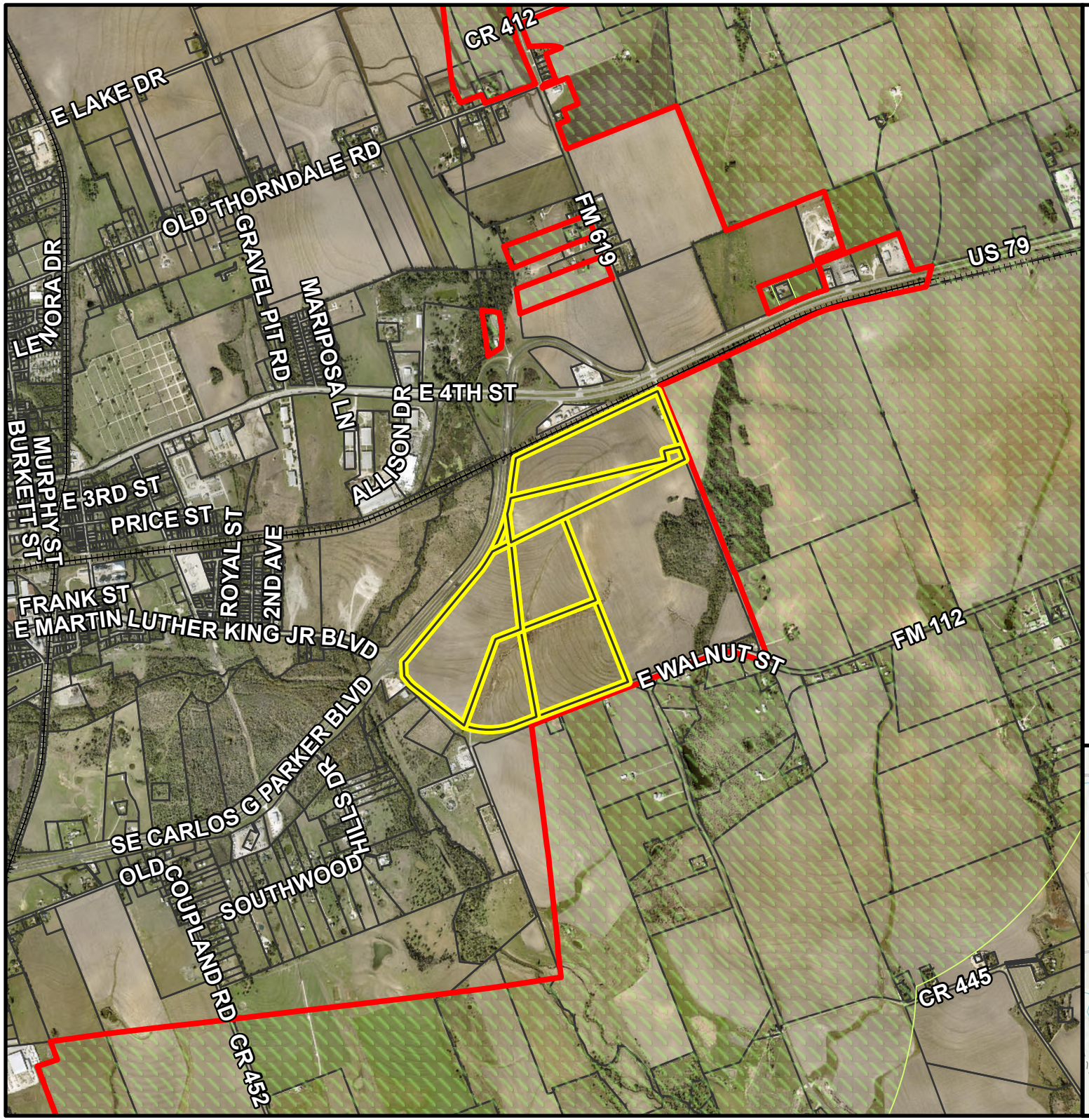
KH Response: Trees have been added to the legend



Subject: Text Box
Page Label: [9] 1 OVERALL PRELIMINARY PLAN
Author: Autumn Howell
Date: 8/26/2024 2:35:47 PM
Status:
Color:
Layer:
Space:

KH Response:Callouts have been removed as culverts are to be demolished

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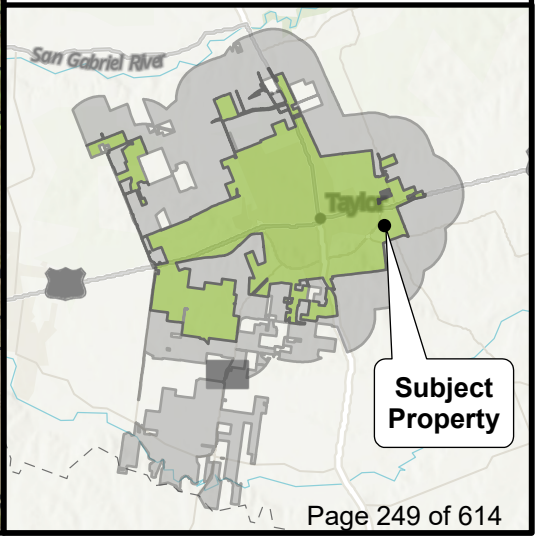


PZ-2024-2258

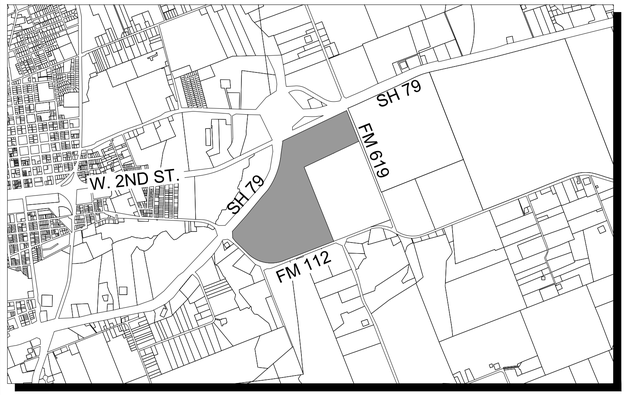
112 FM/427 LOOP
Preliminary Plat
Location Map
Approximately 211 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

N 0 2,000 4,000
Feet



GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
CITY OF TAYLOR PROJECT NUMBER (PZ-2024-XXXX)



Tree Table	
Point	Size & Species
50276	18.5" HACKBERRY
50277	19" HACKBERRY (M) 13", 12"
50278	8" MULBERRY (M) 6", 4"
50279	11" HACKBERRY
50280	17" MULBERRY (M) 13", 7.5"
50281	21" HACKBERRY
50282	13" MULBERRY
50283	25.5" HACKBERRY
50284	38.5" HACKBERRY (M) 16", 12", 12", 12", 9"
50286	13.5" HACKBERRY
50287	17" CREPE-MYRTLE (M) 6", 6", 6", 5", 5"
50288	23.5" CREPE-MYRTLE (M) 9", 8", 8", 7", 6"
50289	10" CREPE-MYRTLE
52229	15" WILLOW
52230	9" WILLOW
52231	10" WILLOW
52232	30" WILLOW
80354	18.5" HACKBERRY
80355	34" HACKBERRY (M) 26", 16"
80357	14.5" HACKBERRY
80359	13.5" HACKBERRY
80360	8" HACKBERRY
80361	10.5" HACKBERRY
80364	21" HACKBERRY
80365	12.5" HACKBERRY
80370	16" CHINABERRY
80372	8" CHINESE-TALLOW

Tree Table	
Point	Size & Species
80376	21" ELM
80377	11" ELM
80382	20" HACKBERRY (M) 16", 8"
80383	14.5" HACKBERRY (M) 10", 9"
80384	8" HACKBERRY
80386	29.5" HACKBERRY
80387	11" HACKBERRY
80388	22" HACKBERRY
80392	13" HACKBERRY
80393	15" HACKBERRY (M) 11", 8"
80394	9" HACKBERRY
80395	21" HACKBERRY
80404	10" HACKBERRY
80409	8" HACKBERRY
80410	11" HACKBERRY
80411	9.5" HACKBERRY
80412	10" HACKBERRY (M) 7", 6"
80413	8" HACKBERRY
80415	10" HACKBERRY
80416	31.5" HACKBERRY (M) 22", 19"
80420	19" HACKBERRY (M) 13", 12"
80422	10.5" MULBERRY
80423	8" HACKBERRY
80424	13" HACKBERRY
80425	11.5" HACKBERRY
80426	11" HACKBERRY

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C5	4°13'40"	2427.01'	179.08'	N06°44'59"E	179.04'
C6	41°08'12"	1106.00'	794.08'	S88°59'32"W	777.13'
C7	24°39'30"	1106.00'	475.99'	N58°06'37"W	472.32'
C8	26°16'52"	2427.01'	1113.25'	N22°00'03"E	1103.52'

LEGEND

- PROPERTY LINE
- XXX EXISTING MAJOR CONTOUR
- XXX EXISTING MINOR CONTOUR
- XXX PROPOSED MAJOR CONTOUR
- XXX PROPOSED MINOR CONTOUR
- W EXISTING WATER LINE
- WW EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
A SUBDIVISION OF XXX.XX ACRES IN THE CITY OF TAYLOR,
WILLIAMSON COUNTY, TEXAS
SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

TEXAS REGISTERED ENGINEERING FIRM F-928

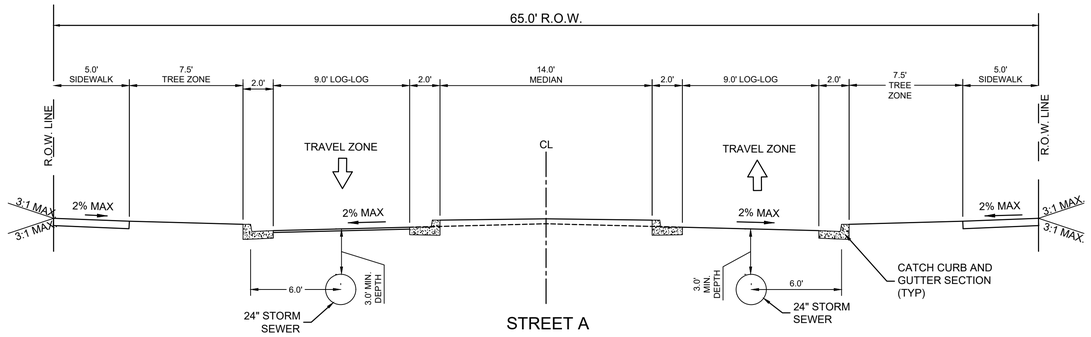
Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 300'	GA	JF	JUNE 2024	065001200	1 OF 5

STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
08/02/2024

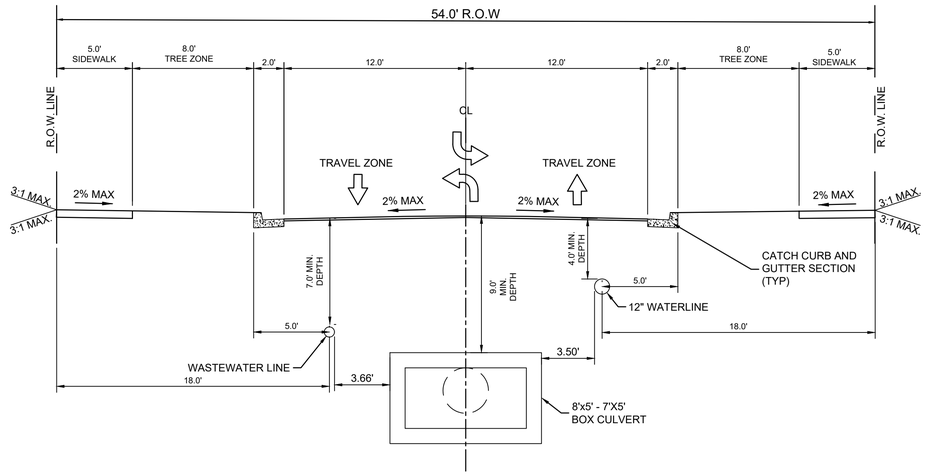
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DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY PLANS\SHEET SIC - OVERALL PRELIMINARY PLAN.DWG PLOTTED BY: ALVAREZ, GERRY 8/1/2024 4:01 PM LAST SAVED: 7/31/2024 5:17 PM

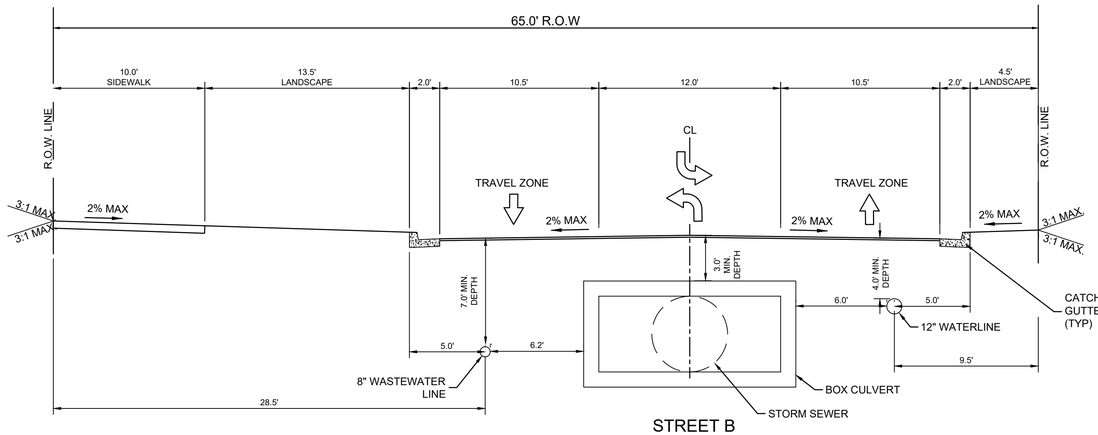
GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
CITY OF TAYLOR PROJECT NUMBER (PZ-2024-XXXX)



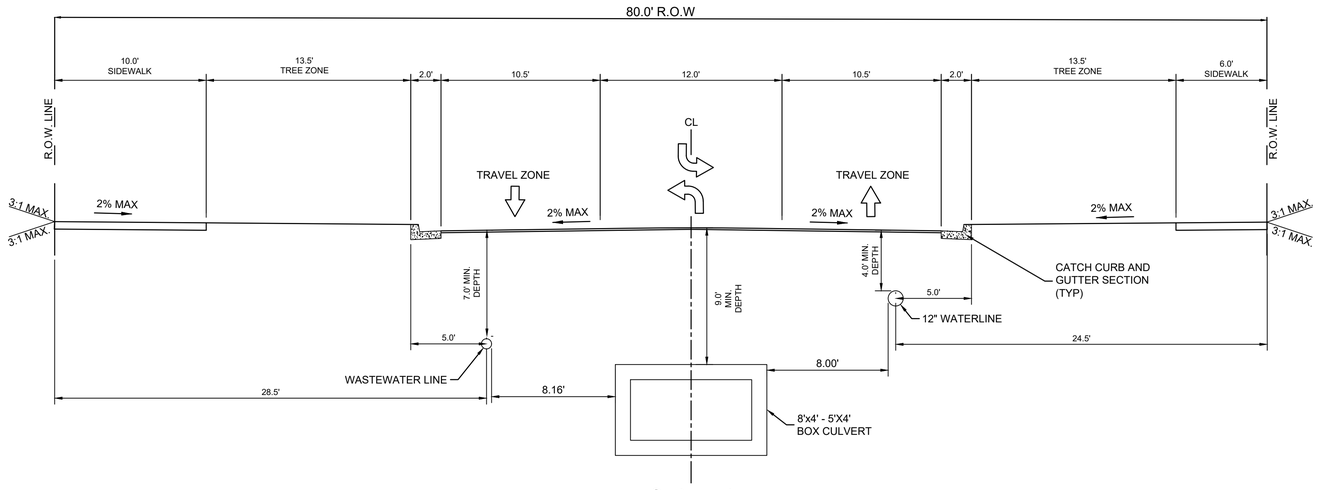
STREET A



STREET A, D AND E



STREET B



STREET B

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REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
A SUBDIVISION OF XXX.XX ACRES IN THE CITY OF TAYLOR,
WILLIAMSON COUNTY, TEXAS
SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

TEXAS REGISTERED ENGINEERING FIRM F-928

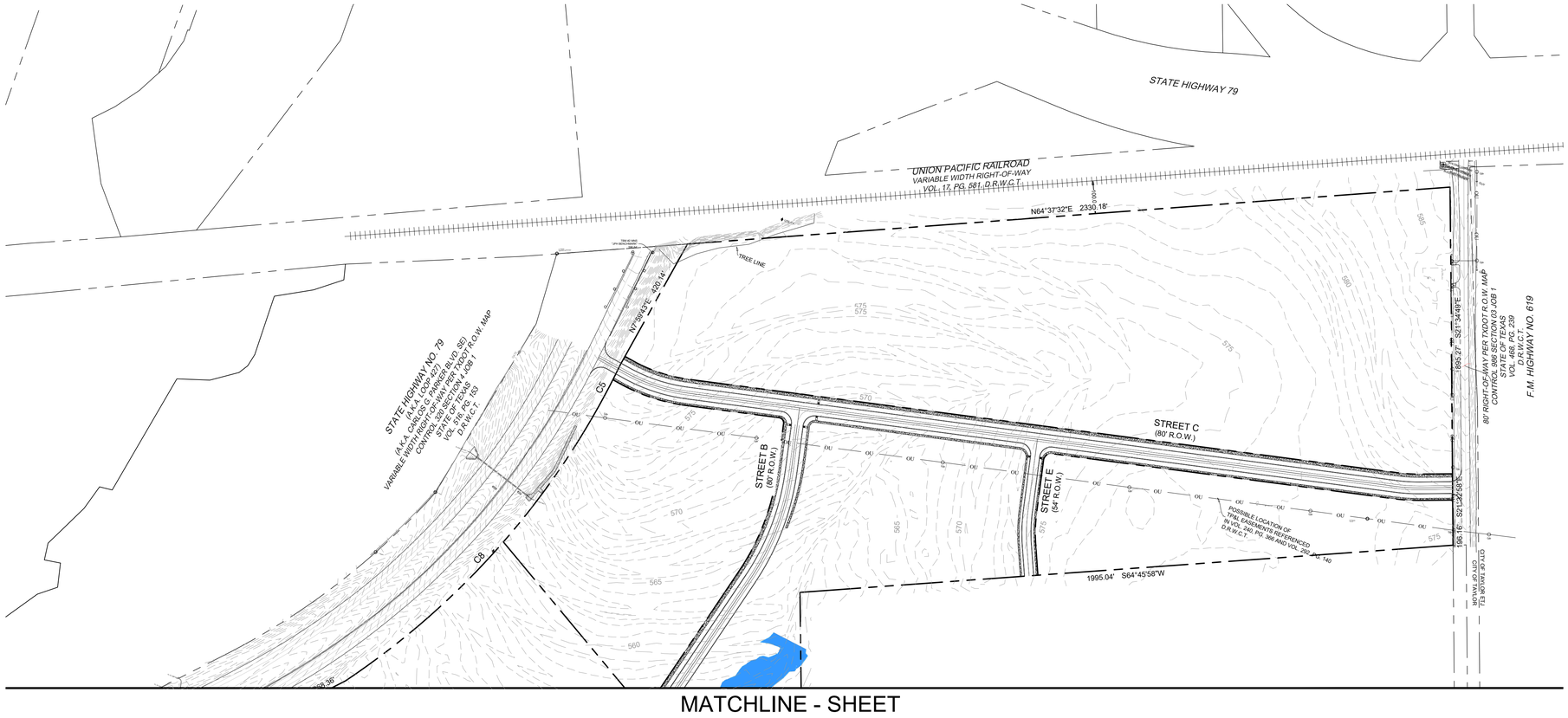
STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
08/02/2024

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
	GA	JF	JUNE 2024	065001200	2 OF 5

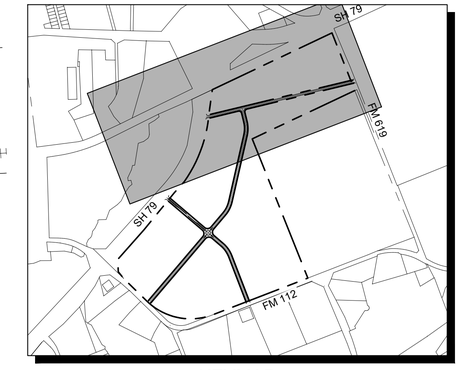
City Project Number: PZ-2024-XXXX

DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY PLANS\SHEET SIC - CROSS SECTIONS.DWG PLOTTED BY: ALVAREZ, GERRY 8/1/2024 4:01 PM LAST SAVED: 7/31/2024 3:22 PM

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
CITY OF TAYLOR PROJECT NUMBER (PZ-2024-XXXX)



MATCHLINE - SHEET



KEYMAP
N.T.S

0 200' 400'
GRAPHIC SCALE 200'

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
A SUBDIVISION OF XXX.XX ACRES IN THE
CITY OF TAYLOR,
WILLIAMSON COUNTY, TEXAS
SUBMITTAL DATE: x/x/xxxx

Kimley»Horn
TEXAS REGISTERED ENGINEERING FIRM F-928

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 200'	GA	JF	JUNE 2024	065001200	3 OF 5

STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
08/02/2024

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City Project Number: PZ-2024-XXXX

DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY PLANS\SHEETS\C - PRELIMINARY PLAN.DWG PLOTTED BY ALVAREZ, GERRY 8/1/2024 4:02 PM LAST SAVED 7/31/2024 8:25 PM

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
CITY OF TAYLOR PROJECT NUMBER (PZ-2024-XXXX)

MATCHLINE - SHEET





KEYMAP
N.T.S

LEGEND

- PROPERTY LINE
- XXX EXISTING MAJOR CONTOUR
- XXX EXISTING MINOR CONTOUR
- XXX PROPOSED MAJOR CONTOUR
- XXX PROPOSED MINOR CONTOUR
- W EXISTING WATER LINE
- WW EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- WW EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

0 200' 400'
GRAPHIC SCALE 200'

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
A SUBDIVISION OF XXX.XX ACRES IN THE CITY OF TAYLOR, WILLIAMSON COUNTY, TEXAS
SUBMITTAL DATE: x/x/xxxx

Kimley»Horn
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
08/02/2024

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 200'	GA	JF	JUNE 2024	065001200	4 OF 5

City Project Number: PZ-2024-XXXX

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DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY PLANS\SHEET SIC - PRELIMINARY PLAN.DWG PLOTTED BY ALVAREZ, GERRY 8/1/2024 4:02 PM LAST SAVED 7/31/2024 6:25 PM

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
CITY OF TAYLOR PROJECT NUMBER (PZ-2024-XXXX)

OWNER'S CERTIFICATION

STATE OF TEXAS {
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF _____ {

I, _____, OWNER OF THE CERTAIN _____ ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN DEEDS RECORDED IN DOCUMENT NO. _____ OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY STATE THAT THERE ARE LIEN HOLDERS OF THE CERTAIN TRACT OF LAND, AND DO HEREBY SUBDIVIDE SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHT-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS THE _____.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ DAY OF _____, 2024.

PRELIMINARY
NAME
ADDRESS

NOTARY'S CERTIFICATION

STATE OF TEXAS {
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF _____ {

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

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

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON: _____

LIEN HOLDER

STATE OF TEXAS §
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF WILLIAMSON §

I, _____ OF BANK NAME, LIENHOLDER OF THAT CERTAIN _____ ACRES TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED OF TRUST RECORDED IN DOCUMENT NO. XXXXXXXX OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT AS SHOWN HEREON, AND DO FURTHER HEREBY JOIN, APPROVE, AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF TAYLOR THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS THE CITY OF TAYLOR MAY DEEM APPROPRIATE. THIS SUBDIVISION IS TO BE KNOWN AS _____.

TO CERTIFY WHICH, WITNESS BY MY HAND THIS _____ day of _____, 2024.

_____
(LIEN HOLDER SIGNATURE)
BANK NAME
STREET NAME
CITY, STATE ZIP

STATE OF TEXAS §
KNOW ALL MEN BY THESE PRESENTS
COUNTY OF _____ §

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ day of _____, 2024.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES ON: _____

PLANNING & ZONING COMMISSION - PRELIMINARY PLATS

A PRELIMINARY PLAT FOR A SUBDIVISION TO BE KNOWN AS _____ HAS BEEN APPROVED ACCORDING TO THE MINUTES OF THE MEETING OF THE TAYLOR PLANNING AND ZONING COMMISSION ON THE _____ DAY OF _____, 2024, A.D.

_____
CHAIRMAN SIGNATURE DATE

_____
CHAIRMAN SIGNATURE DATE

FLOODPLAIN ADMINISTRATOR'S CERTIFICATION

BASED UPON THE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE CITY OF TAYLOR FLOODPLAIN REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REGULATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. CITY OF TAYLOR DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATED WITHIN

_____ _____
CITY OF TAYLOR FLOODPLAIN ADMINISTRATOR DATE

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NOTES:

1. THE BEARINGS SHOWN HEREON ARE RELATIVE TO THE TEXAS STATE PLAN GRID SYSTEM, NAD-83 (2011), CENTRAL ZONE 4203, DISTANCES SHOWN ARE GROUND DISTANCES. SCALE FACTOR IS 0.9998800. DISTANCES AND COORDINATES SHOWN HEREON ARE U.S. SURVEY FEET.
2. SUBJECT TO EASEMENTS, CONDITIONS, COVENANTS AND RESTRICTIONS AS STATED OR SHOWN HEREON, AS REQUIRED BY THE CITY OF TAYLOR, TEXAS, AND ANY OF RECORD WHICH MAY BE APPLICABLE.
3. A CURRENT TITLE COMMITMENT OR REPORT WAS NOT AVAILABLE OR PROVIDED TO THE UNDERSIGNED SURVEYOR AS OF THE DATE OF THIS SURVEY AND THE UNDERSIGNED SURVEYOR DID NOT ABSTRACT THE SUBJECT PROPERTY.
4. UTILITY PROVIDERS - WATER: CITY OF TAYLOR, TEXAS; WASTEWATER/SEPTIC: WILLIAMSON COUNTY, TEXAS; ELECTRICITY: ONCOR ELECTRIC.
5. PART OF THE SUBJECT PROPERTY LIES WITHIN THE SPECIAL FLOOD HAZARD AREA ACCORDING TO THE FLOOD INSURANCE RATE MAP (FIRM) AS COMPILED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, MAP NUMBER _____EFFECTIVE DATE _____, WILLIAMSON COUNTY, TEXAS, AND IS SHOWN HEREON AS APPROXIMATE FLOOD HAZARD BOUNDARY. THERE IS HEREBY DEDICATED A DRAINAGE EASEMENT TO COVER ONE HUNDRED (100) YEAR FLOODPLAIN AREAS, DRAINAGE CHANNELS, PIPE SYSTEMS AND ANY OTHER RELATED DRAINAGE FACILITIES SITUATED HEREON.
6. NO STRUCTURES AND/OR OBSTRUCTIONS ARE PERMITTED IN DRAINAGE EASEMENTS WITHOUT PRIOR REVIEW AND APPROVAL BY THE CITY OF TAYLOR, TEXAS DEVELOPMENT SERVICES DEPARTMENT.
7. ALL MINIMUM YARD (BUILDING) SETBACKS SHALL BE IN ACCORDANCE WITH THE COMMERCIAL PLANNED DEVELOPMENT FOR RCR-TAYLOR LOGISTICS PARK ORDINANCE NUMBER 2022-14.
8. NO DEVELOPMENT SHALL BEGIN PRIOR TO THE ISSUANCE OF A FLOODPLAIN DEVELOPMENT PERMIT FOR LOTS SITUATED IN THE 100-YEAR FLOODPLAIN. STRUCTURES AND BUILDINGS CONSTRUCTED NEXT TO THE FLOODPLAIN MUST BE A MINIMUM OF TWO (2) FEET ABOVE THE 100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE).
9. A PRIVATE TEMPORARY BLANKET DRAINAGE EASEMENT SHALL BE INCLUDED OVER AND ACROSS ALL PORTIONS OF PHASE 2, BLOCK 2 THAT DRAIN INTO DETENTION RESERVE 2A UNTIL A PERMANENT DRAINAGE EASEMENT IS ESTABLISHED AS DEFINED BY SEPARATE INSTRUMENT OR AMENDING PLAT FOLLOWING CITY OF TAYLOR REVIEW AND APPROVAL OF SITE DEVELOPMENT PLANS FOR THE RESPECTIVE LOTS.
10. TYPICAL FIRE SUPPRESSION SYSTEMS THAT MEET CHAPTER 9 FIRE SUPPRESSIONS SYSTEM OF THE INTERNATIONAL FIRE CODE AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13 REQUIREMENTS, OR THE MOST RECENT VERSION THEREOF, AS REQUIRED BY THE CITY OF TAYLOR, TEXAS WILL BE DESIGNED ACCORDINGLY IN ALL PHASES THAT INCLUDE PLANNED BUILDING CONSTRUCTION.
11. THIS SUBDIVISION IS SUBJECT TO CITY OF TAYLOR, TEXAS ORDINANCE 2022-14 (COMMERCIAL PLANNED DEVELOPMENT DISTRICT) AND CORRESPONDING SITE DEVELOPMENT PERMITS.
12. ALL DRAINAGE AND DETENTION FACILITIES SHOWN HEREIN ARE PRIVATE FACILITIES. THE LAND OWNER.DEVELOPER SHALL BE REQUIRED TO MEET THE STANDARDS SPECIFIED IN THE OPERATIONS & MAINTENANCE PLAN FOR DETENTION FACILITIES FILED UNDER CITY OF TAYLOR PERMIT _____. THE CITY OF TAYLOR, TEXAS SHALL NOT BE RESPONSIBLE FOR MAINTENANCE ACTIVITIES FOR DRAINAGE AND DETENTION FACILITIES SHOWN HEREIN.
13. A 10-FOOT PUBLIC UTILITY EASEMENT (P.U.E.) SHALL BE DEDICATED PARALLEL TO FM 3349 AS SHOWN.
14. THE SUBDIVIDER OR LOT OWNER AT TIME OF DEVELOPMENT IS RESPONSIBLE TO NOTE THE LOCATION OF SIDEWALKS ON THE PLAT. SIDEWALKS SHALL BE CONSTRUCTED AND EXTENDED ACROSS THEIR PROPERTY ALONG THE PERIMETER OF ALL PROPERTY BOUNDARIES ADJACENT TO PUBLIC RIGHT-OF-WAYS AS INDICATED IN THE EFFECTIVE COMMERCIAL PLANNED DEVELOPMENT CODES. SIDEWALKS SHALL BE A MINIMUM OF FIVE (5) FEET IN WIDTH AND BE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). ALL SIDEWALKS MUST BE IN COMPLIANCE WITH SPECIFICATIONS PROVIDED BY THE CITY ENGINEER. AS OF THE DATE OF THIS PRELIMINARY PLAT, SIDEWALK REQUIREMENTS ARE UNDER CPD REVIEW BY THE CITY OF TAYLOR, TEXAS.
15. PUBLIC RIGHT-OF-WAY ACCESS FOR PHASE 3, LOT 1 AND RESERVE 4 WILL BE PROVIDED BY THE 80' SHARED ACCESS EASEMENT SHOWN HEREON/ SAID EASEMENT MAY BE USED BY PHASE 3, LOT 1, DRAINAGE/OPEN SPACE RESERVE 4, AND PHASE 1, LOT 2.
16. MINIMUM FIRE FLOW OF 750 GALLONS PER MINUTE FOR NOT LESS THAN TWO (2) HOURS SHALL BE PROVIDED, THE PLATTED PROPERTY HAS ADJACENT ACCESS TO THE CITY OF TAYLOR WATER SYSTEM. TYPICAL FIRE SUPRESSION SYSTEMS AND FIRE PROTECTION WATER SUPPLY WILL COMPLY WITH THE CITY OF TAYLOR, TEXAS CODE REQUIREMENTS AND WILL BE DESIGNED ACCORDINGLY.
17. AN INDIVIDUAL SEWER TAP AND WATER TAP SHALL BE INSTALLED FOR EACH LOT.
18. WASTEWATER SERVICES FOR TAYLOR INDUSTRIAL WILL BE PROVIDED BY ON-SITE SEPTIC FACILITIES UNTIL THE PERMANENT SERVICE IS RESOLVED.
19. ON-SITE SEWAGE FACILITIES (OSSF), PERMITTED THROUGH WILLIAMSON COUNTY, MAY BE TEMPORARILY UTILIZED FOR WASTEWATER SERVICE AND TREATMENT FOR DEVELOPMENT WITHIN THE BOUNDARY OF THIS PRELIMINARY PLAT UNTIL PERMANENT WASTEWATER SERVICES FROM THE CITY OF TAYLOR'S SANITARY SEWER SYSTEM OR OTHER ENTITY ARE AVAILABLE TO THE PROPERTY, AT WHICH TIME ALL LOTS AND DEVELOPMENT WITHIN THE BOUNDARY OF THIS PRELIMINARY PLAT SHALL BE CONNECTED TO THE CITY OF TAYLOR'S SANITARY SEWER SYSTEM OR COORDINATED WITH THE CITY OF TAYLOR. FOLLOWING SERVICE AVAILABILITY, DEVELOPER AND CITY AGREE TO NEGOTIATE A MUTUALLY AGREED UPON FINANCIAL STRUCTURE FOR THE CONSTRUCTION OF PERMANENT SANITARY SEWER SERVICE TO THE PROPERTY. A REFERENCE TO THE AGREEMENT AND THE DEADLINE FOR PERMANENT WASTEWATER SERVICE CONNECTION SHALL BE REQUIRED ON ALL FUTURE FINAL PLATS OR REPLATS WITHIN THE BOUNDARY OF THIS PRELIMINARY PLAT.
20. THE PROPOSED LANDSCAPE BUFFER SHOWN HEREON IS 50 FEET WIDE AND ADJACENT TO EXISTING AND PROPOSED RIGHTS-OF-WAY AS SHOWN HEREON. THE LANDSCAPING PLAN AND BUFFER LOCATION SHALL MEET THE REQUIREMENTS STATED IN THE _____ DEVELOPMENT CODES THAT ARE IN EFFECT FOR ANY DEVELOPMENT OF THE PLATTED AREA SHOWN HEREON. THE PORTION OF THE LANDSCAPE BUFFER WITHIN PHASE 2, BLOCK 2 AND ADJACENT TO FM 3349 SHALL ALSO BE UTILIZED AS A TEMPORARY ACCESS EASEMENT DURING THE CONSTRUCTION PHASE OF THE RESPECTIVE LOTS.
21. NO STRUCTURES SHALL BE ADDED TO THE AREA SHOWN HEREON AS 'DRAINAGE/OPEN SPACE RESERVE 4' WITHOUT PRIOR APPROVAL AND PERMITTING FROM THE CITY OF TAYLOR, TEXAS DEVELOPMENT SERVICES DEPARTMENT.
22. THE ADJOINING PROPERTY SOUTH OF RCR PARKWAY SHOWN HEREON (CALLED 75.001 ACRES) SHALL BE GRANTED AN ACCESS EASEMENT TO INSTALL A DRIVEWAY CONNECTION FOR INGRESS AND EGRESS TO RCR PARKWAY. THE DRIVEWAY LOCATION SHALL BE IN COMPLIANCE WITH THE CITY OF TAYLOR, TEXAS REGULATIONS.

WILLIAMSON COUNTY - ON-SITE SEWAGE FACILITIES

BASED UPON THE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE REQUIREMENTS OF EDWARDS AQUIFER REGULATIONS FOR WILLIAMSON COUNTY AND WILLIAMSON COUNTY ON-SITE SEWAGE FACILITY REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE WILLIAMSON COUNTY ENGINEER'S OFFICE AND WILLIAMSON COUNTY DISCLAIM ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS BLUE LINE (SURVEY) AND THE DOCUMENTS ASSOCIATED WITH IT.

_____ _____
J.TERRON EVERTSON, PE, DR, CFM DATE
COUNTY ENGINEER

ENGINEERS CERTIFICATION

THE INFORMATION SHOWN HEREON SUBSTANTIALLY COMPLIES WITH ALL ORDINANCES SPECIFIED IN THE CITY OF TAYLOR, TEXAS ORDINANCE NO. 2022-14, COMMERCIAL PLANNED DEVELOPMENT FOR THE _____ PLANNED DEVELOPMENT. ADDITIONALLY, AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY PANEL NUMBER _____, EFFECTIVE DATE _____, AND THAT EACH LOT CONFORMS TO THE CITY OF TAYLOR REGULATIONS. THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENT SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT _____, _____COUNTY, TEXAS, THIS _____ DAY OF _____, 2024.

PRELIMINARY
NAME
REGISTERED PROFESSIONAL
ENGINEER NO. _____, STATE OF TEXAS
TBPELS FIRM NO. _____

SURVEYORS CERTIFICATION

STATE OF TEXAS
COUNTY OF WILLIAMSON

I, _____, REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF TAYLOR, TEXAS

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT _____,_____ COUNTY, TEXAS, THIS _____ DAY OF _____, 2024.

PRELIMINARY

_____
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. _____, STATE OF TEXAS

COUNTY CLERK'S CERTIFICATION

COUNTY OF WILLIAMSON

I, _____, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IS WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE DAY OF _____, 2024, A.D., AT _____ O'CLOCK, _____M., AND DULY RECORDED THIS THE _____ DAY OF _____, 2024, A.D., AT _____ O'CLOCK _____M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO. _____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN _____, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

_____, CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: _____, DEPUTY

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
A SUBDIVISION OF XXX.XX ACRES IN THE CITY OF TAYLOR,
WILLIAMSON COUNTY, TEXAS
SUBMITTAL DATE: x/x/xxxx

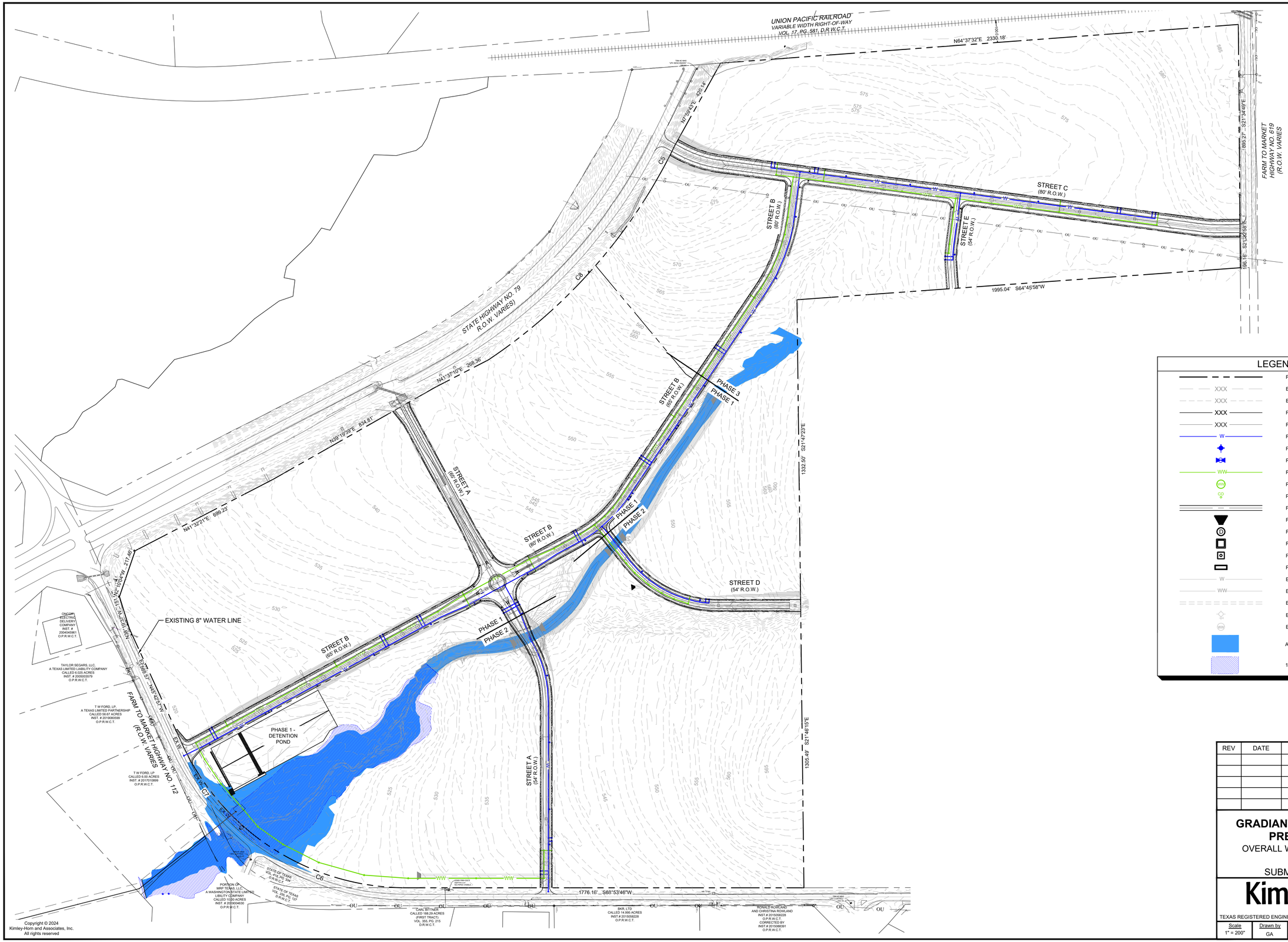
STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
08/02/2024

Kimley»Horn
TEXAS REGISTERED ENGINEERING FIRM F-928

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
-----	GA	JF	JUNE 2024	065001200	5 OF 5

City Project Number: PZ-2024-XXXX

DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY PLAN\SHEETS\C - PRELIMINARY PLAN NOTES.DWG PLOTTED BY ALVAREZ, GERRY 8/1/2024 4:02 PM LAST SAVED 8/1/2024 9:41 AM



LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT

OVERALL WATER AND WASTEWATER
UTILITY PLAN

SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

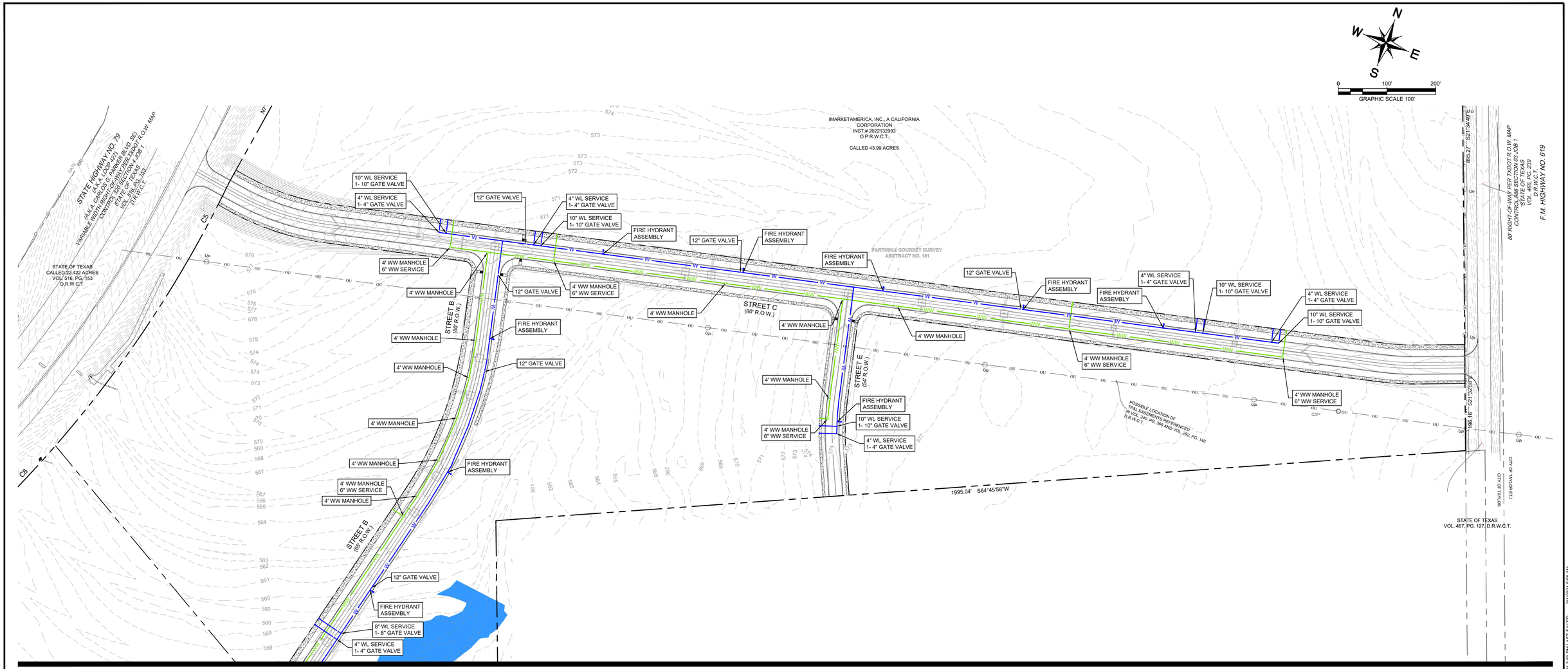
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Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 200'	GA	JF	MAY 2024	065001200	1 OF 4

City Project Number: PZ-2024-XXXX

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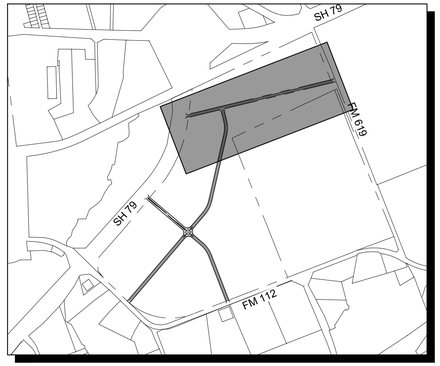
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MATCHLINE - SHEET 3

LEGEND

	PROPERTY LINE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
W	PROPOSED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER GATE VALVE
WW	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
W	EXISTING WATER LINE
WW	EXISTING WASTEWATER LINE
	EXISTING STORM DRAIN LINE
	EXISTING FIRE HYDRANT
	EXISTING WASTEWATER MANHOLE
	ATLAS 14 100 YR FLOODPLAIN
	100 YEAR FEMA FLOODPLAIN



KEYMAP
N.T.S

UTILITY NOTES:
1. ALL WATER MAINS SHALL BE 12" DIAMETER.
2. ALL WASTEWATER MAINS SHALL BE 8" DIAMETER.

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT

WATER AND WASTEWATER PLAN (1 OF 3)

SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

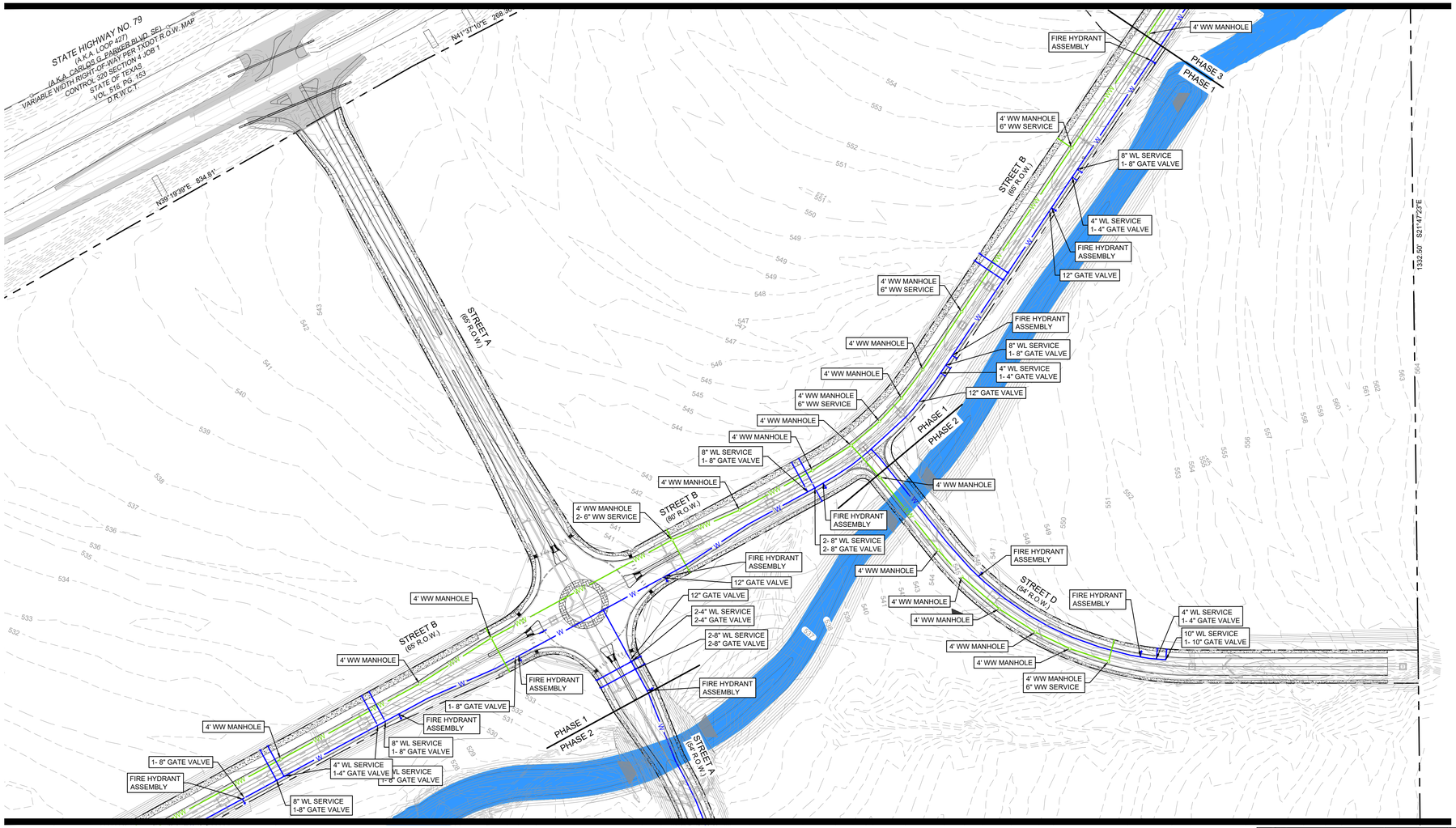
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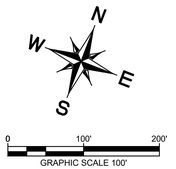
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1" = 100'	GA	JF	MAY 2024	065001200	2 OF 4

City Project Number: PZ-2024-XXXX

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DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY\EXHIBIT\SC - UTILITY EXHIBIT.DWG PLOTTED BY: ALVAREZ, GERRY 8/1/2024 3:39 PM LAST SAVED: 8/1/2024 8:56 AM





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

UTILITY NOTES:
1. ALL WATER MAINS SHALL BE 12" DIAMETER.
2. ALL WASTEWATER MAINS SHALL BE 8" DIAMETER.



KEYMAP
N.T.S

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT

WATER AND WASTEWATER PLAN (2 OF 3)

SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

TEXAS REGISTERED ENGINEERING FIRM F-928

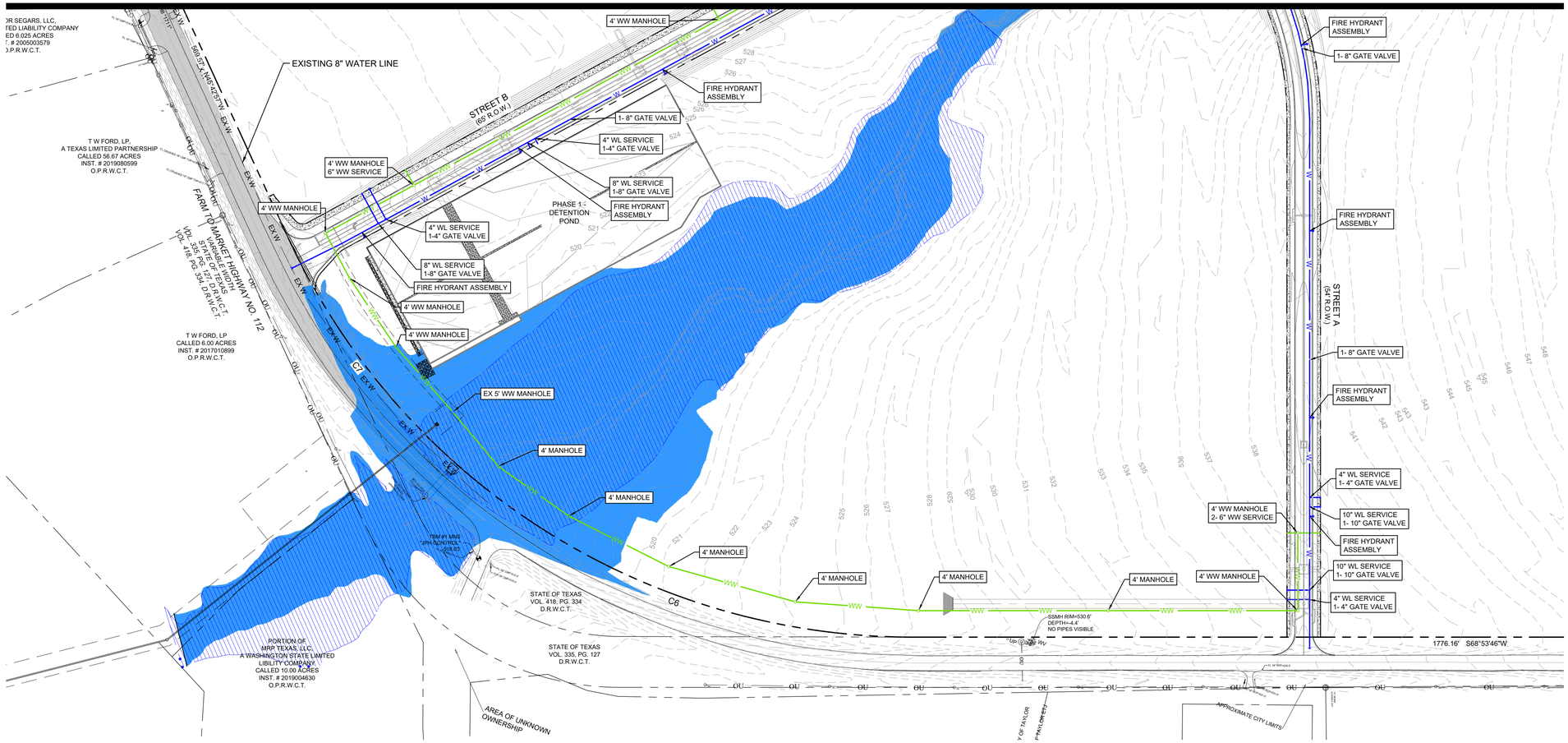
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1" = 100'	GA	JF	MAY 2024	065001200	3 OF 4

City Project Number: PZ-2024-XXXX

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DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY\EXHIBIT\SC - UTILITY EXHIBIT.DWG PLOTTED BY: ALVAREZ, GERRY 8/1/2024 3:59 PM LAST SAVED: 8/1/2024 8:56 AM

MATCHLINE - SHEET 3

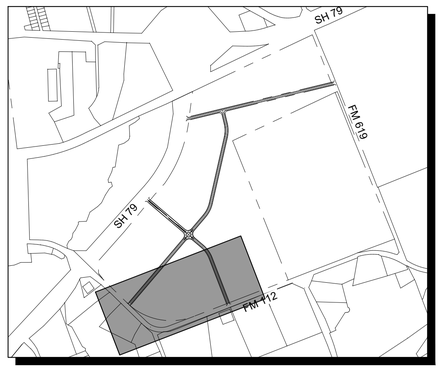




LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

UTILITY NOTES:
1. ALL WATER MAINS SHALL BE 12" DIAMETER.
2. ALL WASTEWATER MAINS SHALL BE 8" DIAMETER.



KEYMAP
N.T.S

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT

WATER AND WASTEWATER PLAN (3 OF 3)

SUBMITTAL DATE: x/x/xxxx

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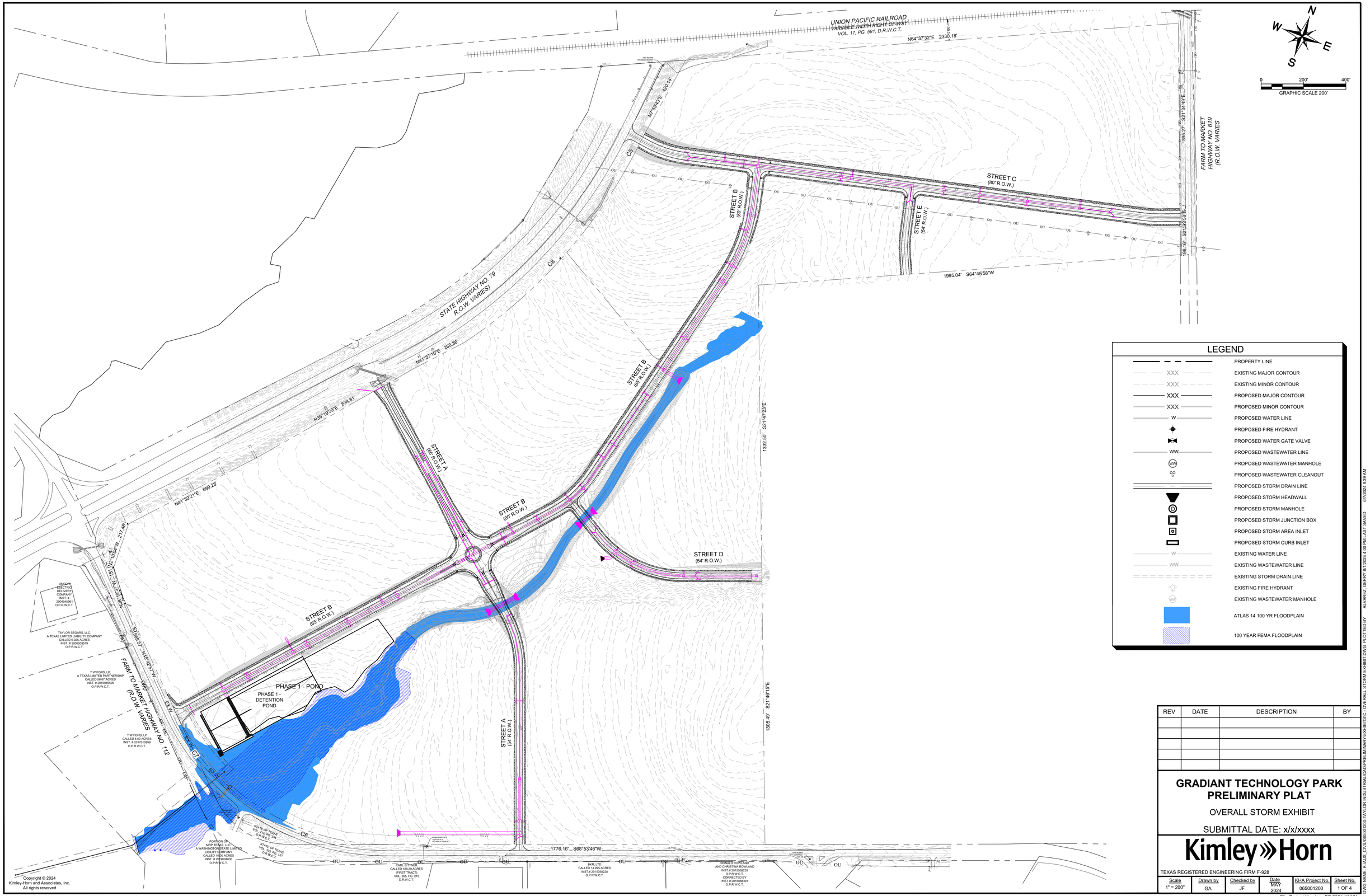
TEXAS REGISTERED ENGINEERING FIRM F-928

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 100'	GA	JF	MAY 2024	065001200	4 OF 4

City Project Number: PZ-2024-XXXX

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DWG NAME: K:\AUS_CIVIL\065001200-TAYLOR INDUSTRIAL\CAD\PRELIMINARY EXHIBITS\C - UTILITY EXHIBIT.DWG PLOTTED BY: ALVAREZ, GERRY 8/1/2024 3:59 PM LAST SAVED: 8/1/2024 6:56 AM



LEGEND

- PROPERTY LINE
- XXX — EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- XXX — PROPOSED MAJOR CONTOUR
- XXX — PROPOSED MINOR CONTOUR
- W — PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- WW — PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK PRELIMINARY PLAT

OVERALL STORM EXHIBIT

SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

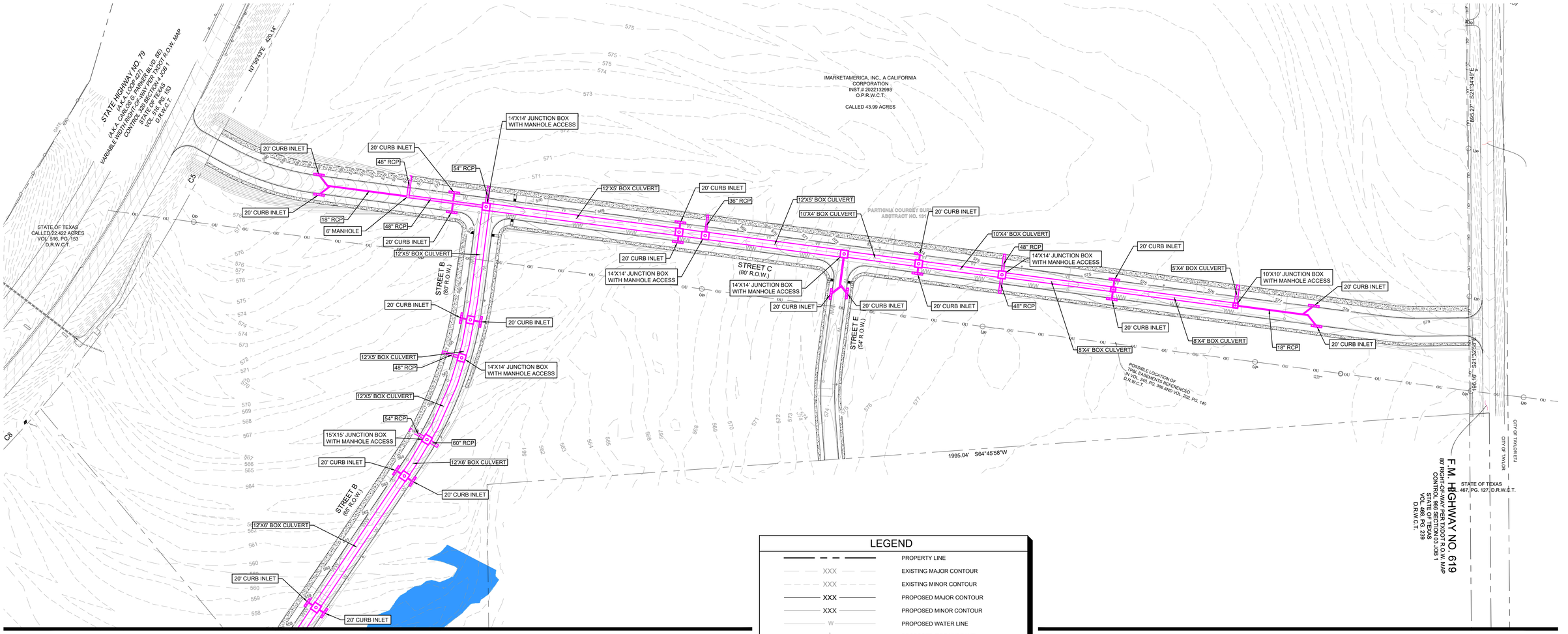
TEXAS REGISTERED ENGINEERING FIRM F-928

Scale	Drawn by	Checked by	Date	KHA Project No.	Sheet No.
1" = 200'	GA	JF	MAY 2024	065001200	1 OF 4

City Project Number: PZ-2024-XXXX

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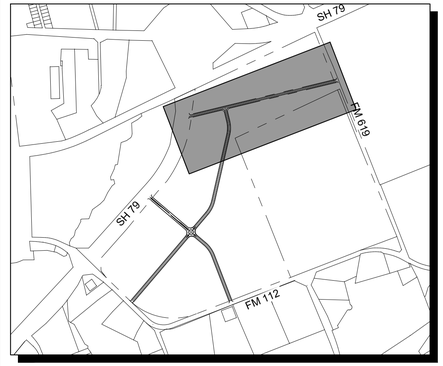
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MATCHLINE - SHEET 3

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- EXISTING WATER LINE
- EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN



KEYMAP
N.T.S

REV	DATE	DESCRIPTION	BY

GRADIANT TECHNOLOGY PARK
PRELIMINARY PLAT
STORM EXHIBIT (1 OF 3)

SUBMITTAL DATE: x/x/xxxx

Kimley»Horn

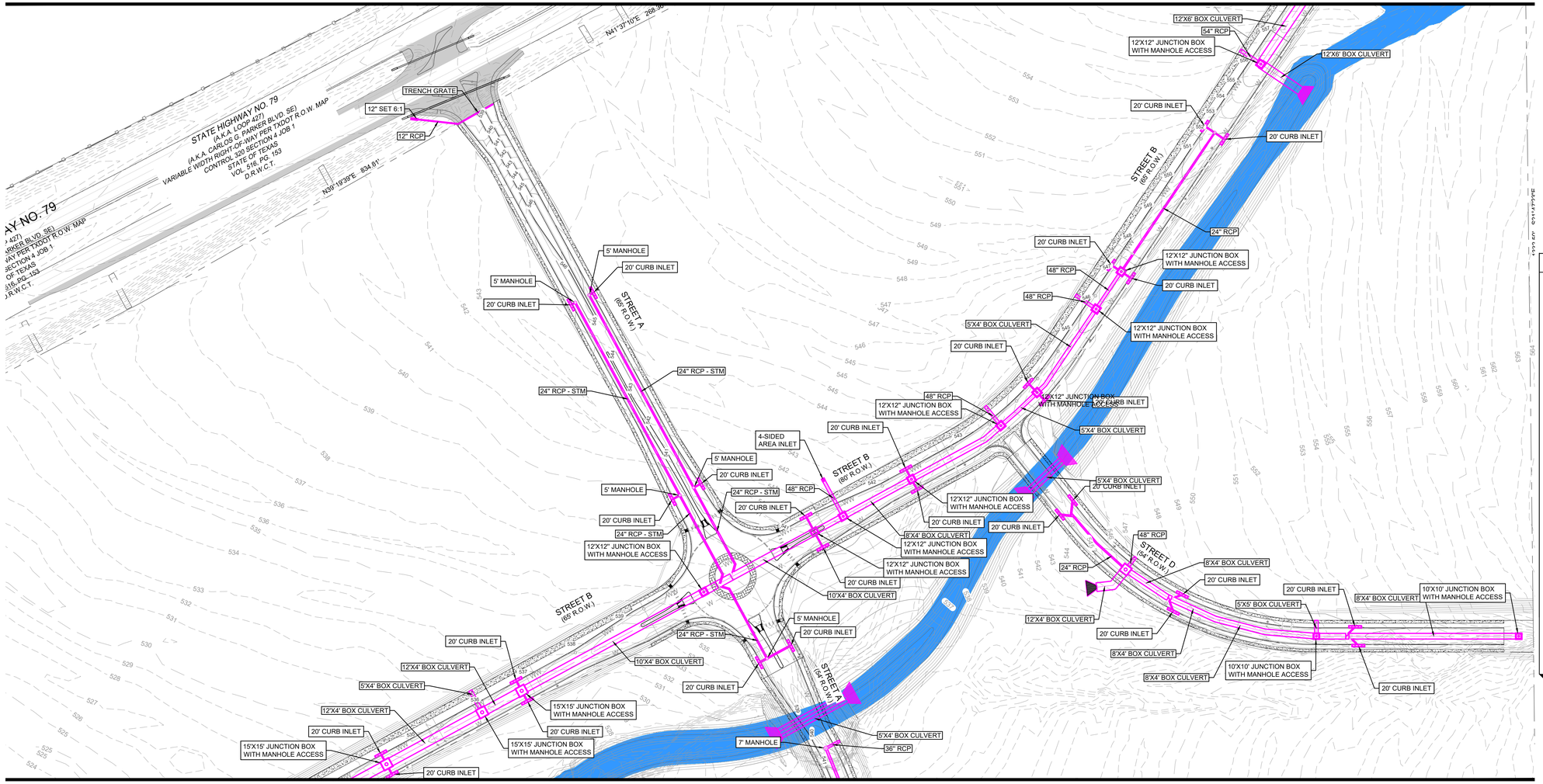
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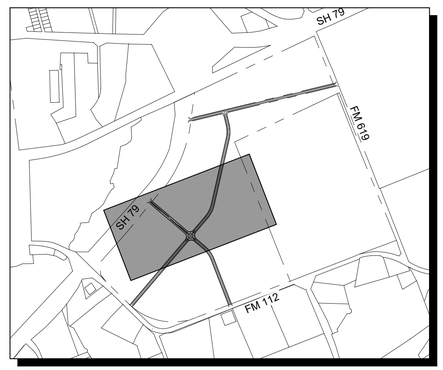


LEGEND

- PROPERTY LINE
- XXX EXISTING MAJOR CONTOUR
- XXX EXISTING MINOR CONTOUR
- XXX PROPOSED MAJOR CONTOUR
- XXX PROPOSED MINOR CONTOUR
- W PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
- WW PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- W EXISTING WATER LINE
- WW EXISTING WASTEWATER LINE
- EXISTING STORM DRAIN LINE
- EXISTING FIRE HYDRANT
- EXISTING WASTEWATER MANHOLE
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

N W E S

0 100' 200'
GRAPHIC SCALE 100'



KEYMAP
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REV	DATE	DESCRIPTION	BY

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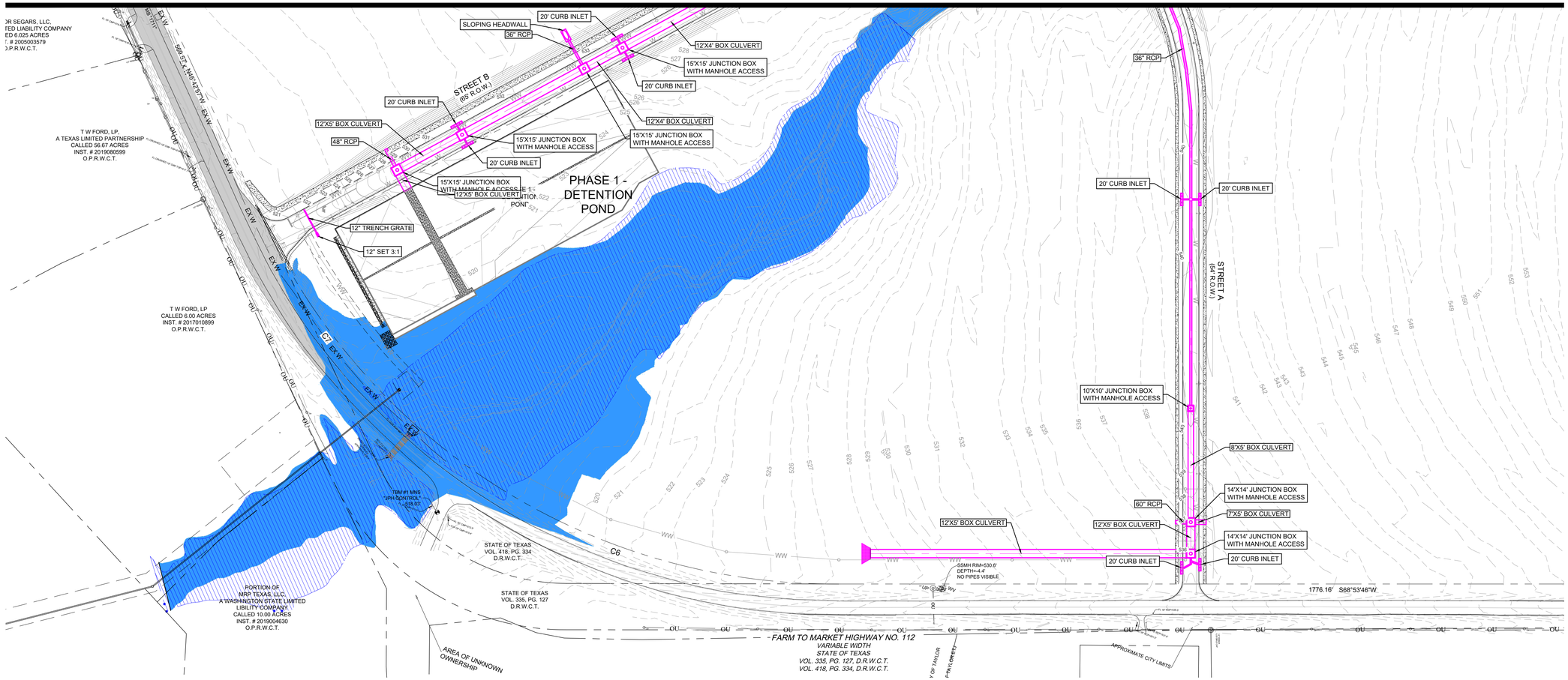
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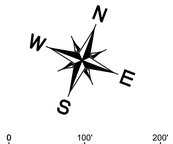
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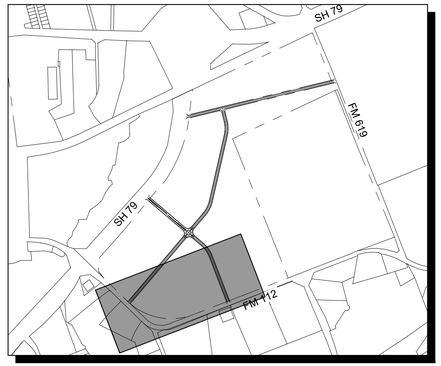
MATCHLINE - SHEET 3





LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER GATE VALVE
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- 100 YEAR FEMA FLOODPLAIN



KEYMAP
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Traffic Impact Analysis

iMarketAmerica TIA

Taylor, Texas

Prepared for:
iMarketAmerica, Inc.
810 Hesters Crossing, Ste. 205
Round Rock, Texas 78681
Contact Name: Charles Kim (Incheol)
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8.2.2024

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KH Project No. 065001200

August 2, 2024

iMarketAmerica TIA



AUGUST 2, 2024

Prepared By:

Kimley»Horn

EXECUTIVE SUMMARY

The proposed iMarketAmerica development is a site contained within US 79, FM 112, and FM 619 in Taylor, Texas which is a part of Williamson County. The site is anticipated to contain approximately 2000 square feet of manufacturing and warehouse space, as well as a gas stations. The project is assumed to be completed in the year 2027. This study determines traffic generation characteristics, analyzes potential traffic related impacts on the adjacent road network, and identifies mitigation measures.

The site will have access to the surrounding roadway network via 5 driveways, 2 on US 79, 2 on FM 112, and 1 on FM 619. The southernmost driveway on US 79, referred to as Driveway 4, is a full access driveway with US 79. The northernmost driveway on US 79, referred to as Driveway 5, is a right-in only driveway. The driveway on FM 619, referred to as Driveway 6, is a full access driveway. Finally, the eastmost driveway on FM 112, referred to as Driveway 7, and westmost driveway on FM 112, referred to as Driveway 8, are also both full access driveways. It should be noted that Driveways 4, 5, etc. continue the intersection numbering convention and a Driveway 1, 2, and 3 do not exist. Intersections to be analyzed were determined after discussions with review agency staff and are listed below.

1. US 79 & FM 112
2. US 79 & FM 619
3. FM 619 & FM 112
4. US 79 & Site Driveway 4
5. US 79 & Site Driveway 5
6. FM 619 & Site Driveway 6
7. FM 112 & Site Driveway 7
8. FM 112 & Site Driveway 8

Turning movement counts were obtained at the above existing intersections during weekday AM and PM peak demand periods on Thursday, May 16, 2024. Traffic operations were analyzed at the study intersections for Existing conditions, 2027 No Build, and 2027 Site Build-Out. Background traffic was projected to 2027 by applying a 3.50% annual growth factor that was determined by using historical traffic counts in the area. More detailed discussion of the turning movement counts methodology can be found in the Existing Traffic Volumes section.

Site traffic is distributed into and out of the site driveways and onto the street system based on the area street system characteristics, existing traffic patterns, and the location of driveway access to/from the site.

For the proposed land uses, projected site traffic is calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* 11th Edition. The development is anticipated to generate approximately 1,296 net new trips during the AM peak-hour and 1,405 net new trips during the PM peak-hour. Analysis of the 2027 Build-Out scenario showed some study intersections operate below acceptable LOS D or lower than the No Build LOS. To restore operating conditions to acceptable LOS, the following mitigations are recommended:

- US 79 & FM 112
  a. Install traffic signal
- FM 619 & US 79
  a. Install traffic signal
- US 79 & Site Driveway 4
  a. Install northbound right turn lane
  b. Install southbound left turn lane
- US 79 & Site Driveway 5
  a. Install northbound right turn lane
- FM 619 & Site Driveway 6
  a. Install southbound right turn lane
- FM 112 & Site Driveway 7
  a. Install westbound right turn lane
  b. Install eastbound left turn lane

In 2027 Build Out Conditions, the eastbound movement out of Driveway 4 operates at an LOS lower than D, however this driveway is within a quarter mile of intersection 1, where a signal is proposed. Driveway 4 is off of US 79, a TxDOT road, and the TxDOT Austin District requires signals spaced no closer than one half mile apart, therefore installing a traffic signal is not recommended for Driveway 4.

For the above mitigations, the developer pro-rata cost share is expected to be approximately $280,394. Additionally, the developer will be responsible for constructing each required improvement at Driveways 4, 5, 6, 7, and 8.

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INTRODUCTION AND BACKGROUND

PURPOSE

Kimley-Horn and Associates, Inc. was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the iMarketAmerica development. The proposed development is a site at the northeast corner of US 79 and FM 112 in Taylor, Texas. A site vicinity map is provided in **Figure 1**.

This study addresses potential traffic impacts of the proposed development on the surrounding roadway network and intersections. This traffic impact study was prepared based on criteria set forth by the review agency. The specific objectives of this study are to determine the future operational levels-of-service (LOS) at the various study intersections and to identify capacity related improvements.

GENERAL STUDY INFORMATION

This development will consist of 50 square feet of general light industrial space, 2000 square feet of manufacturing and warehousing space, 115 square feet for a research and development center, and a gas station. The scope of analysis for this study was prepared in consultation with the review agency staff and is provided in ***Appendix A***. The following scenarios were analyzed:

- 2024 Existing Conditions
- 2027 No Build
- 2027 Site Build-Out

The following intersections were studied in the scenarios listed above for both AM and PM peak hour periods:

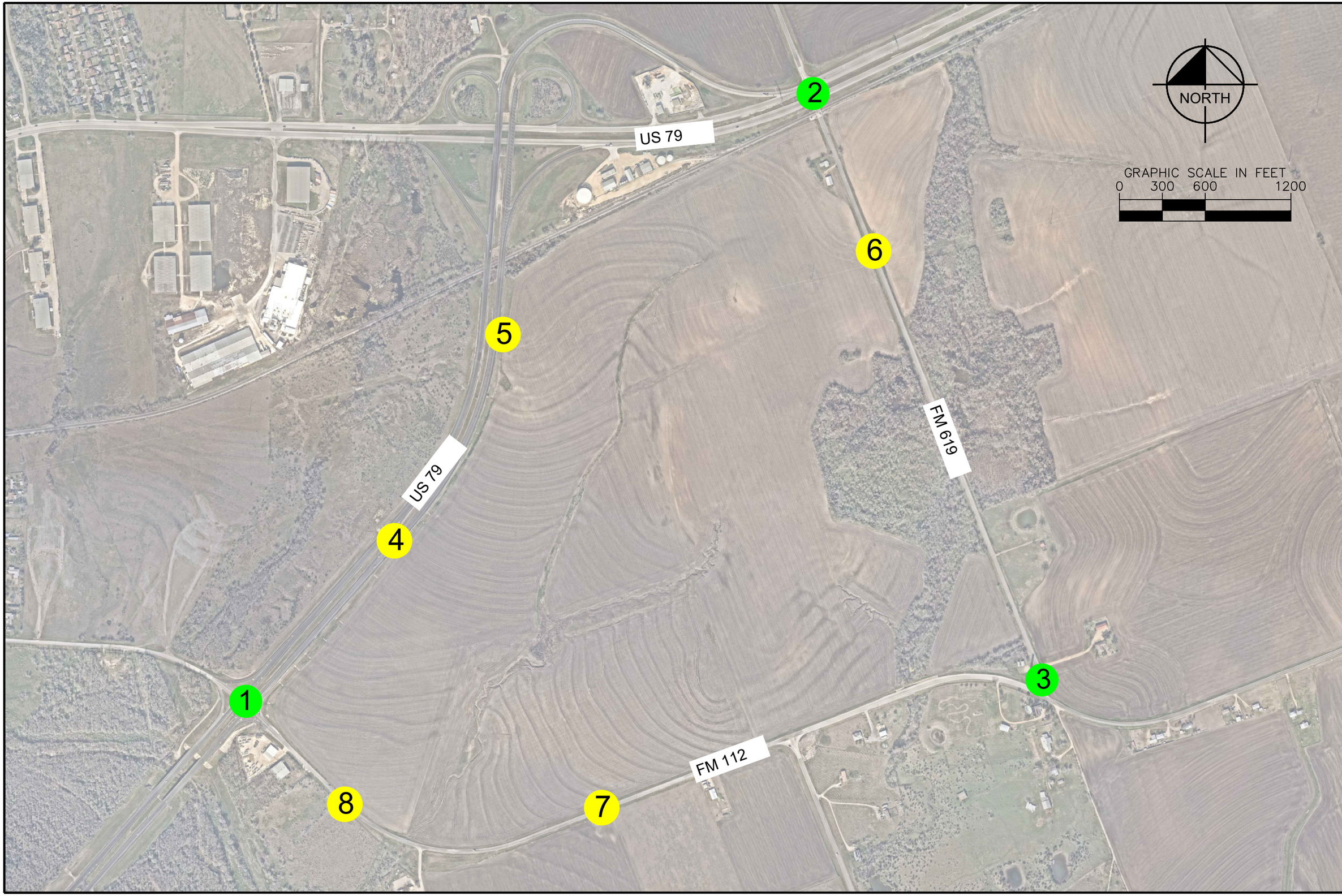
1. US 79 & FM 112
2. FM 619 & US 79
3. FM 619 & FM 112

Figure 1 shows the study intersections and proposed driveways. Driveway 4 is a full access driveway with US 79, while Driveway 5 is a right-in only driveway. The southernmost driveways, Driveway 7 and Driveway 8, are full access with FM 112.Driveway 6 is a full access driveway with FM 619. ***Figure 2*** shows the proposed site plan.

Land uses for the development are summarized in **Table 1.**

Table 1 – Proposed Land-Uses

Land Uses	Size	ITE Code
General Light Industrial	49.6 SF	110
Manufacturing	1348.44 SF	140
Warehousing	735.88 SF	150
Research and Development Center	115.2 SF	760
Gasoline Station w/ Convenience Market	16 SF	945



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AUSTIN, TX 78759

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TAYLOR, TEXAS

SITE VICINITY MAP AND STUDY INTERSECTIONS

FIGURE
1

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			일반주차	트레일러 (접안 미포함)	장변	단변
PHASE 1	Factory 1	126,000sf	262대	43대	600ft	210ft
	Factory 2	156,000sf	286대	0대	600ft	260ft
	Factory 3	156,000sf	278대	0대	600ft	260ft
	Warehouse 1	156,000sf	279대	0대	600ft	260ft
	Warehouse 2	114,400sf	256대	0대	260ft	440ft
	Support 1	12,800sf	24대	0대	160ft	80ft
	Support 2	12,800sf	22대	0대	160ft	80ft
PHASE 2	Factory 4	108,160sf	239대	27대	416ft	260ft
	Factory 5	616,640sf	596대	112대	820ft	752ft
	Warehouse 3	136,920sf	293대	34대	652ft	210ft
	R&D 1	57,600sf	218대	0대	240ft	240ft
	R&D 2	57,600sf	219대	0대	240ft	240ft
	Infra 1 (MEP)	14,400sf	66대	0대	120ft	120ft
	Support 3	24,000sf	29대	0대	200ft	120ft
PHASE 3	Factory 6	185,640sf	312대	62대	884ft	210ft
	Warehouse 4	104,160sf	209대	0대	210ft	496ft
	Warehouse 5	156,000sf	262대	0대	260ft	600ft
	Infra 2(MEP)	18,000sf	22대	0대	150ft	120ft
	Infra 3(MEP)	18,000sf	22대	0대	150ft	120ft
	Infra 4(MEP)	18,000sf	23대	0대	150ft	120ft
	Gas Station	17,250sf	84대	6대	–	–
총계		2,266,370sf	4,001대	284대	–	–

Taylor 212 Acre Site
Taylor, TX
April, 2024

Gansam

EXISTING OPERATING CONDITIONS

SURROUNDING TRANSPORTATION SYSTEM

The major study area roadways are described below.

US 79 – is currently a four (4) lane divided roadway, with two lanes in each direction of travel. It is classified by TxDOT as a Principal Arterial. It runs in the north-south and east-west direction around the site. There is a posted speed limit of 65 miles per hour (mph) in the project vicinity. There are currently no bicycle or pedestrian facilities in the project vicinity.

FM 112 – is currently a two (2) lane undivided roadway, with one lane in each direction of travel, It is classified by TxDOT as a Major Collector. It runs generally in the east-west direction near all site study intersections. There is a posted speed limit of 45 mph and currently no bicycle or pedestrian facilities in the project vicinity.

FM 619 – is currently a two (2) lane undivided roadway, with one lane in each direction of travel. It is classified by TxDOT as a Major Collector. It runs generally in the north-south direction. There is a posted speed limit of 45 mph and currently no bicycle or pedestrian facilities in the project vicinity.

