

CONTACT INFORMATION:

OWNER/DEVELOPER: CCI Pflugerville I, LP
500 N Capital Of TX Hwy Bldg 1, Suite 200
Austin, TX 78746

Realtron, Inc.
13276 Research Blvd., Suite 105
Austin, TX 78750

ENGINEER: WINKELMANN & ASSOCIATES, INC.
WILLIAM WINKELMANN, P.E.
6750 HILLCREST PLAZA DRIVE
SUITE 325
DALLAS, TEXAS 75230
(972) 490-7090

GAS SERVICE:
ATMOS GAS
JACKIE YU
PROJECT MANAGER
3110 N. I-35
ROUND ROCK, TEXAS 78681
(512) 310-3801

SURVEYOR: WINKELMANN & ASSOCIATES, INC.
LEONARD J. LUEKER, R.P.L.S.
6750 HILLCREST PLAZA DRIVE
SUITE 325
DALLAS, TEXAS 75230
(972) 490-7090 ext. 211

TELEPHONE SERVICE:
AT&T CONSTRUCTION & ENGINEERING SW
ENGINEERING DESIGN - AUSTIN NORTH
UNIT
DAVID WILLIAMS
712 E HUNTLAND DR. ROOM 229
AUSTIN, TEXAS 78752
(512) 870-4760

CITY: CITY OF PFLUGERVILLE
P O BOX 589
PFLUGERVILLE, TX 78691-0589

ELECTRIC SERVICE:
ONCOR
JUSTIN JACKS
350 TEXAS AVE.
ROUND ROCK, TX 78664
JUSTIN.JACK@ONCOR.COM

CITY OF PFLUGERVILLE - DEVELOPMENT SERVICES CENTER
(PLANNING, ENGINEERING, & BUILDING DEPARTMENTS)
201-B EAST PECAN STREET
P O BOX 589
PFLUGERVILLE, TX 78691-0589
512-990-6300

CITY OF PFLUGERVILLE - PUBLIC WORKS
DEPARTMENT
CONTACT: MATT WOODARD
15500 SUN LIGHT NEAR WAY #B
PFLUGERVILLE, TX 78691-0589
512-990-6400

CITY OF PFLUGERVILLE - WATER AND
WASTEWATER SERVICE:
PUBLIC WORKS DEPARTMENT-UTILITY DIVISION
15500 SUN LIGHT NEAR WAY #B
PFLUGERVILLE, TEXAS 78660
(512) 251-9935 office
(512) 989-1052 fax

TRAVIS COUNTY EMERGENCY SERVICES
DISTRICT #2
CONTACT: MIKE SLAUGHTER
203 E. PECAN STREET
PFLUGERVILLE, TX 78660
512-989-4531

ASSOCIATED STUDIES:
DRAINAGE REPORT WILLIAM WINKELMAN, P.E.
TIA DESHAZO
WATER SUPPLY SITE SUMMARY WILLIAM WINKELMAN, P.E.
SANITARY SEWER REPORT WILLIAM WINKELMAN, P.E.

09-07-2021
09-2021
09-07-2021
09-07-2021

INITIAL SUBMITTAL DATE:
SEPTEMBER 7, 2021.

ASSOCIATED STUDIES:

SUBMITTED BY:
WINKELMANN & ASSOCIATES, INC.

William Winkelmann

WILL WINKELMANN, P.E.
PROJECT MANAGER



THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
WILLIAM R. WINKELMANN
P.E. # 120378

SURVEYOR'S CERTIFICATION
STATE OF TEXAS
COUNTY OF DALLAS:

KNOW ALL MEN BY THESE PRESENTS:

THAT I, LEONARD J. LUEKER, DO HEREBY CERTIFY THAT I PREPARED THIS PLAN FROM AN ACTUAL AND ACCURATE ON-THE-GROUND SURVEY OF THE LAND, AND THAT THE CORNER MONUMENTS SHOWN THEREON MARKING THE BOUNDARY OF THE PROPOSED SUBDIVISION, BUT NOT INTERIOR LOT LINES, WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH ALL CITY OF PFLUGERVILLE, TEXAS CODES AND ORDINANCES AND THAT ALL KNOWN EASEMENTS WITHIN THE BOUNDARY OF THE PLAT ARE SHOWN HEREON.

SIGNATURE OF REGISTERED PROFESSIONAL LAND SURVEYOR



PRELIMINARY PLAN
for
LONGHORN
NEC OF MEISTER AND NEW MEISTER
P. CONRAD SURVEY, ABSTRACT NO. 200
THE J. CAN WINKLE SURVEY, ABSTRACT NO. 787
THE W. BARKER SURVEY, ABSTRACT NO. 107
CITY OF PFLUGERVILLE, TRAVIS AND WILLIAMSON
COUNTY, TEXAS

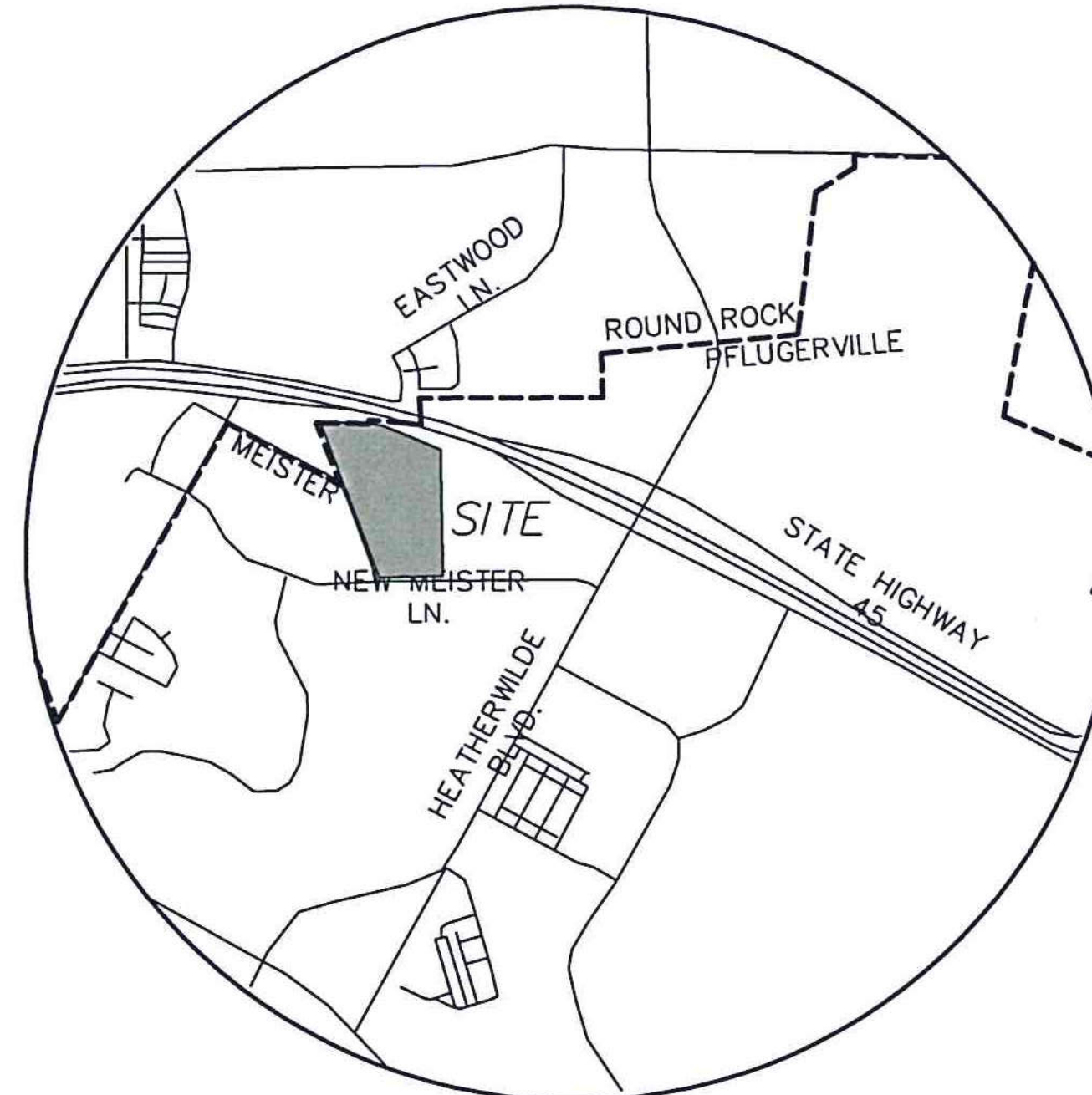
OWNERS CERTIFICATE

STATE OF TEXAS §
COUNTY OF TRAVIS & WILLIAMSON §

WHEREAS, CCI Pflugerville I, LP and Realtron, Inc., are the owners of 68.756 acre tract of land situated in the P. CONRAD SURVEY, ABSTRACT NO. 200, the J. VAN WINKLE SURVEY, ABSTRACT NO. 787, and the W. BARKER SURVEY, ABSTRACT NO. 107 in the City of Pflugerville, Travis and Williamson County, Texas, being a portion of a tract of land described in deed to Realtron, Inc. (Tracts 1 and 2) as recorded in County Clerk's Instrument No. 2006202615, Official Public Records, Travis County, Texas, and being all of tract of land described in deed to CCI-Pflugerville I, LP as recorded in County Clerk's Instrument No. 2015077437, Official Public Records, Travis County, Texas, and County Clerk's Instrument No. 2015040299, Official Public Records, Williamson County, Texas, and being all of tract of land described in deed to CCI-Pflugerville I, LP (Tract 1 and 2) as recorded in County Clerk's Instrument No. 2015109288, Official Public Records, Travis County, Texas, and being the remainder of a tract of land described in deed to Richard Z. Rady, Trustee, as recorded in Volume 11469, Page 1650, Official Public Records, Travis County, Texas.

PRELIMINARY PLAN NOTES:

- This plan lies within the City of Pflugerville full purpose jurisdiction.
- Water and wastewater shall be provided by City of Pflugerville. No lot in this subdivision shall be occupied until connected to water and wastewater facilities.
- A 10-ft Public Utility Easement (P.U.E.) shall be dedicated along all street frontage(s).
- Easement(s) dedicated to the public by this plan shall also be subject to the terms and conditions of the Engineering Design Manual, as amended. The Grantor [property owner(s)], heirs, successors and assigns shall retain the obligation to maintain the surface of the easement property free of litter, debris, and trash.
- No improvements including but not limited to structures, fences, or landscaping shall be allowed in a public easement, except as approved by the City.
- The property owner shall provide access to drainage and utility easements as may be necessary and shall not prohibit access for the placement, construction, installation, replacement, repair, maintenance, relocation, removal, operation and inspection of such drainage and utility facilities, and related appurtenances.
- Streelights shall be installed and in full working order with the public improvements. All streelights shall be in conformance with all City of Pflugerville ordinances including but not limited to being downcast and full cut off type.
- This subdivision is subject to all City of Pflugerville ordinances or technical manuals related to Tree Preservation per City Ordinance # 1203-15-02-24 and City Resolution # 1224-09-08-25- 8A.
- The Community Impact Fee rate for water and wastewater will be assessed at the time of final plat.
- On-site storm water facilities shall be provided to mitigate post-development peak runoff rates for the 2 year, 25 year and 100 year storm events.
- All electric utility infrastructure including but not limited to telephone, cable television, electric utility lateral and service lines shall be installed in accordance with the City of Pflugerville Engineering Design Manual as amended.
- The owner of this subdivision, and his or her successors and assigns, assumes responsibility for plans for construction of subdivision improvements which comply with applicable codes and requirements of the City of Pflugerville as amended.
- Construction plans and specifications for all subdivision improvements shall be reviewed and approved by the City of Pflugerville prior to any construction within the subdivision.
- (Commercial Subdivisions) Site development construction plans shall be reviewed and approved by the City of Pflugerville prior to any construction.
- All proposed fences and walls adjacent to intersecting public roadway right-of-way or adjacent to private access drives shall be in compliance with the sight distance requirements of the City of Pflugerville Engineering Design Manual, as amended.
- Wastewater and water systems shall conform to TCEQ (Texas Commission on Environmental Quality) and State Board of Insurance requirements. The owner understands and acknowledges that plat vacation or re-platting may be required at the owner's sole expense if plans to develop this subdivision do not comply with such codes and requirements.
- A six (6) foot wide sidewalk shall be provided on both sides of the street.
- A TIA may be required with future phases of this development, and shall account for all lots and land uses associated with this boundary.
- The preliminary plan shall be amended once the right-of-way abandonment occurs, and the alignment of Kenney Fort Blvd. have been established to this plan boundary.
- Right-of-way to be abandoned and future extension of Kenney Fort Blvd pending final approval from TxDOT and the City of Pflugerville prior to final plat approval.
- Changes to Kenney Fort at Highway 45 and Meister Lane may be necessary during final review. A revised preliminary plan may be necessary if significant changes are needed.
- TxDOT continues to review Kenney Fort alignment and connections. A revised preliminary plan may be necessary if significant changes are needed.



VICINITY MAP
NOT TO SCALE

LOT DATA:	Current Land Use	Proposed Land Use
GROSS ACREAGE	68.756 ACRES	
ROW DEDICATION	5,242 ACRES	APPROXIMATELY 1,898 LF WITH 100' ROW
NUMBER OF LOTS	3	
LOT 1	12.725 ACRES	VACANT WAREHOUSE
LOT 2	10.122 ACRES	VACANT DATA CENTER
LOT 3	40.418 ACRES	VACANT WAREHOUSES

FLOODPLAIN INFORMATION:

THIS PROJECT IS LOCATED ENTIRELY WITHIN ZONE 'X' (UNSHADED), AS SHOWN ON F.I.R.M. PANEL 48452C0280J and 48453C0260J, TRAVIS COUNTY, TEXAS, DATED AUGUST 18, 2014.

BENCHMARK:

ADEQUACY CLAUSE:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF PFLUGERVILLE MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

City Approved Revisions & Corrections							
No.	Description	Revise (R) Correct (C) Add (A) Void (V) Sheet No's	Net Change Impervious Cover (sq. ft.) / %	Total Impervious Cover (sq. ft.) / %	Design Engineer Signature	City of Pflugerville Approval	Approval Date

BENCHMARKS:

BM#1 - Square cut on concrete base of a transmission tower, ±233.6 feet Northwest of the Northeast property corner of "Tract 1".
N=10,151,017.640
E=3,150,216.554
ELEVATION - 792.34 feet

BM#2 - Square cut on the Northwest corner of a curb inlet, North curb line of New Meister Lane, ±240.3 feet West of the Southwest property corner of "Tract 1".
N=10,149,104.153
E=3,150,202.389
ELEVATION - 766.41 feet

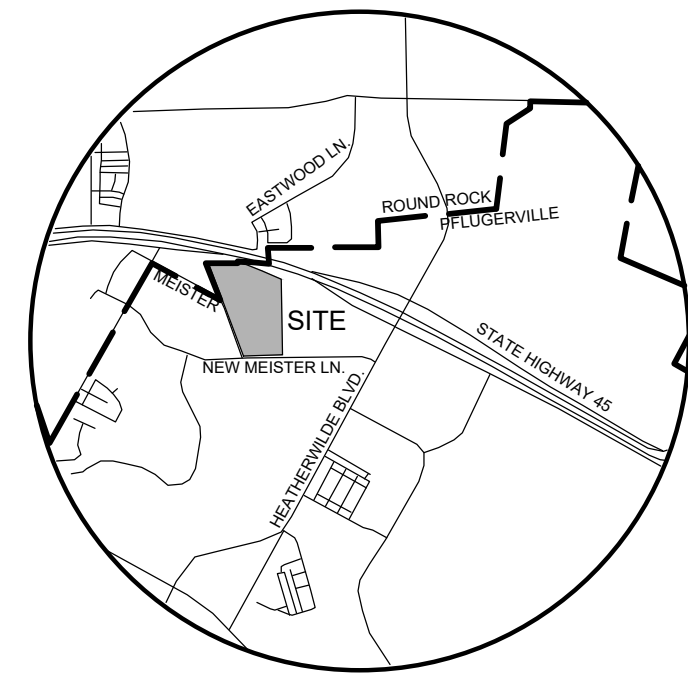
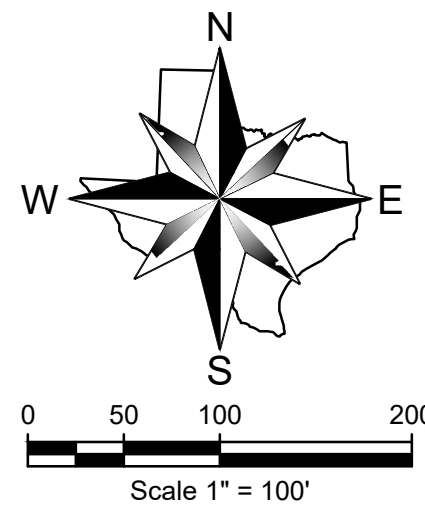
COMBINED SCALE FACTOR: 1.0001

