

## City of Lucas Planning and Zoning Request November 10, 2022

Requester: Development Services Director Joe Hilbourn

#### **Agenda Item Request**

Consider approval of an application for a site plan, landscape plan, elevations, and a preliminary plat submitted by Dave Carter, on behalf of the owner NDC Holdings, LP, for Lucas Retail Addition, a retail center on a 1.619-acre tract of land in the William Snider Survey, Abstract Number 821, situated in the City of Lucas, Collin County, Texas, located at 2695 McGarity Lane.

#### **Background Information**

#### Site Plan:

NDC Holdings is proposing 10,450 square feet of retail and restaurant space. A drive-through does require a specific use permit. The specific use permit was approved on June 2, 2022. The site is currently zoned Commercial Business, and the use fits the area.

Impervious cover shown is 63% (a maximum of 65% is permitted). The amount of parking spaces required is 74 (74 are proposed). Site stormwater runoff detention is accounted for and shown, and all drainage is dedicated as a drainage easement for protection. The site does meet the City's lighting requirements and the photometric plan that was submitted. The photometric site plans show a max height of outdoor fixtures of 25', and lights are shielded, full cutoff light fixtures in compliance with the City's lighting ordinance.

#### Landscape Plan:

Total site area is 70,503 square feet and the building footprint is 10,450 square feet. Total landscape area provided is 17,233 square feet; 15% is required and 24% is proposed. Angel Parkway - street trees required is 10 (10 are provided). Angel Parkway - street shrubs required is 80, 121 are provided. McGarity Lane - street trees required is 12, 12 are provided. McGarity Lane - street shrubs required is 118, 128 are provided. Parking area is 35,241 square feet. Required interior landscape is 1,762 square feet (5%). Provided interior landscape is 2,697 square feet (7%). Parking shade trees required is 8 trees. Parking shade trees provided is 9 trees.

Irrigation is required for all provided landscape elements; the irrigation plan provided is showing compliance.

#### **Architectural Plan:**

The proposed building height is 27 feet tall; maximum permitted is 35 feet tall. The proposed building has 100% masonry. The length of the building is 142 feet wide and meets the City's requirements for a change of direction in an elevation every 60 feet.

House Bill 2439 no longer permits cities to restrict building materials that are permitted by a model code. The building materials proposed comply with the requirements in the 2015 International Building Code.

Item No. 02



# City of Lucas Planning and Zoning Request November 10, 2022

#### **Preliminary plat:**

The lot is 1.619 acres of land. The preliminary plat and civil engineering plans (approved by the engineering department on October 26, 2022) provides easements for drainage including detention, utility easements, and easements for fire lanes. The plat meets the City's requirements for a preliminary plat.

#### **Attachments/Supporting Documentation**

- 1. Civil Plans
- 2. Site Plan
- 3. Elevations
- 4. Photometric Plan
- 5. Preliminary Plat
- 6. Landscape Plan
- 7. Application
- 8. Checklist
- 9. Location Map

#### **Budget/Financial Impact**

NA

#### Recommendation

Staff recommends approving the site plan, landscape plan, architectural plan, and the preliminary plat.

#### Motion

I make a motion to recommend to the City Council to approve/deny the site plan, landscape plan, elevations and the preliminary plat submitted by Dave Carter, on behalf of the owner NDC Holdings, LP, for Lucas Retail Addition, a retail center on a 1.619-acre tract of land in the William Snider Survey, Abstract Number 821, situated in the City of Lucas, Collin County, Texas, located at 2695 McGarity Lane.