EXISTING TRAFFIC VOLUMES

Weekday AM and PM peak period turning movement counts were collected at the following study intersections on Thursday May 16, 2024:

1. US 79 & FM 112
    - AM Peak Hour: 7:00 AM – 8:00 AM
    - PM Peak Hour: 4:30 PM – 5:30 PM
2. FM 619 & US 79
    - AM Peak Hour: 7:00 AM – 8:00 AM
    - PM Peak Hour: 4:30 PM – 5:30 PM
3. FM 619 & FM 112
    - AM Peak Hour: 7:15 AM – 8:15 AM
    - PM Peak Hour: 5:00 PM – 6:00 PM

Figure 3 shows the existing traffic volumes. The raw count sheets are provided in ***Appendix C***.



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2024 EXISTING TRAFFIC VOLUMES

FIGURE
3

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NO BUILD (FORECASTED) OPERATING CONDITIONS

To obtain 2027 background traffic projections, historic counts near the site were compared to find expected growth trends within the study area. Based on data from TxDOT's Traffic Count Database System (TCDS), traffic volumes were assumed to increase at a growth rate of 3.50% per year. ***Table 2*** shows the location of historic counts from TCDS used to calculate the assumed growth rate. The TCDS counts are included in ***Appendix B.*** The equation used for determining the average annual growth is provided below.

$$Growth\ Rate = \frac{Total\ Trips_{Current\ Year}}{Total\ Trips_{Previous\ Year}}^{\frac{1}{Current\ Year - Previous\ Year}} - 1$$

Table 2 – Growth Rate Calculation

Year	FM 112	US 79 N/S	US 79 E/W
2022	2330	7842	9007
2019	2,307	6,750	7,753
Growth	0.33%	5.13%	5.12%
Average		3.53%	
Assumed	3.50%		

NO BUILD (FORECASTED) VOLUMES

The resulting 2027 No Build weekday AM and PM peak hour traffic volumes are shown in ***Figure 4.***



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NO BUILD TRAFFIC VOLUMES

FIGURE
4

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TRIP GENERATION AND DISTRIBUTION

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. The acknowledged source for trip generation rates is the 11th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. The trips indicated are one-way trips or trip ends, where one vehicle entering and exiting the site is counted as two trips (one inbound trip and one outbound trip).

Internal capture is the tendency for customers or residents to visit several parts of a mixed-use development in one trip but be counted twice in the trip generation since the formula assumes the land uses are isolated. For this project, there were no internal capture reductions for all land uses.

Pass-by trips are existing vehicles on the adjacent roadways that choose to visit the new site, and then return to their original path. Pass-by trips do not reduce the driveway volumes projected for the site but are deducted from the through traffic volume and routed as right-in / right-out or left-in / left-out movements at driveways on the area roadways. The methodology for determining pass-by followed the ITE 11th Edition *Trip Generation Manual*. This report is the acknowledged source to calculate pass-by trips for different land uses. For this project, there were pass-by reductions for the gas station land use.

Table 3 summarizes the resulting Daily and Weekday AM and PM peak hour trip generation for 2027. Details of site trip generation are provided in ***Appendix C***.

Table 3 – 2027 Site Trip Generation

ITE Land Use Code	Land Use	AM Peak			PM Peak		
		Total	In	Out	Total	In	Out
110	General Light Industrial	37	33	4	32	4	28
140	Manufacturing	917	697	220	998	309	689
150	Warehousing	125	96	29	132	37	95
760	Research and Development Center	119	98	21	113	18	95
945	Gasoline Station w/ Convenience Market	257	129	128	295	148	147
Total External Trips		**1,455**	**1,053**	**402**	**1,570**	**516**	**1,054**
Pass-By Reduction		159	80	79	165	83	82
Total External Trips		**1,296**	**973**	**323**	**1,405**	**433**	**972**

TRIP DISTRIBUTION AND ASSIGNMENT

The trip distribution for this site is based on existing traffic data, using cordon line calculations. The cordon line methodology consists of delineating an imaginary line around the study area and calculating the number of vehicles entering and exiting the study area through that line. This calculation provides a picture of how many vehicles approach or leave the study area from each direction and roadway connection. The percentage of vehicles approaching or departing the study area on each roadway connection forms the basis for the overall distribution of traffic in the study area. The percentages determined from the cordon line calculations should also reflect expected traffic patterns.

Table 4 displays the directional distribution percentages calculated using the Cordon count methodology for the proposed development.

Table 4 – Cordon Count Distribution

Intersection	Direction	Cordon Counts		Distribution			Percent to Development
		AM	PM	AM	PM	Average	
1	To/From S on US 79	884	957	23%	23%	**23%**	40%
1	To/From W on FM 112	91	107	2%	3%	**2%**	5%
2	To/From N on FM 619	135	158	3%	4%	**4%**	5%
2	To/From E on US 79	1269	1323	33%	32%	**33%**	15%
2	To/From W on US 79	1224	1277	32%	31%	**31%**	30%
3	To/From E on FM 112	132	138	3%	3%	**3%**	5%
3	To/From W on FM 112	135	140	3%	3%	**3%**	0%
		3870	**4100**	**100%**	**100%**	**100%**	**100%**

The cordon counts projected that site traffic would come from many sources, including to/from south on US 79, to/from west on US 79, and to/from north on FM 619. Using engineering judgment, the cordon count was analyzed to determine if it would reflect the expected trip destination and sources. The 33% average distribution to /from east on US 79 was decreased to 15%, while to/from south on US 79 was increase to 40% to account for the lack of the development northeast of the site. It was assumed that the distribution of traffic from west of the site would need to be increased, since that is where the majority of residential and commercial development is.

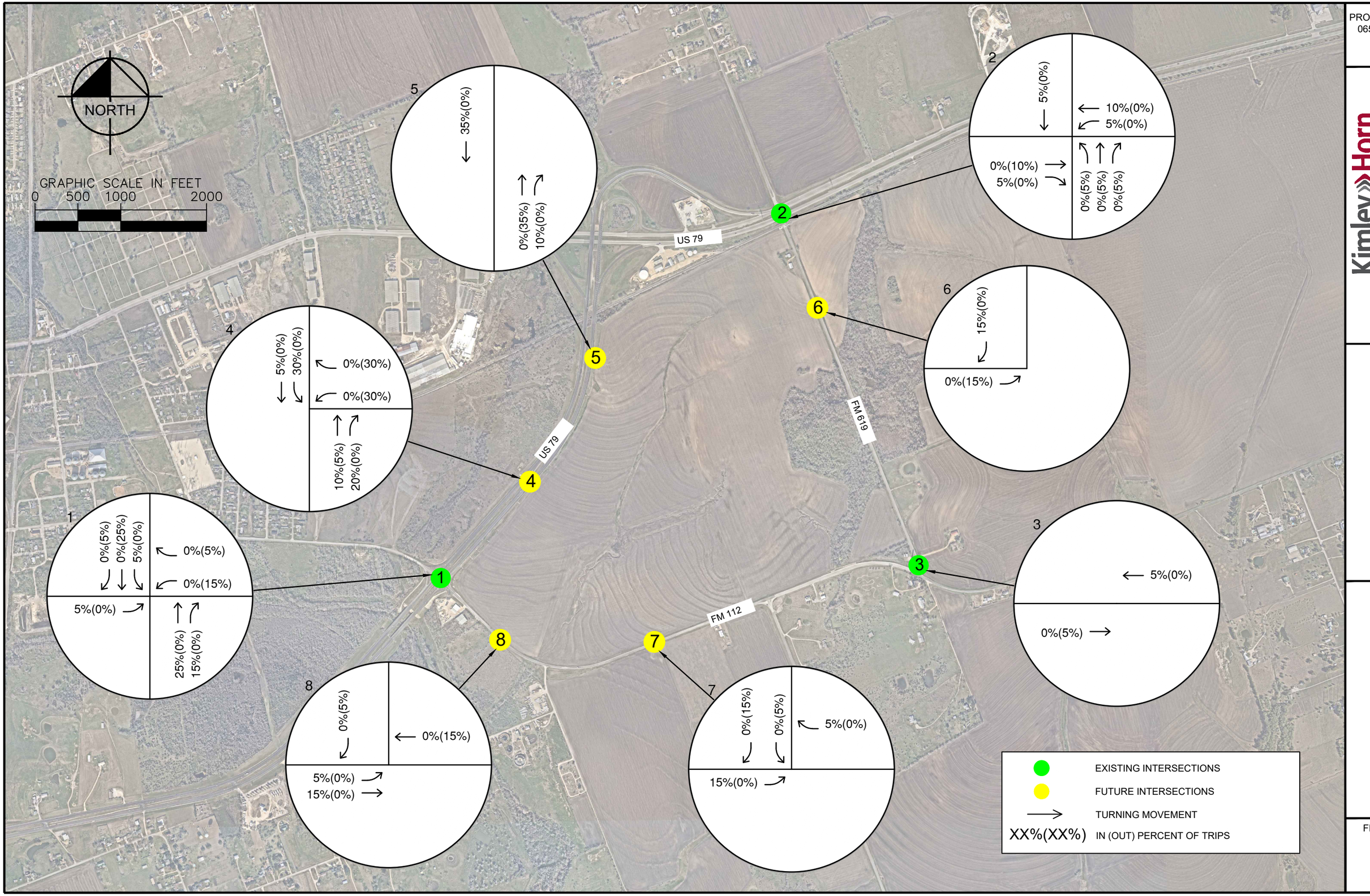
After considering the overall distribution of the site traffic, assumptions can be made for a development about how vehicles will choose the most appropriate exit point. Some factors that are included in distributing site traffic between the proposed driveways include the following:

- The accessibility of the driveway to the primary travel directions,
- The preference of drivers to use the first available driveway when entering and exiting the site
- The preference of drivers to make right-turns versus left-turns, and
- The choice of a route to provide the most opportunity to make preferred maneuvers.

Figure 5 shows the resulting weekday AM and PM peak hour site trip assignment at all study intersections for the site development. ***Figure 6*** shows the total site traffic after being calculated using the percentages for each trip assignment group in ***Figure 5***.

ASSUMPTIONS

- Cordon line calculations were performed on existing count data for all study intersections.
- The traffic generated by the site was assigned to the future roadway network using the appropriate trip distribution percentages for the AM and PM peak hours.
- Site trips are added to the forecasted year 2027 background trips to determine the total 2027 traffic volumes.
- Peak Hour Factors (PHF) and HV% from existing counts were used for every existing intersection.
- *Synchro 12*™ default PHF (0.92) and HV% (2%) values were used for proposed intersections.



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IMARKETAMERICA TIA
TAYLOR, TEXAS

SITE TRIP ASSINGMENT

FIGURE
5

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000

US 79

FM 619

FM 112

1
16(49) 81(243) 49(22)
16(49)
48(146)
49(22)
243(108) 146(65)

2
49(22)
97(43) 49(22)
32(97) 49(22)
16(49) 16(49) 16(49)

3
49(22)
16(49)

4
49(22) 292(130)
97(292) 97(292)
113(92) 195(87)

5
341(152)
113(340) 97(43)

6
146(65)
48(146)

7
48(146) 16(49)
49(22)
146(65)

8
16(49)
48(146)
49(22) 146(65)

EXISTING INTERSECTIONS
FUTURE INTERSECTIONS
TURNING MOVEMENT
XX(XX) AM (PM) TURNING MOVEMENT VOLUMES

PROJECT NO.
065001200

Kimley»Horn
TBPE REGISTERED FIRM NO. F-928
10814 JOLLYVILLE RD, BUILDING IV, SUITE 200
AUSTIN, TX 78759
Phone: (512) 418-4514
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IMARKETAMERICA TIA
TAYLOR, TEXAS

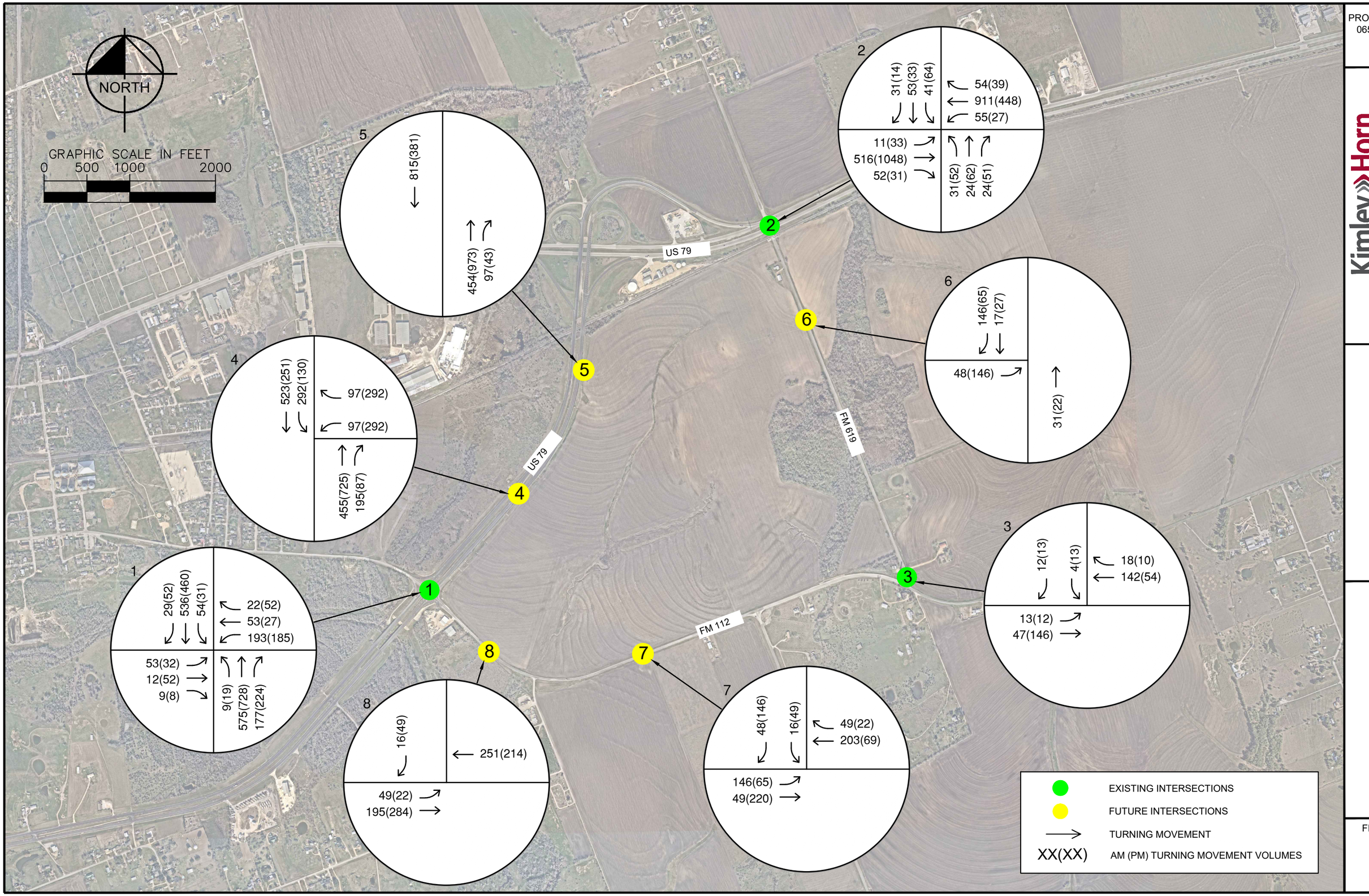
TOTAL SITE TRAFFIC VOLUMES

FIGURE
6

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BUILD (SITE + FORECASTED) OPERATING CONDITIONS

Site traffic was added to the No Build volumes to represent estimated total buildout (growth plus site-generated) traffic conditions in 2027 after the completion of the proposed development. The resulting 2027 total weekday AM and PM peak hour traffic volumes are shown in ***Figure 7***.



PROJECT NO.
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TAYLOR, TEXAS

BUILD OUT TRAFFIC VOLUMES

FIGURE
7

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

BUILD WITH MITIGATIONS OPERATING CONDITIONS

A mitigation plan must be developed for every development phase considered in a Traffic Impact Analysis. Mitigation plans are designed to show the recommended improvements to bring intersection operations back to Level of Service (LOS) D or to at least the operating conditions of the No Build scenario.

To accommodate traffic from the proposed development, the following mitigations are proposed:

- US 79 & FM 112
  a. Install traffic signal
- FM 619 & US 79
  a. Install traffic signal
- US 79 & Site Driveway 4
  a. Install northbound right turn lane
  b. Install southbound left turn lane
- US 79 & Site Driveway 5
  a. Install northbound right turn lane
- FM 619 & Site Driveway 6
  a. Install southbound right turn lane
- FM 112 & Site Driveway 7
  a. Install westbound right turn lane
  b. Install eastbound left turn lane

The above intersection mitigations bring most movements to an acceptable LOS or reduce delay below No Build conditions where feasible

In 2027 Build Out Conditions, the eastbound movement out of Driveway 4 operates at an LOS lower than D, however this driveway is within a quarter mile of intersection 1, where a signal is proposed. Driveway 4 is off of US 79, a TxDOT road, and the TxDOT Austin District requires signals spaced no closer than one half mile apart, therefore installing a traffic signal is not recommended for Driveway 4.

INTERSECTION CAPACITY ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in 2027 at the study intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual.*

ANALYSIS METHODOLOGY

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from "A" (very little delay) to "F" (long delays and congestion). **Table 5** shows the definition of level of service for signalized and unsignalized intersections. LOS D is the threshold for acceptable operations for signalized intersections.

Table 5 – Level of Service

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay for signalized intersections. For the unsignalized analysis, the level of service (LOS) is defined for each controlled approach.

Where possible, HCM 7th analysis is used. For intersections not possible to analyze using HCM 7th, HCM 2000 is used.

ANALYSIS RESULTS & MITIGATIONS

2024 EXISTING TRAFFIC OPERATIONS

Existing conditions measures of effectiveness (MOEs) are summarized in **Table 6** and **Table 7**.

2027 NO BUILD TRAFFIC OPERATIONS

The 2027 No Build condition represents traffic operations if this project is never built. The 2027 No Build conditions also assume traffic growth using the previously discussed growth factor and background projects have been completed.

No Build conditions MOEs are summarized in **Table 6** and **Table 7**.

2027 BUILD-OUT TRAFFIC OPERATIONS

Site trips from the proposed project are added to the No Build scenario for the Build-Out scenario.

Build-Out conditions MOEs are summarized in **Table 6** and **Table 7**.

2027 BUILD-OUT WITH MITIGATIONS TRAFFIC OPERATIONS

Intersection operations were improved to the acceptable LOS by adding the mitigations identified in the previous section.

2027 Build-Out with Mitigations conditions MOEs are summarized in **Table 6** and **Table 7**.

Table 6: AM LOS Results

INTERSECTION	MOVEMENT	2024 Existing AM					2027 No Build AM					2027 Build Out AM					2027 Mitigated AM				
		95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS
1: US 79 & FM 112	EBL	10	-	0.13	16.6	C	15	-	0.16	18.9	C	0	-	0.01	5.8	A	40	-	0.32	14.8	B
	EBT	10		0.13	16.6	C	15		0.16	18.9	C	0		0.01	5.8	A	40		0.32	14.8	B
	EBR	10	-	0.13	16.6	C	15	-	0.16	18.9	C	0	-	0.01	5.8	A	40	-	0.32	14.8	B
	WBL	25	-	0.27	20.5	C	38	-	0.34	24.8	C	215	-	1.19	215.2	F	80	-	0.75	28.3	C
	WBT	25		0.27	20.5	C	38		0.34	24.8	C	215		1.19	215.2	F	80		0.75	28.3	C
	WBR	25	-	0.27	20.5	C	38	-	0.34	24.8	C	215	-	1.19	215.2	F	80	-	0.75	28.3	C
	NBL	3	155	0.02	8.3	A	3	155	0.02	8.4	A	3	155	0.02	8.7	A	12	155	0.07	23.4	C
	NBT	0		-	-	-	0		-	-	-	0				-	130		0.57	16.9	B
	NBR	0	165	-	-	-	0	165	-	-	-	0	165			-	27	165	0.32	4.1	A
	SBL	0	190	0.01	8.1	A	0	190	0.01	8.2	A	13	190	0.15	9.6	A	38	190	0.62	40.9	D
	SBT	0		-	-	-	0		-	-	-	0				-	121		0.37	10.7	B
	SBR	0	340	0.00	0.0	A	0	340	0.00	0.0	A	0	340	0.00	0.0	A	0	340	0.09	1.7	A
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	0.67	-	F
2: FM 619 & US 79	EBL	3	730	0.04	13.3	B	3	730	0.04	14.3	B	3	730	0.04	14.4	B	15	730	0.05	19.8	B
	EBT	0		-	-	-	0		-	-	-	0				-	103		0.43	12.2	B
	EBR	0	965	-	-	-	0	965	-	-	-	0	965			-	3	965	0.12	1.9	A
	WBL	0	890	0.01	8.4	A	0	890	0.01	8.5	A	8	890	0.09	9.1	A	42	890	0.30	22.0	C
	WBT	0		-	-	-	0		-	-	-	0				-	121		0.43	8.7	A
	WBR	0	840	-	-	-	0	840	-	-	-	0	840			-	5	840	0.08	1.3	A
	NBL	20	-	0.21	22.4	C	28	-	0.29	27.8	D	0	-			-	54	-	0.40	14.2	B
	NBT	20		0.21	22.4	C	28		0.29	27.8	D	0				-	54		0.40	14.2	B
	NBR	20	-	0.21	22.4	C	28	-	0.29	27.8	D	0	-			-	54	-	0.40	14.2	B
	SBL	70	-	0.55	44.4	E	113	-	0.74	75.8	F	443	-	2.33	717.3	F	52	-	0.44	15.1	B
	SBT	70		0.55	44.4	E	113		0.74	75.8	F	443		2.33	717.3	F	52		0.44	15.1	B
	SBR	70	-	0.55	44.4	E	113	-	0.74	75.8	F	443	-	2.33	717.3	F	52	-	0.44	15.1	B
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	0.52	-	F
3: FM 112 & FM 619	EBL	3	-	0.02	7.5	A	3	-	0.02	7.5	A	0	-	0.01	7.7	A	0	-	0.01	7.7	A
	EBT	0	-	-	0.0	A	0	-	-	0.0	A	0	-		0.0	A	0	-	-	0.0	A
	WBT	0	-	-	-	-	0	-	-	-	-	0	-			-	0	-	-	-	-
	WBR	0	-	-	-	-	0	-	-	-	-	0	-			-	0	-	-	-	-
	SBL	3	-	0.04	9.3	A	3	-	0.04	9.4	A	3	-	0.03	9.8	A	3	-	0.03	9.8	A
	SBT	3	-	0.04	9.3	A	3	-	0.04	9.4	A	3	-	0.03	9.8	A	3	-	0.03	9.8	A
	SBR	3	-	0.04	9.3	A	3	-	0.04	9.4	A	3	-	0.03	9.8	A	3	-	0.03	9.8	A
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig
4: US 79 & Driveway 4	WBL	-	-	-	-	-	-	-	-	-	-	460	-	2.15	621.4	F	340	-	1.42	277.9	F
	WBR	-	-	-	-	-	-	-	-	-	-	460	-	2.15	621.4	F	340	-	1.42	277.9	F
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	NBR	-	-	-	-	-	-	-	-	-	-	0	530			-	0	530			-
	SBL	-	-	-	-	-	-	-	-	-	-	40	600	0.36	11.3	B	40	600	0.36	11.3	B
	SBT	-	-	-	-	-	-	-	-	-	-	0		0.00	1.4	A	0		0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F

Table 6: AM LOS Results

INTERSECTION	MOVEMENT	2024 Existing AM					2027 No Build AM					2027 Build Out AM					2027 Mitigated AM				
		95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS
5: US 79 & Driveway 5	WBL	-	-	-	-	-	-	-	-	-	-	10	-	0.12	10.9	B	10	-	0.11	10.0	A
	WBR	-	-	-	-	-	-	-	-	-	-	10	-	0.12	10.9	B	10	-	0.11	10.0	A
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	NBR	-	-	-	-	-	-	-	-	-	-	0	530			-	0	530			-
	SBL	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	SBT	-	-	-	-	-	-	-	-	-	-	0		0.00	0.0	A	0		0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
6: FM 619 & Driveway 6	EBL	-	-	-	-	-	-	-	-	-	-	5	-	0.06	9.4	A	5	-	0.06	9.0	A
	EBR	-	-	-	-	-	-	-	-	-	-	5	-	0.06	9.4	A	5	-	0.06	9.0	A
	NBL	-	-	-	-	-	-	-	-	-	-	0	-		0.0	A	0	-		0.0	A
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	SBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	SBR	-	-	-	-	-	-	-	-	-	-	0	530	0.00	0.0	A	0	530	0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
7: FM 112 & Driveway 7	EBL	-	-	-	-	-	-	-	-	-	-	10	340	0.12	8.2	A	10	340	0.12	8.2	A
	EBT	-	-	-	-	-	-	-	-	-	-	0			0.0	A	0				-
	WBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	WBR	-	-	-	-	-	-	-	-	-	-	0	270			-	0	270			-
	SBL	-	-	-	-	-	-	-	-	-	-	10	-	0.11	11.4	B	10	-	0.11	11.1	B
	SBR	-	-	-	-	-	-	-	-	-	-	10	-	0.11	11.4	B	10	-	0.11	11.1	B
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
8: FM 112 & Driveway 8	EBL	-	-	-	-	-	-	-	-	-	-	3	-	0.04	7.9	A	3	-	0.04	7.9	A
	EBT	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	WBT	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	WBR	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	SBL	-	-	-	-	-	-	-	-	-	-	3	-	0.02	9.8	A	3	-	0.02	9.8	A
	SBR	-	-	-	-	-	-	-	-	-	-	3	-	0.02	9.8	A	3	-	0.02	9.8	A

Table 7: PM LOS Results

INTERSECTION	MOVEMENT	2024 Existing PM					2027 No Build PM					2027 Build Out PM					2027 Mitigated PM				
		95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS
1: US 79 & FM 112	EBL	-	-	0.31	22.9	C	-	-	0.80	67.9	F	175	-	1.13	221.1	F	47	-	0.33	14.9	B
	EBT	-		0.31	22.9	C	-		0.80	67.9	F	175		1.13	221.1	F	47		0.33	14.9	B
	EBR	-	-	0.31	22.9	C	-	-	0.80	67.9	F	175	-	1.13	221.1	F	47	-	0.33	14.9	B
	WBL	-	-	0.24	27.3	D	-	-	0.31	39.2	E	105	-	0.69	61.4	F	70	-	0.75	27.9	C
	WBT	-		0.24	27.3	D	-		0.31	39.2	E	105		0.69	61.4	F	70		0.75	27.9	C
	WBR	-	-	0.24	27.3	D	-	-	0.31	39.2	E	105	-	0.69	61.4	F	70	-	0.75	27.9	C
	NBL	-	155	0.02	7.7	A	-	155	0.04	7.8	A	3	155	0.03	8.5	A	19	155	0.19	25.6	C
	NBT	-		-	-	-	-		-	-	-	0				-	168		0.59	15.6	B
	NBR	-	165	-	-	-	-	165	-	-	-	0	165			-	29	165	0.34	3.6	A
	SBL	-	190	0.02	8.9	A	-	190	0.02	9.4	A	8	190	0.10	10.0	A	25	190	0.41	30.9	C
	SBT	-		-	-	-	-		-	-	-	0				-	101		0.32	11.6	B
	SBR	-	340	0.00	0.0	A	-	340	0.00	0.0	A	0	340	0.00	0.0	A	0	340	0.17	3.8	A
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	0.69	-	F
2: FM 619 & US 79	EBL	5	730	0.05	10.0	A	5	730	0.08	10.6	B	5	730	0.06	10.6	B	35	730	0.19	25.9	C
	EBT	0		-	-	-	0		-	-	-	0				-	275		0.73	16.9	B
	EBR	0	965	-	-	-	0	965	-	-	-	0	965			-	0	965	0.06	0.3	A
	WBL	0	890	0.01	9.9	A	3	890	0.02	10.6	B	5	890	0.07	11.4	B	28	890	0.19	25.9	C
	WBT	0		-	-	-	0		-	-	-	0				-	64		0.22	10.2	B
	WBR	0	840	-	-	-	0	840	-	-	-	0	840			-	0	840	0.06	0.6	A
	NBL	18	-	0.19	34.2	D	30	-	0.32	54.2	F	910	-	5.64	2,230.5	F	126	-	0.68	22.8	C
	NBT	18		0.19	34.2	D	30		0.32	54.2	F	910		5.64	2,230.5	F	126		0.68	22.8	C
	NBR	18	-	0.19	34.2	D	30	-	0.32	54.2	F	910	-	5.64	2,230.5	F	126	-	0.68	22.8	C
	SBL	75	-	0.56	41.0	E	218	-	1.14	187.6	F	0	-	0.00	0.0	A	57	-	0.42	17.8	B
	SBT	75		0.56	41.0	E	218		1.14	187.6	F	0		0.00	0.0	A	57		0.42	17.8	B
	SBR	75	-	0.56	41.0	E	218	-	1.14	187.6	F	0	-	0.00	0.0	A	57	-	0.42	17.8	B
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	0.74	-	F
3: FM 112 & FM 619	EBL	0	-	0.01	7.3	A	0	-	0.02	7.3	A	0	-	0.01	7.4	A	0	-	0.01	7.4	A
	EBT	0	-	-	0.0	A	0	-	-	0.0	A	0	-		0.0	A	0	-	-	0.0	A
	WBT	0	-	-	-	-	0	-	-	-	-	0	-			-	0	-	-	-	-
	WBR	0	-	-	-	-	0	-	-	-	-	0	-			-	0	-	-	-	-
	SBL	3	-	0.04	9.3	A	8	-	0.08	9.9	A	5	-	0.05	9.8	A	5	-	0.05	9.8	A
	SBT	3	-	0.04	9.3	A	8	-	0.08	9.9	A	5	-	0.05	9.8	A	5	-	0.05	9.8	A
	SBR	3	-	0.04	9.3	A	8	-	0.08	9.9	A	5	-	0.05	9.8	A	5	-	0.05	9.8	A
	Intersection	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig	-	-	N/A - Unsig	N/A - Unsig	N/A - Unsig
4: US 79 & Driveway 4	WBL	-	-	-	-	-	-	-	-	-	-	1,435	-	3.04	964.0	F	1,370	-	2.75	831.0	F
	WBR	-	-	-	-	-	-	-	-	-	-	1,435	-	3.04	964.0	F	1,370	-	2.75	831.0	F
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	NBR	-	-	-	-	-	-	-	-	-	-	0	530			-	0	530			-
	SBL	-	-	-	-	-	-	-	-	-	-	18	600	0.19	10.8	B	18	600	0.19	10.8	B
	SBT	-	-	-	-	-	-	-	-	-	-	0		0.00	0.6	A	0		0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F

Table 7: PM LOS Results

INTERSECTION	MOVEMENT	2024 Existing PM					2027 No Build PM					2027 Build Out PM					2027 Mitigated PM				
		95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS	95% QUEUE (ft)	TURN BAY LENGTH (ft)	V/C RATIO	DELAY (s)	LOS
5: US 79 & Driveway 5	WBL	-	-	-	-	-	-	-	-	-	-	18	-	0.19	14.3	B	15	-	0.17	13.2	B
	WBR	-	-	-	-	-	-	-	-	-	-	18	-	0.19	14.3	B	15	-	0.17	13.2	B
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	NBR	-	-	-	-	-	-	-	-	-	-	0	530			-	0	530			-
	SBL	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	SBT	-	-	-	-	-	-	-	-	-	-	0		0.00	0.0	A	0		0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
6: FM 619 & Driveway 6	EBL	-	-	-	-	-	-	-	-	-	-	15	-	0.17	9.8	A	15	-	0.17	9.5	A
	EBR	-	-	-	-	-	-	-	-	-	-	15	-	0.17	9.8	A	15	-	0.17	9.5	A
	NBL	-	-	-	-	-	-	-	-	-	-	0	-		0.0	A	0	-		0.0	A
	NBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	SBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	SBR	-	-	-	-	-	-	-	-	-	-	0	530	0.00	0.0	A	0	530	0.00	0.0	A
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
7: FM 112 & Driveway 7	EBL	-	-	-	-	-	-	-	-	-	-	3	340	0.05	7.5	A	3	340	0.05	7.5	A
	EBT	-	-	-	-	-	-	-	-	-	-	0			0.0	A	0				-
	WBT	-	-	-	-	-	-	-	-	-	-	0				-	0				-
	WBR	-	-	-	-	-	-	-	-	-	-	0	270			-	0	270			-
	SBL	-	-	-	-	-	-	-	-	-	-	15	-	0.16	8.3	A	25	-	0.26	11.0	B
	SBR	-	-	-	-	-	-	-	-	-	-	15	-	0.16	8.3	A	25	-	0.26	11.0	B
	Intersection	-	-	-	-	F	-	-	-	-	F	-	-	N/A - Unsig	N/A - Unsig	F	-	-	N/A - Unsig	N/A - Unsig	F
8: FM 112 & Driveway 8	EBL	-	-	-	-	-	-	-	-	-	-	3	-	0.02	7.7	A	3	-	0.02	7.7	A
	EBT	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	WBT	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	WBR	-	-	-	-	-	-	-	-	-	-	0	-			-	0	-			-
	SBL	-	-	-	-	-	-	-	-	-	-	5	-	0.07	9.8	A	5	-	0.07	9.8	A
	SBR	-	-	-	-	-	-	-	-	-	-	5	-	0.07	9.8	A	5	-	0.07	9.8	A

TURN LANE ANALYSIS

TxDOT defines right turn deceleration auxiliary lane thresholds as 50 vehicles per hour for roads with a posted speed of greater than 45 mph and 60 vehicles per hour for roads with a posted speed of less than or equal to 45 mph. US 79, a TxDOT road, has a posted speed limit of 65 mph. FM 112 and FM 619 are also TxDOT roads and have speed limits of 45 and 60 mph, respectively. TxDOT's guidelines for left turn lanes consist of an analysis of advancing traffic volume, the percent of this volume that is left turning, and opposing volume. For driveways with fewer than the minimum threshold of right- or left-turning vehicles per hour, a right- or left-turn auxiliary deceleration lane is not required.

Results of the analysis for both the morning and afternoon peak periods for is summarized below:

- Driveway 4 and US 79
  - Left-turn lane warranted
  - Right-turn lane warranted
- Driveway 5 & US 79
  - Left-turn lane not analyzed – no left-turning traffic into the driveway.
  - Right-turn lane warranted.
- Driveway 6 & FM 619
  - Left-turn lane warranted
  - Right-turn lane not warranted.
- Driveway 7 & FM 112
  - Left-turn lane warranted
  - Right-turn lane warranted
- Driveway 8 & FM 112
  - Left-turn lane not warranted
  - Right-turn lane not warranted.

Turn lanes at Driveways 4, 5, 6, 7, and 8 should follow TxDOT Roadway Design Manual guidelines. None of the driveways are anticipated to be geometrically limited.

ADDITIONAL ANALYSIS

To determine the impact of the development, the following additional analysis were completed at intersection and roadways per the approved scope:

- Sight distance analysis
- Signal warrant analysis

A safety/geometric review and access management analysis were not included in the project's scope. The subsequent sections detail the results of each of this analysis.

2027 SIGHT DISTANCE ANALYSIS

All locations where signals are proposed as a mitigation are TxDOT facilities. The TxDOT Roadway Design Manual (RDW) governs for TxDOT facilities. The RDW Ch2 §3 draws its Stopping Sight Distance (SSD) requirements from the American Association of State Highway and Transportation Officials (AASHTO) guidelines. Initial site observations indicate that adequate SSD is possible at all intersections where signals are proposed as a mitigation. Per AASHTO, SSD should be measured from a 3.5-foot height of the driver's eye (as they are approaching the proposed driveway) to an object 2.0 feet above the roadway surface (located at the proposed driveway). Per the AASHTO document *A Policy on Geometric Design of Highways and Streets*, a passenger car approaching any site driveway needs a desirable minimum of 200 feet of SSD along FM 112 west of Intersection 1, 360 feet along FM 112 east of Intersection 1, 645 feet along US 79 at Intersection 1, 720 feet along US 79 at Intersection 2, and 570 feet along FM 619 at Intersection 2.

Aerial photography and vertical contours were used to determine SSD for vehicles traveling to Driveways 4-8. Existing contours are also available for the proposed location. Figures showing the Stopping Sight Distance are included in ***Appendix E*** and ***Appendix F***.

The RDW Ch2 §3 draws its Intersection Sight Distance (ISD) requirements from the American Association of State Highway and Transportation Officials (AASHTO) guidelines. Initial site observations indicate that adequate ISD is possible at all site driveways. Per AASHTO, ISD should be measured from a 3.5-foot height of the driver's eye (as they are approaching the proposed driveway) to an object 3.5 feet above the roadway surface (located at the proposed driveway). Per the AASHTO document *A Policy on Geometric Design of Highways and Streets*, a passenger car approaching any site driveway needs a desirable minimum of 720 feet of SSD along US 79, 665 feet along FM 619, and 500 feet along FM 112.

Aerial photography and vertical contours were used to determine ISD for vehicles traveling from Driveways 4-8. Existing contours are also available for the proposed location. Figures showing the Intersection Sight Distance are included in ***Appendix G*** and ***Appendix H***.

2027 SIGNAL WARRANT ANALYSIS

Signal warrants were performed for US 79 & FM 112 and FM 619 & US 719.

The peak hour counts and 24-hour counts used for analysis are in ***Appendix B***. The signal warrant analysis reports and volume projections are provided in ***Appendix I***, and the results are summarized as follows:

Intersection 1 (US 79 & FM 112) and Intersection 2 (FM 619 & US 79) meet signal warrants 1, 2, and 3 in the build-out analysis scenario. Therefore, a traffic signal **is recommended** for these intersections beginning in the build-out condition (2027). These intersections should be signalized based on real counts and should not be signalized if the iMarketAmerica development is not complete and generating sufficient traffic volumes. The volume warrants are summarized in **Table 8** for the 2027 Build-Out analysis scenarios. The remaining warrants were not considered for the following reasons:

- **Warrant 4, Pedestrian Volume:** No pedestrians or ped crossings present.
- **Warrant 5, School Crossing:** No schools or school crossings present.
- **Warrant 6, Coordinated Signal System:** No engineering study for a coordinated system has been conducted.
- **Warrant 7, Crash Experience:** Warrant 7 was only run for intersections that did not meet volume warrants. No crashes were reported at these intersections within the last 3 years.
- **Warrant 8, Roadway Network:** No engineering study for a roadway network has been conducted.
- **Warrant 9, Intersection Near a Grade Crossing:** No grade crossing present.

A pro-rata cost share for the traffic signals at Intersection 1 and Intersection 2 were calculated based on the percentage of site traffic compared to the total traffic present at the overall intersection in the peak hour build-out scenario. The pro-rata cost share is provided in **Table 8.** The pro-rata cost share for this signal is based on the percentage of site traffic compared to the total traffic present at the overall intersection in the peak hour build-out scenario.

Table 8 – 2027 Signal Warrant Analysis Summary

Warrant	2027 Build-Out	
	Condition Met	Hours Satisfied
Intersection 1		
1A	Yes	14
1B	Yes	13
2	Yes	13
3A	Yes	
3B	Yes	10
Intersection 2		
1A	No	3
1B	Yes	13
2	Yes	11
3A	Yes	
3B	Yes	2

RECOMMENDATIONS, MITIGATIONS, AND CONCLUSIONS

This study analyzes traffic impacts of the proposed iMarketAmerica development located in Taylor, Texas. The scenarios studied include – Existing conditions, 2027 No Build, and 2027 Build-Out.

Analysis of the 2027 Build-Out scenario showed some study intersections operate below acceptable LOS D. To restore operating conditions to acceptable LOS, the following mitigations are recommended:

- US 79 & FM 112
  a. Install traffic signal
- FM 619 & US 79
  a. Install traffic signal
- US 79 & Site Driveway 4
  a. Install northbound right turn lane (530' storage length, 100' taper)
  b. Install southbound left turn lane (600' storage length, 100' taper)
- US 79 & Site Driveway 5
  a. Install northbound right turn lane (530' storage length, 100' taper)
- FM 619 & Site Driveway 6
  a. Install southbound right turn lane (530' storage length, 100' taper)
- FM 112 & Site Driveway 7
  a. Install westbound right turn lane (270' storage length, 100' taper)
  b. Install eastbound left turn lane (340' storage length, 100' taper)

The above intersection mitigations bring most movements to an acceptable LOS or reduce delay below No Build conditions.

In 2027 Build Out Conditions, the eastbound movement out of Driveway 4 operates at an LOS lower than D, however this driveway is within a quarter mile of intersection 1, where a signal is proposed. Driveway 4 is off US 79, a TxDOT road, and the TxDOT Austin District requires signals spaced no closer than one half mile apart, therefore installing a traffic signal is not recommended for Driveway 4.

For the above mitigation measures, the total contribution by the developer is broken down in **Table 9**.

Table 9 – Mitigation Cost Estimate

Intersection	Approach	Mitigation Measure	Unit Cost	Total Estimated Cost	% Site Traffic at Location	Pro Rata Calculated By	Pro-Rata Cost Share
US 79 & FM 112	All	Install Signal	$5,000 per signal	$500,000	37.62%	Full Intersection	$ 188,085
FM 619 & US 79	All	Install Signal	$5,000 per signal	$500,000	18.46%	Full Intersection	$ 92,309
Driveway 4 at US 79	All	Install northbound right turn lane (530’ storage length, 100’ taper) and install southbound left turn lane (600’ storage length, 100’ taper)	Site access improvements to be built by the developer.				
Driveway 5 at US 79	NB	Install northbound right turn lane (530’ storage length, 100’ taper)	Site access improvements to be built by the developer.				
Driveway 6 at FM 619	SB	Install southbound right turn lane (530’ storage length, 100’ taper)	Site access improvements to be built by the developer.				
Driveway 7 at FM 112	All	Install westbound right turn lane (270’ storage length, 100’ taper) and install eastbound left turn lane (340’ storage length, 100’ taper	Site access improvements to be built by the developer.				
TOTAL				**$100,000**	**-**		**$ 280, 394**

CERTIFICATION STATEMENT

I hereby certify that this report complies with the City Code and with applicable technical requirements of the City of Taylor and is complete to the best of my knowledge.

KIMLEY-HORN AND ASSOCIATES



Kelly Rees, P.E.
Project Manager

APPENDICES

Appendix A: TIA Scoping Document

TRAFFIC IMPACT ANALYSIS SCOPE AND STUDY AREA

Date:	June 27, 2024
Project Name:	212 Acre Tract (iMarketAmerica Taylor Industrial Site)
Location:	US 79 and FM 112 (northeast corner), Taylor, TX
Owner's Agent:	Kelly Rees, P.E, Kimley Horn & Associates
Phone:	737-471-0320

Sections I and II of the scope must be approved prior to formal submittal of a Traffic Impact Analysis (TIA). You may receive signoff of both sections concurrently or separately.

I. Data Collection

1. Background Information

a. Completed trip generation estimate (rec. on 5/8 via email)
b. Location/Study area map that specifies major roadways and intersections within study area
c. Identification of existing planning efforts by all applicable agencies
    i. Envision Taylor Comprehensive Plan
    ii. Williamson County Long Range Transportation Plan
    iii. TxDOT—CAMPO 2045

2. Envision Taylor Comprehensive Plan – Transportation

(Envision-Taylor-Comprehensive-Plan-First-Amendment)

a. Review City of Taylor's Comprehensive Plan, Chapter 3 – Transportation Plan (starting on page 99), for guidance regarding proposed roadways that may be located within the project site.
b. Demonstrate and include a discussion on how proposed roadways shown on Figure 84 will be incorporated into the project.
c. Provide a discussion on incorporation of multimodal features into the project.

3. Intersections Level of Service

Calculations for a.m. and p.m. peak hours must be performed for the following intersections, showing (a) existing traffic conditions and (b) projected traffic conditions for each phase, identifying site, non-site, and total traffic:

a) US 79 and FM 112
b) US 79 and FM 619
c) FM 619 and FM 112
d) All site driveways

Note:

a. Existing signal timings will be used for the intersection analyses to maintain adequate traffic progression.
b. Recommendations should be based on mitigation of site traffic impacts to maintain overall LOS A through D at signalized intersections. Unsignalized intersection analysis should focus on mitigating the stop-controlled approach of the minor street.
c. Capacity Analysis for each phase / year shall include:
    i. Level of Service by movements
    ii. Delay by movements
    iii. V/C by movements
    iv. 95th percentile queue by movements

4. Site Driveway Analysis

a. A sight distance study should be performed for all proposed access points. Submit analysis results on a plan/profile sheet.
b. TxDOT criteria should be used to determine the need for left-turn lane at the site access points on TxDOT or County roadways. Any site driveway on a TxDOT roadway will require a right-turn deceleration lane. Design of the turn lane shall be discussed with TxDOT and approval sent to the City Engineer.
c. Site driveways should comply with the guidance established in the Comprehensive Plan and must be approved by both the City and TxDOT, if located on state roadways. Please contact Shane Brown (512-930-6011/512-734-5754/tommy.brown@txdot.gov) for TxDOT approval.

5. Signal Warrant Analysis: a Signal Warrant analysis (showing both existing and projected volumes at time of warranting) shall be performed and sealed as a separate document for the following study intersections showing 12 hrs of data including peak hours:

a. US 79 at FM 112

6. Other Considerations

a. Data should be collected while schools are in session. Counts taken in the summer while school is not in session should be adjusted by a factor of 15% during the AM peak and 5% during the PM peak with approval of City's engineer. Counts collected for other

projects in the area (previous TIAs) will be allowed if a growth rate is applied to adjust the count data to the current year traffic conditions.

b. Methodology for capacity and level of service shall be Highway Capacity Manual, latest edition.

II.Study Assumptions

1. **Data Assumptions.** The following assumptions must be included in the analysis. Any change in these assumptions must be approved by the city engineer prior to submittal of the TIA.

    a. Background Traffic – The annual growth rate shall be calculated using the following standard formula: Newest Reported Volume = Old Reported Volume*(1+Growth Rate)^(Number of Years Between the Two Volumes). The roadway used for computing growth rate should be of the same class of highway as the development's location and be as close as possible to the project site.
    b. Other Projects – This study should account for traffic to be generated by the following projects:
        i. NONE
    c. Internal Capture - ITE
    d. Pass-by Capture – ITE

2. **Trip Distribution**
   Distribution assumptions should be based on recent traffic counts and engineering judgement. The proposed distribution will be submitted to City's engineer for review and approval prior to submission of the TIA.

3. **Other Considerations**
    a. Code the appropriate heavy vehicle percentages in the traffic model. Provide justification for the assumed amount.
    b. Provide a traffic signal warrant analysis (existing and future traffic conditions) for any proposed traffic signal(s).
    c. When the TIA includes installation of a new traffic signal as a mitigation, an analysis of the intersection's sight distance to stopped end of queue should be included.

Submittal Requirements

1. Traffic modeling requirements
    a. Signal timing sheets to be included in the Appendix of the TIA
    b. Synchro signal timing sheets to be included in the following format: existing conditions (am + pm on one sheet), future conditions (am background, am background + site on one sheet, pm background, pm background + site on one sheet)
    c. All intersection must be modeled in one Synchro file (latest edition), including unsignalized intersections.

d. Submit the following electronically:
   i. PDF of the TIA.
   ii. Synchro Network for all conditions analyzed and background DXF or aerial format. Synchro files must be in real world coordinates.
   iii. Excel spreadsheet with overall trip generation, internal and pass-by trip capture rates, site distribution, and assignment.
   iv. A CAD file for the site plan, if available.
e. TxDOT Submission should be uploaded to the Kimley Horn Assoc Box.com box.

2. Maps
a. A proposed site plan.
b. A map showing all bicycle routes, bus transit and bus stops within ½ mile of the site, if applicable.
c. A map showing all background projects and trip generation for each project, if applicable.
d. A map showing all roadways and driveways analyzed (labeled and dimensioned).
e. An aerial map of all intersections with roadway improvements (dimensioned), including above ground utilities called out.

This scope is based upon the assumed development uses and intensities received via email on May 8, 2023. Any change in these assumptions may require a change in the scope.

Prepared by: Scott R. Cunningham, P.E. Phone: 512-832-7188
Scott R. Cunningham, P.E., TxDOT Austin District Traffic Ops Engineer

Prepared by: Not Needed Phone: _____
Matt Williamson, Williamson County

Prepared by: Kathleen G. Smith Phone: 512-632-0546
Kathleen G. Smith, P.E., HDR Engineering, Inc. for City of Taylor

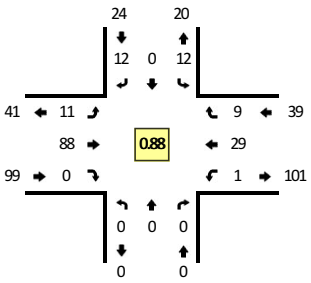
Accepted by: Kelly A Rees Phone: 737-471-0320
Kelly Rees, P.E., Kimley-Horn

Appendix B: Traffic Counts

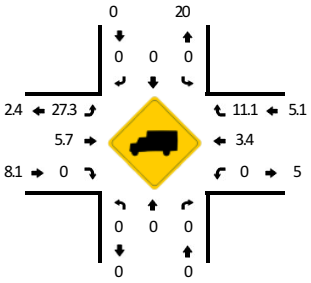
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

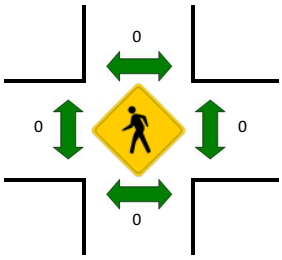
LOCATION: FM 619 -- FM 112 | **QC JOB #:** 16615904
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

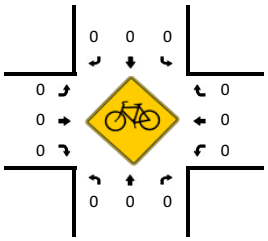


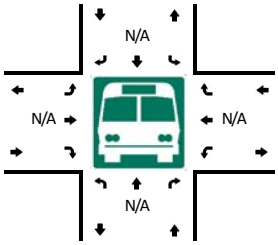




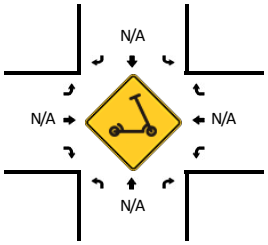












15-Min Count Period Beginning At	FM 619 (Northbound)				FM 619 (Southbound)				FM 112 (Eastbound)				FM 112 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	2	0	4	0	0	17	0	0	0	4	2	0	29	
4:15 PM	0	0	0	0	2	0	2	0	1	19	0	0	0	8	1	0	33	
4:30 PM	0	0	0	0	2	0	3	0	2	29	0	0	0	12	2	0	50	
4:45 PM	0	0	0	0	4	0	2	0	3	12	0	0	0	4	1	0	26	138
5:00 PM	0	0	0	0	4	0	3	0	4	21	0	0	0	5	1	0	38	147
5:15 PM	0	0	0	0	0	0	4	0	4	28	0	0	0	5	4	1	46	160
5:30 PM	0	0	0	0	3	0	1	0	3	17	0	0	0	9	1	0	34	144
5:45 PM	0	0	0	0	5	0	4	0	0	22	0	0	0	10	3	0	44	162

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	16	0	16	112	0	0	0	20	16	4	184
Heavy Trucks	0	0	0		0	0	0		4	4	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

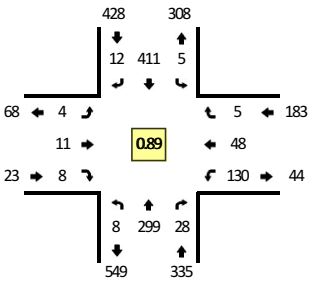
Comments:

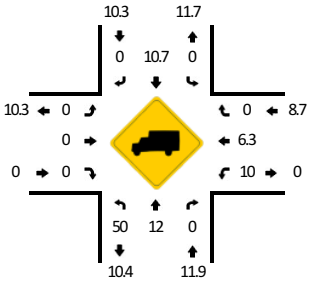
Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

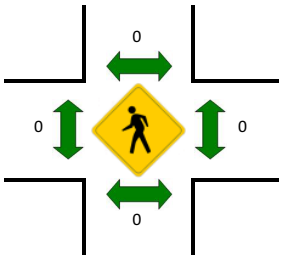
LOCATION: US 79 -- FM 112 | **QC JOB #:** 16615905
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

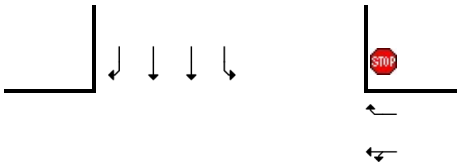
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

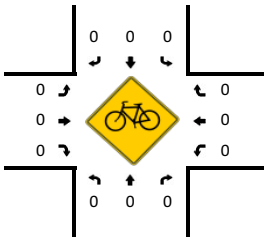


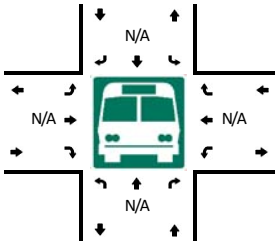


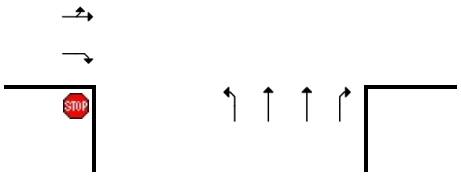
TRUE DATA TO IMPROVE MOBILITY

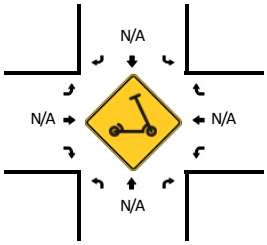












15-Min Count Period Beginning At	US 79 (Northbound)				US 79 (Southbound)				FM 112 (Eastbound)				FM 112 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	59	7	0	1	109	3	0	0	1	3	0	30	7	0	0	221	
7:15 AM	5	72	4	0	0	88	1	0	1	1	0	0	33	13	0	0	218	
7:30 AM	1	96	7	0	2	104	3	0	1	1	2	0	27	11	4	0	259	
7:45 AM	1	72	10	0	2	110	5	0	2	8	3	0	40	17	1	0	271	969
8:00 AM	3	43	11	0	0	93	3	0	0	3	6	0	27	13	1	0	203	951
8:15 AM	4	47	11	0	1	70	0	0	1	5	0	0	21	7	4	0	171	904
8:30 AM	4	55	17	0	1	49	0	0	4	4	0	0	13	9	2	0	158	803
8:45 AM	2	60	8	0	0	73	1	0	3	4	0	0	14	5	1	0	171	703

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	288	40	0	8	440	20	0	8	32	12	0	160	68	4	0	1084
Heavy Trucks	4	28	0		0	48	0		0	0	0		24	4	0		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

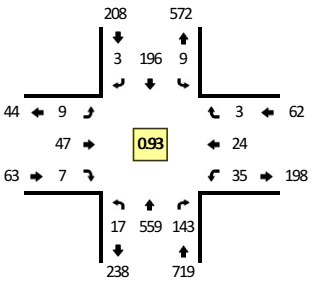
Comments:

Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

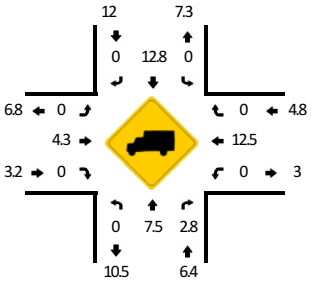
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

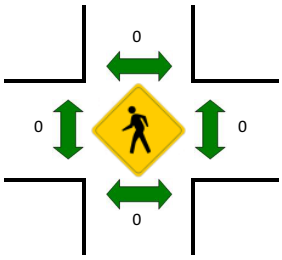
LOCATION: US 79 -- FM 112 | **QC JOB #:** 16615906
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

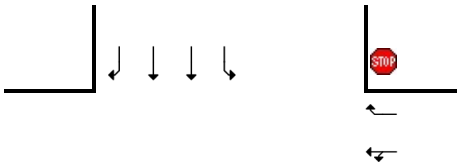
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

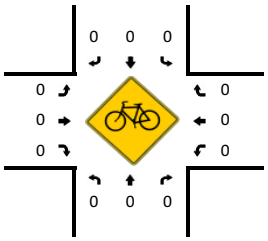


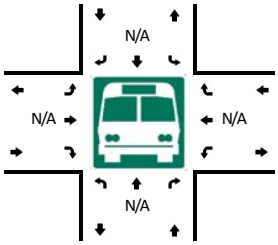


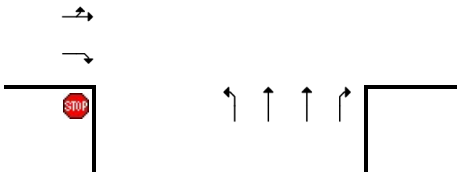


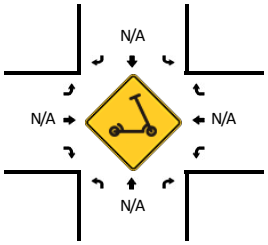












15-Min Count Period Beginning At	US 79 (Northbound)				US 79 (Southbound)				FM 112 (Eastbound)				FM 112 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	75	17	0	1	67	2	0	2	4	1	0	9	3	0	0	183	
4:15 PM	3	97	44	0	1	39	0	0	1	11	1	0	10	3	1	0	211	
4:30 PM	8	131	44	0	1	48	1	1	2	8	1	0	10	3	1	0	259	
4:45 PM	5	144	33	0	0	48	2	0	3	9	4	0	9	6	1	0	264	917
5:00 PM	3	162	36	0	2	54	0	0	4	11	0	0	7	3	1	0	283	1017
5:15 PM	1	122	30	0	5	46	0	0	0	19	2	0	9	12	0	0	246	1052
5:30 PM	1	93	30	0	1	55	1	0	1	8	1	0	11	4	1	0	207	1000
5:45 PM	1	94	40	1	1	61	1	0	1	4	1	0	13	3	0	0	221	957

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	648	144	0	8	216	0	0	16	44	0	0	28	12	4	0	1132
Heavy Trucks	0	40	0		0	20	0		0	0	0		0	0	0		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of report: Tube Count - Volume Data

LOCATION: Carlos G Parker Blvd SE (US 79) **QC JOB #:** 16615907

SPECIFIC LOCATION: **DIRECTION:** NB

CITY/STATE: Taylor, TX **DATE:** May 16 2024 - May 16 2024

Start Time	Mon	Tue	Wed	Thu 16 May 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				24		24			24	
01:00 AM				15		15			15	
02:00 AM				12		12			12	
03:00 AM				17		17			17	
04:00 AM				48		48			48	
05:00 AM				74		74			74	
06:00 AM				114		114			114	
07:00 AM				**297**		**297**			**297**	
08:00 AM				220		220			220	
09:00 AM				205		205			205	
10:00 AM				240		240			240	
11:00 AM				268		268			268	
12:00 PM				270		270			270	
01:00 PM				292		292			292	
02:00 PM				300		300			300	
03:00 PM				331		331			331	
04:00 PM				457		457			457	
05:00 PM				**475**		**475**			**475**	
06:00 PM				289		289			289	
07:00 PM				163		163			163	
08:00 PM				108		108			108	
09:00 PM				83		83			83	
10:00 PM				59		59			59	
11:00 PM				44		44			44	
Day Total				4405		4405			4405	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				7:00 AM 297		7:00 AM 297			7:00 AM 297	
PM Peak Volume				5:00 PM 475		5:00 PM 475			5:00 PM 475	

Comments:

Report generated on 5/28/2024 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

TRUE DATA TO IMPROVE MOBILITY

Type of report: Tube Count - Volume Data

LOCATION: Carlos G Parker Blvd SE (US 79) **QC JOB #:** 16615907

SPECIFIC LOCATION: **DIRECTION:** NB, SB

CITY/STATE: Taylor, TX **DATE:** May 16 2024 - May 16 2024

Start Time	Mon	Tue	Wed	Thu 16 May 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				37		37			37	
01:00 AM				38		38			38	
02:00 AM				33		33			33	
03:00 AM				43		43			43	
04:00 AM				198		198			198	
05:00 AM				383		383			383	
06:00 AM				583		583			583	
07:00 AM				**725**		**725**			**725**	
08:00 AM				511		511			511	
09:00 AM				437		437			437	
10:00 AM				497		497			497	
11:00 AM				515		515			515	
12:00 PM				528		528			528	
01:00 PM				558		558			558	
02:00 PM				559		559			559	
03:00 PM				590		590			590	
04:00 PM				667		667			667	
05:00 PM				**708**		**708**			**708**	
06:00 PM				439		439			439	
07:00 PM				271		271			271	
08:00 PM				194		194			194	
09:00 PM				138		138			138	
10:00 PM				103		103			103	
11:00 PM				70		70			70	
Day Total				8825		8825			8825	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				7:00 AM 725		7:00 AM 725			7:00 AM 725	
PM Peak Volume				5:00 PM 708		5:00 PM 708			5:00 PM 708	

Comments:

Report generated on 5/28/2024 11:59 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: Carlos G Parker Blvd SE (US 79) **QC JOB #:** 16615907

SPECIFIC LOCATION: **DIRECTION:** SB

CITY/STATE: Taylor, TX **DATE:** May 16 2024 - May 16 2024

Start Time	Mon	Tue	Wed	Thu 16 May 24	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				13		13			13	
01:00 AM				23		23			23	
02:00 AM				21		21			21	
03:00 AM				26		26			26	
04:00 AM				150		150			150	
05:00 AM				309		309			309	
06:00 AM				**469**		**469**			**469**	
07:00 AM				428		428			428	
08:00 AM				291		291			291	
09:00 AM				232		232			232	
10:00 AM				257		257			257	
11:00 AM				247		247			247	
12:00 PM				258		258			258	
01:00 PM				**266**		**266**			**266**	
02:00 PM				259		259			259	
03:00 PM				259		259			259	
04:00 PM				210		210			210	
05:00 PM				233		233			233	
06:00 PM				150		150			150	
07:00 PM				108		108			108	
08:00 PM				86		86			86	
09:00 PM				55		55			55	
10:00 PM				44		44			44	
11:00 PM				26		26			26	
Day Total				4420		4420			4420	
% Weekday Average				100%						
% Week Average				100%		100%				
AM Peak Volume				6:00 AM 469		6:00 AM 469			6:00 AM 469	
PM Peak Volume				1:00 PM 266		1:00 PM 266			1:00 PM 266	

Comments:

Report generated on 5/28/2024 11:59 AM

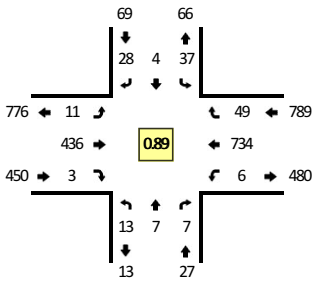
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

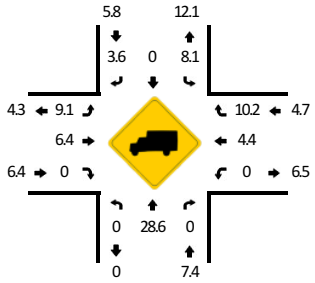
TRUE DATA TO IMPROVE MOBILITY

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

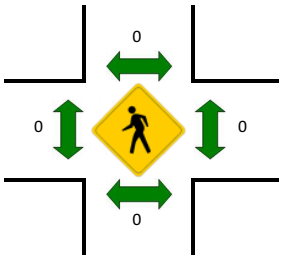
LOCATION: FM 619 -- US Hwy 79 | **QC JOB #:** 16615901
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

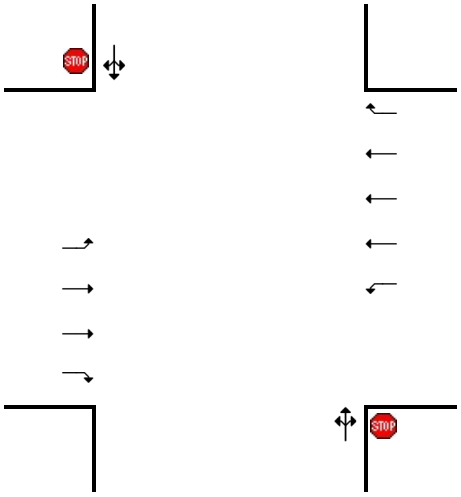
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

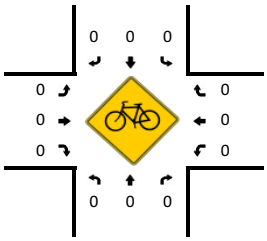


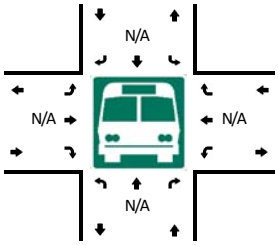


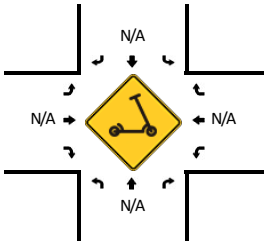
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	FM 619 (Northbound)				FM 619 (Southbound)				US Hwy 79 (Eastbound)				US Hwy 79 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	1	0	0	6	2	7	0	2	84	0	1	1	167	7	0	280	
7:15 AM	4	1	6	0	8	0	9	0	4	117	0	0	1	155	20	0	325	
7:30 AM	2	2	1	0	14	1	7	0	0	117	0	0	1	192	16	0	353	
7:45 AM	5	3	0	0	9	1	5	0	4	118	3	0	3	220	6	0	377	1335
8:00 AM	3	0	1	0	13	3	6	0	1	72	1	0	0	165	15	0	280	1335
8:15 AM	1	1	3	0	4	1	3	0	7	71	0	0	1	112	15	0	219	1229
8:30 AM	4	2	0	0	5	1	8	0	4	89	0	0	1	113	8	0	235	1111
8:45 AM	2	0	3	0	5	2	4	0	0	91	3	0	1	117	14	0	242	976

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	12	0	0	36	4	20	0	16	472	12	0	12	880	24	0	1508
Heavy Trucks	0	4	0		0	0	0		4	32	0		0	36	8		84
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

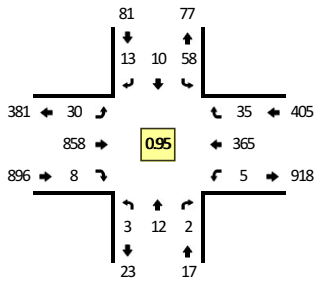
Comments:

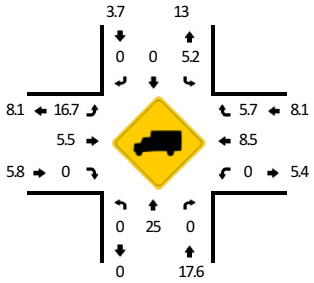
Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

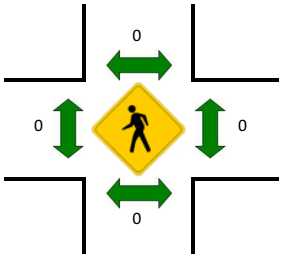
LOCATION: FM 619 -- US Hwy 79 | **QC JOB #:** 16615902
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

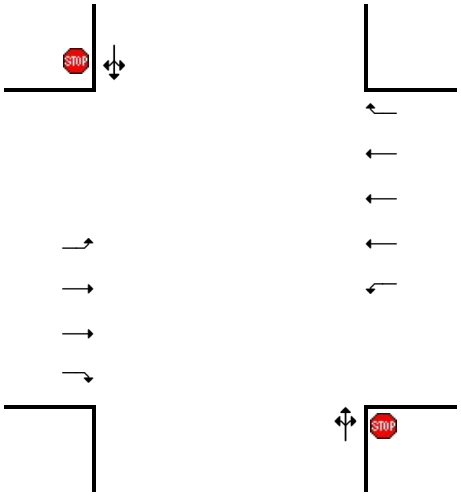
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

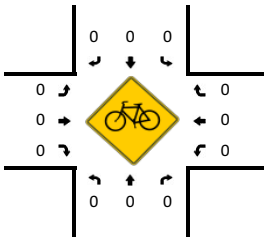


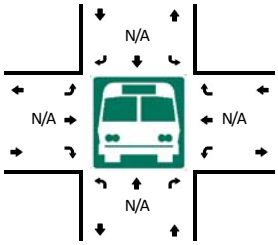


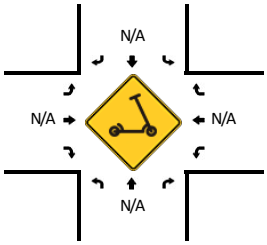
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	FM 619 (Northbound)				FM 619 (Southbound)				US Hwy 79 (Eastbound)				US Hwy 79 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	2	0	0	6	1	5	0	5	148	4	0	1	99	6	0	278	
4:15 PM	1	1	0	0	6	1	2	0	5	152	2	0	0	72	6	0	248	
4:30 PM	1	2	1	0	21	1	2	0	10	212	3	0	1	86	9	0	349	
4:45 PM	0	3	1	0	9	3	5	0	5	207	2	0	1	88	7	0	331	1206
5:00 PM	0	3	0	0	9	4	2	0	8	228	3	0	2	99	11	0	369	1297
5:15 PM	2	4	0	0	19	2	4	0	7	211	0	0	1	92	8	0	350	1399
5:30 PM	2	1	0	0	15	5	5	0	5	160	0	0	0	89	10	0	292	1342
5:45 PM	1	2	0	0	16	2	3	0	8	156	5	0	1	117	6	0	317	1328

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	12	0	0	36	16	8	0	32	912	12	0	8	396	44	0	1476
Heavy Trucks	0	8	0		4	0	0		4	52	0		0	16	0		84
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

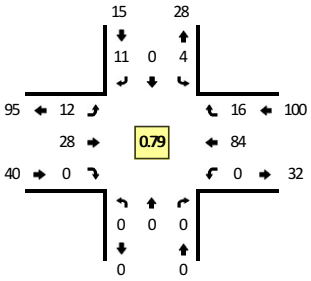
Comments:

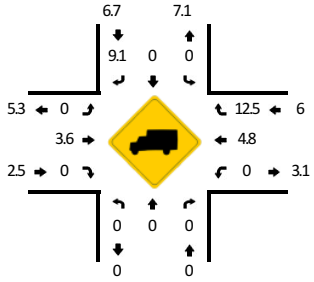
Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

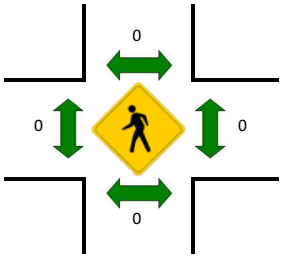
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

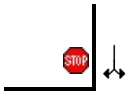
LOCATION: FM 619 -- FM 112 | **QC JOB #:** 16615903
CITY/STATE: Taylor, TX | **DATE:** Thu, May 16 2024

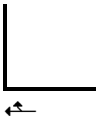
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

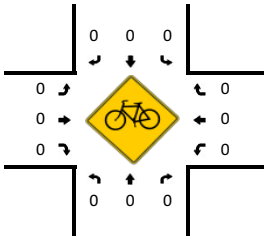


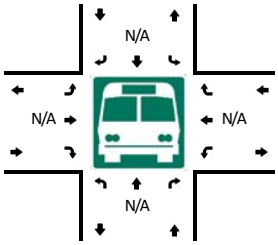


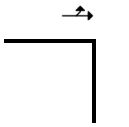




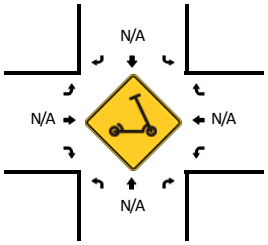












15-Min Count Period Beginning At	FM 619 (Northbound)				FM 619 (Southbound)				FM 112 (Eastbound)				FM 112 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	4	0	2	5	0	0	0	15	2	0	29	
7:15 AM	0	0	0	0	0	0	1	0	6	2	0	0	0	24	4	0	37	
7:30 AM	0	0	0	0	0	0	3	0	2	4	0	0	0	22	5	0	36	
7:45 AM	0	0	0	0	1	0	5	0	2	13	0	0	0	22	6	0	49	151
8:00 AM	0	0	0	0	3	0	2	0	2	9	0	0	0	16	1	0	33	155
8:15 AM	0	0	0	0	0	0	2	0	3	6	0	0	0	16	2	0	29	147
8:30 AM	0	0	0	0	1	0	2	0	5	12	0	0	0	12	1	0	33	144
8:45 AM	0	0	0	0	4	0	2	0	3	3	0	0	0	8	2	0	22	117

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	20	0	8	52	0	0	0	88	24	0	196
Heavy Trucks	0	0	0		0	0	4		0	4	0		0	8	4		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 5/23/2024 1:28 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix C: Trip Generation Calculations

APPENDIX C: TRIP GENERATION CALCULATIONS

AM PEAK-PERIOD

Phase	ITE Code	Land-Use Description	Land-Use	# UNITS	UNIT	Phase Percentage	Total Trips			Internally Captured Trips (Internal Trips)			Net Trips After Internal Capture (External Trips)			Pass By Trips (Existing External)			Net Trips After IC + PB (Net New External)			TDM	TDM Trips			Existing Trips			Net Trips After All Reductions			Phase	Net Trips After All Reductions By Phase		
							Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	AM	Total	In	Out	Total	In	Out	Total	In	Out		Total	In	Out
1	110	Non-Internal Capture	General Light Industrial	49.6	1,000 Sq Ft	100%	37	33	4	0	0	0	37	33	4	0	0	0	37	33	4		0	0	0	0	0	0	37	33	4	1	1,296	973	323
1	140	Non-Internal Capture	Manufacturing	1348.44	1,000 Sq Ft	100%	917	697	220	0	0	0	917	697	220	0	0	0	917	697	220		0	0	0	0	0	0	917	697	220	1			
1	150	Non-Internal Capture	Warehousing	735.88	1,000 Sq Ft	100%	125	96	29	0	0	0	125	96	29	0	0	0	125	96	29		0	0	0	0	0	0	125	96	29	1			
1	760	Non-Internal Capture	Research and Development Center	115.2	1,000 Sq Ft	100%	119	98	21	0	0	0	119	98	21	0	0	0	119	98	21		0	0	0	0	0	0	119	98	21	1			
1	945	Non-Internal Capture	Gasoline Station w/ Convenience Market	16	Fueling Position(s) 2-4k SF	100%	257	129	128	0	0	0	257	129	128	159	80	79	98	49	49		0	0	0	0	0	0	98	49	49	1			
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
					TOTAL		1,455	1,053	402	0	0	0	1,455	1,053	402	159	80	79	1,296	973	323		0	0	0	0	0	0	1,296	973	323		1,296	973	323

PM PEAK-PERIOD

Phase	ITE Code	Land-Use Description	Land-Use	# UNITS	UNIT	Phase Percentage	Total Trips			Internally Captured Trips (Internal Trips)			Net Trips After Internal Capture (External Trips)			Pass By Trips (Existing External)			Net Trips After IC + PB (Net New External)			TDM	TDM Trips			Existing Trips			Net Trips After All Reductions			Phase	Net Trips After All Reductions By Phase		
							Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	PM	Total	In	Out	Total	In	Out	Total	In	Out		Total	In	Out
1	110	Non-Internal Capture	General Light Industrial	49.6	1,000 Sq Ft	100%	32	4	28	0	0	0	32	4	28	0	0	0	32	4	28		0	0	0	0	0	0	32	4	28	1	1,405	433	972
1	140	Non-Internal Capture	Manufacturing	1348.44	1,000 Sq Ft	100%	998	309	689	0	0	0	998	309	689	0	0	0	998	309	689		0	0	0	0	0	0	998	309	689	1			
1	150	Non-Internal Capture	Warehousing	735.88	1,000 Sq Ft	100%	132	37	95	0	0	0	132	37	95	0	0	0	132	37	95		0	0	0	0	0	0	132	37	95	1			
1	760	Non-Internal Capture	Research and Development Center	115.2	1,000 Sq Ft	100%	113	18	95	0	0	0	113	18	95	0	0	0	113	18	95		0	0	0	0	0	0	113	18	95	1			
1	945	Non-Internal Capture	Gasoline Station w/ Convenience Market	16	Fueling Position(s) 2-4k SF	100%	295	148	147	0	0	0	295	148	147	165	83	82	130	65	65		0	0	0	0	0	0	130	65	65	1			
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
		Select Use					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0				
					TOTAL		1,570	516	1,054	0	0	0	1,570	516	1,054	165	83	82	1,405	433	972		0	0	0	0	0	0	1,405	433	972		1,405	433	972

Appendix D: Synchro Outputs

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	12	9	144	53	6	9	332	31	6	456	13
Future Volume (vph)	4	12	9	144	53	6	9	332	31	6	456	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.969			0.991				0.850			0.850
Flt Protected		0.993			0.968		0.950			0.950		
Satd. Flow (prot)	0	1828	0	0	1805	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.993			0.968		0.950			0.950		
Satd. Flow (perm)	0	1828	0	0	1805	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			2092			417			1920	
Travel Time (s)		28.4			31.7			4.4			20.1	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	8	35	13	178	75	19	23	426	44	10	490	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	0	272	0	23	426	44	10	490	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	12	9	144	53	6	9	332	31	6	456	13
Future Volume (Veh/h)	4	12	9	144	53	6	9	332	31	6	456	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Hourly flow rate (vph)	8	35	13	178	75	19	22	426	44	10	490	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	805	980	245	753	980	213	490			426		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	805	980	245	753	980	213	490			426		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	86	98	31	69	98	98			99		
cM capacity (veh/h)	202	244	762	257	243	795	1077			1137		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	56	272	22	213	213	44	10	245	245	22
Volume Left	8	178	22	0	0	0	10	0	0	0
Volume Right	13	19	0	0	0	44	0	0	0	22
cSH	280	265	1077	1700	1700	1700	1137	1700	1700	1700
Volume to Capacity	0.20	1.02	0.02	0.13	0.13	0.03	0.01	0.14	0.14	0.01
Queue Length 95th (ft)	18	263	2	0	0	0	1	0	0	0
Control Delay (s/veh)	21.0	103.4	8.4	0.0	0.0	0.0	8.2	0.0	0.0	0.0
Lane LOS	C	F	A				A			
Approach Delay (s/veh)	21.0	103.4	0.4				0.2			
Approach LOS	C	F								

Intersection Summary				
Average Delay	22.0			
Intersection Capacity Utilization	37.1%	ICU Level of Service	A	
Analysis Period (min)	15			

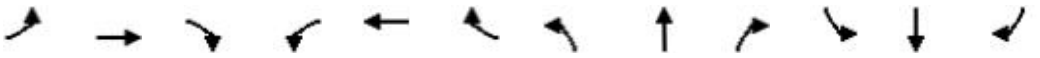
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	12	9	144	53	6	9	332	31	6	456	13
Future Vol, veh/h	4	12	9	144	53	6	9	332	31	6	456	13
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	34	67	81	71	31	40	78	70	63	93	60
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	8	35	13	178	75	19	23	426	44	10	490	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	807	982	245	755	982	213	490	0	0	426	0	0
Stage 1	510	510	-	472	472	-	-	-	-	-	-	-
Stage 2	297	472	-	283	510	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	276	251	762	299	249	795	1077	-	-	1137	-	-
Stage 1	519	541	-	544	560	-	-	-	-	-	-	-
Stage 2	693	562	-	703	538	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	201	243	762	255	242	795	1077	-	-	1137	-	-
Mov Cap-2 Maneuver	201	243	-	255	242	-	-	-	-	-	-	-
Stage 1	508	536	-	533	548	-	-	-	-	-	-	-
Stage 2	572	550	-	639	533	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	18.9	24.8	0.4	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1077	-	-	307	274	1137	-	-
HCM Lane V/C Ratio	0.021	-	-	0.159	0.343	0.008	-	-
HCM Control Delay (s/veh)	8.4	-	-	18.9	24.8	8.2	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	0.6	1.5	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	483	3	7	814	54	14	8	8	41	4	31
Future Volume (vph)	11	483	3	7	814	54	14	8	8	41	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.941			0.953	
Flt Protected	0.950			0.950				0.983			0.974	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1740	0	0	1746	0
Flt Permitted	0.950			0.950				0.983			0.974	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1740	0	0	1746	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2142			2858			4542			2329	
Travel Time (s)		48.7			65.0			51.6			26.5	
Peak Hour Factor	0.63	0.92	0.25	0.50	0.83	0.61	0.65	0.58	0.29	0.66	0.33	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	17	525	12	14	981	89	22	14	28	62	12	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	525	12	14	981	89	0	64	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	483	3	7	814	54	14	8	8	41	4	31
Future Vol, veh/h	11	483	3	7	814	54	14	8	8	41	4	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	92	25	50	83	61	65	58	29	66	33	78
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	17	525	12	14	981	89	22	14	28	62	12	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	981	0	0	537	0	0	985	1568	263	1313	1580	491
Stage 1	-	-	-	-	-	-	559	559	-	1009	1009	-
Stage 2	-	-	-	-	-	-	426	1009	-	304	571	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	403	-	-	1034	-	-	231	111	739	140	109	450
Stage 1	-	-	-	-	-	-	469	512	-	202	318	-
Stage 2	-	-	-	-	-	-	547	318	-	659	506	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	403	-	-	1034	-	-	184	105	739	116	103	450
Mov Cap-2 Maneuver	-	-	-	-	-	-	184	105	-	116	103	-
Stage 1	-	-	-	-	-	-	449	490	-	194	314	-
Stage 2	-	-	-	-	-	-	473	314	-	591	485	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.5	0.1	27.8	75.8
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	220	403	-	-	1034	-	-	154
HCM Lane V/C Ratio	0.286	0.043	-	-	0.014	-	-	0.74
HCM Control Delay (s/veh)	27.8	14.3	-	-	8.5	-	-	75.8
HCM Lane LOS	D	B	-	-	A	-	-	F
HCM 95th %tile Q (veh)	1.1	0.1	-	-	0	-	-	4.5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	31	93	18	4	12
Future Volume (vph)	13	31	93	18	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.973		0.913	
Flt Protected		0.985			0.983	
Satd. Flow (prot)	0	1853	1830	0	1688	0
Flt Permitted		0.985			0.983	
Satd. Flow (perm)	0	1853	1830	0	1688	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		4542	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	26	57	106	27	12	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	83	133	0	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	31	93	18	4	12
Future Volume (Veh/h)	13	31	93	18	4	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Hourly flow rate (vph)	26	57	106	27	12	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	133				229	120
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	133				229	120
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	98
cM capacity (veh/h)	1458				748	935

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	83	133	34
Volume Left	26	0	12
Volume Right	0	27	22
cSH	1458	1700	859
Volume to Capacity	0.02	0.08	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s/veh)	2.4	0.0	9.4
Lane LOS	A		A
Approach Delay (s/veh)	2.4	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay		2.1	
Intersection Capacity Utilization		19.0%	ICU Level of Service A
Analysis Period (min)		15	

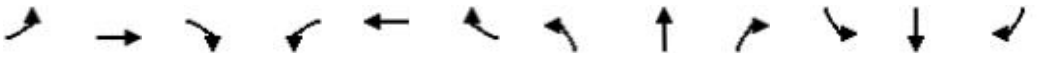
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	31	93	18	4	12
Future Vol, veh/h	13	31	93	18	4	12
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	50	54	88	67	33	55
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	26	57	106	27	12	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	133	0	-	0	229	120
Stage 1	-	-	-	-	120	-
Stage 2	-	-	-	-	109	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1458	-	-	-	761	934
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1458	-	-	-	747	934
Mov Cap-2 Maneuver	-	-	-	-	747	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	918	-

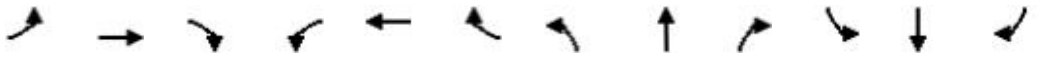
Approach	EB	WB	SB
HCM Control Delay, s/v	2.3	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1458	-	-	-	857
HCM Lane V/C Ratio	0.018	-	-	-	0.04
HCM Control Delay (s/veh)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	52	8	39	27	3	19	620	159	9	217	3
Future Volume (vph)	10	52	8	39	27	3	19	620	159	9	217	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.991			0.986				0.850			0.850
Flt Protected		0.995			0.976		0.950			0.950		
Satd. Flow (prot)	0	1873	0	0	1810	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.995			0.976		0.950			0.950		
Satd. Flow (perm)	0	1873	0	0	1810	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			2092			417			1920	
Travel Time (s)		28.4			31.7			4.4			20.1	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	20	153	12	48	38	10	48	795	227	14	233	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	0	0	96	0	48	795	227	14	233	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	52	8	39	27	3	19	620	159	9	217	3
Future Volume (Veh/h)	10	52	8	39	27	3	19	620	159	9	217	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Hourly flow rate (vph)	20	153	12	48	38	10	48	795	227	14	233	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	774	1152	117	1112	1152	398	233			795		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	774	1152	117	1112	1152	398	233			795		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	19	99	6	80	98	96			98		
cM capacity (veh/h)	233	189	920	51	188	605	1339			829		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	185	96	48	398	398	227	14	117	117	5
Volume Left	20	48	48	0	0	0	14	0	0	0
Volume Right	12	10	0	0	0	227	0	0	0	5
cSH	204	83	1339	1700	1700	1700	829	1700	1700	1700
Volume to Capacity	0.91	1.16	0.04	0.23	0.23	0.13	0.02	0.07	0.07	0.00
Queue Length 95th (ft)	181	172	3	0	0	0	1	0	0	0
Control Delay (s/veh)	89.6	237.6	7.8	0.0	0.0	0.0	9.4	0.0	0.0	0.0
Lane LOS	F	F	A				A			
Approach Delay (s/veh)	89.6	237.6	0.3				0.5			
Approach LOS	F	F								