**PRELIMINARY PLAN -
NOT FOR RECORDATION**

C:\451\32\ENGINEERING\Preliminary Plans\45132-Prelim_COV.dwg PFLUGERVILLE LONGHORN - PRELIMINARY PLAN

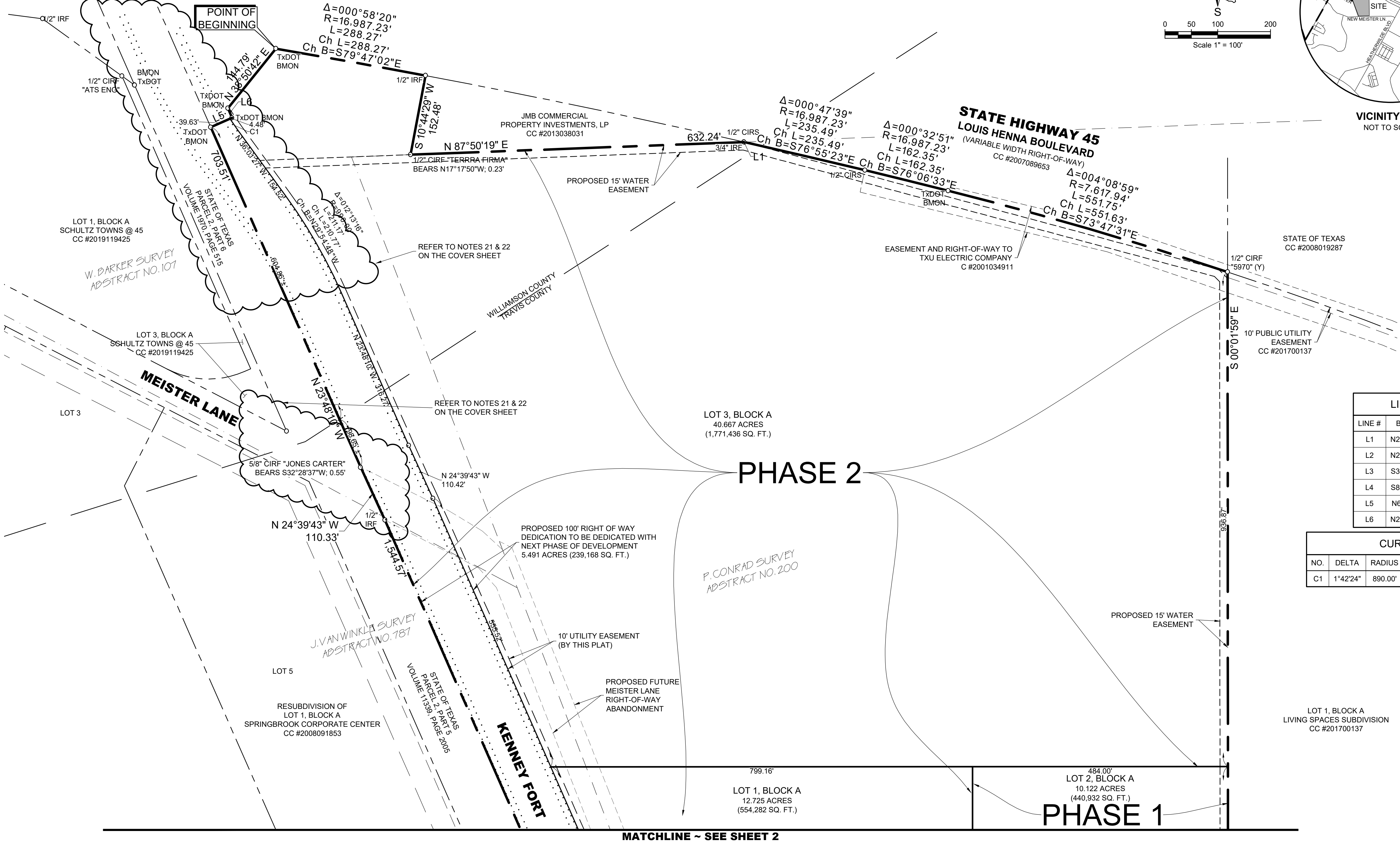
LEGEND

CIRS	1/2" iron rod set w/ plastic cap stamped "WAI 5714"
IRF	Iron Rod Found
BMON	Brass Monument
TxDOT	Texas Department of Transportation
XCF	"X" cut in Concrete Found
CM	Controlling Monument
CC #	County Clerk's Instrument Number
---	Proposed Sidewalk



REVISION	DATE	APPROVAL

Winkelmann & Associates, Inc.
 CONSULTING CIVIL ENGINEERS ■ SURVEYORS
 6750 Hillcrest Plaza Drive, Suite 325
 Dallas, Texas 75230
 (214) 490-7090
 FAX (214) 490-7090
 www.winkelmann.com
 Texas Engineering Registration No. 99-0000000000
 Surveying Registration No. 0221-0000000000
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LINE TABLE

LINE #	BEARING	DISTANCE
L1	N29°51'02"W	0.30'
L2	N21°13'33"W	32.15'
L3	S35°37'08"W	39.32'
L4	S87°40'50"W	54.92'
L5	N65°53'33"E	44.01'
L6	N22°44'41"W	19.88'

CURVE TABLE

NO.	DELTA	RADIUS	LENGTH	CH. L	CH. B
C1	1°42'24"	890.00'	26.51'	26.51'	S35°10'15"E

FLOOD NOTE
 According to the Federal Emergency Management Agency, Flood Insurance Rate Map Community Panel Nos. 48452C0280J and 48453C0260J, both dated August 18, 2014, this property is within Flood Zone X.
 Zone X - Areas determined to be outside the 0.2% annual chance floodplain.
 This flood statement does not imply that the property and/or the structure 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 liability on the part of the surveyor.

NOTE:
RIGHT-OF-WAY TO BE ABANDONED AND FUTURE EXTENSION OF KENNEY FORT BLVD. PENDING FINAL APPROVAL FROM TxDOT AND THE CITY OF PFLUGERVILLE PRIOR TO FINAL PLAT.

OWNERS:
 CCI Pflugerville I, LP
 500 N Capital Of TX Hwy Bldg 1, Suite 200
 Austin, TX 78746

Realtron, Inc.
 13276 Research Blvd., Suite 105
 Austin, TX 78750

SURVEYOR:
 Winkelmann & Associates, Inc.
 6750 Hillcrest Plaza Drive
 Suite 325
 Dallas, Texas 75230
 ph# (214) 490-7090

PRELIMINARY PLAN LONGHORN ADDITION
 LOTS 1-3, BLOCK A
 BEING 68.756 ACRES OUT OF THE P. CONRAD SURVEY, ABSTRACT NO. 200
 CITY OF PFLUGERVILLE, TRAVIS & WILLIAMSON COUNTY, TEXAS

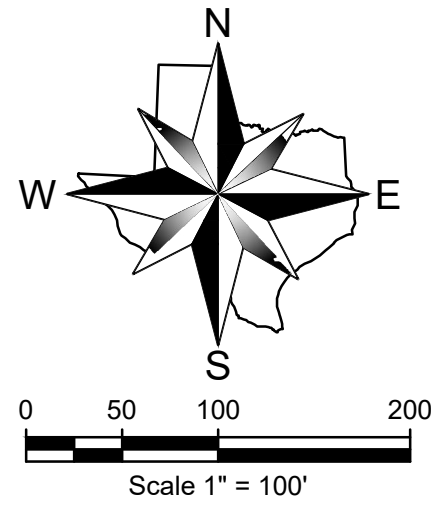
P. CONRAD SURVEY, ABSTRACT NO. 200, THE J. VAN WINKLE SURVEY, ABSTRACT NO. 787, AND THE W. BARKER SURVEY, ABSTRACT NO. 107, CITY OF PFLUGERVILLE, TRAVIS & WILLIAMSON COUNTY, TEXAS

CCI PFLUGERVILLE I, LP
 500 N CAPITAL OF TX HWY BLDG 1, SUITE 200
 AUSTIN, TX 78746

PRELIMINARY PLAN LONGHORN ADDITION
 LOTS 1-3, BLOCK A

Date : 08.19.21
 Scale : 1" = 100'
 File : 45132-PP1T - s1h
 Project No. : 45132

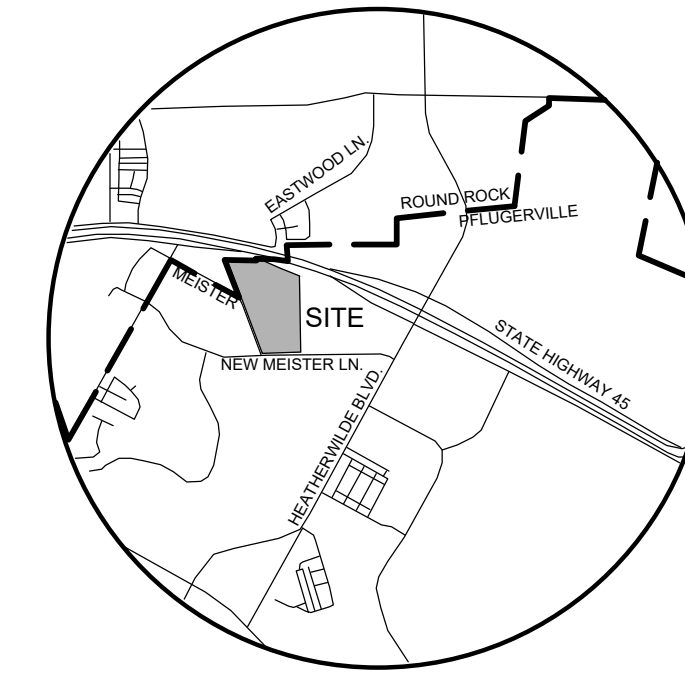
P-02



LEGEND

CIRS	1/2" iron rod set w/ plastic cap stamped "WAI 5714"
IRF	Iron Rod Found
BMON	Brass Monument
TxDOT	Texas Department of Transportation
XCF	"X" cut in Concrete Found
CM	Controlling Monument
CC #	County Clerk's Instrument Number
---	Proposed Sidewalk

NOTE:
RIGHT-OF-WAY TO BE ABANDONED AND FUTURE EXTENSION OF KENNEY FORT BLVD. PENDING FINAL APPROVAL FROM TxDOT AND THE CITY OF PFLUGERVILLE PRIOR TO FINAL PLAT.



VICINITY MAP
 NOT TO SCALE

No.	DATE	REVISION	APPROVAL

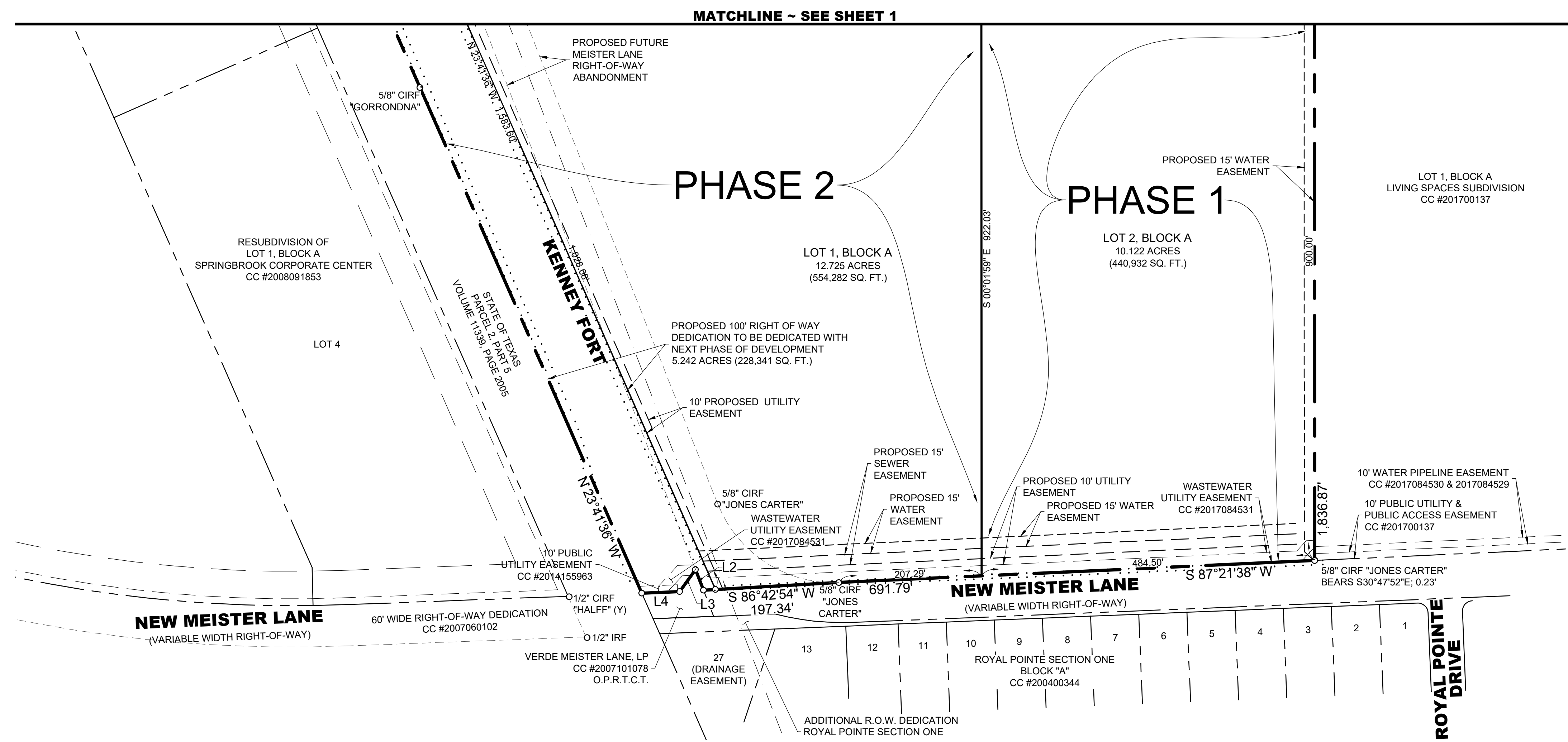
Winkelmann & Associates, Inc.
 CONSULTING CIVIL ENGINEERS ■ SURVEYORS
 6750 Hillcrest Plaza Drive, Suite 325
 Dallas, Texas 75230
 Phone: (214) 490-7090
 Fax: (214) 490-7090
 P.E. License No. 10115
 S.E. License No. 10115
 COPYRIGHT © 2015, Winkelmann & Associates, Inc.