# ENGINEERING PLANS

# LUCAS RETAIL

# CITY OF LUCAS, TEXAS

#### Index Of Drawings

Cover Sheet
Preliminary Plat
ALTA/NSPS Survey

Topographie Survey

SP Site Plan
C1-1 Demolition Plan
C2-1 Paving Plan
C3-1 Grading Plan

C4-1 Ex. Drainage Area Map C4-2 Drainage Area Map C4-3 Detention Pond Plan

C5-1 Utility Plan

C5-2 Sanitary Sewer Profile

C6-1 Erosion Control Plan C7-1 Construction Details

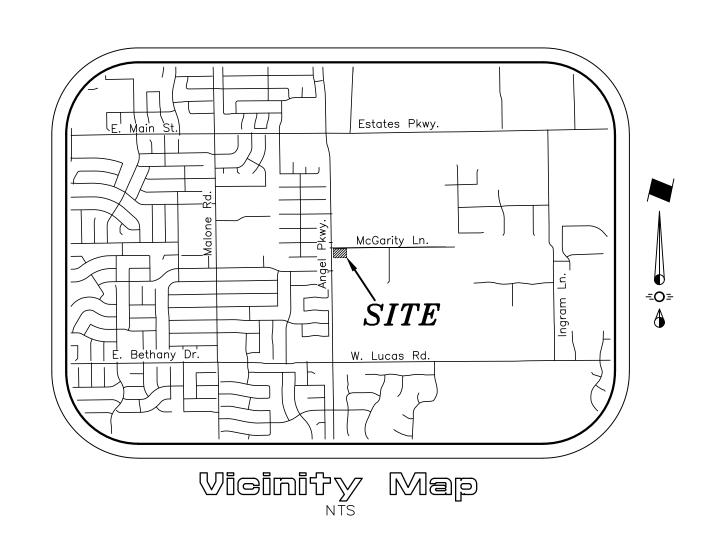
L1.01 Tree Preservation Plan

L2.01 Landscape Plan

L2.02 Landscape Specifications and Details

L3.01 Irrigation Plan

L3.02 Irrigation Specifications and Details



Prepared For

# NDC Holdings

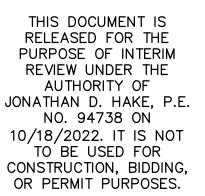
8235 Douglas Avenue, Suite 720 Dallas, Texas 75225

Engineer

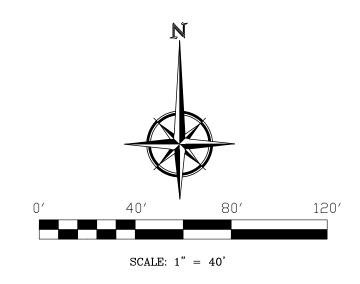
CROSS ENGINEERING CONSULTANTS

1720 W. Virginia Stre 972.562.4409

McKinney, Texas 75069 Texas P.E. Firm No. F-5935



ISSUE DATES:	REVISIONS:	DATE BY
09/06/2022		
10/11/2022		
10/18/2022		



The area (acres) shown hereon is based on the mathematical closure of the courses and distances reflected on this Survey. It does not include the tolerances that may be present due to positional accuracy of the boundary monuments in place.

#### REFERENCE BEARING NOTE:

The bearings shown hereon are geodetic and were derived from GPS observations and measurements from City of Allen Control Monument No. 7 and referenced to the Texas State Plane Coordinate System, NAD 83, North Central Zone (4202).

#### FLOOD ZONE NOTE:

This Surveyor has reviewed Flood Insurance Rate Map No. 48085C0405J (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review revealed that the subject parcel lies within "ZONE X" (Un-Shaded) and is outside of the 0.2% annual chance floodplain.

#### MONUMENT NOTE:

All lot corner monuments set by this Surveyor are 1/2 inch diameter rebar, 18 inches long, topped with a red plastic cap, stamped "RPLS 4701" or if in concrete pavement, a mag nail with a steel washer, stamped "RPLS 4701", unless otherwise noted.

#### SUBDIVISION NOTE:

All proposed lots situated in whole or in part within the city's corporate limits comply with the minimum size requirements of the governing zoning district and the requirements of the subdivision ordinance.

Selling a portion of this addition by metes and bounds is a violation of City Subdivision Ordinance and State of Texas statutes and is subject to fines and witholding of utilities and building permits.

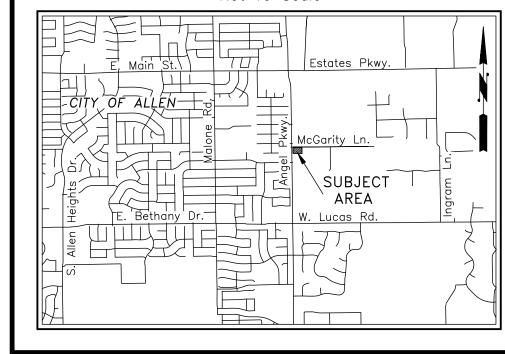
#### PURPOSE STATEMENT:

The purpose of this plat is to abandon an easement and dedicate easements for the development of the subject property.