Intersection Summary				
Average Delay	24.9			
Intersection Capacity Utilization	34.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	52	8	39	27	3	19	620	159	9	217	3
Future Vol, veh/h	10	52	8	39	27	3	19	620	159	9	217	3
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	34	67	81	71	31	40	78	70	63	93	60
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	20	153	12	48	38	10	48	795	227	14	233	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	774	1152	117	1112	1152	398	233	0	0	795	0	0
Stage 1	261	261	-	891	891	-	-	-	-	-	-	-
Stage 2	513	891	-	221	261	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	292	199	919	165	198	604	1339	-	-	829	-	-
Stage 1	727	696	-	306	361	-	-	-	-	-	-	-
Stage 2	517	363	-	764	693	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	233	189	919	51	188	604	1339	-	-	829	-	-
Mov Cap-2 Maneuver	233	189	-	51	188	-	-	-	-	-	-	-
Stage 1	701	684	-	295	348	-	-	-	-	-	-	-
Stage 2	437	350	-	576	681	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	67.9	39.2	0.3	0.5
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1339	-	-	207	152	829	-	-
HCM Lane V/C Ratio	0.035	-	-	0.797	0.314	0.017	-	-
HCM Control Delay (s/veh)	7.8	-	-	67.9	39.2	9.4	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	5.7	1.3	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	951	9	6	405	39	3	13	2	64	11	14
Future Volume (vph)	33	951	9	6	405	39	3	13	2	64	11	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.972			0.984	
Flt Protected	0.950			0.950				0.993			0.968	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1816	0	0	1792	0
Flt Permitted	0.950			0.950				0.993			0.968	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1816	0	0	1792	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2142			2858			4542			2329	
Travel Time (s)		48.7			65.0			51.6			26.5	
Peak Hour Factor	0.63	0.92	0.25	0.50	0.83	0.61	0.65	0.58	0.29	0.66	0.33	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	52	1034	36	12	488	64	5	22	7	97	33	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	1034	36	12	488	64	0	34	0	0	148	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	16.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	951	9	6	405	39	3	13	2	64	11	14
Future Vol, veh/h	33	951	9	6	405	39	3	13	2	64	11	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	92	25	50	83	61	65	58	29	66	33	78
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	52	1034	36	12	488	64	5	22	7	97	33	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	488	0	0	1070	0	0	1374	1650	517	1144	1686	244
Stage 1	-	-	-	-	-	-	1138	1138	-	512	512	-
Stage 2	-	-	-	-	-	-	236	512	-	632	1174	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	690	-	-	653	-	-	128	99	506	182	94	647
Stage 1	-	-	-	-	-	-	211	277	-	445	537	-
Stage 2	-	-	-	-	-	-	712	537	-	424	266	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	690	-	-	653	-	-	81	90	506	135	85	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	90	-	135	85	-
Stage 1	-	-	-	-	-	-	195	256	-	412	527	-
Stage 2	-	-	-	-	-	-	637	527	-	353	246	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.5	0.2	54.2	187.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	106	690	-	-	653	-	-	130
HCM Lane V/C Ratio	0.32	0.076	-	-	0.018	-	-	1.14
HCM Control Delay (s/veh)	54.2	10.6	-	-	10.6	-	-	187.6
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q (veh)	1.2	0.2	-	-	0.1	-	-	8.7



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	98	32	10	13	13
Future Volume (vph)	12	98	32	10	13	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.960		0.949	
Flt Protected		0.994			0.970	
Satd. Flow (prot)	0	1870	1806	0	1732	0
Flt Permitted		0.994			0.970	
Satd. Flow (perm)	0	1870	1806	0	1732	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		4542	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	24	181	36	15	39	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	205	51	0	63	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	98	32	10	13	13
Future Volume (Veh/h)	12	98	32	10	13	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Hourly flow rate (vph)	24	181	36	15	39	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	51				273	44
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	51				273	44
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				94	98
cM capacity (veh/h)	1562				708	1030

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	205	51	63
Volume Left	24	0	39
Volume Right	0	15	24
cSH	1562	1700	804
Volume to Capacity	0.02	0.03	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s/veh)	1.0	0.0	9.9
Lane LOS	A		A
Approach Delay (s/veh)	1.0	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	98	32	10	13	13
Future Vol, veh/h	12	98	32	10	13	13
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	50	54	88	67	33	55
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	24	181	36	15	39	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	51	0	-	0	273	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	229	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1562	-	-	-	719	1029
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1562	-	-	-	707	1029
Mov Cap-2 Maneuver	-	-	-	-	707	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.9	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	801
HCM Lane V/C Ratio	0.015	-	-	-	0.079
HCM Control Delay (s/veh)	7.3	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Future Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.980			0.989				0.850			0.850
Flt Protected		0.966			0.970		0.950			0.950		
Satd. Flow (prot)	0	1781	0	0	1805	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.966			0.970		0.950			0.950		
Satd. Flow (perm)	0	1781	0	0	1805	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			987			417			1555	
Travel Time (s)		28.4			15.0			4.4			16.3	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	95	19	20	219	106	29	17	669	219	135	589	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	134	0	0	354	0	17	669	219	135	589	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	12	9	193	53	22	9	575	177	54	536	29
Future Volume (Veh/h)	53	12	9	193	53	22	9	575	177	54	536	29
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Hourly flow rate (vph)	95	19	20	219	106	29	17	669	219	135	589	76
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1281	1562	295	1277	1562	335	589			669		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1281	1562	295	1277	1562	335	589			669		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	80	97	0	0	96	98			85		
cM capacity (veh/h)	0	94	705	90	94	664	989			924		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	134	354	17	335	335	219	135	295	295	76
Volume Left	95	219	17	0	0	0	135	0	0	0
Volume Right	20	29	0	0	0	219	0	0	0	76
cSH	0	98	989	1700	1700	1700	924	1700	1700	1700
Volume to Capacity	Err	3.61	0.02	0.20	0.20	0.13	0.15	0.17	0.17	0.04
Queue Length 95th (ft)	Err	Err	1	0	0	0	13	0	0	0
Control Delay (s/veh)	Err	Err	8.7	0.0	0.0	0.0	9.6	0.0	0.0	0.0
Lane LOS	F	F	A				A			
Approach Delay (s/veh)	Err	Err	0.2				1.6			
Approach LOS	F	F								

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	46.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	35.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	12	9	193	53	22	9	575	177	54	536	29
Future Vol, veh/h	53	12	9	193	53	22	9	575	177	54	536	29
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	62	44	88	50	75	53	86	81	40	91	38
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	95	19	20	219	106	29	17	669	219	135	589	76

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1281	1562	295	1277	1562	335	589	0	0	669	0	0
Stage 1	859	859	-	703	703	-	-	-	-	-	-	-
Stage 2	422	703	-	574	859	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	124	112	704	~ 125	112	664	989	-	-	924	-	-
Stage 1	320	374	-	397	441	-	-	-	-	-	-	-
Stage 2	583	441	-	474	374	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	94	704	~ 90	~ 94	664	989	-	-	924	-	-
Mov Cap-2 Maneuver	-	94	-	~ 90	~ 94	-	-	-	-	-	-	-
Stage 1	315	319	-	390	434	-	-	-	-	-	-	-
Stage 2	414	434	-	369	319	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	5.8	215.2	0.2	1.6
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	989	-	-	4628	114	924	-	-
HCM Lane V/C Ratio	0.017	-	-	0.009	1.187	0.146	-	-
HCM Control Delay (s/veh)	8.7	-	-	5.8	215.2	9.6	-	-
HCM Lane LOS	A	-	-	A	F	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	0	8.6	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Future Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.960			0.966	
Flt Protected	0.950			0.950				0.975			0.985	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1761	0	0	1790	0
Flt Permitted	0.950			0.950				0.975			0.985	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1761	0	0	1790	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2212			2858			672			2329	
Travel Time (s)		21.5			27.8			7.6			26.5	
Peak Hour Factor	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	15	549	78	87	990	68	82	32	48	59	84	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	549	78	87	990	68	0	162	0	0	191	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	64.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	516	52	55	911	54	31	24	24	41	53	31
Future Vol, veh/h	11	516	52	55	911	54	31	24	24	41	53	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	94	67	63	92	80	38	75	50	69	63	65
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	15	549	78	87	990	68	82	32	48	59	84	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	990	0	0	627	0	0	1191	1743	275	1485	1821	495
Stage 1	-	-	-	-	-	-	579	579	-	1164	1164	-
Stage 2	-	-	-	-	-	-	612	1164	-	321	657	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	399	-	-	958	-	-	169	87	726	108	~ 77	447
Stage 1	-	-	-	-	-	-	456	501	-	157	269	-
Stage 2	-	-	-	-	-	-	422	269	-	645	462	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	399	-	-	958	-	-	-	76	726	62	~ 67	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	76	-	62	~ 67	-
Stage 1	-	-	-	-	-	-	439	482	-	151	245	-
Stage 2	-	-	-	-	-	-	225	245	-	541	444	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.3	0.7		$ 717.3
HCM LOS			-	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	399	-	-	958	-	-	82
HCM Lane V/C Ratio	-	0.037	-	-	0.091	-	-	2.332
HCM Control Delay (s/veh)	-	14.4	-	-	9.1	-	-	$ 717.3
HCM Lane LOS	-	B	-	-	A	-	-	F
HCM 95th %tile Q (veh)	-	0.1	-	-	0.3	-	-	17.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	47	142	18	4	12
Future Volume (vph)	13	47	142	18	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.981		0.906	
Flt Protected		0.988			0.985	
Satd. Flow (prot)	0	1859	1845	0	1679	0
Flt Permitted		0.988			0.985	
Satd. Flow (perm)	0	1859	1845	0	1679	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		3870	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	19	59	195	32	7	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	78	227	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	47	142	18	4	12
Future Volume (Veh/h)	13	47	142	18	4	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Hourly flow rate (vph)	19	59	195	32	7	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	227				308	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227				308	211
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	98
cM capacity (veh/h)	1347				677	832

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	78	227	23
Volume Left	19	0	7
Volume Right	0	32	16
cSH	1347	1700	777
Volume to Capacity	0.01	0.13	0.03
Queue Length 95th (ft)	1	0	2
Control Delay (s/veh)	2.0	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	2.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	47	142	18	4	12
Future Vol, veh/h	13	47	142	18	4	12
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	69	79	73	56	60	75
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	19	59	195	32	7	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	227	0	-	0	308	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1347	-	-	-	686	832
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	929	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	676	832
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.9	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	779
HCM Lane V/C Ratio	0.014	-	-	-	0.029
HCM Control Delay (s/veh)	7.7	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	97	455	195	292	523
Future Volume (vph)	97	97	455	195	292	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	600	
Storage Lanes	0	0		0	0	
Taper Length (ft)	25				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.932		0.955			
Flt Protected	0.976					0.982
Satd. Flow (prot)	1694	0	3380	0	0	3476
Flt Permitted	0.976					0.982
Satd. Flow (perm)	1694	0	3380	0	0	3476
Link Speed (mph)	30		65			65
Link Distance (ft)	486		1555			2048
Travel Time (s)	11.0		16.3			21.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	105	105	495	212	317	568
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	0	707	0	0	885
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	97	97	455	195	292	523
Future Volume (Veh/h)	97	97	455	195	292	523
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	105	105	495	212	317	568
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1519	354			707	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1519	354			707	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	84			64	
cM capacity (veh/h)	70	643			887	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	210	330	377	506	379
Volume Left	105	0	0	317	0
Volume Right	105	0	212	0	0
cSH	127	1700	1700	887	1700
Volume to Capacity	1.65	0.19	0.22	0.36	0.22
Queue Length 95th (ft)	387	0	0	41	0
Control Delay (s/veh)	387.5	0.0	0.0	8.8	0.0
Lane LOS	F			A	
Approach Delay (s/veh)	387.5	0.0		5.0	
Approach LOS	F				

Intersection Summary			
Average Delay	47.6		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	75.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	97	455	195	292	523
Future Vol, veh/h	97	97	455	195	292	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	-	-	-	-	-	-
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	105	105	495	212	317	568

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1519	354	0	0	707	0
Stage 1	601	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	110	642	-	-	887	-
Stage 1	510	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 53	642	-	-	887	-
Mov Cap-2 Maneuver	~ 53	-	-	-	-	-
Stage 1	510	-	-	-	-	-
Stage 2	167	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	$621.4	0	4.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	98	887	-
HCM Lane V/C Ratio	-	-	2.152	0.358	-
HCM Control Delay (s/veh)	-	-	$ 621.4	11.3	1.4
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q (veh)	-	-	18.4	1.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	79	374	177	0	815
Future Volume (vph)	0	79	374	177	0	815
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	0	
Storage Lanes	0	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.952			
Flt Protected						
Satd. Flow (prot)	0	1611	3369	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1611	3369	0	0	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	533		2048			982
Travel Time (s)	12.1		21.5			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	86	407	192	0	886
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	86	599	0	0	886
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	79	374	177	0	815
Future Volume (Veh/h)	0	79	374	177	0	815
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	86	407	192	0	886
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	946	300			599	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	946	300			599	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	88			100	
cM capacity (veh/h)	260	697			974	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	86	271	328	443	443
Volume Left	0	0	0	0	0
Volume Right	86	0	192	0	0
cSH	697	1700	1700	1700	1700
Volume to Capacity	0.12	0.16	0.19	0.26	0.26
Queue Length 95th (ft)	11	0	0	0	0
Control Delay (s/veh)	10.9	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s/veh)	10.9	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	79	374	177	0	815
Future Vol, veh/h	0	79	374	177	0	815
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	86	407	192	0	886

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	300	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	696	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	696	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	696	-
HCM Lane V/C Ratio	-	-	0.123	-
HCM Control Delay (s/veh)	-	-	10.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q (veh)	-	-	0.4	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	0	0	31	17	146
Future Volume (vph)	48	0	0	31	17	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			530
Storage Lanes	0	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.879	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1637	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1637	0
Link Speed (mph)	30			60	60	
Link Distance (ft)	383			3870	672	
Travel Time (s)	8.7			44.0	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	0	0	34	18	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	34	177	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	0	0	31	17	146
Future Volume (Veh/h)	48	0	0	31	17	146
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	0	0	34	18	159
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	132	98	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	132	98	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	100	100			
cM capacity (veh/h)	863	959	1399			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	52	34	177
Volume Left	52	0	0
Volume Right	0	0	159
cSH	863	1399	1700
Volume to Capacity	0.06	0.00	0.10
Queue Length 95th (ft)	5	0	0
Control Delay (s/veh)	9.4	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.4	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	0	0	31	17	146
Future Vol, veh/h	48	0	0	31	17	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	52	0	0	34	18	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	132	98	177	0	-	0
Stage 1	98	-	-	-	-	-
Stage 2	34	-	-	-	-	-
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	862	958	1399	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	862	958	1399	-	-	-
Mov Cap-2 Maneuver	862	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1399	-	862	-	-
HCM Lane V/C Ratio	-	-	0.061	-	-
HCM Control Delay (s/veh)	0	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	0.2	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	146	49	203	49	16	48
Future Volume (vph)	146	49	203	49	16	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340			270	0	0
Storage Lanes	0			0	0	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.974		0.898	
Flt Protected		0.964			0.988	
Satd. Flow (prot)	0	1796	1814	0	1653	0
Flt Permitted		0.964			0.988	
Satd. Flow (perm)	0	1796	1814	0	1653	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1207	2430		518	
Travel Time (s)		18.3	36.8		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	159	53	221	53	17	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	212	274	0	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	49	203	49	16	48
Future Volume (Veh/h)	146	49	203	49	16	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	53	221	53	17	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				619	248
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274				619	248
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				96	93
cM capacity (veh/h)	1289				397	791

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	212	274	69
Volume Left	159	0	17
Volume Right	0	53	52
cSH	1289	1700	636
Volume to Capacity	0.12	0.16	0.11
Queue Length 95th (ft)	11	0	9
Control Delay (s/veh)	6.4	0.0	11.4
Lane LOS	A		B
Approach Delay (s/veh)	6.4	0.0	11.4
Approach LOS			B

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	146	49	203	49	16	48
Future Vol, veh/h	146	49	203	49	16	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	159	53	221	53	17	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	274	0	-	0	619	248
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	371	-
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	1289	-	-	-	452	791
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1289	-	-	-	395	791
Mov Cap-2 Maneuver	-	-	-	-	395	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	698	-

Approach	EB	WB	SB
HCM Control Delay, s/v	6.1	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1289	-	-	-	632
HCM Lane V/C Ratio	0.123	-	-	-	0.11
HCM Control Delay (s/veh)	8.2	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	0.4	-	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	49	195	251	0	0	16
Future Volume (vph)	49	195	251	0	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.990				
Satd. Flow (prot)	0	1844	1863	0	1611	0
Flt Permitted		0.990				
Satd. Flow (perm)	0	1844	1863	0	1611	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		987	1099		293	
Travel Time (s)		15.0	16.7		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	212	273	0	0	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	265	273	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	195	251	0	0	16
Future Volume (Veh/h)	49	195	251	0	0	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	212	273	0	0	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	273				591	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273				591	273
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1290				450	766

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	265	273	17
Volume Left	53	0	0
Volume Right	0	0	17
cSH	1290	1700	766
Volume to Capacity	0.04	0.16	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s/veh)	1.9	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	1.9	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		39.5%	ICU Level of Service A
Analysis Period (min)		15	

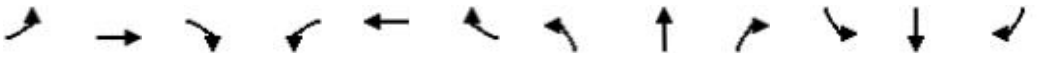
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	195	251	0	0	16
Future Vol, veh/h	49	195	251	0	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	53	212	273	0	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	591	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	318	-
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	1290	-	-	-	470	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1290	-	-	-	448	766
Mov Cap-2 Maneuver	-	-	-	-	448	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	738	-

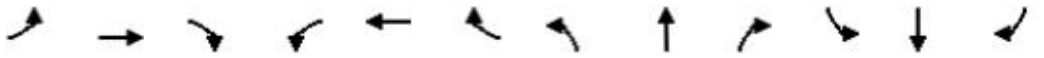
Approach	EB	WB	SB
HCM Control Delay, s/v	1.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1290	-	-	-	766
HCM Lane V/C Ratio	0.041	-	-	-	0.023
HCM Control Delay (s/veh)	7.9	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Future Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.985			0.972				0.850			0.850
Flt Protected		0.982			0.969		0.950			0.950		
Satd. Flow (prot)	0	1820	0	0	1772	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.982			0.969		0.950			0.950		
Satd. Flow (perm)	0	1820	0	0	1772	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			987			417			1555	
Travel Time (s)		28.4			15.0			4.4			16.3	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	57	84	18	210	54	69	36	847	277	78	505	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	333	0	36	847	277	78	505	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	52	8	185	27	52	19	728	224	31	460	52
Future Volume (Veh/h)	32	52	8	185	27	52	19	728	224	31	460	52
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Hourly flow rate (vph)	57	84	18	210	54	69	36	847	277	78	505	137
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1184	1580	253	1370	1580	424	505			847		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1184	1580	253	1370	1580	424	505			847		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	12	12	98	0	43	88	97			90		
cM capacity (veh/h)	64	95	750	23	95	582	1063			792		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	159	333	36	424	424	277	78	253	253	137
Volume Left	57	210	36	0	0	0	78	0	0	0
Volume Right	18	69	0	0	0	277	0	0	0	137
cSH	89	34	1063	1700	1700	1700	792	1700	1700	1700
Volume to Capacity	1.79	9.72	0.03	0.25	0.25	0.16	0.10	0.15	0.15	0.08
Queue Length 95th (ft)	332	Err	3	0	0	0	8	0	0	0
Control Delay (s/veh)	477.9	Err	8.5	0.0	0.0	0.0	10.0	0.0	0.0	0.0
Lane LOS	F	F	A				B			
Approach Delay (s/veh)	477.9	Err	0.3				1.1			
Approach LOS	F	F								

Intersection Summary				
Average Delay	1436.2			
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	24

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	52	8	185	27	52	19	728	224	31	460	52
Future Vol, veh/h	32	52	8	185	27	52	19	728	224	31	460	52
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	62	44	88	50	75	53	86	81	40	91	38
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	57	84	18	210	54	69	36	847	277	78	505	137

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1184	1580	253	1370	1580	424	505	0	0	847	0	0
Stage 1	661	661	-	919	919	-	-	-	-	-	-	-
Stage 2	523	919	-	451	661	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	146	109	750	~ 106	109	581	1063	-	-	792	-	-
Stage 1	420	460	-	294	350	-	-	-	-	-	-	-
Stage 2	508	350	-	560	460	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	64	95	750	~ 23	95	581	1063	-	-	792	-	-
Mov Cap-2 Maneuver	64	95	-	~ 23	95	-	-	-	-	-	-	-
Stage 1	406	415	-	284	338	-	-	-	-	-	-	-
Stage 2	363	338	-	393	415	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	221.1	61.4	0.3	1.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1063	-	-	90	178	792	-	-
HCM Lane V/C Ratio	0.034	-	-	1.134	0.693	0.098	-	-
HCM Control Delay (s/veh)	8.5	-	-	221.1	61.4	10	-	-
HCM Lane LOS	A	-	-	F	F	B	-	-
HCM 95th %tile Q (veh)	0.1	-	-	7	4.2	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Future Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.957			0.982	
Flt Protected	0.950			0.950				0.979			0.973	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1762	0	0	1797	0
Flt Permitted	0.950			0.950				0.979			0.973	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1762	0	0	1797	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2212			2858			672			2329	
Travel Time (s)		21.5			27.8			7.6			26.5	
Peak Hour Factor	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	44	1115	46	43	487	49	137	83	102	93	52	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	1115	46	43	487	49	0	322	0	0	167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	316.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	1048	31	27	448	39	52	62	51	64	33	14
Future Vol, veh/h	33	1048	31	27	448	39	52	62	51	64	33	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	94	67	63	92	80	38	75	50	69	63	65
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	44	1115	46	43	487	49	137	83	102	93	52	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	487	0	0	1161	0	0	1510	1776	558	1260	1822	244
Stage 1	-	-	-	-	-	-	1203	1203	-	573	573	-
Stage 2	-	-	-	-	-	-	307	573	-	687	1249	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	690	-	-	603	-	-	~ 103	83	476	152	77	647
Stage 1	-	-	-	-	-	-	193	258	-	405	504	-
Stage 2	-	-	-	-	-	-	646	504	-	394	245	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	690	-	-	603	-	-	~ 32	~ 72	476	-	67	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 32	~ 72	-	-	67	-
Stage 1	-	-	-	-	-	-	181	241	-	379	468	-
Stage 2	-	-	-	-	-	-	515	468	-	190	229	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	0.8	$ 2230.5	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	57	690	-	-	603	-	-	-
HCM Lane V/C Ratio	5.641	0.064	-	-	0.071	-	-	-
HCM Control Delay (s/veh)	$ 2230.5	10.6	-	-	11.4	-	-	-
HCM Lane LOS	F	B	-	-	B	-	-	-
HCM 95th %tile Q (veh)	36.4	0.2	-	-	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	146	54	10	13	13
Future Volume (vph)	12	146	54	10	13	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.974		0.941	
Flt Protected		0.996			0.973	
Satd. Flow (prot)	0	1874	1832	0	1722	0
Flt Permitted		0.996			0.973	
Satd. Flow (perm)	0	1874	1832	0	1722	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		3870	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	17	185	74	18	22	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	202	92	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	146	54	10	13	13
Future Volume (Veh/h)	12	146	54	10	13	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Hourly flow rate (vph)	17	185	74	18	22	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	92				302	83
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	92				302	83
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	98
cM capacity (veh/h)	1509				684	979

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	202	92	39
Volume Left	17	0	22
Volume Right	0	18	17
cSH	1509	1700	787
Volume to Capacity	0.01	0.05	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s/veh)	0.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	0.7	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	146	54	10	13	13
Future Vol, veh/h	12	146	54	10	13	13
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	69	79	73	56	60	75
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	17	185	74	18	22	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	92	0	-	0	302	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	219	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1509	-	-	-	692	979
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	683	979
Mov Cap-2 Maneuver	-	-	-	-	683	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	820	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	789
HCM Lane V/C Ratio	0.012	-	-	-	0.049
HCM Control Delay (s/veh)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	292	292	725	87	130	251
Future Volume (vph)	292	292	725	87	130	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	600	
Storage Lanes	0	0		0	0	
Taper Length (ft)	25				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.932		0.984			
Flt Protected	0.976					0.983
Satd. Flow (prot)	1694	0	3483	0	0	3479
Flt Permitted	0.976					0.983
Satd. Flow (perm)	1694	0	3483	0	0	3479
Link Speed (mph)	30		65			65
Link Distance (ft)	486		1555			2048
Travel Time (s)	11.0		16.3			21.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	317	788	95	141	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	634	0	883	0	0	414
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	292	292	725	87	130	251
Future Volume (Veh/h)	292	292	725	87	130	251
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	317	317	788	95	141	273
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1254	442			883	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1254	442			883	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	44			81	
cM capacity (veh/h)	134	564			762	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	634	525	358	232	182
Volume Left	317	0	0	141	0
Volume Right	317	0	95	0	0
cSH	216	1700	1700	762	1700
Volume to Capacity	2.94	0.31	0.21	0.19	0.11
Queue Length 95th (ft)	1412	0	0	17	0
Control Delay (s/veh)	917.9	0.0	0.0	7.4	0.0
Lane LOS	F			A	
Approach Delay (s/veh)	917.9	0.0		4.1	
Approach LOS	F				

Intersection Summary				
Average Delay	302.3			
Intersection Capacity Utilization	77.6%	ICU Level of Service		D
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	317.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	292	292	725	87	130	251
Future Vol, veh/h	292	292	725	87	130	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	317	317	788	95	141	273

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1255	442	0	0	883	0
Stage 1	836	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 164	563	-	-	762	-
Stage 1	386	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 128	563	-	-	762	-
Mov Cap-2 Maneuver	~ 128	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	494	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v$	964	0	4.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	209	762	-
HCM Lane V/C Ratio	-	-	3.037	0.185	-
HCM Control Delay (s/veh)	-	-	$ 964	10.8	0.6
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q (veh)	-	-	57.4	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	82	890	126	0	381
Future Volume (vph)	0	82	890	126	0	381
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	0	
Storage Lanes	0	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.981			
Flt Protected						
Satd. Flow (prot)	0	1611	3472	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1611	3472	0	0	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	533		2048			982
Travel Time (s)	12.1		21.5			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	967	137	0	414
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	89	1104	0	0	414
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	82	890	126	0	381
Future Volume (Veh/h)	0	82	890	126	0	381
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	89	967	137	0	414
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1243	552			1104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1243	552			1104	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	81			100	
cM capacity (veh/h)	167	477			628	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	89	645	459	207	207
Volume Left	0	0	0	0	0
Volume Right	89	0	137	0	0
cSH	477	1700	1700	1700	1700
Volume to Capacity	0.19	0.38	0.27	0.12	0.12
Queue Length 95th (ft)	17	0	0	0	0
Control Delay (s/veh)	14.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s/veh)	14.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	82	890	126	0	381
Future Vol, veh/h	0	82	890	126	0	381
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	89	967	137	0	414

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	552	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	477	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	477	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	477	-
HCM Lane V/C Ratio	-	-	0.187	-
HCM Control Delay (s/veh)	-	-	14.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q (veh)	-	-	0.7	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	0	0	22	27	65
Future Volume (vph)	146	0	0	22	27	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			530
Storage Lanes	0	0	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.904	
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1684	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1684	0
Link Speed (mph)	30			60	60	
Link Distance (ft)	383			3870	672	
Travel Time (s)	8.7			44.0	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	159	0	0	24	29	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	0	24	100	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	0	0	22	27	65
Future Volume (Veh/h)	146	0	0	22	27	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	0	0	24	29	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	89	65	100			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89	65	100			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	100	100			
cM capacity (veh/h)	912	1000	1493			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	159	24	100
Volume Left	159	0	0
Volume Right	0	0	71
cSH	912	1493	1700
Volume to Capacity	0.17	0.00	0.06
Queue Length 95th (ft)	16	0	0
Control Delay (s/veh)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s/veh)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	146	0	0	22	27	65
Future Vol, veh/h	146	0	0	22	27	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	159	0	0	24	29	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	89	65	100	0	-	0
Stage 1	65	-	-	-	-	-
Stage 2	24	-	-	-	-	-
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	912	999	1493	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	912	999	1493	-	-	-
Mov Cap-2 Maneuver	912	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	912	-	-
HCM Lane V/C Ratio	-	-	0.174	-	-
HCM Control Delay (s/veh)	0	-	9.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	0.6	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	220	69	22	49	146
Future Volume (vph)	65	220	69	22	49	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340			270	0	0
Storage Lanes	0			0	0	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.967		0.899	
Flt Protected		0.989			0.988	
Satd. Flow (prot)	0	1842	1801	0	1655	0
Flt Permitted		0.989			0.988	
Satd. Flow (perm)	0	1842	1801	0	1655	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1207	2430		518	
Travel Time (s)		18.3	36.8		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	239	75	24	53	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	310	99	0	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	220	69	22	49	146
Future Volume (Veh/h)	65	220	69	22	49	146
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	71	239	75	24	53	159
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	99				468	87
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99				468	87
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				90	84
cM capacity (veh/h)	1494				527	971

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	310	99	212
Volume Left	71	0	53
Volume Right	0	24	159
cSH	1494	1700	802
Volume to Capacity	0.05	0.06	0.26
Queue Length 95th (ft)	4	0	27
Control Delay (s/veh)	2.0	0.0	11.1
Lane LOS	A		B
Approach Delay (s/veh)	2.0	0.0	11.1
Approach LOS			B

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	220	69	22	49	146
Future Vol, veh/h	65	220	69	22	49	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	-	-
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	71	239	75	24	53	159

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	468	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	381	-
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	1494	-	-	-	553	971
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1494	-	-	-	523	971
Mov Cap-2 Maneuver	-	-	-	-	523	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.7	0	8.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	1297
HCM Lane V/C Ratio	0.047	-	-	-	0.163
HCM Control Delay (s/veh)	7.5	0	-	-	8.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	284	214	0	0	49
Future Volume (vph)	22	284	214	0	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.996				
Satd. Flow (prot)	0	1855	1863	0	1611	0
Flt Permitted		0.996				
Satd. Flow (perm)	0	1855	1863	0	1611	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		987	1099		293	
Travel Time (s)		15.0	16.7		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	309	233	0	0	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	333	233	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	284	214	0	0	49
Future Volume (Veh/h)	22	284	214	0	0	49
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	309	233	0	0	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	233				590	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233				590	233
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	93
cM capacity (veh/h)	1335				462	806

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	333	233	53
Volume Left	24	0	0
Volume Right	0	0	53
cSH	1335	1700	806
Volume to Capacity	0.02	0.14	0.07
Queue Length 95th (ft)	1	0	5
Control Delay (s/veh)	0.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	0.7	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	284	214	0	0	49
Future Vol, veh/h	22	284	214	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	24	309	233	0	0	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	233	0	-	0	590	233
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	357	-
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	1335	-	-	-	470	806
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1335	-	-	-	460	806
Mov Cap-2 Maneuver	-	-	-	-	460	-
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.8
HCM LOS			A

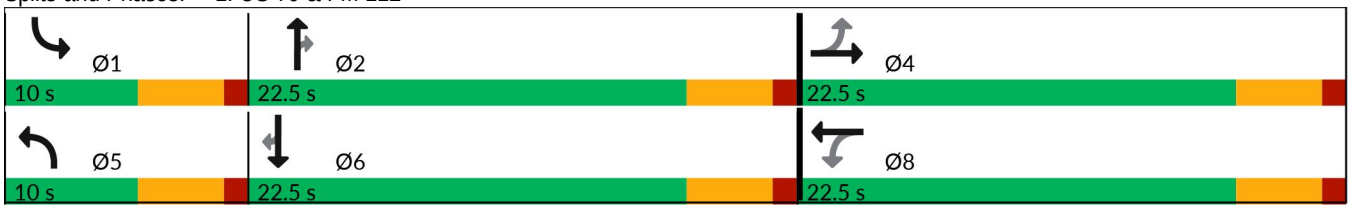
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1335	-	-	-	806
HCM Lane V/C Ratio	0.018	-	-	-	0.066
HCM Control Delay (s/veh)	7.7	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Future Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.980			0.989				0.850			0.850
Flt Protected		0.966			0.970		0.950			0.950		
Satd. Flow (prot)	0	1781	0	0	1805	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.669			0.769		0.950			0.950		
Satd. Flow (perm)	0	1233	0	0	1431	0	1787	3574	1599	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			9				219			119
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			987			417			1555	
Travel Time (s)		28.4			15.0			4.4			16.3	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	95	19	20	219	106	29	17	669	219	135	589	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	134	0	0	354	0	17	669	219	135	589	76
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		10.0	22.5	22.5	10.0	22.5	22.5
Total Split (%)	40.9%	40.9%		40.9%	40.9%		18.2%	40.9%	40.9%	18.2%	40.9%	40.9%
Maximum Green (s)	18.0	18.0		18.0	18.0		5.5	18.0	18.0	5.5	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)		15.5			15.5		5.8	15.5	15.5	5.8	21.1	21.1
Actuated g/C Ratio		0.32			0.32		0.12	0.32	0.32	0.12	0.44	0.44
v/c Ratio		0.32			0.75		0.07	0.57	0.32	0.62	0.37	0.09
Control Delay (s/veh)		14.8			28.3		23.4	16.9	4.1	40.9	10.7	1.7
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		14.8			28.3		23.4	16.9	4.1	40.9	10.7	1.7
LOS		B			C		C	B	A	D	B	A
Approach Delay (s/veh)		14.9			28.4			13.9			15.0	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 47.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 16.7		Intersection LOS: B	
Intersection Capacity Utilization 48.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: US 79 & FM 112





Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	134	354	17	669	219	135	589	76
v/c Ratio	0.32	0.75	0.07	0.57	0.32	0.62	0.37	0.09
Control Delay (s/veh)	14.8	28.3	23.4	16.9	4.1	40.9	10.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.8	28.3	23.4	16.9	4.1	40.9	10.7	1.7
Queue Length 50th (ft)	26	94	5	93	0	43	54	0
Queue Length 95th (ft)	40	80	12	130	27	38	121	0
Internal Link Dist (ft)	1169	907		337			1475	
Turn Bay Length (ft)			155		165	190		340
Base Capacity (vph)	501	576	217	1425	769	217	1749	843
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.61	0.08	0.47	0.28	0.62	0.34	0.09

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Future Volume (vph)	53	12	9	193	53	22	9	575	177	54	536	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.97			0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1780			1805		1787	3574	1599	1787	3574	1599
Flt Permitted		0.66			0.76		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1233			1431		1787	3574	1599	1787	3574	1599
Peak-hour factor, PHF	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Adj. Flow (vph)	95	19	20	219	106	29	17	669	219	135	589	76
RTOR Reduction (vph)	0	12	0	0	6	0	0	0	141	0	0	45
Lane Group Flow (vph)	0	122	0	0	348	0	17	669	78	135	589	31
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		15.5			15.5		1.0	18.1	18.1	4.0	21.1	21.1
Effective Green, g (s)		15.5			15.5		1.0	18.1	18.1	4.0	21.1	21.1
Actuated g/C Ratio		0.30			0.30		0.02	0.35	0.35	0.08	0.41	0.41
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		374			434		34	1265	566	139	1475	660
v/s Ratio Prot							0.01	c0.19		c0.08	c0.16	
v/s Ratio Perm		0.10			c0.24				0.05			0.02
v/c Ratio		0.32			0.80		0.50	0.52	0.13	0.97	0.39	0.04
Uniform Delay, d1		13.7			16.3		24.8	13.1	11.1	23.4	10.5	8.9
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5			10.2		11.0	0.4	0.1	67.2	0.1	0.0
Delay (s)		14.2			26.5		35.9	13.5	11.3	90.7	10.7	9.0
Level of Service		B			C		D	B	B	F	B	A
Approach Delay (s/veh)		14.2			26.5			13.4			24.0	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

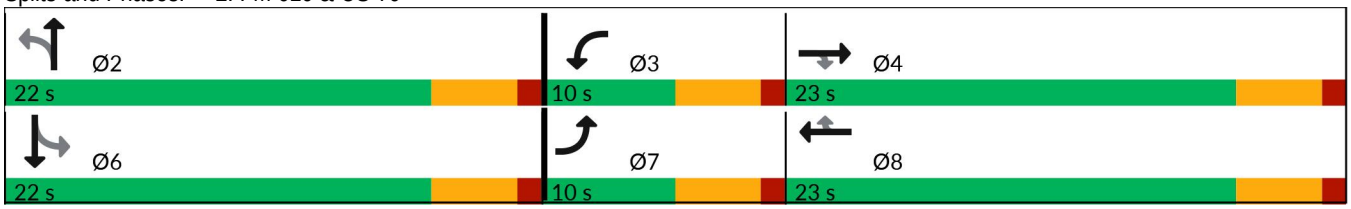
HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Future Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.960			0.966	
Flt Protected	0.950			0.950				0.975			0.985	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1761	0	0	1790	0
Flt Permitted	0.950			0.950				0.793			0.875	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1432	0	0	1590	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			119		40			32	
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2212			2858			672			2329	
Travel Time (s)		21.5			27.8			7.6			26.5	
Peak Hour Factor	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	15	549	78	87	990	68	82	32	48	59	84	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	549	78	87	990	68	0	162	0	0	191	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.0	23.0	23.0	10.0	23.0	23.0	22.0	22.0		22.0	22.0	
Total Split (%)	18.2%	41.8%	41.8%	18.2%	41.8%	41.8%	40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	5.5	18.5	18.5	5.5	18.5	18.5	17.5	17.5		17.5	17.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	6.0	13.3	13.3	6.0	16.8	16.8		9.7			9.7	
Actuated g/C Ratio	0.16	0.35	0.35	0.16	0.44	0.44		0.26			0.26	
v/c Ratio	0.05	0.43	0.12	0.30	0.43	0.08		0.40			0.44	
Control Delay (s/veh)	19.8	12.2	1.9	22.0	8.7	1.3		14.2			15.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay (s/veh)	19.8	12.2	1.9	22.0	8.7	1.3		14.2			15.1	
LOS	B	B	A	C	A	A		B			B	
Approach Delay (s/veh)		11.1			9.3			14.3			15.2	
Approach LOS		B			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 37.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay (s/veh): 10.7		Intersection LOS: B	
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: FM 619 & US 79





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	15	549	78	87	990	68	162	191
v/c Ratio	0.05	0.43	0.12	0.30	0.43	0.08	0.40	0.44
Control Delay (s/veh)	19.8	12.2	1.9	22.0	8.7	1.3	14.2	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.8	12.2	1.9	22.0	8.7	1.3	14.2	15.1
Queue Length 50th (ft)	3	53	0	19	39	0	23	31
Queue Length 95th (ft)	15	103	3	42	121	5	54	52
Internal Link Dist (ft)		2132			2778		592	2249
Turn Bay Length (ft)	730		965	890		840		
Base Capacity (vph)	283	1908	909	283	2961	972	743	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.29	0.09	0.31	0.33	0.07	0.22	0.23

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Future Volume (vph)	11	516	52	55	911	54	31	24	24	41	53	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97			0.98	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599		1761			1790	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.79			0.87	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599		1432			1591	
Peak-hour factor, PHF	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Adj. Flow (vph)	15	549	78	87	990	68	82	32	48	59	84	48
RTOR Reduction (vph)	0	0	50	0	0	40	0	30	0	0	24	0
Lane Group Flow (vph)	15	549	28	87	990	28	0	132	0	0	167	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	0.8	14.8	14.8	2.8	16.8	16.8		9.7			9.7	
Effective Green, g (s)	0.8	14.8	14.8	2.8	16.8	16.8		9.7			9.7	
Actuated g/C Ratio	0.02	0.36	0.36	0.07	0.41	0.41		0.24			0.24	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	35	1296	580	122	2114	658		340			378	
v/s Ratio Prot	0.01	0.15		c0.05	c0.19							
v/s Ratio Perm			0.02			0.02		0.09			c0.10	
v/c Ratio	0.42	0.42	0.04	0.71	0.46	0.04		0.38			0.44	
Uniform Delay, d1	19.7	9.7	8.4	18.6	8.7	7.1		13.0			13.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	8.2	0.2	0.0	17.8	0.1	0.0		0.7			0.8	
Delay (s)	27.9	10.0	8.4	36.4	8.9	7.2		13.7			14.0	
Level of Service	C	B	A	D	A	A		B			B	
Approach Delay (s/veh)		10.2			10.9			13.7			14.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	40.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	47	142	18	4	12
Future Volume (vph)	13	47	142	18	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.981		0.906	
Flt Protected		0.988			0.985	
Satd. Flow (prot)	0	1859	1845	0	1679	0
Flt Permitted		0.988			0.985	
Satd. Flow (perm)	0	1859	1845	0	1679	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		3870	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	19	59	195	32	7	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	78	227	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	47	142	18	4	12
Future Volume (Veh/h)	13	47	142	18	4	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Hourly flow rate (vph)	19	59	195	32	7	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	227				308	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227				308	211
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	98
cM capacity (veh/h)	1347				677	832

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	78	227	23
Volume Left	19	0	7
Volume Right	0	32	16
cSH	1347	1700	777
Volume to Capacity	0.01	0.13	0.03
Queue Length 95th (ft)	1	0	2
Control Delay (s/veh)	2.0	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	2.0	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	47	142	18	4	12
Future Vol, veh/h	13	47	142	18	4	12
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	69	79	73	56	60	75
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	19	59	195	32	7	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	227	0	-	0	308	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1347	-	-	-	686	832
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	929	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	676	832
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.9	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	779
HCM Lane V/C Ratio	0.014	-	-	-	0.029
HCM Control Delay (s/veh)	7.7	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	97	97	455	195	292	523
Future Volume (vph)	97	97	455	195	292	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	600	
Storage Lanes	0	0		1	1	
Taper Length (ft)	25				100	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.932			0.850		
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1694	0	3539	1583	1770	3539
Flt Permitted	0.976				0.950	
Satd. Flow (perm)	1694	0	3539	1583	1770	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	486		1555			2048
Travel Time (s)	11.0		16.3			21.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	105	105	495	212	317	568
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	0	495	212	317	568
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	97	97	455	195	292	523
Future Volume (Veh/h)	97	97	455	195	292	523
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	105	105	495	212	317	568
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1413	248			707	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1413	248			707	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	86			64	
cM capacity (veh/h)	83	753			887	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	210	248	248	212	317	284	284
Volume Left	105	0	0	0	317	0	0
Volume Right	105	0	0	212	0	0	0
cSH	149	1700	1700	1700	887	1700	1700
Volume to Capacity	1.41	0.15	0.15	0.12	0.36	0.17	0.17
Queue Length 95th (ft)	336	0	0	0	41	0	0
Control Delay (s/veh)	275.0	0.0	0.0	0.0	11.3	0.0	0.0
Lane LOS	F				B		
Approach Delay (s/veh)	275.0	0.0			4.0		
Approach LOS	F						

Intersection Summary			
Average Delay	34.0		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	34.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	97	455	195	292	523
Future Vol, veh/h	97	97	455	195	292	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	-	-	-	530	600	-
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	105	105	495	212	317	568

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1413	248	0	0	707	0
Stage 1	495	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	129	752	-	-	887	-
Stage 1	578	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 83	752	-	-	887	-
Mov Cap-2 Maneuver	~ 83	-	-	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	224	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	277.9	0	4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	149	887	-
HCM Lane V/C Ratio	-	-	1.415	0.358	-
HCM Control Delay (s/veh)	-	-	277.9	11.3	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q (veh)	-	-	13.6	1.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	79	374	177	0	815
Future Volume (vph)	0	79	374	177	0	815
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	533		2048			982
Travel Time (s)	12.1		21.5			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	86	407	192	0	886
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	86	407	192	0	886
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	79	374	177	0	815
Future Volume (Veh/h)	0	79	374	177	0	815
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	86	407	192	0	886
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	850	204			599	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850	204			599	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	300	803			974	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	86	204	204	192	443	443
Volume Left	0	0	0	0	0	0
Volume Right	86	0	0	192	0	0
cSH	803	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.12	0.12	0.11	0.26	0.26
Queue Length 95th (ft)	9	0	0	0	0	0
Control Delay (s/veh)	10.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s/veh)	10.0	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	79	374	177	0	815
Future Vol, veh/h	0	79	374	177	0	815
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	530	-	-
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	86	407	192	0	886

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	204	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	803	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	803	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	803	-
HCM Lane V/C Ratio	-	-	0.107	-
HCM Control Delay (s/veh)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q (veh)	-	-	0.4	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	0	0	31	17	146
Future Volume (vph)	48	0	0	31	17	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			530
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1863	1583
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1863	1583
Link Speed (mph)	30			60	60	
Link Distance (ft)	383			3870	672	
Travel Time (s)	8.7			44.0	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	0	0	34	18	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	0	34	18	159
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	0	0	31	17	146
Future Volume (Veh/h)	48	0	0	31	17	146
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	0	0	34	18	159
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					672	
pX, platoon unblocked						
vC, conflicting volume	52	18	177			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	52	18	177			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	957	1061	1399			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	52	34	18	159
Volume Left	52	0	0	0
Volume Right	0	0	0	159
cSH	957	1399	1700	1700
Volume to Capacity	0.05	0.00	0.01	0.09
Queue Length 95th (ft)	4	0	0	0
Control Delay (s/veh)	9.0	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s/veh)	9.0	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	0	0	31	17	146
Future Vol, veh/h	48	0	0	31	17	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	530
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	52	0	0	34	18	159

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	52	18	177	0	-	0
Stage 1	18	-	-	-	-	-
Stage 2	34	-	-	-	-	-
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	957	1061	1399	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	957	1061	1399	-	-	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1399	-	957	-	-
HCM Lane V/C Ratio	-	-	0.055	-	-
HCM Control Delay (s/veh)	0	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	0.2	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	146	49	203	49	16	48
Future Volume (vph)	146	49	203	49	16	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340			270	0	0
Storage Lanes	1			1	0	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850	0.898	
Flt Protected	0.950				0.988	
Satd. Flow (prot)	1770	1863	1863	1583	1653	0
Flt Permitted	0.950				0.988	
Satd. Flow (perm)	1770	1863	1863	1583	1653	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1207	2430		518	
Travel Time (s)		18.3	36.8		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	159	53	221	53	17	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	53	221	53	69	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	49	203	49	16	48
Future Volume (Veh/h)	146	49	203	49	16	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	53	221	53	17	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	274				592	221
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274				592	221
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				96	94
cM capacity (veh/h)	1289				411	819

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	159	53	221	53	69
Volume Left	159	0	0	0	17
Volume Right	0	0	0	53	52
cSH	1289	1700	1700	1700	658
Volume to Capacity	0.12	0.03	0.13	0.03	0.10
Queue Length 95th (ft)	11	0	0	0	9
Control Delay (s/veh)	8.2	0.0	0.0	0.0	11.1
Lane LOS	A				B
Approach Delay (s/veh)	6.1		0.0		11.1
Approach LOS					B

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	146	49	203	49	16	48
Future Vol, veh/h	146	49	203	49	16	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	340	-	-	270	-	-
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	159	53	221	53	17	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	274	0	-	0	592	221
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	371	-
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	1289	-	-	-	469	819
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	698	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1289	-	-	-	411	819
Mov Cap-2 Maneuver	-	-	-	-	411	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	698	-

Approach	EB	WB	SB
HCM Control Delay, s/v	6.1	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1289	-	-	-	656
HCM Lane V/C Ratio	0.123	-	-	-	0.106
HCM Control Delay (s/veh)	8.2	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q (veh)	0.4	-	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	49	195	251	0	0	16
Future Volume (vph)	49	195	251	0	0	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.990				
Satd. Flow (prot)	0	1844	1863	0	1611	0
Flt Permitted		0.990				
Satd. Flow (perm)	0	1844	1863	0	1611	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		987	1099		293	
Travel Time (s)		15.0	16.7		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	212	273	0	0	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	265	273	0	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	195	251	0	0	16
Future Volume (Veh/h)	49	195	251	0	0	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	212	273	0	0	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		987				
pX, platoon unblocked						
vC, conflicting volume	273				591	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	273				591	273
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	98
cM capacity (veh/h)	1290				450	766

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	265	273	17
Volume Left	53	0	0
Volume Right	0	0	17
cSH	1290	1700	766
Volume to Capacity	0.04	0.16	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s/veh)	1.9	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	1.9	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	195	251	0	0	16
Future Vol, veh/h	49	195	251	0	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	53	212	273	0	0	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	591	273
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	318	-
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	1290	-	-	-	470	766
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1290	-	-	-	448	766
Mov Cap-2 Maneuver	-	-	-	-	448	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	738	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.6	0	9.8
HCM LOS			A

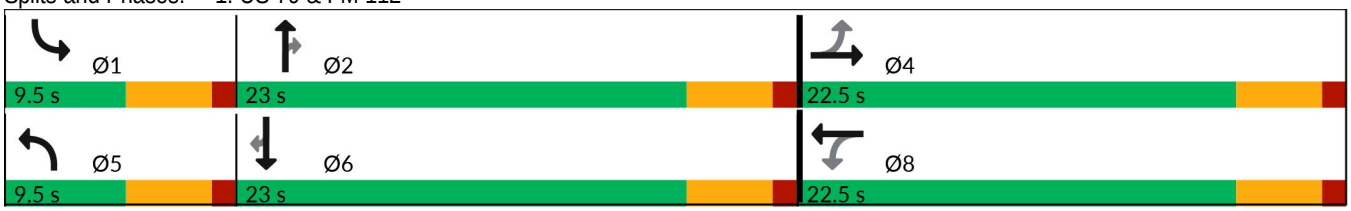
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1290	-	-	-	766
HCM Lane V/C Ratio	0.041	-	-	-	0.023
HCM Control Delay (s/veh)	7.9	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Future Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.985			0.972				0.850			0.850
Flt Protected		0.982			0.969		0.950			0.950		
Satd. Flow (prot)	0	1820	0	0	1772	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.826			0.756		0.950			0.950		
Satd. Flow (perm)	0	1531	0	0	1382	0	1787	3574	1599	1787	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			25				277			137
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			987			417			1555	
Travel Time (s)		28.4			15.0			4.4			16.3	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	57	84	18	210	54	69	36	847	277	78	505	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	333	0	36	847	277	78	505	137
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8					2			6
Detector Phase	4	4		8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		9.5	23.0	23.0	9.5	23.0	23.0
Total Split (%)	40.9%	40.9%		40.9%	40.9%		17.3%	41.8%	41.8%	17.3%	41.8%	41.8%
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	18.5	18.5	5.0	18.5	18.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	None	None	None	Max	Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	0
Act Effct Green (s)		14.8			14.8		5.1	19.4	19.4	5.1	21.0	21.0
Actuated g/C Ratio		0.31			0.31		0.11	0.40	0.40	0.11	0.43	0.43
v/c Ratio		0.33			0.75		0.19	0.59	0.34	0.41	0.32	0.17
Control Delay (s/veh)		14.9			27.9		25.6	15.6	3.6	30.9	11.6	3.8
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		14.9			27.9		25.6	15.6	3.6	30.9	11.6	3.8
LOS		B			C		C	B	A	C	B	A
Approach Delay (s/veh)		14.9			27.9			13.1			12.3	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 55			
Actuated Cycle Length: 48.5			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay (s/veh): 15.0		Intersection LOS: B	
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			

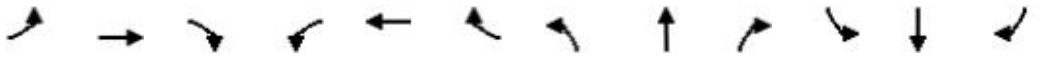
Splits and Phases: 1: US 79 & FM 112





Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	159	333	36	847	277	78	505	137
v/c Ratio	0.33	0.75	0.19	0.59	0.34	0.41	0.32	0.17
Control Delay (s/veh)	14.9	27.9	25.6	15.6	3.6	30.9	11.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.9	27.9	25.6	15.6	3.6	30.9	11.6	3.8
Queue Length 50th (ft)	35	86	11	123	0	25	44	0
Queue Length 95th (ft)	47	70	19	168	29	25	101	0
Internal Link Dist (ft)	1169	907		337			1475	
Turn Bay Length (ft)			155		165	190		340
Base Capacity (vph)	592	543	189	1427	804	189	1551	771
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.61	0.19	0.59	0.34	0.41	0.33	0.18

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Future Volume (vph)	32	52	8	185	27	52	19	728	224	31	460	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.98			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98			0.96		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1820			1773		1787	3574	1599	1787	3574	1599
Flt Permitted		0.82			0.75		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1530			1383		1787	3574	1599	1787	3574	1599
Peak-hour factor, PHF	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Adj. Flow (vph)	57	84	18	210	54	69	36	847	277	78	505	137
RTOR Reduction (vph)	0	9	0	0	18	0	0	0	167	0	0	81
Lane Group Flow (vph)	0	150	0	0	315	0	36	847	110	78	505	56
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm	NA		Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		14.8			14.8		1.8	20.3	20.3	2.6	21.1	21.1
Effective Green, g (s)		14.8			14.8		1.8	20.3	20.3	2.6	21.1	21.1
Actuated g/C Ratio		0.29			0.29		0.04	0.40	0.40	0.05	0.41	0.41
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		442			399		62	1417	633	90	1472	658
v/s Ratio Prot							0.02	c0.24		c0.04	0.14	
v/s Ratio Perm		0.10			c0.23				0.07			0.04
v/c Ratio		0.34			0.79		0.58	0.59	0.17	0.86	0.34	0.08
Uniform Delay, d1		14.3			16.7		24.3	12.2	10.0	24.1	10.3	9.1
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4			10.2		13.0	0.6	0.1	53.3	0.6	0.2
Delay (s)		14.8			26.9		37.4	12.9	10.1	77.5	10.9	9.4
Level of Service		B			C		D	B	B	E	B	A
Approach Delay (s/veh)		14.8			26.9			13.0			17.8	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

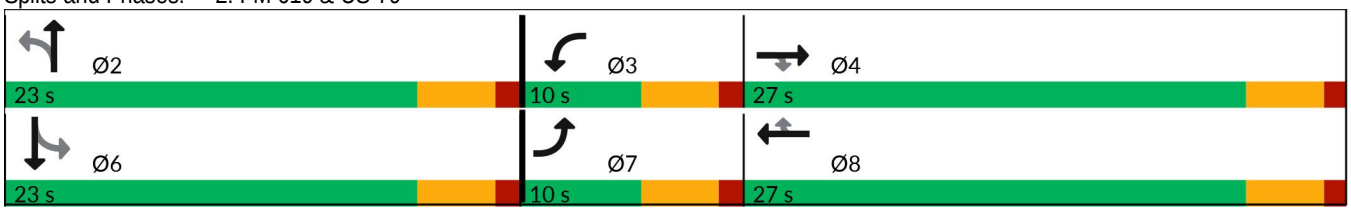
HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Future Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.957			0.982	
Flt Protected	0.950			0.950				0.979			0.973	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1762	0	0	1797	0
Flt Permitted	0.950			0.950				0.816			0.686	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1469	0	0	1267	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109			109		40			13	
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2212			2858			672			2329	
Travel Time (s)		21.5			27.8			7.6			26.5	
Peak Hour Factor	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	44	1115	46	43	487	49	137	83	102	93	52	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	1115	46	43	487	49	0	322	0	0	167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4			8	2			6		
Detector Phase	7	4	4	3	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.0	27.0	27.0	10.0	27.0	27.0	23.0	23.0		23.0	23.0	
Total Split (%)	16.7%	45.0%	45.0%	16.7%	45.0%	45.0%	38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	5.5	22.5	22.5	5.5	22.5	22.5	18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	
Walk Time (s)		7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0	0	0	0		0	0	
Act Effct Green (s)	5.9	19.8	19.8	5.9	19.8	19.8		14.1			14.1	
Actuated g/C Ratio	0.13	0.42	0.42	0.13	0.42	0.42		0.30			0.30	
v/c Ratio	0.19	0.73	0.06	0.19	0.22	0.06		0.68			0.42	
Control Delay (s/veh)	25.9	16.9	0.3	25.9	10.2	0.6		22.8			17.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay (s/veh)	25.9	16.9	0.3	25.9	10.2	0.6		22.8			17.8	
LOS	C	B	A	C	B	A		C			B	
Approach Delay (s/veh)		16.7			10.6			22.9			17.9	
Approach LOS		B			B			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay (s/veh): 16.1		Intersection LOS: B	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: FM 619 & US 79

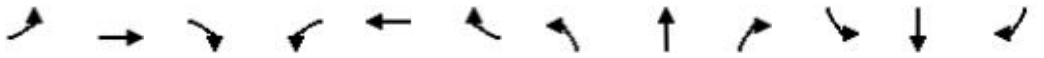




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	44	1115	46	43	487	49	322	167
v/c Ratio	0.19	0.73	0.06	0.19	0.22	0.06	0.68	0.42
Control Delay (s/veh)	25.9	16.9	0.3	25.9	10.2	0.6	22.8	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.9	16.9	0.3	25.9	10.2	0.6	22.8	17.8
Queue Length 50th (ft)	11	102	0	10	23	0	60	30
Queue Length 95th (ft)	35	#275	0	28	64	0	126	57
Internal Link Dist (ft)		2132			2778		592	2249
Turn Bay Length (ft)	730		965	890		840		
Base Capacity (vph)	225	1849	879	225	2657	879	647	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.60	0.05	0.19	0.18	0.06	0.50	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Future Volume (vph)	33	1048	31	27	448	39	52	62	51	64	33	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00		1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97			0.97	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599		1763			1798	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.81			0.68	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599		1470			1267	
Peak-hour factor, PHF	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Adj. Flow (vph)	44	1115	46	43	487	49	137	83	102	93	52	22
RTOR Reduction (vph)	0	0	27	0	0	29	0	29	0	0	9	0
Lane Group Flow (vph)	44	1115	19	43	487	20	0	293	0	0	158	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	1.7	19.8	19.8	1.7	19.8	19.8		14.1			14.1	
Effective Green, g (s)	1.7	19.8	19.8	1.7	19.8	19.8		14.1			14.1	
Actuated g/C Ratio	0.03	0.40	0.40	0.03	0.40	0.40		0.29			0.29	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	61	1441	644	61	2071	644		422			363	
v/s Ratio Prot	c0.02	c0.31		0.02	0.09							
v/s Ratio Perm			0.01			0.01		c0.20			0.12	
v/c Ratio	0.72	0.77	0.02	0.70	0.23	0.03		0.69			0.43	
Uniform Delay, d1	23.4	12.7	8.8	23.4	9.6	8.8		15.5			14.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	34.1	2.6	0.0	30.8	0.0	0.0		4.9			0.8	
Delay (s)	57.5	15.3	8.8	54.3	9.7	8.8		20.5			15.0	
Level of Service	E	B	A	D	A	A		C			B	
Approach Delay (s/veh)		16.6			12.9			20.5			15.0	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Edition methodology supports speed limit in the range of 25 to 55 mph.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	146	54	10	13	13
Future Volume (vph)	12	146	54	10	13	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.974		0.941	
Flt Protected		0.996			0.973	
Satd. Flow (prot)	0	1874	1832	0	1722	0
Flt Permitted		0.996			0.973	
Satd. Flow (perm)	0	1874	1832	0	1722	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		3870	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	17	185	74	18	22	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	202	92	0	39	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	146	54	10	13	13
Future Volume (Veh/h)	12	146	54	10	13	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Hourly flow rate (vph)	17	185	74	18	22	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	92				302	83
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	92				302	83
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	98
cM capacity (veh/h)	1509				684	979

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	202	92	39
Volume Left	17	0	22
Volume Right	0	18	17
cSH	1509	1700	787
Volume to Capacity	0.01	0.05	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s/veh)	0.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	0.7	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	146	54	10	13	13
Future Vol, veh/h	12	146	54	10	13	13
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	69	79	73	56	60	75
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	17	185	74	18	22	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	92	0	-	0	302	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	219	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1509	-	-	-	692	979
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1509	-	-	-	683	979
Mov Cap-2 Maneuver	-	-	-	-	683	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	820	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1509	-	-	-	789
HCM Lane V/C Ratio	0.012	-	-	-	0.049
HCM Control Delay (s/veh)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	292	292	725	87	130	251
Future Volume (vph)	292	292	725	87	130	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	600	
Storage Lanes	0	0		1	1	
Taper Length (ft)	25				100	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.932			0.850		
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1694	0	3539	1583	1770	3539
Flt Permitted	0.976				0.950	
Satd. Flow (perm)	1694	0	3539	1583	1770	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	486		1555			2048
Travel Time (s)	11.0		16.3			21.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	317	788	95	141	273
Shared Lane Traffic (%)						
Lane Group Flow (vph)	634	0	788	95	141	273
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	292	292	725	87	130	251
Future Volume (Veh/h)	292	292	725	87	130	251
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	317	317	788	95	141	273
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1207	394			883	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1207	394			883	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	48			81	
cM capacity (veh/h)	143	605			762	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	634	394	394	95	141	137	137
Volume Left	317	0	0	0	141	0	0
Volume Right	317	0	0	95	0	0	0
cSH	232	1700	1700	1700	762	1700	1700
Volume to Capacity	2.73	0.23	0.23	0.06	0.19	0.08	0.08
Queue Length 95th (ft)	1365	0	0	0	17	0	0
Control Delay (s/veh)	824.7	0.0	0.0	0.0	10.8	0.0	0.0
Lane LOS	F				B		
Approach Delay (s/veh)	824.7	0.0			3.7		
Approach LOS	F						

Intersection Summary			
Average Delay	271.6		
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	273.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	292	292	725	87	130	251
Future Vol, veh/h	292	292	725	87	130	251
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	530	600	-
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	317	317	788	95	141	273

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1207	394	0	0	883	0
Stage 1	788	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 176	605	-	-	762	-
Stage 1	409	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 143	605	-	-	762	-
Mov Cap-2 Maneuver	~ 143	-	-	-	-	-
Stage 1	409	-	-	-	-	-
Stage 2	515	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v$	831	0	3.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	231	762	-
HCM Lane V/C Ratio	-	-	2.748	0.185	-
HCM Control Delay (s/veh)	-	-	$ 831	10.8	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q (veh)	-	-	54.8	0.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	82	890	126	0	381
Future Volume (vph)	0	82	890	126	0	381
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		530	0	
Storage Lanes	0	0		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	3539
Link Speed (mph)	30		65			65
Link Distance (ft)	533		2048			982
Travel Time (s)	12.1		21.5			10.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	89	967	137	0	414
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	89	967	137	0	414
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	82	890	126	0	381
Future Volume (Veh/h)	0	82	890	126	0	381
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	89	967	137	0	414
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1174	484			1104	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1174	484			1104	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	83			100	
cM capacity (veh/h)	185	529			628	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	89	484	484	137	207	207
Volume Left	0	0	0	0	0	0
Volume Right	89	0	0	137	0	0
cSH	529	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.28	0.28	0.08	0.12	0.12
Queue Length 95th (ft)	15	0	0	0	0	0
Control Delay (s/veh)	13.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s/veh)	13.2	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	82	890	126	0	381
Future Vol, veh/h	0	82	890	126	0	381
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	530	-	-
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	89	967	137	0	414

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	484	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	529	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	529	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	529	-
HCM Lane V/C Ratio	-	-	0.168	-
HCM Control Delay (s/veh)	-	-	13.2	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q (veh)	-	-	0.6	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	146	0	0	22	27	65
Future Volume (vph)	146	0	0	22	27	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			530
Storage Lanes	0	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	1863	1863	1583
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	1863	1863	1583
Link Speed (mph)	30			60	60	
Link Distance (ft)	383			3870	672	
Travel Time (s)	8.7			44.0	7.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	159	0	0	24	29	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	0	24	29	71
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	0	0	22	27	65
Future Volume (Veh/h)	146	0	0	22	27	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	159	0	0	24	29	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					672	
pX, platoon unblocked						
vC, conflicting volume	53	29	100			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	53	29	100			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	100	100			
cM capacity (veh/h)	955	1046	1493			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	159	24	29	71
Volume Left	159	0	0	0
Volume Right	0	0	0	71
cSH	955	1493	1700	1700
Volume to Capacity	0.17	0.00	0.02	0.04
Queue Length 95th (ft)	15	0	0	0
Control Delay (s/veh)	9.5	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s/veh)	9.5	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	146	0	0	22	27	65
Future Vol, veh/h	146	0	0	22	27	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	530
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	159	0	0	24	29	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	53	29	100	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	24	-	-	-	-	-
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	955	1046	1493	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	955	1046	1493	-	-	-
Mov Cap-2 Maneuver	955	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.5	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	955	-	-
HCM Lane V/C Ratio	-	-	0.166	-	-
HCM Control Delay (s/veh)	0	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	0.6	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	220	69	22	49	146
Future Volume (vph)	65	220	69	22	49	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	340			270	0	0
Storage Lanes	1			1	0	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850	0.899	
Flt Protected	0.950				0.988	
Satd. Flow (prot)	1770	1863	1863	1583	1655	0
Flt Permitted	0.950				0.988	
Satd. Flow (perm)	1770	1863	1863	1583	1655	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1207	2430		518	
Travel Time (s)		18.3	36.8		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	239	75	24	53	159
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	239	75	24	212	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	220	69	22	49	146
Future Volume (Veh/h)	65	220	69	22	49	146
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	71	239	75	24	53	159
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	99				456	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99				456	75
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				90	84
cM capacity (veh/h)	1494				536	986

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	71	239	75	24	212
Volume Left	71	0	0	0	53
Volume Right	0	0	0	24	159
cSH	1494	1700	1700	1700	815
Volume to Capacity	0.05	0.14	0.04	0.01	0.26
Queue Length 95th (ft)	4	0	0	0	26
Control Delay (s/veh)	7.5	0.0	0.0	0.0	11.0
Lane LOS	A				B
Approach Delay (s/veh)	1.7		0.0		11.0
Approach LOS					B

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	220	69	22	49	146
Future Vol, veh/h	65	220	69	22	49	146
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	340	-	-	270	-	-
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	71	239	75	24	53	159

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	456	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	381	-
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	1494	-	-	-	562	986
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1494	-	-	-	535	986
Mov Cap-2 Maneuver	-	-	-	-	535	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.7	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	814
HCM Lane V/C Ratio	0.047	-	-	-	0.26
HCM Control Delay (s/veh)	7.5	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	-	1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	284	214	0	0	49
Future Volume (vph)	22	284	214	0	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.996				
Satd. Flow (prot)	0	1855	1863	0	1611	0
Flt Permitted		0.996				
Satd. Flow (perm)	0	1855	1863	0	1611	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		987	1099		293	
Travel Time (s)		15.0	16.7		6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	309	233	0	0	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	333	233	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	284	214	0	0	49
Future Volume (Veh/h)	22	284	214	0	0	49
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	309	233	0	0	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		987				
pX, platoon unblocked						
vC, conflicting volume	233				590	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	233				590	233
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	93
cM capacity (veh/h)	1335				462	806

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	333	233	53
Volume Left	24	0	0
Volume Right	0	0	53
cSH	1335	1700	806
Volume to Capacity	0.02	0.14	0.07
Queue Length 95th (ft)	1	0	5
Control Delay (s/veh)	0.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s/veh)	0.7	0.0	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	284	214	0	0	49
Future Vol, veh/h	22	284	214	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	24	309	233	0	0	53

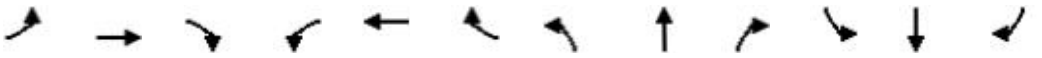
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	233	0	-	0	590	233
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	357	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1335	-	-	-	470	806
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1335	-	-	-	460	806
Mov Cap-2 Maneuver	-	-	-	-	460	-
Stage 1	-	-	-	-	788	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1335	-	-	-	806
HCM Lane V/C Ratio	0.018	-	-	-	0.066
HCM Control Delay (s/veh)	7.7	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	11	8	130	48	5	8	299	28	5	411	12
Future Volume (vph)	4	11	8	130	48	5	8	299	28	5	411	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.969			0.991				0.850			0.850
Flt Protected		0.992			0.968		0.950			0.950		
Satd. Flow (prot)	0	1826	0	0	1805	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.992			0.968		0.950			0.950		
Satd. Flow (perm)	0	1826	0	0	1805	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			2092			417			1920	
Travel Time (s)		28.4			31.7			4.4			20.1	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Heavy Vehicles (%)	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	8	32	12	160	68	16	20	383	40	8	442	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	244	0	20	383	40	8	442	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	11	8	130	48	5	8	299	28	5	411	12
Future Volume (Veh/h)	4	11	8	130	48	5	8	299	28	5	411	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.34	0.67	0.81	0.71	0.31	0.40	0.78	0.70	0.63	0.93	0.60
Hourly flow rate (vph)	8	32	12	160	68	16	20	383	40	8	442	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	724	881	221	676	881	192	442			383		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	724	881	221	676	881	192	442			383		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	89	98	47	76	98	98			99		
cM capacity (veh/h)	248	281	789	301	279	821	1122			1179		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	52	244	20	192	192	40	8	221	221	20
Volume Left	8	160	20	0	0	0	8	0	0	0
Volume Right	12	16	0	0	0	40	0	0	0	20
cSH	322	307	1122	1700	1700	1700	1179	1700	1700	1700
Volume to Capacity	0.16	0.79	0.02	0.11	0.11	0.02	0.01	0.13	0.13	0.01
Queue Length 95th (ft)	14	160	1	0	0	0	1	0	0	0
Control Delay (s/veh)	18.3	50.1	8.3	0.0	0.0	0.0	8.1	0.0	0.0	0.0
Lane LOS	C	F	A				A			
Approach Delay (s/veh)	18.3	50.1	0.4				0.1			
Approach LOS	C	F								

Intersection Summary				
Average Delay	11.1			
Intersection Capacity Utilization	34.7%	ICU Level of Service		A
Analysis Period (min)	15			

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	11	8	130	48	5	8	299	28	5	411	12
Future Vol, veh/h	4	11	8	130	48	5	8	299	28	5	411	12
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	34	67	81	71	31	40	78	70	63	93	60
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	8	32	12	160	68	16	20	383	40	8	442	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	724	881	221	676	881	192	442	0	0	383	0	0
Stage 1	458	458	-	423	423	-	-	-	-	-	-	-
Stage 2	266	423	-	253	458	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	317	288	789	341	286	820	1122	-	-	1179	-	-
Stage 1	557	570	-	582	589	-	-	-	-	-	-	-
Stage 2	722	591	-	732	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	248	281	789	301	279	820	1122	-	-	1179	-	-
Mov Cap-2 Maneuver	248	281	-	301	279	-	-	-	-	-	-	-
Stage 1	547	566	-	572	578	-	-	-	-	-	-	-
Stage 2	614	580	-	675	564	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	16.6	20.5	0.4	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1122	-	-	355	315	1179	-	-
HCM Lane V/C Ratio	0.018	-	-	0.125	0.266	0.007	-	-
HCM Control Delay (s/veh)	8.3	-	-	16.6	20.5	8.1	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	0.4	1	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	436	3	6	734	49	13	7	7	37	4	28
Future Volume (vph)	10	436	3	6	734	49	13	7	7	37	4	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.942			0.953	
Flt Protected	0.950			0.950				0.982			0.974	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1740	0	0	1746	0
Flt Permitted	0.950			0.950				0.982			0.974	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1740	0	0	1746	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2142			2858			4542			2329	
Travel Time (s)		48.7			65.0			51.6			26.5	
Peak Hour Factor	0.63	0.92	0.25	0.50	0.83	0.61	0.65	0.58	0.29	0.66	0.33	0.78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	16	474	12	12	884	80	20	12	24	56	12	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	474	12	12	884	80	0	56	0	0	104	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	436	3	6	734	49	13	7	7	37	4	28
Future Vol, veh/h	10	436	3	6	734	49	13	7	7	37	4	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	92	25	50	83	61	65	58	29	66	33	78
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	16	474	12	12	884	80	20	12	24	56	12	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	884	0	0	486	0	0	890	1414	237	1183	1426	442
Stage 1	-	-	-	-	-	-	506	506	-	908	908	-
Stage 2	-	-	-	-	-	-	384	908	-	275	518	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	448	-	-	1080	-	-	267	138	768	171	135	484
Stage 1	-	-	-	-	-	-	503	541	-	238	355	-
Stage 2	-	-	-	-	-	-	580	355	-	685	534	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	448	-	-	1080	-	-	221	132	768	149	129	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	132	-	149	129	-
Stage 1	-	-	-	-	-	-	485	522	-	229	351	-
Stage 2	-	-	-	-	-	-	513	351	-	625	515	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	0.1	22.4	44.4
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	263	448	-	-	1080	-	-	191
HCM Lane V/C Ratio	0.214	0.035	-	-	0.011	-	-	0.545
HCM Control Delay (s/veh)	22.4	13.3	-	-	8.4	-	-	44.4
HCM Lane LOS	C	B	-	-	A	-	-	E
HCM 95th %tile Q (veh)	0.8	0.1	-	-	0	-	-	2.8



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	12	28	84	16	4	11
Future Volume (vph)	12	28	84	16	4	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.973		0.916	
Flt Protected		0.984			0.982	
Satd. Flow (prot)	0	1851	1830	0	1692	0
Flt Permitted		0.984			0.982	
Satd. Flow (perm)	0	1851	1830	0	1692	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		4542	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	24	52	95	24	12	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	76	119	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	28	84	16	4	11
Future Volume (Veh/h)	12	28	84	16	4	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.50	0.54	0.88	0.67	0.33	0.55
Hourly flow rate (vph)	24	52	95	24	12	20
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	119				207	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	119				207	107
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	98
cM capacity (veh/h)	1475				771	950

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	119	32
Volume Left	24	0	12
Volume Right	0	24	20
cSH	1475	1700	874
Volume to Capacity	0.02	0.07	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s/veh)	2.4	0.0	9.3
Lane LOS	A		A
Approach Delay (s/veh)	2.4	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay		2.1	
Intersection Capacity Utilization		18.8%	ICU Level of Service A
Analysis Period (min)		15	

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	28	84	16	4	11
Future Vol, veh/h	12	28	84	16	4	11
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	50	54	88	67	33	55
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	24	52	95	24	12	20

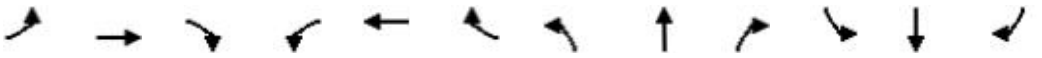
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	119	0	-	0	207	107
Stage 1	-	-	-	-	107	-
Stage 2	-	-	-	-	100	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1475	-	-	-	784	950
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1475	-	-	-	771	950
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	927	-

Approach	EB	WB	SB
HCM Control Delay, s/v	2.4	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1475	-	-	-	873
HCM Lane V/C Ratio	0.016	-	-	-	0.037
HCM Control Delay (s/veh)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0.1	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	47	7	35	24	3	17	559	143	8	196	3
Future Volume (vph)	9	47	7	35	24	3	17	559	143	8	196	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	155		165	190		340
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			115			170		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.980			0.994				0.850			0.850
Flt Protected		0.993			0.979		0.950			0.950		
Satd. Flow (prot)	0	1831	0	0	1831	0	1787	3574	1599	1787	3574	1599
Flt Permitted		0.993			0.979		0.950			0.950		
Satd. Flow (perm)	0	1831	0	0	1831	0	1787	3574	1599	1787	3574	1599
Link Speed (mph)		30			45			65			65	
Link Distance (ft)		1249			2092			417			1920	
Travel Time (s)		28.4			31.7			4.4			20.1	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	16	76	16	40	48	4	32	650	177	20	215	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	92	0	32	650	177	20	215	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	47	7	35	24	3	17	559	143	8	196	3
Future Volume (Veh/h)	9	47	7	35	24	3	17	559	143	8	196	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.56	0.62	0.44	0.88	0.50	0.75	0.53	0.86	0.81	0.40	0.91	0.38
Hourly flow rate (vph)	16	76	16	40	48	4	32	650	177	20	215	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	668	969	108	900	969	325	215			650		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	668	969	108	900	969	325	215			650		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	69	98	76	80	99	98			98		
cM capacity (veh/h)	282	243	929	170	243	674	1360			939		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	108	92	32	325	325	177	20	108	108	8
Volume Left	16	40	32	0	0	0	20	0	0	0
Volume Right	16	4	0	0	0	177	0	0	0	8
cSH	279	209	1360	1700	1700	1700	939	1700	1700	1700
Volume to Capacity	0.39	0.44	0.02	0.19	0.19	0.10	0.02	0.06	0.06	0.00
Queue Length 95th (ft)	44	52	2	0	0	0	2	0	0	0
Control Delay (s/veh)	25.8	35.1	7.7	0.0	0.0	0.0	8.9	0.0	0.0	0.0
Lane LOS	D	E	A				A			
Approach Delay (s/veh)	25.8	35.1	0.3				0.7			
Approach LOS	D	E								

Intersection Summary					
Average Delay	4.9				
Intersection Capacity Utilization	32.0%	ICU Level of Service		A	
Analysis Period (min)	15				

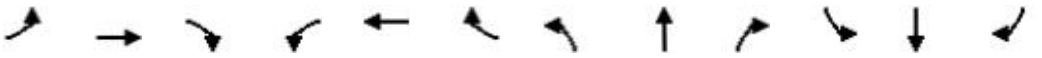
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	47	7	35	24	3	17	559	143	8	196	3
Future Vol, veh/h	9	47	7	35	24	3	17	559	143	8	196	3
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	155	-	165	190	-	340
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	56	62	44	88	50	75	53	86	81	40	91	38
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	16	76	16	40	48	4	32	650	177	20	215	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	668	969	108	900	969	325	215	0	0	650	0	0
Stage 1	255	255	-	714	714	-	-	-	-	-	-	-
Stage 2	413	714	-	186	255	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.52	6.52	6.92	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.51	4.01	3.31	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	346	254	928	235	254	674	1360	-	-	939	-	-
Stage 1	730	698	-	391	436	-	-	-	-	-	-	-
Stage 2	590	436	-	801	698	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	282	243	928	170	243	674	1360	-	-	939	-	-
Mov Cap-2 Maneuver	282	243	-	170	243	-	-	-	-	-	-	-
Stage 1	712	683	-	382	426	-	-	-	-	-	-	-
Stage 2	508	426	-	685	683	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	22.9	27.3	0.3	0.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1360	-	-	292	213	939	-	-
HCM Lane V/C Ratio	0.024	-	-	0.314	0.244	0.021	-	-
HCM Control Delay (s/veh)	7.7	-	-	22.9	27.3	8.9	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	1.3	0.9	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	858	8	5	365	35	3	12	2	58	10	13
Future Volume (vph)	30	858	8	5	365	35	3	12	2	58	10	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	730		965	890		840	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	190			130			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.981			0.977	
Flt Protected	0.950			0.950				0.986			0.966	
Satd. Flow (prot)	1787	3574	1599	1787	5136	1599	0	1820	0	0	1775	0
Flt Permitted	0.950			0.950				0.986			0.966	
Satd. Flow (perm)	1787	3574	1599	1787	5136	1599	0	1820	0	0	1775	0
Link Speed (mph)		70			70			60			60	
Link Distance (ft)		2142			2858			4542			2329	
Travel Time (s)		48.7			65.0			51.6			26.5	
Peak Hour Factor	0.75	0.94	0.67	0.63	0.92	0.80	0.38	0.75	0.50	0.69	0.63	0.65
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	40	913	12	8	397	44	8	16	4	84	16	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	913	12	8	397	44	0	28	0	0	120	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	858	8	5	365	35	3	12	2	58	10	13
Future Vol, veh/h	30	858	8	5	365	35	3	12	2	58	10	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	730	-	965	890	-	840	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	94	67	63	92	80	38	75	50	69	63	65
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	40	913	12	8	397	44	8	16	4	84	16	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	925	0	0	1176	1406	457	958	1418	199
Stage 1	-	-	-	-	-	-	993	993	-	413	413	-
Stage 2	-	-	-	-	-	-	183	413	-	545	1005	-
Critical Hdwy	5.32	-	-	4.12	-	-	6.97	6.52	6.92	6.97	6.52	7.12
Critical Hdwy Stg 1	-	-	-	-	-	-	6.52	5.52	-	7.32	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.72	5.52	-	6.52	5.52	-
Follow-up Hdwy	3.11	-	-	2.21	-	-	3.66	4.01	3.31	3.66	4.01	3.91
Pot Cap-1 Maneuver	760	-	-	741	-	-	173	139	553	241	137	691
Stage 1	-	-	-	-	-	-	259	324	-	520	595	-
Stage 2	-	-	-	-	-	-	766	595	-	477	320	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	760	-	-	741	-	-	145	130	553	207	128	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	145	130	-	207	128	-
Stage 1	-	-	-	-	-	-	245	307	-	492	588	-
Stage 2	-	-	-	-	-	-	716	588	-	425	303	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	0.2	34.2	41
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	151	760	-	-	741	-	-	215
HCM Lane V/C Ratio	0.185	0.053	-	-	0.011	-	-	0.558
HCM Control Delay (s/veh)	34.2	10	-	-	9.9	-	-	41
HCM Lane LOS	D	B	-	-	A	-	-	E
HCM 95th %tile Q (veh)	0.7	0.2	-	-	0	-	-	3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	11	88	29	9	12	12
Future Volume (vph)	11	88	29	9	12	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.961		0.940	
Flt Protected		0.994			0.973	
Satd. Flow (prot)	0	1870	1808	0	1721	0
Flt Permitted		0.994			0.973	
Satd. Flow (perm)	0	1870	1808	0	1721	0
Link Speed (mph)		45	45		60	
Link Distance (ft)		513	612		4542	
Travel Time (s)		7.7	9.3		50.7	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	16	111	40	16	20	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	127	56	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.9%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	88	29	9	12	12
Future Volume (Veh/h)	11	88	29	9	12	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.69	0.79	0.73	0.56	0.60	0.75
Hourly flow rate (vph)	16	111	40	16	20	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	56				191	48
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56				191	48
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	98
cM capacity (veh/h)	1555				792	1024

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	127	56	36
Volume Left	16	0	20
Volume Right	0	16	16
cSH	1555	1700	881
Volume to Capacity	0.01	0.03	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s/veh)	1.0	0.0	9.3
Lane LOS	A		A
Approach Delay (s/veh)	1.0	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	88	29	9	12	12
Future Vol, veh/h	11	88	29	9	12	12
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	69	79	73	56	60	75
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	16	111	40	16	20	16

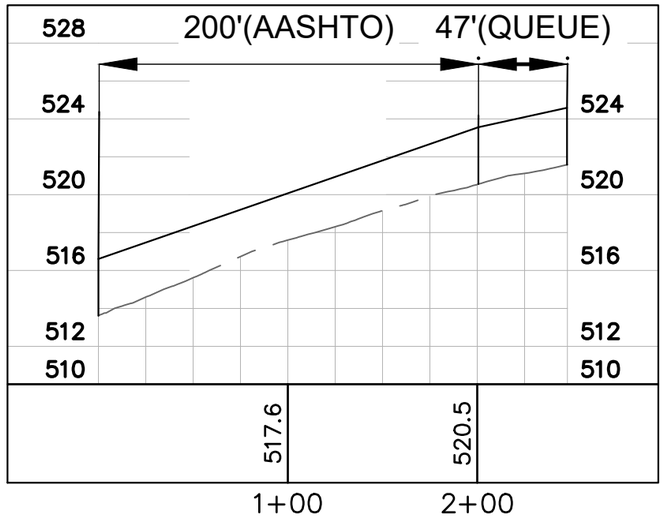
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	56	0	-	0	191	48
Stage 1	-	-	-	-	48	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	4.11	-	-	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	2.209	-	-	-	3.509	3.309
Pot Cap-1 Maneuver	1555	-	-	-	800	1024
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	887	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1555	-	-	-	791	1024
Mov Cap-2 Maneuver	-	-	-	-	791	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	887	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.9	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1555	-	-	-	880
HCM Lane V/C Ratio	0.01	-	-	-	0.041
HCM Control Delay (s/veh)	7.3	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

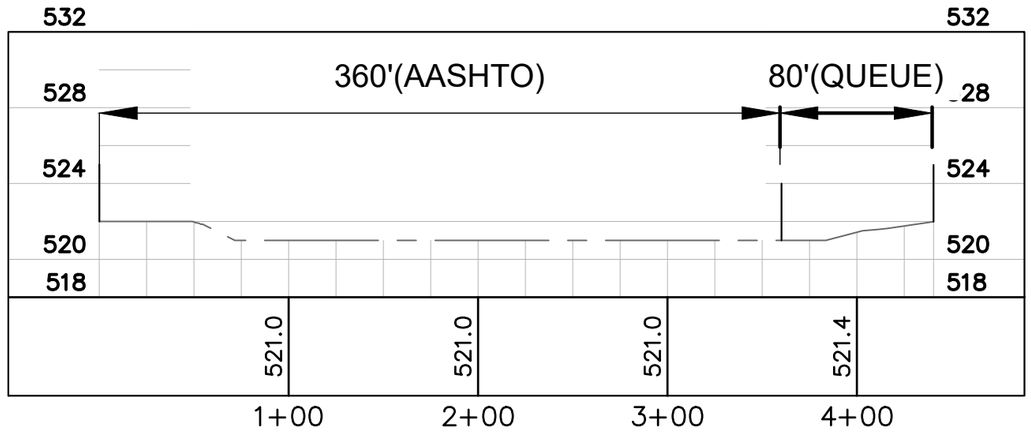
Appendix E: Vertical Stopping Sight Distance

INT 1 SSD EB



SPEED LIMIT 30

INT 1 SSD WB



SPEED LIMIT 45

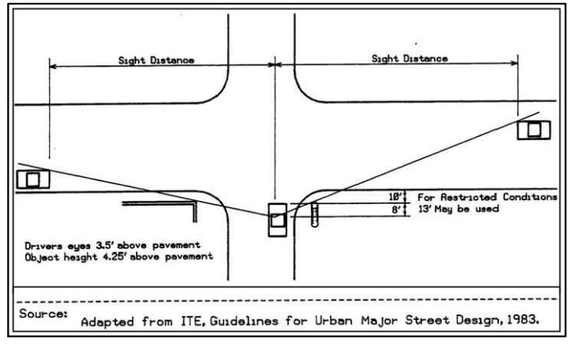
Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance		Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)				Calculated (m)	Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

GRAPHIC SCALE IN FEET
0 40 80 160
HORIZONTAL

0 40 80 160
VERTICAL



PROJECT NO.
065001200

Kimley»Horn
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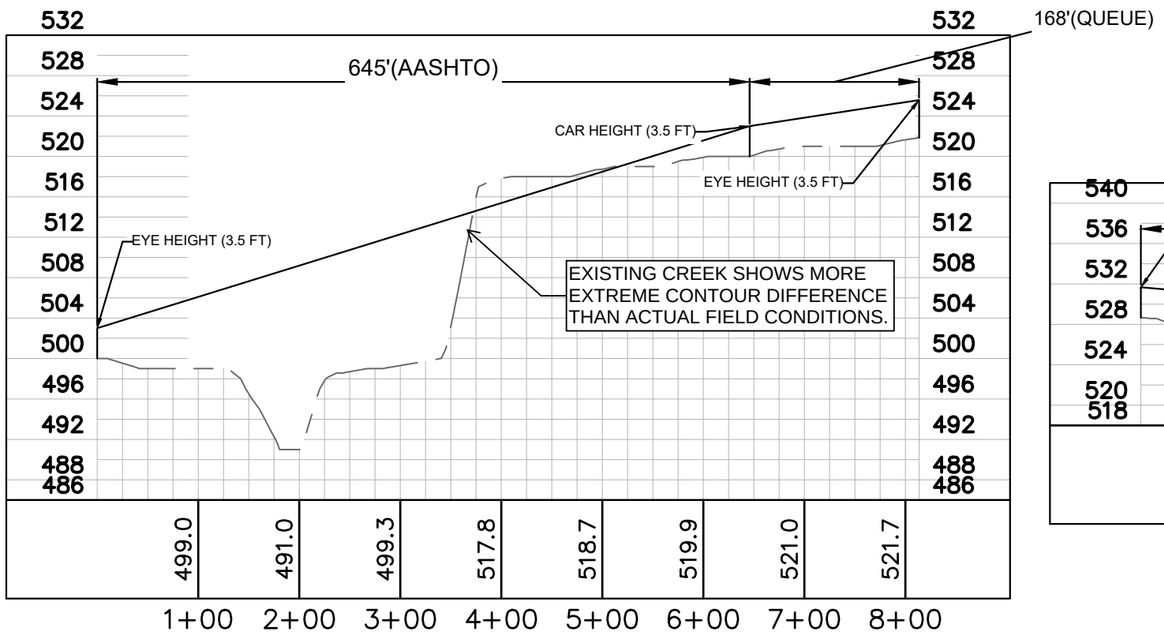
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VERTICAL STOPPING SIGHT DISTANCE - INT 1 E-W

FIGURE
5

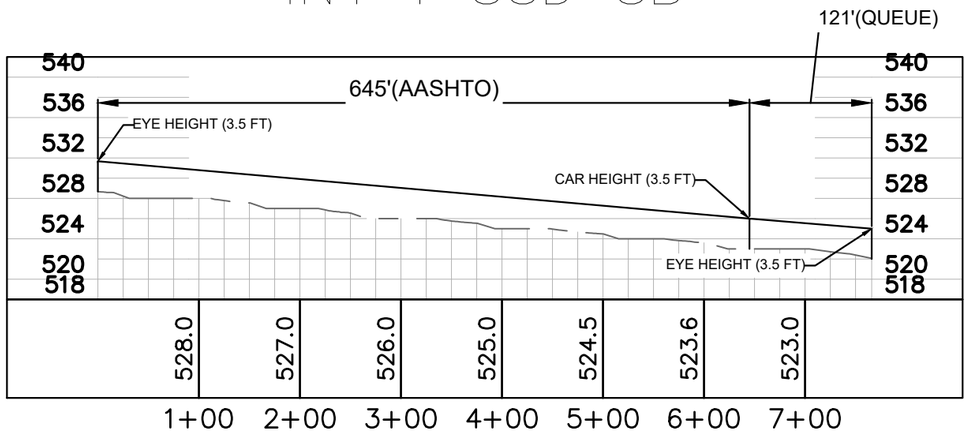
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INT 1 SSD NB



SPEED LIMIT 65

INT 1 SSD SB



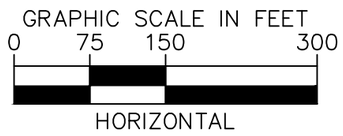
SPEED LIMIT 65

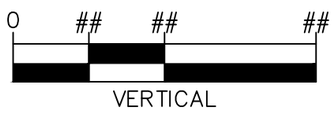
*creek crossing at contours

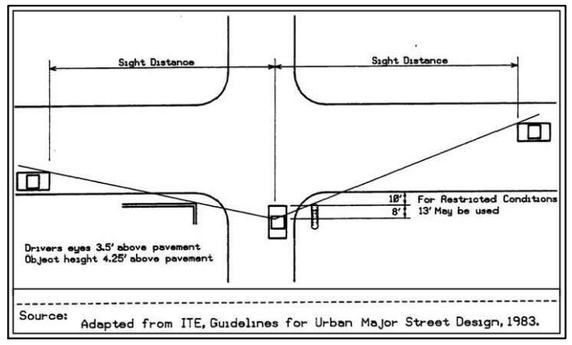
Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance Calculated (ft)	Stopping Sight Distance Design (ft)	Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance Calculated (m)	Stopping Sight Distance Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.