P. CONRAD SURVEY, ABSTRACT NO. 200, THE J. VAN WINKLE SURVEY, ABSTRACT NO. 107, ABSTRACT NO. 787, AND THE W. BARKER SURVEY, ABSTRACT NO. 107, CITY OF PFLUGERVILLE, TRAVIS & WILLIAMSON COUNTY, TEXAS
 CCI PFLUGERVILLE I, LP
 500 N CAPITAL OF TX HWY BLDG 1, SUITE 200
 AUSTIN, TX 78746

PRELIMINARY PLAN
LONGHORN ADDITION
 LOTS 1-3, BLOCK A

Date: 08.19.21
 Scale: 1" = 100'
 File: 45132-PPLT - s1h
 Project No.: 45132

P-03

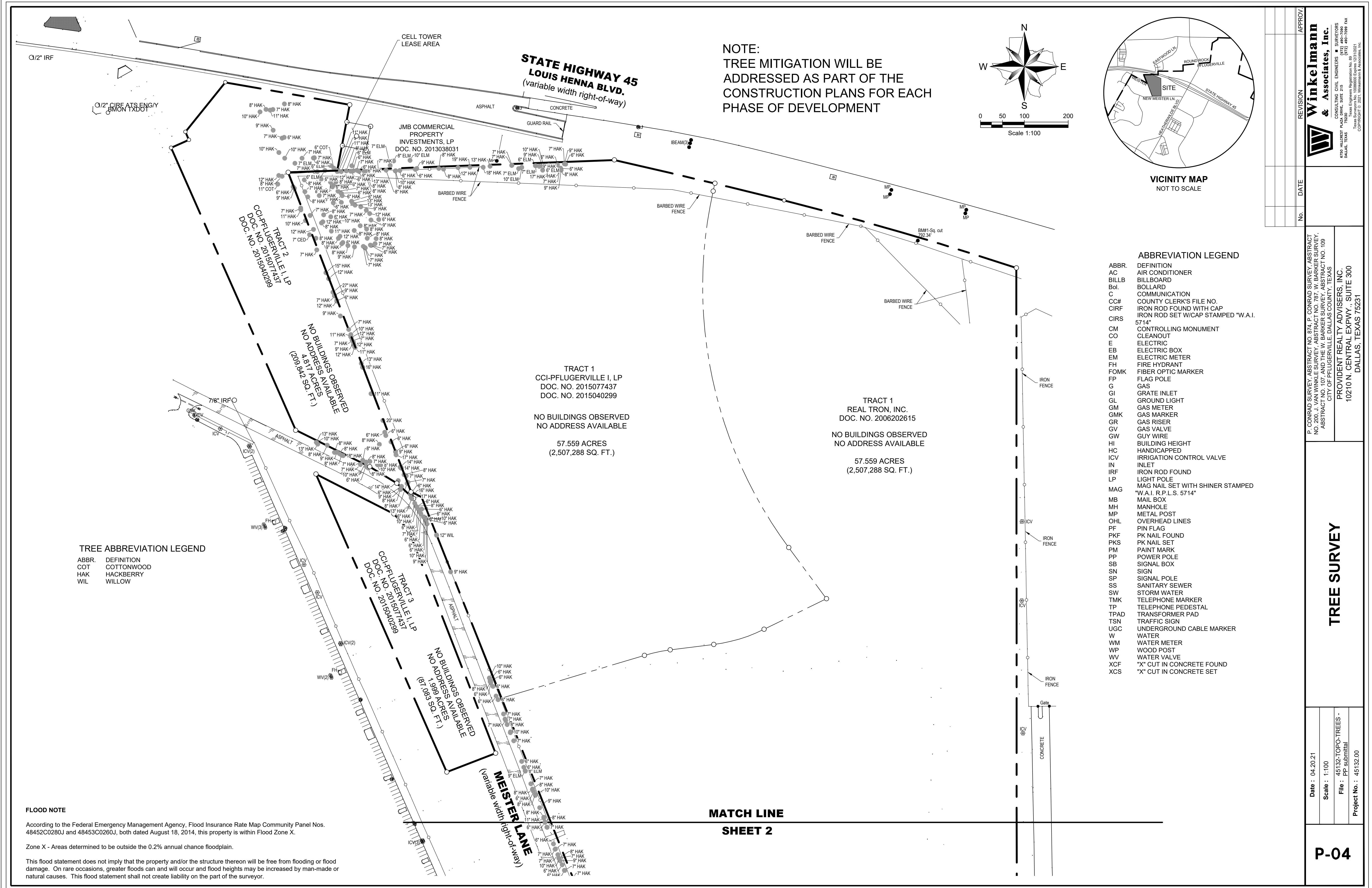


OWNERS:
 CCI Pflugerville I, LP
 500 N Capital Of Tx Hwy Bldg 1, Suite 200
 Austin, TX 78746

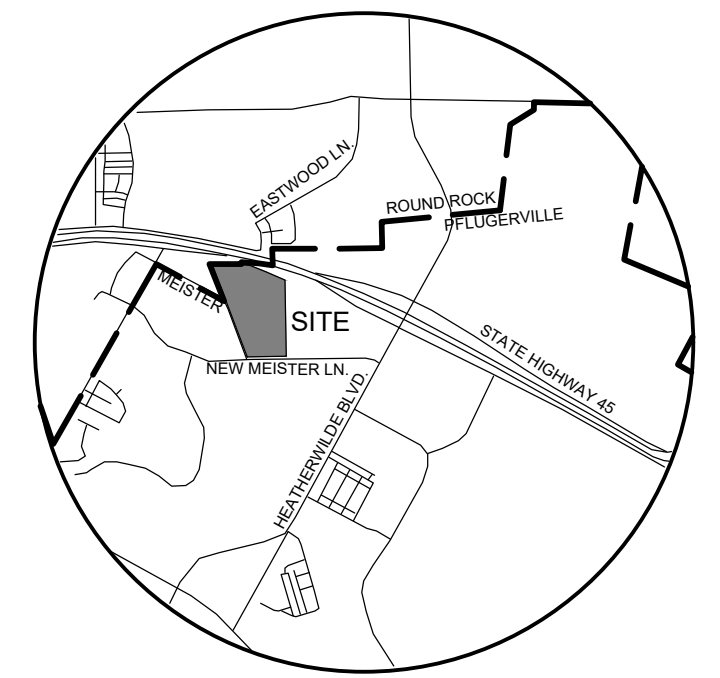
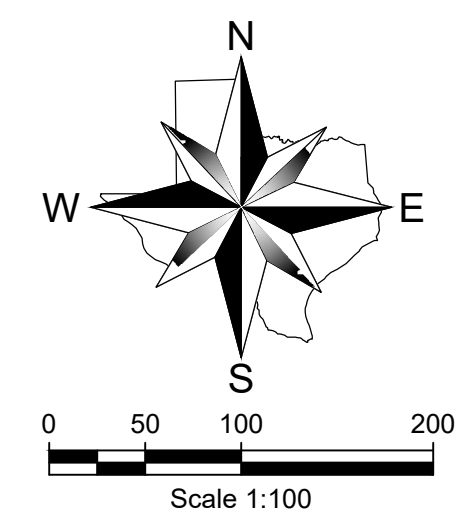
Realtor, Inc.
 13276 Research Blvd., Suite 105
 Austin, TX 78750

SURVEYOR:
 Winkelmann & Associates, Inc.
 6750 Hillcrest Plaza Drive
 Suite 325
 Dallas, Texas 75230
 ph# (214) 490-7090

PRELIMINARY PLAN
LONGHORN ADDITION
 LOTS 1-3, BLOCK A
 BEING 68.756 ACRES OUT OF THE P. CONRAD SURVEY, ABSTRACT NO. 200 CITY OF PFLUGERVILLE, TRAVIS & WILLIAMSON COUNTY, TEXAS



NOTE:
 TREE MITIGATION WILL BE
 ADDRESSED AS PART OF THE
 CONSTRUCTION PLANS FOR EACH
 PHASE OF DEVELOPMENT



VICINITY MAP
 NOT TO SCALE

ABBREVIATION LEGEND

ABBR.	DEFINITION
AC	AIR CONDITIONER
BILLB	BILLBOARD
BoI.	BOLLARD
C	COMMUNICATION
CC#	COUNTY CLERK'S FILE NO.
CIRF	IRON ROD FOUND WITH CAP
CIRS	IRON ROD SET W/CAP STAMPED "W.A.I. 5714"
CM	CONTROLLING MONUMENT
CO	CLEANOUT
E	ELECTRIC
EB	ELECTRIC BOX
EM	ELECTRIC METER
FH	FIRE HYDRANT
FOMK	FIBER OPTIC MARKER
FP	FLAG POLE
G	GAS
GI	GRATE INLET
GL	GROUND LIGHT
GM	GAS METER
GMK	GAS MARKER
GR	GAS RISER
GV	GAS VALVE
GW	GUY WIRE
HI	BUILDING HEIGHT
HC	HANDICAPPED
ICV	IRRIGATION CONTROL VALVE
IN	INLET
IRF	IRON ROD FOUND
LP	LIGHT POLE
MAG	MAG NAIL SET WITH SHINER STAMPED "W.A.I. R.P.L.S. 5714"
MB	MAIL BOX
MH	MANHOLE
MPL	METAL POST
OHL	OVERHEAD LINES
PF	PIN FLAG
PKF	PK NAIL FOUND
PKS	PK NAIL SET
PM	PAINT MARK
PP	POWER POLE
SB	SIGNAL BOX
SN	SIGN
SP	SIGNAL POLE
SS	SANITARY SEWER
SW	STORM WATER
TMK	TELEPHONE MARKER
TP	TELEPHONE PEDESTAL
TPAD	TRANSFORMER PAD
TSN	TRAFFIC SIGN
UGC	UNDERGROUND CABLE MARKER
W	WATER
WM	WATER METER
WP	WOOD POST
WV	WATER VALVE
XCF	"X" CUT IN CONCRETE FOUND
XCS	"X" CUT IN CONCRETE SET

TREE ABBREVIATION LEGEND

ABBR.	DEFINITION
COT	COTTONWOOD
HAK	HACKBERRY
WIL	WILLOW

FLOOD NOTE

According to the Federal Emergency Management Agency, Flood Insurance Rate Map Community Panel Nos. 48452C0280J and 48453C0260J, both dated August 18, 2014, this property is within Flood Zone X.

Zone X - Areas determined to be outside the 0.2% annual chance floodplain.

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REVISION	DATE	APPROVAL

Winkelmann & Associates, Inc.
 CONSULTING CIVIL ENGINEERS ■ SURVEYORS
 5700 W. PARKWAY, SUITE 215
 DALLAS, TEXAS 75244
 TEL: 972.462.7500
 FAX: 972.462.7509
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P. CONRAD SURVEY ABSTRACT NO. 874, P. CONRAD SURVEY ABSTRACT NO. 200, J. VAN WINKLE SURVEY ABSTRACT NO. 787, W. BARKER SURVEY ABSTRACT NO. 107, AND THE W. BARKER SURVEY ABSTRACT NO. 109, CITY OF PFLUGERVILLE, DALLAS COUNTY, TEXAS
PROVIDENT REALTY ADVISERS, INC.
 10210 N. CENTRAL EXPWY., SUITE 300
 DALLAS, TEXAS 75231

Date :	04.20.21
Scale :	1:100
File :	45132-TOPO-TREES - PP submittal
Project No. :	45132.00

P-04

ABBREVIATION LEGEND

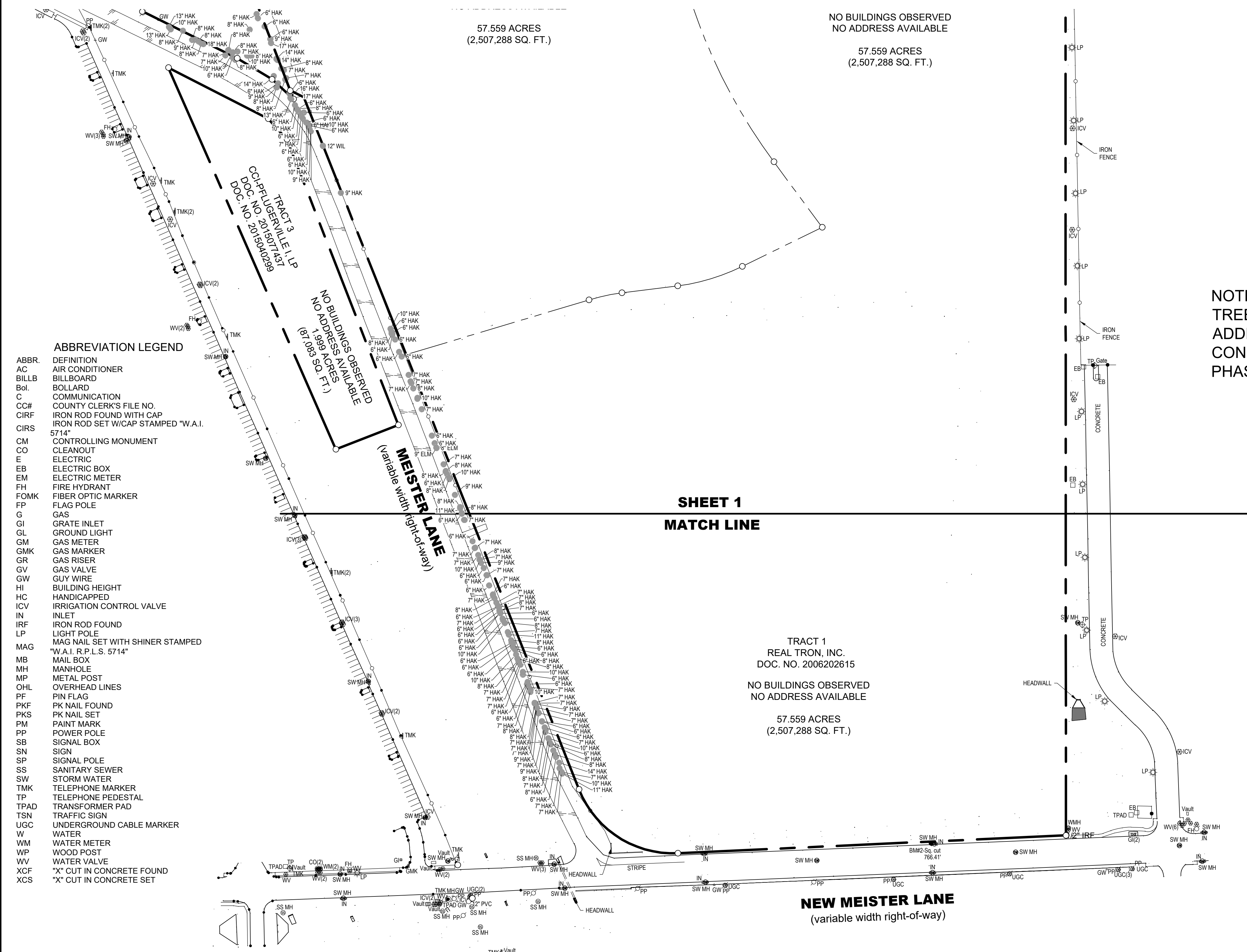
ABBR.	DEFINITION
AC	AIR CONDITIONER
BILLB	BILLBOARD
Bol.	BOLLARD
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CC#	COUNTY CLERK'S FILE NO.
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CIRS	IRON ROD SET W/CAP STAMPED "W.A.I. 5714"
CM	CONTROLLING MONUMENT
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EB	ELECTRIC BOX
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GI	GRATE INLET
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GMK	GAS MARKER
GR	GAS RISER
GV	GAS VALVE
GW	GUY WIRE
HI	BUILDING HEIGHT
HC	HANDICAPPED
ICV	IRRIGATION CONTROL VALVE
IN	INLET
IRF	IRON ROD FOUND
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OHL	OVERHEAD LINES
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PKS	PK NAIL SET
PM	PAINT MARK
PP	POWER POLE
SB	SIGNAL BOX
SN	SIGN
SP	SIGNAL POLE
SS	SANITARY SEWER
SW	STORM WATER
TMK	TELEPHONE MARKER
TP	TELEPHONE PEDESTAL
TPAD	TRANSFORMER PAD
TSN	TRAFFIC SIGN
UGC	UNDERGROUND CABLE MARKER
W	WATER
WM	WATER METER
WP	WOOD POST
WV	WATER VALVE
XCF	"X" CUT IN CONCRETE FOUND
XCS	"X" CUT IN CONCRETE SET

FLOOD NOTE

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Zone X - Areas determined to be outside the 0.2% annual chance floodplain.

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NO BUILDINGS OBSERVED
NO ADDRESS AVAILABLE

57.559 ACRES
(2,507,288 SQ. FT.)

SHEET 1
MATCH LINE

TRACT 1
REAL TRON, INC.
DOC. NO. 2006202615

NO BUILDINGS OBSERVED
NO ADDRESS AVAILABLE

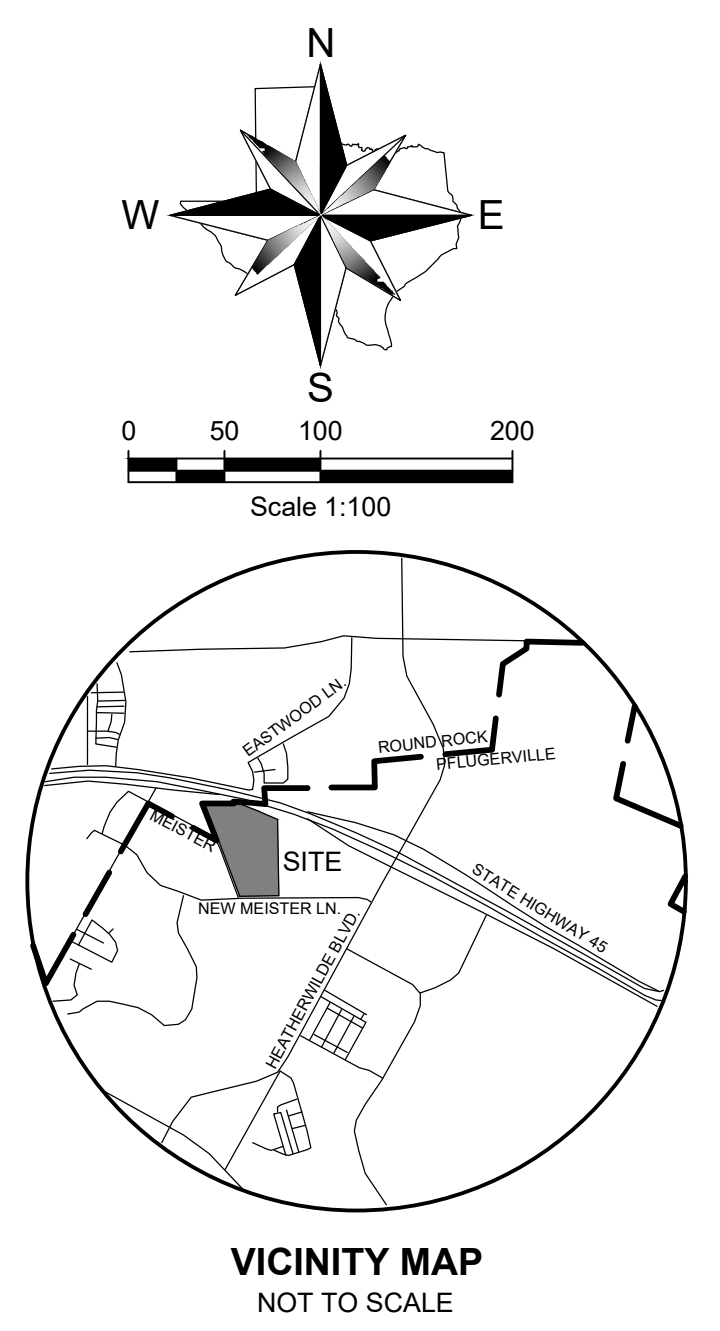
57.559 ACRES
(2,507,288 SQ. FT.)