#### LEGEND

₩ WATER VALVE △ WATER METER -**├**- FIRE HYDRANT ∅ POWER POLE GUY ANCHOR (TR) TELEPHONE RISER FOC FIBER OPTIC CABLE BOX TVR CABLE TELEVISION RISER CoServ UTILITY MARKER (Labeled) FOC W UTILITY MARKER (Labeled) ( ) SANITARY SEWER MANHOLE BOUNDARY LINE ADJOINER BOUNDARY LINE OVERHEAD POWER LINE — GAS —— GAS —— GAS —— GAS — BURIED COSERV GAS LINE BURIED FIBER OPTIC LINE BURIED WATER LINE BURIED 12" WATER LINE SANITARY SEWER LINE (Size Labeled)

#### VICINITY MAP Not To Scale



**ABBREVIATIONS** 

Doc. No. = Document Number

CM = Controlling Monument

IRF = Iron Rod Found

D.R.C.C.T. = Deed Records, Collin County, Texas

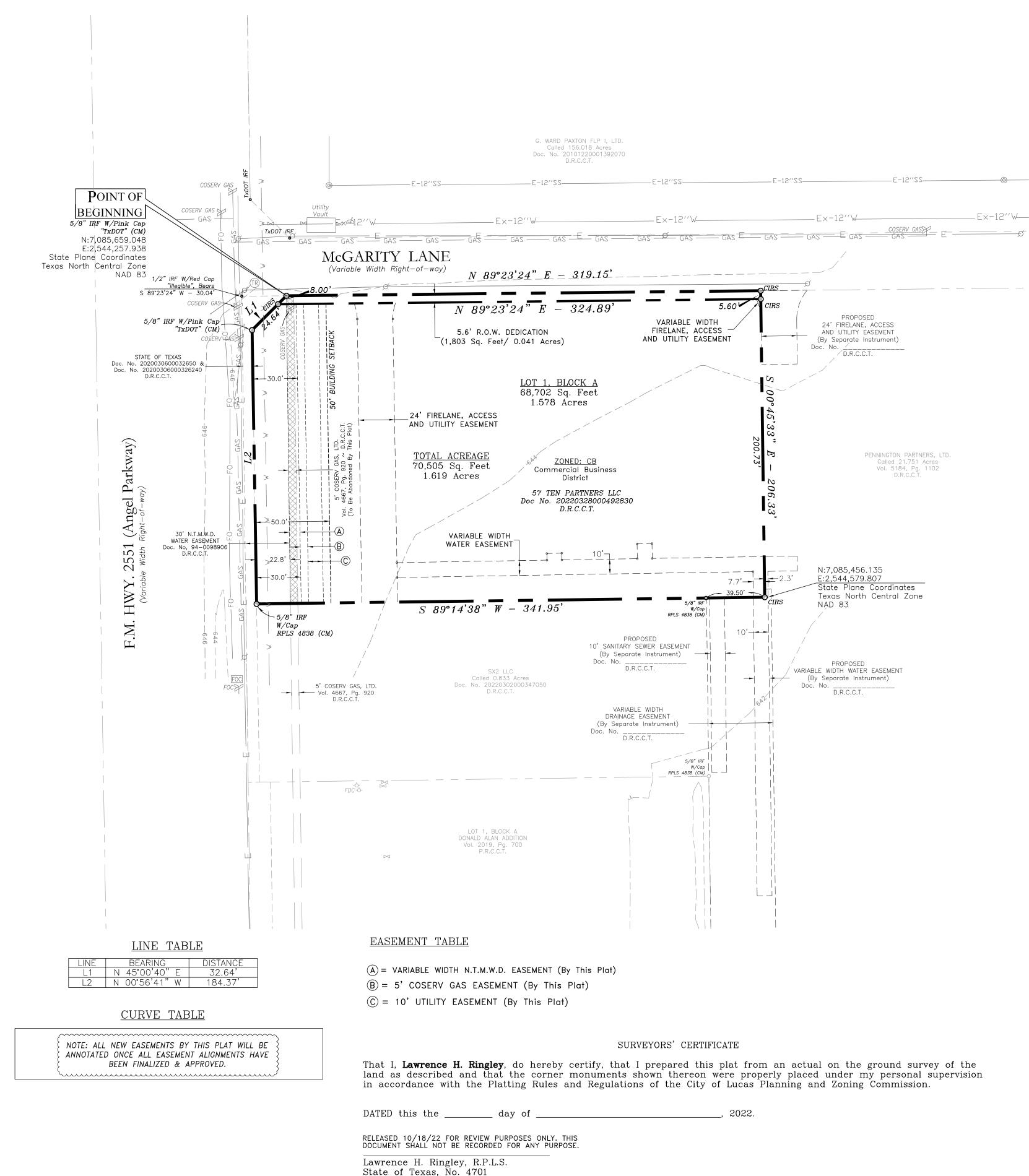
IRS = 1/2 " Iron Rod Set with red plastic cap, stamped "RPLS 4701"