PROJECT NO.
065001200

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Website: kimley-horn.com

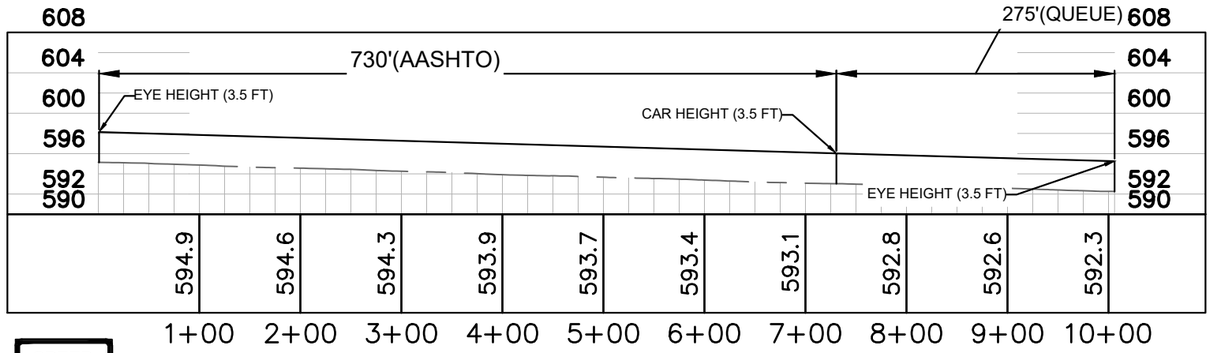
IMARKETAMERICA TIA
TAYLOR, TEXAS

VERTICAL STOPPING SIGHT DISTANCE - INT 1 N-S

FIGURE
6

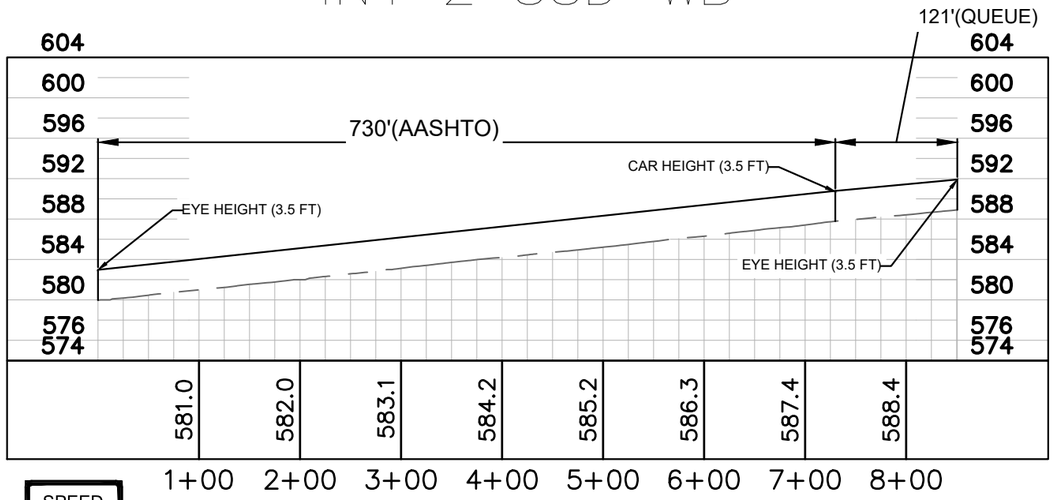
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INT 2 SSD EB



SPEED LIMIT 70

INT 2 SSD WB



SPEED LIMIT 70

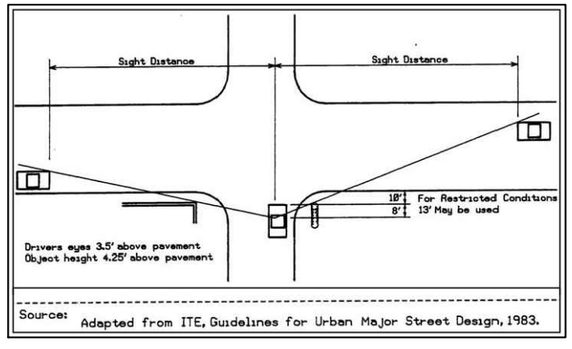
Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance Calculated (ft)	Stopping Sight Distance Design (ft)	Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance Calculated (m)	Stopping Sight Distance Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

GRAPHIC SCALE IN FEET
0 75 150 300
HORIZONTAL

0 75 150 300
VERTICAL



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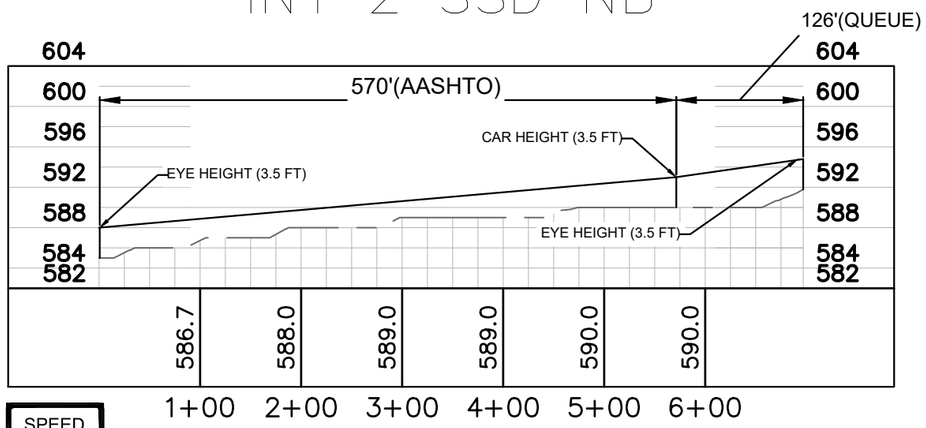
IMARKETAMERICA TIA
TAYLOR, TEXAS

VERTICAL STOPPING SIGHT DISTANCE - INT 2 E-W

FIGURE 7

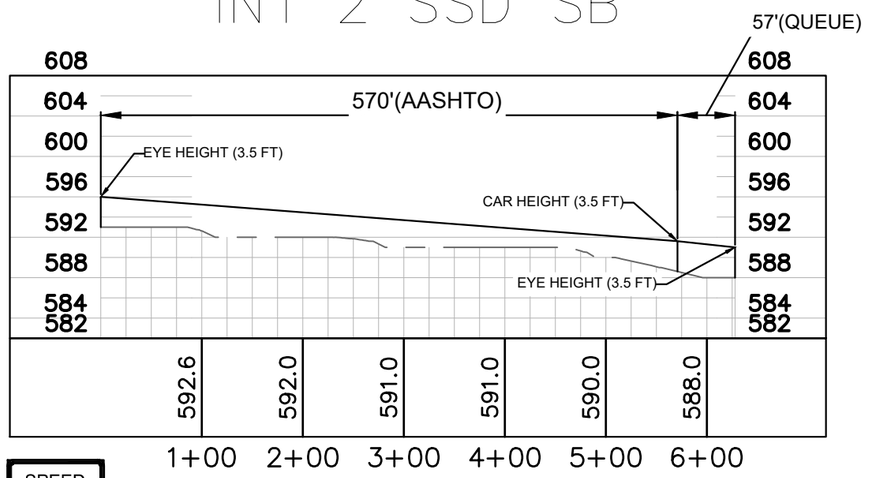
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INT 2 SSD NB



SPEED LIMIT 60

INT 2 SSD SB



SPEED LIMIT 60

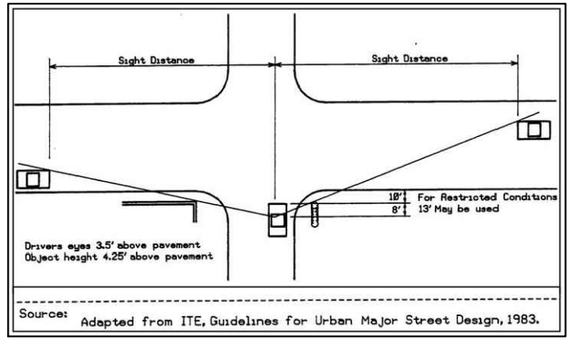
Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance Calculated (ft)	Stopping Sight Distance Design (ft)	Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance Calculated (m)	Stopping Sight Distance Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

GRAPHIC SCALE IN FEET
0 75 150 300
HORIZONTAL

0 75 150 300
VERTICAL



PROJECT NO.
065001200

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IMARKETAMERICA TIA
TAYLOR, TEXAS

VERTICAL STOPPING SIGHT DISTANCE - INT 2 N-S

FIGURE
8

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Appendix F: Horizontal Stopping Sight Distance

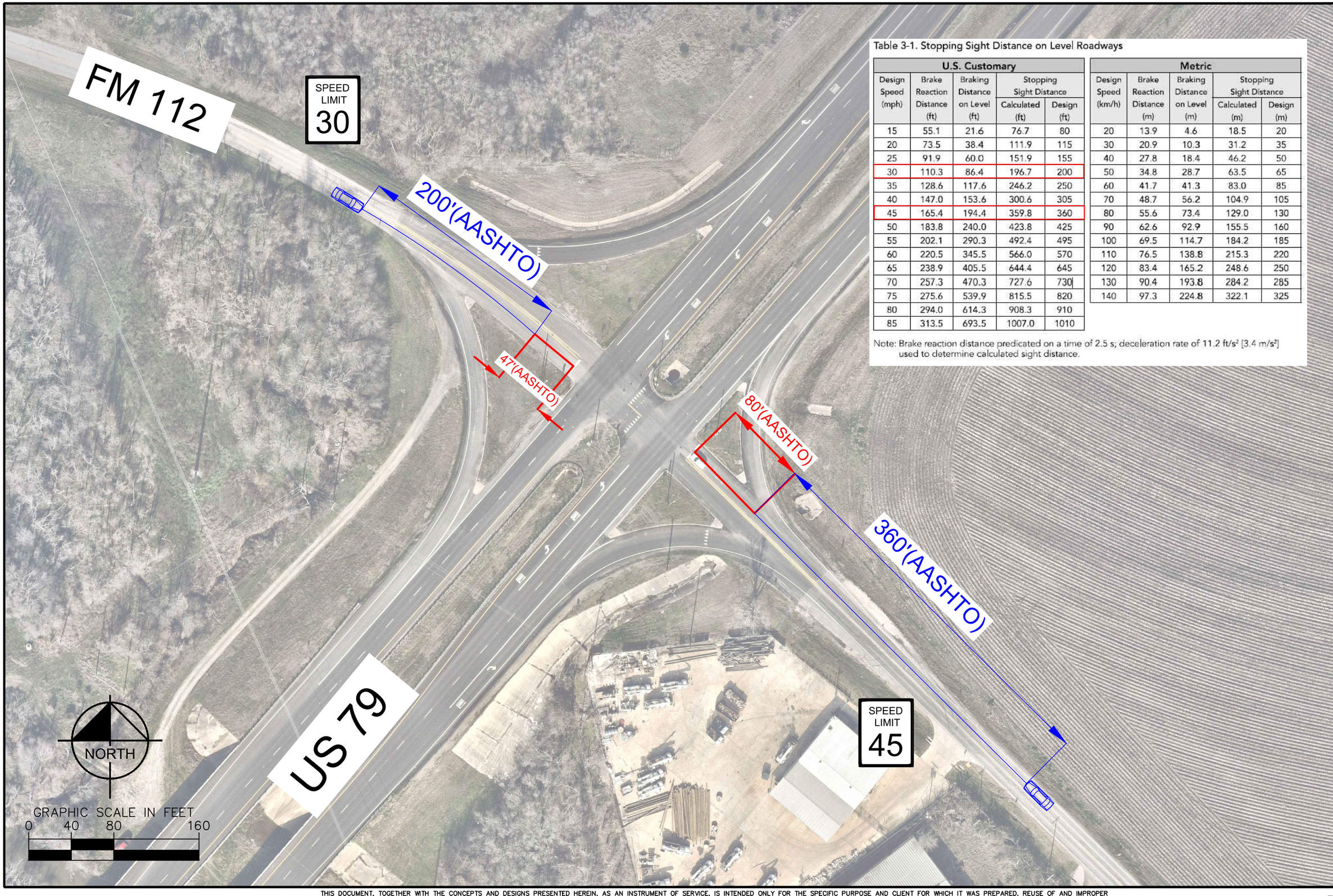


Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance Calculated (ft)	Stopping Sight Distance Design (ft)	Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance Calculated (m)	Stopping Sight Distance Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

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IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL STOPPING
SIGHT DISTANCE - INT 1 E-W

FIGURE
1

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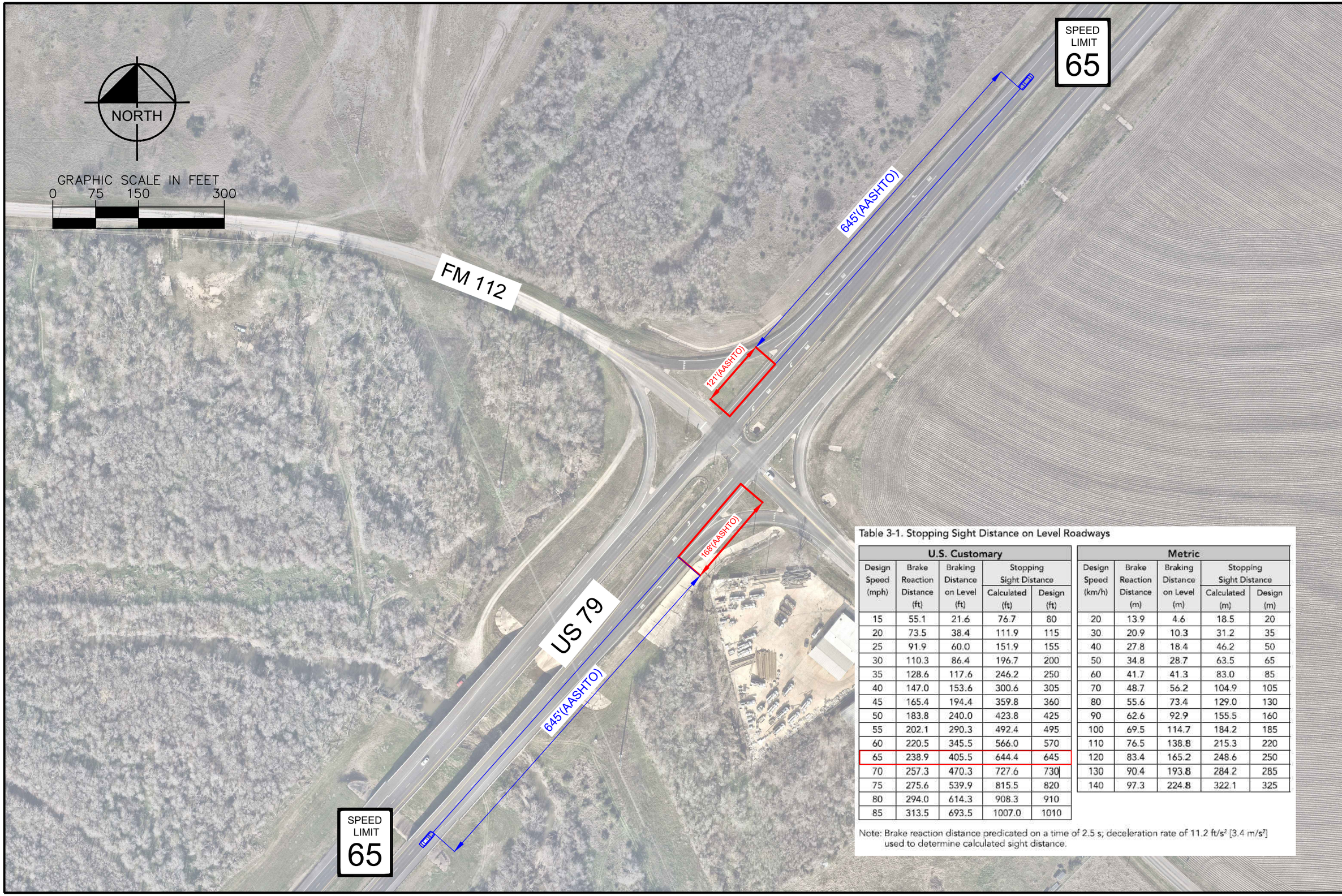


Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance		Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)				Calculated (m)	Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

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IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL STOPPING
SIGHT DISTANCE - INT 1 N-S

FIGURE
2

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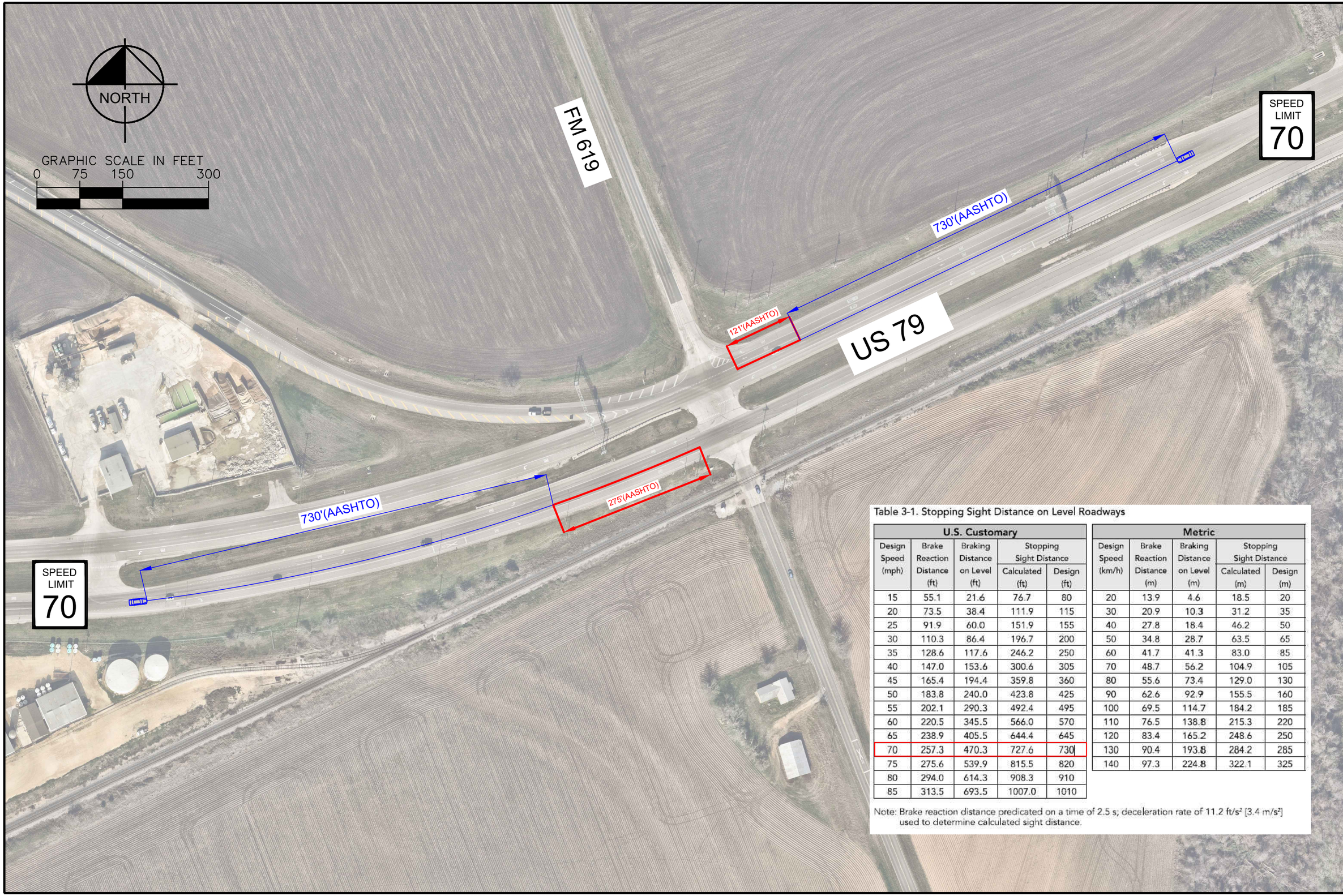


Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance		Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)				Calculated (m)	Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
75	275.6	539.9	815.5	820	140	97.3	224.8	322.1	325
80	294.0	614.3	908.3	910					
85	313.5	693.5	1007.0	1010					

Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.

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IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL STOPPING SIGHT DISTANCE - INT 2 E-W

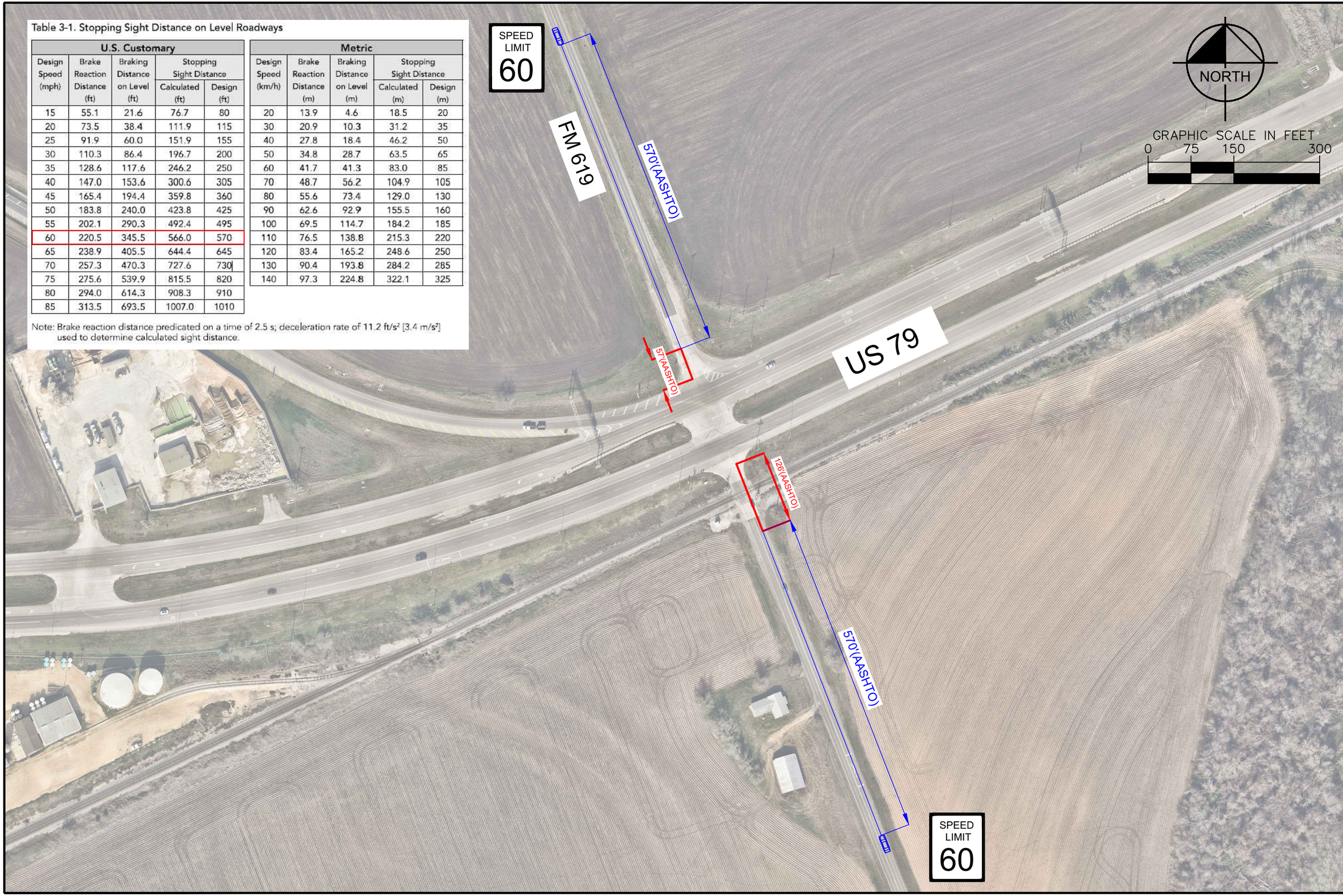
FIGURE
3

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Table 3-1. Stopping Sight Distance on Level Roadways

U.S. Customary					Metric				
Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance Calculated (ft)	Stopping Sight Distance Design (ft)	Design Speed (km/h)	Brake Reaction Distance (m)	Braking Distance on Level (m)	Stopping Sight Distance Calculated (m)	Stopping Sight Distance Design (m)
15	55.1	21.6	76.7	80	20	13.9	4.6	18.5	20
20	73.5	38.4	111.9	115	30	20.9	10.3	31.2	35
25	91.9	60.0	151.9	155	40	27.8	18.4	46.2	50
30	110.3	86.4	196.7	200	50	34.8	28.7	63.5	65
35	128.6	117.6	246.2	250	60	41.7	41.3	83.0	85
40	147.0	153.6	300.6	305	70	48.7	56.2	104.9	105
45	165.4	194.4	359.8	360	80	55.6	73.4	129.0	130
50	183.8	240.0	423.8	425	90	62.6	92.9	155.5	160
55	202.1	290.3	492.4	495	100	69.5	114.7	184.2	185
60	220.5	345.5	566.0	570	110	76.5	138.8	215.3	220
65	238.9	405.5	644.4	645	120	83.4	165.2	248.6	250
70	257.3	470.3	727.6	730	130	90.4	193.8	284.2	285
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80	294.0	614.3	908.3	910					
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Note: Brake reaction distance predicated on a time of 2.5 s; deceleration rate of 11.2 ft/s² [3.4 m/s²] used to determine calculated sight distance.



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IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL STOPPING SIGHT DISTANCE - INT 1 N-S

FIGURE 4

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Appendix G: Vertical Intersection Sight Distance

INTERSECTION 4:
SITE DRIVEWAY 4 & US 79
VERTICAL INTERSECTION SIGHT DISTANCE

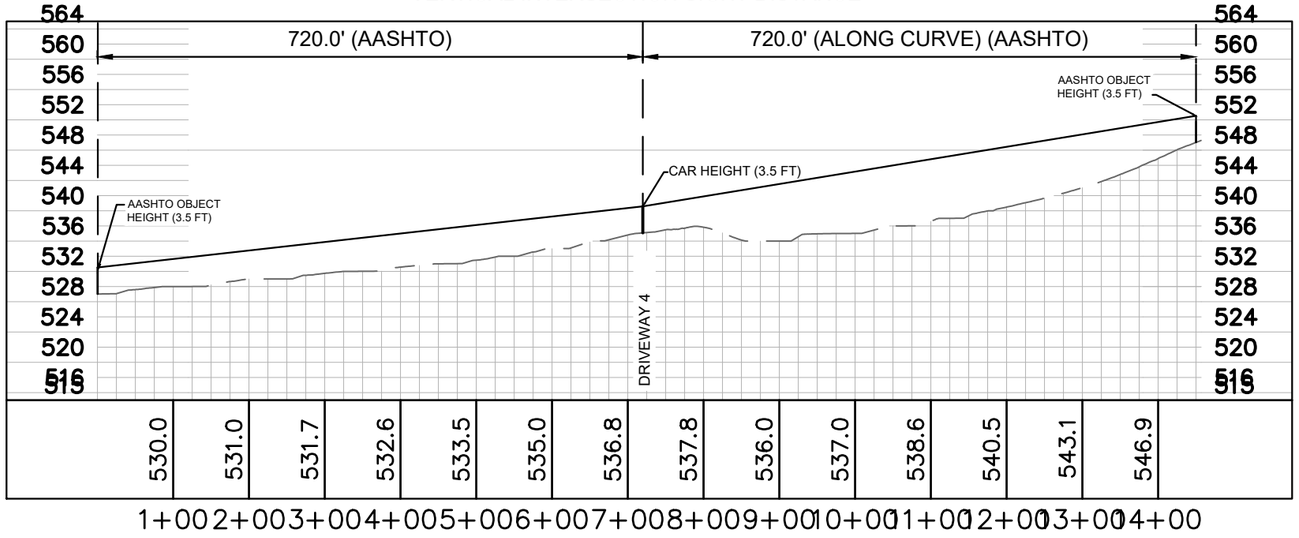
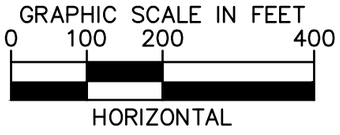
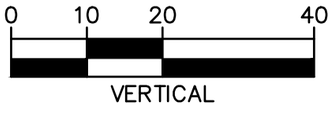


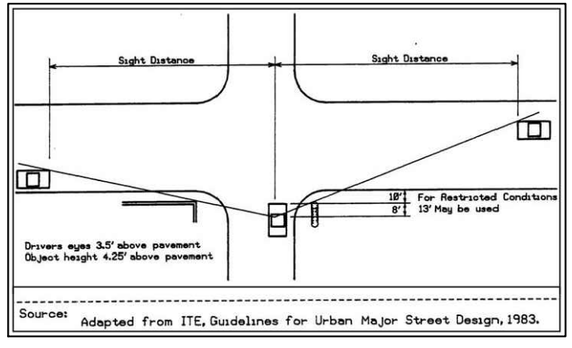
Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
55	495	606.4	610	100	185	208.5	210
60	570	661.5	665	110	220	229.4	230
65	645	716.6	720	120	250	250.2	255
70	730	771.8	775	130	285	271.1	275
75	820	826.9	830				
80	910	882.0	885				

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.







PROJECT NO.
065001200

Kimley»Horn
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IMARKETAMERICA TIA
TAYLOR, TEXAS

VERTICAL SIGHT DISTANCE- DRIVEWAY 4

FIGURE
1

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INTERSECTION 5:
SITE DRIVEWAY 5 & US 79 (RIGHT-IN
RIGHT-OUT ONLY DRIVEWAY)
VERTICAL INTERSECTION SIGHT DISTANCE

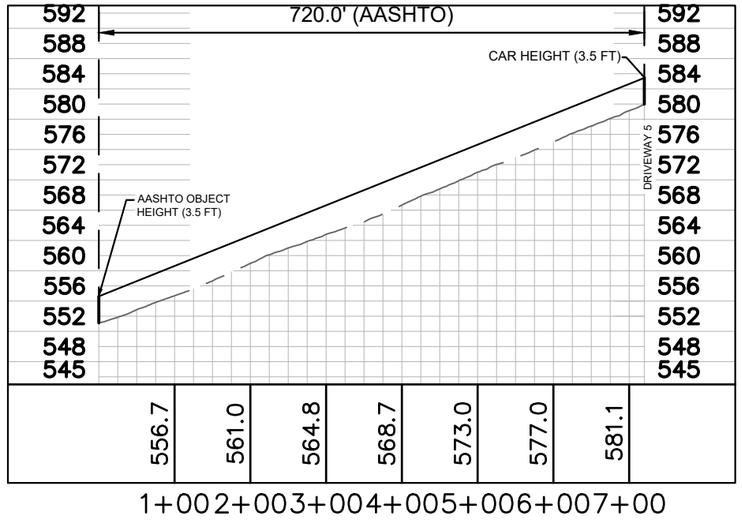
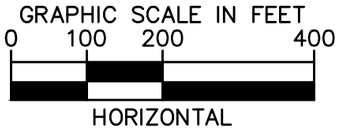
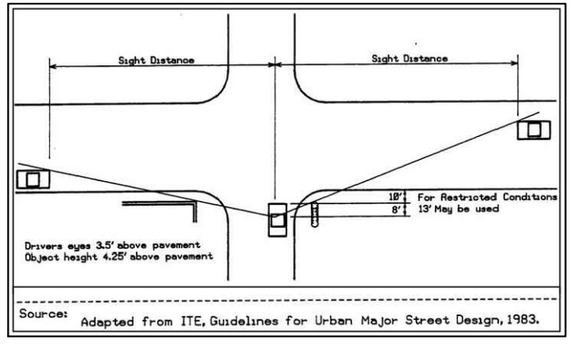


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
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75	820	826.9	830				
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Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.





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IMARKETAMERICA TIA
TAYLOR, TEXAS

VERTICAL SIGHT DISTANCE- DRIVEWAY 5

FIGURE
2

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INTERSECTION 6:
SITE DRIVEWAY 6 & FM 619
VERTICAL INTERSECTION SIGHT DISTANCE

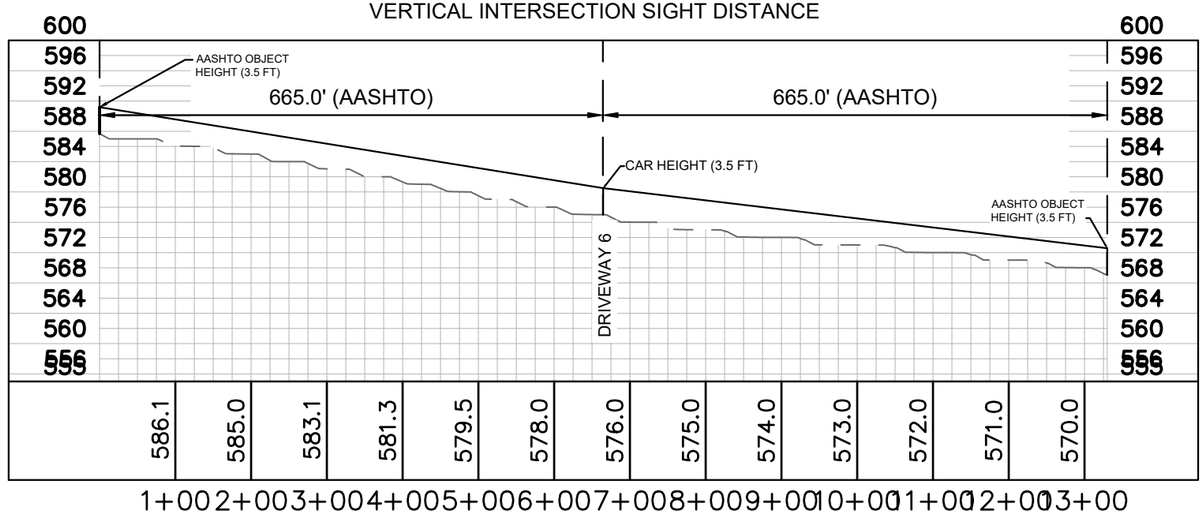
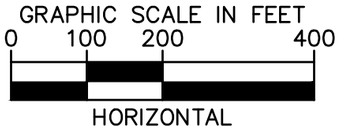
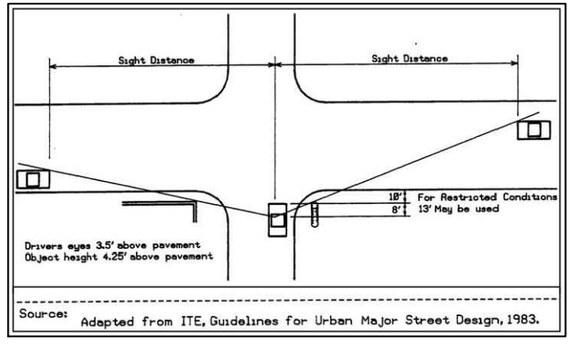


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
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75	820	826.9	830				
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Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.





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VERTICAL SITE DISTANCE- DRIVEWAY 6

FIGURE
3

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INTERSECTION 7:
SITE DRIVEWAY 7 & FM 112
VERTICAL INTERSECTION SIGHT DISTANCE

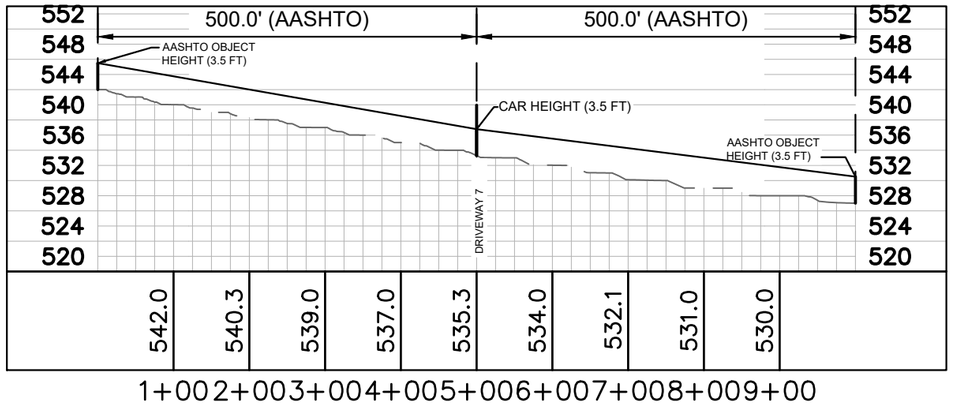
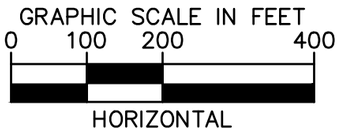
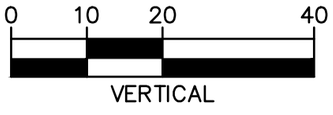


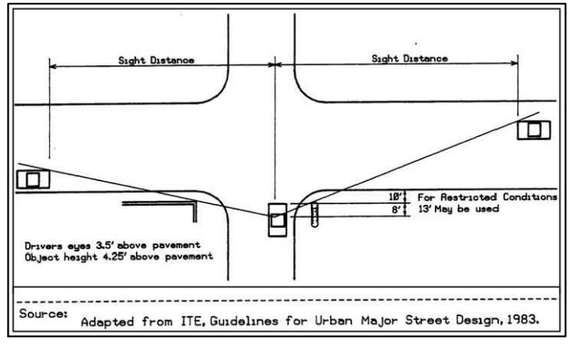
Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
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75	820	826.9	830				
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Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.







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TAYLOR, TEXAS

VERTICAL SIGHT DISTANCE- DRIVEWAY 7

FIGURE
4

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INTERSECTION 8:
SITE DRIVEWAY 8 & FM 112
VERTICAL INTERSECTION SIGHT DISTANCE

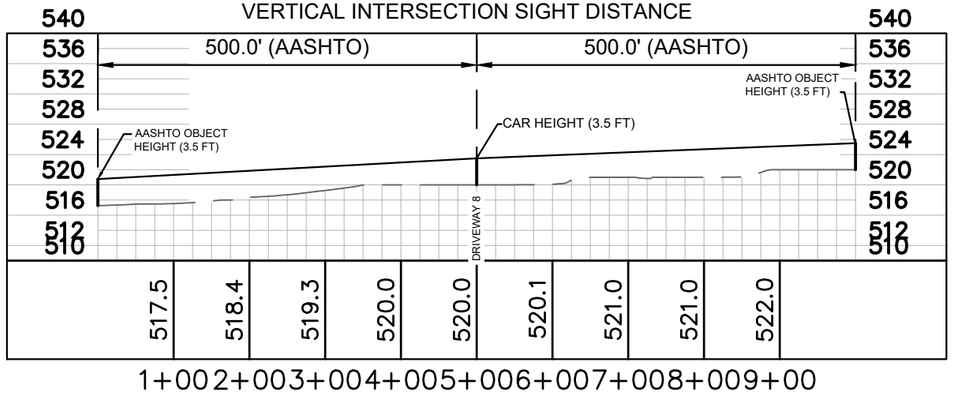
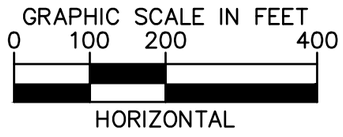
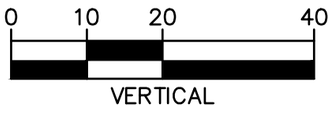


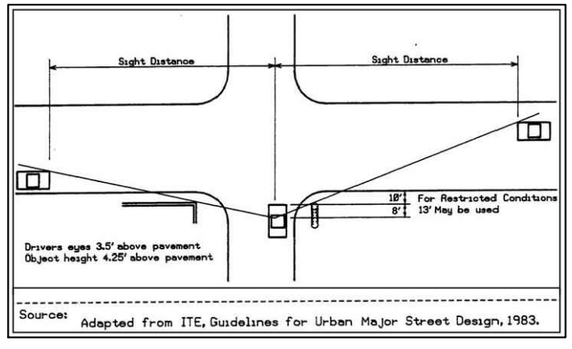
Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
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75	820	826.9	830				
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Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.







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TAYLOR, TEXAS

VERTICAL SIGHT DISTANCE- DRVIEWAY 8

FIGURE
5

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Appendix H: Horizontal Intersection Sight Distance

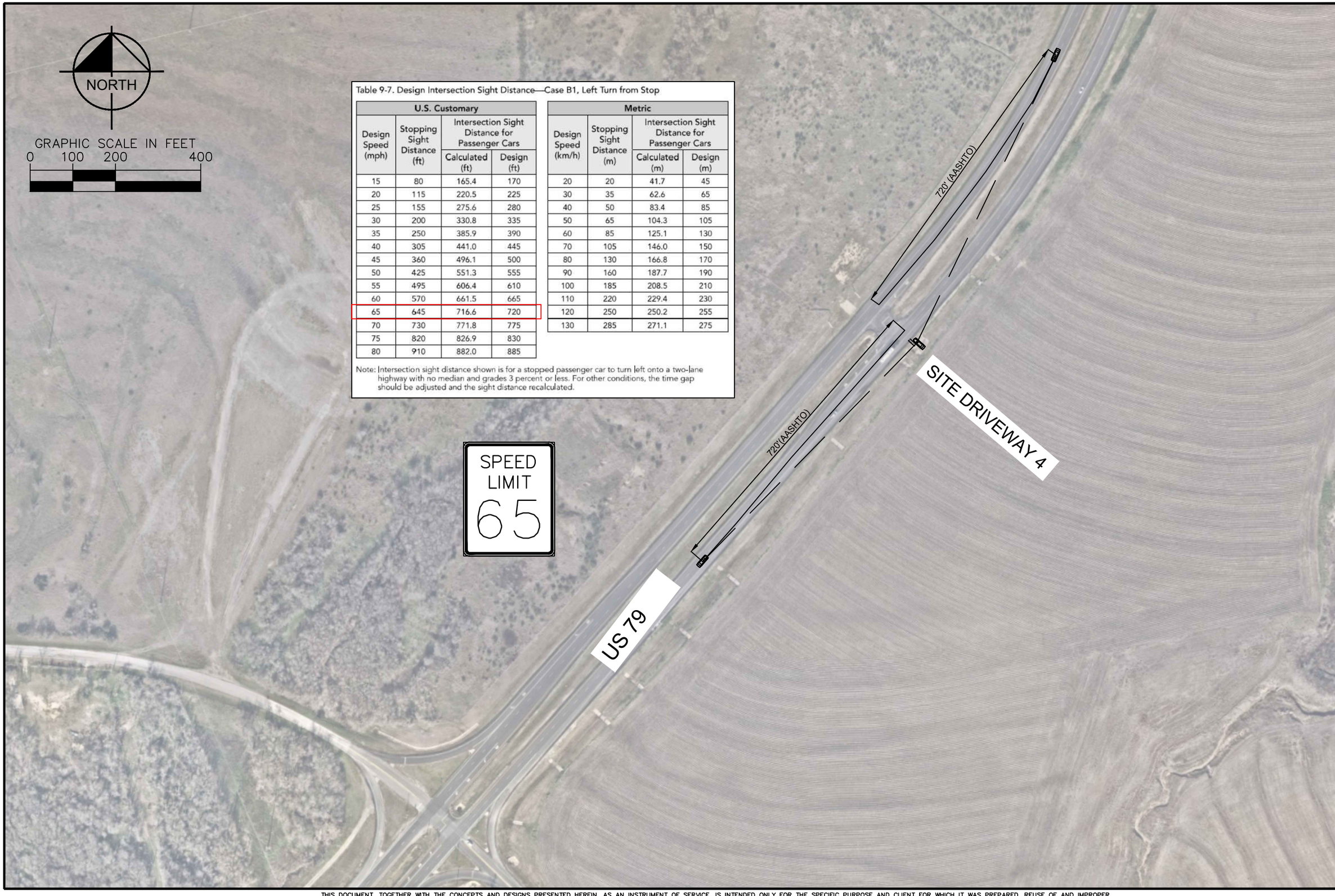


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
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HORIZONTAL SIGHT DISTANCE- DRIVEWAY 4

FIGURE
1

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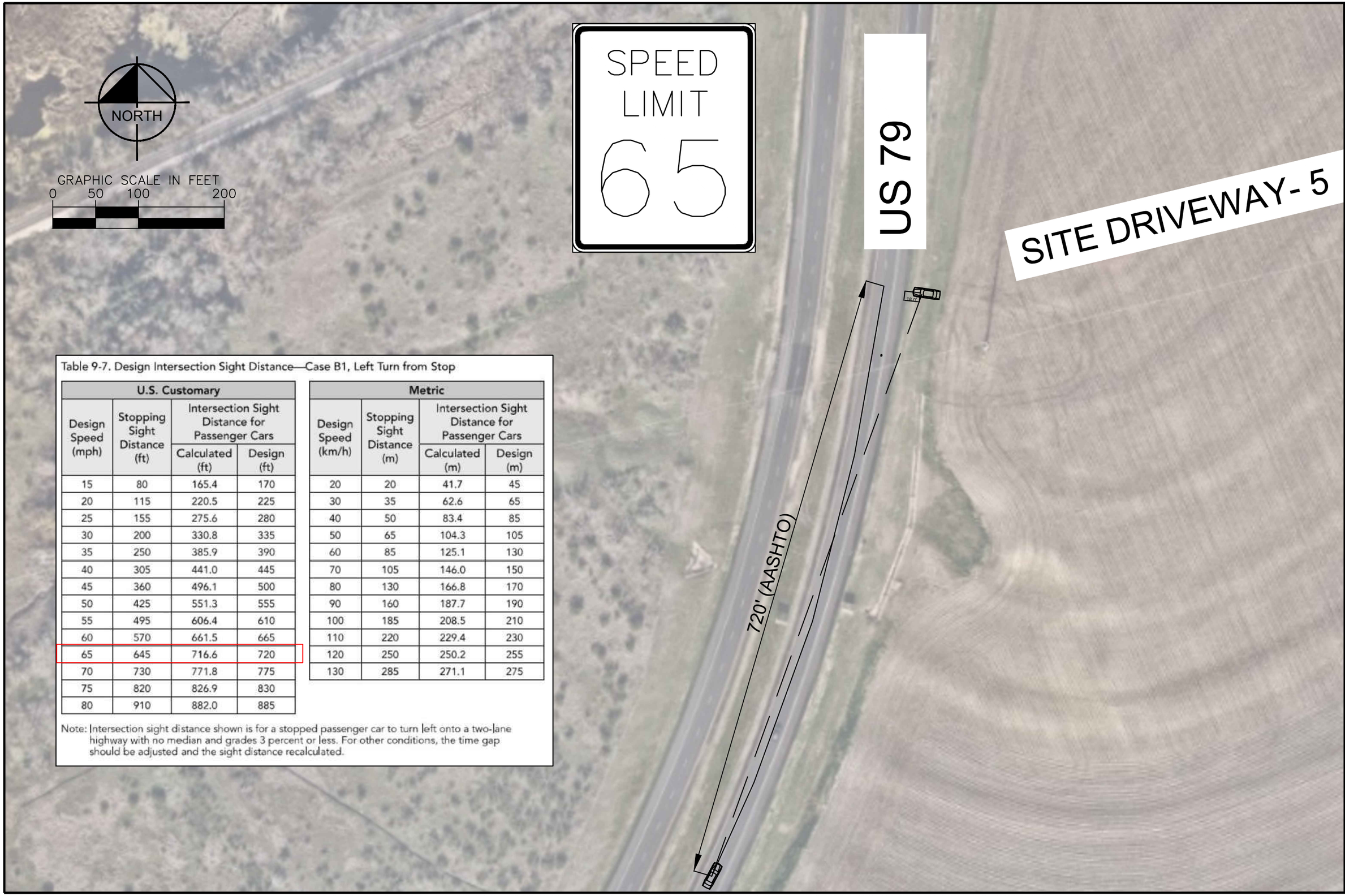


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
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HORIZONTAL SIGHT DISTANCE- DRIVEWAY 5

FIGURE
2

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Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
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HORIZONTAL SITE DISTANCE- DRIVEWAY 6

FIGURE
3

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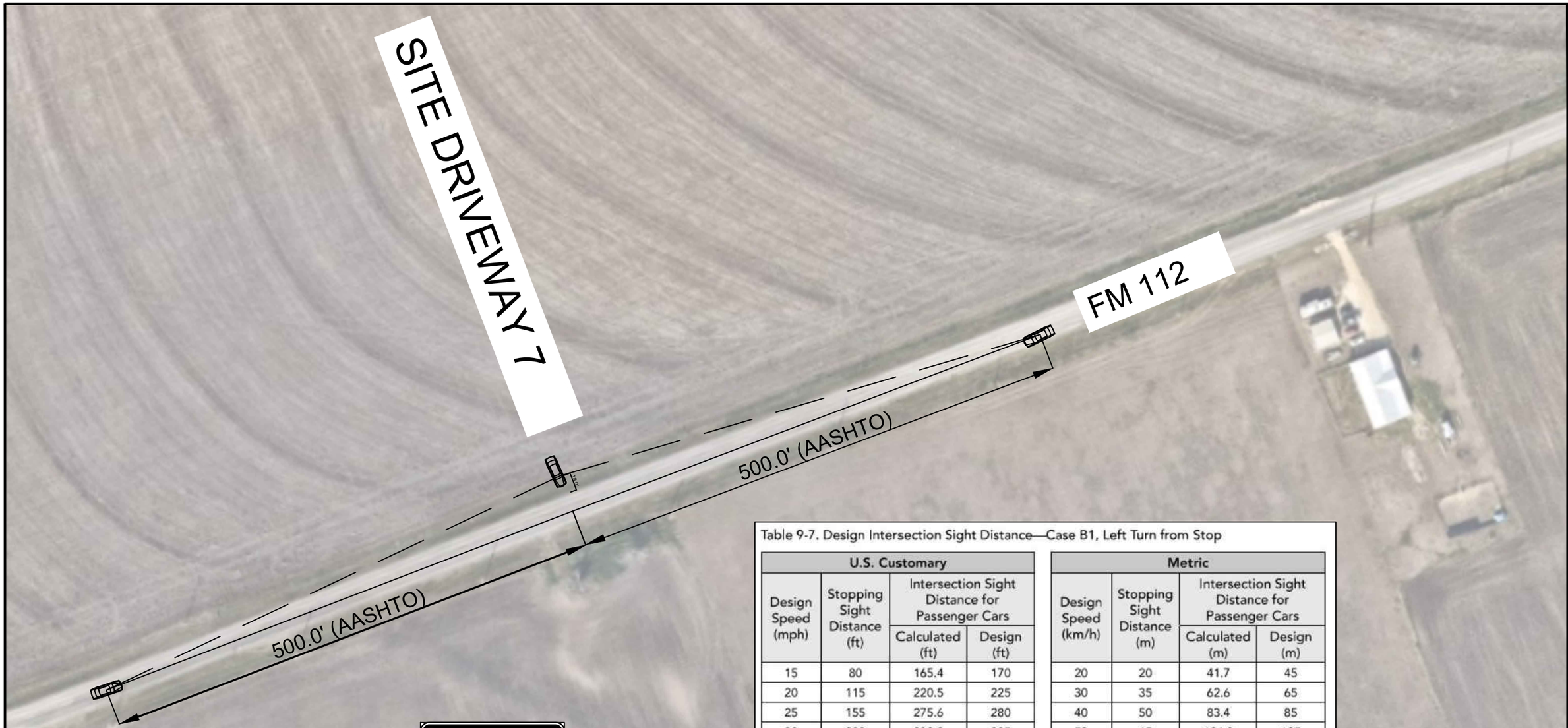


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
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Phone: (512) 418-4514
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IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL SIGHT DISTANCE- DRIVEWAY 7

FIGURE
4

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

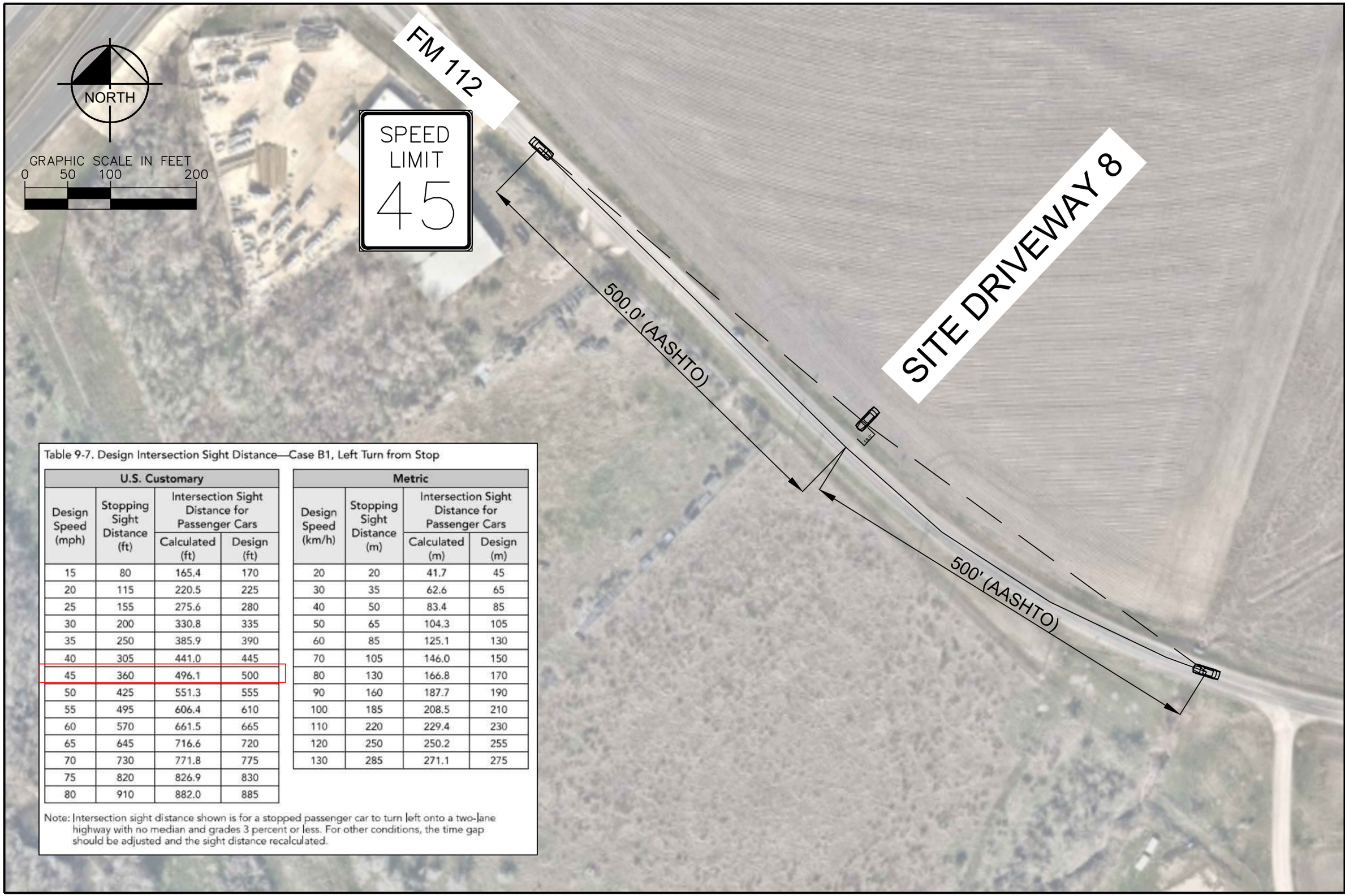


Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
55	495	606.4	610	100	185	208.5	210
60	570	661.5	665	110	220	229.4	230
65	645	716.6	720	120	250	250.2	255
70	730	771.8	775	130	285	271.1	275
75	820	826.9	830				
80	910	882.0	885				

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

PROJECT NO.
065001200

Kimley»Horn
TBPE REGISTERED FIRM NO. F-928
10814 JOLLYVILLE RD. BUILDING IV, SUITE 200
AUSTIN, TX 78759
Phone: (512) 418-4514
Website: kimley-horn.com

IMARKETAMERICA TIA
TAYLOR, TEXAS

HORIZONTAL SIGHT DISTANCE- DRVIEWAY 8

FIGURE
5

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

Appendix I: Signal Warrant Analysis

Summary of Warrants

Intersection:	1		
Major Street:	US 79	**Minor Street:**	CR 112
Intersection:	US 79 & CR 112		
City/Twp:	Taylor ETJ		
Date Performed:	7/31/2024	**Performed By:**	Kimley-Horn
Date Volumes Collected:	5/16/2024		

Warrant	Condition	Is Warrant Met
WARRANT 1: Eight-Hour Vehicular Volume		**YES**
	Condition A	YES
	Condition B	YES
	Condition A&B	N/A
WARRANT 2: Four-Hour Vehicular Volume	(70%)	**YES**
WARRANT 3: Peak-Hour Vehicular Volume	(70%)	**YES**
	Condition A	**YES**
	Condition B	**YES**
WARRANT 4: Pedestrian Volume	(70%)	**NO**
	Four Hour	NO
	Peak Hour	NO
WARRANT 5: School Crossing		**N/A**
WARRANT 6: Coordinated Signal System		**NO**
WARRANT 7: Crash Experience		**NO**
	Condition A	NO
	Condition B	NO
WARRANT 8: Roadway Network		**NO**
WARRANT 9: Intersection Near a Grade Crossing		**NO**

Issue to Be Addressed by Signalization:

Reduce stop delay at intersection during peak weekday hours and mitigate safety issues correctible by a traffic signal.

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 1: Eight-Hour Vehicular Volume

Intersection:	US 79 & CR 112		
Date	7/31/2024	by	Kimley-Horn

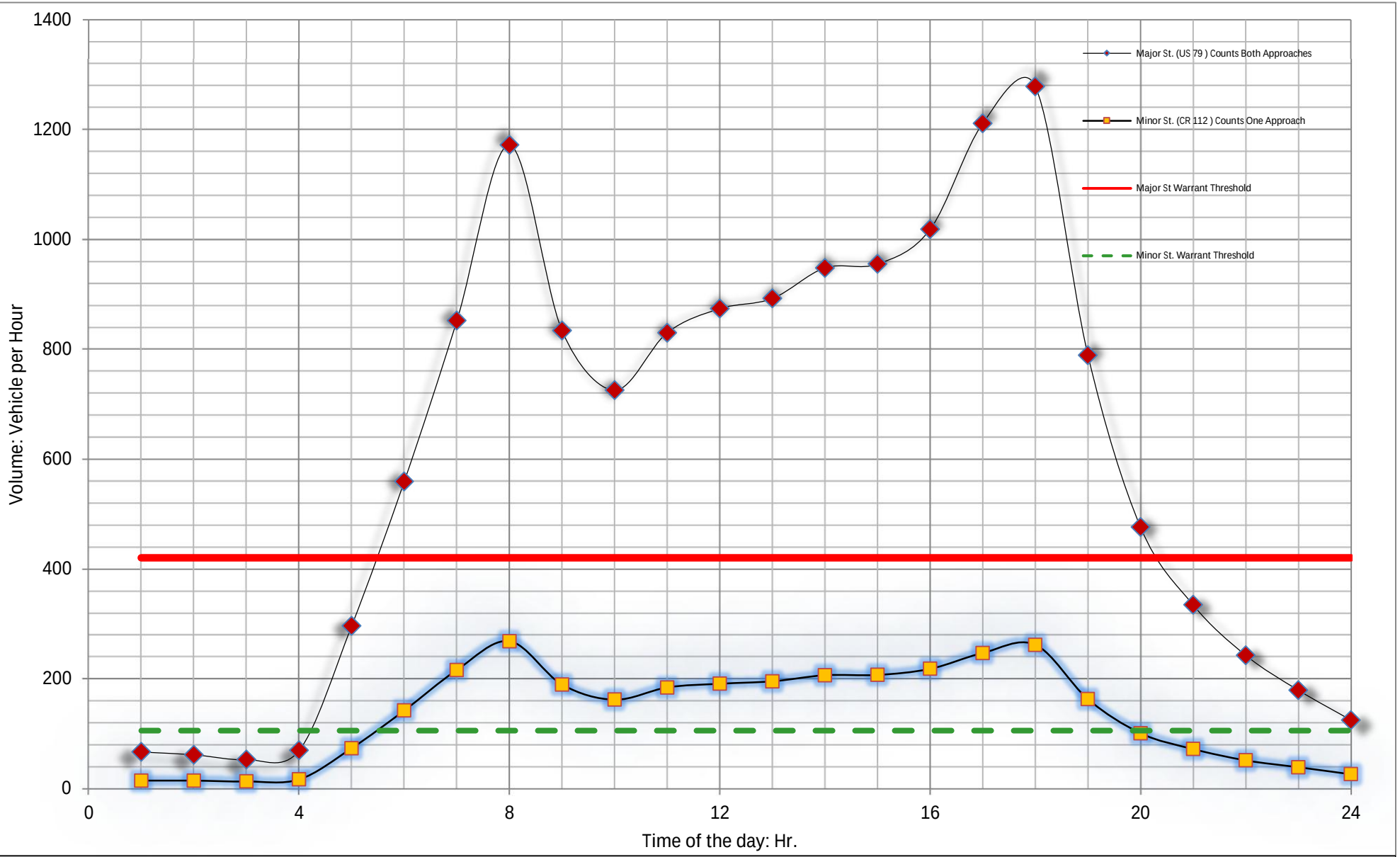
2	: No. of Lanes on Major St?
1	: No. of Lanes on Minor St?
65	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: if answer 4 is Yes, then what is the population of the isolated community?
NO	: Have other remedial measures been tried?

USE 70% WARRANTS 1A AND 1B. DO NOT USE COMBINATION OF A & B

	Major Volume (Both Apr.)	Minor Volume (One Apr.)	Condition A Major Volume	Condition A Minor Volume	Warrant Condition A Met?	Condition B Major Volume	Condition B Minor Volume	Warrant Condition B Met?	Combination Major A	Combination Minor A	Combination Major B	Combination Minor B	Warrant Condition A&B met?
Time	N-S	E-W	70%	70%		70%	70%		56%	56%	56%	56%	
00:01 - 01:00	66	14	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
01:00 - 02:00	61	14	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
02:00 - 03:00	52	13	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
03:00 - 04:00	69	16	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
04:00 - 05:00	296	73	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
05:00 - 06:00	559	142	420	105	YES	630	53	NO	N/A	N/A	N/A	N/A	N/A
06:00 - 07:00	852	216	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
07:00 - 08:00	1172	268	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
08:00 - 09:00	834	189	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
09:00 - 10:00	725	162	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
10:00 - 11:00	830	184	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
11:00 - 12:00	874	190	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
12:00 - 13:00	892	195	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
13:00 - 14:00	948	206	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
14:00 - 15:00	955	207	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
15:00 - 16:00	1018	218	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
16:00 - 17:00	1211	247	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
17:00 - 18:00	1279	261	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
18:00 - 19:00	789	162	420	105	YES	630	53	YES	N/A	N/A	N/A	N/A	N/A
19:00 - 20:00	476	100	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
20:00 - 21:00	334	72	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
21:00 - 22:00	242	51	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
22:00 - 23:00	179	38	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A
23:00 - 24:00	124	26	420	105	NO	630	53	NO	N/A	N/A	N/A	N/A	N/A

Number of Hours that met the Warrant 1A =	14
Number of Hours that met the Warrant 1B =	13
Number of Hours that met the Combination Warrant 1A & 1B =	0

A. Is the Minimum Vehicular Volume Warrant Met? (Condition A)	YES
B. Is the Interruption of Continuous Traffic Met? (Condition B)	YES
C. Combination of Warrants A and B Criteria Met?	N/A



WARRANT 1A

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **YES**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number: **1**

US 79 & CR 112

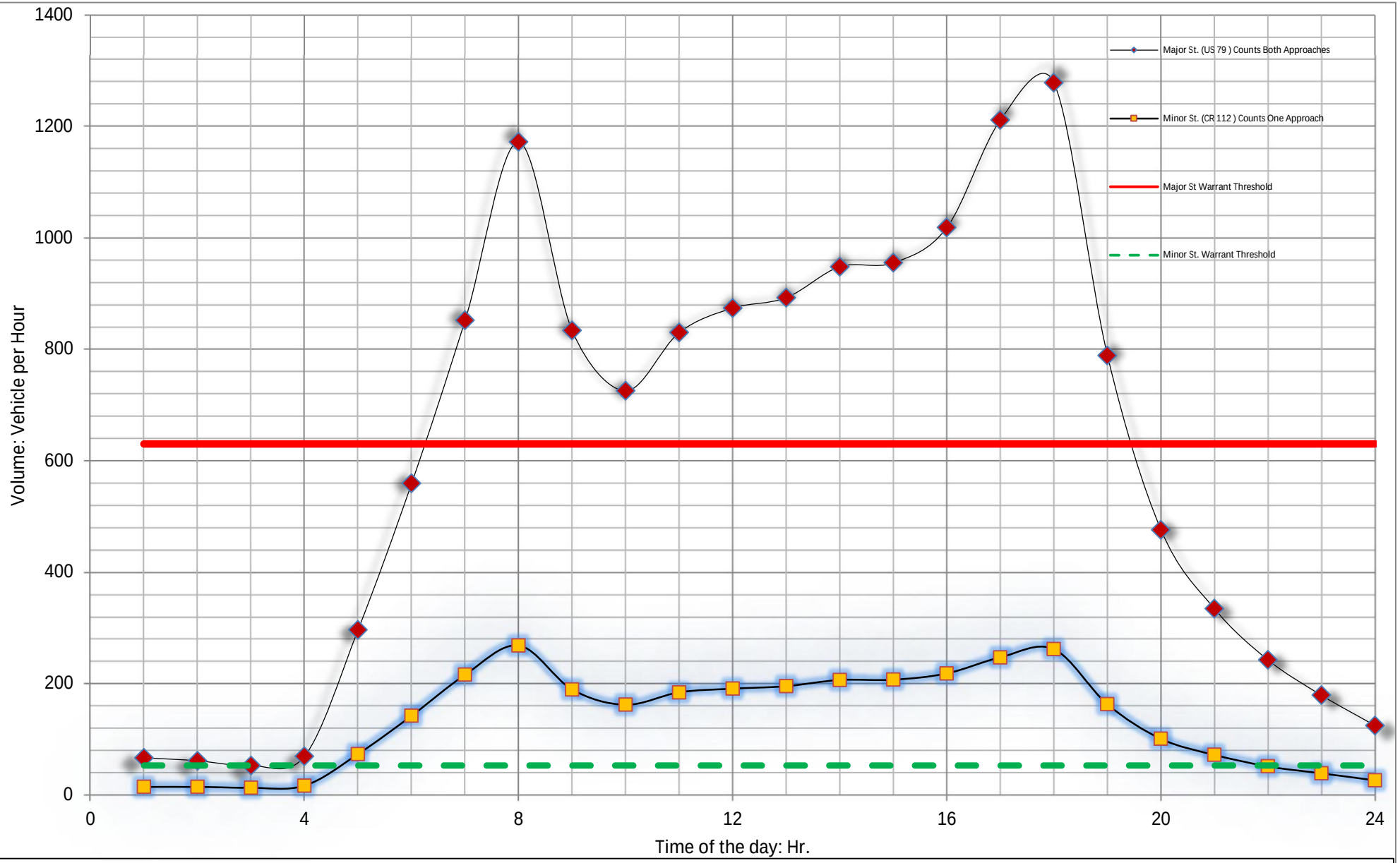
NO. OF LANES ON MAJOR ST.? **2**

NO. OF LANES ON MINOR ST.? **1**

Number of Hours that met the Warrant: **14**

Does this intersection meet Warrant 1A for signal installation? **YES**

Data Collection Date: **5/16/2024**



WARRANT 1B

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **YES**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number: **1**

US 79 & CR 112

NO. OF LANES ON MAJOR ST.? **2**

NO. OF LANES ON MINOR ST.? **1**

Number of Hours that met the Warrant: **13**

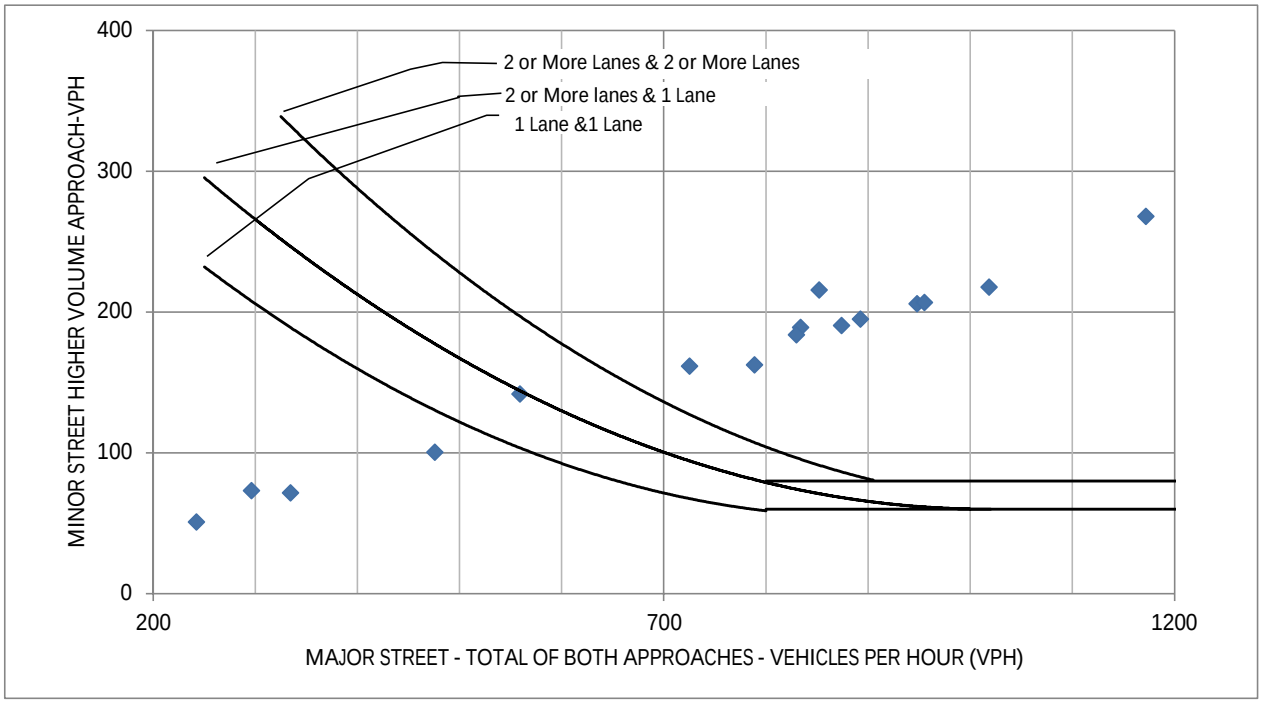
Does this intersection meet Warrant 1B for signal installation? **YES**

Data Collection Date: **5/16/2024**

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 2: Four-Hour Vehicular Volume

Spot Number:	1		
Intersection:	US 79 & CR 112		
Date	7/31/2024	by	Kimley-Horn

2	: No. of Lanes on Major St.
1	: No. of Lanes on Minor St.
65	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: What is the population of the isolated community?



How Many Hours Are Met	13
Is Warrant (70%) Met?	YES

Texas Manual on Uniform Traffic Control Devices

Worksheet for Signal Warrants (Section 4C)

WARRANT 3 A: Peak-Hour Vehicular Volume

Spot Number:	1		
Intersection:	US 79 & CR 112		
Date	7/31/2024	by	Kimley-Horn

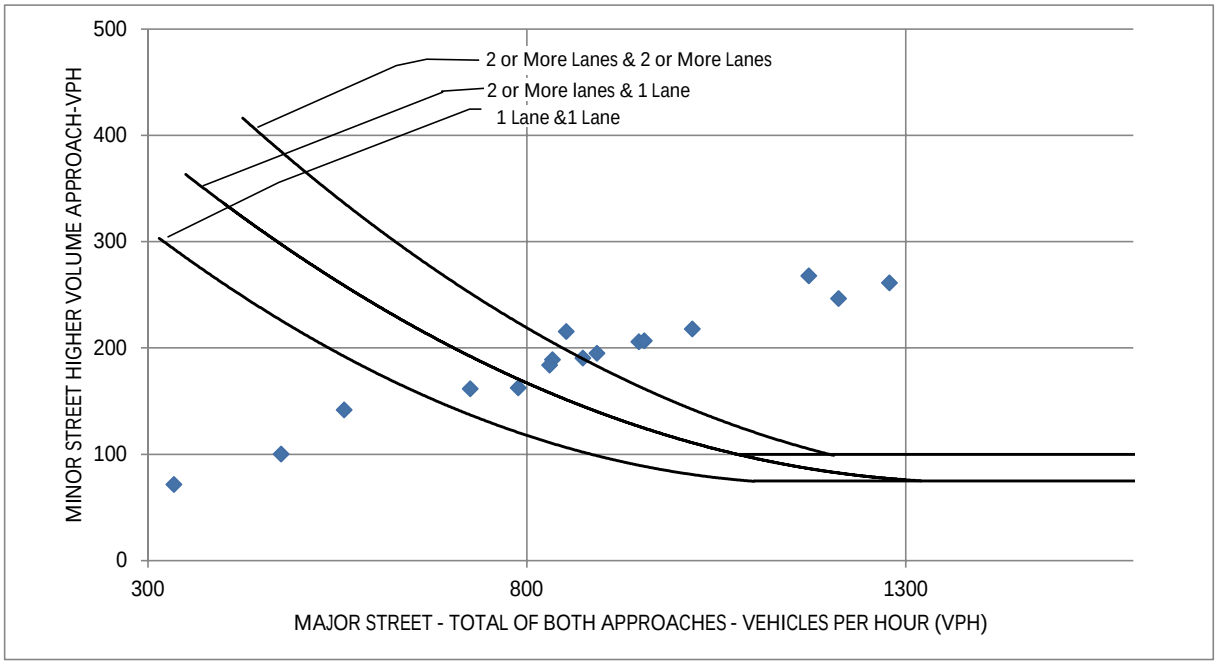
MISSING	: Total Stop Time Delay (hrs)
1	: Minor Street Approach Lanes
4	: Total Approaches
268	: Minor Approach Volume
1532	: Total Entering Volume
07:00 - 08:00	: Peak Hour

Is Warrant 3 A Met?	YES

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 3 B(70%): Peak-Hour Vehicular Volume

Spot Number:	1		
Intersection:	US 79 & CR 112		
Date	7/31/2024	by	Kimley-Horn

2	: No. of Lanes on Major St.
1	: No. of Lanes on Minor St.
65	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: What is the population of the isolated community?



How Many Hours Are Met	10
Is Warrant (70%) Met?	YES

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts NB	% of Daily	NB
	4405	100%	9005
12:00 AM	24	0.5%	49
1:00 AM	15	0.3%	31
2:00 AM	12	0.3%	25
3:00 AM	17	0.4%	35
4:00 AM	48	1.1%	98
5:00 AM	74	1.7%	151
6:00 AM	114	2.6%	233
7:00 AM	*297*	*6.7%*	607
8:00 AM	*220*	*5.0%*	450
9:00 AM	205	4.7%	419
10:00 AM	240	5.4%	491
11:00 AM	268	6.1%	548
12:00 PM	270	6.1%	552
1:00 PM	292	6.6%	597
2:00 PM	300	6.8%	613
3:00 PM	331	7.5%	677
4:00 PM	457	10.4%	934
5:00 PM	*475*	*10.8%*	971
6:00 PM	*289*	*6.6%*	591
7:00 PM	163	3.7%	333
8:00 PM	108	2.5%	221
9:00 PM	83	1.9%	170
10:00 PM	59	1.3%	121
11:00 PM	44	1.0%	90
	MAX % Daily	10.8%	9005
	MAX EXIST VOLUME	971	

US 79

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts SB	% of Daily	SB
	4420	100%	5834
12:00 AM	13	0.3%	17
1:00 AM	23	0.5%	30
2:00 AM	21	0.5%	28
3:00 AM	26	0.6%	34
4:00 AM	150	3.4%	198
5:00 AM	309	7.0%	408
6:00 AM	469	10.6%	619
7:00 AM	*428*	*9.7%*	565
8:00 AM	*291*	*6.6%*	384
9:00 AM	232	5.2%	306
10:00 AM	257	5.8%	339
11:00 AM	247	5.6%	326
12:00 PM	258	5.8%	341
1:00 PM	266	6.0%	351
2:00 PM	259	5.9%	342
3:00 PM	259	5.9%	342
4:00 PM	210	4.8%	277
5:00 PM	*233*	*5.3%*	308
6:00 PM	*150*	*3.4%*	198
7:00 PM	108	2.4%	143
8:00 PM	86	1.9%	114
9:00 PM	55	1.2%	73
10:00 PM	44	1.0%	58
11:00 PM	26	0.6%	34
	MAX % Daily	10.6%	5834
	MAX EXIST VOLUME	619	

US 79

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts EB	% of Daily	EB
	4420	100%	1120
12:00 AM	19	0.4%	5
1:00 AM	19	0.4%	5
2:00 AM	17	0.4%	4
3:00 AM	22	0.5%	6
4:00 AM	99	2.2%	25
5:00 AM	192	4.3%	49
6:00 AM	292	6.6%	74
7:00 AM	363	*8.2%*	92
8:00 AM	256	*5.8%*	65
9:00 AM	219	5.0%	56
10:00 AM	249	5.6%	63
11:00 AM	258	5.8%	65
12:00 PM	264	6.0%	67
1:00 PM	279	6.3%	71
2:00 PM	280	6.3%	71
3:00 PM	295	6.7%	75
4:00 PM	334	7.6%	85
5:00 PM	354	*8.0%*	90
6:00 PM	220	*5.0%*	56
7:00 PM	136	3.1%	34
8:00 PM	97	2.2%	25
9:00 PM	69	1.6%	17
10:00 PM	52	1.2%	13
11:00 PM	35	0.8%	9
	MAX % Daily	8.2%	1120
	MAX EXIST VOLUME	92	

CR 112

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts WB	% of Daily	WB
	4420	100%	3263
12:00 AM	19	0.4%	14
1:00 AM	19	0.4%	14
2:00 AM	17	0.4%	13
3:00 AM	22	0.5%	16
4:00 AM	99	2.2%	73
5:00 AM	192	4.3%	142
6:00 AM	292	6.6%	216
7:00 AM	363	*8.2%*	268
8:00 AM	256	*5.8%*	189
9:00 AM	219	5.0%	162
10:00 AM	249	5.6%	184
11:00 AM	258	5.8%	190
12:00 PM	264	6.0%	195
1:00 PM	279	6.3%	206
2:00 PM	280	6.3%	207
3:00 PM	295	6.7%	218
4:00 PM	334	7.6%	247
5:00 PM	354	*8.0%*	261
6:00 PM	220	*5.0%*	162
7:00 PM	136	3.1%	100
8:00 PM	97	2.2%	72
9:00 PM	69	1.6%	51
10:00 PM	52	1.2%	38
11:00 PM	35	0.8%	26
	MAX % Daily	8.2%	3263
	MAX EXIST VOLUME	268	

CR 112

PEAK HOUR BUILD-OUT APPROACH TOTAL VOLUME				
PEAK HOUR	US 79		CR 112	
	NB	SB	EB	WB
AM	761	619	74	268
PM	971	543	92	264

Summary of Warrants

Intersection:	3		
Major Street:	US 79	**Minor Street:**	FM 619
Intersection:	US 79 & FM 619		
City/Twp:	Taylor ETJ		
Date Performed:	7/31/2024	**Performed By:**	Kimley-Horn
Date Volumes Collected:	5/16/2024		

Warrant	Condition	Is Warrant Met
WARRANT 1: Eight-Hour Vehicular Volume		**YES**
	Condition A	NO
	Condition B	YES
	Condition A&B	N/A
WARRANT 2: Four-Hour Vehicular Volume	(70%)	**YES**
WARRANT 3: Peak-Hour Vehicular Volume	(70%)	**YES**
	Condition A	**YES**
	Condition B	**YES**
WARRANT 4: Pedestrian Volume	(70%)	**NO**
	Four Hour	NO
	Peak Hour	NO
WARRANT 5: School Crossing		**N/A**
WARRANT 6: Coordinated Signal System		**NO**
WARRANT 7: Crash Experience		**NO**
	Condition A	NO
	Condition B	NO
WARRANT 8: Roadway Network		**NO**
WARRANT 9: Intersection Near a Grade Crossing		**NO**

Issue to Be Addressed by Signalization:

Reduce stop delay at intersection during peak weekday hours and mitigate safety issues correctible by a traffic signal.