NEW MEISTER LANE
(variable width right-of-way)

TREE ABBREVIATION LEGEND

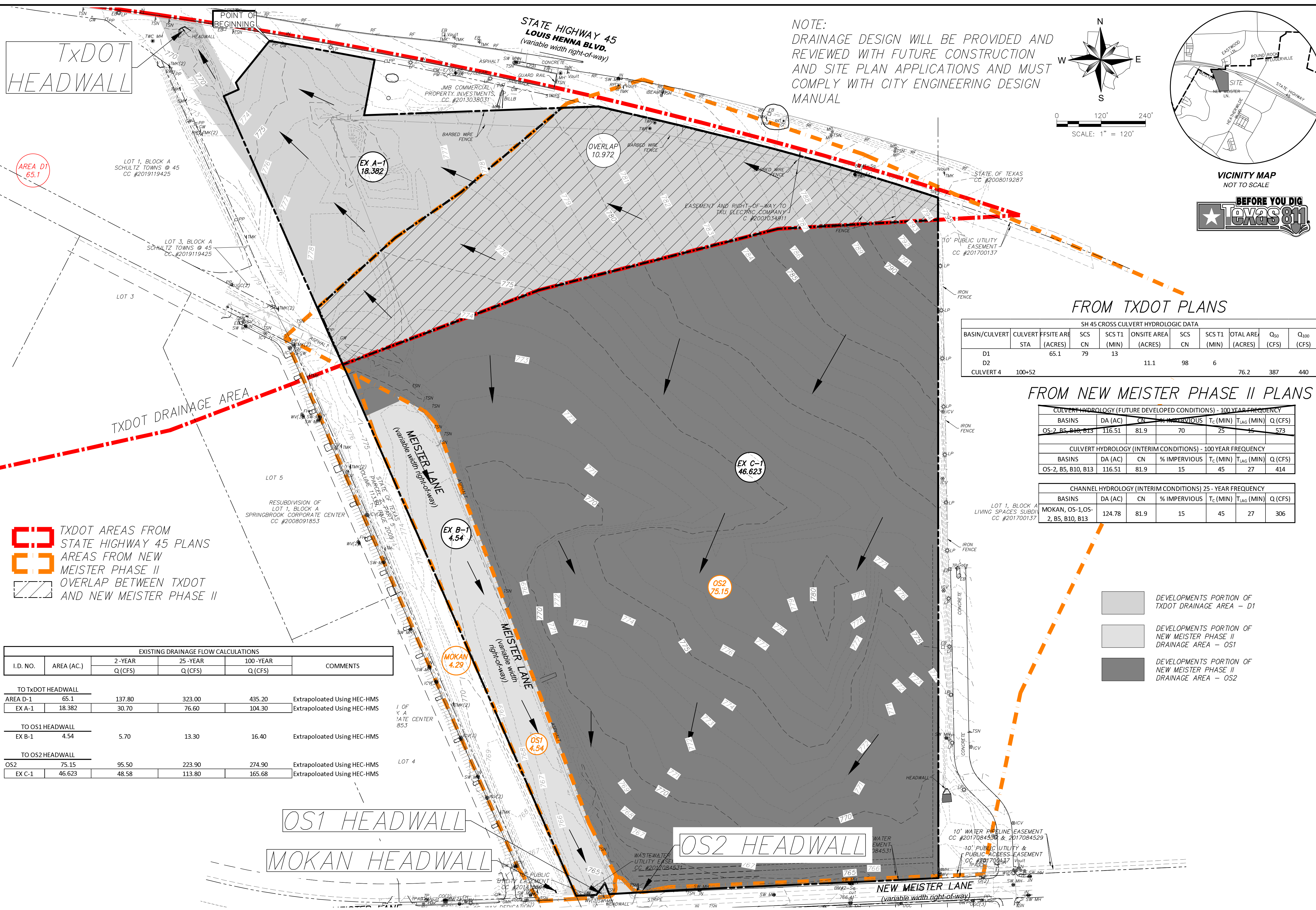
ABBR.	DEFINITION
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NOTE:
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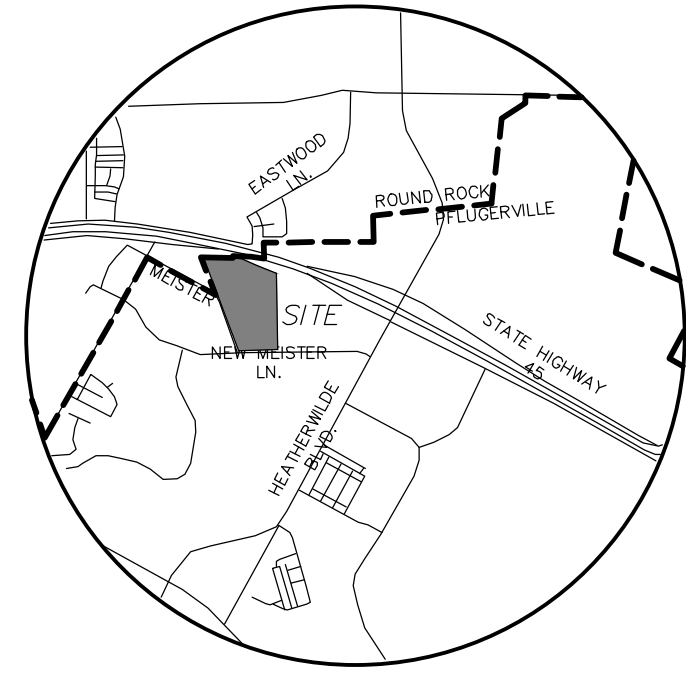
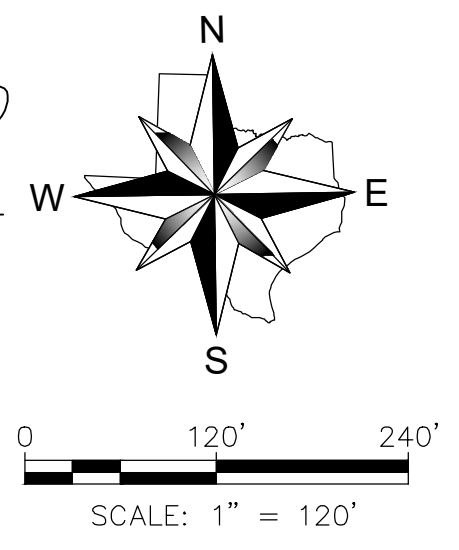


LINE #	BEARING	DISTANCE
L1	N63°00'57"W	27.12'
L2	S10°44'29"W	152.48'
L3	S87°50'19"W	111.99'
L4	S21°03'28"E	16.74'
L5	N47°27'28"W	51.85'
L6	N58°50'45"W	72.62'
L7	N63°38'13"W	188.15'
L8	N66°03'55"E	44.11'
L9	N22°44'41"W	19.88'
L10	S42°07'27"E	49.80'

			 Winkelmann & Associates, Inc. CONSULTING CIVIL ENGINEERS SURVEYORS 1724 N. CENTRAL EXPWY., SUITE 215 DALLAS, TEXAS 75208 Tel: (214) 466-7599 FAX (214) 466-7598 Copyright © 2021, Winkelmann & Associates, Inc.
No.	DATE	REVISION	APPROVAL
		##### SURVEY ABSTRACT NO. ### CITY OF PFLUGERVILLE DALLAS COUNTY, TEXAS PROVIDENT REALTY ADVISERS, INC. 10210 N. CENTRAL EXPWY., SUITE 300 DALLAS, TEXAS 75231	
TREE SURVEY			
Date : 04.20.21	Scale : 1:100	File : 45132-TOPO-TREES - PP submittal	Project No. : 45132.00
			P-05



NOTE:
DRAINAGE DESIGN WILL BE PROVIDED AND
REVIEWED WITH FUTURE CONSTRUCTION
AND SITE PLAN APPLICATIONS AND MUST
COMPLY WITH CITY ENGINEERING DESIGN
MANUAL



VICINITY MAP
NOT TO SCALE

SH 45 CROSS CULVERT HYDROLOGIC DATA

BASIN/CULVERT	CULVERT STA	FFSITE ARE (ACRES)	SCS CN	SCS T1 (MIN)	ONSITE AREA (ACRES)	SCS CN	SCS T1 (MIN)	TOTAL ARE (ACRES)	Q ₅₀ (CFS)	Q ₁₀₀ (CFS)
D1		65.1	79	13	11.1	98	6	76.2	387	440
D2										
CULVERT 4	100+52									

FROM NEW MEISTER PHASE II PLANS

CULVERT HYDROLOGY (FUTURE DEVELOPED CONDITIONS) - 100 YEAR FREQUENCY

BASINS	DA (AC)	CN	% IMPERVIOUS	T _c (MIN)	T _{LAG} (MIN)	Q (CFS)
OS-2, B5, B10, B13	116.51	81.9	70	25	45	573

CULVERT HYDROLOGY (INTERIM CONDITIONS) - 100 YEAR FREQUENCY

BASINS	DA (AC)	CN	% IMPERVIOUS	T _c (MIN)	T _{LAG} (MIN)	Q (CFS)
OS-2, B5, B10, B13	116.51	81.9	15	45	27	414

CHANNEL HYDROLOGY (INTERIM CONDITIONS) 25 - YEAR FREQUENCY

BASINS	DA (AC)	CN	% IMPERVIOUS	T _c (MIN)	T _{LAG} (MIN)	Q (CFS)
MOKAN, OS-1, OS-2, B5, B10, B13	124.78	81.9	15	45	27	306

TXDOT AREAS FROM STATE HIGHWAY 45 PLANS
 AREAS FROM NEW MEISTER PHASE II
 OVERLAP BETWEEN TXDOT AND NEW MEISTER PHASE II

EXISTING DRAINAGE FLOW CALCULATIONS

I.D. NO.	AREA (AC.)	EXISTING DRAINAGE FLOW CALCULATIONS			COMMENTS
		2-YEAR Q (CFS)	25-YEAR Q (CFS)	100-YEAR Q (CFS)	
TO TXDOT HEADWALL					
AREA D-1	65.1	137.80	323.00	435.20	Extrapolated Using HEC-HMS
EX A-1	18.382	30.70	76.60	104.30	Extrapolated Using HEC-HMS
TO OS1 HEADWALL					
EX B-1	4.54	5.70	13.30	16.40	Extrapolated Using HEC-HMS
TO OS2 HEADWALL					
OS2	75.15	95.50	223.90	274.90	Extrapolated Using HEC-HMS
EX C-1	46.623	48.58	113.80	165.68	Extrapolated Using HEC-HMS

DEVELOPMENTS PORTION OF TXDOT DRAINAGE AREA - D1
 DEVELOPMENTS PORTION OF NEW MEISTER PHASE II DRAINAGE AREA - OS1
 DEVELOPMENTS PORTION OF NEW MEISTER PHASE II DRAINAGE AREA - OS2

6.									
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4.									
3.									
2.									
1.									
No.									

DATE: 2021-11-24
 REVISION: FIRST SUBMITTAL
 APPROVAL: [Signature]

Winkelmann & Associates, Inc.
 CONSULTING CIVIL ENGINEERS & SURVEYORS
 6750 HILDBRETT PLAZA DRIVE, SUITE 215
 PFLUGERVILLE, TEXAS 78066
 (972) 488-7888 FAX (972) 488-1988
 Texas Engineers Registration No. 89
 Texas Surveyors Registration No. 100868-00
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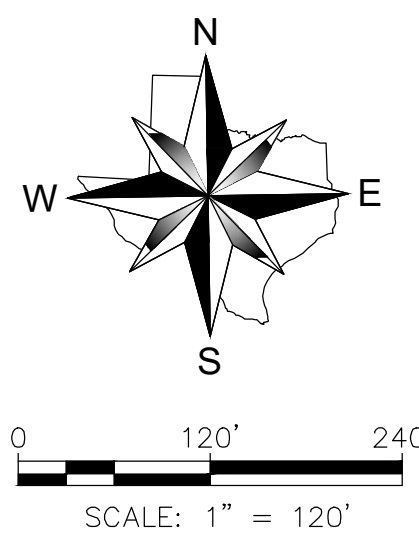
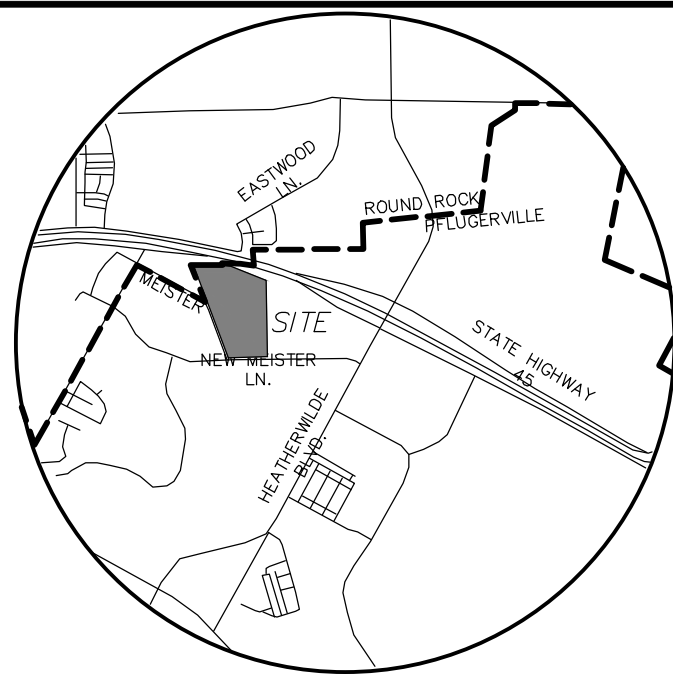
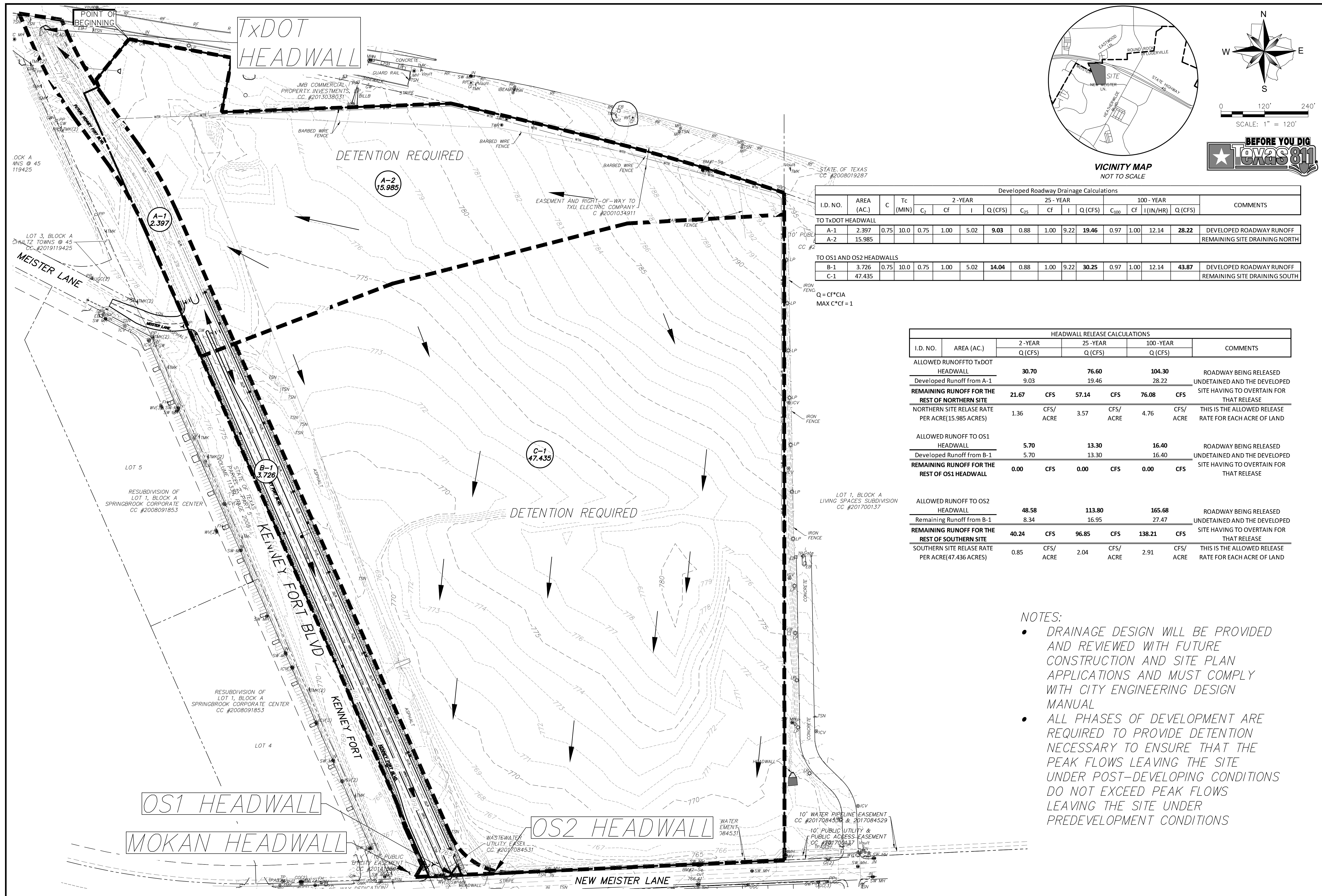
STATE OF TEXAS
 THESE PLANS WERE PREPARED UNDER THE DIRECT SUPERVISION OF WILLIAM WINKELMANN, P.E. #12078. THESE ARE ISSUED FOR INTERIM REVIEW PURPOSES ONLY. THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
 LICENSED PROFESSIONAL ENGINEER