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 1: Eight-Hour Vehicular Volume

Intersection:	US 79 & FM 619		
Date	7/31/2024	by	Kimley-Horn

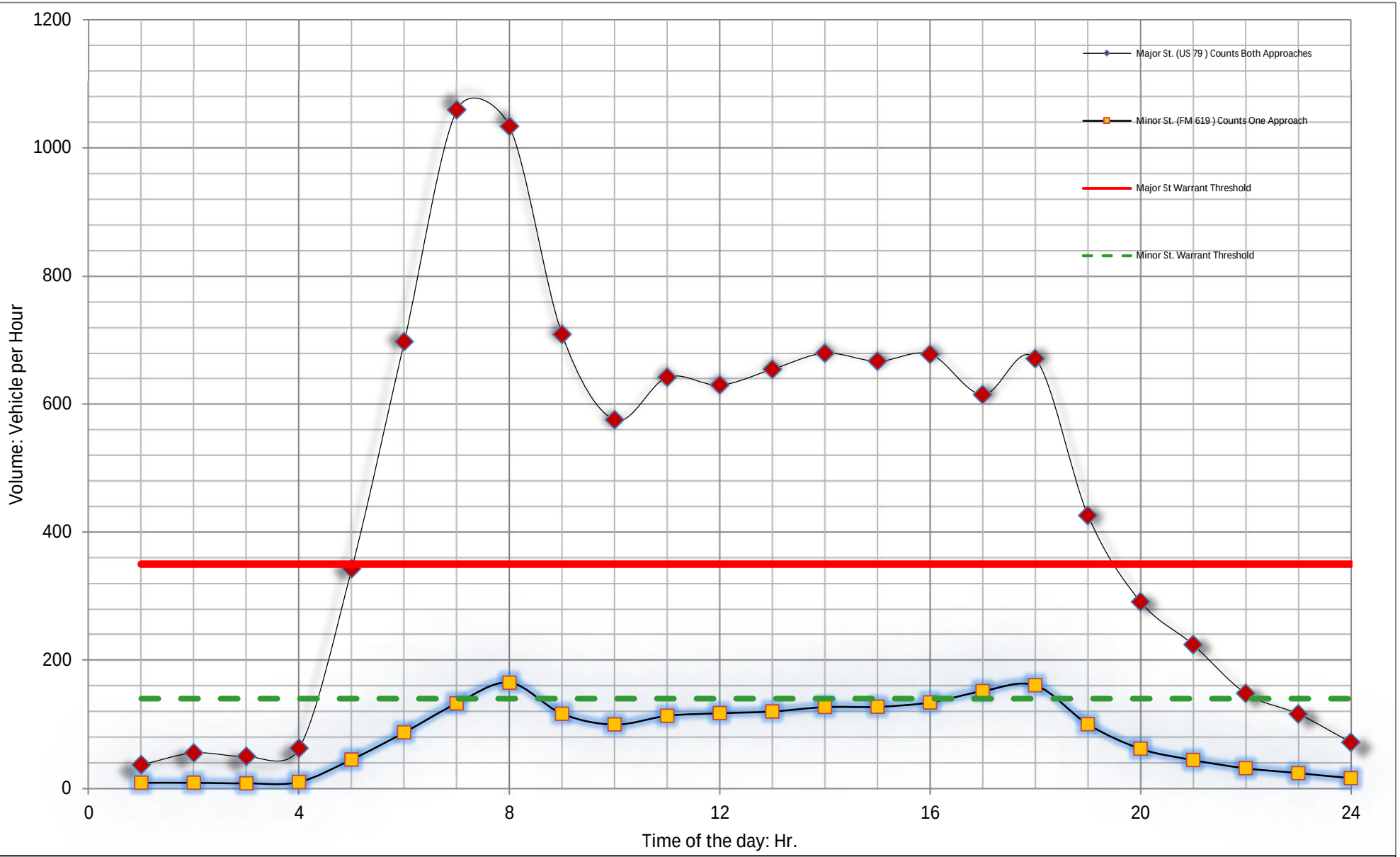
1	: No. of Lanes on Major St?
2	: No. of Lanes on Minor St?
45	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: if answer 4 is Yes, then what is the population of the isolated community?
NO	: Have other remedial measures been tried?

USE 70% WARRANTS 1A AND 1B. DO NOT USE COMBINATION OF A & B

	Major Volume (Both Apr.)	Minor Volume (One Apr.)	Condition A Major Volume	Condition A Minor Volume	Warrant Condition A Met?	Condition B Major Volume	Condition B Minor Volume	Warrant Condition B Met?	Combination Major A	Combination Minor A	Combination Major B	Combination Minor B	Warrant Condition A&B met?
Time	E-W	N-S	70%	70%		70%	70%		56%	56%	56%	56%	
00:01 - 01:00	37	9	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
01:00 - 02:00	55	9	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
02:00 - 03:00	50	8	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
03:00 - 04:00	62	10	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
04:00 - 05:00	343	45	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
05:00 - 06:00	698	87	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
06:00 - 07:00	1059	133	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
07:00 - 08:00	1033	165	350	140	YES	525	70	YES	N/A	N/A	N/A	N/A	N/A
08:00 - 09:00	709	116	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
09:00 - 10:00	575	100	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
10:00 - 11:00	642	113	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
11:00 - 12:00	630	117	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
12:00 - 13:00	654	120	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
13:00 - 14:00	679	127	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
14:00 - 15:00	667	127	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
15:00 - 16:00	678	134	350	140	NO	525	70	YES	N/A	N/A	N/A	N/A	N/A
16:00 - 17:00	615	152	350	140	YES	525	70	YES	N/A	N/A	N/A	N/A	N/A
17:00 - 18:00	671	161	350	140	YES	525	70	YES	N/A	N/A	N/A	N/A	N/A
18:00 - 19:00	426	100	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
19:00 - 20:00	291	62	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
20:00 - 21:00	224	44	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
21:00 - 22:00	148	31	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
22:00 - 23:00	116	24	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A
23:00 - 24:00	72	16	350	140	NO	525	70	NO	N/A	N/A	N/A	N/A	N/A

Number of Hours that met the Warrant 1A =	3
Number of Hours that met the Warrant 1B =	13
Number of Hours that met the Combination Warrant 1A & 1B =	0

A. Is the Minimum Vehicular Volume Warrant Met? (Condition A)	NO
B. Is the Interruption of Continuous Traffic Met? (Condition B)	YES
C. Combination of Warrants A and B Criteria Met?	N/A



WARRANT 1A

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **YES**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number: **3**

US 79 & FM 619

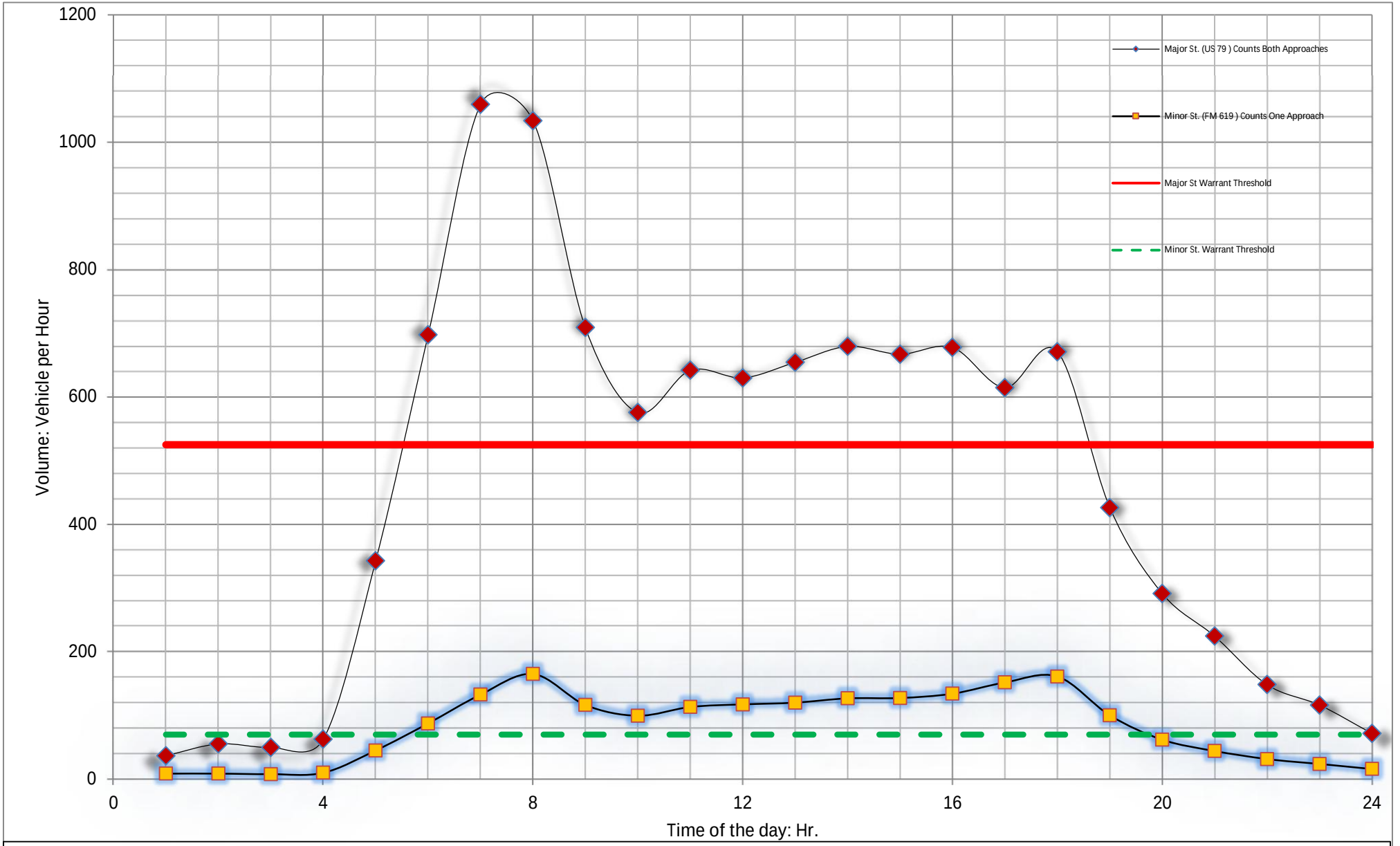
NO. OF LANES ON MAJOR ST.? **1**

NO. OF LANES ON MINOR ST.? **2**

Number of Hours that met the Warrant: **3**

Does this intersection meet Warrant 1A for signal installation? **NO**

Data Collection Date: **5/16/2024**



WARRANT 1B

IS THERE A REDUCTION IN THE WARRANT THRESHOLDS TO 70% ...

1- DUE TO SPEED? **YES**

2- DUE TO ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000? **NO**

Spot Number: **3**

US 79 & FM 619

NO. OF LANES ON MAJOR ST.? **1**

NO. OF LANES ON MINOR ST.? **2**

Number of Hours that met the Warrant: **13**

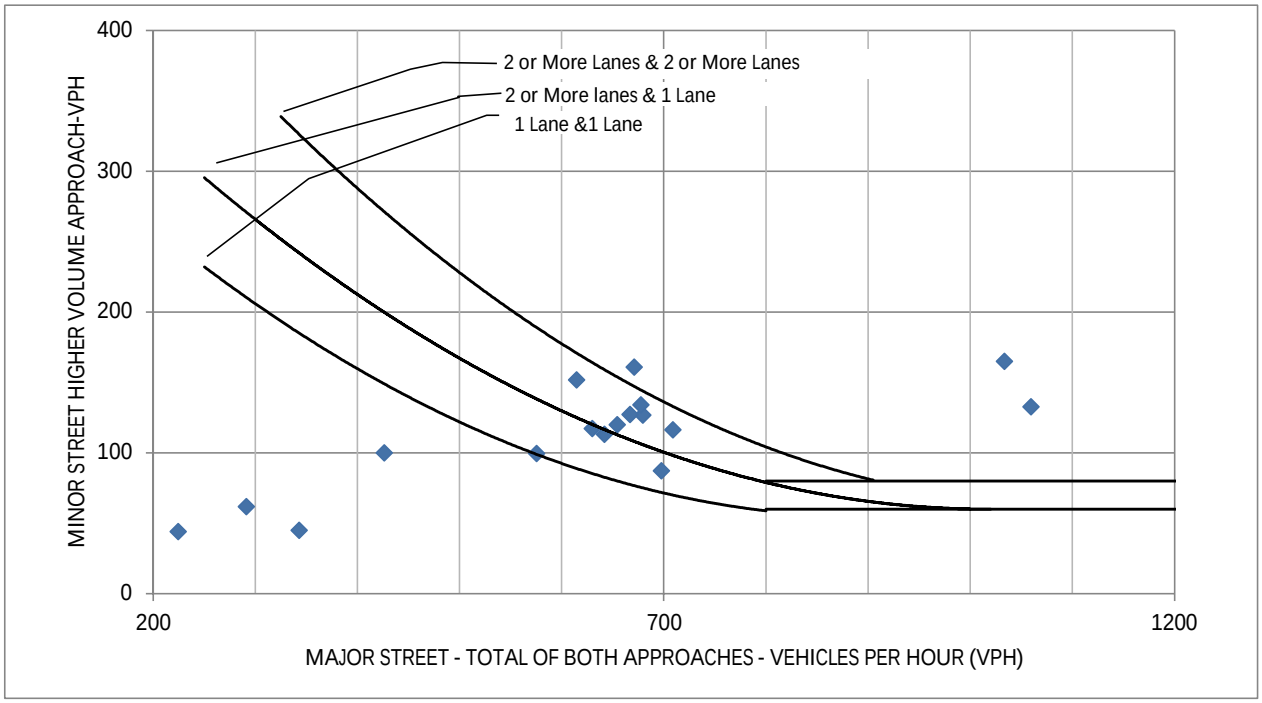
Does this intersection meet Warrant 1B for signal installation? **YES**

Data Collection Date: **5/16/2024**

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 2: Four-Hour Vehicular Volume

Spot Number:	3		
Intersection:	US 79 & FM 619		
Date	7/31/2024	by	Kimley-Horn

1	: No. of Lanes on Major St.
2	: No. of Lanes on Minor St.
45	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: What is the population of the isolated community?



How Many Hours Are Met	11
Is Warrant (70%) Met?	YES

Texas Manual on Uniform Traffic Control Devices

Worksheet for Signal Warrants (Section 4C)

WARRANT 3 A: Peak-Hour Vehicular Volume

Spot Number:	3		
Intersection:	US 79 & FM 619		
Date	7/31/2024	by	Kimley-Horn

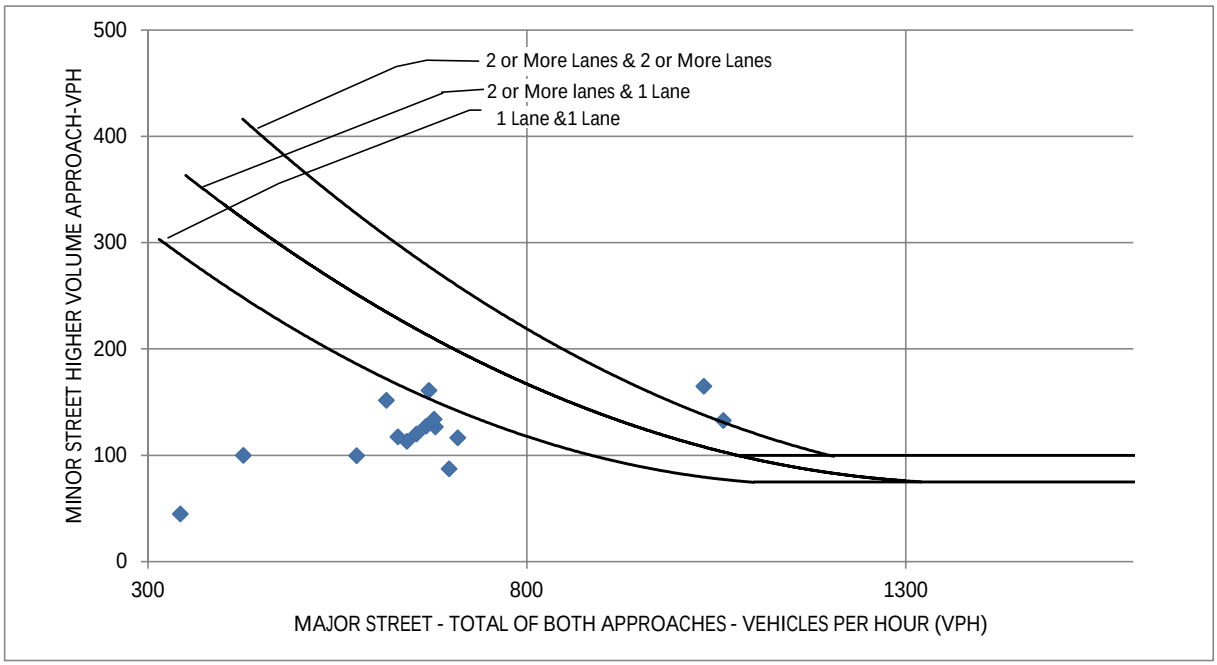
MISSING	: Total Stop Time Delay (hrs)
2	: Minor Street Approach Lanes
4	: Total Approaches
165	: Minor Approach Volume
1324	: Total Entering Volume
07:00 - 08:00	: Peak Hour

Is Warrant 3 A Met?	YES

Texas Manual on Uniform Traffic Control Devices
Worksheet for Signal Warrants (Section 4C)
WARRANT 3 B(70%): Peak-Hour Vehicular Volume

Spot Number:	3		
Intersection:	US 79 & FM 619		
Date	7/31/2024	by	Kimley-Horn

1	: No. of Lanes on Major St.
2	: No. of Lanes on Minor St.
45	: Speed limit or 85th Percentile? (MPH)
NO	: Is the intersection within an Isolated community?
	: What is the population of the isolated community?



How Many Hours Are Met	2
Is Warrant (70%) Met?	YES

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts NB	% of Daily	NB
	4420	100%	2009
12:00 AM	19	0.4%	9
1:00 AM	19	0.4%	9
2:00 AM	17	0.4%	8
3:00 AM	22	0.5%	10
4:00 AM	99	2.2%	45
5:00 AM	192	4.3%	87
6:00 AM	292	6.6%	133
7:00 AM	*363*	*8.2%*	165
8:00 AM	*256*	*5.8%*	116
9:00 AM	219	5.0%	100
10:00 AM	249	5.6%	113
11:00 AM	258	5.8%	117
12:00 PM	264	6.0%	120
1:00 PM	279	6.3%	127
2:00 PM	280	6.3%	127
3:00 PM	295	6.7%	134
4:00 PM	334	7.6%	152
5:00 PM	*354*	*8.0%*	161
6:00 PM	*220*	*5.0%*	100
7:00 PM	136	3.1%	62
8:00 PM	97	2.2%	44
9:00 PM	69	1.6%	31
10:00 PM	52	1.2%	24
11:00 PM	35	0.8%	16
MAX % Daily		8.2%	2009
MAX EXIST VOLUME		165	

FM 619

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts SB	% of Daily	SB
	4420	100%	1522
12:00 AM	19	0.4%	7
1:00 AM	19	0.4%	7
2:00 AM	17	0.4%	6
3:00 AM	22	0.5%	8
4:00 AM	99	2.2%	34
5:00 AM	192	4.3%	66
6:00 AM	292	6.6%	101
7:00 AM	*363*	*8.2%*	125
8:00 AM	*256*	*5.8%*	88
9:00 AM	219	5.0%	75
10:00 AM	249	5.6%	86
11:00 AM	258	5.8%	89
12:00 PM	264	6.0%	91
1:00 PM	279	6.3%	96
2:00 PM	280	6.3%	96
3:00 PM	295	6.7%	102
4:00 PM	334	7.6%	115
5:00 PM	*354*	*8.0%*	122
6:00 PM	*220*	*5.0%*	76
7:00 PM	136	3.1%	47
8:00 PM	97	2.2%	33
9:00 PM	69	1.6%	24
10:00 PM	52	1.2%	18
11:00 PM	35	0.8%	12
MAX % Daily		8.2%	1522
MAX EXIST VOLUME		125	

FM 619

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts EB	% of Daily	EB
	4405	100%	10312
12:00 AM	24	0.5%	8
1:00 AM	15	0.3%	5
2:00 AM	12	0.3%	4
3:00 AM	17	0.4%	6
4:00 AM	48	1.1%	17
5:00 AM	74	1.7%	26
6:00 AM	114	2.6%	39
7:00 AM	297	*6.7%*	103
8:00 AM	220	*5.0%*	76
9:00 AM	205	4.7%	71
10:00 AM	240	5.4%	83
11:00 AM	268	6.1%	93
12:00 PM	270	6.1%	93
1:00 PM	292	6.6%	101
2:00 PM	300	6.8%	104
3:00 PM	331	7.5%	114
4:00 PM	457	10.4%	158
5:00 PM	475	*10.8%*	164
6:00 PM	289	*6.6%*	100
7:00 PM	163	3.7%	56
8:00 PM	108	2.5%	37
9:00 PM	83	1.9%	29
10:00 PM	59	1.3%	20
11:00 PM	44	1.0%	15
MAX % Daily		10.8%	1522
MAX EXIST VOLUME		1112	

US 79

2027 Build-Out 24 Hour Count Calculation			
Trip Generation Calculations			BUILD-OUT 24 HR COUNT
Hour of Day	Existing Counts WB	% of Daily	WB
	4420	100%	9613
12:00 AM	13	0.3%	28
1:00 AM	23	0.5%	50
2:00 AM	21	0.5%	46
3:00 AM	26	0.6%	57
4:00 AM	150	3.4%	326
5:00 AM	309	7.0%	672
6:00 AM	469	10.6%	1020
7:00 AM	428	*9.7%*	931
8:00 AM	291	*6.6%*	633
9:00 AM	232	5.2%	505
10:00 AM	257	5.8%	559
11:00 AM	247	5.6%	537
12:00 PM	258	5.8%	561
1:00 PM	266	6.0%	579
2:00 PM	259	5.9%	563
3:00 PM	259	5.9%	563
4:00 PM	210	4.8%	457
5:00 PM	233	*5.3%*	507
6:00 PM	150	*3.4%*	326
7:00 PM	108	2.4%	235
8:00 PM	86	1.9%	187
9:00 PM	55	1.2%	120
10:00 PM	44	1.0%	96
11:00 PM	26	0.6%	57
MAX % Daily		10.6%	9613
MAX EXIST VOLUME		1020	

US 79

PEAK HOUR BUILD-OUT APPROACH TOTAL VOLUME				
PEAK HOUR	FM 619		US 79	
	NB	SB	EB	WB
AM	79	125	579	1,020
PM	165	111	1,112	514

DRAINAGE REPORT

Gradiant Technology Park
112 FM/427 Loop
Taylor, Texas 76574

Prepared For:
Preliminary Plan Application
Final Plat Application
Subdivision Improvement Plan Application
Site Plan “A” Application
Site Plan “B” Application

Prepared By:
Kimley-Horn and Associates, Inc.
10814 Jollyville Road
Building IV, Suite 200
Austin, TX 78759
TEXAS REGISTRATION #928



8/2/2024

Kimley»Horn

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5. INTERIM DRAINAGE AREA MAP
6. PROPOSED DRAINAGE AREA MAP
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I. INTRODUCTION

This drainage analysis has been prepared for iMarketAmerica and is solely for the use of the proposed Gradiant Technology Park (Phase 1) improvements. The subject property is located on the northeast corner of the US 79 and FM 112 intersection in the City of Taylor city limits in Williamson County. The overall site consists of approximately ±211.8 acres, which is currently undeveloped farmland. The Phase 1 improvements which will be limited to ±58 acres include subdivision public improvements and two large private commercial developments. A site location map is included in the Appendix as ***Exhibit 1.***

II. FEMA FLOODPLAIN

According to the FEMA Flood Insurance Rate Maps (FIRM) for Williamson County and Incorporated Areas, Texas Community Panel Number #48491C0534F and #48491C0542F dated December 20, 2019, a portion of the development lies within the 100-yr floodplain (Zone A). However, the proposed Phase 1 improvements will not encroach nor impact the FEMA 100-year floodplain. A copy of the FEMA FIRM map showing the site is included in the Appendix as ***Exhibit 2***.

III. ASSUMPTIONS AND METHODS FOR HYDROLOGIC ANALYSIS

The hydrologic parameters used in the HEC-HMS Software model was based on the US Natural Resources Conservation Service (NRCS) methodology for soil infiltration loss rates and rainfall to runoff transform. Other parameters such as land use loss rates (curve number) and time of concentration values were calculated based on property characteristics and are discussed in more detail below.

The City of Taylor 24-hour storm with a Depth-Duration Frequency (DDF) (provided by the City of Taylor) distribution was used to estimate flows for total cumulative rainfall as given in the table below.

24-hour City of Taylor Rainfall Totals				
Return Period	2 year	10 year	25 year	100 year
Depth (inch)	3.97	6.38	8.17	11.5

The Time of Concentrations (Tc) were calculated using TR-55 methodology to account for analyzing the drainage areas under existing and proposed conditions. Due to the existing terrain consisting of earthen channels defined over time by storm runoff, the existing time of concentration was mainly based on channel flow. For the proposed condition, a Manning's number of 0.15 was used for the pavement areas consisting of curb and gutter flow within the right-of-way and for concrete pavement within the commercial sites. Please reference the Subdivision Improvement Plans for additional information on the time of concentration computed for this development.

IV. EXISTING CONDITION DRAINAGE SYSTEM ANALYSIS

The existing site topographic information used for the drainage study is provided by an on the ground survey. From the topography, two (2) drainage basins (EX-1 and OS) were identified and analyzed for the proposed regional pond providing detention for the Phase 1 improvements. EX-2 drainage basin drains to the southeast away from the point of analysis (POA).

The SCS curve numbers (CN) were created for the drainage basins by using the NRCS soil survey maps to classify the soil types and was used to select Curve Numbers for "pasture, grassland, or range-continuous forage for grazing (good condition)". All the existing soils located within the

basins are classified as having a hydraulic rating Group D (CN=80). The NRCS soil survey maps for this development are in the Appendix as ***Exhibit 3.***

Below are the HEC-HMS results for the existing undeveloped conditions which includes the runoff at the POA. The existing drainage area map is shown in ***Exhibit 4 Existing Drainage Area Map.***

EXISTING CONDITIONS										
Area	**AREA (acres)**	**AREA (sq.mi.)**	**Curve Number**	**Impervious Cover (%)**	**TC (min.)**	**LAG TIME (min.)**	**Q2 (cfs)**	**Q10 (cfs)**	**Q25 (cfs)**	**Q100 (cfs)**
EX-1	201.34	0.315	80	0	43.6	26.2	289.9	545.5	718.8	1005.1
EX-2	10.51	0.016	80	0	10.0	6.0	30.3	56.5	74.0	102.6
OS	48.19	0.075	80	0	39.3	23.6	73.6	138.2	182.0	254.0
POA							362.6	682.2	899.2	1256.3

V. PROPOSED CONDITION DRAINAGE SYSTEM ANALYSIS

The proposed condition analysis considered the ROW+Pond, SP1, and SP2 drainage basins to be developed with the remaining property to be undeveloped including the offsite drainage basin. The impervious considered for each of the developed basins have been provided in the table below. The proposed runoff will be conveyed to a regional detention pond through the public storm system. The delineated drainage basins are shown in ***Exhibit 5 Proposed Drainage Area Map and Exhibit 6 Inlet Drainage Area Map.***

Each of the curb inlets within the public right-of-way were located to fully intercept the upstream runoff and to comply with clear lane requirements. All inlet calculations for the 25-year and 100-year storms are located on ***Exhibit 7 Drainage Calculations.***

Below are the HEC-HMS results for the proposed developed conditions which includes the runoff at the POA:

PROPOSED CONDITIONS										
Drainage Area	**AREA (acres)**	**AREA (sq.mi.)**	**Curve Number**	**Impervious Cover (%)**	**Time of Concentration (min.)**	**LAG TIME (min.)**	**Q2 (cfs)**	**Q10 (cfs)**	**Q25 (cfs)**	**Q100 (cfs)**
SP1	29.48	0.046	80	85	5.0	3.0	159.3	239.1	291.9	377.9
SP2	19.86	0.031	80	85	5.0	3.0	107.3	161.1	196.7	254.6
BP-DA1	142.02	0.222	80	0	43.6	26.2	204.9	385.5	508.0	710.3
DA2	10.51	0.016	80	0	10.0	6.0	30.3	56.5	74.0	102.6
ROW+POND	8.33	0.013	80	42	5.0	3.0	36.8	60.5	76.2	101.9
BP1	0.60	0.001	80	80	5.0	3.0	3.2	4.8	5.9	7.7
BP2	0.34	0.001	80	76	5.0	3.0	1.8	2.7	3.3	4.3
BP3	0.71	0.001	80	28	5.0	3.0	8.6	14.6	18.6	25.2
OS	48.19	0.075	80	0	39.3	23.6	73.6	138.2	182.0	254.0
POA							350.0	657.3	865.6	1234.8

*BP = DRAINAGE AREA BYPASSES DETENTION POND

Below is a table that provides the interim flows prior to the two (2) commercial lots located within the SP1 and SP2 drainage areas are developed. Similar to the proposed runoff conditions, the interim runoff conditions will not increase the existing runoff at the POA.

INTERIM CONDITIONS										
Drainage Area	**AREA (acres)**	**AREA (sq.mi.)**	**Curve Number**	**Impervious Cover (%)**	**Time of Concentration (min.)**	**LAG TIME (min.)**	**Q2 (cfs)**	**Q10 (cfs)**	**Q25 (cfs)**	**Q100 (cfs)**
BSP1A	21.27	0.033	80	0	10.0	6.0	61.4	114.4	149.8	207.6
SP1B	8.21	0.013	80	0	10.0	6.0	23.7	44.1	57.8	80.1
SP2	21.95	0.034	80	0	10.0	6.0	63.4	118.0	154.6	214.2
BP-DA1	140.64	0.220	80	0	43.6	26.2	202.9	381.8	503.1	703.4
DA2	10.51	0.016	80	0	10.0	6.0	30.3	56.5	74.0	102.6
ROW+POND	8.33	0.013	80	42	5.0	3.0	36.8	60.5	76.2	101.9
BP1	0.60	0.001	80	80	5.0	3.0	3.2	4.8	5.9	7.7
BP2	0.34	0.001	80	76	5.0	3.0	1.8	2.7	3.3	4.3
BP3	0.71	0.001	80	28	5.0	3.0	8.6	14.6	18.6	25.2
OS	48.19	0.075	80	0	39.3	23.6	73.6	138.2	182.0	254.0
POA							327.4	591.0	791.6	1108.0

*BP = DRAINAGE AREA BYPASSES DETENTION POND

VI. SUMMARY

The analysis performed confirmed that the proposed Phase 1 development which includes a regional detention pond will not result in the increase in flows at the POA.

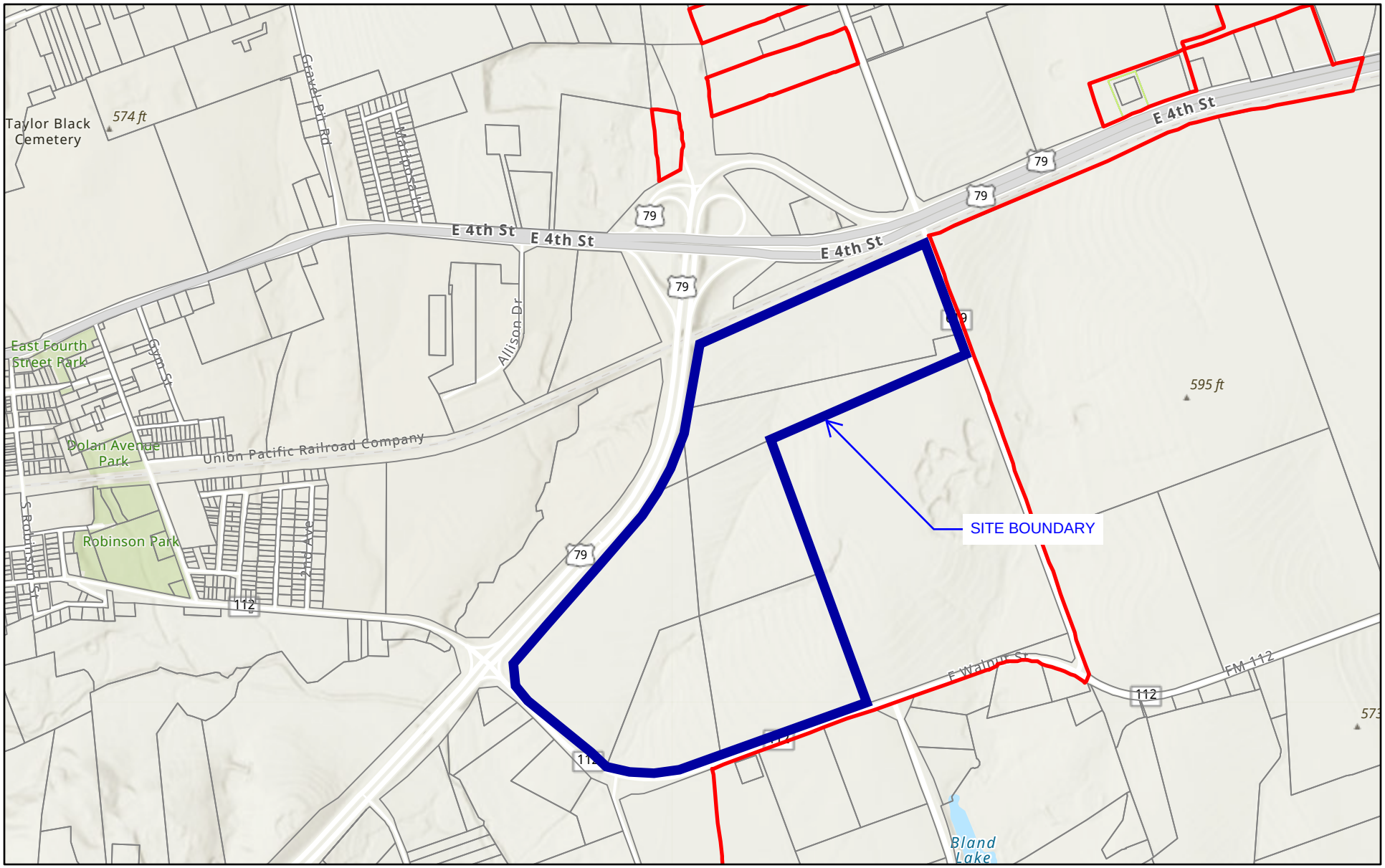
No offsite conditions or neighboring properties will be affected by this development. No proposed floodplain boundaries are proposed.

The engineer confirms that this report complies with all applicable City, State, and Federal regulations and standards

EXHIBIT 1

SITE LOCATION MAP

ArcGIS Web Map



5/13/2024, 1:23:11 PM

City Limits

WCAD Parcels

ETJ Boundary

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

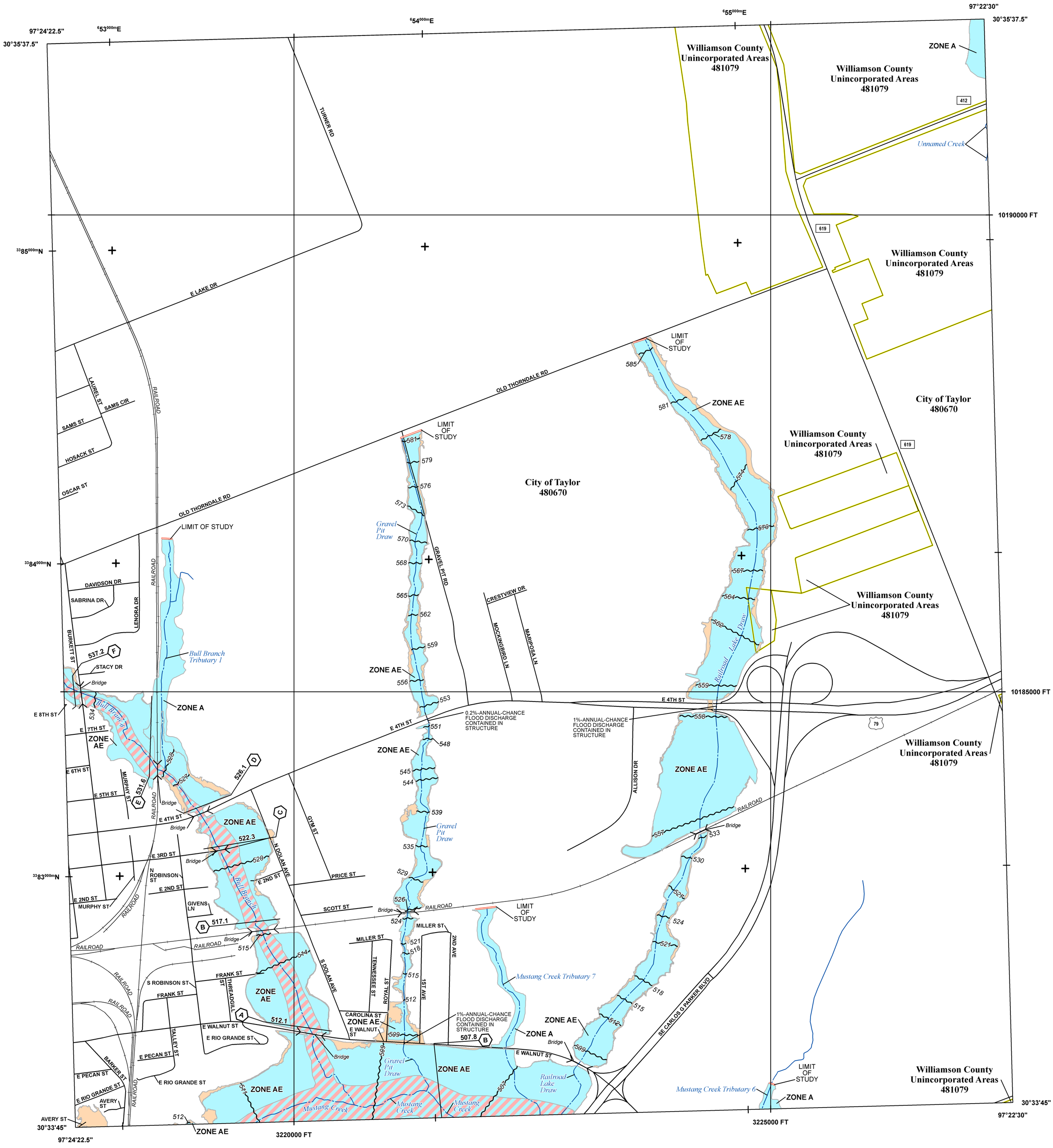
Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife,

ArcGIS Web AppBuilder

Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, Baylor University, City of Austin, County of Williamson, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA

EXHIBIT 2

FEMA FLOODPLAIN MAPS



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A,V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- E 18.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 — Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE

N

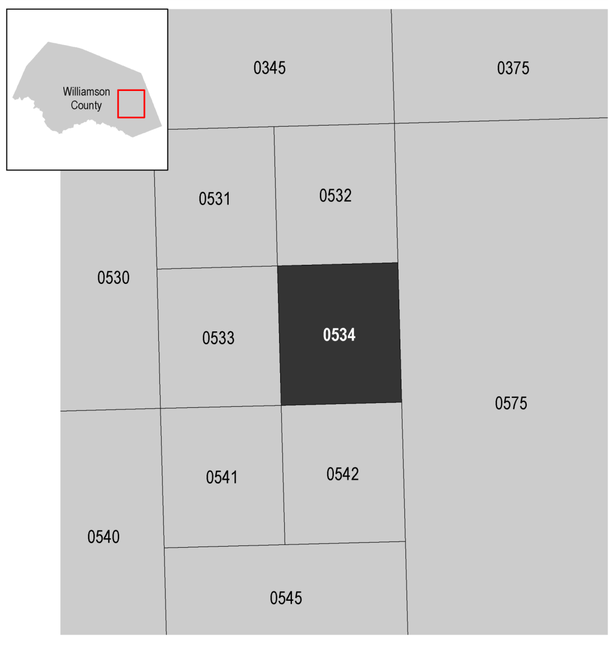
Map Projection:
Texas State Plane Central (FIPS ZONE 4203); North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY, TEXAS
and Incorporated Areas

PANEL 534 OF 750

FEMA

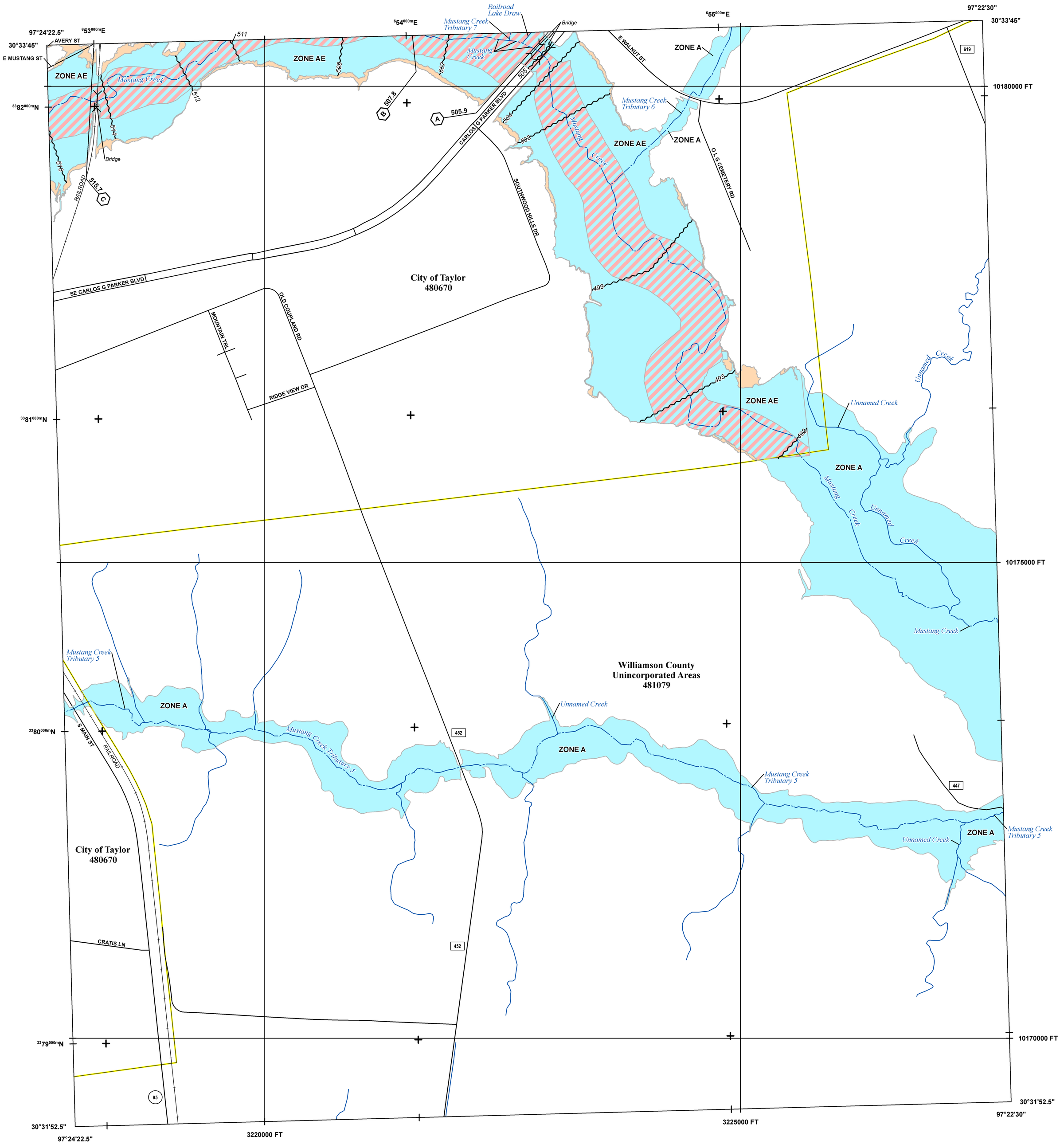
Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
TAYLOR, CITY OF	480670	0534	F
WILLIAMSON COUNTY	481079	0534	F

VERSION NUMBER
2.3.3.3

MAP NUMBER
48491C0534F

MAP REVISED
DECEMBER 20, 2019



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A,V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
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GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

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NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from digital data obtained from Texas Natural Resource Information Systems (TNRIS), dated 2000; United States Census Bureau, dated 2015; United States Geological Survey, dated 2005; and the Williamson County Geographic Information Systems (GIS) Department, dated 2014 and 2017.

SCALE

N

Map Projection:
Texas State Plane Central (FIPS ZONE 4203); North American Datum 1983; Western Hemisphere; Vertical Datum: NAVD 88

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

WILLIAMSON COUNTY, TEXAS

and Incorporated Areas

PANEL 542 OF 750

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
TAYLOR, CITY OF	480670	0542	F
WILLIAMSON COUNTY	481079	0542	F

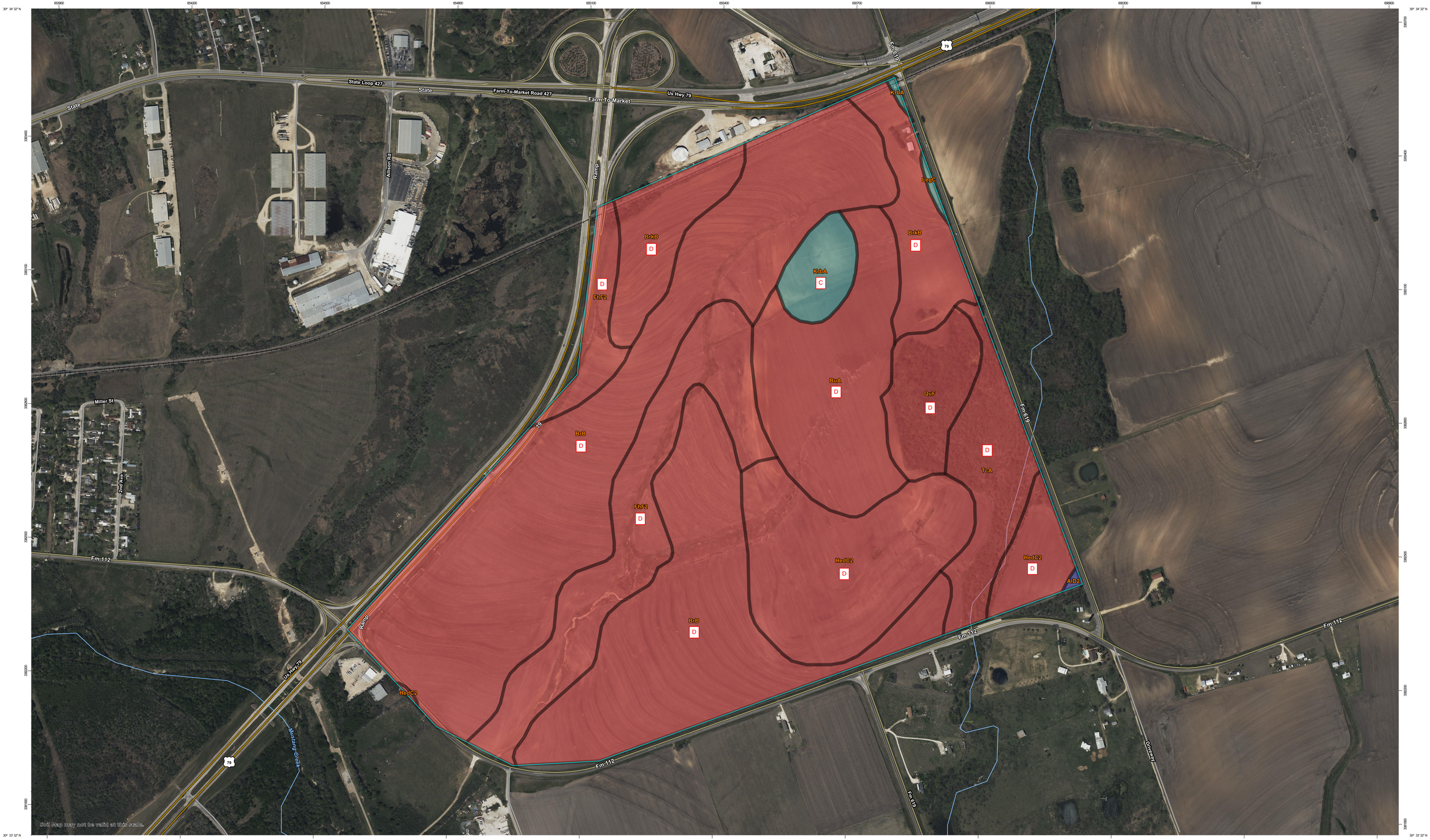
VERSION NUMBER
2.3.3.3

MAP NUMBER
48491C0542F

MAP REVISED
DECEMBER 20, 2019

EXHIBIT 3

NRCS SOIL MAPS



Map Scale: 1:3,840 if printed on D landscape (34" x 22") sheet.

N

0 50 100 200 300 Meters

0 150 300 600 900 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Texas
Survey Area Data: Version 24, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 2, 2022—May 17, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AlD2	Altoga silty clay loam, 5 to 8 percent slopes, moderately eroded	B	0.3	0.1%
BrB	Branyon clay, 1 to 3 percent slopes	D	155.6	43.9%
BrkB	Branyon-Krum complex, 1 to 3 percent slopes	D	29.7	8.4%
BuA	Burleson clay, 0 to 1 percent slopes	D	36.4	10.3%
FhF2	Ferris-Heiden complex, 5 to 15 percent slopes, moderately eroded	D	43.3	12.2%
HedC2	Heiden clay, 2 to 5 percent slopes, moderately eroded	D	47.6	13.4%
KrbA	Krum-Branyon complex, 0 to 1 percent slopes	C	7.8	2.2%
LegC	Lewisville-Altoga complex, 2 to 5 percent slopes	C	0.5	0.1%
QuF	Queeny-Sunev complex, 5 to 15 percent slopes	D	14.0	3.9%
TcA	Tinn clay, 0 to 1 percent slopes, occasionally flooded	D	19.1	5.4%
Totals for Area of Interest			**354.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

EXHIBIT 4

EXISTING DRAINAGE AREA MAP

LEGEND

X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
A-1	INLET NUMBER
	PROPERTY LINE
	EXISTING STORM DRAIN LINE
	EXISTING DRAINAGE DIVIDE
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
	TIME OF CONCENTRATION PATH
	100 YEAR FEMA FLOODPLAIN

EXISTING HEC-HMS MODEL LAYOUT

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
8/2/2024

KHA PROJECT	065001200
DATE	AUGUST 2024
SCALE:	AS SHOWN
DESIGNED BY:	JF
DRAWN BY:	GA
CHECKED BY:	JF

GRADIANT TECHNOLOGY PARK PHASE 1

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

EXISTING DRAINAGE AREA MAP

811 Know what's **below.** **Call** before you dig.

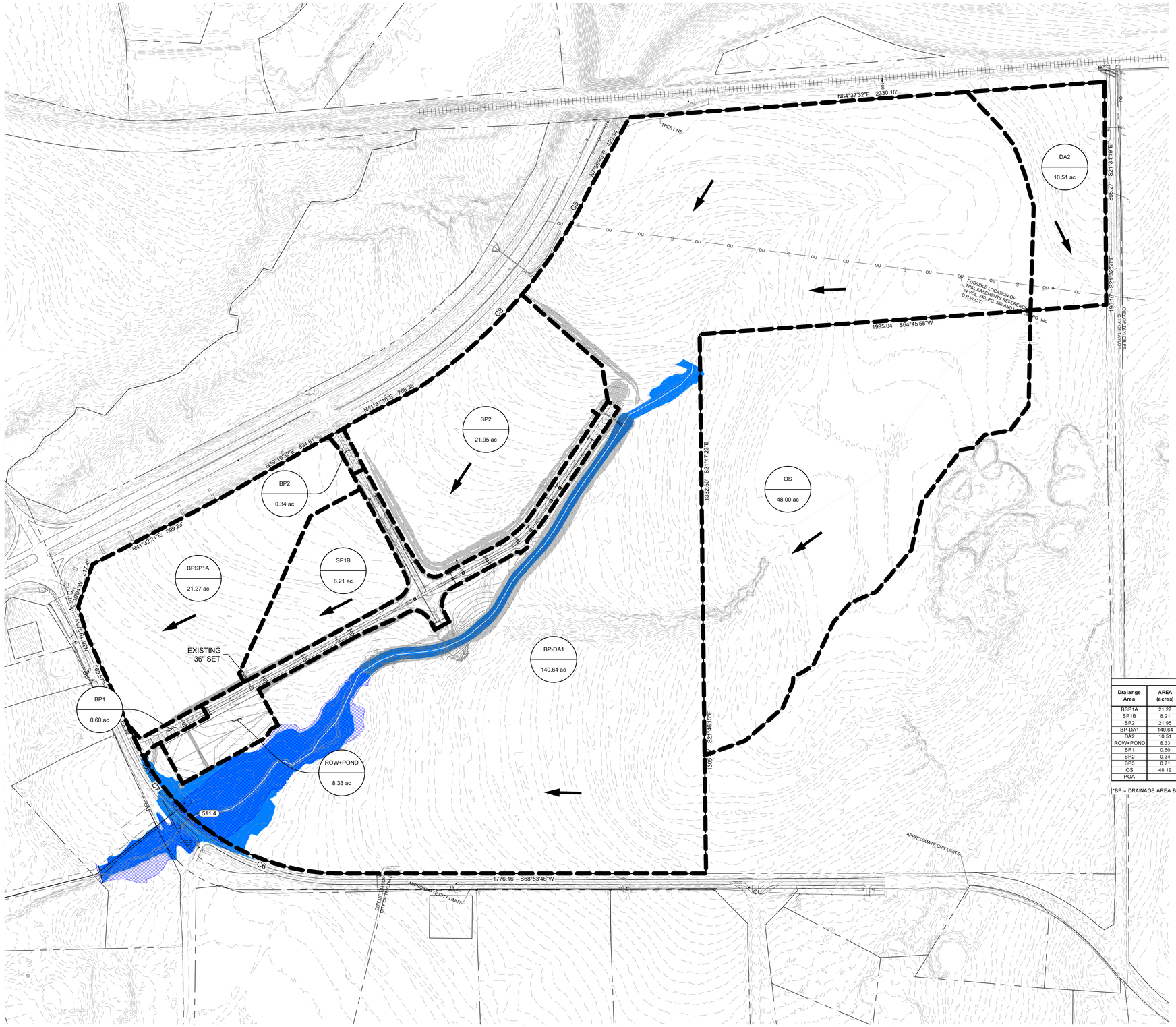
WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SHEET NUMBER
15
OF 90

Plotted By:Howell, Autumn Date:August 01, 2024 04:41:10pm File Path:K:\AUS_Civil\065001200- Taylor Industrial\Civil\SIP Phase 1\PlanSheets\C - Existing Drainage Area Map.dwg
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EXHIBIT 5

PROPOSED DRAINAGE AREA MAP



N

W E

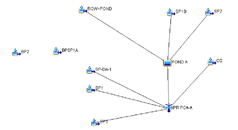
S

0 250' 500'

GRAPHIC SCALE 250'

LEGEND

X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
A-1	INLET NUMBER
	PROPERTY LINE
	EXISTING STORM DRAIN LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
	PROPOSED FLOW DIRECTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
	TIME OF CONCENTRATION PATH
	ATLAS 14 100 YR FLOODPLAIN
	100 YEAR FEMA FLOODPLAIN



INTERIM HEC-HMS MODEL LAYOUT

INTERIM CONDITIONS

Drainage Area	AREA (acres)	AREA (sq.mi.)	Curve Number	Impervious Cover (%)	Time of Concentration (min.)	LAG TIME (min.)	Q2 (cfs)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
BSP1A	21.27	0.033	80	0	10.0	6.0	61.4	114.4	149.8	207.6
SP1B	8.21	0.013	80	0	10.0	6.0	23.7	44.1	57.8	80.1
SP2	21.95	0.034	80	0	10.0	6.0	63.4	118.0	154.6	214.2
BP-DA1	140.64	0.220	80	0	43.6	26.2	202.9	381.8	503.1	703.4
DA2	10.51	0.016	80	0	10.0	6.0	30.3	56.5	74.0	102.6
ROW+POND	8.33	0.013	80	42	5.0	3.0	36.8	60.5	76.2	101.9
BP1	0.60	0.001	80	80	5.0	3.0	3.2	4.8	5.9	7.7
BP2	0.34	0.001	80	76	5.0	3.0	1.8	2.7	3.3	4.3
BP3	0.71	0.001	80	28	5.0	3.0	8.6	14.6	18.6	25.2
OS	48.19	0.075	80	0	39.3	23.6	73.6	138.2	182.0	254.0
POA							327.4	591.0	791.6	1108.0

*BP = DRAINAGE AREA BYPASSES DETENTION POND

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No.	REVISIONS	DATE	BY

Kimley»Horn

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STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER

8/2/2024

KHA PROJECT	065001200
DATE	AUGUST 2024
SCALE:	AS SHOWN
DESIGNED BY:	JF
DRAWN BY:	GA
CHECKED BY:	JF

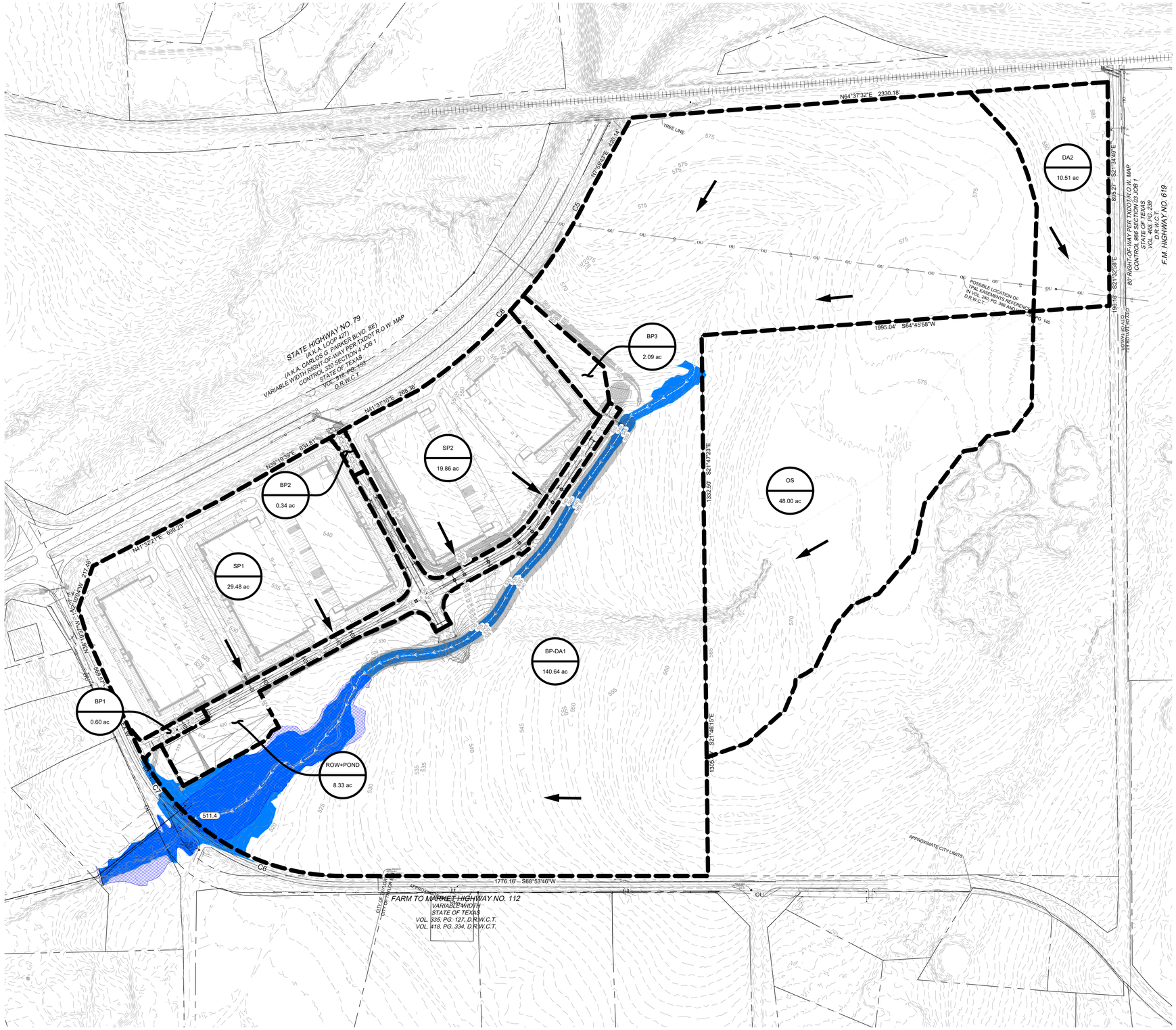
INTERIM DRAINAGE AREA MAP

GRADIANT TECHNOLOGY PARK PHASE 1

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
16
OF 90

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0 250' 500'
GRAPHIC SCALE 250'

LEGEND

X-1 / 9.9 ac	AREA DESIGNATOR / AREA IN ACRES
A-1	INLET NUMBER
	PROPERTY LINE
	EXISTING STORM DRAIN LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM DRAIN LINE
	PROPOSED STORM GRATE INLET
	PROPOSED STORM HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED STORM JUNCTION BOX
	PROPOSED STORM AREA INLET
	PROPOSED STORM CURB INLET
	PROPOSED FLOW DIRECTION
XXX	EXISTING MAJOR CONTOUR
XXX	EXISTING MINOR CONTOUR
XXX	PROPOSED MAJOR CONTOUR
XXX	PROPOSED MINOR CONTOUR
	TIME OF CONCENTRATION PATH
	ATLAS 14 100 YR FLOODPLAIN
	100 YEAR FEMA FLOODPLAIN



PROPOSED HEC-HMS MODEL LAYOUT

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No.	REVISIONS	DATE	BY

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8/2/2024

KHA PROJECT	065001200
DATE	AUGUST 2024
SCALE:	AS SHOWN
DESIGNED BY:	JF
DRAWN BY:	GA
CHECKED BY:	JF

PROPOSED DRAINAGE AREA MAP

GRADIANT TECHNOLOGY PARK PHASE 1

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
17
OF 90

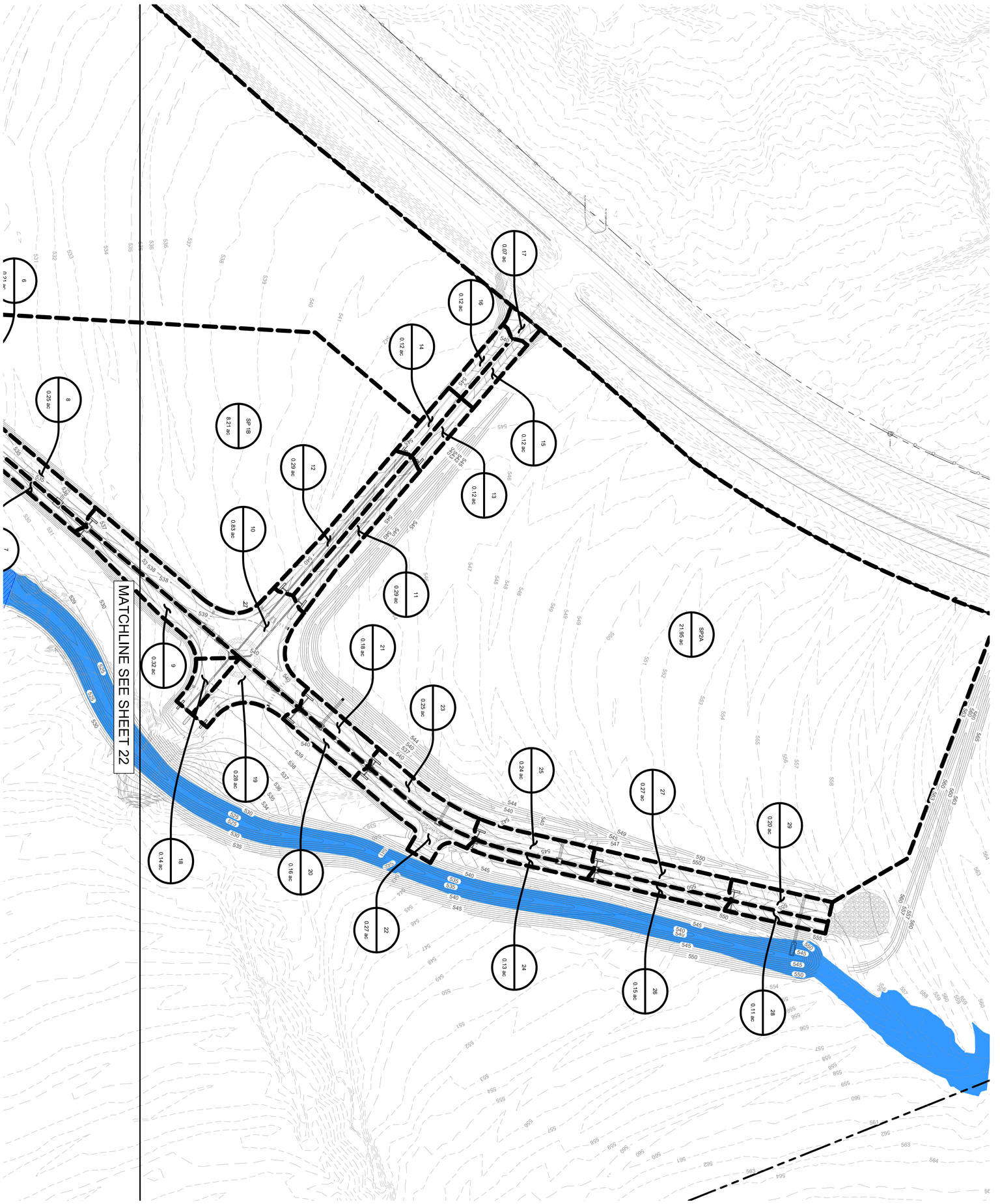
Plotted By:Howell, Autumn Date:August 01, 2024 04:42:38pm File Path:K:\AUS_Civil\065001200-Taylor Industrial\Cad\SIP Phase 1\PlanSheets\C - Proposed Drainage Area Map.dwg
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EXHIBIT 6

INLET DRAINAGE AREA MAP

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LEGEND

- AREA DESIGNATOR / AREA IN ACRES
- INLET NUMBER
- PROPERTY LINE
- EXISTING STORM DRAIN LINE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM GRATE INLET
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- PROPOSED FLOW DIRECTION
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- TIME OF CONCENTRATION PATH
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN

GRAPHIC SCALE 100' (0, 100', 200')

Know what's below. Call before you dig. 811

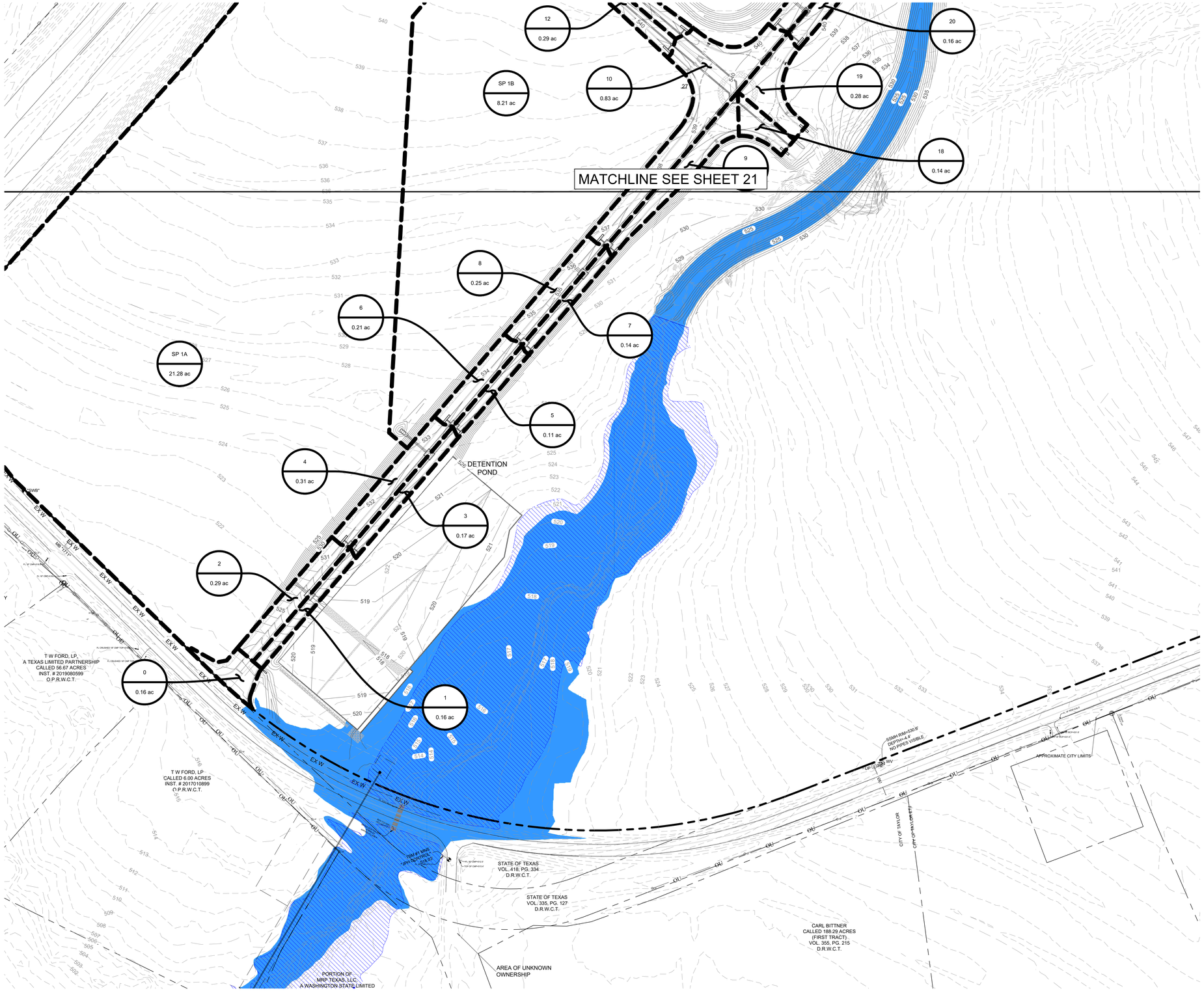
WARNING: CONTRACTOR IS TO NOTIFY ALL UTILITIES PRIOR TO CONSTRUCTION. LOCATION OF ALL UTILITIES SHOWN IS APPROXIMATE.

SHEET NUMBER 21 OF 90	GRADIANT TECHNOLOGY PARK PHASE 1 CITY OF TAYLOR WILLIAMSON COUNTY, TEXAS	INLET DRAINAGE AREA MAP (1 OF 2)	KHA PROJECT 065001200 DATE AUGUST 2024 SCALE: AS SHOWN DESIGNED BY: JF DRAWN BY: GA CHECKED BY: JF

8/2/2024

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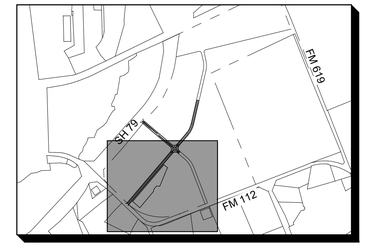
No.	REVISIONS	DATE	BY



N
W E
S
0 100' 200'
GRAPHIC SCALE 100'

LEGEND

- X-1 / 9.9 ac — AREA DESIGNATOR / AREA IN ACRES
- A-1 — INLET NUMBER
- PROPERTY LINE
- EXISTING STORM DRAIN LINE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM GRATE INLET
- PROPOSED STORM HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- PROPOSED STORM AREA INLET
- PROPOSED STORM CURB INLET
- PROPOSED FLOW DIRECTION
- XXX — EXISTING MAJOR CONTOUR
- XXX — EXISTING MINOR CONTOUR
- XXX — PROPOSED MAJOR CONTOUR
- XXX — PROPOSED MINOR CONTOUR
- TIME OF CONCENTRATION PATH
- ATLAS 14 100 YR FLOODPLAIN
- 100 YEAR FEMA FLOODPLAIN



KEYMAP
N.T.S

811
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Call before you dig.

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8/2/2024

KHA PROJECT	065001200
DATE	AUGUST 2024
SCALE:	AS SHOWN
DESIGNED BY:	JF
DRAWN BY:	GA
CHECKED BY:	JF

INLET DRAINAGE AREA MAP (2 OF 2)

GRADIANT TECHNOLOGY PARK PHASE 1

CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

SHEET NUMBER
22
OF 90

Plotted By:Howell, Autumn Date:August 01, 2024 04:44:48pm File Path:K:\AUS_Civil\065001200- Taylor Industrial\Cad\SIP Phase 1\PlanSheets\C - Inlet Drainage Area Map.dwg
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EXHIBIT 7

INLET DRAINAGE CALCULATIONS

Taylor Industrial - Proposed "C" Value Calculations

D.A. Number	Drainage Area (SF)	Drainage Area (Ac)	Pervious Area (SF)	Impervious Area (SF)	I.C. (%)	Comp. C_{25}	Comp. C_{100}
0	6969.6	0.16	0	6970	100%	0.88	0.97
1	6969.6	0.16	1307	5663	81%	0.77	0.86
2	12632.4	0.29	3920	8712	69%	0.70	0.78
3	7383	0.17	1307	6076	82%	0.78	0.86
4	13477.47	0.31	4356	9121	68%	0.69	0.77
5	5004.35	0.11	871	4133	83%	0.78	0.86
6	9258.63	0.21	3049	6210	67%	0.69	0.77
7	6055.45	0.14	1307	4748	78%	0.75	0.84
8	10941.99	0.25	3485	7457	68%	0.69	0.78
9	13799.49	0.32	2614	11185	81%	0.77	0.85
10	36016.84	0.83	6098	29919	83%	0.78	0.87
11	12486.85	0.29	2614	9873	79%	0.76	0.84
12	12613.76	0.29	2614	10000	79%	0.76	0.84
13	5218.35	0.12	871	4347	83%	0.78	0.87
14	5209.49	0.12	871	4338	83%	0.78	0.87
15	5380.21	0.12	1306	4074	76%	0.74	0.82
16	5380.48	0.12	1306	4074	76%	0.74	0.82
17	3049	0.07	0	3049	100%	0.88	0.97
18	6244.94	0.14	436	5809	93%	0.84	0.93
19	11987.14	0.28	1307	10680	89%	0.82	0.90
20	7050.76	0.16	1742	5309	75%	0.73	0.82
21	7846.51	0.18	1742	6105	78%	0.75	0.83
22	11946.55	0.27	3485	8462	71%	0.71	0.79
23	10890	0.25	3485	7405	68%	0.69	0.77
24	5768.39	0.13	871	4897	85%	0.79	0.88
25	10454	0.24	3485	6969	67%	0.68	0.77
26	6546.07	0.15	1307	5239	80%	0.76	0.85
27	11953.62	0.27	3920	8034	67%	0.69	0.77
28	4791.6	0.11	871	3920	82%	0.77	0.86
29	8712	0.20	2614	6098	70%	0.70	0.79
SP 1A	926986.8	21.28	926987	0	0%	0.29	0.36
SP 1B	357627.6	8.21	357628	0	0%	0.29	0.36
SP 2A	956142	21.95	956142	0	0%	0.29	0.36

Taylor Industrial - "Tc" Value Calculations

Drainage Area	Area (Ac.)	Sheet Flow Length ft	Slope ft/ft	n	Tt min	Shallow Flow Length ft	Slope ft/ft	n	Tt min	Total Tc min
0	0.16 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
1	0.16 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
2	0.29 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
3	0.17 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
4	0.31 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
5	0.11 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
6	0.21 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
7	0.14 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
8	0.25 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
9	0.32 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
10	0.83 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
11	0.29 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
12	0.29 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
13	0.12 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
14	0.12 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
15	0.12 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
16	0.12 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
17	0.07 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
18	0.14 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
19	0.28 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
20	0.16 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
21	0.18 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
22	0.27 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
23	0.25 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
24	0.13 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
25	0.24 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
26	0.15 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
27	0.27 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
28	0.11 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
29	0.20 Ac.	20	0.02	0.02	0.49 min	200	0.005	0.35	2.32	5.0 min
SP 1A	21.28 Ac.	100	0.02	0.17	9.81 min	1377	0.020	0.35	10.06	19.9 min
SP 1B	8.21 Ac.	100	0.02	0.17	9.81 min	800	0.020	0.35	5.84	15.7 min
SP 2A	21.95 Ac.	100	0.02	0.17	9.81 min	979	0.020	0.35	7.15	17.0 min

Taylor Industrial - Proposed Inlet Runoff (Q) Calculations

D.A. Number	Drainage Area (Ac)	TOTAL I.C. (%)	Comp. C_{25}	Comp. C_{100}	TOTAL T_c (Min.)	i_{25} (in/hr)	i_{100} (in/hr)	Q_{25} (cfs)	Q_{100} (cfs)
0	0.16	100%	0.88	0.97	5.00	10.62	13.63	1.5	2.1
1	0.16	81%	0.77	0.86	5.00	10.62	13.63	1.3	1.9
2	0.29	69%	0.70	0.78	5.00	10.62	13.63	2.1	3.1
3	0.17	82%	0.78	0.86	5.00	10.62	13.63	1.4	2.0
4	0.31	68%	0.69	0.77	5.00	10.62	13.63	2.3	3.3
5	0.11	83%	0.78	0.86	5.00	10.62	13.63	0.9	1.4
6	0.21	67%	0.69	0.77	5.00	10.62	13.63	1.5	2.2
7	0.14	78%	0.75	0.84	5.00	10.62	13.63	1.1	1.6
8	0.25	68%	0.69	0.78	5.00	10.62	13.63	1.8	2.7
9	0.32	81%	0.77	0.85	5.00	10.62	13.63	2.6	3.7
10	0.83	83%	0.78	0.87	5.00	10.62	13.63	6.9	9.8
11	0.29	79%	0.76	0.84	5.00	10.62	13.63	2.3	3.3
12	0.29	79%	0.76	0.84	5.00	10.62	13.63	2.3	3.3
13	0.12	83%	0.78	0.87	5.00	10.62	13.63	1.0	1.4
14	0.12	83%	0.78	0.87	5.00	10.62	13.63	1.0	1.4
15	0.12	76%	0.74	0.82	5.00	10.62	13.63	1.0	1.4
16	0.12	76%	0.74	0.82	5.00	10.62	13.63	1.0	1.4
17	0.07	100%	0.88	0.97	5.00	10.62	13.63	0.7	0.9
18	0.14	93%	0.84	0.93	5.00	10.62	13.63	1.3	1.8
19	0.28	89%	0.82	0.90	5.00	10.62	13.63	2.4	3.4
20	0.16	75%	0.73	0.82	5.00	10.62	13.63	1.3	1.8
21	0.18	78%	0.75	0.83	5.00	10.62	13.63	1.4	2.0
22	0.27	71%	0.71	0.79	5.00	10.62	13.63	2.1	3.0
23	0.25	68%	0.69	0.77	5.00	10.62	13.63	1.8	2.6
24	0.13	85%	0.79	0.88	5.00	10.62	13.63	1.1	1.6
25	0.24	67%	0.68	0.77	5.00	10.62	13.63	1.7	2.5
26	0.15	80%	0.76	0.85	5.00	10.62	13.63	1.2	1.7
27	0.27	67%	0.69	0.77	5.00	10.62	13.63	2.0	2.9
28	0.11	82%	0.77	0.86	5.00	10.62	13.63	0.9	1.3
29	0.20	70%	0.70	0.79	5.00	10.62	13.63	1.5	2.1
SP 1A	21.28	0%	0.29	0.36	19.87	6.44	8.22	39.8	62.9
SP 1B	8.21	0%	0.29	0.36	15.65	7.20	9.18	17.1	27.1
SP 2A	21.95	0%	0.29	0.36	16.96	6.94	8.85	44.2	69.9

Plotted By:Howell, Autumn Date:August 01, 2024 04:44:50pm File Path:K:\AUS_Civil\065001200-Taylor Industrial\Cad\SIP Phase 1\PlanSheets\C - Inlet Drainage Area Map.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

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PHONE: 512-418-1771 FAX: 512-418-1791
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

STATE OF TEXAS
JOSE M. FARIAS
111389
LICENSED
PROFESSIONAL ENGINEER
8/2/2024

KHA PROJECT	065001200
DATE	AUGUST 2024
SCALE:	AS SHOWN
DESIGNED BY:	JF
DRAWN BY:	GA
CHECKED BY:	JF

INLET DRAINAGE CALCULATIONS

GRADIANT
TECHNOLOGY PARK
PHASE 1
CITY OF TAYLOR
WILLIAMSON COUNTY, TEXAS

811 Know what's below. Call before you dig.

WARNING: CONTRACTOR IS TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SHEET NUMBER
23
OF 90

City of Taylor
PZ-2024-2109
Infill Neighborhood Plan
Staff Report

Item Details

Subject Property:	215 Commercial Drive
Total Acreage:	Approximately 4.68 acres
Legal Description:	Approximately 4.68 acres of land generally located at 215 Commercial Drive, legally described as Lake Aire Subdivision, Block One, Northern Part of Lot One, approximately 4.68 acres, more particularly described by Williamson Central Appraisal District Parcel R048754, Taylor, Williamson County, Texas
Applicant:	Chris Dringenberg, Southwest Engineers
Property Owner(s):	Greg Bruggeman, GWV Commercial Drive LLC
Request:	A request for an Infill Neighborhood Plan
Case History:	This is the first hearing of this request.

Overview of Applicant's Request & Background

The applicant is requesting an Infill Neighborhood Plan to allow for multifamily, single-family attached, and civic spaces on the subject property.

The applicant worked with the City's design consultant, Michael Watkins Architect, to furnish the applicant and the City with Infill Neighborhood Plan to address a neighborhood structure and scale, civic spaces, and frontage types to support surrounding land use in the area. A master plan with development program and annotations, the plan (see attached) contains:

- a regulating plan with both general and design-specific standards
- a thoroughfare plan with applicable front types or cross sections,
- a civic space plan,
- a fire apparatus access diagram, and an addressing plan

The applicant, city staff, and Michael Watkins and his team of urban designers met virtually to collaboratively conduct a design charette. A neighborhood layout was developed and after the charette, a plan was sent out and reviewed by staff and the applicant before finalizing the proposed Infill Neighborhood Plan attached with this report. The proposed community closely aligns with the City's long-term goals and will help the city meet the growing demand for walkable communities. The plan (see attached) contains a Regulating Plan that identifies Place

Types, Primary and Secondary frontages, design-specific standards, provides general standards and recommends the following warrants and a variance:

- A Warrant is recommended to allow for lower ratios of P4 than is permitted for a TND, given that other properties currently zoned P5 are expected to include a mix of Place Types if they redevelop.
- A Warrant is recommended to allow for larger Block size for Block B, due to the existing thoroughfare network and potential thoroughfare connections in this area.
- A Warrant is recommended to allow this parking lot not to connect to the adjacent parking lot due to the significant change in elevation in this area.
- Liner Buildings shall be permitted in the areas shown, on page B.4 of the attached plan, in order to screen parking. All Liner Buildings shall have the Primary Entrance and a Stoop, Porch, or balcony facing the Primary Frontage. A Warrant is recommended to allow parking in the Second Lot Layer in these locations only if it is enclosed in a building and screened from view at Frontages.
- A Variance is recommended to allow parking in the Second Layer in order to accommodate the applicant's proposed program and associated parking. This parking shall be screened where visible from frontages.
- A Variance is recommended to allow parking lots to face Commercial Drive in these locations in order to accommodate the applicant's proposed program and associated parking given the existing easements and thoroughfare network on and near the Subject Property.

Location:

The subject property is located at 215 Commercial Drive.

Physical and Natural Features:

The subject property is vacant land that is relatively flat and mostly of devoid foliage.

Growth Sector Designations:

The subject property is located within the Infill Growth Sector (G-5).

The Infill Growth Sector is made up of areas that are already developed and served by infrastructure. They are also intended for higher intensity uses than are currently in place.

Future Land Use and Zoning Designations:

The subject property is assigned the Future Land Use designation as Market: Community.

Market Centers are mixed-use areas anchored by a retail destination where surrounding residents go to get daily goods and services. As with all centers, Market Centers are envisioned as mixed-use and walkable places. Neighborhood, Community, and Regional Market Centers differ by the scale of the development but not in the types of uses or the walkable nature.

The current zoning is P5: Urban Center. The P5 Urban Center Place Type regulates a higher intensity mixture of building types that accommodate commercial, retail, offices, hotels, and residential. Buildings are set close to the sidewalk with high pedestrian and vehicle traffic. P5

promotes a continuous line of buildings and wide sidewalks critical to defining the public frontage.

The surrounding properties are:

Direction	Zoning District	Growth Sector	Future Land Use	Existing Land Use
North	P5 – Urban Center & P3 – Neighborhood	Infill Neighborhood Sector (G-4) & Infill Growth Sector (G-5)	Neighborhood Infill & Market: Community	Multifamily
South	P5	Infill Growth Sector (G-5)	Market: Community	Multifamily
East	P5	Infill Growth Sector (G-5)	Market: Community	Self-Storage
West	CS – Civic Space	Infill Neighborhood Sector (G-4)	Neighborhood Infill	Vacant Land

Transportation

The subject property gains access off Commercial Drive to the north and through an access point through the property to the south along Lake Drive.

Utilities

The subject property is located within the City of Taylor water and wastewater CCN. There is a 6-inch water line, 8-inch wastewater line, and 6-inch water line located on the subject property.

Public Notification

As required by the Local Government Code and the City of Taylor Code of Ordinances, all property owners within a 200-foot radius of the subject property were notified of the zoning map amendment request. Thirty-seven (37) notices were mailed to the property owners and a legal notice advertising the public hearing was placed in the Taylor Press on Sunday, August 25, 2024.

Staff Analysis

Upon analyzing the request for Infill Neighborhood Plan to allow for multifamily, single-family attached, and civic spaces in the P5 – Urban Center Place Type, the proposed plan is consistent with the intended Place Type development of the surrounding area. The Infill Neighborhood Plan request is consistent with the following Land Use Policies in Envision Taylor Comprehensive Plan:

- **LU9** – Promote development patterns that maximize the use of existing infrastructure and land use before expanding infrastructure to underdeveloped areas.

- The applicant currently has access to water and wastewater on their property and would likely only be required to extend as needed (lateral lines to buildings

- **LU10** - New development should generate sufficient revenue to support the long-term cost of maintaining the infrastructure that serves it.

  - The applicant has proposed a mix of Place Types – P4 and P5 which address the desired increase in more housing. The applicant is also proposing a civic space at the center of the development using to activate the space.

Staff Recommendation

For the reasons stated in the staff analysis, staff recommends approval of the requested Infill Neighborhood Plan.

Planning and Zoning Commission Recommendation

The Planning and Zoning Commission is charged with reviewing all requests for an Infill Neighborhood Plan and recommends to City Council either in favor of or opposition to each request. In determining a recommendation on an Infill Neighborhood Plan request, the Planning and Zoning Commission members consider the following factors

Is the Infill Neighborhood Plan consistent with the Comprehensive Plan?

- The Infill Neighborhood Plan is consistent with the Comprehensive Plan.

Is the Infill Neighborhood Plan compatible with the surrounding area?

- The Plan is compatible with other zoning to the north, east, west, and to the south of the subject property.

Does the Infill Neighborhood Plan promote the public health, safety, or general welfare?

- Staff analysis determined that the proposed EC Plan for the subject property will promote public health, safety, and the general welfare. In addition, the Planning Principles and Policy Guide in the Comprehensive Plan aim to promote health, safety, and general welfare by managing growth, while promoting safe and orderly development.

Is adequate infrastructure available or planned to meet the needs of the proposed land use?

- There is adequate infrastructure available for the proposed multi-family development.

Do current conditions indicate that an Infill Neighborhood Plan is necessary?

- The Taylor Land Development Code requires developments over 2.5 Acres infill location, requiring an Infill Neighborhood Plan.

Attachments:

1. Letter of Intent from Applicant
2. Location Map
3. Zoning Map
4. Growth Sectors Map
5. Future Land Use Map
6. Notification Map
7. Draft Ordinance

a. Exhibit A – Survey
b. Exhibit B – Infill Neighborhood Plan

Letter of Intent

Please accept this submission as our Infill Neighborhood Application for the property described as a 4.68-acre tract of land, more or less, out of the W.J. Baker Survey, Abstract No. 65, Williamson County, Texas, being a part of Lot I, Lake Alre, said plat recorded in Cabinet F, slides 75-76, Plat records, Williamson County, Texas and located at 215 Commercial Drive. Along with this letter we have uploaded an updated Site Plan along with a Massing Plan for comparison of the proposed development with relationship to the existing adjacent properties. As requested, we have also included a recent deed of the property along with a recent survey.

The proposed development will consist of two (2) muti-family buildings three-four stories in height along with a through driveway connecting Commercial Drive to the existing development to the south. In addition the development it is anticipated that an existing onsite water line will need to be relocated so that the proposed improvements can be achieved. We would like to discuss with the group the plans provided and make any necessary adjustments based on this meeting/review of the plans that will help us move onto the next step with a Site Plan Application Submission.

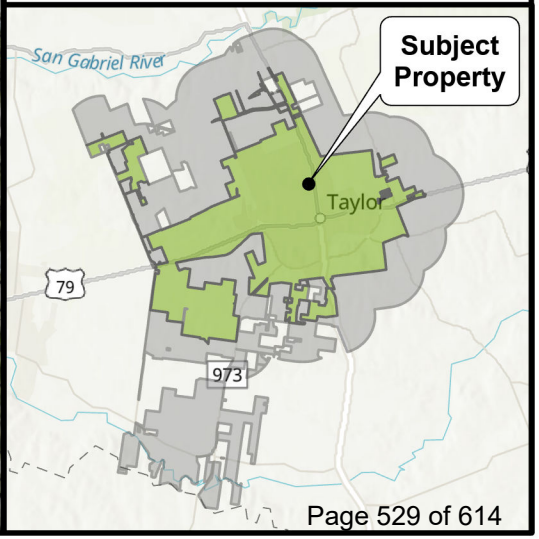


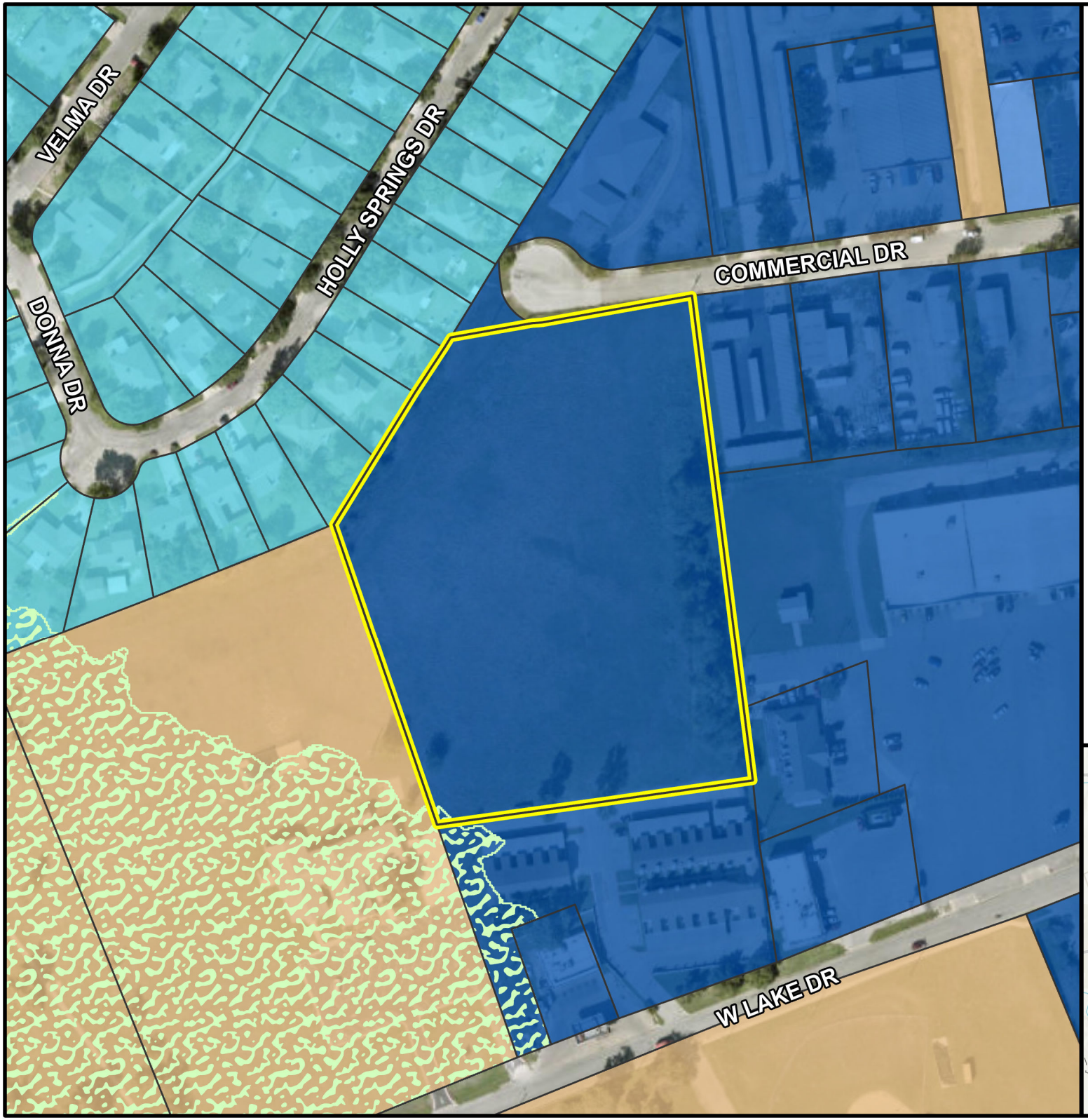
PZ-2024-2109

215 Commercial Dr.
Neighborhood Plan
Location Map
Approximately 4.7 acres

- City Limits
- Subject Property
- Parcels

N 0 410 820
Feet





PZ-2024-2109

215 Commercial Dr.
Neighborhood Plan
Current Zoning Map
Approximately 4.7 acres

- City Limits
- Subject Property
- Parcels

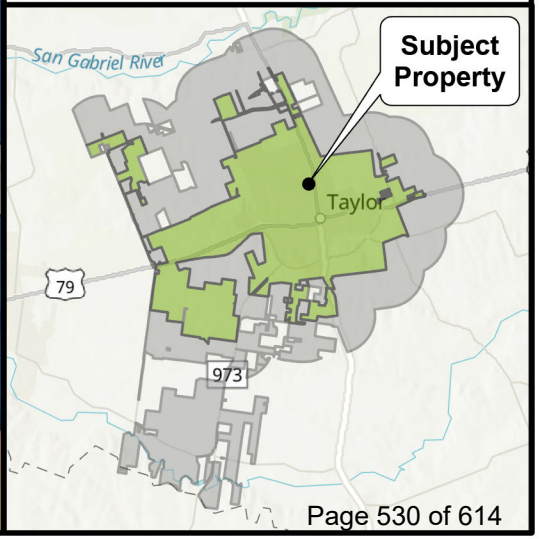
Overlay Zoning

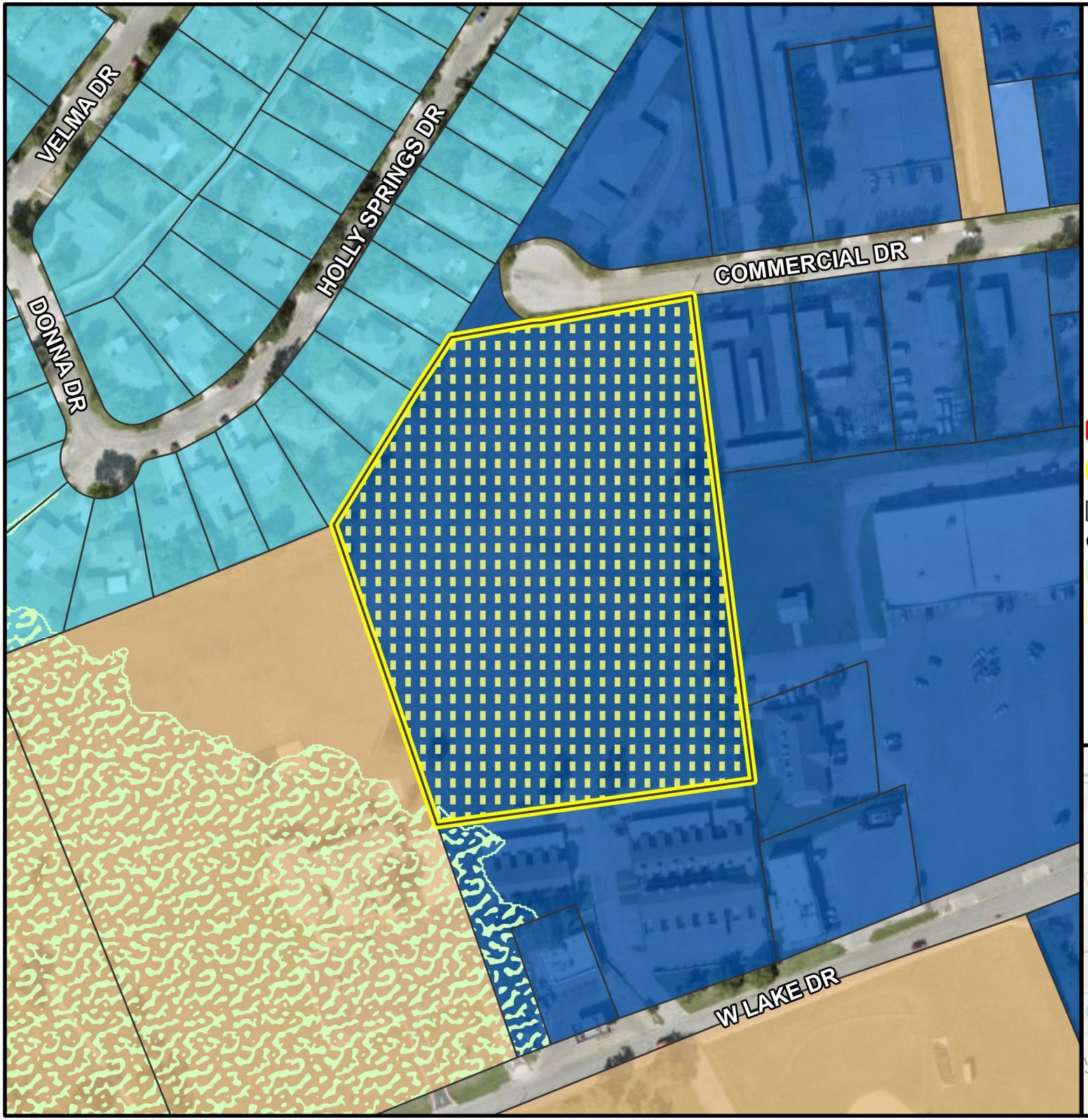
- P1: Nature

Place Type Zoning

- P3: Neighborhood
- P4: Mix
- P5: Urban Center
- CS: Civic Space

N 0 150 300
Feet





Taylor Texas
CITY OF TAYLOR TX

PZ-2024-2109

215 Commercial Dr.
Neighborhood Plan
Proposed Zoning Map
Approximately 4.7 acres

- City Limits
- Subject Property
- Parcels

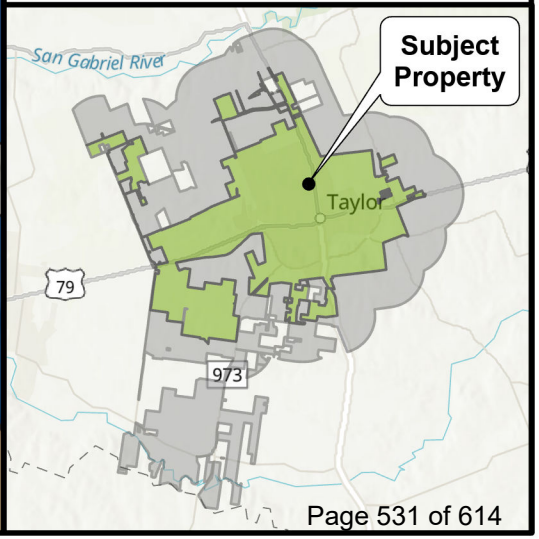
Overlay Zoning

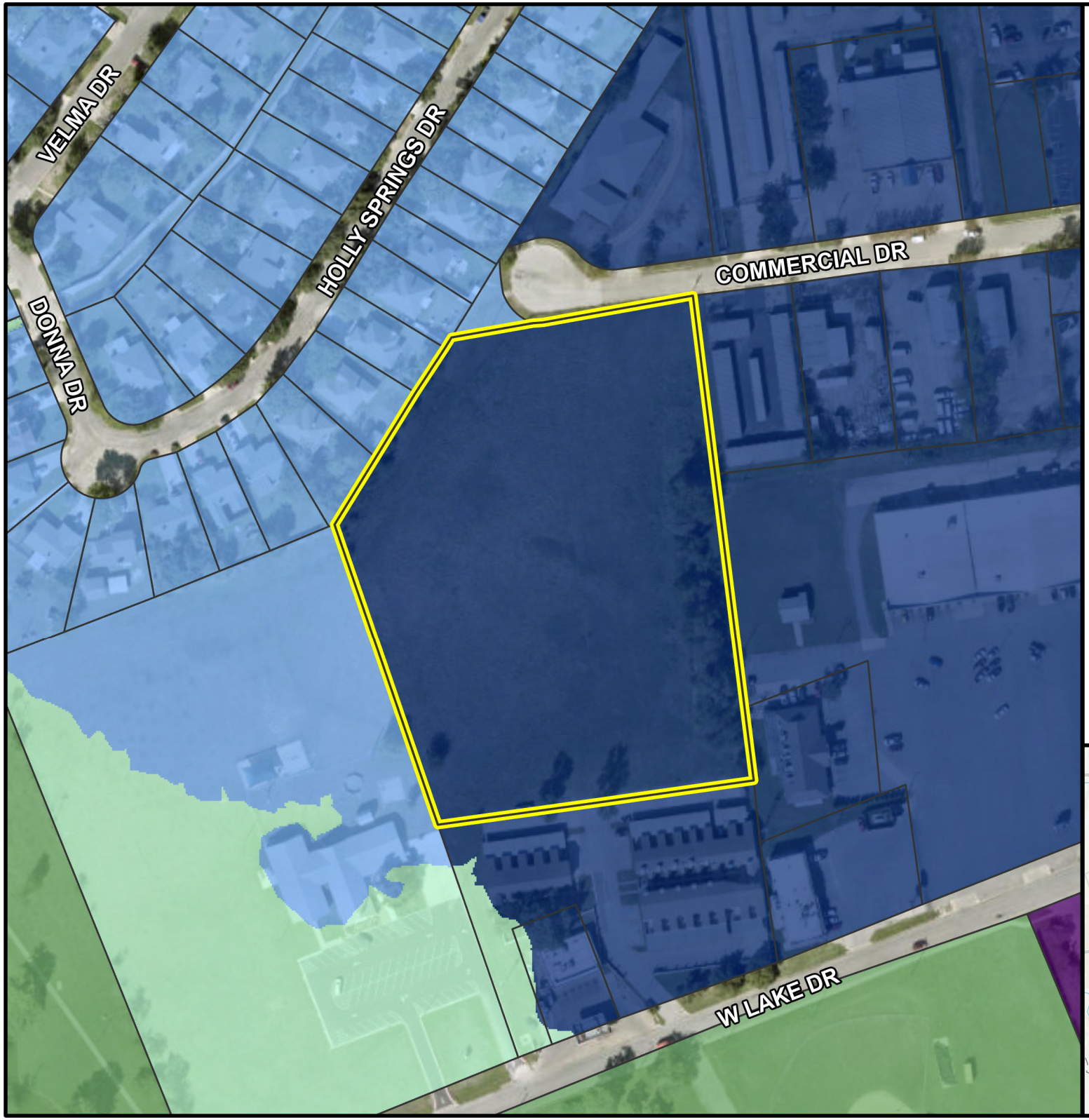
- P1: Nature
- Neighborhood Plan Overlay

Place Type Zoning

- P3: Neighborhood
- P4: Mix
- P5: Urban Center
- CS: Civic Space

N 0 150 300
Feet





PZ-2024-2109

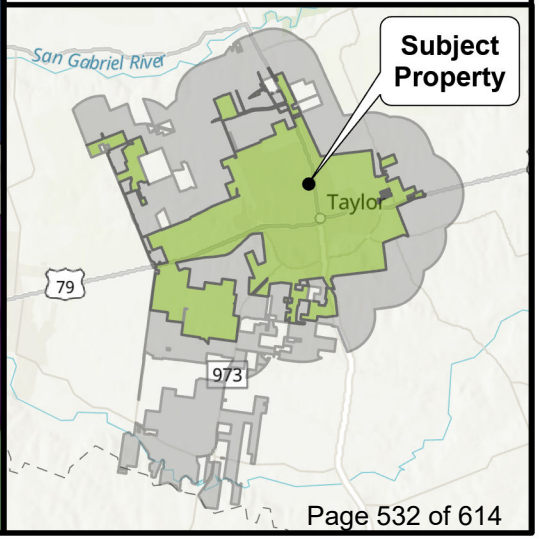
215 Commercial Dr.
Neighborhood Plan
Growth Sector Map
Approximately 4.7 acres

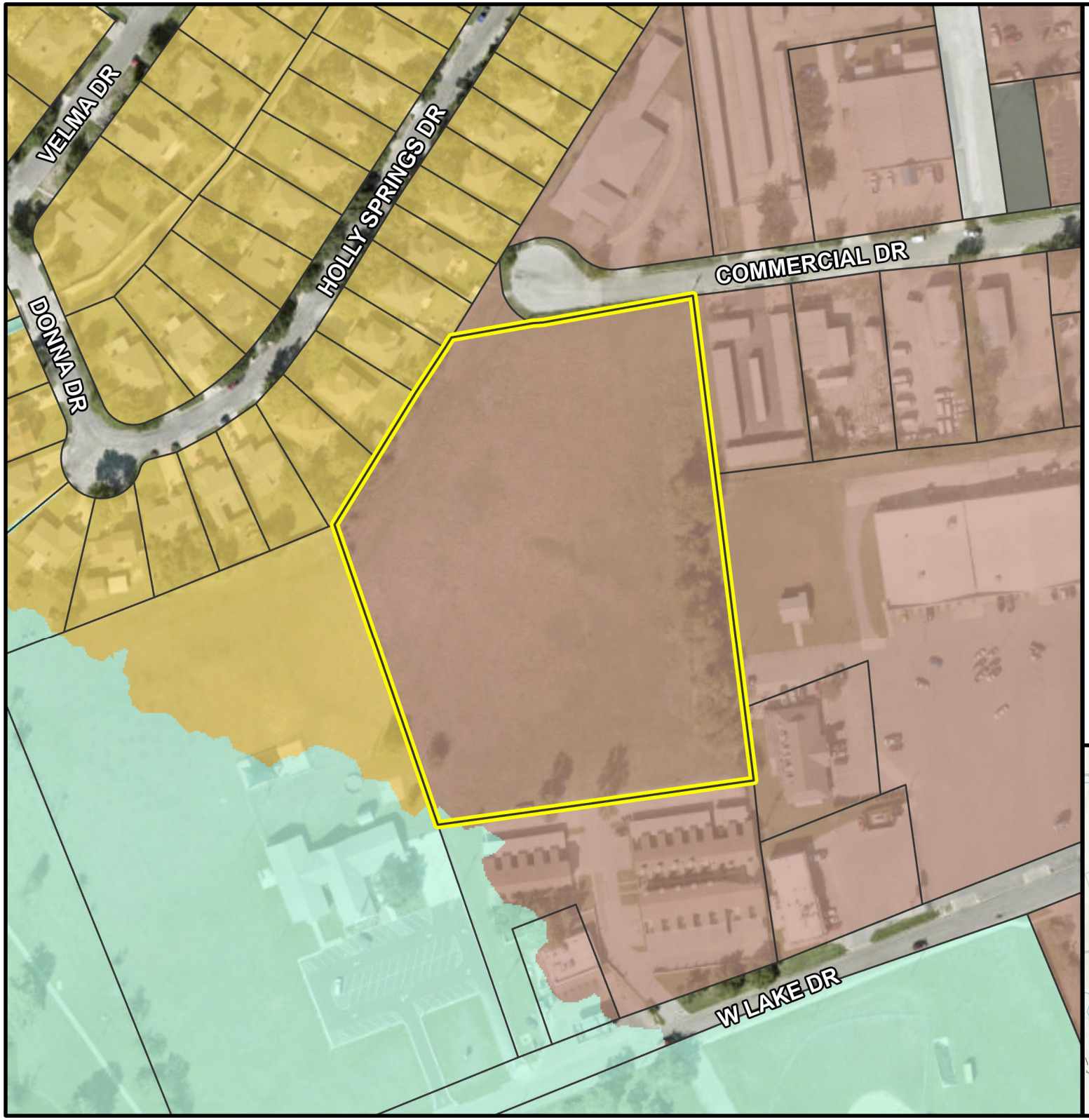
- City Limits
- Subject Property
- Parcels

Growth Sector

- Preserved Open Sector (O-1)
- Reserved Open Sector (O-2)
- Intended Growth Sector (G-3)
- Infill Neighborhood Sector (G-4)
- Infill Growth Sector (G-5)

N 0 150 300
Feet





PZ-2024-2109

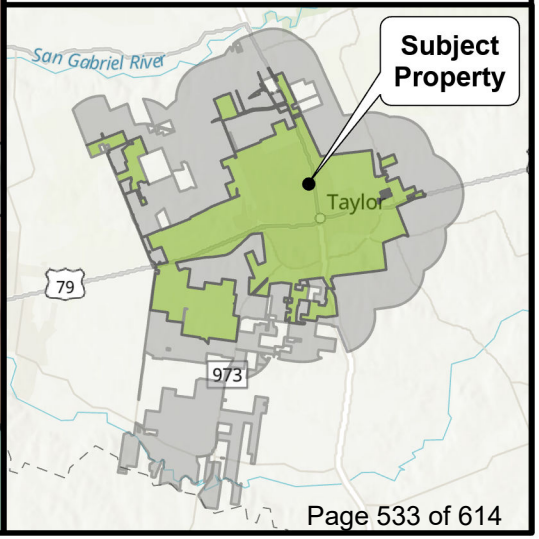
215 Commercial Dr.
Neighborhood Plan
Future Land Use Map
Approximately 4.7 acres

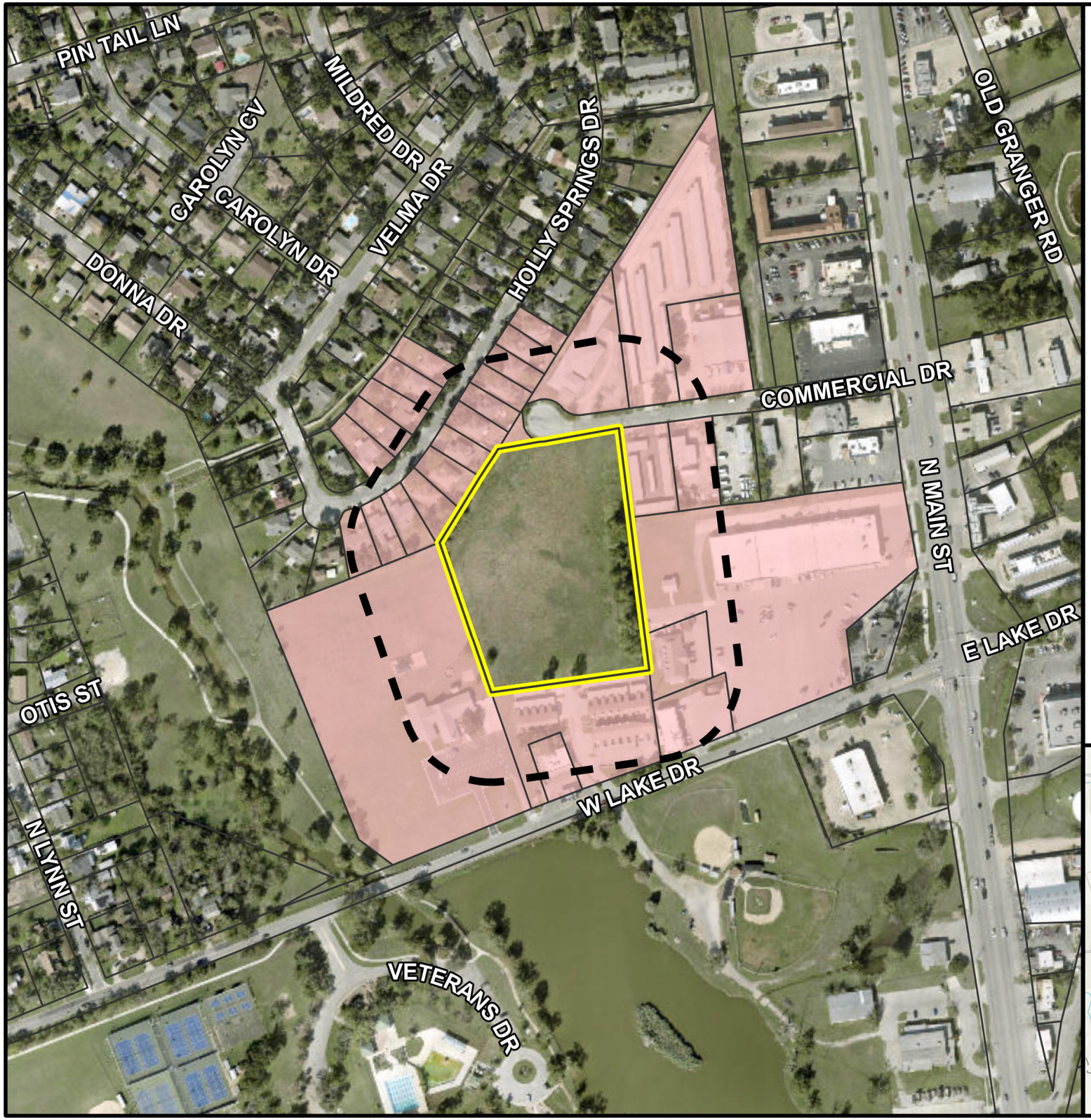
- City Limits
- Subject Property
- Parcels

Future Land Use

- Area of Minimal Change
- Neighborhood Infill
- Market: Community
- Market: Neighborhood
- Open Space

N 0 150 300
Feet





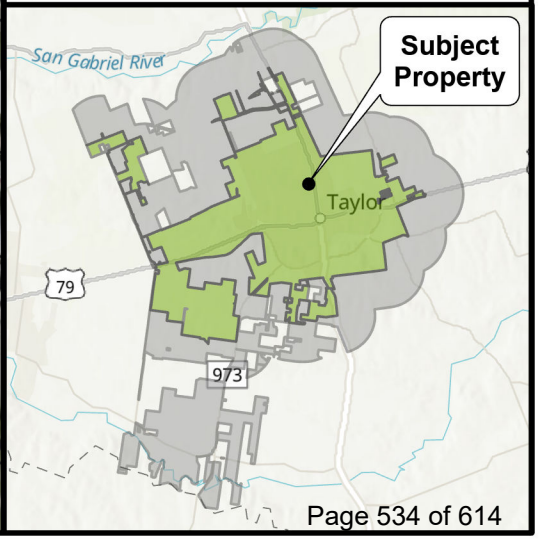
Taylor Texas
CITY OF TAYLOR TX

PZ-2024-2109

215 Commercial Dr.
Neighborhood Plan
Notification Map
Approximately 4.7 acres

- City Limits
- Subject Property
- 200-ft. Buffer
- Notified Properties
- Parcels

N 0 310 620
Feet



ORDINANCE NO. 2024-40

AN ORDINANCE APPROVING AN INFILL NEIGHBORHOOD PLAN REFERRED TO AS 215 COMMERCIAL GENERALLY LOCATED AT 215 COMMECIAL DRIVE, LEGALLY DESCRIBED AS LAKE AIRE SUBDIVISION, BLOCK ONE, NORTHERN PART OF LOT ONE, APPROXIMATELY 4.68 ACRES, MORE PARTICULARLY DESCRIBED BY WILLIAMSON CENTRAL APPRAISAL DISTRICT PARCEL R048754, TAYLOR, WILLIAMSON COUNTY, TEXAS; AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF TAYLOR, TEXAS, TO SHOW THE ZONING CHANGE ADOPTED HEREIN; PROVIDING A SAVINGS CLAUSE.

WHEREAS, the Taylor City Council conducted a public hearing on September 26, 2024, to consider the request made by the applicant, whose property is legally described in Exhibit "A" attached hereto and incorporated by reference herein for all purposes ("Property"), to approve an Infill Neighborhood Plan referred to as 215 Commercial; and

WHEREAS, the Planning and Zoning Commission, after proper notice, conducted a public hearing on September 10, 2024, to consider the zoning request, and recommended the Infill Neighborhood Plan to the City Council; and

WHEREAS, the City Council, after the public hearing, approves the request for the Infill Neighborhood Plan and Property zoning change.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TAYLOR, TEXAS, that:

SECTION 1. The facts and recitations contained in the preamble of this Ordinance are hereby declared to be true and correct and are incorporated by reference herein and made a part hereof, as if copied verbatim.

SECTION 2. The Official Zoning map of the City of Taylor, Texas, is changed to indicate that an Infill Neighborhood Plan has been approved for the Property and to show the allocation and location of Place Types on the Property as depicted in the Infill Neighborhood Plan attached hereto for all purposes as Exhibit "B".

SECTION 3. All other terms and conditions contained in the official zoning map, except as amended herein, shall continue and remain in full force and effect.

SECTION 4. Should any section, paragraph, clause, phrase, or provision of this Ordinance be adjudged invalid or held unconstitutional, the same shall not affect the validity of this Ordinance as a whole or any part of the provisions thereof, other than the part so decided to be invalid or unconstitutional.

SECTION 5. In accordance with Article VIII of the City Charter, Ordinance 2024-XX was introduced before the Taylor City Council on the 26th day of September 2024.

PASSED, APPROVED, and ADOPTED on the _____ day of _____, 2024.

_____
Dwayne Ariola, Mayor

ATTEST:

_____
Dianna McLean, City Clerk

APPROVED AS TO FORM:

_____
Mark Schroeder,
City Attorney

CERTIFICATE

THE STATE OF TEXAS

COUNTY OF WILLIAMSON

I, Dianna McLean, being the current City Clerk of the City of Taylor, Texas, do hereby certify that the attached is a true and correct copy of Ordinance No. 2024-XX, passed and approved by the City Council of the City of Taylor, Texas, on the _____ day of _____ 2024, and such Ordinance was duly introduced, passed, approved and adopted at meetings open to the public and notices of the meetings, giving the dates, places, and subject matter thereof, were posted as prescribed by Government Code Section 551.043.

Witness my hand and seal of office this _____ day of _____ 2024.

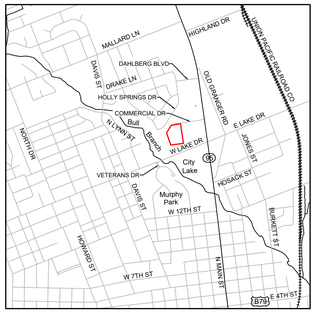
_____
Dianna McLean
City Clerk

EXHIBIT A

(Metes & Bounds/Legal Description/Survey)

ALTA/NSPS LAND TITLE SURVEY

OF 4.681 ACRES ± OUT OF
THE WILLIAM J. BAKER SURVEY NO. 2
A-65, WILLIAMSON COUNTY, TEXAS



VICINITY MAP
SCALE: 1" = 2000'

TITLE COMMITMENT NOTES:

COMMITMENT FOR TITLE INSURANCE PREPARED BY: FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. 202202922, EFFECTIVE DATE: AUGUST 3, 2023

THE SURVEYOR HAS RELIED UPON THE REFERENCED COMMITMENT FOR TITLE REGARDING EASEMENTS, RESTRICTIONS AND OTHER MATTERS AFFECTING THIS PROPERTY. NO ADDITIONAL RESEARCH WAS DONE FOR THE PURPOSE OF THIS SURVEY. SURVEYOR'S NOTES AND/OR OBSERVATIONS SHOWN IN BRACKETS. [ ]

THE FOLLOWING MATTERS ADDRESSED BY THE SURVEYOR ARE ITEMIZED BELOW.

A) PUBLIC UTILITY EASEMENT 10 FEET IN WIDTH, AS SHOWN BY THE PLAT RECORDED IN CABINET F, SLIDE 75 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, BEING FURTHER AFFECTED BY DOCUMENT NO. 1999041159 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

B) PUBLIC UTILITY EASEMENT 18 FEET IN WIDTH, AS SHOWN BY THE PLAT RECORDED IN CABINET F, SLIDE 75 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

C) PUBLIC UTILITY EASEMENT 20 FEET IN WIDTH, AS SHOWN BY THE PLAT RECORDED IN CABINET F, SLIDE 75 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

D) BUILDING SETBACK 20 FEET IN WIDTH, AS SHOWN BY THE PLAT RECORDED IN CABINET F, SLIDE 75 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

E) BUILDING SETBACK 10 FEET IN WIDTH, AS SHOWN BY THE PLAT RECORDED IN CABINET F, SLIDE 75 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

F) INTENTIONALLY DELETED

G) UTILITY EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY, BY INSTRUMENT DATED FEBRUARY 4, 1974, RECORDED IN VOLUME 608, PAGE 256 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS. [DOES NOT AFFECT, UNABLE TO DETERMINE LOCATION FROM RECORD DOCUMENT, EASEMENT APPEARS TO BE EAST OF SUBJECT PROPERTY BASED ON DESCRIPTION]

H) INGRESS, EGRESS AND PARKING OF VEHICULAR TRAFFIC BY INSTRUMENT DATED NOVEMBER 13, 1975, RECORDED IN VOLUME 623, PAGE 916 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS. [DOES NOT AFFECT, SOUTH OF SUBJECT PROPERTY]

I) UTILITY EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY, BY INSTRUMENT DATED DECEMBER 19, 1978, RECORDED IN VOLUME 747, PAGE 106 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS. [MAY APPLY, UNABLE TO DETERMINE LOCATION FROM RECORD DOCUMENT]

J) PUBLIC UTILITY EASEMENT GRANTED TO THE CITY OF TAYLOR, BY INSTRUMENT DATED MAY 5, 1988, RECORDED IN VOLUME 1687, PAGE 129 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624. [AS DEPICTED]

K) PIPELINE EASEMENT GRANTED TO ATMOS ENERGY CORPORATION, A TEXAS CORPORATION, BY INSTRUMENT DATED NOVEMBER 16, 2007, RECORDED UNDER DOCUMENT NO. 2007102719 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS. [AS DEPICTED]

L) THE RIGHTS OF LOWER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT TO LEVY TAXES AND ISSUE BONDS. [APPLIES]

M) FENCE OUTSETS AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624.

N) CONCRETE AND ASPHALT AREA OVER PROPERTY LINE AS SHOWN ON SURVEY DATED FEBRUARY 20, 2021, PREPARED BY KENNETH LOUIS CRIDER, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5624.

O) UPON RECEIPT OF AN ACCEPTABLE AFFIDAVIT FROM THE SELLER(S), THE FOLLOWING WILL BE DELETED AS AN EXCEPTION:

"ANY AND ALL LEASES, RECORDED OR UNRECORDED, WITH RIGHTS OF TENANTS IN POSSESSION."

P) INTENTIONALLY DELETED

Q) INTENTIONALLY DELETED

UTILITY NOTES

1. SURVEYOR MAKES NO GUARANTEES THAT THE UTILITES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED AND DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED (UTILITIES SHOWN HEREON MAY BE EXAGGERATED FOR GRAPHIC REPRESENTATION ONLY). SURVEYOR DOES CERTIFY THAT UTILITIES ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.
2. TEXAS 811 ONE CALL SERVICES WERE USED FOR UNDERGROUND UTILITY MARKING. TICKET NUMBER: 2360315706
3. ALL SUBSURFACE UTILITIES AND PIPE SIZES SHOWN HEREON ARE APPROXIMATE AND HAVE NOT BEEN FIELD VERIFIED.

FLOOD INFORMATION

SAID DESCRIBED PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION ZONE X (SHADED) AND ZONE X (UNSHADED) BY THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT, ON FLOOD INSURANCE RATE MAP NO. 48491C0533F, WITH A DATE OF IDENTIFICATION OF DECEMBER 20, 2019, FOR COMMUNITY NUMBER 480670, IN WILLIAMSON COUNTY, STATE OF TEXAS, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

TO: GOLDWOLF VENTURES, LLC, FIDELITY NATIONAL TITLE INSURANCE COMPANY;

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEY, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS:
1, 2, 3, 4, 5, 7(a), 8, 9, 13, 16, AND 17 OF TABLE A THEREOF.

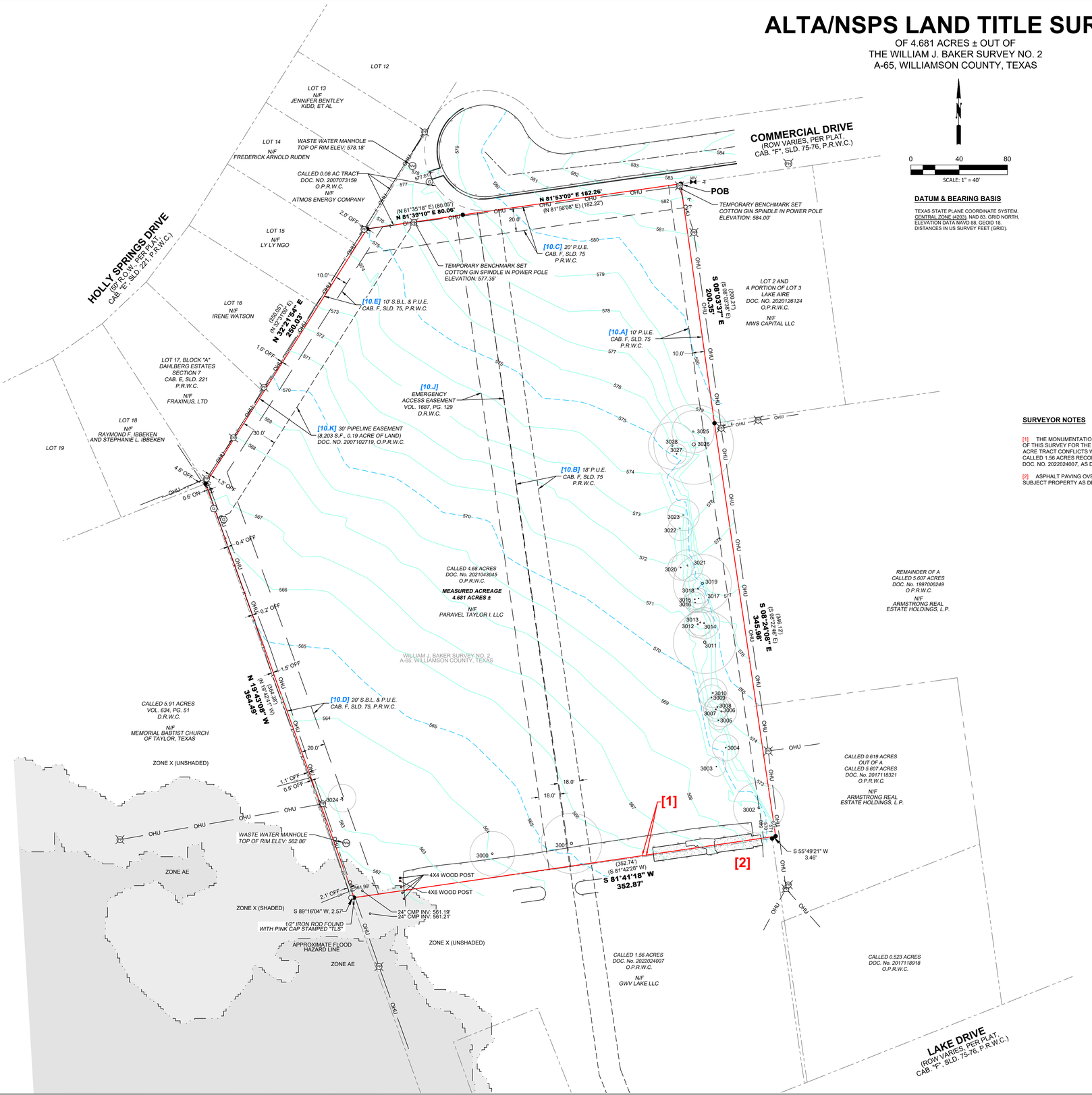
THE FIELDWORK WAS COMPLETED ON APRIL 19, 2023.

DATE OF PLAT OR MAP: JUNE 20, 2023

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT

DEREK KINSAUL, R.P.L.S. No 6356

SHEET SIZE = 24"X36"



0 40 80
SCALE: 1" = 40'

DATUM & BEARING BASIS

TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (4203), NAD 83. GRID NORTH, ELEVATION DATA NAVD 88, GEOID 18. DISTANCES IN US SURVEY FEET (GRID).

TREE TABLE		
Tag No.	Type	Trunk
3000	COTTONWOOD	18 1/2 "
3001	COTTONWOOD	25 "
3002	HACKBERRY	12X10X8 (M)
3003	HACKBERRY	8 "
3004	HACKBERRY	11 "
3005	HACKBERRY	8 "
3006	HACKBERRY	12 1/2 "
3007	HACKBERRY	10 "
3008	HACKBERRY	10 "
3009	HACKBERRY	8X5 (M)
3010	HACKBERRY	12 "
3011	HACKBERRY	19X14 (M)
3012	HACKBERRY	11 "
3013	HACKBERRY	11 "
3014	HACKBERRY	13 "
3015	HACKBERRY	8 1/2 "
3016	HACKBERRY	8 1/2 "
3017	HACKBERRY	8 1/2 "
3018	HACKBERRY	12 1/2 "
3019	HACKBERRY	24 "
3020	ASH	10 1/2 "
3021	HACKBERRY	13 "
3022	HACKBERRY	10 "
3023	HACKBERRY	13 "
3024	HACKBERRY	7X5X4 (M)
3025	HACKBERRY	17 1/2 "
3026	HACKBERRY	33 "
3027	HACKBERRY	8 1/2 "
3028	HACKBERRY	19 1/2 "

SURVEYOR NOTES

[1] THE MONUMENTATION FOUND DURING THE COURSE OF THIS SURVEY FOR THE SOUTH LINE OF THE SUBJECT 4.68 ACRE TRACT CONFLICTS WITH THE NORTH LINE OF THE CALLED 1.56 ACRES RECORDED IN DOC. NO. 2022024007, AS DEPICTED HEREON.

[2] ASPHALT PAVING OVERLAPS THE SOUTH LINE OF THE SUBJECT PROPERTY AS DEPICTED HEREON.

LEGEND

- 1/2" IRON ROD FOUND (PINK CAP STAMPED "SURVEY WORKS")
- 1/2" IRON ROD FOUND (UNLESS NOTED)
- GAS PIPELINE MARKER
- GUY WIRE
- POWER POLE
- FIRE HYDRANT
- MANHOLE
- WASTEWATER
- WATER VALVE
- OHU — OVERHEAD UTILITY
- // — WOOD FENCE
- -oo- — CHAIN LINK FENCE
- -x- — WIRE FENCE
- EDGE OF PAVEMENT
- PROPERTY LINE
- ADJOINER LINE
- CONCRETE AREA
- DEED OVERLAP / GAP

P.U.E.	PUBLIC UTILITY EASEMENT
S.B.L.	SETBACK LINE
INV	INVERT
+ 100'	SPOT ELEVATION
CMP	CORRUGATED METAL PIPE
ON/OFF	STRUCTURE ON/OFF SUBJECT PROPERTY
R.O.W.	RIGHT OF WAY
( )	RECORD INFORMATION
VOL. PG.	VOLUME AND PAGE
R.P.R.W.C.	REAL PROPERTY RECORDS WILLIAMSON COUNTY
D.R.W.C.	DEED RECORDS WILLIAMSON COUNTY
DOC. NO.	DOCUMENT NUMBER
O.P.R.W.C.	OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY
CAB. SLD.	CABINET AND SLIDE
P.R.W.C.	DEED RECORDS WILLIAMSON COUNTY
N/F	NOW OR FORMERLY

TREE LEGEND

CRITICAL ROOT ZONE = DIAMETER EQUAL IN FEET TO TWICE THE NUMBER OF INCHES OF THE TREE'S TRUNK DIAMETER

(M) MULTIPLE TRUNK

TABLE A - ALTA NOTES

1. MONUMENTS PLACED AT ALL MAJOR CORNERS
2. ADDRESS(ES) OF THE SURVEYED PROPERTY DISCLOSED
3. FLOOD ZONE CLASSIFICATION DEPICTED BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY
4. GROSS LAND AREA: 4.681 ACRES
5. VERTICAL RELIEF SOURCE: 1-FOOT CONTOURS BASED ON GROUND SURVEY MEASUREMENTS

7(a). EXTERIOR DIMENSIONS OF ALL BUILDINGS AT GROUND LEVEL

8. SUBSTANTIAL FEATURES OBSERVED IN THE PROCESS OF CONDUCTING FIELDWORK AS DEPICTED
9. NO PAINTED PARKING AREAS NOTED DURING SURVEY
13. NAMES OF ADJOINING LAND OWNERS PER WILLIAMSON COUNTY APPRAISAL DISTRICT
16. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WERE OBSERVED IN THE PROCESS OF CONDUCTING FIELDWORK
17. THERE IS NO EVIDENCE OF PROPOSED STREET RIGHT OF WAY CHANGES AS PROVIDED BY THE CLIENT OR GOVERNING MUNICIPALITY.

GENERAL NOTES:

1) THIS PROPERTY IS SUBJECT TO ANY AND ALL RECORDED AND UNRECORDED EASEMENTS. SURVEYOR HAS MADE NO INVESTIGATION FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS OR OWNERSHIP TITLE EVIDENCE.
2) SUBJECT TO ALL APPLICABLE DEVELOPMENT CODES AND ZONING ORDINANCES.
3) DUE TO DIFFERING BUILDING PRACTICES, BUILDING DIMENSIONS ARE APPROXIMATE.
4) ANY UTILITIES SHOWN HEREON MAY BE EXAGGERATED FOR GRAPHIC REPRESENTATION ONLY.
5) OWNERSHIP DEED RECORDED IN DOCUMENT NO. 2021191992, WILLIAMSON COUNTY RECORDS.
6) TREE TYPES TO BE VERIFIED BY CERTIFIED ARBORIST.

Texas 811 Know what's below. Call before you dig.

SURVEYED FOR: GOLDWOLF VENTURES
PROJECT NO. 21-0353.01
COMMERCIAL DR.,
TAYLOR, TX

SURVEY WORKS
INFO@SURVEYWORKS.COM
SURVEYWORKS.COM
1207 UPLAND DRIVE
AUSTIN, TX 78741
FIRM #10194157
(512) 599-8067

SHEET
1 of 1



An Infill Neighborhood Plan
for
215 Commercial Drive
Taylor, Texas

A BACKGROUND

Regional Context A.2
Site in Context A.3
Comprehensive Plan Excerpts A.4
Target Place Type Allocations A.5
Existing Conditions A.6
Elevation Analysis A.7

B INFILL NEIGHBORHOOD PLAN

Place Type Allocations B.2
Regulating Plan B.3
Design-Specific Standards. B.4
Thoroughfare Types Plan B.5
Thoroughfare Sections B.6
Civic Space Plan B.7

C ILLUSTRATIVE PLAN AND DIAGRAMS

Master Plan in Context C.2
Illustrative Master Plan with Program C.3
Fire Apparatus Access Diagram C.4
Detailed Program and Parking C.5
Master Plan with Annotations C.6
Character Images C.7

X APPENDIX

Charrette Plans X.2

For

The City of Taylor, Texas

and

GWV Commercial Drive, LLC

by

Michael Watkins Architect, LLC

September 3, 2024



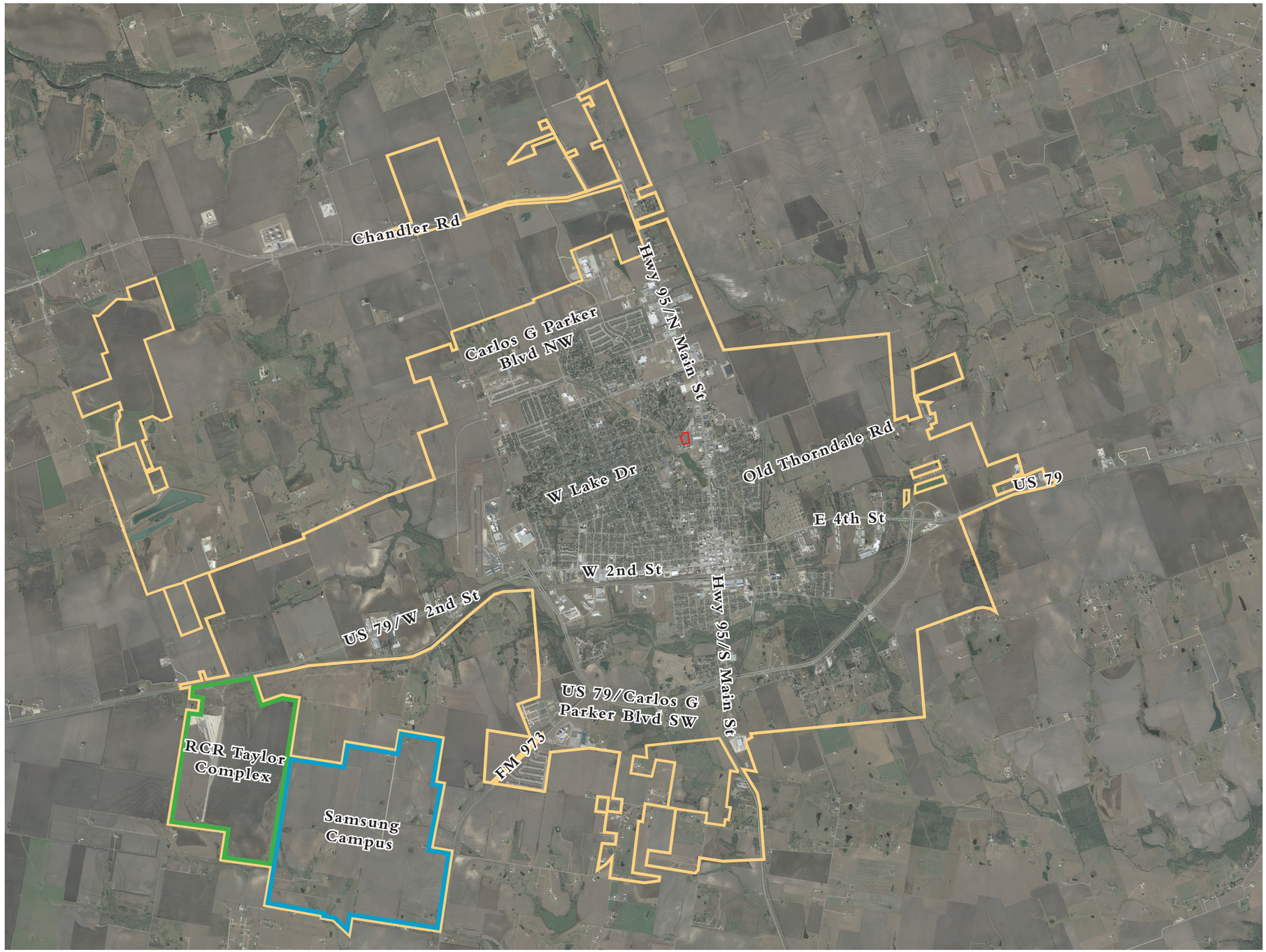
A. Background

The Infill Neighborhood Plan provides the general layout for the development, serving as a guide for future steps in the development. This layout is based on the existing conditions on the Subject Property as described in the Background chapter and the specific development scenario described in the Supplemental Plans. The Regulations chapter describes the required components and standards associated with this layout and demonstrates the layout's compliance with the Taylor Comprehensive Plan and the Taylor Land Development Code. Other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of the requirements in the Regulations chapter and all other applicable regulations.

The Background chapter summarizes information about the site, program, zoning, and other relevant constraints provided by the Applicant and the City of Taylor that inform the design of the Infill Neighborhood Plan.

Regional Context A.2
Site in Context A.3
Comprehensive Plan Excerpts A.4
Target Place Type Allocations A.5
Existing Conditions A.6
Elevation Analysis A.7

REGIONAL CONTEXT



Key

- City Boundary
- Subject Property
- Samsung Campus
- RCR Taylor Complex

N

0 ft 2,250 ft 4,500 ft 9,000 ft

SITE IN CONTEXT



Key

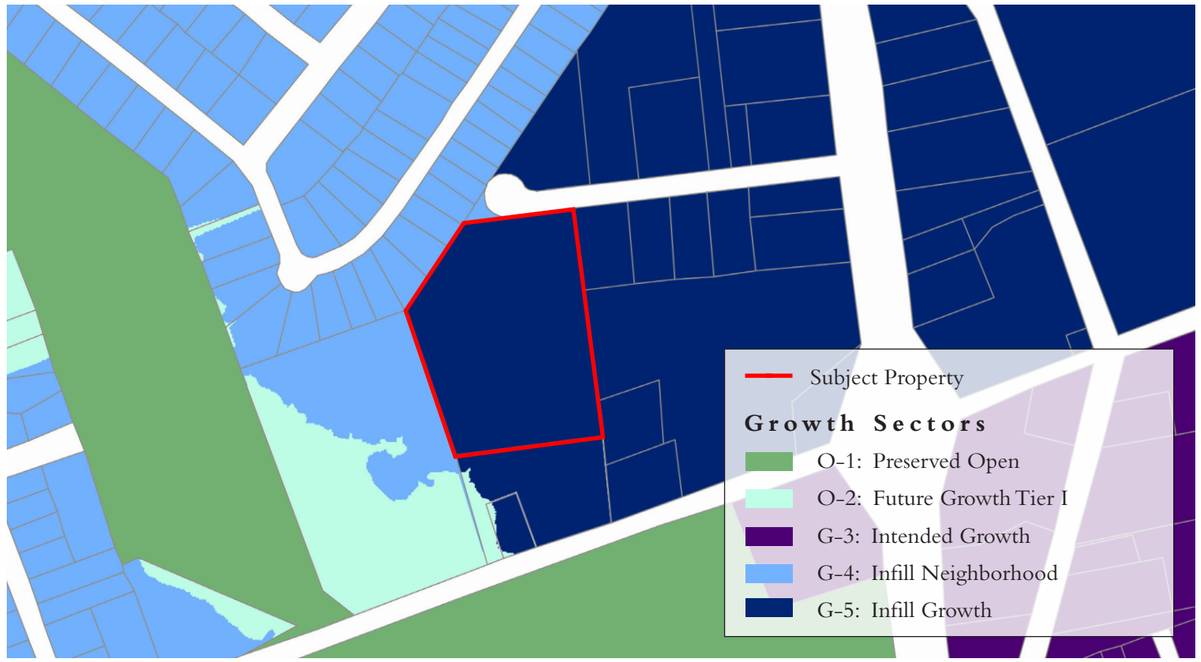
- Subject Property
- Community Boulevard
- Trail
- 1-foot Contour
- 10-foot Contour
- 30-foot Pipeline Easement
- Varying Public Utility Easements

N

0 ft 80 ft 160 ft 320 ft

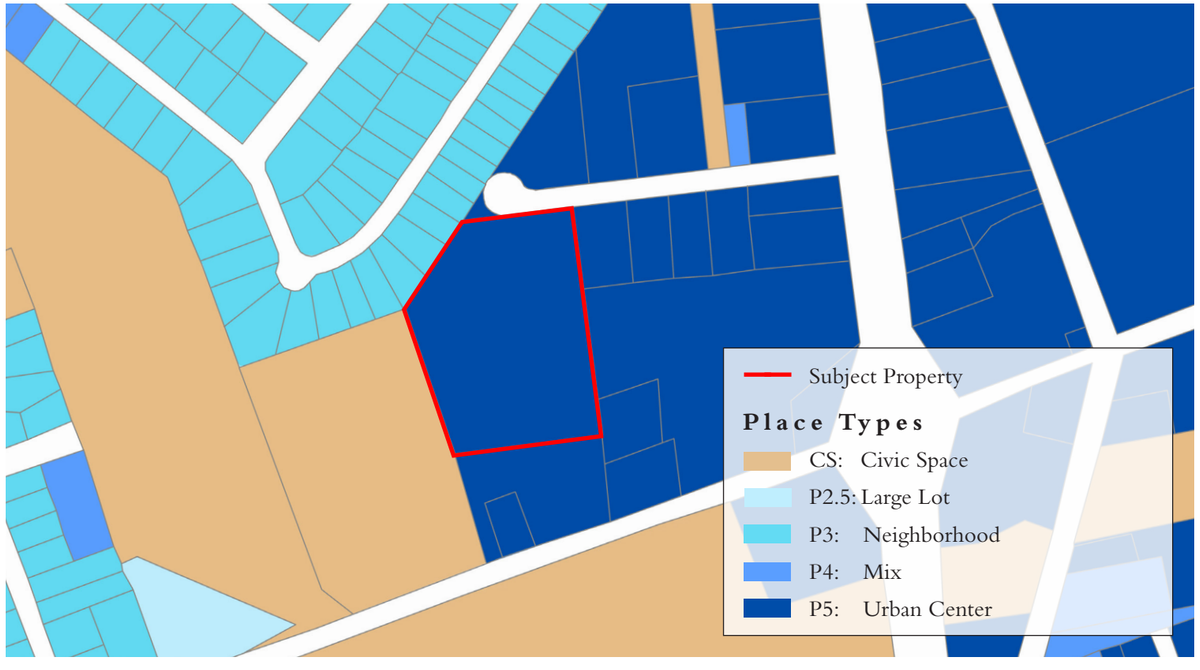
The design is subject to change. Not for construction.

COMPREHENSIVE PLAN EXCERPTS

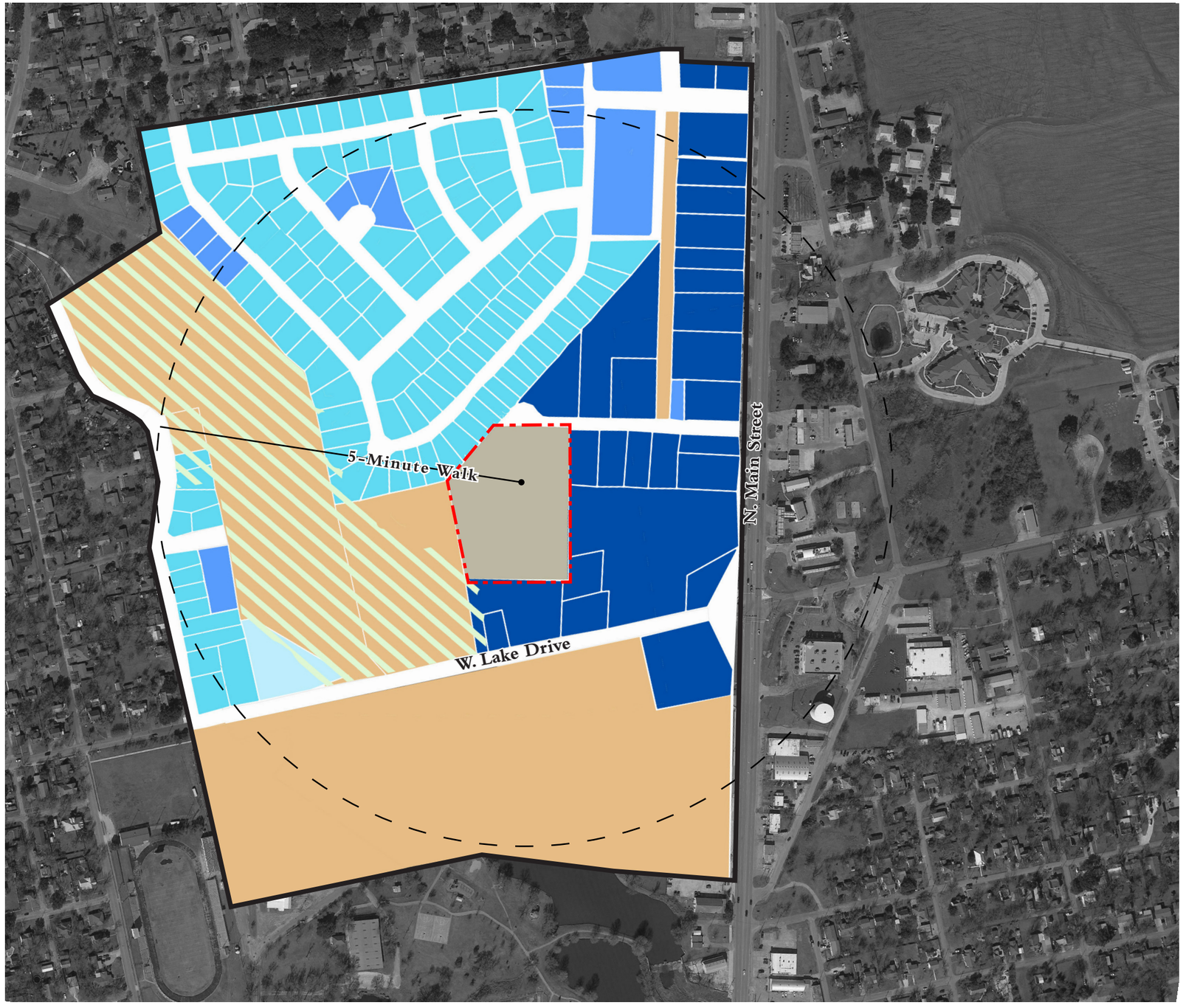








TARGET PLACE TYPE ALLOCATIONS

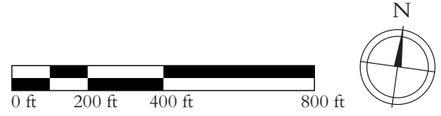


Key

- Subject Property
- Pedestrian Shed

Place Type	Permitted for a TND	Total in Pedestrian Shed	Outside Subject Property	Inside Subject Property
P1 [2]	5% min.	TBD	23.2 ac.	TBD
P2.5	0% min.	TBD	1.3 ac.	TBD
P3	10-30%	TBD	32.4 ac.	TBD
P4	40-60%	TBD	6.3 ac.	TBD
P5	10-30%	TBD	23.3 ac.	TBD
CS	10% min.	TBD	54.5 ac.	TBD
TBD	-	TBD	0.0 ac.	4.7 ac..
Total	**100%**	**122.5 ac.**	**117.8 ac.**	**4.7 ac.**

1. *The percentages listed are calculated with respect to the area of the Pedestrian Shed as shown on the accompanying plan. The Pedestrian Shed (as described in LDC § 3.6.1.7) delineates the area of the subject property and adjacent properties intended to constitute a complete TND (as described in LDC § 3.6.1.4). Areas and percentages listed are approximate.*
2. *The area of P1 is not counted towards any of the totals because P1 is an overlay district, so all areas zoned P1 are totaled according to their base Place Type.*



The design is subject to change. Not for construction.

EXISTING CONDITIONS



Key

- Subject Property
- 1-foot Contour
- 10-foot Contour
- Pipeline Easement
- Public Easement

Note: parking may be located in both the Pipeline and Public Easements.

0 ft 40 ft 80 ft 160 ft

N

The design is subject to change. Not for construction.

ELEVATION ANALYSIS



Key

- Subject Property
- 1-foot Contour
- 10-foot Contour
- 580-585 feet
- 575-580 feet
- 570-575 feet
- 565-570 feet
- 560-565 feet

0 ft 40 ft 80 ft 160 ft

N

The design is subject to change. Not for construction.

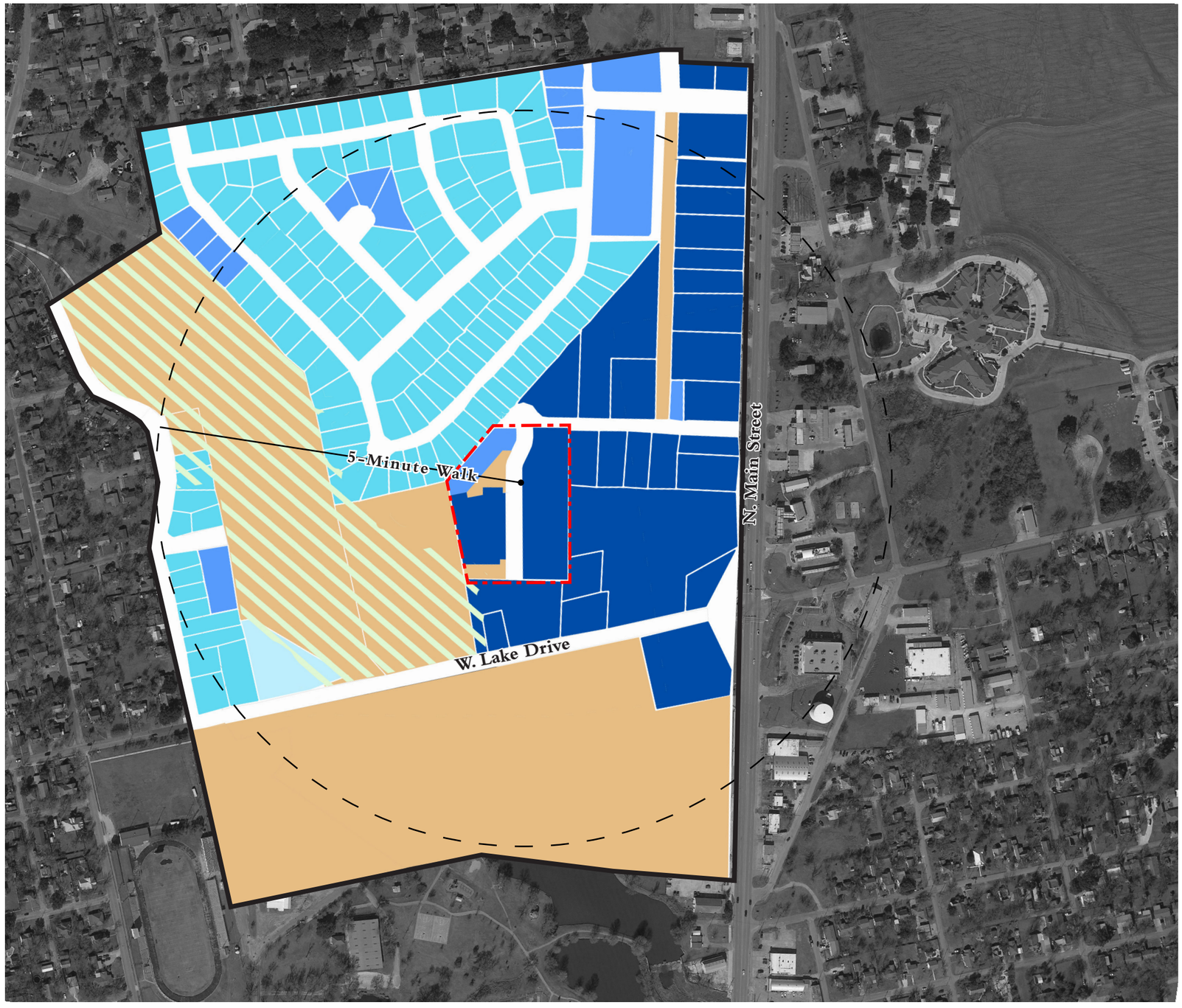


B. Regulations

The Regulations chapter is a set of plans and standards which specifies the requirements of this Infill Neighborhood Plan and demonstrates how the Infill Neighborhood Plan complies with the Taylor Comprehensive Plan and Land Development Code. These Regulations include the general layout of Thoroughfares, Civic Spaces, Blocks, and Lots, as well as standards specifying any deviations from the LDC and additional requirements necessary for the development to comply with the Comprehensive Plan and the intent of the LDC. While these Regulations are informed by the specific development scenario described in the Supplemental Plans chapter, other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of these Regulations and all other applicable regulations.

Regulating Plan in Context B.2
Regulating Plan B.3
Design-Specific Standards B.4
Thoroughfare Types Map B.5
Thoroughfare Sections B.6
Civic Space Plan B.7

PLACE TYPE ALLOCATIONS

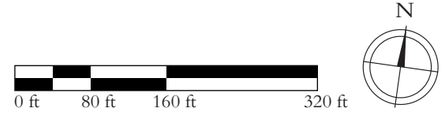


Key

- Subject Property
- Pedestrian Shed

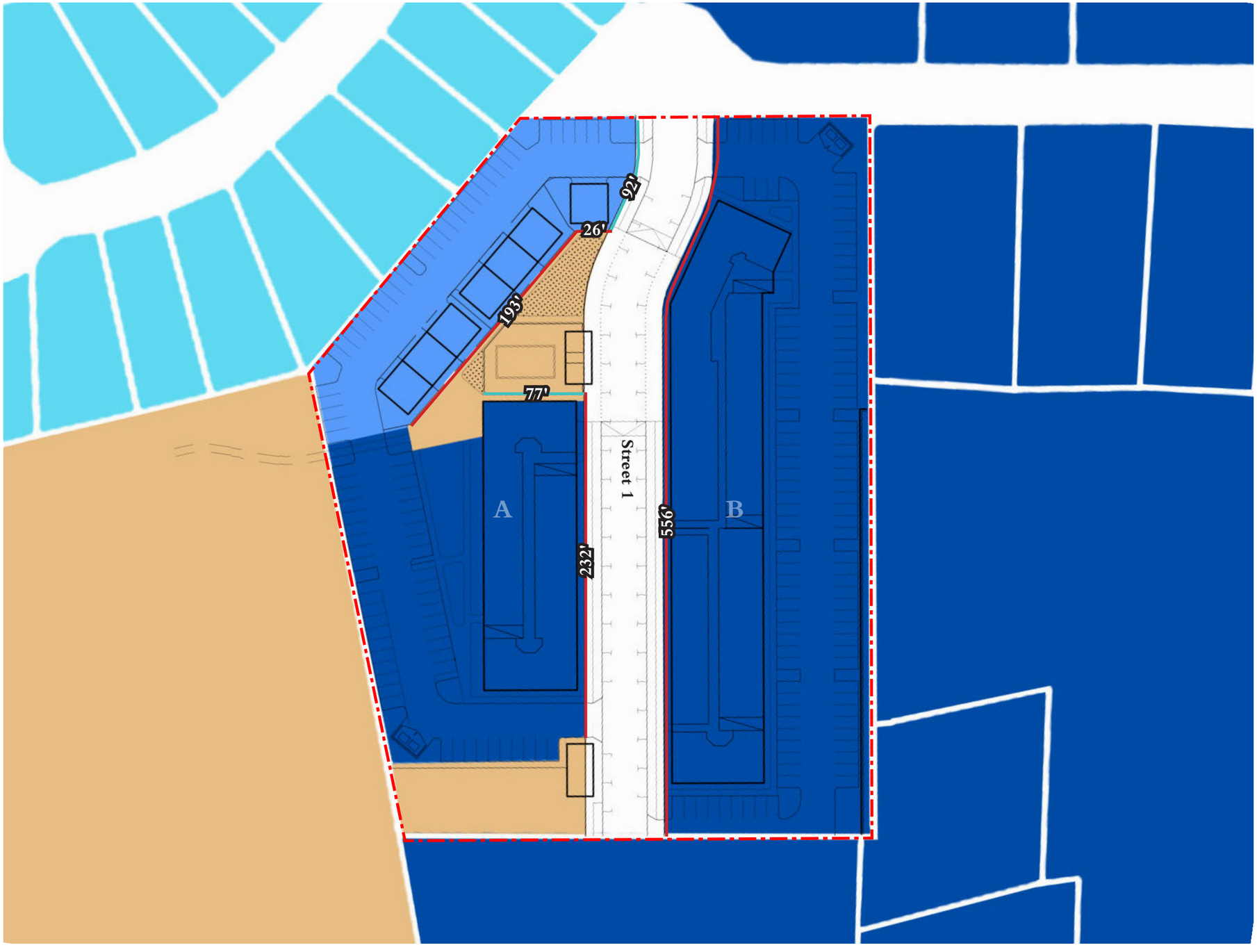
Place Type	Permitted for a TND	Total in Pedestrian Shed	Outside Subject Property	Inside Subject Property
P1 [3]	5% min.	23.2 ac. (19.1%)	23.2 ac.	0.0 ac.
P2.5	0% min.	1.3 ac. (0.1%)	1.3 ac.	0.0 ac.
P3	10-30%	32.4 ac. (26.7%) [5]	32.4 ac.	0.0 ac.
P4	40-60%	6.3 ac. (5.2%) [5]	6.3 ac.	0.6 ac.
P5	10-30%	26.2 ac. (21.6%) [5]	23.3 ac.	2.9 ac.
CS	10% min.	55.0 ac. (45.4%)	54.5 ac.	0.5 ac.
Total	**100%**	**121.2 ac.**	**117.8 ac.**	**4.0 ac.**

1. *The percentages listed are calculated with respect to the area of the Pedestrian Shed on the accompanying plan. The Pedestrian Shed (as described in LDC § 3.6.1.7) delineates the area of the subject property and adjacent properties intended to constitute a complete TND (as described in LDC § 3.6.1.4). Areas and percentages listed are approximate.*
2. *The areas and percentages listed are calculated excluding the following: Front Type Thoroughfares, land within the ETJ or other land outside the Taylor city limits, and TxDOT RsOW.*
3. *The area of P1 is not counted towards any of the totals because P1 is an overlay district, so all areas zoned P1 are totaled according to their base Place Type.*
4. *See the Civic Space Plan on page B.8.for the total Civic Space allocation within the subject property.*
5. *See a recommended Warrant regarding the allocation of P5 in this Pedestrian Shed in the General Standards on page B.3.*



The design is subject to change. Not for construction.

REGULATING PLAN

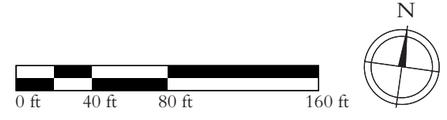


Key

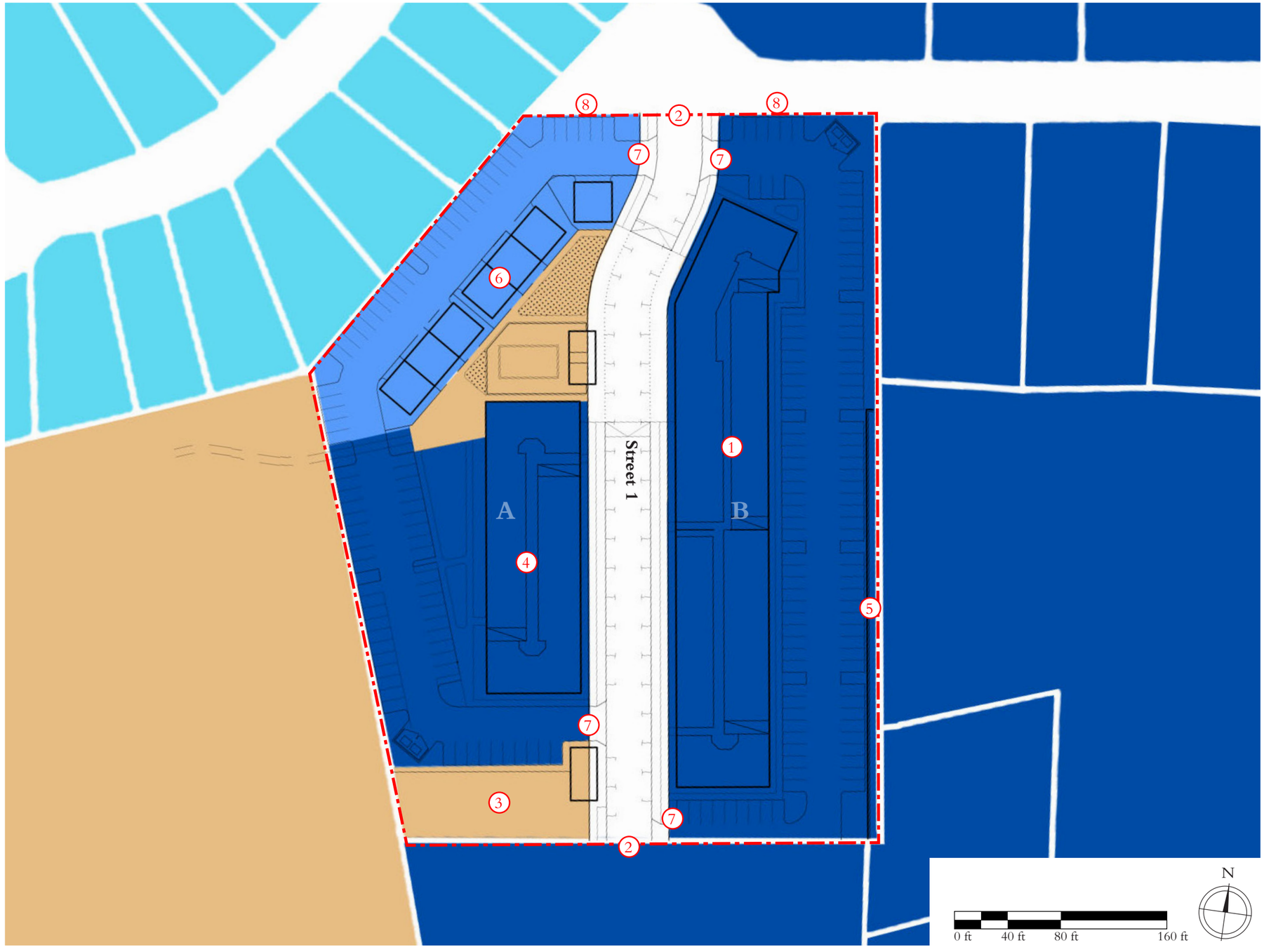
- Subject Property
- P2.5
- P3
- P4
- P5
- CS
- Primary Frontage
- Secondary Frontage

General Standards

1. A Warrant is recommended to allow for lower ratios of P4 than is permitted for a TND, given that other properties currently zoned P5 are expected to include a mix of Place Types if they redevelop.
2. Block dimensions shown are non-binding and are intended to demonstrate compliance with City Standards for block length and perimeter. See the Design Specific Standards on page B.4 for a recommended Warrant for blocks which do not comply.



The design is subject to change. Not for construction.



Design-Specific Standards

1. A Warrant is recommended to allow for larger Block size for Block B, due to the existing thoroughfare network and potential thoroughfare connections in this area.
2. Street 1 is intended to connect to the adjacent properties, with the exact location of the connection to be determined.
3. Stormwater management facilities, whether primarily wet or dry, shall be designed such that they add value to the neighborhood, rather than detract from it.
    a. Dry facilities shall be landscaped to act as an open lawn or space for unstructured recreation when dry, and shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.
    b. Wet facilities shall be designed to look like natural ponds with gently sloping edges rather than steep "engineered" banks. Wet ponds shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.
    c. Maintenance berms and/or maintenance access shall be provided for in both wet and dry facilities.
4. Buildings in Block A shall have a maximum height of 3 stories to provide a transition from the P4 and P5 proposed in this Infill Neighborhood Plan and the neighboring Detached Dwellings in P3.
5. A Warrant is recommended to allow this parking lot not to connect to the adjacent parking lot due to the significant change in elevation in this area.
6. Liner Buildings shall be permitted in the areas shown in order to screen parking. All Liner Buildings shall have the Primary Entrance and a Stoop, Porch, or balcony facing the Primary Frontage. A Warrant is recommended to allow parking in the Second Lot Layer in these locations only if it is enclosed in a building and screened from view at Frontages.
7. A Variance is recommended to allow parking in the Second Layer in order to accommodate the applicant's proposed program and associated parking. This parking shall be screened where visible from frontages.
8. A Variance is recommended to allow parking lots to face Commercial Drive in these locations in order to accommodate the applicant's proposed program and associated parking given the existing easements and thoroughfare network on and near the Subject Property

The design is subject to change. Not for construction.

THOROUGHFARE TYPES MAP



Key

Subject Property

Front Thoroughfare Types

Name	Type	ROW	Pavement
Street	ST	60	34

Rear Thoroughfare Types

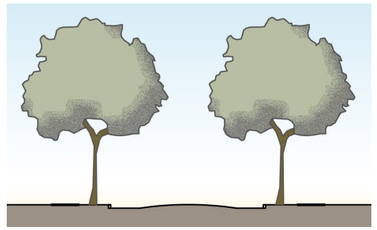
Name	Pavement
Fire Lane in Parking Lot	26-feet clear

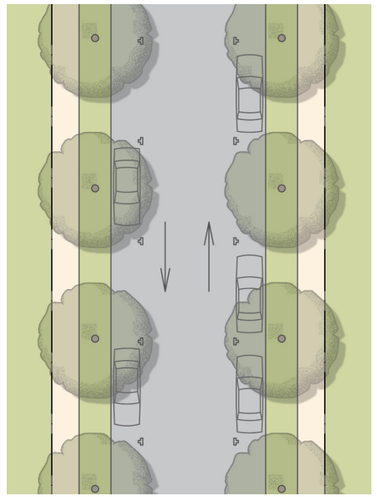
N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.

THOROUGHFARE SECTIONS





ST-60-34

Neighborhood Street
60 ft. ROW
34 ft. Pavement
Slow Movement
Two-Way Traffic
Parking Both Sides
12 ft. Curb Radius
Header Curbs
7 ft. Tree Lawn
Allee[1], 25-30 ft. o.c.
6 ft. Sidewalk
For buildings up to 30 ft. tall

[1](Cluster pattern permitted adjacent to civic spaces.)

Thoroughfare Type
ST Street

Right-of-Way Width

Pavement Width

XX-###-##

Thoroughfare Type
Place Type
Right-of-Way or Easement Width
Pavement Width
Movement
Traffic Lanes
Parking Lanes
Pavement / Curb
Curb Type
Planter Type (includes curb if any)
Landscape Type
Walkway Type

Notes

CIVIC SPACE PLAN



Key

Subject Property

Civic Space Types

Plaza

Park

Area of Civic Space in Subject Property	0.51 ac
Area of Subject Property	4.72 ac
Civic Space Ratio	**11%**

N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.



C. Supplemental Plans

The Supplemental Plans chapter is a set of additional plans that elaborates on the specific development scenario used as the basis for this Infill Neighborhood Plan. This information includes the Building Types, uses, and parking incorporated into the design, how that design proposes to address matters such as fire apparatus access, and particular features of the design that contribute to the intended character of the development. The information presented in this chapter reflects one possible development scenario for this Infill Neighborhood Plan. Other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of the requirements in the Regulations chapter and all other applicable regulations.

Master Plan in Context C.2
Master Plan with Summary Program C.3
Fire Apparatus Access Diagram C.4
Detailed Program and Parking C.5
Master Plan with Annotations C.6
Character Images C.7

MASTER PLAN IN CONTEXT



Key

- Subject Property
- 1-foot Contour
- 10-foot Contour
- Community Boulevard
- Trail
- Stormwater Management Pond
- Large Apartment Building
- Leasing Office with Multi-Family Above
- Park-under Unit
- Pavilion or Civic Structure
- Pool

N

0 ft 80 ft 160 ft 320 ft

The design is subject to change. Not for construction.