12-01-2021

PRELIMINARY EXISTING DRAINAGE AREA MAP
 LONGHORN ADDITION INFRASTRUCTURE PFLUGERVILLE, TX

P-06

45132.DA
 G:\45132.DA\ENGINEERING\Construction\Plans\45132.DA-EX-DAM.dwg
 LAST SAVED BY: SHUBACH December 1, 2021



Developed Roadway Drainage Calculations

I.D. NO.	AREA (AC.)	C	Tc (MIN)	2-YEAR			25-YEAR			100-YEAR			COMMENTS			
				C ₂	C _f	I	Q (CFS)	C ₂₅	C _f	I	Q (CFS)	C ₁₀₀		C _f	I (IN/HR)	Q (CFS)
TO TxDOT HEADWALL																
A-1	2.397	0.75	10.0	0.75	1.00	5.02	9.03	0.88	1.00	9.22	19.46	0.97	1.00	12.14	28.22	DEVELOPED ROADWAY RUNOFF
A-2	15.985															REMAINING SITE DRAINING NORTH
TO OS1 AND OS2 HEADWALLS																
B-1	3.726	0.75	10.0	0.75	1.00	5.02	14.04	0.88	1.00	9.22	30.25	0.97	1.00	12.14	43.87	DEVELOPED ROADWAY RUNOFF
C-1	47.435															REMAINING SITE DRAINING SOUTH

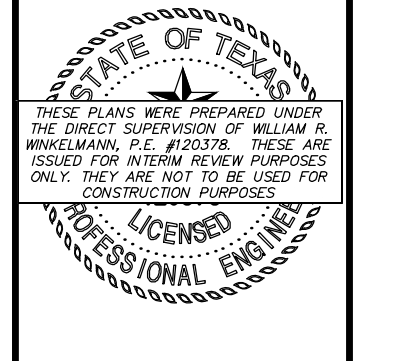
Q = Cf * CIA
MAX C * Cf = 1

HEADWALL RELEASE CALCULATIONS

I.D. NO.	AREA (AC.)	2-YEAR		25-YEAR		100-YEAR		COMMENTS
		Q (CFS)	CFS	Q (CFS)	CFS	Q (CFS)	CFS	
ALLOWED RUNOFF TO TxDOT HEADWALL								
		30.70		76.60		104.30		ROADWAY BEING RELEASED
		9.03		19.46		28.22		UNDETAILED AND THE DEVELOPED
		SITE HAVING TO OBTAIN FOR THAT RELEASE						
REMAINING RUNOFF FOR THE REST OF NORTHERN SITE								
		21.67	CFS	57.14	CFS	76.08	CFS	
NORTHERN SITE RELEASE RATE PER ACRE (15.985 ACRES)								
		1.36	CFS/ACRE	3.57	CFS/ACRE	4.76	CFS/ACRE	THIS IS THE ALLOWED RELEASE RATE FOR EACH ACRE OF LAND
ALLOWED RUNOFF TO OS1 HEADWALL								
		5.70		13.30		16.40		ROADWAY BEING RELEASED
		5.70		13.30		16.40		UNDETAILED AND THE DEVELOPED
		SITE HAVING TO OBTAIN FOR THAT RELEASE						
REMAINING RUNOFF FOR THE REST OF OS1 HEADWALL								
		0.00	CFS	0.00	CFS	0.00	CFS	
ALLOWED RUNOFF TO OS2 HEADWALL								
		48.58		113.80		165.68		ROADWAY BEING RELEASED
		8.34		16.95		27.47		UNDETAILED AND THE DEVELOPED
		SITE HAVING TO OBTAIN FOR THAT RELEASE						
REMAINING RUNOFF FOR THE REST OF SOUTHERN SITE								
		40.24	CFS	96.85	CFS	138.21	CFS	
SOUTHERN SITE RELEASE RATE PER ACRE (47.436 ACRES)								
		0.85	CFS/ACRE	2.04	CFS/ACRE	2.91	CFS/ACRE	THIS IS THE ALLOWED RELEASE RATE FOR EACH ACRE OF LAND

- NOTES:
- DRAINAGE DESIGN WILL BE PROVIDED AND REVIEWED WITH FUTURE CONSTRUCTION AND SITE PLAN APPLICATIONS AND MUST COMPLY WITH CITY ENGINEERING DESIGN MANUAL
 - ALL PHASES OF DEVELOPMENT ARE REQUIRED TO PROVIDE DETENTION NECESSARY TO ENSURE THAT THE PEAK FLOWS LEAVING THE SITE UNDER POST-DEVELOPING CONDITIONS DO NOT EXCEED PEAK FLOWS LEAVING THE SITE UNDER PREDEVELOPMENT CONDITIONS

Winkelmann & Associates, Inc.
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 PFLUGERVILLE, TEXAS 78066
 (972) 488-7989
 (972) 488-7989 FAX
 Texas Engineers Registration No. 89
 Texas Surveyors Registration No. 100868
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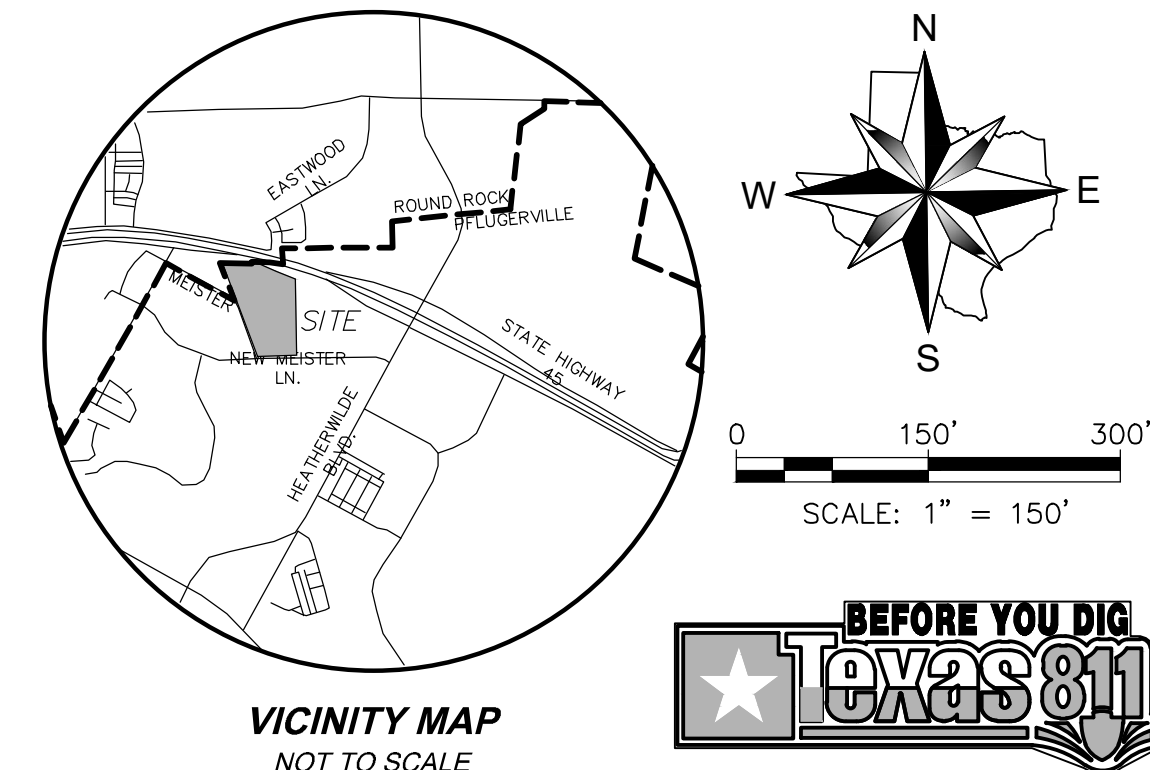
12-01-2021

PRELIMINARY ULTIMATE DRAINAGE AREA MAP
 LONGHORN ADDITION INFRASTRUCTURE
 PFLUGERVILLE, TX

P-07

No.	DATE	REVISION	APPROV.
1.	2021-11-24	FIRST SUBMITTAL	
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NOTE:
UTILITY DESIGN WILL BE PROVIDED AND
REVIEWED WITH FUTURE CONSTRUCTION
PLAN APPLICATIONS AND MUST COMPLY
WITH THE STANDARDS OUTLINED IN THE
ENGINEERING DESIGN MANUAL



*****NOTICES TO CONTRACTOR*****

EXISTING UNDERGROUND/BURIED PUBLIC, PRIVATE, AND FRANCHISE UTILITIES/FACILITIES AFFECT THIS SITE, AND ARE DEPICTED ON THE PLANS PER THE BEST AVAILABLE INFORMATION AT THE TIME THE PLANS WERE PRODUCED. WINKELMANN & ASSOC., INC. SHALL NOT BE RESPONSIBLE FOR KNOWING THE EXACT LOCATION OF ALL FACILITIES OR DEPICTING EXACT LOCATIONS OF SAID FACILITIES ON THE PLANS BEYOND WHAT IS STATED ABOVE.

CONTRACTOR(S) SHALL CALL "811" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK ON THE SITE, AND SHALL NOT BEGIN ANY EXCAVATION OR DEMOLITION ACTIVITIES UNTIL AFTER SAID FACILITIES HAVE BEEN MARKED AND/OR FLAGGED PER "811" OR THE FACILITY OWNERS.

CONTRACTOR(S) SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO SAID FACILITIES DUE TO WORK BEING DONE WITHOUT FOLLOWING THE PROCEDURES ABOVE.

ABBREVIATION LEGEND

PP	Power Pole	IRF	Iron Rod Found
CW	Guy Wire	IRS	Iron Rod Set
MH	Manhole	CIRS	Iron Rod Set w/ cap "WAI"
WV	Water Valve	CIRF	Iron Rod Found w/ cap
TP	Telephone Pedestal	XCS	"X" Cut in Concrete Set
WM	Water Meter	XCF	"X" Cut in Concrete Found
FH	Fire Hydrant	PKS	PK Nail Set
LP	Light Pole	PKF	PK Nail Found
IV	Irrigation Valve	SS	Sanitary Sewer
CO	Clean Out	SW	Storm Sewer
AC	Air Conditioner	TF	Transformer pad
TV	Cable Box	GM	Gas Meter
SB	Signal Box	GMK	Gas Marker
SP	Signal Pole	TSN	Traffic Sign
SN	Sign	UGC	Underground Cable Marker
CM	Control Monument	EB	Electric Box
		EM	Electric Meter

—●—●— EX. SANITARY SEWER

PHASE 1

----- 12" WATER

----- 8" SANITARY SEWER

BENCH MARKS:

BM#1 – Square cut on concrete base of a transmission tower, ±233.6 feet Northwest of the Northeast property corner of "Tract 1".

ELEVATION – 792.34 feet

BM#2 – Square cut on the Northwest corner of a curb inlet, North curb line of New Meister Lane, ±240.3 feet West of the Southwest property corner of "Tract 1".

ELEVATION – 766.41 feet

Winkelman & Associates, Inc.

CONSULTING CIVIL ENGINEERS ■ SURVEYORS

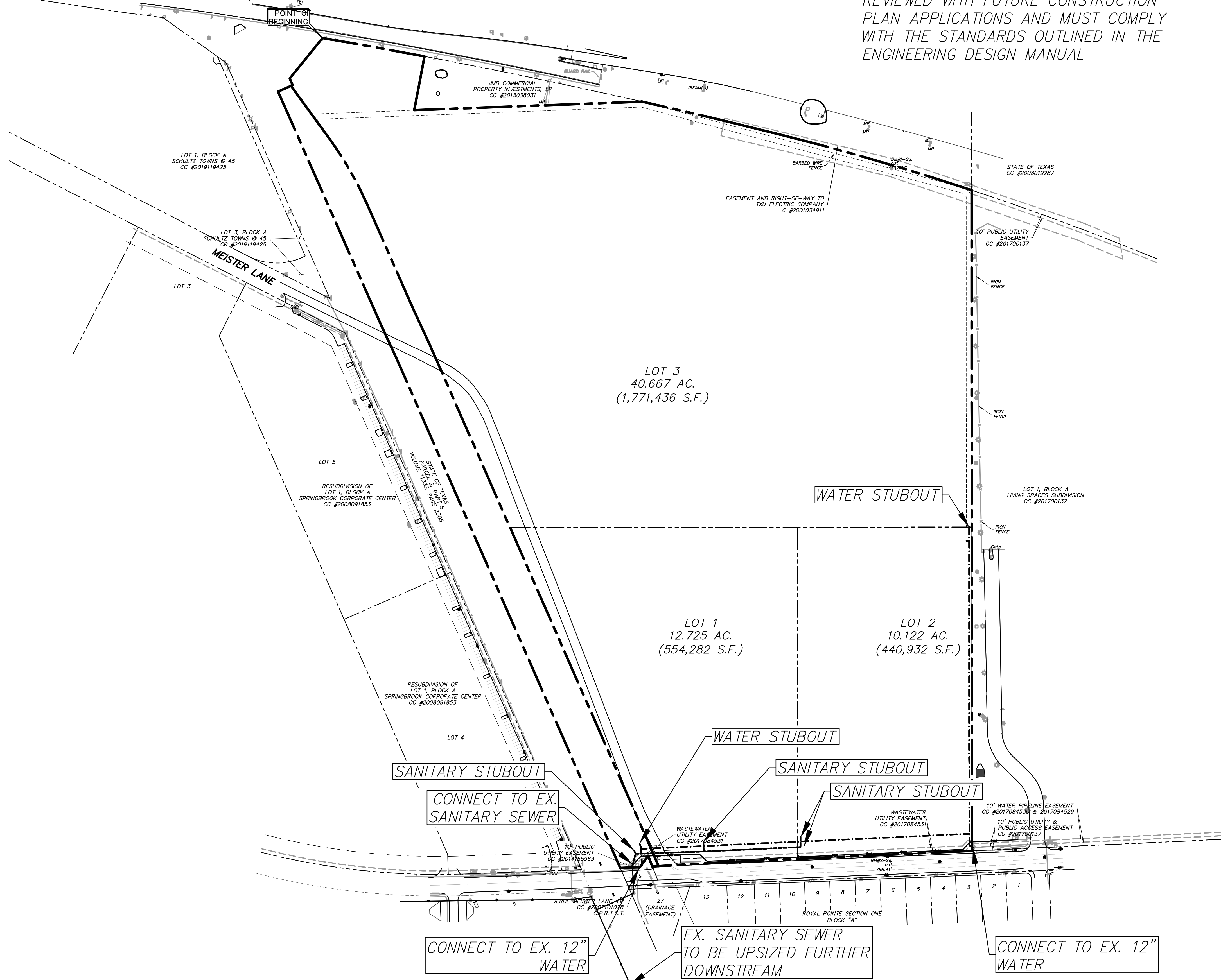
6750 HILGHEIST PLAZA, DRKE, SUITE 215 (972) 440-7900
 TEXAS ENGINEERS Registration No. 89 (972) 440-7999 FAX
 TEXAS SURVEYORS Registration No. 110886B-00
 LICENSED PROFESSIONAL ENGINEER IN MECHANICAL ENGINEERING