MASTER PLAN WITH SUMMARY PROGRAM



Key

- Subject Property
- 1-foot Contour
- 10-foot Contour
- Stormwater Management Pond
- Leasing Office with Multi-Family Above
- Pavilion or Civic Structure
- Pool

Residential Program

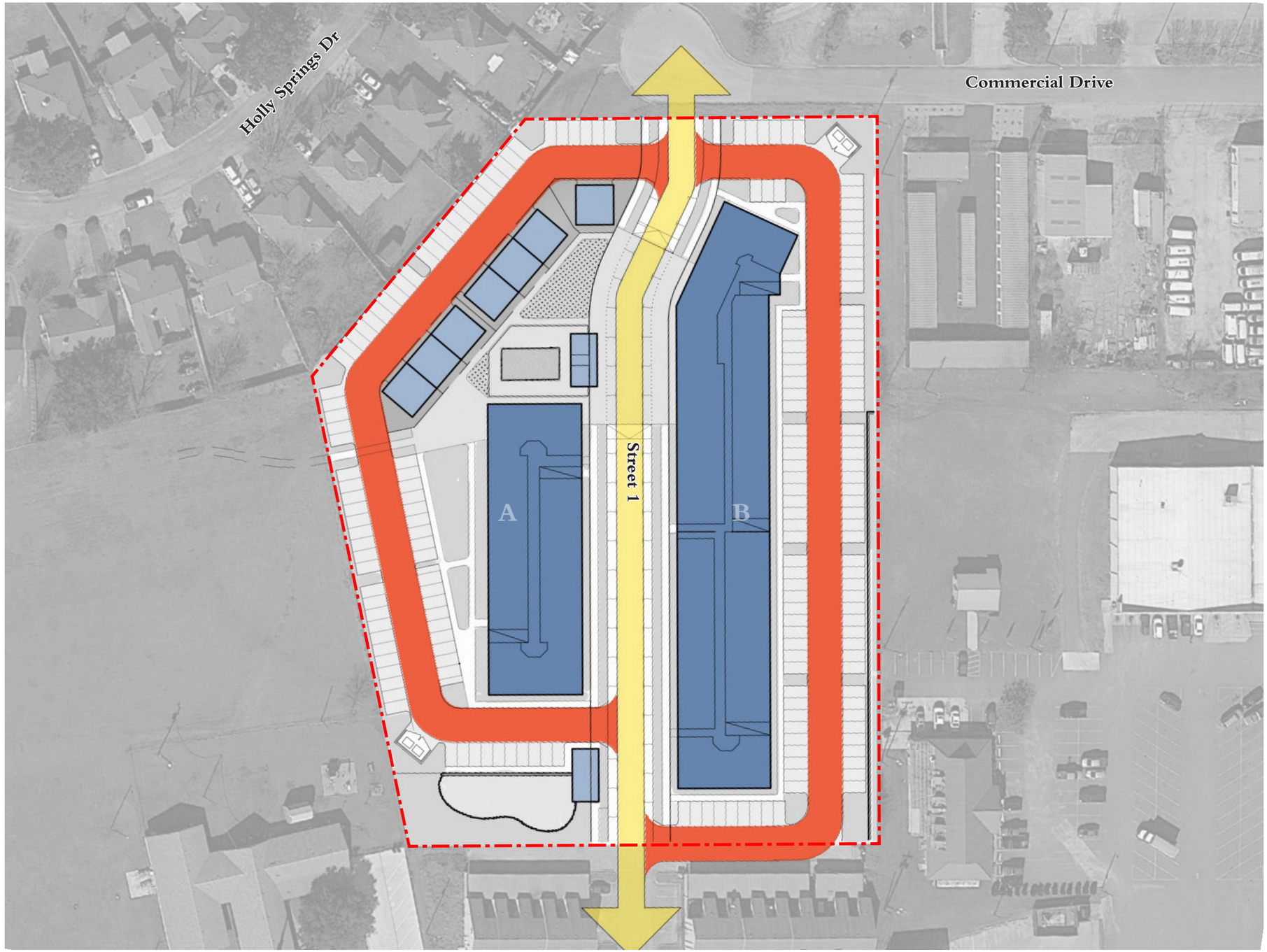
Large Apartment Buildings	163 units
1-Bedroom units	*129 units*
2-Bedroom units	*34 units*
Park-under Units	7 units
Total Residential	**170 units**

N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.

FIRE APPARATUS ACCESS DIAGRAM

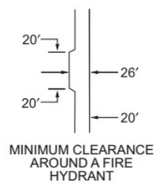


Key

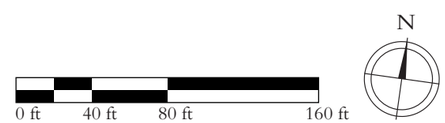
- Subject Property
- 26-foot Fire Apparatus Access Roads
- 20-foot Fire Apparatus Access Roads
- Buildings over 30 feet
- Buildings under 30 feet

Fire Apparatus Access Notes

1. Disclaimer: Applicant's understanding of the relevant standards from these fire apparatus access notes to be confirmed by the City of Taylor.
2. Buildings 30 feet tall or greater:
   - Fire Apparatus Access Roads shall be 26 feet clear minimum.
   - Fire Apparatus Access Roads shall be between 15 and 30 feet from the building.
   - Fire Apparatus Access Roads shall provide access to one complete side of the building, as determined by the Fire Official.
3. For buildings less than 30 feet tall:
   - Fire Apparatus Access Roads shall be 20 feet clear minimum.
4. All Fire Apparatus Access Roads shall have an effective inside turning radius of 15 feet.
5. All Fire Apparatus Access Roads shall be a maximum distance of 150 feet from all portions of any building.
6. Where a fire hydrant is located on a Fire Apparatus Access Road, the minimum road width shall be 26 feet (7925 mm), exclusive of all shoulders (*see graphic below*).

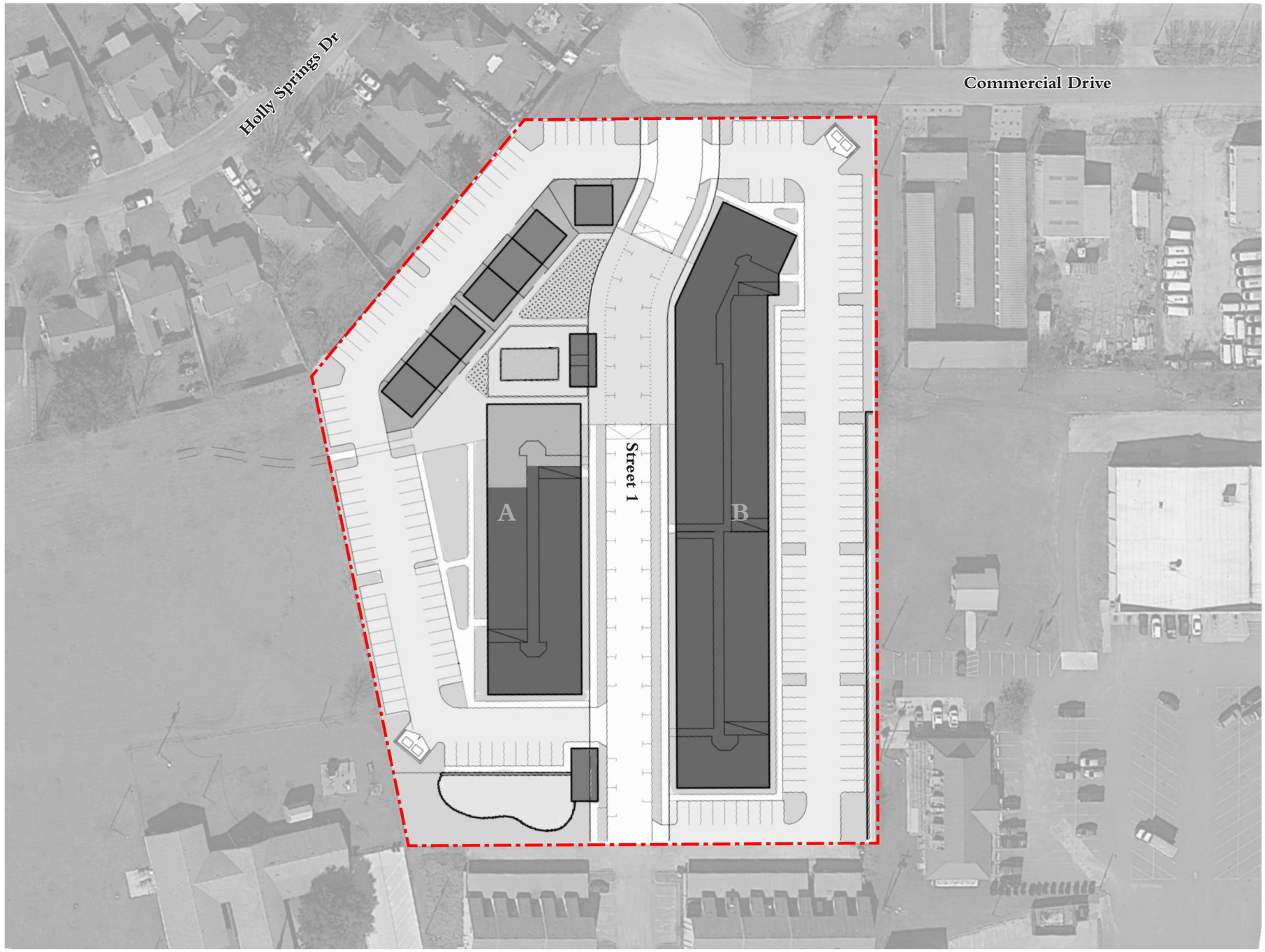


MINIMUM CLEARANCE AROUND A FIRE HYDRANT



The design is subject to change. Not for construction.

DETAILED PROGRAM AND PARKING



Key

- Subject Property
- Area Boundary

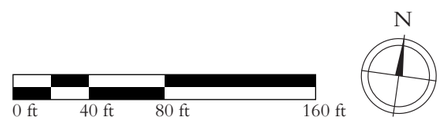
Applicant's Requested Parking Ratios		Spaces
Multi-family Residential	per unit	1.5
Park-under Units	per unit	2

Parking counts provided are approximate and assume 9' x 18' spaces with 24' drive aisles. Further refinement will be needed to account for accessible parking, EV charging, dumpster location, etc. Parking area lines are drawn along the center of streets.

Detailed Program

Large Apartment Buildings		Spaces
1-Bedroom units	129 units	194
2-Bedroom units	34 units	51
Total	163 units	245
Park-under Units	7 units	14
Total Requested		**259**

Parking Provided	Spaces
Provided on Street	40
Provided in Parking Lots	185
Provided in Garages	14
Total Provided	**239**
Difference	**-20**



The design is subject to change. Not for construction.

MASTER PLAN WITH ANNOTATIONS



Key

- Subject Property
- 1-foot Contour
- 5-foot Contour
- Stormwater Management Pond
- Pool
- abc Thoroughfare Label

Annotations

1. Park-under Buildings
2. Multi-family Buildings
3. Pavilion
4. Leasing Office
5. Retaining Wall
6. Future Trail Connection
7. Raised Intersection with Bollards

0 ft 40 ft 80 ft 160 ft

N

The design is subject to change. Not for construction.

CHARACTER IMAGES



1. Park-under Buildings - East Beach, Norfolk,Va.



2. Multi-family Buildings - Beacon Place, Kentlands, Gaithersburg, Md.



3. Pavilion - Amerson River Park, Macon, Ga.



X. Appendix

The Appendix chapter provides additional information for reference that is not directly related to the content of the Infill Neighborhood Plan.

Charrette Plans X.2

CHARRETTE PLAN - WEDNESDAY - SCHEME 1



Key

- Subject Property
- 1-foot Contour
- 5-foot Contour
- Stormwater Management Pond
- Pool
- Townhouse
- Multi-Family
- Civic

PROGRAM

MULTI-FAMILY	UNITS
1 BEDROOM	114
2 BEDROOM	38
TOWNHOUSE	
24 x 50 PARK-UNDER	+ 9
TOTAL	= 161 UNITS

MULTI-FAMILY PARKING

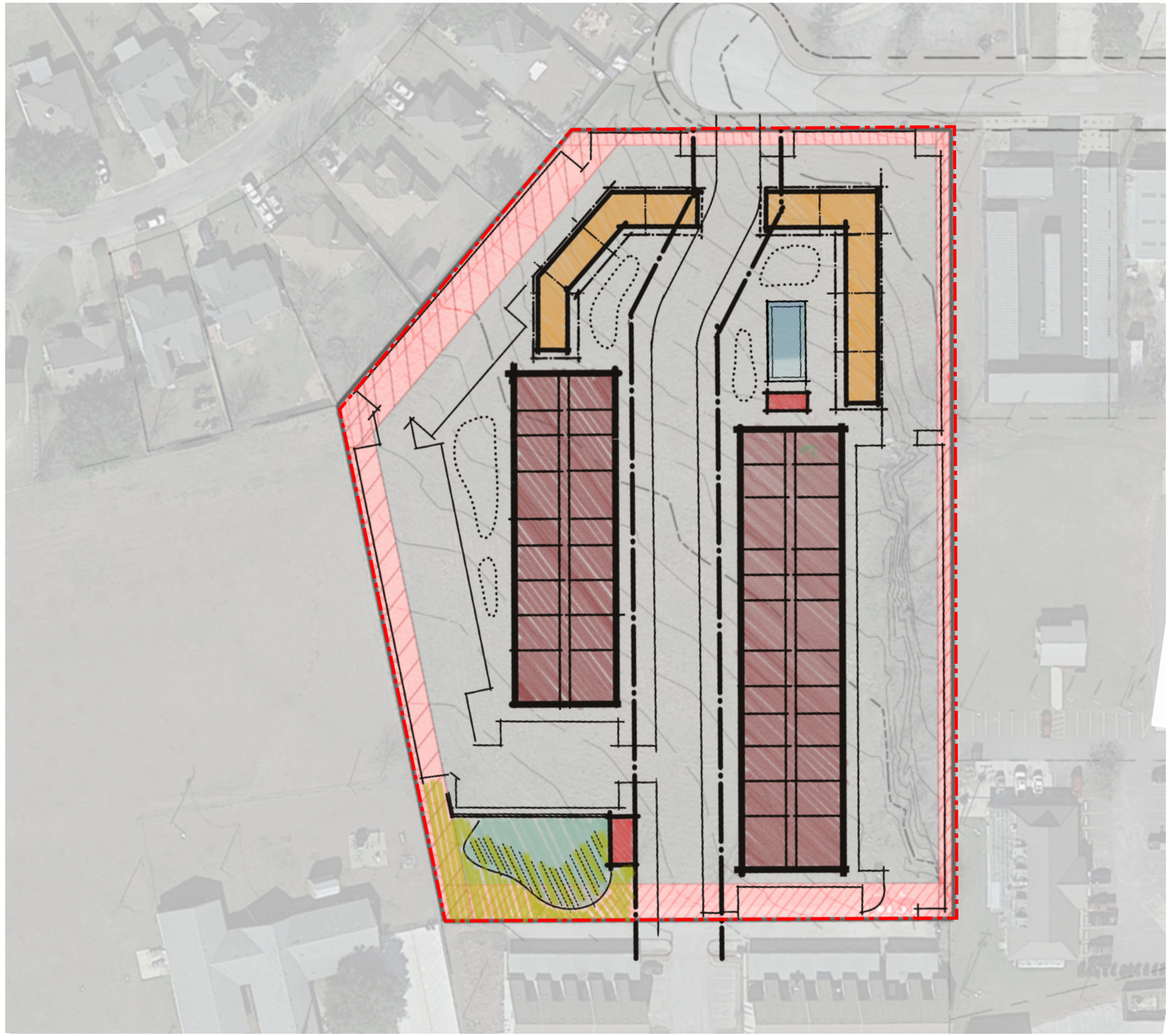
TOT. MULTI-FAM BEDROOMS	190 BEDS
SPACES/BEDROOM	x 1.18/B
REQUIRED	= 224 SPACES
PROVIDED	240 SPACES
NET	+16 SPACES

N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.

CHARRETTE PLAN - WEDNESDAY - SCHEME 2



Key

- Subject Property
- 1-foot Contour
- 5-foot Contour
- Stormwater Management Pond
- Pool
- Liner
- Multi-Family
- Civic

PROGRAM

MULTI-FAMILY	UNITS
1 BEDROOM	106
2 BEDROOM	38
TOWNHOUSE	
40x24 CARRIAGE HOUSE	+9
TOTAL	= 153 UNITS

MULTI-FAMILY PARKING

TOT. MULTI-FAM BEDROOMS 174 BEDS

SPACES/BEDROOM x1.18/B

REQUIRED = 205 SPACES

PROVIDED 240 SPACES

NET +35 SPACES

N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.

CHARRETTE PLAN - FRIDAY



Key

- Subject Property
- 1-foot Contour
- 5-foot Contour
- Stormwater Management Pond
- Pool
- Liner
- Multi-Family
- Civic

PROGRAM

MULTI-FAMILY	UNITS
1 BEDROOM	130
2 BEDROOM	38
TOWNHOUSE	
40x24 CARRIAGE HOUSE	+ 5
TOTAL	= 173 UNITS

MULTI-FAMILY PARKING

TOT. MULTI-FAM BEDROOMS	206 BEDS
SPACES/BEDROOM	x 1.18/B
REQUIRED	= 243 SPACES
PROVIDED	243 SPACES
NET	= 1.18 SPACES/BED

N

0 ft 40 ft 80 ft 160 ft

The design is subject to change. Not for construction.

City of Taylor
PZ-2024-2102
Neighborhood Plan
Staff Report

Item Details

Subject Property:	Generally located West of Backwood Pass
Total Acreage:	Approximately 99 acres
Legal Description:	Approximately 99 acres of land, part of and out of the James C. Eaves Survey, Abstract No. 533, and George M. Reese Survey, Abstract No. 214, more particularly described by the Williamson Central Appraisal District Parcels R019951, R019181, R019651, Taylor, Williamson County, Texas
Applicant:	Luke Caraway, Viewpoint Engineering
Property Owner(s):	Dharma Rajah, Taylor 973, LLC
Request:	A request for a Neighborhood Plan
Case History:	This is the first hearing of this request

Overview of Applicant's Request & Background

The applicant is requesting a Neighborhood Plan to allow for a mix of residential (single-family detached, large multi-family, liner buildings/thin buildings), commercial, hotel and civic space uses on the subject property.

The current zoning, P4 – Mix Place Type and P5 – Urban Center Place Type, requires that specific development standards be determined to fit the needs of the proposed development at time of application through a Neighborhood Plan for the subject property. The City's Land Development Code states that the P4 Place Type is meant to regulate a variety of building types ranging from smaller commercial buildings to intermixed house-form commercial and attached and detached residential. It provides flexibility for this area to easily transition between low-intensity commercial and residential building types, allowing for the neighboring P5 Urban Center zoning to expand and contract over time, increasing Taylor's economic resiliency. The P5 Urban Center Place Type is meant for a higher intensity mixture of building types that accommodate commercial, retail, offices, hotels, and residential. In P5 Place Type buildings are set close to the sidewalk with high pedestrian and vehicle traffic to promote a continuous line of buildings and wide sidewalks critical to defining the public frontage.

The applicant worked with the City's design consultant, Michael Watkins Architect, to produce a Neighborhood Plan to address development standards, civic spaces, and frontage types. The development standards for the Neighborhood Plan were prepared and have been reviewed and finalized by staff and the applicant. The proposed plan closely aligns with the City's long-term goals and the City's Place Type zoning. The plan (see attached) contains a Regulating Plan that

identifies Place Types, Primary and Secondary frontages, design-specific standards, provides general standards and recommends the following warrants and a variance:

- A Warrant is recommended to allow for a P1 (Nature) ratio of zero percent (0%) or 0 acres instead of the required five percent (5%) or 5 acres, given that the subject property is neither adjacent to nor includes land which falls within the LDC's definition of Nature (lands in a natural state or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation).
- A Warrant is recommended to allow for a lower P4 (Mix) ratio of 35.7% or 27.7 acres instead of the required 40-60% or 40 to 60 acres, given that the subject property dedicates a 12-acre site for a public school—a facility which will benefit the community at large. With the school site, the subject property generously exceeds the minimum requirements for civic space allocation percentages.
- A warrant is recommended for Block AB to allow for a block length longer than 800 feet, (without being divided by a pedestrian Front Thoroughfare or Civic Space along that length. The previously approved in the Davis Tract -Phase 2 PD standards allowed for a maximum block length of 800 feet long but only if it is divided by a pedestrian Front Thoroughfare or Civic Space along that length) given that the already in place Block size exceeds this maximum and additional thoroughfare connections are impractical.
- A warrant is recommended to allow for a 282-foot minimum horizontal inside radius on Community Boulevards to allow for walkable streets with commercial frontage, where pedestrian activity is the highest.
- A Variance is recommended to allow for Block length standards which conform to those prescribed in the previously approved Davis Tract – Phase 2 PD Standards. These Block length standards are as follows: *Blocks shall be a maximum of 600 feet in any direction. Blocks shall be bounded by vehicular Front Thoroughfares. A Block may be a maximum of 800 feet long if it is divided by a pedestrian Front Thoroughfare or Civic Space along that length.*

Location:

The subject property is generally located just north of Farm to Market 973 (FM 973), northwest of the intersection of US 79 and FM 973.

Physical and Natural Features:

The subject property is vacant land that is relatively flat and devoid foliage. A utility easement exists through the center of the property and along a small portion of the western boundary of the subject property along the City's ETJ.

Growth Sector Designations:

The subject property is located within the Controlled Growth Sector Tier II (G-2.2)

The Controlled Growth Sector Tier II consists of areas where infrastructure is planned but not yet installed or areas where existing infrastructure lacks capacity and needs to be upgraded prior to expansion (Envision Taylor Comprehensive Plan page 50).

Future Land Use and Zoning Designations:

The subject property is assigned the Future Land Use designation of Special Employment District and Neighborhood Greenfield.

While the Special Employment District was created to provide a location for other, large-scale employment land uses that are associated with Samsung or other regional high-tech businesses, complimentary land uses such as commercial and retail services and high-density residential are considered appropriate in the Special Employment District and should be part of a master plan for areas adjacent to Neighborhood Greenfield and Neighborhood Infill land use designations.

The Neighborhood Greenfield was created for new communities that include a mix of residential uses and building types and neighborhoods serving retail and services. Greenfield development should be developed as an extension of the existing urban fabric in Taylor.

The surrounding properties are:

Direction	Zoning District	Growth Sector	Future Land Use	Existing Land Use
North	ETJ	Future Growth Tier I (G-1)	Special Employment District	Vacant
South	P2.5: Large Lot	Controlled Growth Sector Tier I (G-2.1)	Neighborhood Infill	Vacant
East	P3: Neighborhood	Controlled Growth Sector Tier I (G-2.1)	Special Employment District, Neighborhood Greenfield, and Neighborhood Infill	Single Family Home
West	ETJ	Controlled Growth Sector Tier I (G-2.1)	Special Employment District, and Neighborhood Greenfield	Vacant

Transportation

The subject property will be accessed through the Castlewood Subdivision from FM 973.

This plan identifies a future North-South Community Boulevard with an 80-foot right-of-way connecting County Road 403 and Wesley Miller Lane through the site providing access from both north and the south. The plan also proposes access from the east with a new Neighborhood Avenue with a 60 feet right-of-way which will connects to Farm to Market Road 973 (FM 973).

Utilities

The subject property is located within the City of Taylor Water and Wastewater CCN. Extensions of water and wastewater to and through the subject site will be required for development.

Public Notification

As required by the Local Government Code and the City of Taylor Code of Ordinances, all property owners within a 200-foot radius of the subject property were notified of the neighborhood

plan request. Thirteen (13) notices were mailed to the property owners and a legal notice advertising the public hearing was placed in the Taylor Press on Sunday, August 25, 2024.

Staff Analysis

Upon analyzing the request for a Neighborhood Plan for a mix of residential (single-family detached, large multi-family), nonresidential (commercial on ground floors and hotel) and civic space uses in the P4: Mix and P5: Urban Center Place Types, the proposed plan is consistent with the intended Place Type development of the surrounding area. The Neighborhood Plan request is consistent with the following Land Use Policies in Envision Taylor Comprehensive Plan:

- LU1 – New development should resemble the form and scale of traditional development patterns in Taylor.
    - The new development allows for a mix of residential and supporting commercial and civic uses at walkable distances similar to the traditional development patterns in Taylor.

Staff Recommendation

For the reasons stated in the staff analysis, staff recommends approval of the requested neighborhood plan.

Planning and Zoning Commission Recommendation

The Planning and Zoning Commission is charged with reviewing all requests for a Neighborhood Plan and recommends to City Council either in favor of or opposition to each request. In determining a recommendation on a Neighborhood Plan request, the Planning and Zoning Commission members consider the following factors:

Is the Neighborhood Plan consistent with the Comprehensive Plan?

- The Neighborhood Plan request is consistent with the Comprehensive Plan. The applicant would like to use the property for a mix of residential (single-family detached, large multi-family), nonresidential (commercial on ground floors and hotel) and civic space uses in the P4: Mix and P5: Urban Center Place Types.

Is the Neighborhood Plan compatible with the surrounding area?

- The Plan is compatible with other zoning to the north, east, west, and to the south of the subject property.

Does the Neighborhood Plan promote the public health, safety, or general welfare?

- Staff analysis determined that the proposed Neighborhood Plan for the subject property will promote public health, safety, and the general welfare. In addition, the Planning Principles and Policy Guide in the Comprehensive Plan aim to promote health, safety, and general welfare by managing growth, while promoting safe and orderly development.

Is adequate infrastructure available or planned to meet the needs of the proposed land use?

- Currently there is a 24-inch water main along FM 973 to the south of the subject property and an 8-inch waterline and a 12-inch waterline along the eastern boundary of the subject property. The subject property also has access to wastewater through an 18-inch wastewater line along Farm to Market Road 973 (FM 973) to the south and 8-inch wastewater line along the eastern boundary at Blazed Trail and Wesley Miller Lane.

Do current conditions indicate that a Neighborhood Plan is necessary?

- The Taylor Land Development Code requires a Neighborhood Plan on the subject property before any development permits can be considered.

Attachments:

1. Location Map
2. Current Zoning Map
3. Growth Sectors Map
4. Future Land Use Map
5. Notification Map
6. Draft Ordinance
    a. Exhibit A – Survey
    b. Exhibit B – Neighborhood Plan



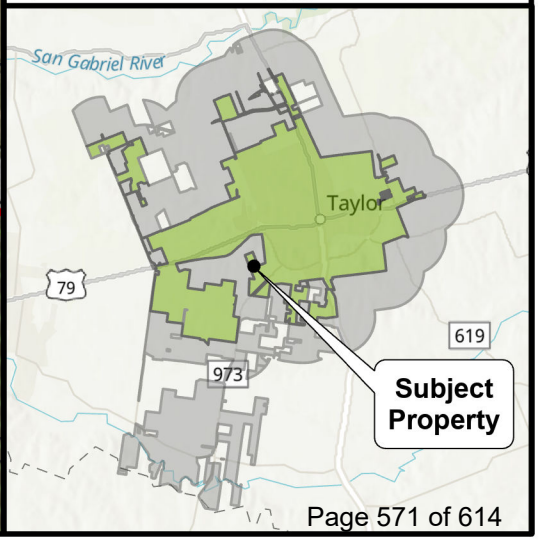
Taylor Texas
CITY OF TAYLOR TX

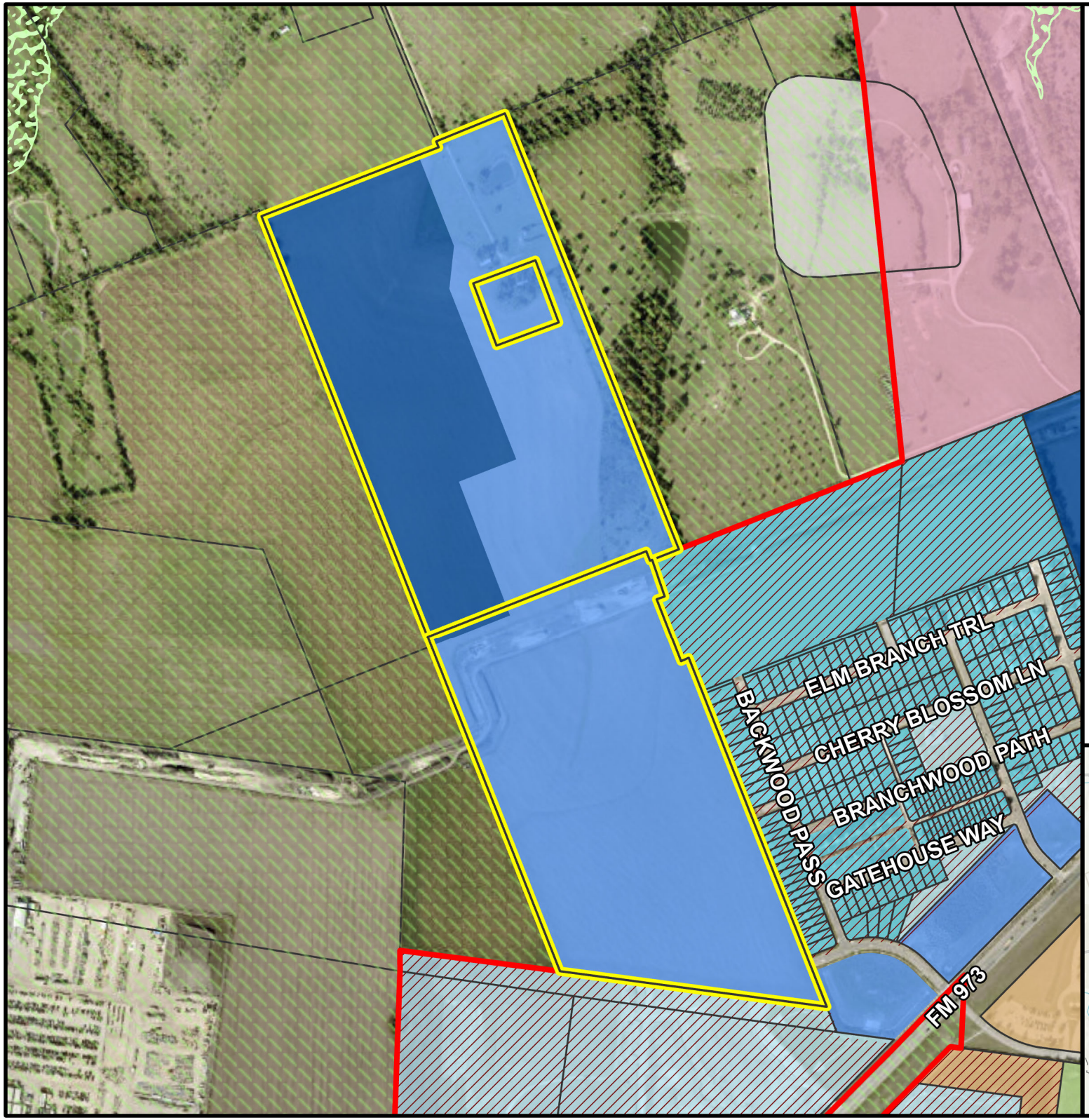
PZ-2024-2102

Davis Tract FM 973
New Neighborhood Plan Amendment
Location Map
Approximately 100 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

N 0 1,000 2,000
Feet





Taylor Texas
CITY OF TAYLOR TX

PZ-2024-2102

Davis Tract FM 973
New Neighborhood Plan Amendment
Current Zoning Map
Approximately 100 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

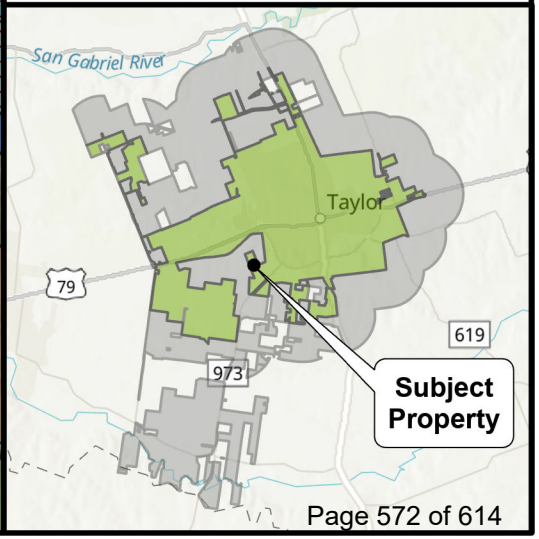
Overlay Zoning

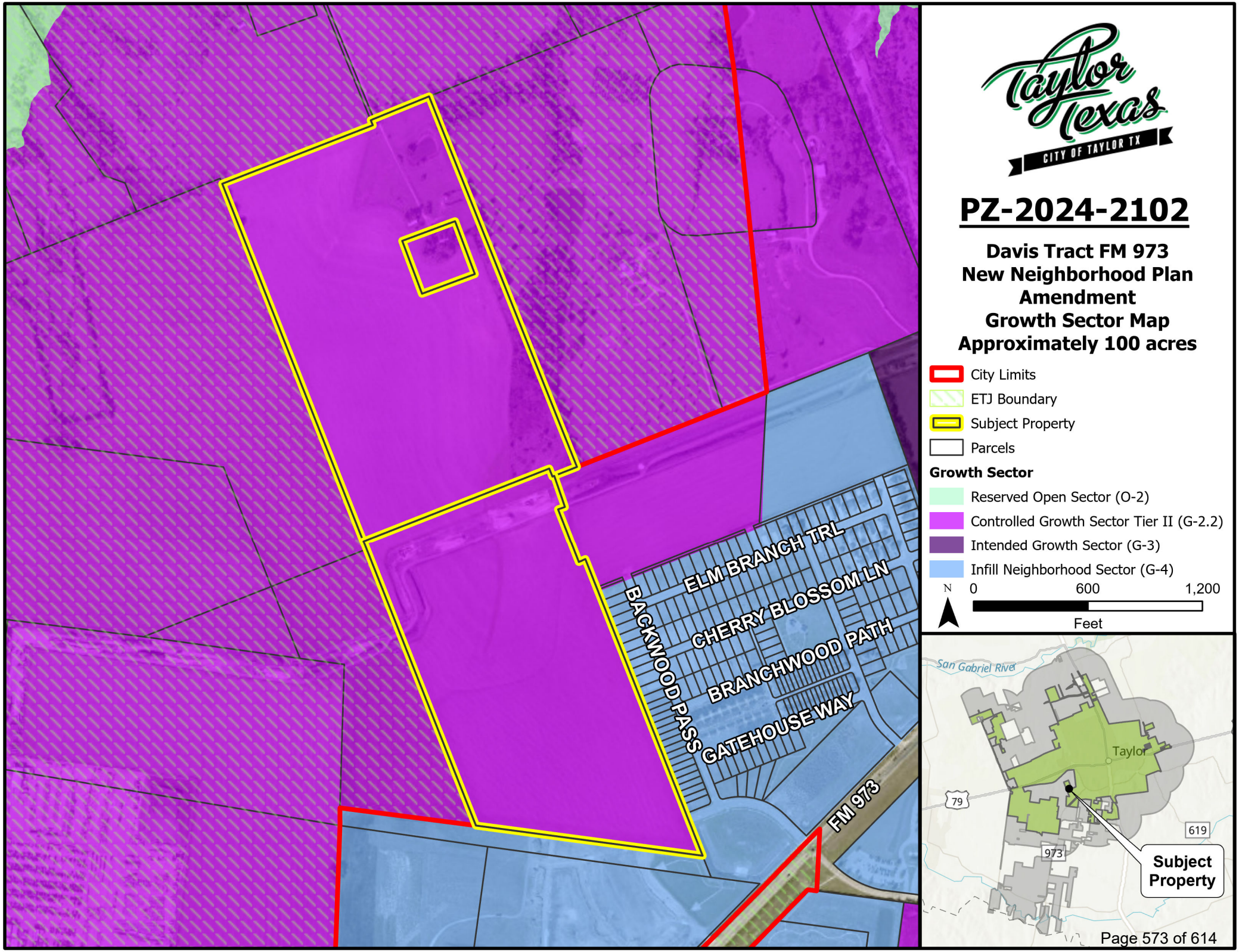
- Planned Development Overlay
- P1: Nature

Place Type Zoning

- P2: Rural
- P2.5: Large Lot
- P3: Neighborhood
- P4: Mix
- P5: Urban Center
- EC: Employment Center
- CS: Civic Space
- Unknown

N 0 600 1,200
Feet





PZ-2024-2102

Davis Tract FM 973
New Neighborhood Plan Amendment
Growth Sector Map
Approximately 100 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

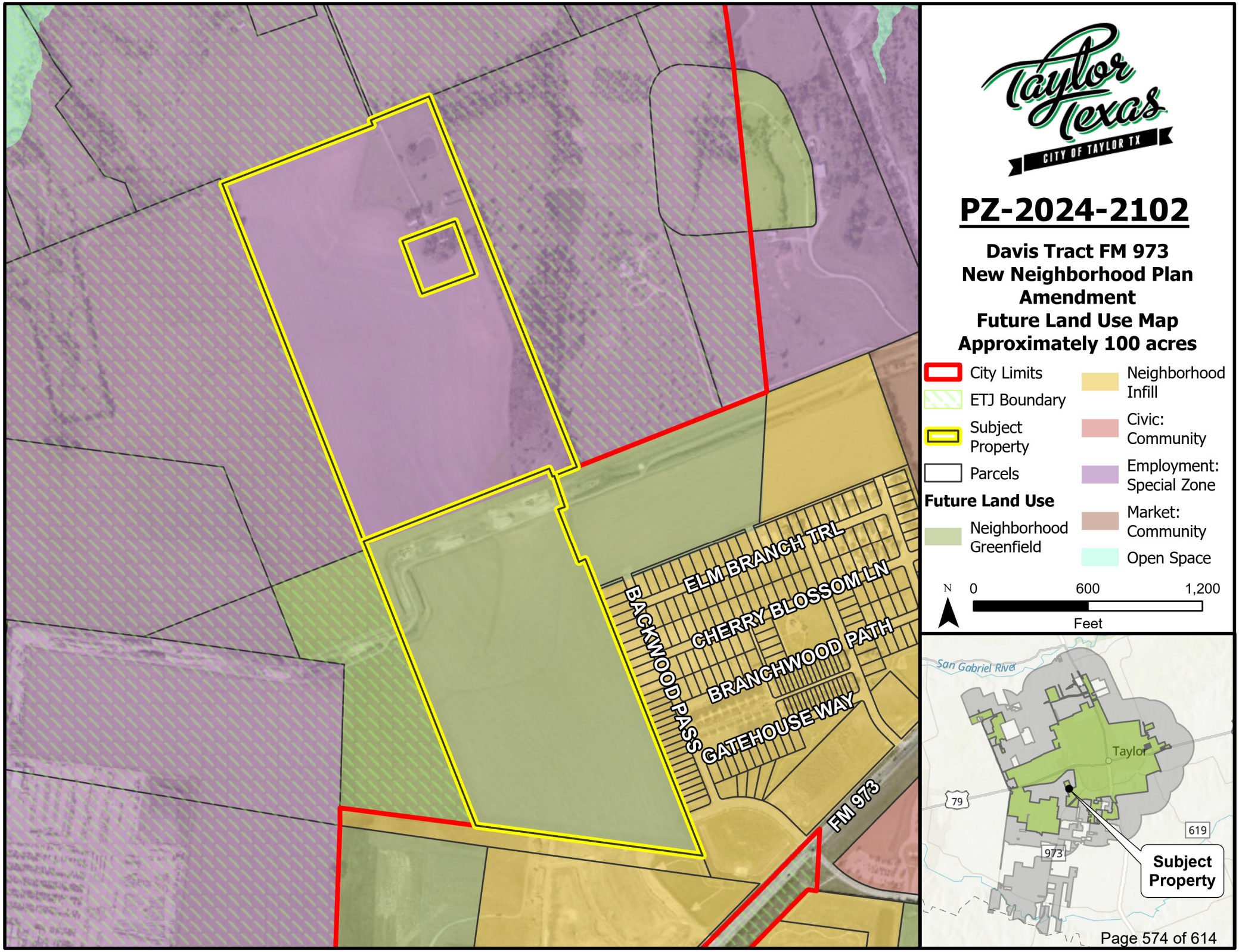
Growth Sector

- Reserved Open Sector (O-2)
- Controlled Growth Sector Tier II (G-2.2)
- Intended Growth Sector (G-3)
- Infill Neighborhood Sector (G-4)

N

0 600 1,200

Feet



Taylor Texas
CITY OF TAYLOR TX

PZ-2024-2102

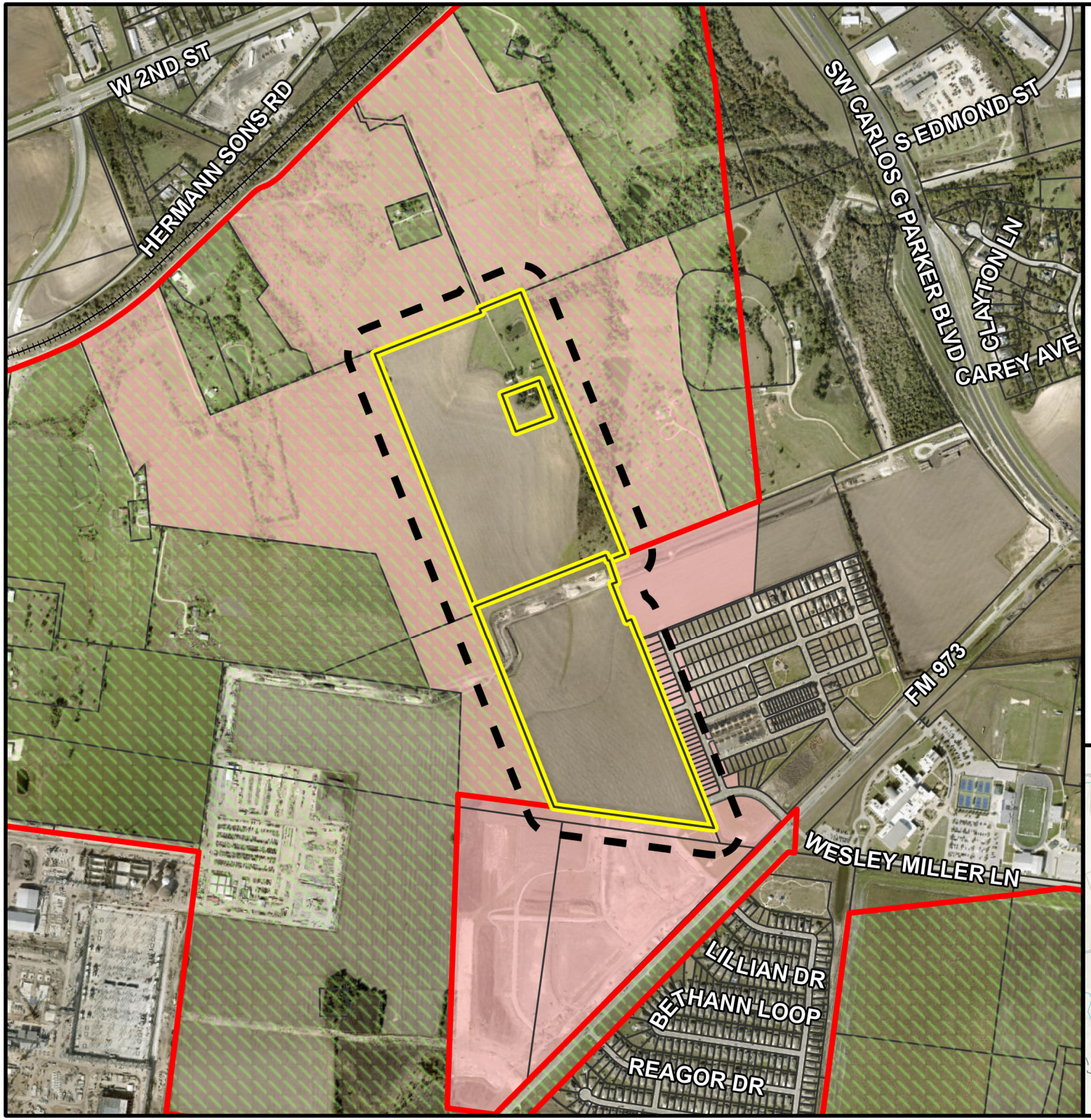
Davis Tract FM 973
New Neighborhood Plan Amendment
Future Land Use Map
Approximately 100 acres

- City Limits
- ETJ Boundary
- Subject Property
- Parcels

Future Land Use

- Neighborhood Greenfield
- Neighborhood Infill
- Civic: Community
- Employment: Special Zone
- Market: Community
- Open Space

N 0 600 1,200
Feet



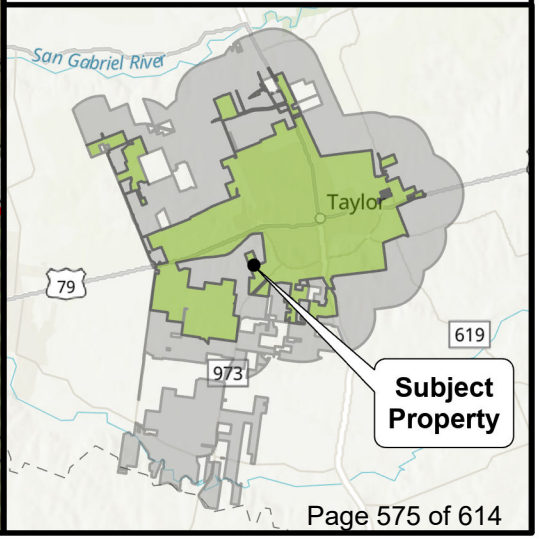
Taylor Texas
CITY OF TAYLOR TX

PZ-2024-2102

Davis Tract FM 973
New Neighborhood Plan Amendment
Notification Map
Approximately 100 acres

- City Limits
- ETJ Boundary
- Subject Property
- 200-ft. Buffer
- Notified Properties
- Parcels

N 0 1,000 2,000
Feet



ORDINANCE NO. 2024-XX

AN ORDINANCE REPEALING AND REPLACING DAVIS TRACT PHASE TWO NEIGHBORHOOD PLAN, ORDINANCE 2024-01, GENERALLY LOCATED WEST OF BACKWOOD PASS, LEGALLY DESCRIBED AS APPROXIMATELY 99 ACRES OF LAND PART OF AND OUT OF THE JAMES C. EAVES SURVEY, ABSTRACT NO. 533, AND GEORGE M. REESE SURVEY, ABSTRACT NO. 214, MORE PARTICULARLY DESCRIBED BY THE WILLIAMSON CENTRAL APPRAISAL DISTRICT PARCELS R019951, R019181, AND R019651, TAYLOR, WILLIAMSON COUNTY, TEXAS; AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF TAYLOR, TEXAS, TO SHOW THE ZONING CHANGE ADOPTED HEREIN; PROVIDING A SAVINGS CLAUSE.

WHEREAS, the Taylor City Council conducted a public hearing on September 26, 2024, to consider the request made by the applicant, whose property is legally described in Exhibit "A" attached hereto and incorporated by reference herein for all purposes ("Property"), to approve an Neighborhood Plan referred to as Davis Tract Phase Two; and

WHEREAS, the Planning and Zoning Commission, after proper notice, conducted a public hearing on September 10, 2024, to consider the zoning request, and recommended the Neighborhood Plan to the City Council; and

WHEREAS, the City Council, after the public hearing, approves the request for the Infill Neighborhood Plan and Property zoning change.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TAYLOR, TEXAS, that:

SECTION 1. The facts and recitations contained in the preamble of this Ordinance are hereby declared to be true and correct and are incorporated by reference herein and made a part hereof, as if copied verbatim.

SECTION 2. The Official Zoning map of the City of Taylor, Texas, is changed to indicate that an Infill Neighborhood Plan has been approved for the Property and to show the allocation and location of Place Types on the Property as depicted in the Neighborhood Plan attached hereto for all purposes as Exhibit "B".

SECTION 3. All other terms and conditions contained in the official zoning map, except as amended herein, shall continue and remain in full force and effect.

SECTION 4. Should any section, paragraph, clause, phrase, or provision of this Ordinance be adjudged invalid or held unconstitutional, the same shall not affect the validity of this Ordinance as a whole or any part of the provisions thereof, other than the part so decided to be invalid or unconstitutional.

SECTION 5. In accordance with Article VIII of the City Charter, Ordinance 2024-XX was introduced before the Taylor City Council on the 26th day of September 2024.

PASSED, APPROVED, and ADOPTED on the _____ day of _____, 2024.

_____
Dwayne Ariola, Mayor

ATTEST:

_____
Dianna McLean, City Clerk

APPROVED AS TO FORM:

_____
Mark Schroeder,
City Attorney

CERTIFICATE

THE STATE OF TEXAS

COUNTY OF WILLIAMSON

I, Dianna McLean, being the current City Clerk of the City of Taylor, Texas, do hereby certify that the attached is a true and correct copy of Ordinance No. 2024-XX, passed and approved by the City Council of the City of Taylor, Texas, on the _____ day of _____ 2024, and such Ordinance was duly introduced, passed, approved and adopted at meetings open to the public and notices of the meetings, giving the dates, places, and subject matter thereof, were posted as prescribed by Government Code Section 551.043.

Witness my hand and seal of office this _____ day of _____ 2024.

_____
Dianna McLean
City Clerk

EXHIBIT A

(Metes & Bounds/Legal Description/Survey)

ASH & ASSOCIATES
SURVEYING - MAPPING - PLANNING
"Serving the Community of Texas"
142 Jackson Lane
San Marcos, Texas 78666
Phone: 512-392-1719
ashandassociates.net

REM. (-) S&E ANNEXATION TRACT
99.990 ACRES
GM REESE & JC EAVES SURVEYS

STATE OF TEXAS
COUNTY OF WILLIAMSON

BEING A 99.990 ACRE TRACT OF LAND SITUATED IN THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533 AND THE JAMES C. EAVES SURVEY ABSTRACT NO. 214, WILLIAMSON COUNTY, TEXAS, THE SAME BEING ALL THAT CERTAIN 54.911 ACRE TRACT OF LAND CALLED TRACT 1 AND A PORTION OF THAT CERTAIN 70.644 ACRE TRACT OF LAND CALLED TRACT 2, AS CONVEYED BY DEED DATED DECEMBER 9, 2021 TO TAYLOR 973, LLC, RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 3 inch buried metal fence post found at the south corner of said Taylor 973, LLC, called 70.644 acre Tract 2, for the south corner of the herein described tract of land, same being at the common east corner of that certain called 90.65 acre tract of land conveyed to T.W. Ford, LP, by deed dated June 1, 2017, recorded in Document No. 2017050597, Official Public Records, Williamson County, Texas, and being in the north line of that certain called 69.993 acre tract of land conveyed to Castlewood South, LLC, by deed dated June 4, 2021, recorded in Document No. 2021084226, Official Public Records, Williamson County, Texas;

THENCE North 21°34'49" West (N21°34’35”W Record), with the northeast line of said Ford called 90.65 acre tract and the common southwest line of said Taylor 973, LLC, called 70.644 acre Tract 2, at an approximate distance of 1556 feet passing the northwest line of said George M. Reese Survey and the common southeast line of said James C. Eaves Survey, at a distance of 1597.78 feet passing the west corner of said Taylor 973, LLC, called 70.644 acre Tract 2 and the common south corner of said Taylor 973, LLC, called 54.911 acre Tract 1, and continuing on with the northeast line of said Ford called 90.65 acre tract and the common southwest line of said called 54.911 acre Tract 1, a total distance of **3610.80 feet** (3611.39’ Record) to a 1/2" iron rod found at the west corner of said called 54.911 acre Tract 1, for the west corner of the herein described tract of land, same being at a south corner of that certain called 52.501 acre tract of land conveyed to Taylor 53 Business, LLC, by deed dated October 29, 2021, recorded in Document No. 2021166275, Official Public Records, Williamson County, Texas;

THENCE North 68°46'43" East (N68°46’54”E Record) with the northwest line of said Taylor 973, LLC, called 54.911 acre Tract 1 and the common southeast line of said Taylor 53 Business, LLC, called 52.501 acre tract, along the meander of a wire fence, at a distance of 852.54 feet (852.58’ Record) passing a 1” iron pipe found, and continuing on for a total distance of **864.85 feet** (864.99’ Record) to a 1/2" iron rod with cap “Chaparral” found at the east corner of said Taylor 53 Business, LLC, called 52.501 acre tract and a common interior corner of said Taylor 973, LLC, called 54.911 acre Tract 1, for an interior corner of the herein described tract of land, and from which a 1” bent iron pipe found bears North 68°55'04" East, a distance of 17.93 feet;

THENCE North 22°28'28" West (N22°20’19”W Record) with a northeast line of said Taylor 53 Business, LLC, called 52.501 acre tract and a common southwest line of said Taylor 973, LLC, called 54.911 acre Tract 1, a distance of **35.94 feet** (36.05’ Record) to a 1/2" iron rod with cap “RPLS 2547” found at the northerly west corner of said 54.911 acre Tract 1, for a northerly west corner of the tract of land herein described, same being at the common south corner of that certain 0.873 acre tract of land called Tract 3, as conveyed by deed dated December 9, 2021 to Taylor 973, LLC, recorded in Document No. 2021188725, Official Public Records, Williamson County, Texas, and being in the northwest line of the said James C. Eaves Survey and the common southeast line of the H.G. Johnson Survey, Abstract No. 348;

THENCE North 68°47'56" East (N68°43’57”E Record), with the J.C. Eaves/H.G. Johnson Survey line and a northwest line of said Taylor 973, LLC, called 54.911 acre Tract 1, a distance of **17.99 feet** (18.02’ Record) to a 1/2” iron pipe found at an east corner of said Taylor 973, LLC, called 0.873 acre Tract 3 and a common corner of said Taylor 973, LLC, called 54.911 acre Tract 1, for a corner of the herein described tract of land, same being at the south corner of that certain called 142.37 acre tract of land conveyed to John Bohls by deed dated January 19, 1907, recorded in Volume 123, Page 191, Deed Records, Williamson County, Texas;

THENCE North 68°46'34" East (N68°46’48”E Record), with the southeast line of said Bohls called 142.37 acre tract, the common northwest line of said Taylor 973, LLC, called 54.911 acre Tract 1 and said J.C. Eaves/H.G. Johnson Survey line, along the meanders of a wire fence, a distance of **298.64 feet** (298.69’ Record) to 1/2" iron rod found at the north corner of said called 54.911 acre Tract 1, for the north corner of the herein described tract of land, same being at the common west corner of that certain called 45.83 acre tract of land, conveyed to J. Patrick and Beverly K. Quinn by deed dated September 25, 1996, recorded in Document No. 1996052460, Official Public Records, Williamson County, Texas;

THENCE South 21°33'08" East (S21°33’03”E Record), with the northeast line of said Taylor 973, LLC, called 54.911 acre Tract 1 and the common southwest line of said J. Patrick and Beverly K. Quinn called 45.83 acre tract, along the meanders of a wire fence, a distance of **2086.64 feet** (2087.00’ Record) to a 1/2" iron rod found at the east corner of said called 54.911 acre Tract 1 and the common south corner of said Quinn called 45.83 acre tract, for an east corner of the herein described tract of land, same being in the northwest line of the aforesaid Taylor 973, LLC, called 70.644 acre Tract 2, and the afore-mentioned Eaves/Reese Survey line;

THENCE South 68°35'33" West (S68°34’59”W Record), with the southeast line of said Taylor 973, LLC, called 54.911 acre Tract 1, the common northwest line of said called 70.644 acre Tract 2, and the said Eaves/Reese Survey line, a distance of **125.33 feet** to a corner of the herein described tract of land, and from which a common corner of said tracts 1 and 2, bears South 68°35'33" West (S68°34'59" W Record), a distance of 8.04 feet;

THENCE through and severing said Taylor 973, LLC, called 70.644 acre Tract 2, the following courses and distances numbered **(1)** through **(5)**:

1) South 20°51'11" East, a distance of **170.39 feet** to corner;

2) South 68°35'08" West, a distance of **40.89 feet** to corner;

3) South 21°26'02" East, a distance of **295.44 feet** to corner;

4) North 68°24'19" East, a distance of **34.93 feet** to corner;

5) South 21°54'48" East, a distance of **160.00 feet** to a 1/2" iron rod found at an interior corner of said Taylor 973, LLC. called 70.644 acre Tract 2, and the common west corner of Castlewood Subdivision Phase 2, an addition to Williamson County, Texas, according to the map thereof recorded in Document No. 2022074792, Official Public Records, Williamson County, Texas;

THENCE with a northeast line of said Taylor 973, LLC. called 70.644 acre Tract 2 and the common southwest line of said Castlewood Subdivision Phase 2, the following courses and distances numbered **(1)** and **(2)**:

1) South 21°38'06" East (S21°35’30”E Record), a distance of **514.60 feet** (514.66’ Record) to a 6 inch steel pipe post found for corner;

2) South 21°34’27” East (S21°35’30”E Record), at a distance of 80.4 feet passing the centerline of Blaze Trail, a 50 foot public right-of-way, and continuing on for a total distance of **759.37 feet** to a 1/2" iron rod found for corner at a south corner of said Castlewood Subdivision Phase 2 and a common west corner of Wesley Miller Lane, a 70 foot public right-of-way, as shown by plat of Castlewood Subdivision Phase 1, an addition to Williamson County, Texas, according to the map thereof recorded in Document No. 2021152781, Official Public Records, Williamson County, Texas;

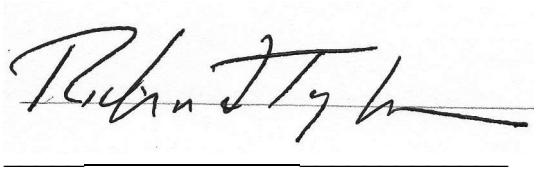
THENCE South 21°26’07” East (S21°35’25”E Record), continuing with a northeast line of said Taylor 973, LLC. called 70.644 acre Tract 2, a distance of **70.01 feet** (70.00’ Record) to a 1/2" iron rod found for corner at a south corner of said Castlewood Subdivision Phase 1, a south corner of said Wesley Miller Lane, and a common west corner of Castlewood Subdivision Phase 3, an addition to Williamson County, Texas, according to the afore-mentioned map thereof recorded in Document No. 2022074792, Official Public Records, Williamson County, Texas;

THENCE South 21°38’36” East (S21°35’30”E Record), continuing with a northeast line of said Taylor 973, LLC. called 70.644 acre Tract 2 and the common southwest line of said Castlewood Subdivision Phase 3, a distance of **162.78 feet** to a 1/2" iron rod with cap “Chaparral” found at the east corner of said called 70.644 acre Tract 2, for an east corner of the herein described tract of land, same being at an east corner of the of the afore-mentioned called 69.993 acre tract of land conveyed to Castlewood South, LLC, by deed dated June 4, 2021, recorded in Document No. 2021084226, Official Public Records, Williamson County, Texas, and from which a 1/2" iron rod with cap “Haynie Consulting” found in the south line of said George M. Reese Survey and the common north line of the HT&B RR. CO. Survey, Section 6, Abstract No. 211, a corner of said Castlewood Subdivision Phase 3 and a common interior corner of said called 69.993 acre tract, bears South 21°31’48” East (S21°35’30”E Record), a distance of 127.72 feet (127.58’ Record);

THENCE North 82°37'18" West (N82°38’12”W Record), with the southeast line of said Taylor 973, LLC. called 70.644 acre Tract 2 and the common north line of said Castlewood South, LLC, called 69.993 acre tract a distance of **1196.62 feet** (1196.79’ Record) to the **POINT OF BEGINNING** and **CONTAINING 99.990 ACRES OF LAND.**

BEARING BASIS HEREIN DERIVED BY GPS MEASUREMENTS ADJUSTED BY HARN (HIGH ACCURACY REFERENCE NETWORK) & PROJECTED TO TEXAS STATE PLANE COORDINATES (TEXAS CENTRAL ZONE) & NAD83 (HORIZONTAL).

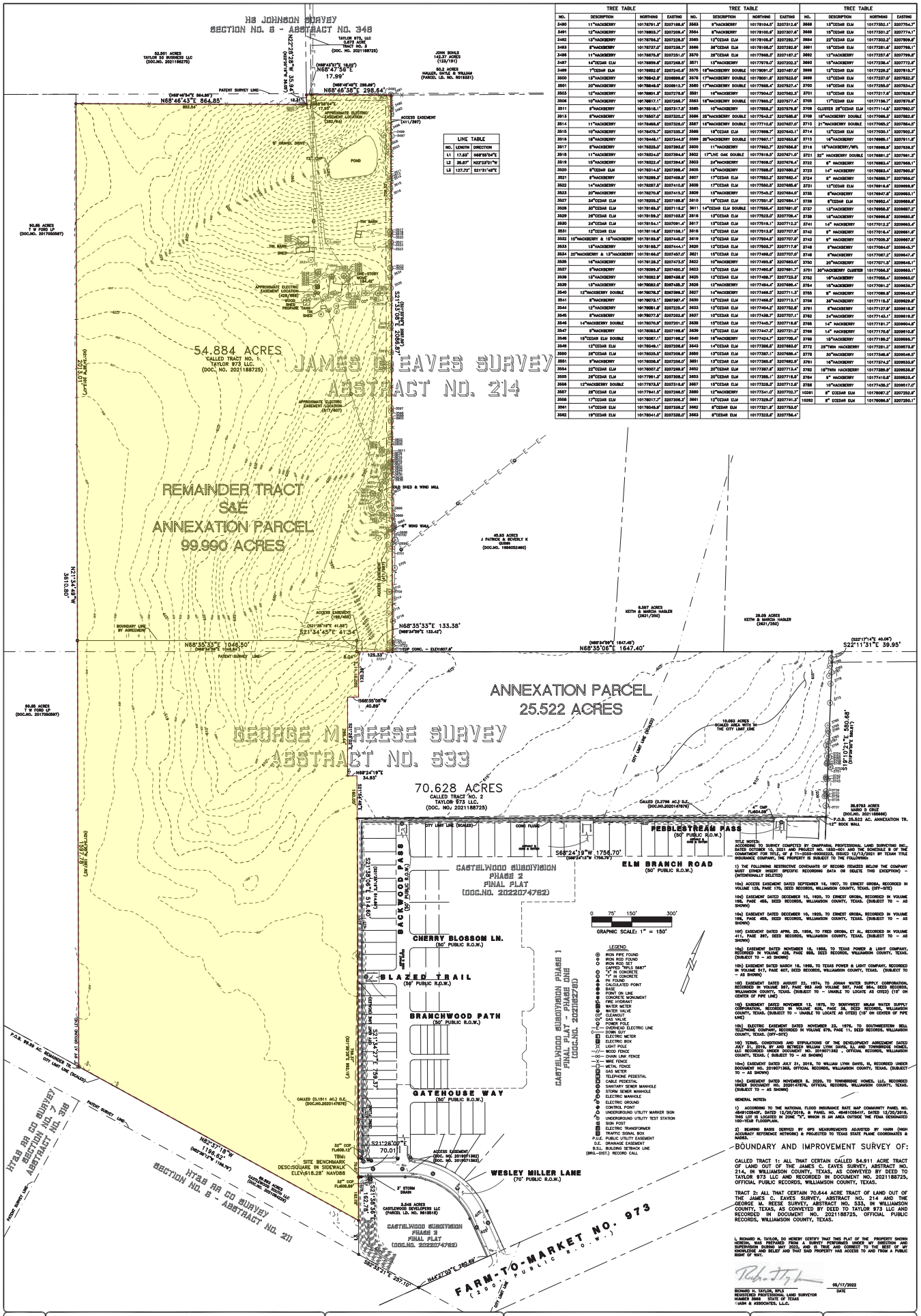
I, Richard H. Taylor, do certify that this description and associated exhibit were prepared this date from a boundary survey performed under my direction during May 17, 2022, and is true and correct to the best of my knowledge and belief.





10/23/2023
Date

Richard H. Taylor
Registered Professional Land Surveyor
No. 3986 State of Texas
Attachment: Drawing of 99.990 Acre Remainder Tract & 25.522 Acre Annexation Tract
Job: 22-8154



LINE TABLE		
NO.	LENGTH	DIRECTION
L1	17.85'	N68°35'06"E
L2	85.97'	N22°35'11"W
L3	127.72'	S21°31'48"E

TREE TABLE			
NO.	DESCRIPTION	NORTHING	EASTING
3490	11"HACKBERRY	10178781.5'	3207185.6'
3491	12"HACKBERRY	10178805.7'	3207209.4'
3492	13"HACKBERRY	10178795.3'	3207228.5'
3493	8"HACKBERRY	10178737.2'	3207238.7'
3496	11"HACKBERRY	10178875.8'	3207251.0'
3497	14"CEDAR ELM	10178859.9'	3207268.5'
3499	7"CEDAR ELM	10178852.9'	3207240.8'
3500	13"HACKBERRY	10178842.3'	3206999.6'
3502	32"HACKBERRY	10178846.0'	3207184.5'
3503	12"HACKBERRY	10178901.8'	3207278.8'
3506	10"HACKBERRY	10178917.1'	3207266.7'
3511	8"HACKBERRY	10178918.1'	3207317.8'
3512	8"HACKBERRY	10178007.0'	3207320.2'
3514	11"HACKBERRY	10178488.8'	3207320.6'
3515	10"HACKBERRY	10178475.7'	3207320.3'
3516	18"HACKBERRY	10178446.1'	3207344.5'
3517	8"HACKBERRY	10178325.0'	3207360.8'
3518	11"HACKBERRY	10178324.6'	3207394.8'
3519	15"HACKBERRY	10178322.4'	3207396.6'
3520	8"CEDAR ELM	10178311.5'	3207295.4'
3521	8"HACKBERRY	10178289.2'	3207409.5'
3522	14"HACKBERRY	10178287.5'	3207410.5'
3523	20"HACKBERRY	10178270.8'	3207415.2'
3524	34"CEDAR ELM	10178270.2'	3207185.8'
3526	20"CEDAR ELM	10178165.3'	3207116.2'
3529	28"CEDAR ELM	10178159.2'	3207103.5'
3530	24"CEDAR ELM	10178154.1'	3207091.4'
3531	12"CEDAR ELM	10178116.8'	3207156.1'
3532	10"HACKBERRY & 15"HACKBERRY	10178118.5'	3207449.8'
3533	13"HACKBERRY	10178188.7'	3207444.1'
3534	20"HACKBERRY & 15"HACKBERRY	10178166.0'	3207457.0'
3535	16"HACKBERRY	10178128.2'	3207473.5'
3537	8"HACKBERRY	10178099.2'	3207480.3'
3538	13"HACKBERRY	10178082.8'	3207468.6'
3539	13"HACKBERRY	10178052.0'	3207480.3'
3540	12"HACKBERRY DOUBLE	10178078.2'	3207398.3'
3541	8"HACKBERRY	10178075.1'	3207307.4'
3544	12"HACKBERRY	10178081.8'	3207228.4'
3545	8"HACKBERRY	10178077.2'	3207220.8'
3546	14"HACKBERRY DOUBLE	10178079.9'	3207201.2'
3547	8"HACKBERRY	10178085.5'	3207198.8'
3548	15"CEDAR ELM DOUBLE	10178087.1'	3207195.2'
3549	12"CEDAR ELM	10178049.1'	3207208.8'
3550	10"HACKBERRY	10178035.5'	3207208.8'
3551	9"HACKBERRY	10178008.8'	3207208.5'
3554	22"CEDAR ELM	10178007.2'	3207269.8'
3555	26"CEDAR ELM	10177981.8'	3207308.2'
3556	12"HACKBERRY DOUBLE	10177973.5'	3207316.8'
3557	28"CEDAR ELM	10177941.2'	3207298.5'
3558	17"CEDAR ELM	10178017.7'	3207309.3'
3561	14"CEDAR ELM	10178045.8'	3207335.2'
3562	19"CEDAR ELM	10178041.6'	3207335.0'
3563	9"HACKBERRY	10178104.5'	3207315.6'
3564	8"HACKBERRY	10178105.8'	3207307.6'
3565	12"CEDAR ELM	10178105.8'	3207292.7'
3566	26"CEDAR ELM	10178105.5'	3207282.6'
3570	26"CEDAR ELM	10177968.3'	3207187.2'
3571	13"HACKBERRY	10177978.0'	3207202.3'
3575	18"HACKBERRY DOUBLE	10178091.2'	3207487.0'
3576	17"HACKBERRY DOUBLE	10178091.8'	3207523.6'
3580	18"HACKBERRY DOUBLE	10177988.4'	3207527.4'
3581	16"HACKBERRY	10177904.0'	3207562.3'
3583	18"HACKBERRY DOUBLE	10177985.2'	3207577.4'
3586	10"HACKBERRY	10177858.2'	3207579.6'
3587	18"HACKBERRY DOUBLE	10177843.2'	3207585.6'
3588	21"HACKBERRY DOUBLE	10177710.8'	3207587.0'
3589	28"HACKBERRY DOUBLE	10177697.1'	3207563.8'
3600	11"HACKBERRY	10177662.7'	3207666.8'
3602	17"LIVE OAK DOUBLE	10177619.5'	3207671.4'
3603	24"HACKBERRY	10177608.0'	3207676.4'
3605	15"HACKBERRY	10177588.0'	3207680.2'
3607	17"CEDAR ELM	10177552.2'	3207682.4'
3608	17"CEDAR ELM	10177550.5'	3207685.6'
3609	13"HACKBERRY	10177543.2'	3207684.6'
3610	18"HACKBERRY	10177501.3'	3207684.1'
3611	14"CEDAR ELM DOUBLE	10177555.4'	3207681.0'
3616	13"CEDAR ELM	10177525.0'	3207706.4'
3617	13"CEDAR ELM	10177519.1'	3207712.2'
3618	13"CEDAR ELM	10177513.8'	3207707.9'
3619	12"CEDAR ELM	10177504.5'	3207707.6'
3620	12"CEDAR ELM	10177503.7'	3207717.6'
3621	15"CEDAR ELM	10177498.0'	3207707.6'
3622	10"HACKBERRY	10177495.8'	3207683.0'
3623	12"CEDAR ELM	10177490.8'	3207691.7'
3625	12"CEDAR ELM	10177488.7'	3207723.8'
3626	12"CEDAR ELM	10177484.4'	3207688.4'
3627	14"HACKBERRY	10177488.5'	3207711.5'
3630	12"CEDAR ELM	10177446.8'	3207713.1'
3633	12"CEDAR ELM	10177440.4'	3207752.8'
3636	12"CEDAR ELM	10177439.7'	3207707.1'
3635	15"CEDAR ELM	10177443.7'	3207718.8'
3639	12"CEDAR ELM	10177447.3'	3207721.3'
3640	16"HACKBERRY	10177424.7'	3207708.4'
3643	14"CEDAR ELM	10177398.8'	3207683.2'
3650	13"CEDAR ELM	10177387.1'	3207686.4'
3651	13"CEDAR ELM	10177383.8'	3207692.5'
3652	20"CEDAR ELM	10177387.8'	3207713.4'
3653	20"CEDAR ELM	10177386.5'	3207716.5'
3657	15"CEDAR ELM	10177328.5'	3207712.8'
3660	13"HACKBERRY	10177341.0'	3207702.3'
3662	12"CEDAR ELM	10177329.0'	3207741.3'
3663	8"CEDAR ELM	10177325.8'	3207756.4'
3666	13"CEDAR ELM	10177352.1'	3207754.7'
3668	15"CEDAR ELM	10177331.3'	3207774.1'
3684	22"CEDAR ELM	10177302.2'	3207809.8'
3691	15"CEDAR ELM	10177281.4'	3207795.1'
3692	12"HACKBERRY	10177257.6'	3207799.8'
3693	15"HACKBERRY	10177238.4'	3207772.5'
3698	12"CEDAR ELM	10177229.2'	3207815.7'
3699	12"CEDAR ELM	10177237.6'	3207833.3'
3700	18"CEDAR ELM	10177255.6'	3207834.2'
3701	12"CEDAR ELM	10177217.6'	3207828.3'
3705	17"CEDAR ELM	10177196.7'	3207870.8'
3708	CLUSTER 28"CEDAR ELM	10177114.6'	3207862.0'
3709	18"HACKBERRY DOUBLE	10177086.3'	3207882.8'
3710	21"HACKBERRY DOUBLE	10177085.2'	3207884.6'
3714	12"CEDAR ELM	10177030.1'	3207902.3'
3715	16"HACKBERRY	10176989.1'	3207911.8'
3716	18"HACKBERRY/WFL	10176988.9'	3207836.5'
3721	32" HACKBERRY DOUBLE	10176881.2'	3207961.3'
3723	8" HACKBERRY	10176883.4'	3207966.1'
3723	14" HACKBERRY	10176883.4'	3207960.8'
3724	8" HACKBERRY	10176888.7'	3207956.0'
3731	12"CEDAR ELM	10176916.6'	3209858.8'
3735	8"HACKBERRY	10176947.8'	3209852.1'
3738	8"CEDAR ELM	10176962.4'	3209859.8'
3737	13"HACKBERRY	10176968.2'	3209887.2'
3739	18"HACKBERRY	10176968.5'	3209880.8'
3741	14" HACKBERRY	10177012.2'	3209865.4'
3742	8" HACKBERRY	10177016.4'	3209861.8'
3743	9" HACKBERRY	10177009.3'	3209857.8'
3747	8"HACKBERRY	10177064.6'	3209845.7'
3748	9"HACKBERRY	10177067.2'	3209847.4'
3750	20"HACKBERRY	10177071.5'	3209845.1'
3751	20"HACKBERRY CLUSTER	10177066.3'	3209863.1'
3752	16"HACKBERRY	10177066.4'	3209869.0'
3754	15"HACKBERRY	10177081.2'	3209863.7'
3755	8" HACKBERRY	10177089.8'	3209845.5'
3756	26"HACKBERRY	10177115.5'	3209829.8'
3761	8"HACKBERRY	10177127.9'	3209818.8'
3762	24"HACKBERRY	10177143.1'	3209819.2'
3764	14" HACKBERRY	10177181.7'	3209803.8'
3768	14" HACKBERRY	10177170.6'	3209810.8'
3769	15"HACKBERRY	10177199.2'	3209855.7'
3772	25"TWIN HACKBERRY	10177281.5'	3209875.8'
3778	30"HACKBERRY	10177348.6'	3209849.3'
3781	16"HACKBERRY	10177374.2'	3209839.8'
3782	18"TWIN HACKBERRY	10177389.6'	3209836.8'
3784	9" HACKBERRY	10177410.8'	3209825.4'
3788	10"HACKBERRY	10177438.3'	3209817.0'
10241	8" CEDAR ELM	10176967.2'	3207232.8'
10263	8" CEDAR ELM	10176968.2'	3207280.1'

TITLE NOTES:
ACCORDING TO SURVEY COMPETED BY CHAPARRAL PROFESSIONAL LAND SURVEYING INC., DATED OCTOBER 15, 2021 AND PROJECT NO. 1832-001 AND THE SCHEDULE B OF THE COMMITMENT FOR TITLE, GF # 71-2030-00002225, ISSUED 12/13/2021 BY TEXAN TITLE INSURANCE COMPANY, THE PROPERTY IS SUBJECT TO THE FOLLOWING:

1) THE FOLLOWING RESTRICTIVE COVENANTS OF RECORD ITEMIZED BELOW THE COMPANY MUST EITHER INSERT SPECIFIC RECORDING DATA OR DELETE THIS EXCEPTION) - (INTENTIONALLY DELETED)

10a) ACCESS EASEMENT DATED SEPTEMBER 16, 1907, TO ERNEST GROBA, RECORDED IN VOLUME 125, PAGE 170, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (OFF-SITE)

10d) EASEMENT DATED DECEMBER 10, 1920, TO ERNEST GROBA, RECORDED IN VOLUME 198, PAGE 488, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10e) EASEMENT DATED DECEMBER 10, 1920, TO ERNEST GROBA, RECORDED IN VOLUME 198, PAGE 485, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10f) EASEMENT DATED APRIL 25, 1956, TO FRED GROBA, ET AL, RECORDED IN VOLUME 417, PAGE 397, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10g) EASEMENT DATED NOVEMBER 18, 1988, TO TEXAS POWER & LIGHT COMPANY, RECORDED IN VOLUME 625, PAGE 888, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10h) EASEMENT DATED MARCH 18, 1998, TO TEXAS POWER & LIGHT COMPANY, RECORDED IN VOLUME 517, PAGE 627, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10i) EASEMENT DATED AUGUST 22, 1974, TO JONAH WATER SUPPLY CORPORATION, RECORDED IN VOLUME 857, PAGE 983 AND VOLUME 597, PAGE 954, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – UNABLE TO LOCATE ON SITE) (15' ON CENTER OF PIPE LINE)

10j) EASEMENT DATED NOVEMBER 13, 1978, TO SOUTHWEST MILAM WATER SUPPLY CORPORATION, RECORDED IN VOLUME 835, PAGE 36, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – UNABLE TO LOCATE AS GIVEN) (15' ON CENTER OF PIPE LINE)

10k) ELECTRIC EASEMENT DATED NOVEMBER 23, 1976, TO SOUTHWESTERN BELL TELEPHONE COMPANY, RECORDED IN VOLUME 879, PAGE 11, DEED RECORDS, WILLIAMSON COUNTY, TEXAS. (OFF-SITE)

10l) TERMS, CONDITIONS AND STIPULATIONS OF THE DEVELOPMENT AGREEMENT DATED MAY 31, 2019, BY AND BETWEEN WILLIAM LYNN DAVIS, III AND TOWNSHOME HOMES, LLC RECORDED UNDER DOCUMENT NO. 2019071362 , OFFICIAL RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10m) EASEMENT DATED JULY 31, 2019, TO WILLIAM LYNN DAVIS, III, RECORDED UNDER DOCUMENT NO. 2019071363, OFFICIAL RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

10n) EASEMENT DATED NOVEMBER 5, 2020, TO TOWNSHOME HOMES, LLC, RECORDED UNDER DOCUMENT NO. 2020147676, OFFICIAL RECORDS, WILLIAMSON COUNTY, TEXAS. (SUBJECT TO – AS SHOWN)

GENERAL NOTES:

1) ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 48491C0540F, DATED 12/20/2019, & PANEL NO. 48491C0541F, DATED 12/20/2019, THIS LOT IS LOCATED IN ZONE "X", WHICH IS AN AREA OUTSIDE THE FEMA DESIGNATED 100-YEAR FLOODPLAIN.

2) BEARING BASIS DERIVED BY GPS MEASUREMENTS ADJUSTED BY HARN (NSRS ACCURACY REFERENCE NETWORK) & PROJECTED TO TEXAS STATE PLANE COORDINATES (4203) NAD83.

BOUNDARY AND IMPROVEMENT SURVEY OF:

CALLED TRACT 1: ALL THAT CERTAIN CALLED 54.911 ACRE TRACT OF LAND OUT OF THE JAMES C. EAVES SURVEY, ABSTRACT NO. 214, IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED TO TAYLOR 973 LLC AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

TRACT 2: ALL THAT CERTAIN 70.644 ACRE TRACT OF LAND OUT OF THE JAMES C. EAVES SURVEY, ABSTRACT NO. 214 AND THE GEORGE M. REESE SURVEY, ABSTRACT NO. 533, IN WILLIAMSON COUNTY, TEXAS, AS CONVEYED BY DEED TO TAYLOR 973 LLC AND RECORDED IN DOCUMENT NO. 2021188725, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS.

I, RICHARD H. TAYLOR, DO HEREBY CERTIFY THAT THIS PLAT OF THE PROPERTY SHOWN HEREON, WAS PREPARED FROM A SURVEY PERFORMED UNDER MY DIRECTION AND SUPERVISION DURING MAY 2022, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT SAID PROPERTY HAS ACCESS TO AND FROM A PUBLIC RIGHT OF WAY.

05/17/2022
DATE

RICHARD H. TAYLOR, RPLS
REGISTERED PROFESSIONAL LAND SURVEYOR
NUMBER 5989 STATE OF TEXAS
©ASH & ASSOCIATES, L.L.C.

DRAWING NO. 1 OF 1 SHEET: T 1& 2

BOUNDARY AND IMPROVEMENT SURVEY OF:
TRACT 1 : 54.884 ACRES
TRACT 2 : 70.628 ACRES
JAMES C. EAVES SURVEY – ABS. NO. 214
GEORGE M. REESE SURVEY – ABS. NO. 533
WILLIAMSON COUNTY, TEXAS

DRAWING INFORMATION

DESIGNED BY:	MAM	DATE:	05/17/2022
DRAWN BY:	MAM/RHT	PROJECT NO:	22-8154
APPROVED BY:	RHT	PLOT SCALE:	1" : 150'
FILE NAME:	T 1 & 2		

ASH & ASSOCIATES
SURVEYING - PLANNING - MAPPING
"SERVING THE COMMUNITY OF TEXAS"
142 JACKSON LANE
SAN MARCOS, TEXAS 78666
(512) 392-1719
ashandassociates.net
Surveying: 100847-00

REVISIONS			
6	.	.	.
5	.	.	.
4	.	.	.
3	.	.	.
2	ANNEX 25 AC & REM 100 AC	MAM	06/23/22
1	TOPO	MAM	5/10/22
NO.	REVISION	APPD.	DATE



Neighborhood Plan
for
Davis Tract Phase 2
PZ-2024-2102
Taylor, Texas

A BACKGROUND

Regional Context A.2
Subject Property in Context A.3
Comprehensive Plan Excerpts A.4
Place Types in Context A.5
Existing Conditions A.6
Elevation Analysis A.7

B REGULATIONS

Place Type Allocation Plan B.2
Regulating Plan B.3
Block Frontages and Dimensions B.4
Design-Specific Standards B.5
Transportation Master Plan Diagram B.7
Thoroughfare Types B.8
Thoroughfare Sections B.9
Civic Space Plan B.11

C SUPPLEMENTAL PLANS

Illustrative Master Plan in Context C.2
Illustrative Master Plan with Program Summary C.3
Fire Apparatus Access C.4
Addressing Diagram C.5
Program Acreage C.6
Detailed Parking and Program C.7

X APPENDIX

Charrette Plans X.1

For
The City of Taylor, Texas
and
Top Notch Properties
by
Michael Watkins Architect, llc

August 29, 2024

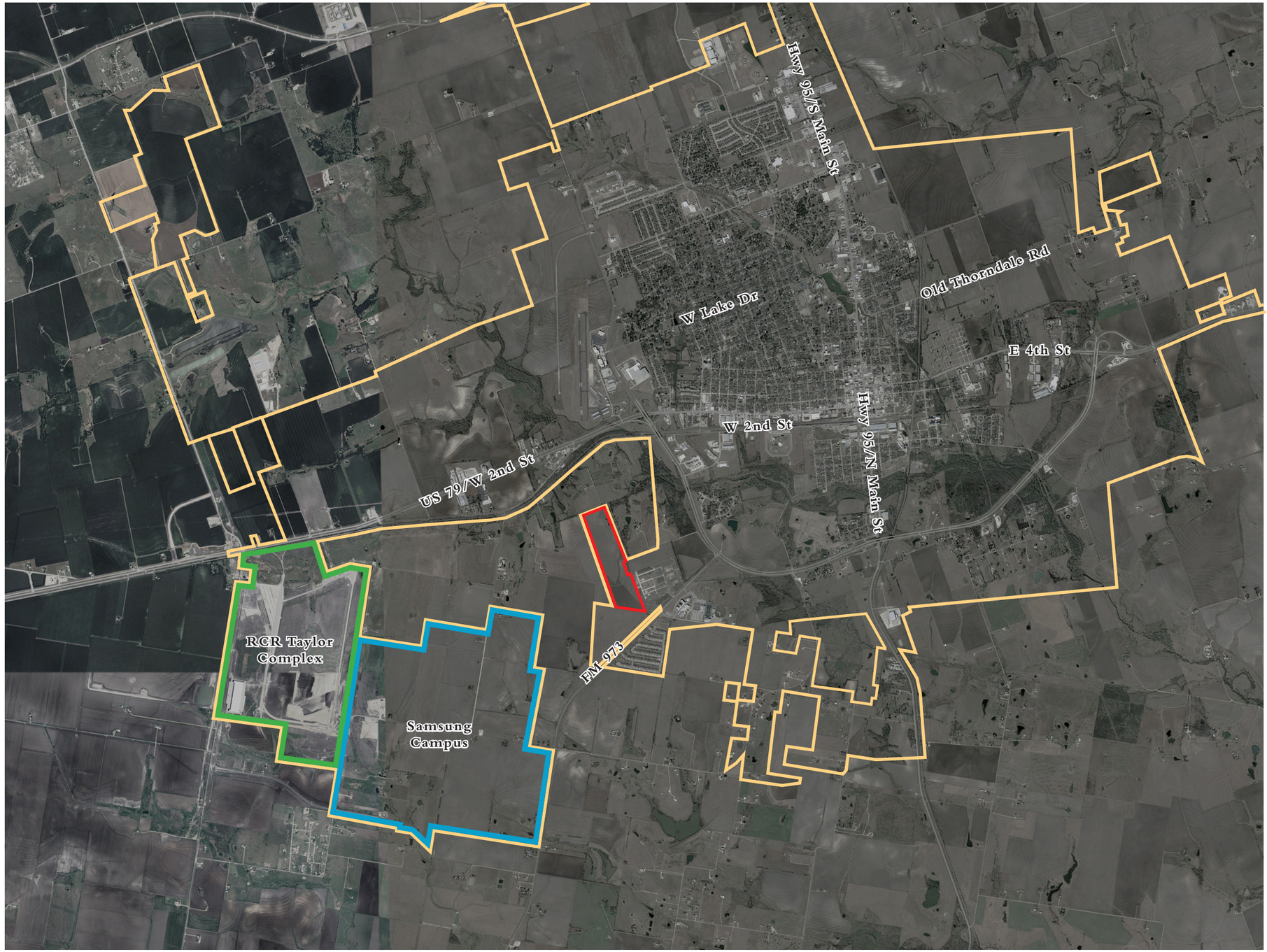
A. Background

The Neighborhood Plan provides the general layout for the development, serving as a guide for future steps in the development. This layout is based on the existing conditions on the Subject Property as described in the Background chapter and the specific development scenario described in the Supplemental Plans. The Regulations chapter describes the required components and standards associated with this layout and demonstrates the layout's compliance with the Taylor Comprehensive Plan and the Taylor Land Development Code. Other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of the requirements in the Regulations chapter and all other applicable regulations.

The Background chapter summarizes information about the site, program, zoning, and other relevant constraints provided by the Applicant and the City of Taylor that inform the design of the Neighborhood Plan.