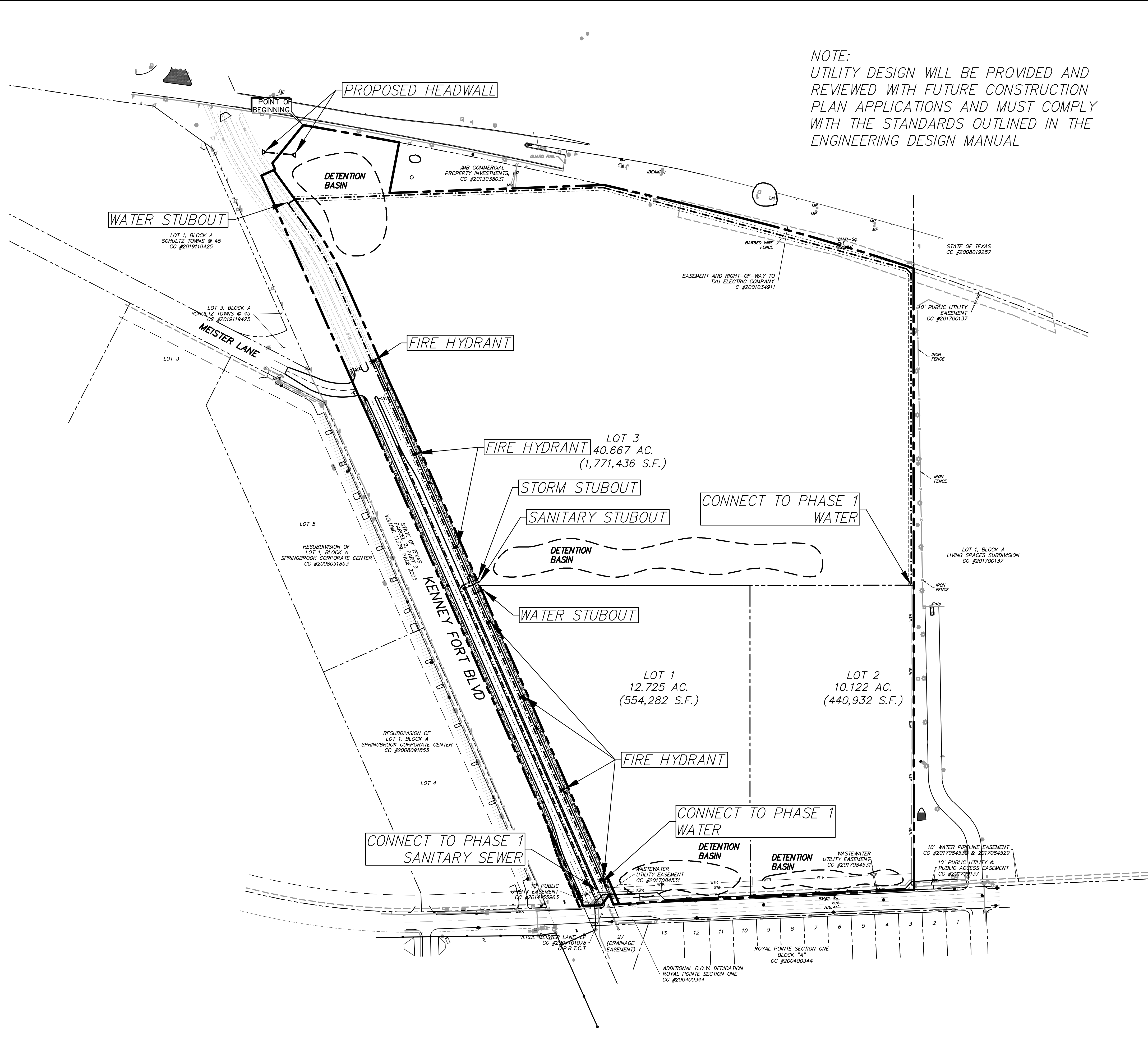
PRELIMINARY PHASE 1 UTILITY LAYOUT

LONGHORN ADDITION
PFLUGERVILLE, TX

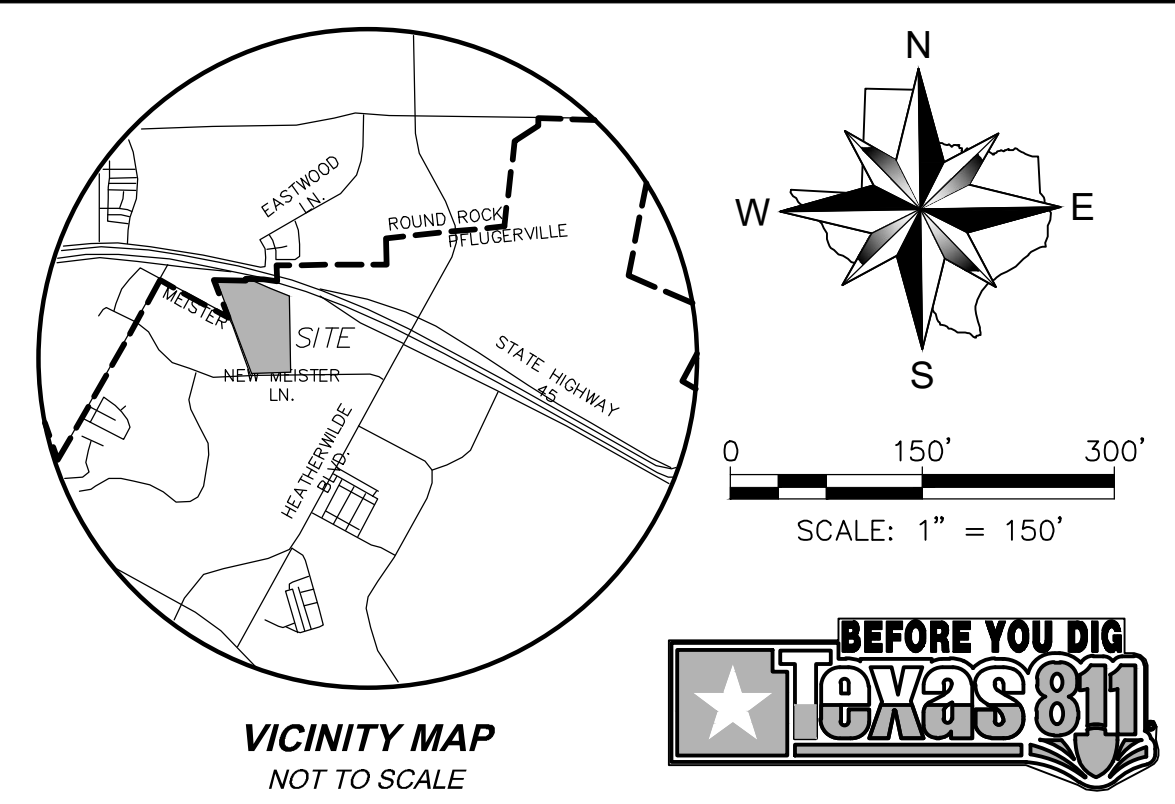
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No.	DATE	REVISION	APPROV.
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NOTE:
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*****NOTICES TO CONTRACTOR*****

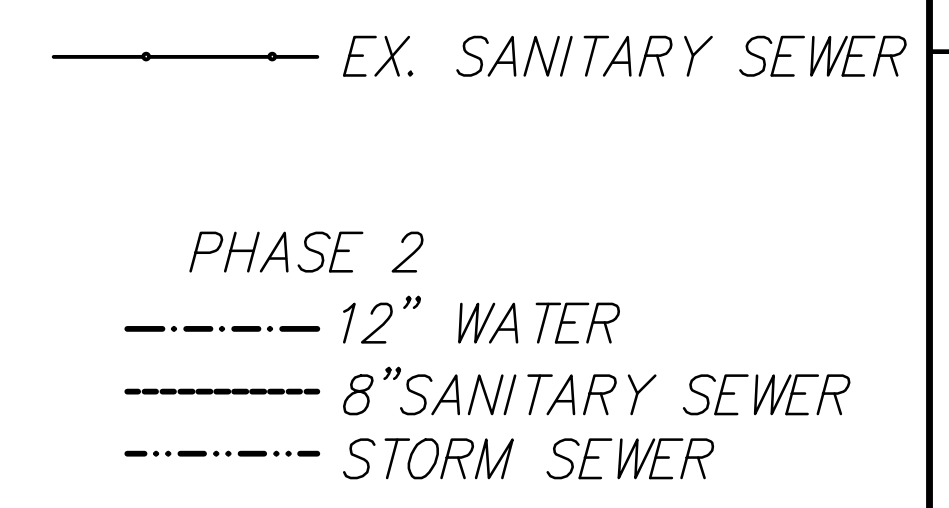
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LP	Light Pole	PKF	PK Nail Found
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CO	Clean Out	SW	Storm Sewer
AC	Air Conditioner	TF	Transformer pad
GM	Gas Meter	GM	Gas Meter
TV	Cable Box	GMK	Gas Marker
SB	Signal Box	TSN	Traffic Sign
SP	Signal Pole	UCG	Underground Cable Marker
SN	Sign	EB	Electric Box
CM	Control Monument	EM	Electric Meter



BENCH MARKS:

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ELEVATION - 792.34 feet

BM#2 - Square cut on the Northwest corner of a curb inlet, North curb line of New Meister Lane, ±240.3 feet West of the Southwest property corner of "Tract 1".
ELEVATION - 766.41 feet

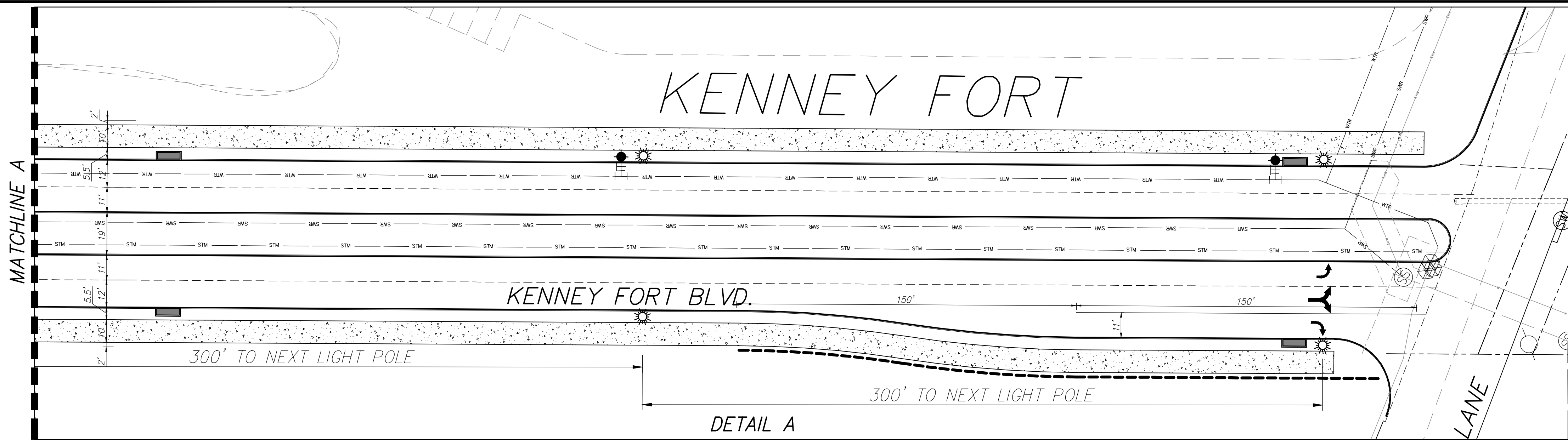
Winkelman & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILDBEST PLAZA, BLDG. SUITE 215
PFLUGERVILLE, TEXAS 78666-0000
(972) 440-7900 FAX (972) 440-7999 FAX
LICENSED PROFESSIONAL ENGINEER REGISTRATION NO. 89
LICENSED PROFESSIONAL SURVEYOR REGISTRATION NO. 100866-00
LICENSED PROFESSIONAL LAND SURVEYOR REGISTRATION NO. 100866-00

P-08 PRELIMINARY PHASE 2 UTILITY LAYOUT
LONGHORN ADDITION
PFLUGERVILLE, TX

P-08.2

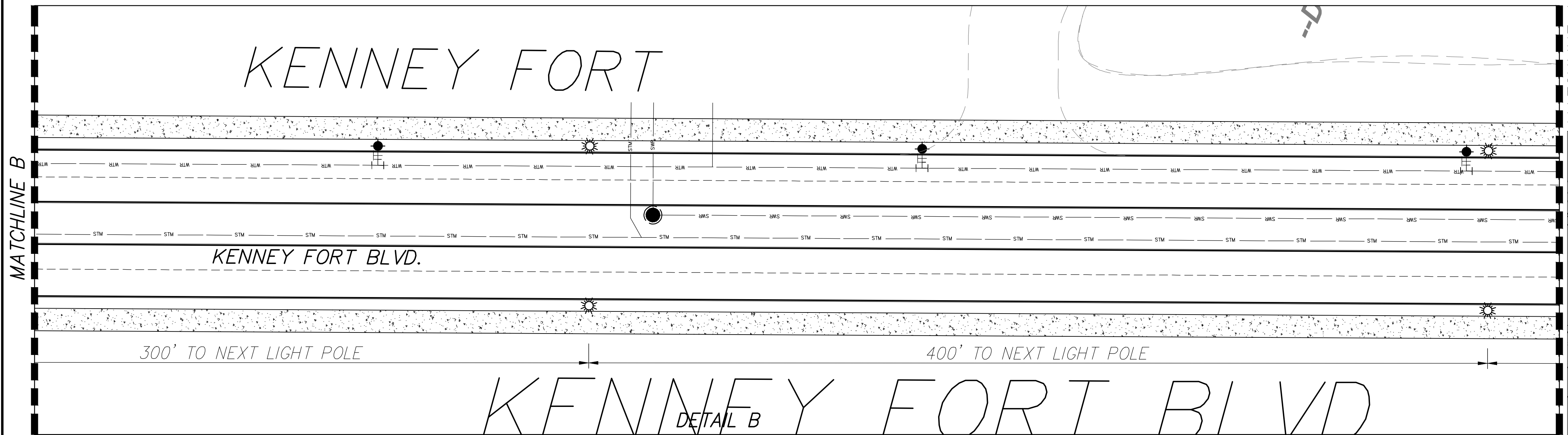
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KENNEY FORT



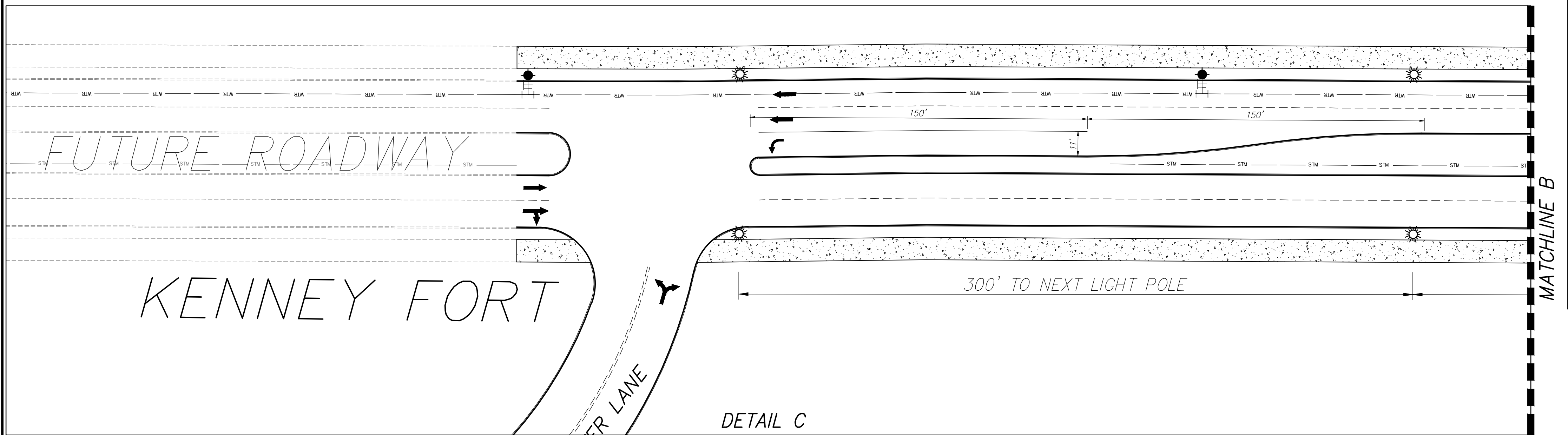
DETAIL A

KENNEY FORT

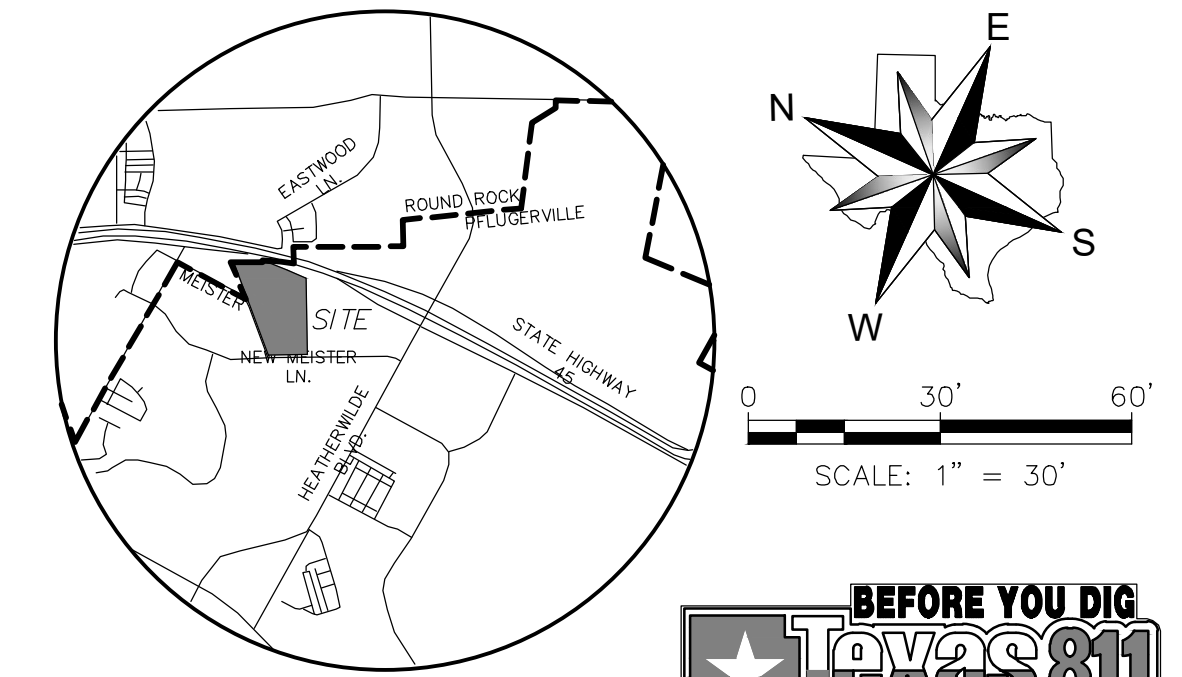


DETAIL B

KENNEY FORT BLVD



DETAIL C



VICINITY MAP
NOT TO SCALE

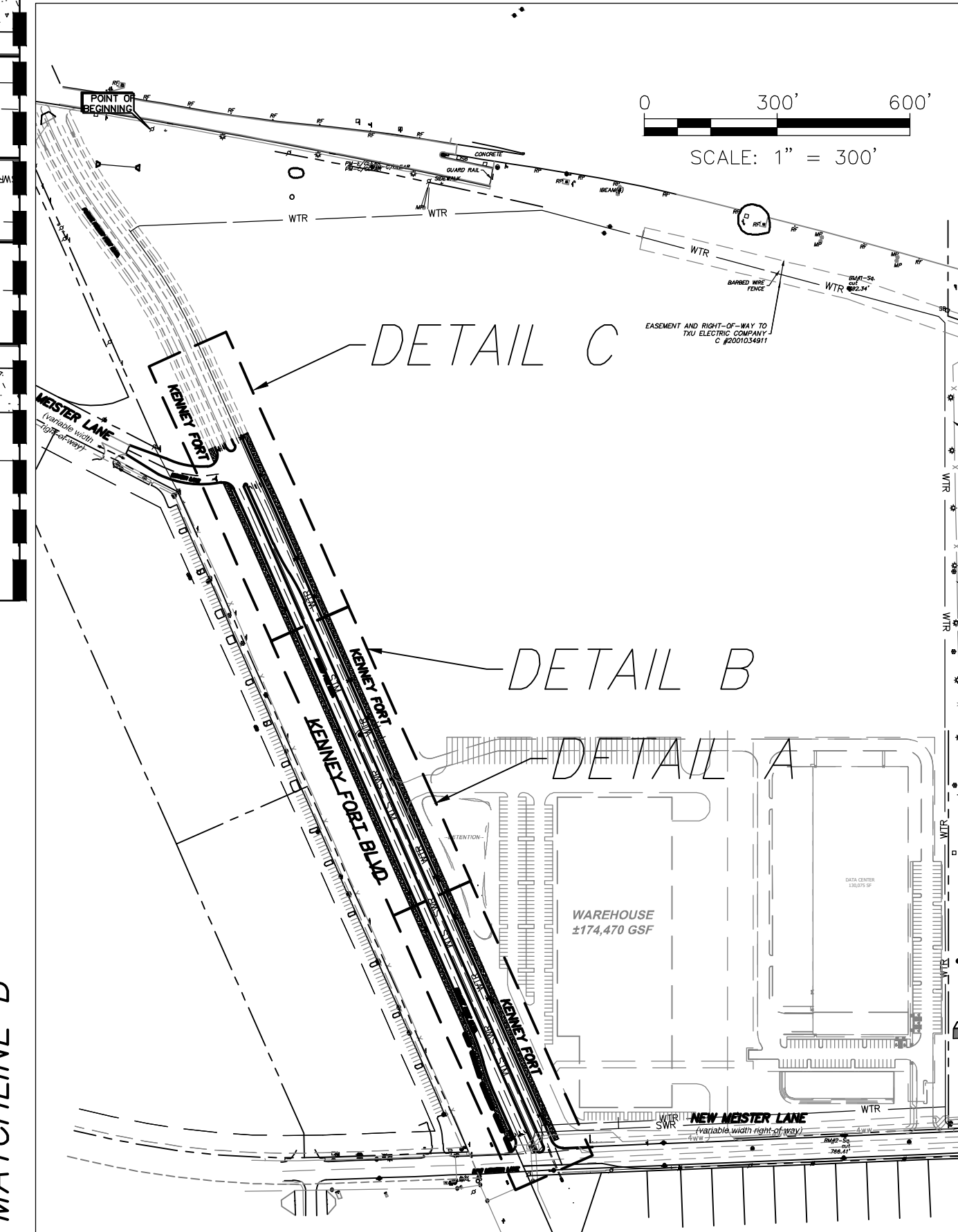


*****NOTICES TO CONTRACTOR*****

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BENCH MARKS:

BM#1 - Square cut on concrete base of a transmission tower, ±233.6 feet Northwest of the Northeast property corner of "Tract 1".

ELEVATION - 792.34 feet

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ELEVATION - 766.41 feet

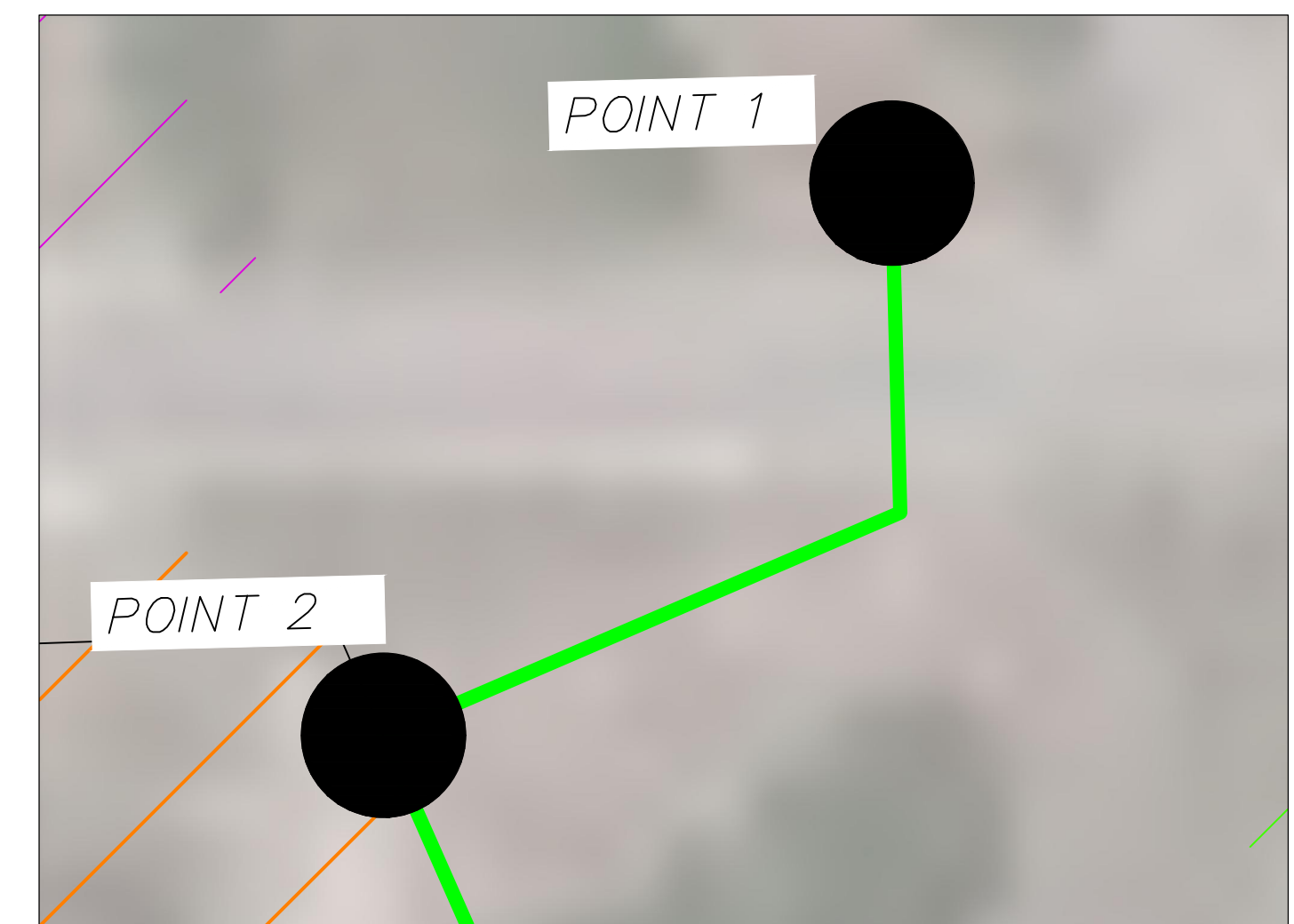
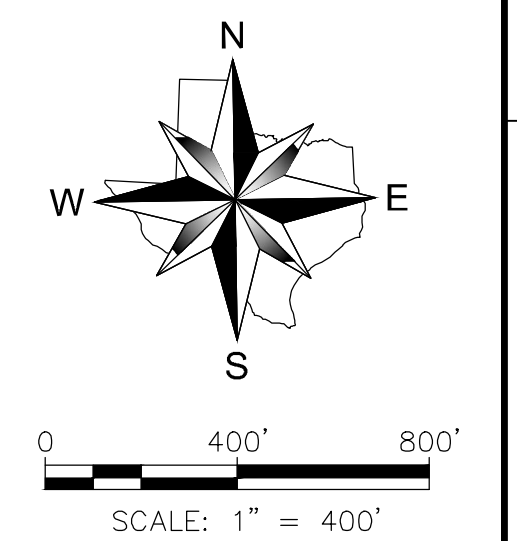
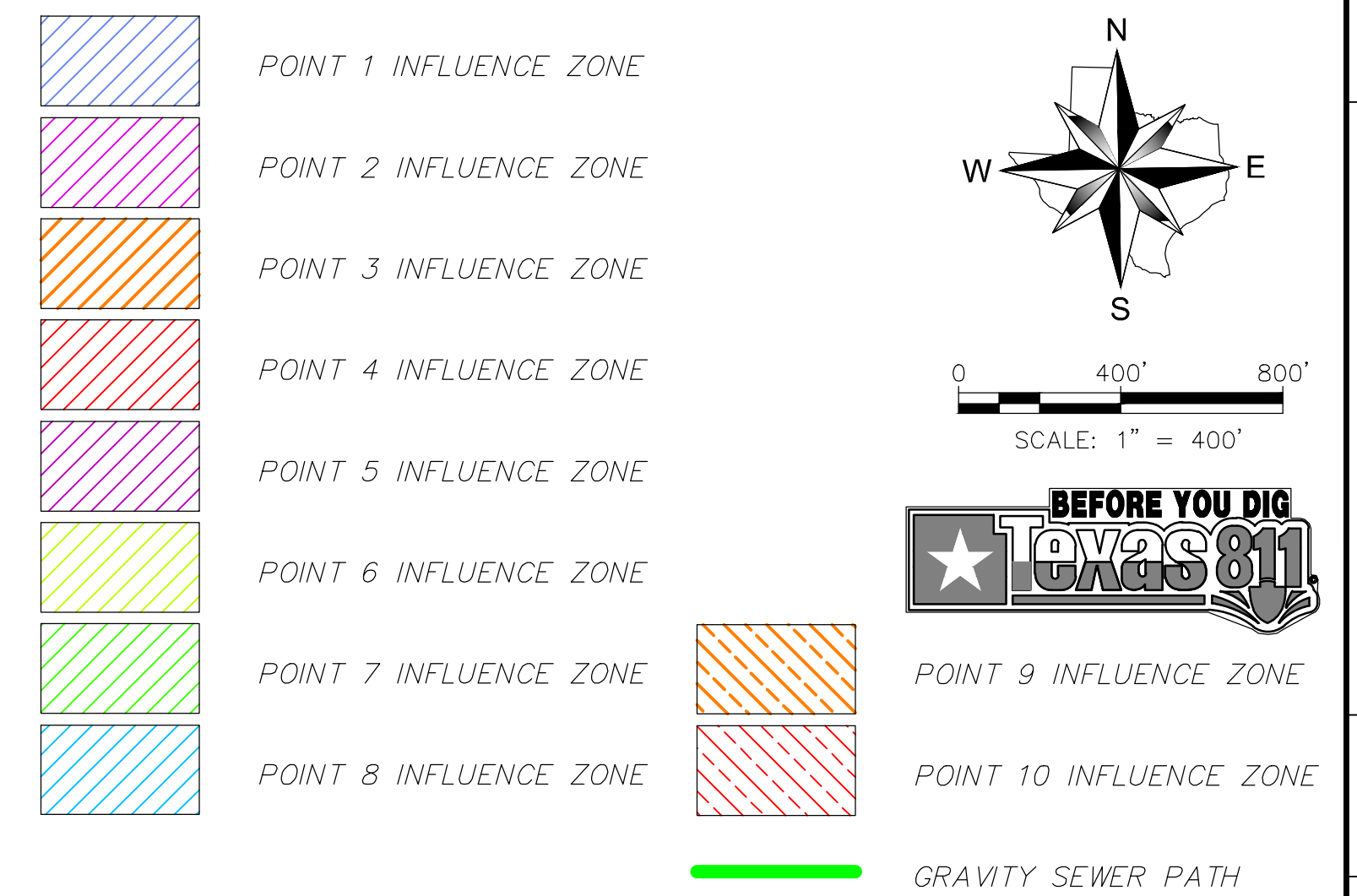
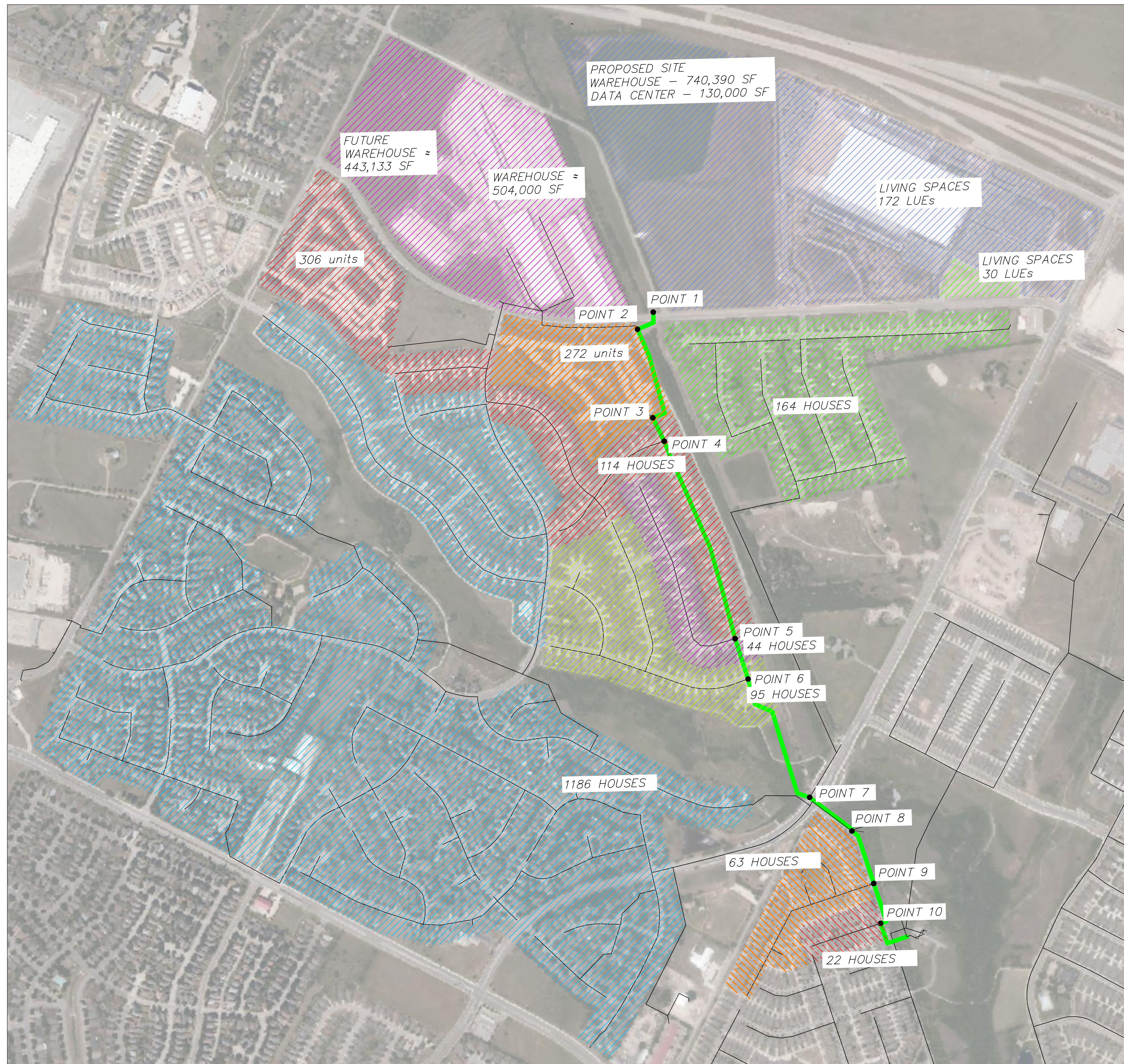
Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILDCREST PLAZA DRIVE, SUITE 215
PFLUGERVILLE, TEXAS 78066
(972) 486-7899
(972) 486-7899 FAX
www.winkelmann.com