Regional Context A.2
Subject Property in Context A.3
Comprehensive Plan Excerpts A.4
Place Types in Context A.5
Existing Conditions A.6
Elevation Analysis A.7

REGIONAL CONTEXT



Key

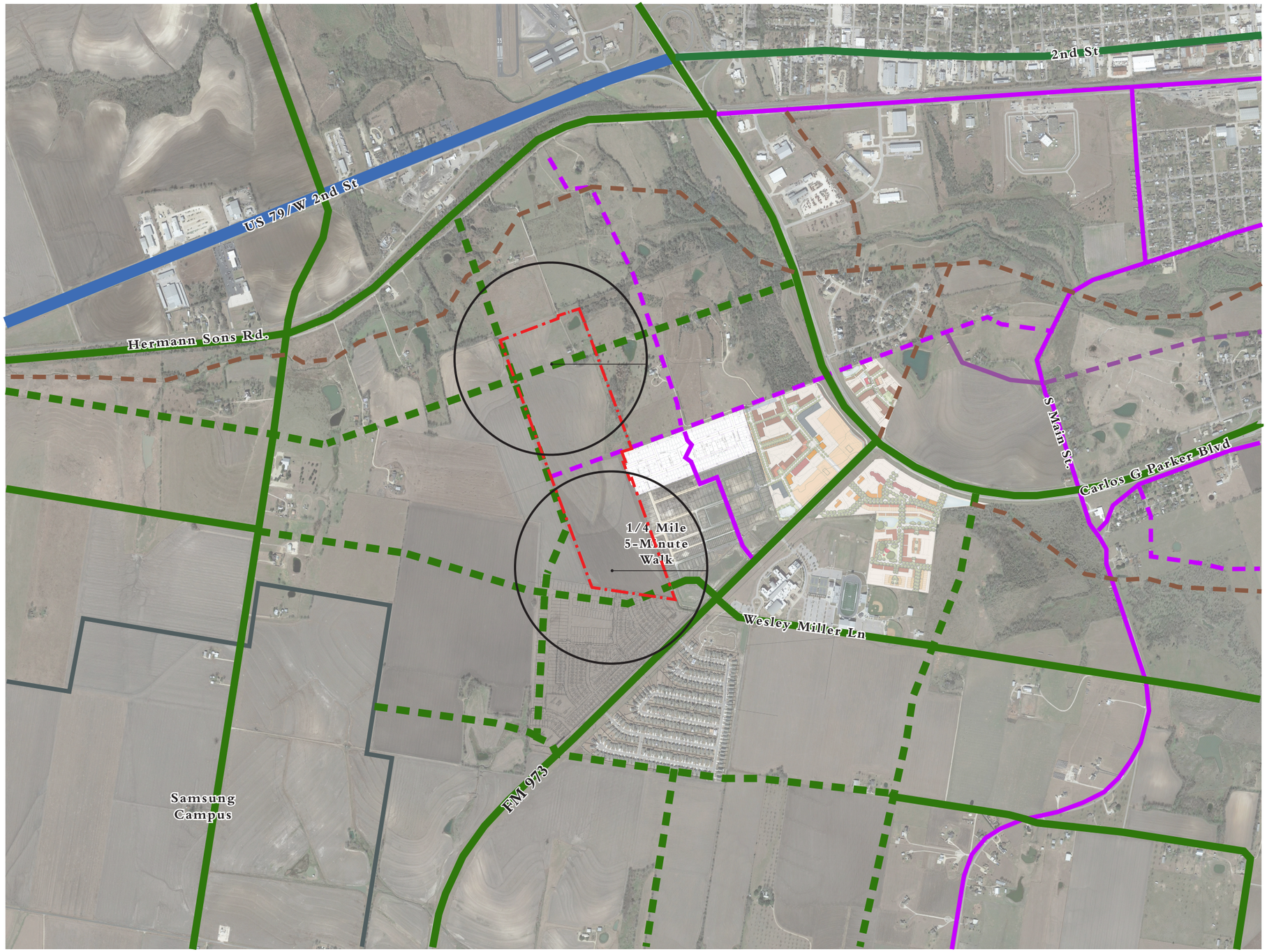
- City Boundary
- Subject Property
- Samsung Campus
- RCR Taylor Complex

0 mile ¼ mile ½ mile 1 mile

N

The design is subject to change. Not for construction.

SUBJECT PROPERTY IN CONTEXT



Key

- Subject Property
- Existing Thoroughfare
- Proposed Thoroughfare

Thoroughfare Designations

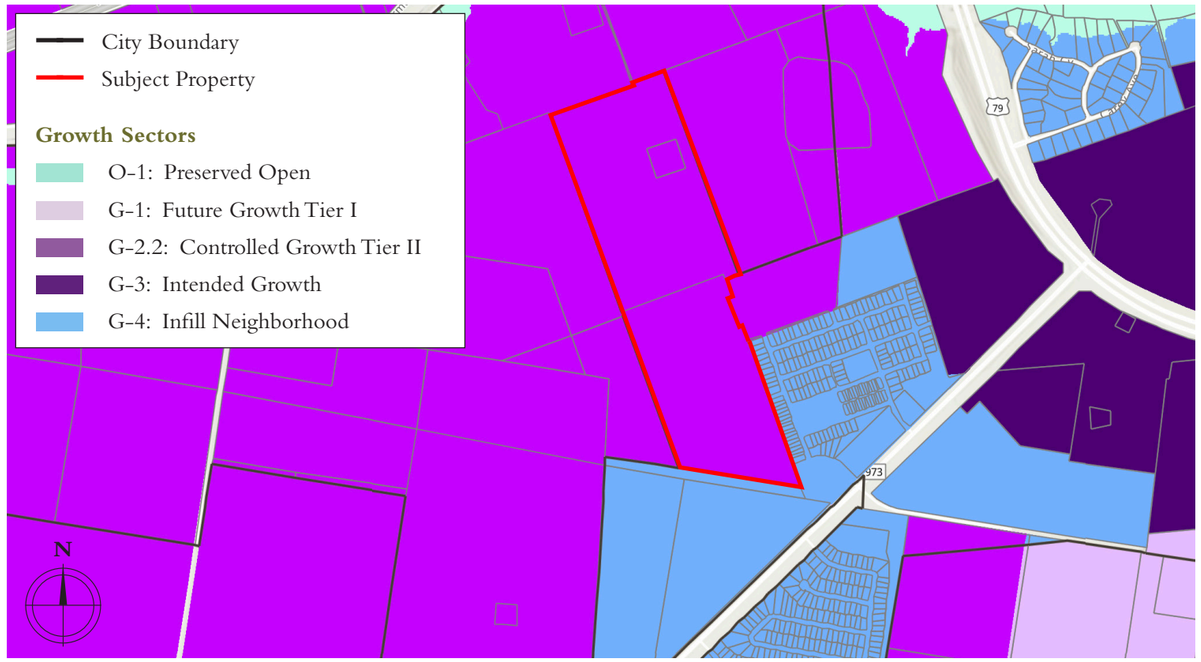
- Regional Road
- Community Boulevard
- Neighborhood Avenue
- Trail

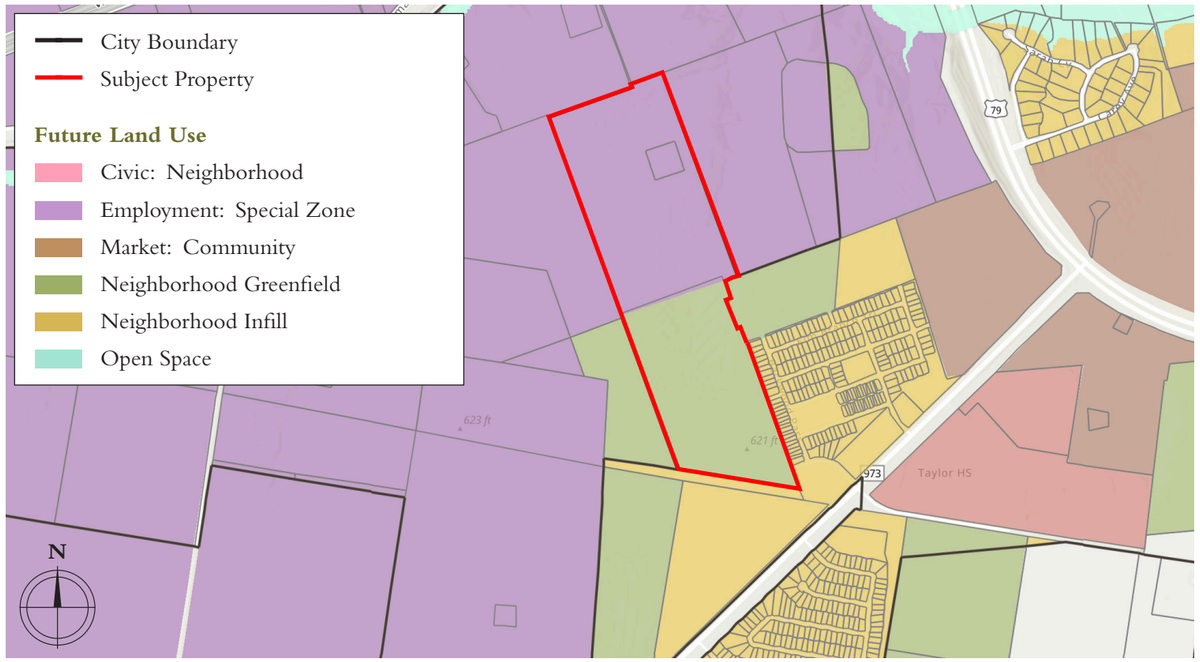
0 mi ⅛ mi ¼ mi ½ mi

N

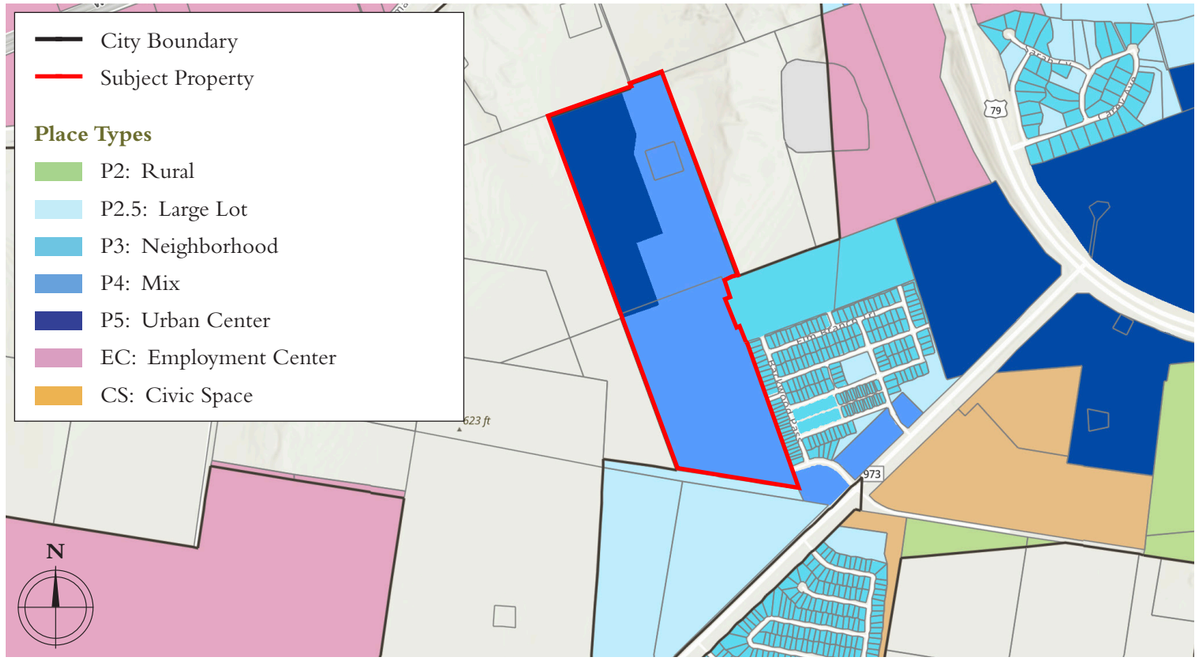
The design is subject to change. Not for construction.

COMPREHENSIVE PLAN EXCERPTS

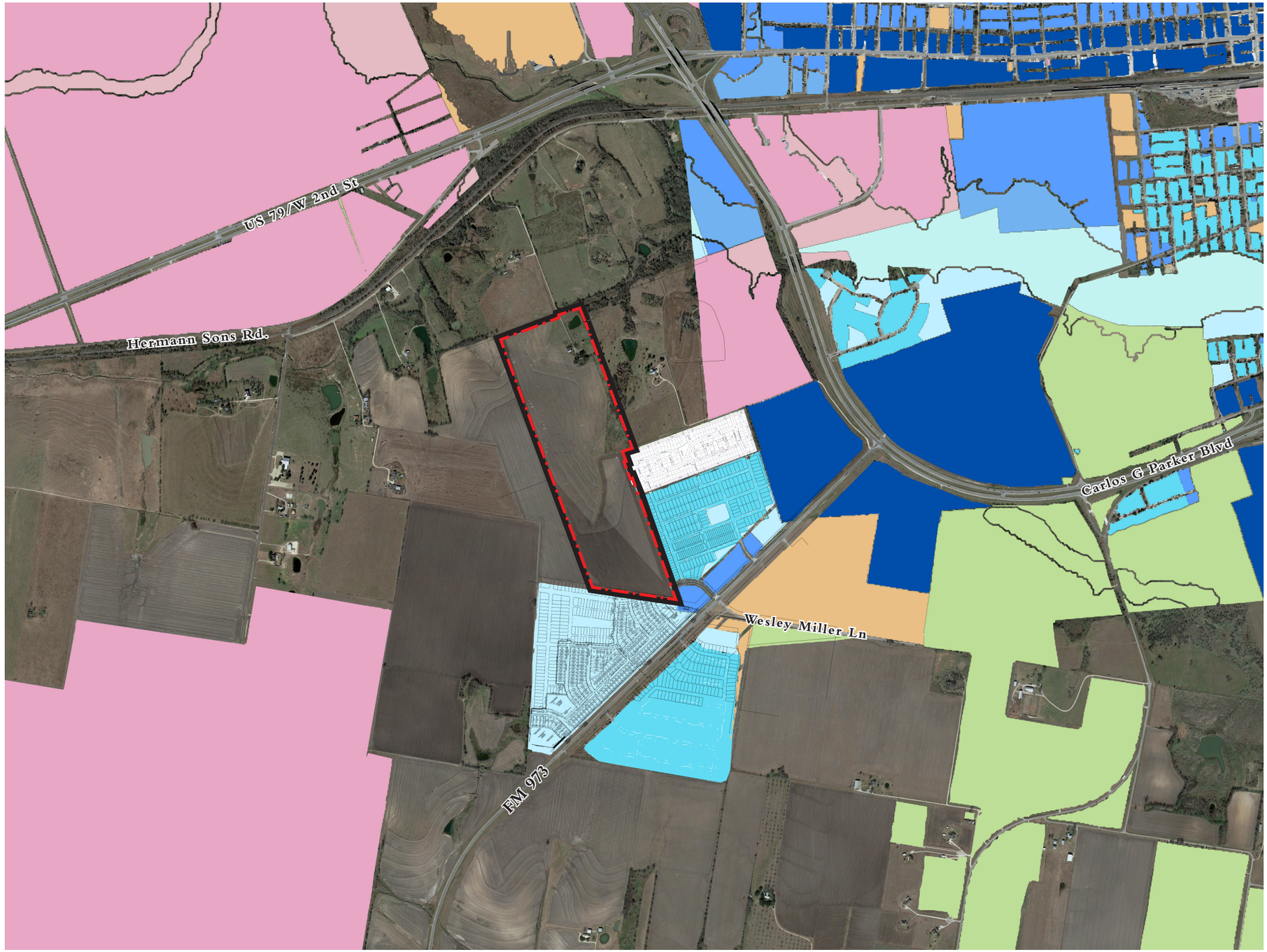








PLACE TYPES IN CONTEXT

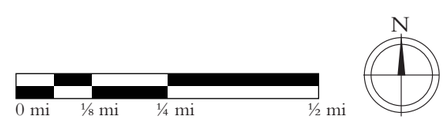


Key

- Subject Property
- Pedestrian Shed

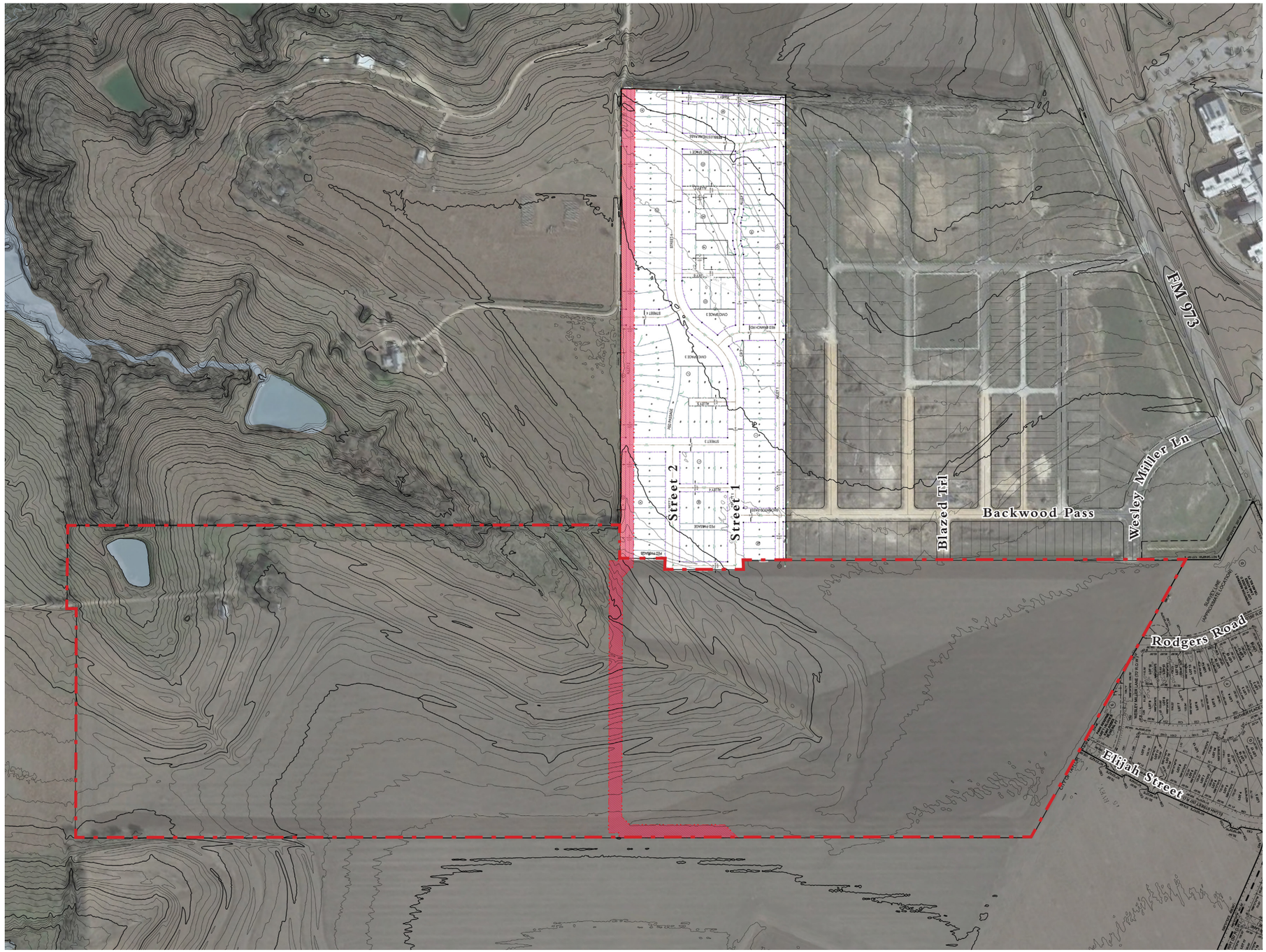
Place Type	Permitted for a TND	Target for Subject Property
P1	5%	5.0 ac. (5%)
P3	10-30%	10-30 ac. (10-30%)
P4	40-60%	40-60 ac. (40-60%)
P5	10-30%	10-30 ac. (10-30%)
CS	10%	10 ac. (10%)
Total	100%	100 ac. (100.0%)

The areas and percentages shown are approximate and do not include TxDOT ROW, Front Type Thoroughfare ROW, areas within the ETJ, or other properties that have not been subdivided. The effective Pedestrian Shed is intended to include areas reasonably walkable (approximately 5 minute walking distance) from the Site based on existing conditions. Its shape does not conform precisely to a 1/4-mile-radius circle, but approaches an area of approximately 80 acres. Properties zoned as Planned Developments are counted towards the Place Types that most closely resemble the standards of the Planned Development. These assumptions are intended to create consistent calculations and useful comparisons between the areas and percentages.



The design is subject to change. Not for construction.

EXISTING CONDITIONS



Key

- Subject Property
- 5-foot Contours
- 1-foot Contours
- Wetlands
- Utility Easements

N

0 ft 200 ft 400 ft 800 ft

The design is subject to change. Not for construction.

ELEVATION ANALYSIS



Key

- Subject Property
- 1-foot Contours
- 5-foot Contours
- 615-620 ft.
- 610-615 ft.
- 605-610 ft.
- 600-605 ft.
- 595-600 ft.
- 590-595 ft.
- 585-590 ft.
- 580-585 ft.

0 ft 200 ft 400 ft 800 ft

N

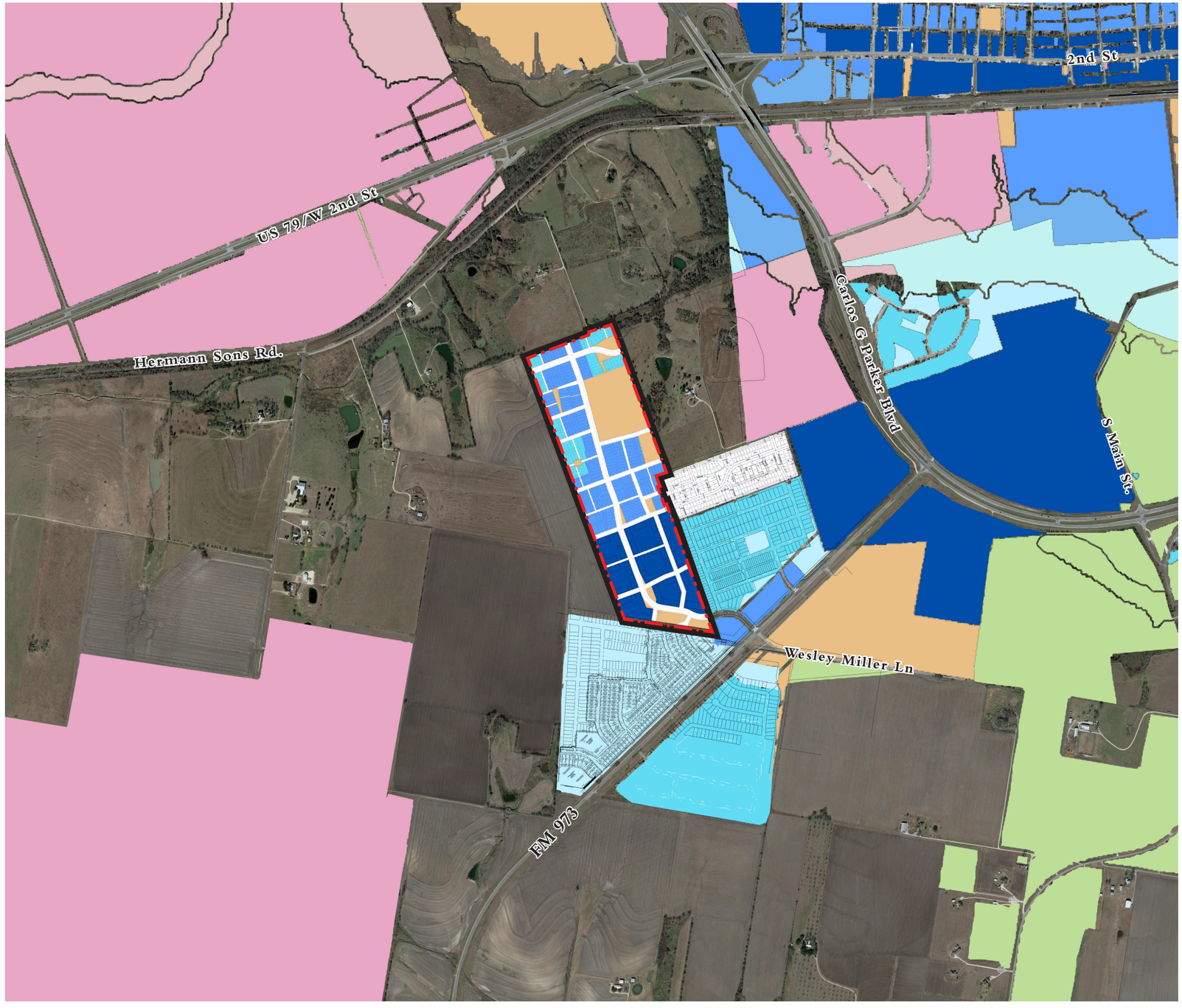
The design is subject to change. Not for construction.

B. Regulations

The Regulations chapter is a set of plans and standards which specifies the requirements of this Neighborhood Plan and demonstrates how the Neighborhood Plan complies with the Taylor Comprehensive Plan and Land Development Code. These Regulations include the general layout of Thoroughfares, Civic Spaces, Blocks, and Lots, as well as standards specifying any deviations from the LDC and additional requirements necessary for the development to comply with the Comprehensive Plan and the intent of the LDC. While these Regulations are informed by the specific development scenario described in the Supplemental Plans chapter, other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of these Regulations and all other applicable regulations.

Place Type Allocation Plan B.2
Regulating Plan B.3
Block Frontages and Dimensions B.4
Design-Specific Standards B.5
Transportation Master Plan Diagram B.7
Thoroughfare Types B.8
Thoroughfare Sections B.9
Civic Space Plan B.11

PLACE TYPE ALLOCATION PLAN



Key

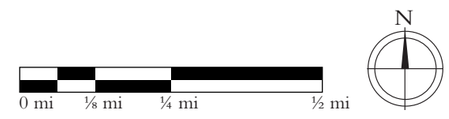
Subject Property

Pedestrian Shed

Place Type	Permitted for a TND	Target	Actual
P1	5%	5.0 ac. (5%)	0 ac. (0%)[4]
P3	10-30%	10-30 ac. (10-30%)	7.9 ac. (10.2%)
P4	40-60%	40-60 ac. (40-60%)	27.7 ac. (35.7%)[5]
P5	10-30%	10-30 ac. (10-30%)	23.0 ac. (29.6%)
CS	10%	10 ac. (10%)	19.1 ac. (24.6%)
Total	100%	100 ac. (100.0%)	

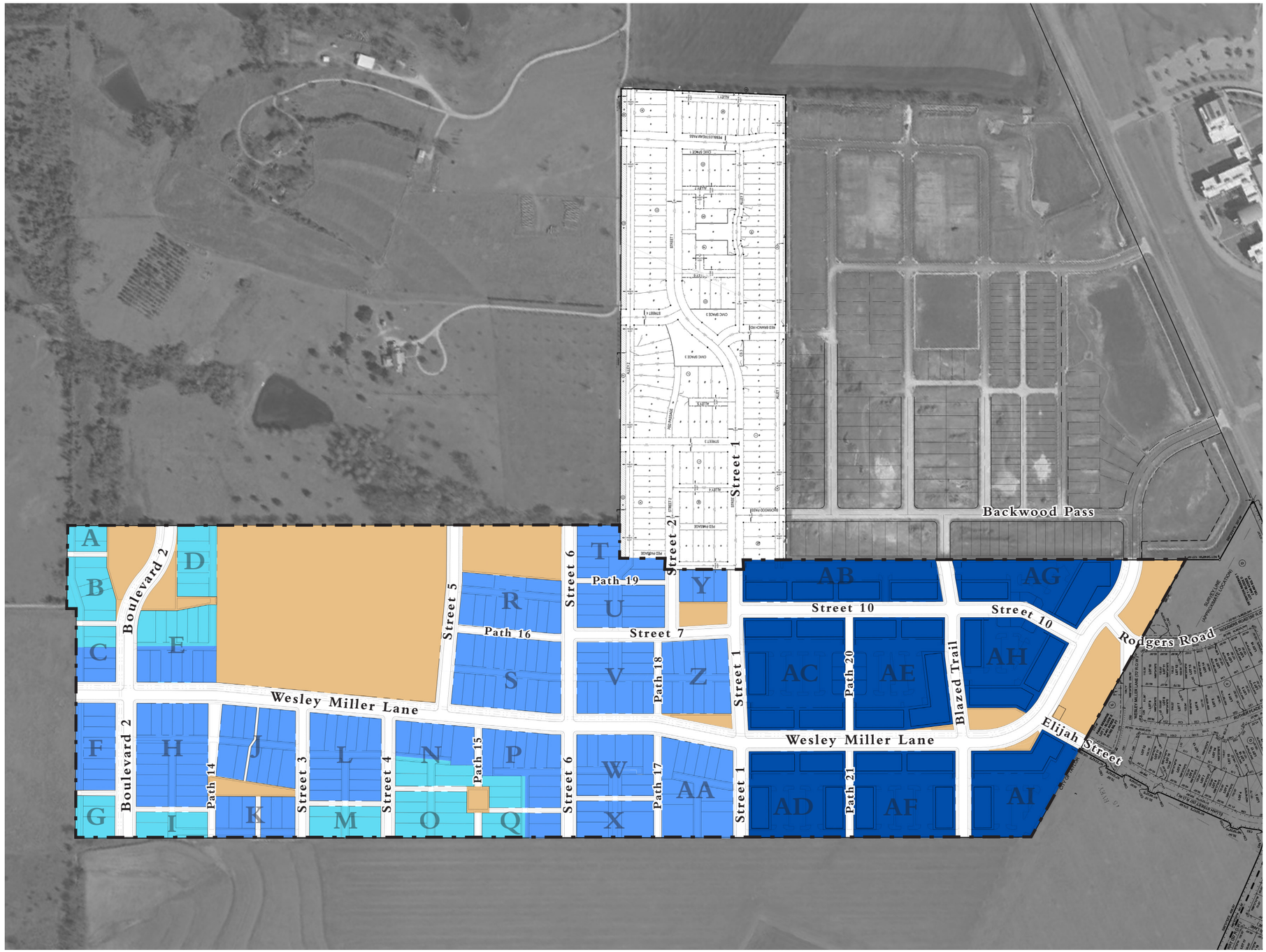
Notes

1. *The percentages listed are calculated with respect to the area of the Pedestrian Shed as shown on the accompanying plan. The Pedestrian Shed (as described in LDC § 3.6.1.7) delineates the area of the subject property and adjacent properties intended to constitute a complete TND (as described in LDC § 3.6.1.4). Areas and percentages listed are approximate.*
2. *The areas and percentages listed are calculated excluding the following: Front Type Thoroughfares, land within the ETJ or other land outside the Taylor city limits, and TxDOT RsOW.*
3. *For the total Civic Space allocation within the subject property, refer to the Civic Space Plan on page B.11.*
4. *See a recommended Warrant regarding the allocation of P1 in this Pedestrian Shed in the General Standards on page B.3.*
5. *See a recommended Warrant regarding the allocation of P4 in this Pedestrian Shed in the General Standards on page B.3.*



The design is subject to change. Not for construction.

REGULATING PLAN

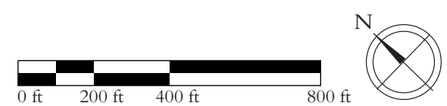


Key

- Subject Property
- P3
- P4
- P5
- CS

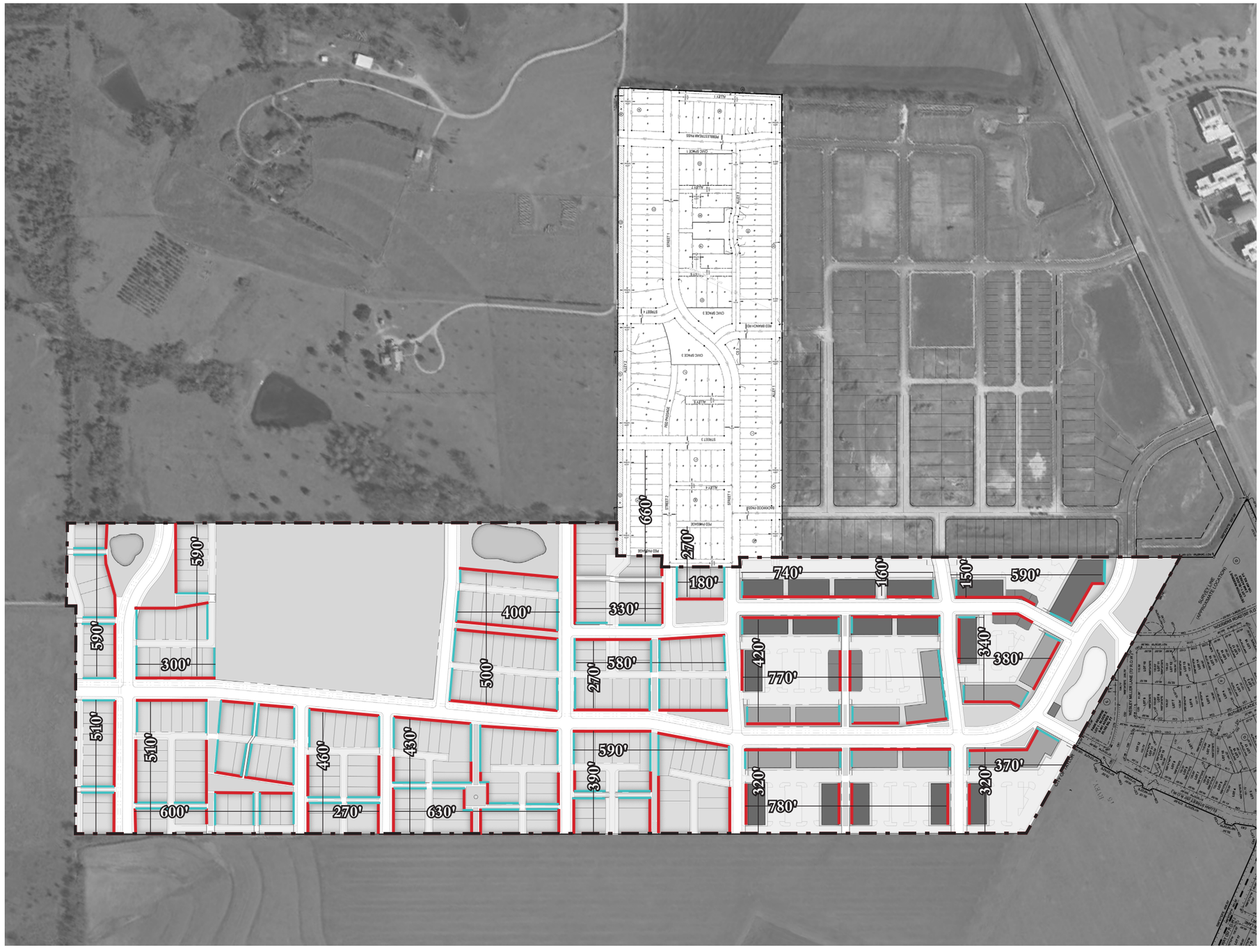
General Standards

1. *A Warrant is recommended to allow for a P1 (Nature) ratio of zero percent (0%) given that the subject property is neither adjacent to nor includes land which falls within the LDC's definition of Nature (lands in a natural state or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation. P1 is intended to preserve areas that contain sensitive habitats, active or passive open spaces, parks and limited agriculture uses. Nature includes floodplains, creeks tributaries and other waterways.).*
2. *A Warrant is recommended to allow for a lower ratio of P4 (Mix) given that the subject property dedicates a 12-acre site for a public school—a facility which will benefit the community at large. With the school site, the subject property generously exceeds the minimum requirements for civic space allocation percentages.*



The design is subject to change. Not for construction.

BLOCK FRONTAGES AND DIMENSIONS



Key

- Subject Property
- Primary Frontage
- Secondary Frontage
- Block Dimensions

Notes

1. *Block dimensions shown are non-binding and are intended to demonstrate compliance with City Standards for block length and perimeter. See the Design Specific Standards on page B.5 for a recommended Warrant for blocks which do not comply.*

N

0 ft 200 ft 400 ft 800 ft

The design is subject to change. Not for construction.



Design Specific Standards

1. A Variance is recommended to allow for Block length standards which conform to those prescribed in the previously approved Davis Tract – Phase 2 PD Standards. These Block length standards are as follows: *Blocks shall be a maximum of 600 feet in any direction. Blocks shall be bounded by vehicular Front Thoroughfares. A Block may be a maximum of 800 feet long if it is divided by a pedestrian Front Thoroughfare or Civic Space along that length.*
2. A warrant is recommended for Block AB to allow for a block length longer than 800', given that the already in place Block size exceeds this maximum and additional thoroughfare connections are impractical.
3. Wesley Miller Lane, Boulevard 2, Streets 1, 3, 4, 5, and Blazed Trail, Elijah Street, Rodgers Road, and Paths 14, 15, 17, and 21 are intended to connect to adjacent properties, with the exact location of the connection to be determined.
4. The multi-family parking lot in Block AB is intended to connect to the alley on the adjacent property, with the exact location of the connection to be determined.
5. It is recommended that a fountain or other civic monument be placed in the civic space on Path 15.
6. It is recommended that special pavers be used within the area outlined to reinforce the character of the central civic space. These special pavers should be flush (no curb) from building face to building face.
7. It is recommended that the school be sited in the middle of its property to allow for circulation without disrupting the neighboring lots. The siting of the school shall reinforce a civic presence within the neighborhood.
8. It is recommended that the civic space between Elijah Street and Rodgers Road be designed in such way that it creates one, unified, civic space with the already existing civic space in Castlewood South.
9. A warrant is recommended to allow for a 282-foot minimum horizontal inside radius on Community Boulevards to allow for walkable streets with commercial frontage, where pedestrian activity is the highest.

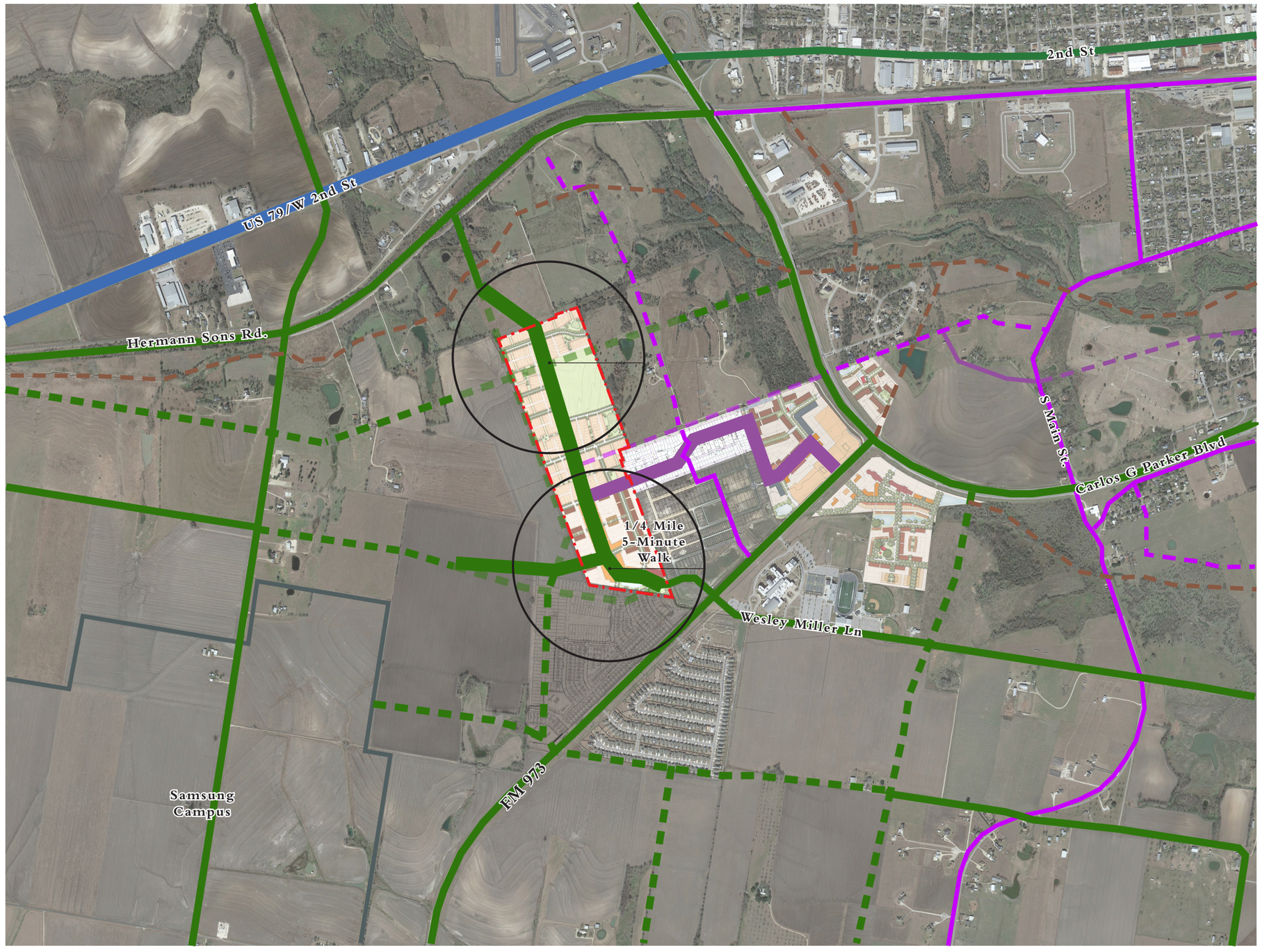
The design is subject to change. Not for construction.



10. In some places, the utility easement is in the side yards of single-family detached lots. These lots are an extra 25 feet in width to accommodate the standard buildable area of a typical single family lot. The portion of the side yard within the easement shall follow all restrictions and regulations prescribed by the easement document(s).
11. The layout of the school grounds should include a landscape screen in the location shown.
12. A warrant is recommended for parking to be placed in the second layer of lots labeled "Thin Buildings," provided this parking is located within the building.
13. A variance is recommended to allow for parking to be placed in the locations shown if walls or hedges of a height sufficient to visually screen the parking from a frontage are provided.
14. A warrant is recommended to allow for the intersections of local streets to be offset as a traffic-calming measure.
15. Stormwater management facilities, whether primarily wet or dry, shall be designed such that they add value to the neighborhood, rather than detract from it.
    a. Dry facilities shall be landscaped to act as an open lawn or space for other unstructured recreation when dry, and shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.
    b. Wet facilities shall be designed to look like natural ponds with gently sloping edges rather than steep "engineered" banks. Wet ponds shall be landscaped around the perimeter with a variety of plantings including, at a minimum, canopy trees which provide shade for users.
    c. Maintenance berms and/or maintenance access shall be accounted for in both wet and dry facilities.

The design is subject to change. Not for construction.

TRANSPORTATION MASTER PLAN DIAGRAM



Key

- Subject Property
- Existing Thoroughfare
- Proposed Thoroughfare
- Previously Proposed Thoroughfare

Thoroughfare Designations

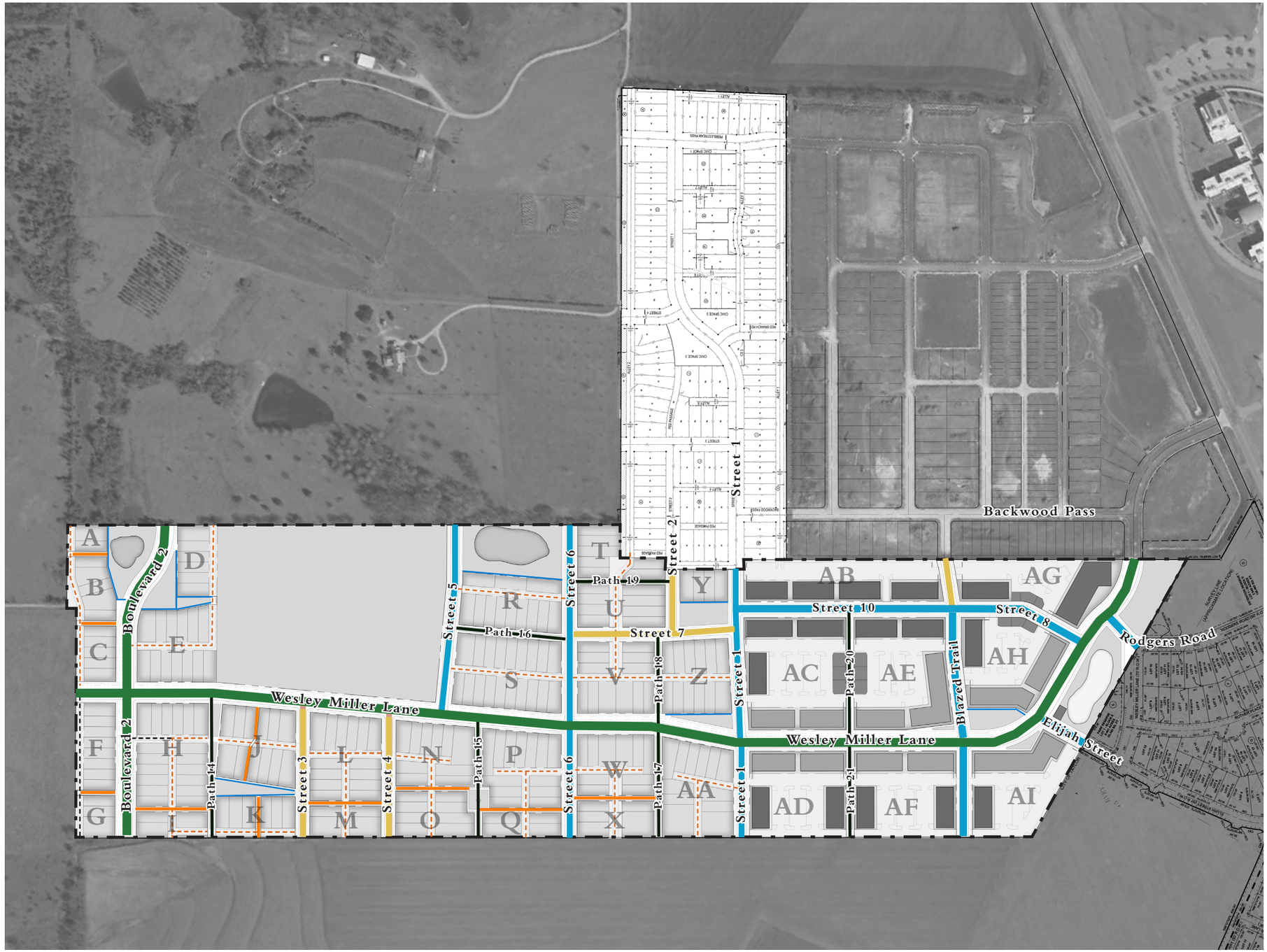
- Regional Road
- Community Boulevard
- Neighborhood Avenue
- Trail

0 mi ⅛ mi ¼ mi ½ mi

N

The design is subject to change. Not for construction.

THOROUGHFARE TYPES



Key

Subject Property

Front Thoroughfare Types

Name	Type	ROW	Pavement
Boulevard	BV	80	36
Street	ST	60	34
Street	ST	54	28
Path	PT	30	6 & 6
Path	PT	V	6

Rear Thoroughfare Types

Name	Type	ROW	Pavement
Fire Alley	FA	26	26
Rear Alley	RA	30	12

Civic Space Thoroughfare Types

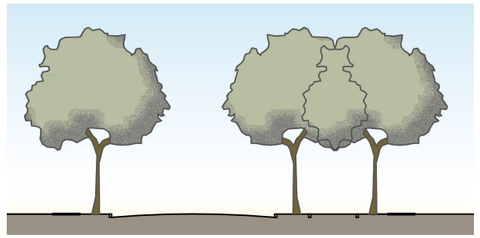
Sidewalk in Civic Space (See Civic Space Standards)

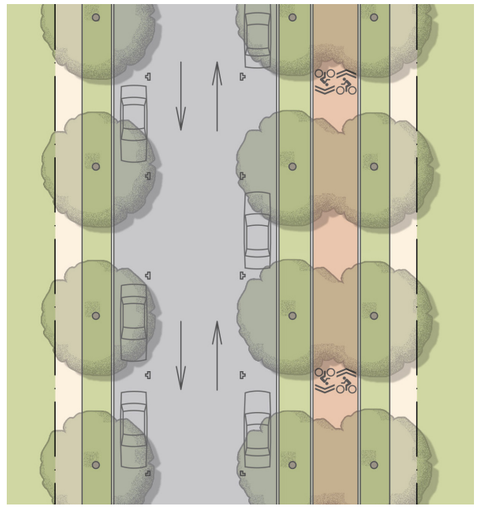
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0 ft 200 ft 400 ft 800 ft

The design is subject to change. Not for construction.

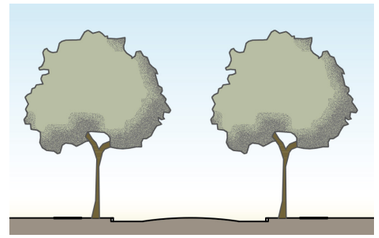
THOROUGHFARE SECTIONS

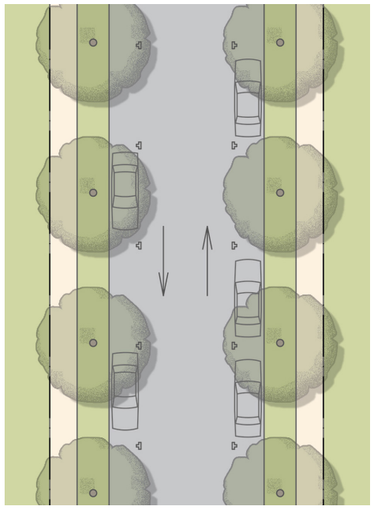




BV-80-36

Neighborhood Boulevard
80 ft. ROW
36 ft. Pavement
Slow Movement
Two-Way Traffic
Parking Both Sides
12 ft. Curb Radius
Header Curbs
8 ft. Tree Lawn
Allee, 25-30 ft. o.c.
6 ft. Sidewalk; 10 ft. Shared-use Path
20-foot clear width

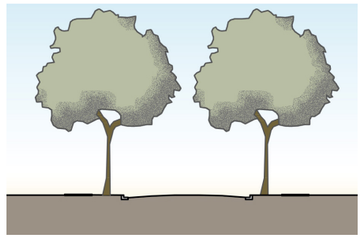


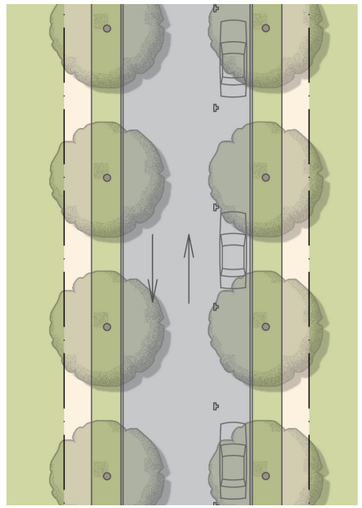


ST-60-34

Neighborhood Street
60 ft. ROW
34 ft. Pavement
Slow Movement
Two-Way Traffic
Parking Both Sides
12 ft. Curb Radius
Header Curbs
7 ft. Tree Lawn
Allee[i], 25-30 ft. o.c.
6 ft. Sidewalk
For buildings up to 30 ft. tall

[i](Cluster pattern permitted adjacent to civic spaces.)



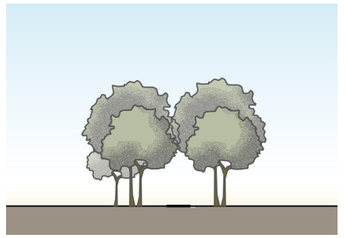


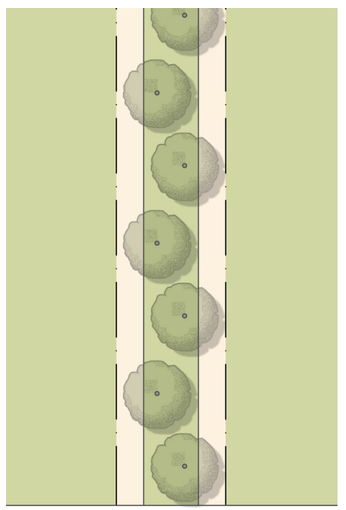
ST-54-28

Neighborhood Street
54 ft. ROW
28 ft. Pavement
Slow Movement
Two-Way Traffic
Parking One Side
12 ft. Curb Radius
Header Curbs
7 ft. Tree Lawn
Allee[i], 25-30 ft. o.c.
6 ft. Sidewalk
20-foot clear width

[i](Cluster pattern permitted adjacent to civic spaces.)

This Thoroughfare type may be converted to a Yield Street with parking on both sides.

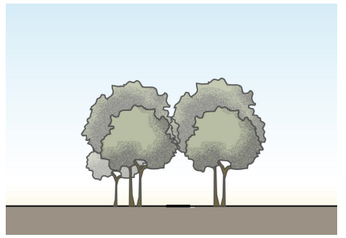


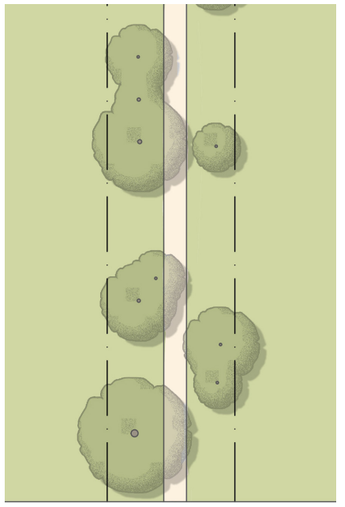


PT-30-6&6

Path
30 ft. ROW Minimum
N/A
Pedestrian
N/A
N/A
N/A
N/A
Planting zone varies
Trees, ground cover, shrubs, lawn
6 ft. Sidewalk
Not provided on this Thoroughfare

This Thoroughfare type will be privately owned and maintained.





PT-V-6

Path
30' ROW
N/A
Pedestrian
N/A
N/A
N/A
N/A
Planting zone varies
Trees, ground cover, shrubs, lawn
6 ft. Sidewalk
Not provided on this Thoroughfare

This Thoroughfare type will be privately owned and maintained.

Thoroughfare Type
- ST Street
- PS Pedestrian Street
- FA Fire Alley

Right-of-Way Width

Pavement Width

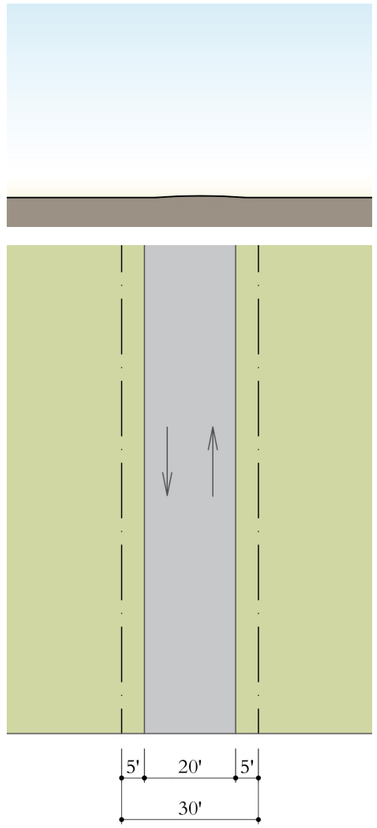
XX-##-##

Thoroughfare Type
Right-of-Way or Easement Width
Pavement Width
Movement
Traffic Lanes
Parking Lanes
Pavement / Curb
Curb Type
Planter Type (includes curb if any)
Landscape Type
Walkway Type
Fire Apparatus Access

Notes

The design is subject to change. Not for construction.

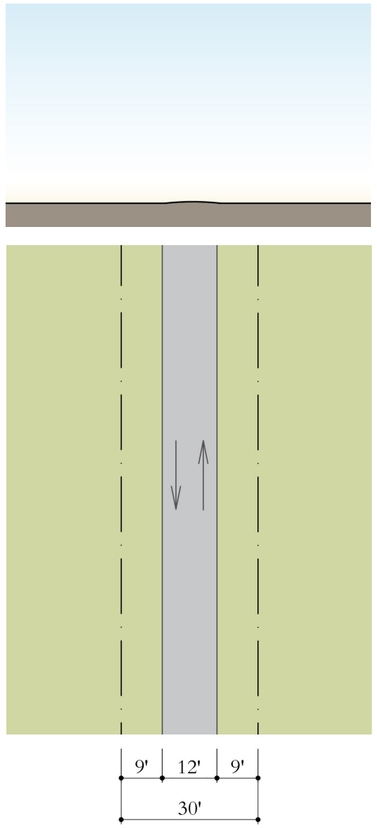
THOROUGHFARE SECTIONS



FA-30-20

Fire Alley
30 ft. ROW
20 ft.
Slow Movement
Two-Way Traffic, Fire Access
No Parking
15 ft. Curb Radius; Apron at Street
Inverted Crown and/or Ribbon Curb
N/A
N/A
No Sidewalk
20-foot clear width

This Thoroughfare type will be privately owned and maintained. Pavement may be widened for greater clear width.



RA-30-12

Rear Alley
30 ROW ft.
12 ft.
Slow Movement
Two-Way Traffic, Fire Access
No Parking
15 ft. Curb Radius; Apron at Street
Inverted Crown and/or Ribbon Curb
N/A
N/A
No Sidewalk
Not provided on this Thoroughfare

This Thoroughfare type will be privately owned and maintained. Pavement may be widened for greater clear width.

Thoroughfare Type
- ST Street
- PS Pedestrian Street
- FA Fire Alley

Right-of-Way Width

Pavement Width

XX-##-##

Thoroughfare Type
Right-of-Way or Easement Width
Pavement Width
Movement
Traffic Lanes
Parking Lanes
Pavement / Curb
Curb Type
Planter Type (includes curb if any)
Landscape Type
Walkway Type
Fire Apparatus Access
Notes

The design is subject to change. Not for construction.

CIVIC SPACE PLAN



Key

- Subject Property
- All lots are within 660 feet of a Civic Space.
- Square
- Green
- Park
- School Site

Civic Space Allocation

19.1 ac.	Civic Space in Subject Property
99.9 ac.	Total Area of Subject Property
19.9%	**Civic Space Ratio**

The design is subject to change. Not for construction.

C. Supplemental Plans

The Supplemental Plans chapter is a set of additional plans that elaborates on the specific development scenario used as the basis for this Neighborhood Plan. This information includes the Building Types, uses, and parking incorporated into the design, how that design proposes to address matters such as fire apparatus access, and particular features of the design that contribute to the intended character of the development. The information presented in this chapter reflects one possible development scenario for this Neighborhood Plan. Other scenarios and refinements to the design are anticipated and shall be permitted within the bounds of the requirements in the Regulations chapter and all other applicable regulations.

Illustrative Master Plan in Context C.2
Illustrative Master Plan with Program Summary C.3
Fire Apparatus Access C.4
Addressing Diagram C.5
Program Acreage C.6
Detailed Parking and Program C.7

ILLUSTRATIVE MASTER PLAN IN CONTEXT



Key

Subject Property

0 mi ⅛ mi ¼ mi ½ mi

N

The design is subject to change. Not for construction.

ILLUSTRATIVE MASTER PLAN WITH PROGRAM SUMMARY



Key

Subject Property

Residential

Single-Family Detached	235 Units
Subtotal Single-Family	**235 Units**
Large Multi-Family (16 Buildings)	384 Units
Thin Buildings	12 Units
Subtotal Multi-Family	**396 Units**
Total Residential	**631 Units**

Non-Residential

Commercial	151,000 SF
Hotel	100 Keys

0 ft 200 ft 400 ft 800 ft

N

The design is subject to change. Not for construction.

FIRE APPARATUS ACCESS



Key

- Subject Property
- 26-foot Fire Apparatus Access Roads
- 20-foot Fire Apparatus Access Roads
- Temporary 20-foot Fire Apparatus Access Roads
- Buildings over 30 feet
- Lots with building under 30 feet

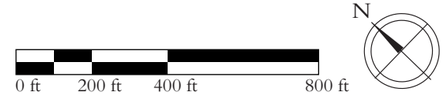
Fire Apparatus Access Notes

1. Applicant's understanding of the relevant standards from these fire apparatus access notes to be confirmed by the City of Taylor.
2. Buildings 30 feet tall or greater:
   - Fire Apparatus Access Roads shall be 26 feet clear minimum.
   - Fire Apparatus Access Roads shall be between 15 and 30 feet from the building.
   - Fire Apparatus Access Roads shall provide access to one complete side of the building, as determined by the Fire Official.
3. For buildings less than 30 feet tall:
   - Fire Apparatus Access Roads shall be 20 feet clear minimum
4. All Fire Apparatus Access Roads shall have an effective inside turning radius of 15 feet.
5. All Fire Apparatus Access Roads shall be a maximum distance of 150 feet from all portions of any building.
6. Where a fire hydrant is located on a Fire Apparatus Access Road, the minimum road width shall be 26 feet (7925 mm), exclusive of all shoulders (*see graphic*).



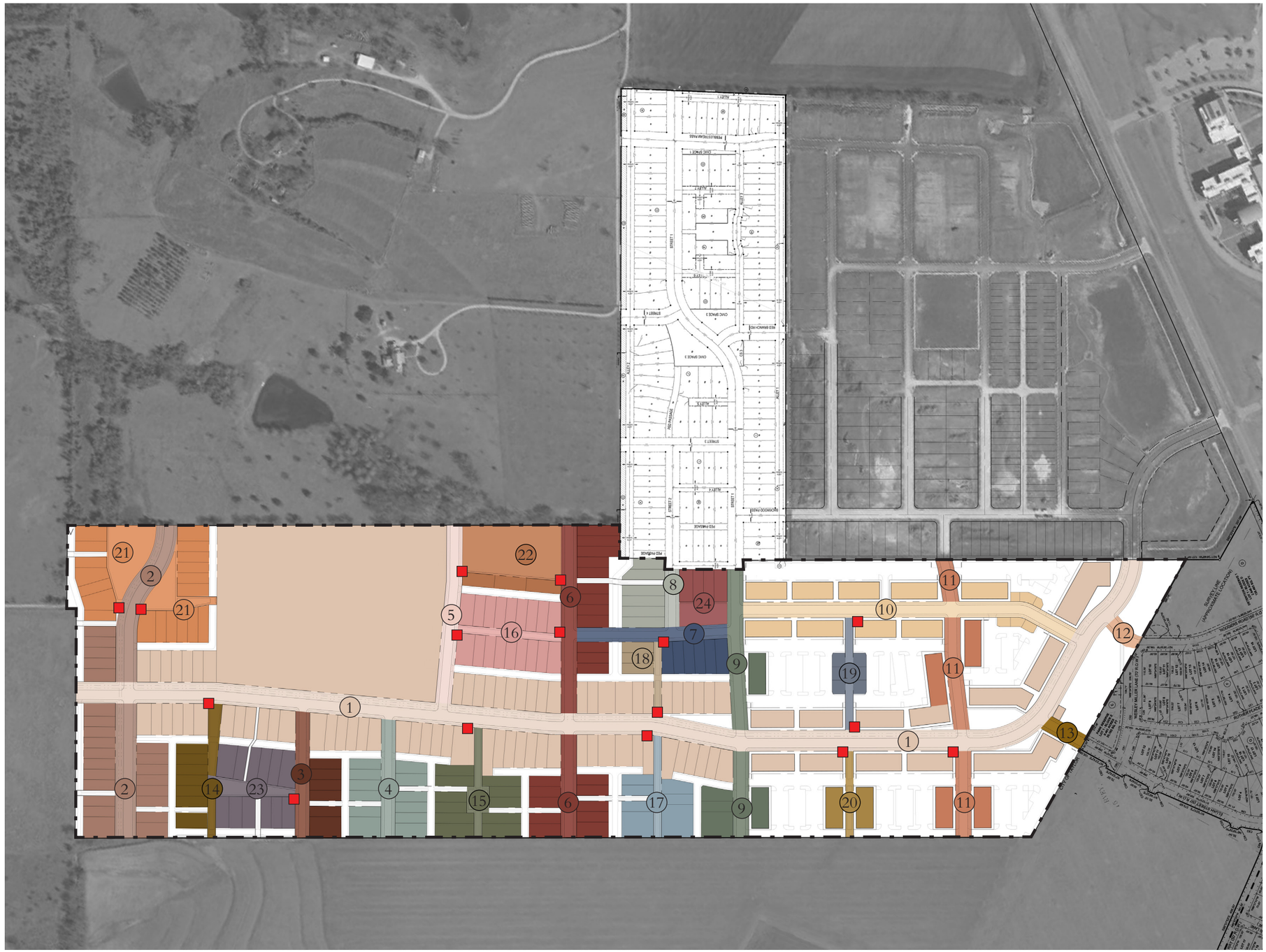
MINIMUM CLEARANCE AROUND A FIRE HYDRANT

7. In places where Fire Apparatus Access Roads dead end at the boundary of the subject property, it is recommended that temporary fire access be provided on a small number of private lots until a permanent Fire Apparatus Access is completed on adjacent properties.



The design is subject to change. Not for construction.

ADDRESSING DIAGRAM



Thoroughfare Names & Key

- Subject Property
- 1 Wesley Miller Lane
- 2 _____ Boulevard
- 3 _____ Street
- 4 _____ Street
- 5 _____ Street
- 6 _____ Street
- 7 _____ Street
- 8 Street 2 (Name to be coordinated with Phase 1)
- 9 Street 1 (Name to be coordinated with Phase 1)
- 10 _____ Street
- 11 Blazed Trail
- 12 Rodgers Road
- 13 Elijah Street
- 14 _____ Path
- 15 _____ Path
- 16 _____ Path
- 17 _____ Path
- 18 _____ Path
- 19 _____ Path
- 20 _____ Path
- 21 _____ Park
- 22 _____ Park
- 23 _____ Park
- 24 _____ Park
- Sign with unit numbers

Notes

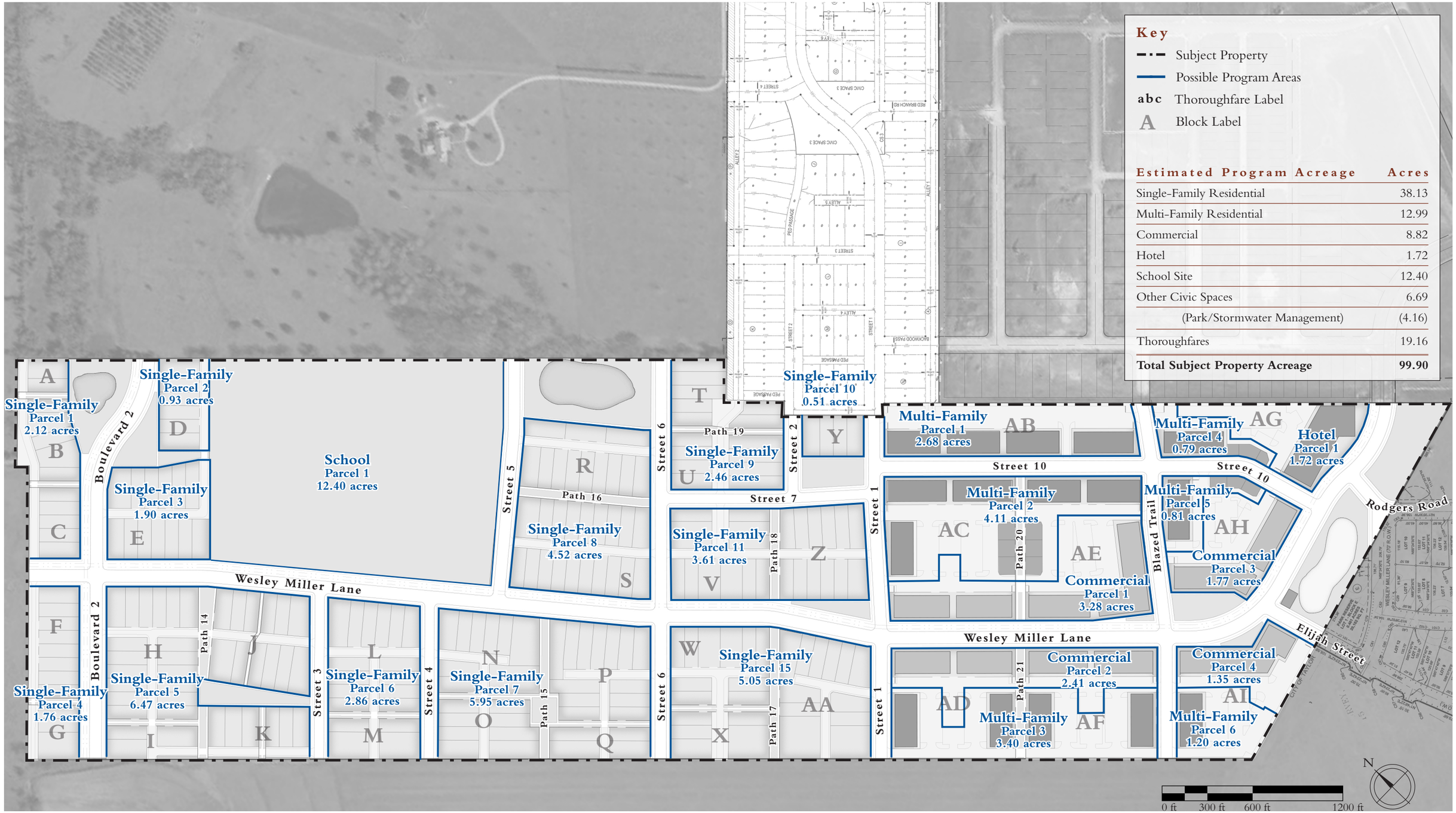
1. *This addressing plan is conceptual and is subject to refinements in future phases.*

N

0 ft 200 ft 400 ft 800 ft

The design is subject to change. Not for construction.

PROGRAM ACREAGE



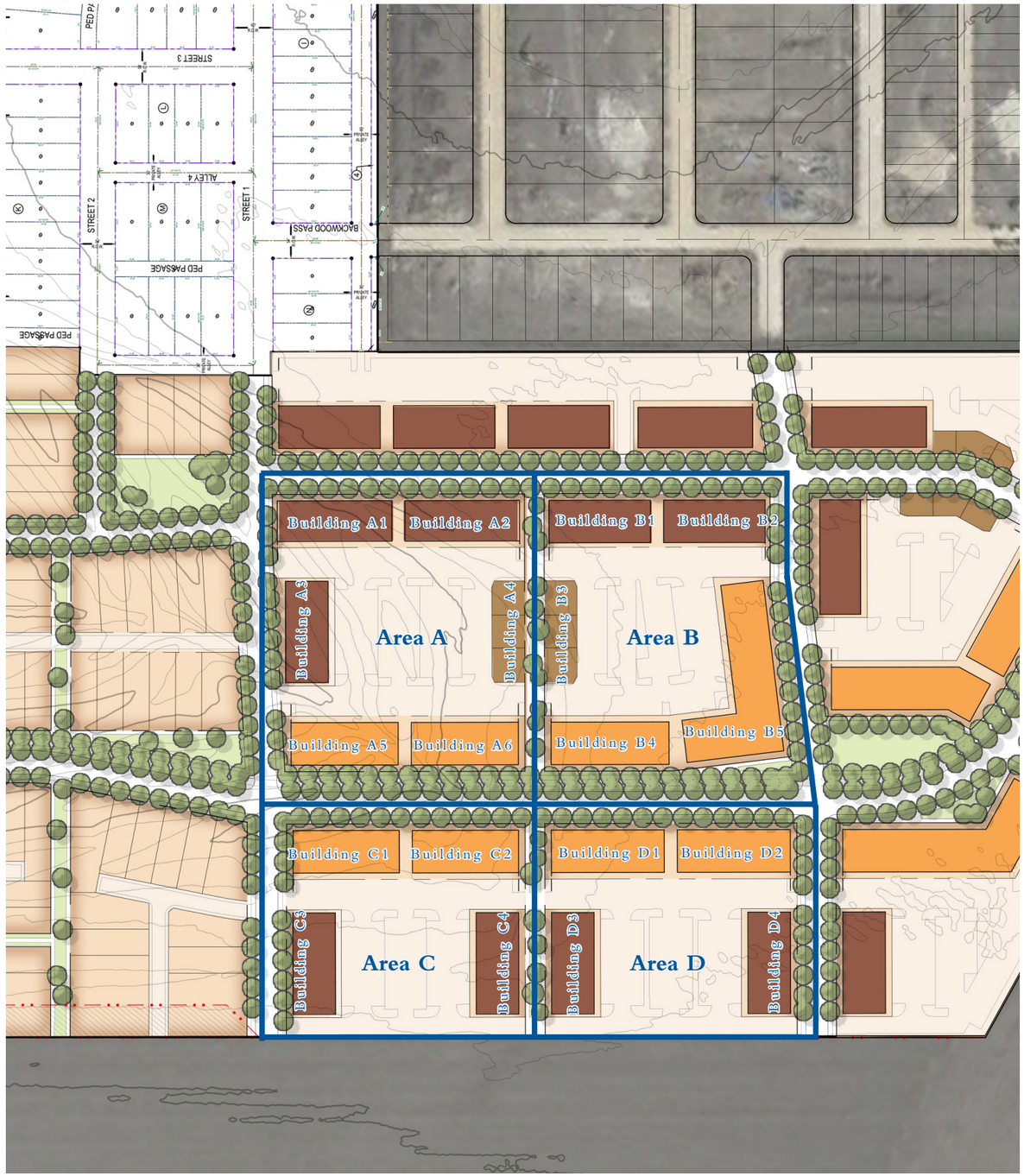
Key

- Subject Property
- Possible Program Areas
- abc Thoroughfare Label
- A Block Label

Estimated Program Acreage	Acres
Single-Family Residential	38.13
Multi-Family Residential	12.99
Commercial	8.82
Hotel	1.72
School Site	12.40
Other Civic Spaces	6.69
(Park/Stormwater Management)	(4.16)
Thoroughfares	19.16
Total Subject Property Acreage	**99.90**

The design is subject to change. Not for construction.

DETAILED PARKING AND PROGRAM



Assumed Parking Ratios		Spaces
Thin Buildings	per unit	1.5
Multi-Family Residential	per unit	1.5
Retail/Restaurant	per 1,000 SF	3.3
Hotel	per key	1

Area A

Large Multi-Family	Program	Spaces
Building A1	24 units	36
Building A2	24 units	36
Building A3	24 units	36
Commercial	Program	Spaces
Building A5	10,600 SF	35
Building A6	10,600 SF	35
Thin Buildings	Program	Spaces
Building A4	3 units	6
Total Requested		**184**
Parking Provided		Spaces
Provided on Street		43
Provided in Parking Lots		165
Provided in Garages		6
Total Provided		**214**
Difference		**+30**

Area B

Large Multi-Family	Program	Spaces
Building B1	24 units	36
Building B2	24 units	36
Commercial	Program	Spaces
Building B4	11,500 SF	38
Building B5	22,500 SF	75
Thin Buildings	Program	Spaces
Building B3	3 units	6
Total Requested		**191**
Parking Provided		Spaces
Provided on Street		48
Provided in Parking Lots		129
Provided in Garages		6
Total Provided		**183**
Difference		**-8**

Area C

Large Multi-Family	Program	Spaces
Building C3	24 units	36
Building C4	24 units	36
Commercial	Program	Spaces
Building C1	10,500 SF	34.5
Building C2	10,500 SF	34.5
Total Requested		**141**
Parking Provided		Spaces
Provided on Street		25
Provided in Parking Lots		113
Total Provided		**138**
Difference		**-3**

Area D

Large Multi-Family	Program	Spaces
Building D3	24 units	36
Building D4	24 units	36
Commercial	Program	Spaces
Building D1	11,200 SF	37
Building D2	11,200 SF	37
Total Requested		**146**
Parking Provided		Spaces
Provided on Street		24
Provided in Parking Lots		116
Total Provided		**140**
Difference		**-6**

Parking counts provided are approximate and assume 10' x 20' spaces with 24' drive aisles. Further refinement will be needed to account for accessible parking, EV parking, dumpster location, etc.

DETAILED PARKING AND PROGRAM



Assumed Parking Ratios		Spaces
Thin Buildings	per unit	1.5
Multi-Family Residential	per unit	1.75
Retail/Restaurant	per 1,000 SF	3.3
Hotel	per key	1

Area E

Large Multi-Family	Program	Spaces
Building E1	24 units	36
Building E2	24 units	36
Building E3	24 units	36
Building E4	24 units	36
Total Requested		**144**
Parking Provided		Spaces
Provided on Street		39
Provided in Parking Lots		124
Total Provided		**163**
Difference		**+19**

Area F

Large Multi-Family	Program	Spaces
Building F1	24 units	36
Hotel	Program	Spaces
Building F3	100 keys	100
Thin Buildings	Program	Spaces
Building F2	3 units	6
Total Requested		**142**
Parking Provided		Spaces
Provided on Street		32
Provided in Parking Lots		93
Provided in Garages		6
Total Provided		**131**
Difference		**-11**

Area G

Large Multi-Family	Program	Spaces
Building G1	24 units	36
Commercial	Program	Spaces
Building G3	15,000 SF	49.5
Building G4	13,300 SF	43.5
Thin Buildings	Program	Spaces
Building G2	3 unit	6
Total Requested		**135**
Parking Provided		Spaces
Provided on Street		48
Provided in Parking Lots		97
Provided in Garages		6
Total Provided		**151**
Difference		**+16**

Area H

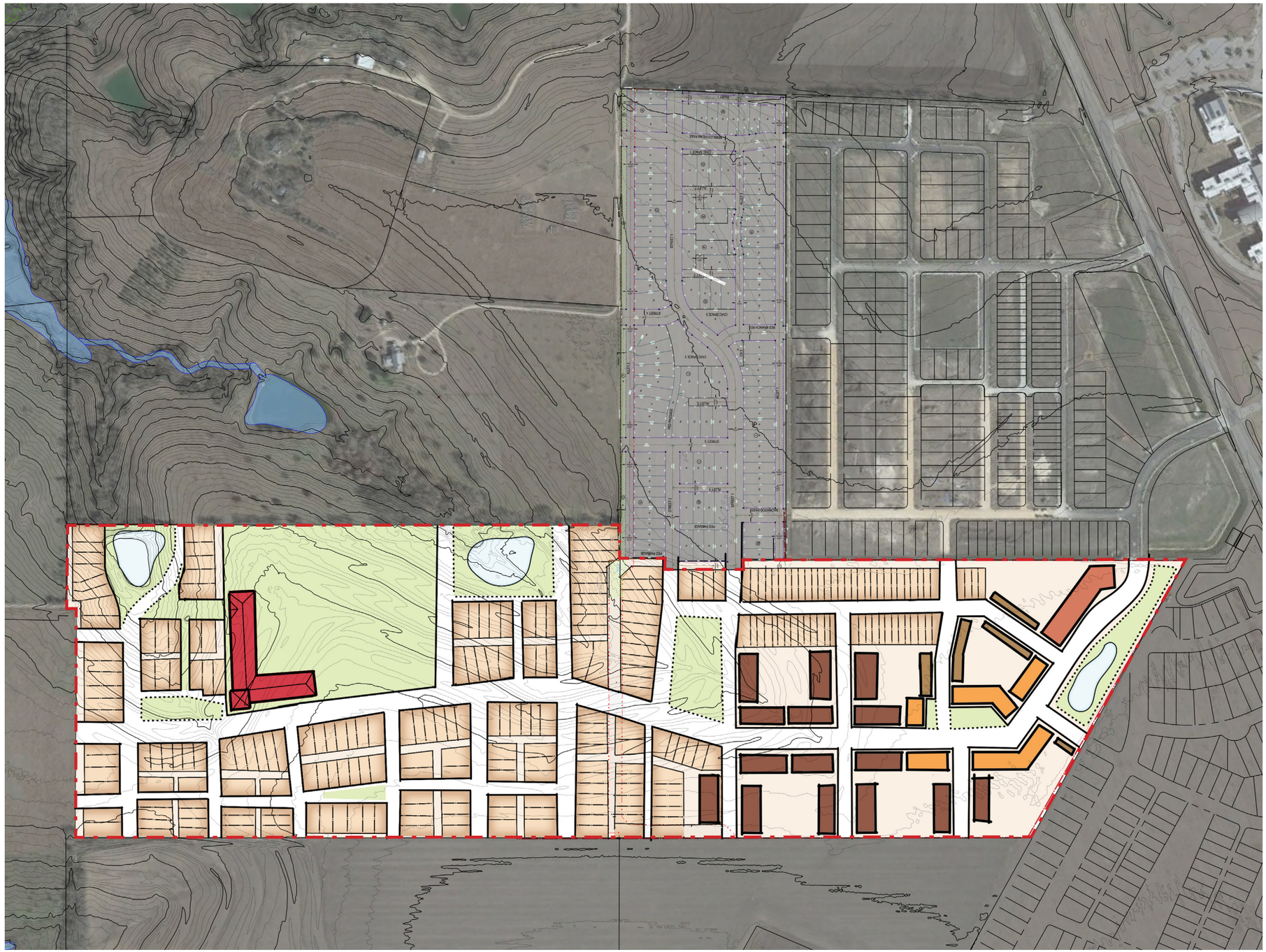
Large Multi-Family	Program	Spaces
Building 8a	24 units	36
Commercial	Program	Spaces
Building 8b	24,000 SF	79
Total Requested		**115**
Parking Provided		Spaces
Provided on Street		23
Provided in Parking Lots		121
Total Provided		**144**
Difference		**+29**

Parking counts provided are approximate and assume 10' x 20' spaces with 24' drive aisles. Further refinement will be needed to account for accessible parking, EV parking, dumpster location, etc.

X. Appendix

The Appendix chapter provides additional information for reference that is not directly related to the content of the Neighborhood and Employment Center Plans. This primarily includes description of the design process that resulted in this document.

Charrette Plan Iterations X.2



Key

Subject Property

Residential

Single-Family Detached	229 Units
Townhouses	20 Units
Thin Buildings	25 Units
Large Multi-Family Buildings	360 Units
Total Residential	**639 Units**

Commercial

Retail	63,000 SF
Hotel	100 Rooms

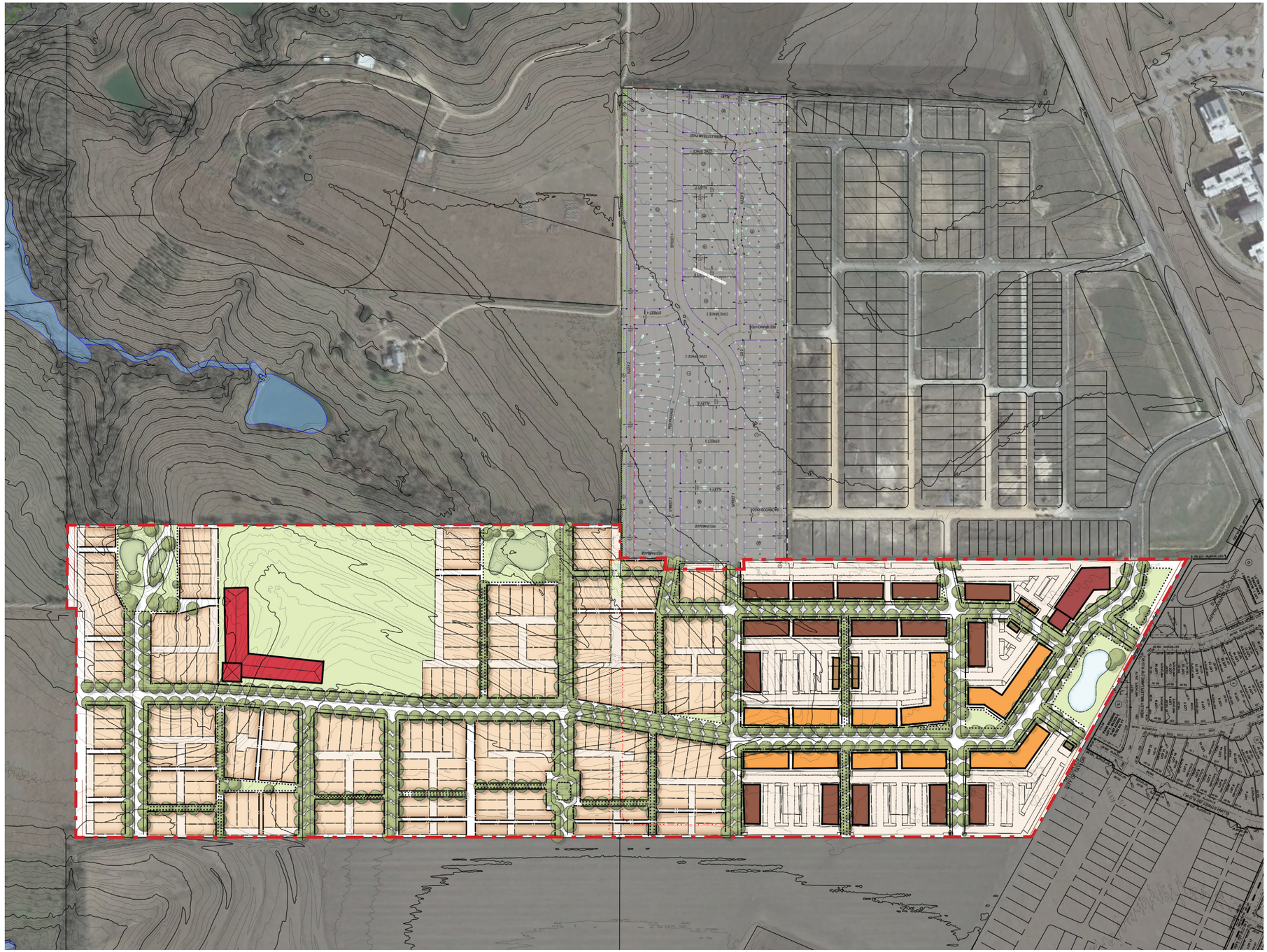
Civic

School Site	12.2 acres
Civic Spaces	8.1 acres
Total Civic	**20.3 acres (20.3%)**

N

0 ft 200 ft 400 ft 800 ft

CHARRETTE PLAN - FRIDAY, AUGUST 2



Key

Subject Property

Residential

Single-Family Detached	237 Units
Thin Buildings	10 Units
Large Multi-Family Buildings	360 Units
Total Residential	**639 Units**

Commercial

Retail	149,000 SF
Hotel	100 Rooms

Civic

School Site	11.9 acres
Civic Spaces	5.9 acres
Total Civic	**17.8 acres (17.8%)**

N

0 ft 200 ft 400 ft 800 ft