PRELIMINARY ILLUMINATION PLAN

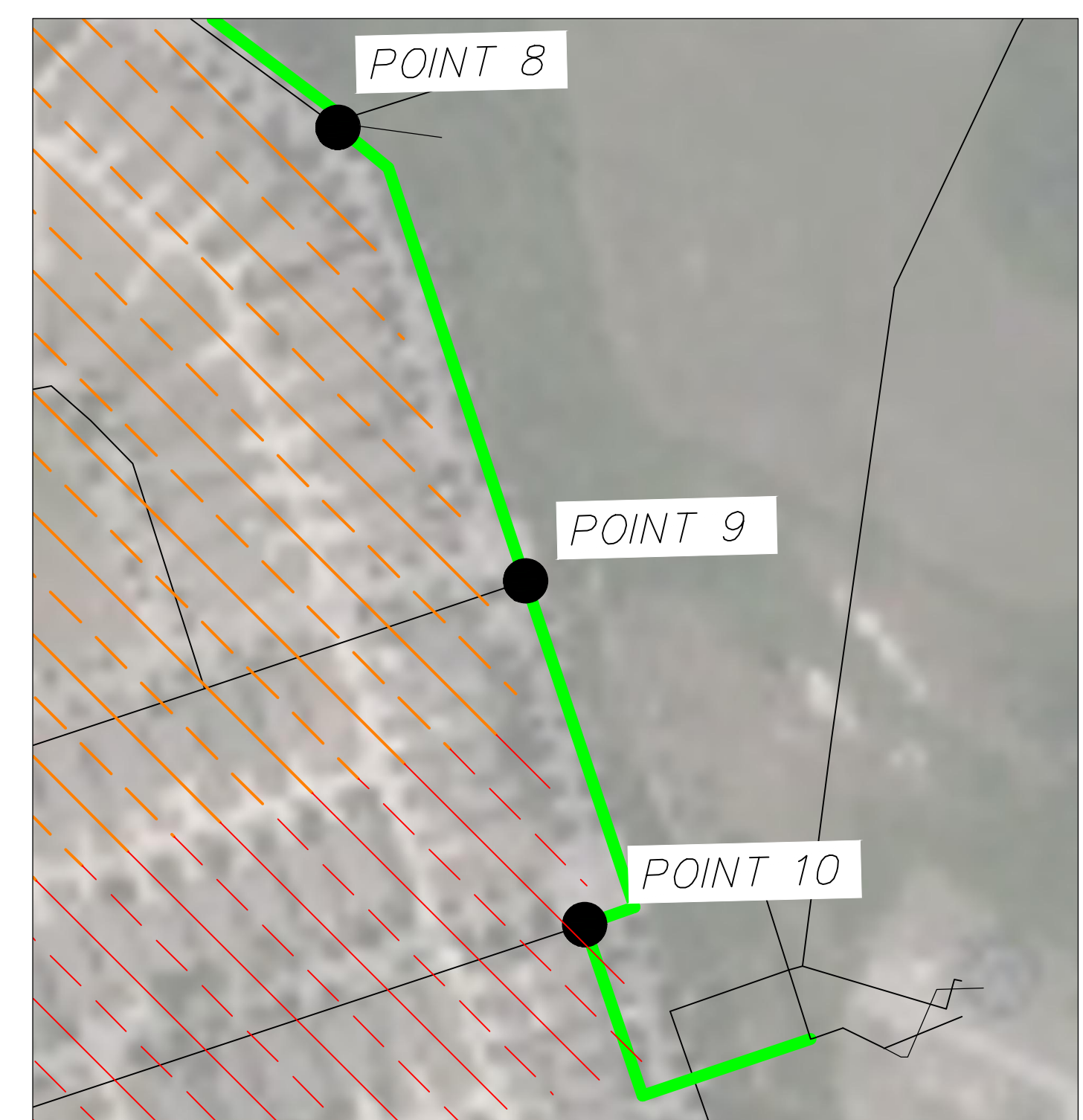
LONGHORN ADDITION
PFLUGERVILLE, TX

P-09

No.	DATE	REVISION	APPROV.
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SCALE: 1"=40'



SCALE: 1"=125'

Winkelmann & Associates, Inc.

CONSULTING CIVIL ENGINEERS ■ SURVEYORS

6750 HILDCREST PLAZA DR., SUITE 215 (972) 486-7900
 TEXAS ENGINEERS REGISTRATION NO. 100866-01 (972) 486-1898 FAX
 100866-01
 CORPORATION OF TEXAS, INCORPORATED IN TEXAS

11-01-2021


SANITARY SEWER STUDY EXHIBIT 1

PFLUGERVILLE, TX

P-10

No.	DATE	REVISION	APPROV.
6.			
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PROPOSED SITE	POINT 1	POINT 2	POINT 3	POINT 4	POINT 5	POINT 6	POINT 7	POINT 8	POINT 9	POINT 10								
Use Warehouse 870,390 SF Multifamily 0 Units Retail 0 SF Restaurant 0 SF Total LUEs 217.5975 Total Acres 63.265 Acres Point 1 From Living Spaces Total LUEs 172 Total Acres 67.3 Acres Accumulated LUEs 389.5975 Accumulated Acres 130.565 Point 2 Use Warehouse 504,500 SF Future Warehouse 443,133 SF Total LUEs 110 Total Acres 63.2 Accumulated LUEs 626.5975 Accumulated Acres 193.765 Point 3 Use Multifamily 272 Units Total LUEs 136 Total Acres 16.62 Accumulated LUEs 762.5975 Accumulated Acres 210.385 Point 4 Use Multifamily 306 Units Single Family 114 Units Total LUEs 267 Total Acres 51.75 Accumulated LUEs 1029.598 Accumulated Acres 262.135 Point 5 Use Single Family 44 Units Total LUEs 44 Total Acres 11.84 Accumulated LUEs 1073.598 Accumulated Acres 273.975 Point 6 Use Single Family 95 Units Total LUEs 95 Total Acres 29.96 Accumulated LUEs 1168.598 Accumulated Acres 303.935 Point 7 Use From Living Spaces Single Family 95 Units Total LUEs 125 Total Acres 49.14 Accumulated LUEs 1293.598 Accumulated Acres 353.075 Point 8 Use Single Family 1186 Units Total LUEs 1186 Total Acres 326.55 Accumulated LUEs 2479.598 Accumulated Acres 679.625 Point 9 Use Single Family 63 Units Total LUEs 63 Total Acres 14.06 Accumulated LUEs 2542.598 Accumulated Acres 693.685 Point 10 Use Single Family 22 Units Total LUEs 22 Total Acres 4.44 Accumulated LUEs 2564.598 Accumulated Acres 698.125	Average Dry Weather Flowrate $Q_{avg} = 73.05 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.68 PDWF= 268.82 gpm Inflow and Infiltration $Q_{i\&i} = 68 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 336.82 gpm Pipe Full Flow Capacity $Q_{full} = 389.65$ Dry Weather Percent Full DW%= 68.99% Not to Exceed 50% Wet Weather Percent Full WW%= 86.44% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 117.49 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.52 PDWF= 413.56 gpm Inflow and Infiltration $Q_{i\&i} = 100.92 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 514.48 gpm Pipe Full Flow Capacity $Q_{full} = 923.99$ Dry Weather Percent Full DW%= 44.76% Not to Exceed 50% Wet Weather Percent Full WW%= 55.68% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 142.99 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.45 PDWF= 493.32 gpm Inflow and Infiltration $Q_{i\&i} = 109.58 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 602.90 gpm Pipe Full Flow Capacity $Q_{full} = 1392.97$ Dry Weather Percent Full DW%= 35.41% Not to Exceed 50% Wet Weather Percent Full WW%= 43.28% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 193.05 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.34 PDWF= 644.79 gpm Inflow and Infiltration $Q_{i\&i} = 136.53 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 781.32 gpm Pipe Full Flow Capacity $Q_{full} = 1296.78$ Dry Weather Percent Full DW%= 49.72% Not to Exceed 50% Wet Weather Percent Full WW%= 60.25% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 201.3 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.32 PDWF= 668.32 gpm Inflow and Infiltration $Q_{i\&i} = 158.3 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 826.62 gpm Pipe Full Flow Capacity $Q_{full} = 1296.78$ Dry Weather Percent Full DW%= 51.54% Not to Exceed 50% Wet Weather Percent Full WW%= 63.74% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 219.11 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.29 PDWF= 720.87 gpm Inflow and Infiltration $Q_{i\&i} = 158.3 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 879.17 gpm Pipe Full Flow Capacity $Q_{full} = 1296.78$ Dry Weather Percent Full DW%= 55.59% Not to Exceed 50% Wet Weather Percent Full WW%= 67.80% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 242.55 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 3.25 PDWF= 788.29 gpm Inflow and Infiltration $Q_{i\&i} = 183.89 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 972.18 gpm Pipe Full Flow Capacity $Q_{full} = 3013.12$ Dry Weather Percent Full DW%= 26.16% Not to Exceed 50% Wet Weather Percent Full WW%= 32.26% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 464.92 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 2.97 PDWF= 1380.81 gpm Inflow and Infiltration $Q_{i\&i} = 353.97 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 1734.78 gpm Pipe Full Flow Capacity $Q_{full} = 1828.1$ Dry Weather Percent Full DW%= 75.53% Not to Exceed 50% Wet Weather Percent Full WW%= 94.90% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 476.74 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 2.96 PDWF= 1411.15 gpm Inflow and Infiltration $Q_{i\&i} = 361.29 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 1772.44 gpm Pipe Full Flow Capacity $Q_{full} = 1828.1$ Dry Weather Percent Full DW%= 77.19% Not to Exceed 50% Wet Weather Percent Full WW%= 96.96% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 480.86 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 2.96 PDWF= 1423.35 gpm Inflow and Infiltration $Q_{i\&i} = 363.61 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 1786.96 gpm Pipe Full Flow Capacity $Q_{full} = 1828.1$ Dry Weather Percent Full DW%= 77.86% Not to Exceed 50% Wet Weather Percent Full WW%= 97.75% Not to Exceed 75%	Average Dry Weather Flowrate $Q_{avg} = 480.86 \text{ gpm}$ Peak Dry Weather Flowrate Peak Factor= 2.96 PDWF= 1423.35 gpm Inflow and Infiltration $Q_{i\&i} = 363.61 \text{ gpm}$ Peak Wet Weather Flowrate PWWF= 1786.96 gpm Pipe Full Flow Capacity $Q_{full} = 2742.15$ Dry Weather Percent Full DW%= 51.91% Not to Exceed 50% Wet Weather Percent Full WW%= 65.17% Not to Exceed 75%							
	<p>NOTE: AS AN ALTERNATIVE TO UPSIZING THE EXISTING LINES, INSTALLING A PARALLEL LINE AT EACH LOCATION WOULD ALLOW FLOWS TO MEET CITY CRITERIA.</p>																	
	<p>PIPE CAPACITY CALCULATIONS</p>																	
	Point 1 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 8 in Pipe Radius 0.333 FT Pipe Area 0.35 FT ² Hydraulic Radius(full) 0.17 FT Wetted Perimeter 2.092301 FT Pipe Slope (%) 0.5 % Pipe Slope 0.005 CFS to GPM 448.83 GPM/cfs Pipe Capacity 389.65 GPM		Point 2 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 12 in Pipe Radius 0.5 FT Pipe Area 0.79 FT ² Hydraulic Radius(full) 0.25 FT Wetted Perimeter 3.141593 FT Pipe Slope (%) 0.33 % Pipe Slope 0.0033 CFS to GPM 448.83 GPM/cfs Pipe Capacity 923.99 GPM		Point 3 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 12 in Pipe Radius 0.5 FT Pipe Area 0.79 FT ² Hydraulic Radius(full) 0.25 FT Wetted Perimeter 3.141593 FT Pipe Slope (%) 0.75 % Pipe Slope 0.0075 CFS to GPM 448.83 GPM/cfs Pipe Capacity 1392.97 GPM		Point 4 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 12 in Pipe Radius 0.5 FT Pipe Area 0.79 FT ² Hydraulic Radius(full) 0.25 FT Wetted Perimeter 3.141593 FT Pipe Slope (%) 1.55 % Pipe Slope 0.0155 CFS to GPM 448.83 GPM/cfs Pipe Capacity 2002.52 GPM		Point 5 & 6 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 12 in Pipe Radius 0.5 FT Pipe Area 0.79 FT ² Hydraulic Radius(full) 0.25 FT Wetted Perimeter 3.141593 FT Pipe Slope (%) 1.2 % Pipe Slope 0.012 CFS to GPM 448.83 GPM/cfs Pipe Capacity 1761.98 GPM		Point 6 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 12 in Pipe Radius 0.5 FT Pipe Area 0.79 FT ² Hydraulic Radius(full) 0.25 FT Wetted Perimeter 3.141593 FT Pipe Slope (%) 1 % Pipe Slope 0.01 CFS to GPM 448.83 GPM/cfs Pipe Capacity 1608.46 GPM		Point 7 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 18 in Pipe Radius 0.75 FT Pipe Area 1.77 FT ² Hydraulic Radius(full) 0.38 FT Wetted Perimeter 4.712389 FT Pipe Slope (%) 0.4 % Pipe Slope 0.004 CFS to GPM 448.83 GPM/cfs Pipe Capacity 3013.12 GPM		Points 8 & 9 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 15 in Pipe Radius 0.625 FT Pipe Area 1.23 FT ² Hydraulic Radius(full) 0.31 FT Wetted Perimeter 3.926991 FT Pipe Slope (%) 0.9 % Pipe Slope 0.009 CFS to GPM 448.83 GPM/cfs Pipe Capacity 1828.1 GPM		Point 10 Constant 1.486 Roughness (n) 0.013 Pipe Diameter 15 in Pipe Radius 0.625 FT Pipe Area 1.23 FT ² Hydraulic Radius(full) 0.31 FT Wetted Perimeter 3.926991 FT Pipe Slope (%) 0.9 % Pipe Slope 0.009 CFS to GPM 448.83 GPM/cfs Pipe Capacity 2742.15 GPM	

 Winkelmann & Associates, Inc. CONSULTING CIVIL ENGINEERS ■ SURVEYORS 6750 HILDCREST PLAZA DR. SUITE 215 (921) 486-7888 PFLUGERVILLE, TX 78150 (921) 486-7888 FAX www.wa-inc.com				01-26-2021	
SANITARY SEWER STUDY EXHIBIT 2				PFLUGERVILLE, TX	
P-11				DATE REVISION APPROVAL	

LAST SAVED BY: SHUBACH December 1, 2021
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