P.R.C.C.T. = Plat Records, Collin County, Texas

TxDOT = Texas Department of Transportation

Vol. = Volume

Pg. = Page



#### OWNER'S CERTIFICATE

STATE OF TEXAS

COUNTY OF COLLIN

WHEREAS, 57 TEN PARTNERS, LLC is the owner of that certain tract of land situated in the City of Lucas, in the William Snider Survey, Abstract No. 821 of Collin County, Texas and being a part of that certain called 21.751 acre tract of land described in a deed to Pennington Partners, Ltd., recorded in Volume 5184, Page 1102, Deed Records, Collin County, Texas (D.R.C.C.T.) and being more particularly described by metes & bounds as

BEGINNING at a 5/8 inch iron rod, topped with a pink plastic cap, stamped "TxDOT", found for the northeastern corner of that certain called 0.0595 acre strip of land, described as "Parcel 59" in a deed to the State of Texas, dated March 5, 2020 and recorded in Document No. 20200306000326240, D.R.C.C.T. and from said beginning point, a found 1/2 inch iron rod, topped with a red plastic cap (illegible stamp), at the intersection of the original east right-of-way line of F.M. Highway 2551 (Angel Parkway - variable width right-of-way) and the south right-of-way line of McGarity Lane (variable width right-of-way) for the northwest corner of said "Parcel 59" and the above described 21.751 acre tract, bears South 89 deg. 23 min. 24 sec. West - 30.04 feet;

THENCE: North 89 deg. 23 min. 24 sec. East, along the common line of said 21.751 acre tract and said McGarity Lane, a distance of 319.15 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4701", set for the northeast corner of this tract;

THENCE: South 00 deg. 45 min. 33 sec. East, departing from said McGarity Lane, over & across said 21.751 acre tract, a distance of 206.33 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4701", set for the southeast corner of this tract;

THENCE: South 89 deg. 14 min. 38 sec. West, continuing across said 21.751 acre tract, at a distance of 39.50 feet, passing a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4838", found on line and continuing across said 21.751 acre tract for a total distance of 341.95 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4838", found on the east line of the above described TxDOT Parcel 59 and same being the now current east right-of-way line of said F.M. Highway 2551 (Angel Parkway);

THENCE: North 00 deg. 56 min. 41 sec. West, along the east line of said F.M. Highway 2551 and said Parcel 59, a distance of 184.37 feet to a 5/8 inch iron rod, topped with a pink plastic cap, stamped "TxDOT", found for an angle corner;

THENCE: North 45 deg. 00 min. 40 sec. East, continuing along the east line of said F.M. 2551 and said Parcel 59, a distance of 32.65 feet to the POINT OF BEGINNING and containing 70,505 square feet or 1.619 acres of land.

#### OWNER'S DEDICATION

STATE OF TEXAS

COUNTY OF COLLIN

STATE OF TEXAS

COUNTY OF COLLIN

That 57 TEN PARTNERS LLC, Owners, do hereby bind themselves and their heirs, assignees and successors of title this plat designating the hereinabove described property as LUCAS RETAIL, an addition to the City of Lucas, and do hereby dedicate to the public use forever the streets, alleys, and right-of-way easements shown thereon, and do hereby reserve the easement strips shown on this plat for the mutual use and accommodation of garbage collection agencies and all public utilities desiring to use or using same. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths that in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems on any of these easements strips, and any public utility shall at all times have the right of ingress and egress to and from and upon the said easement strips for the purpose of constructing, reconstructing, inspecting, patrolling, without the necessity at any time of procuring the permission of anyone. Additionally, I certify that I am the sole owner of the dedicated property and that no other's interest are attached to this property unless otherwise indicated on the required Mortgage Holder Certification that is included on this plat. This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

Witness our hands at LUCAS, Texas, this day of	, 2022.
Dans Cantan Dragidant	
Dave Carter — President 57 Ten Partners LLC	

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared DAVE CARTER, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same in the capacity therein stated and for the purposes and considerations therein expressed

WITNESS MY HAND AND SEAL OF OFFICE, this the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Notary Public, State of Texas

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas

Chairman, Planning and Zoning Commission ATTEST: Date Signature

#### Name & Title

Joseph Hilburn,

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required.

Scott Holden, Date Director of Public Works

The Development Services Director of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances, or as may have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required.

Development Services Director

"PRELIMINARY PLAT FOR REVIEW PURPOSES ONLY"

LUCAS RETAIL PRELIMINARY PLAT LOT 1, BLOCK A 1.619 Acre Tract

Zoned: CB (Commercial Business) William Snider Survey, Abstract No. 821 City of Lucas, Collin County, Texas

#### <u>OWNER</u>

57 TEN PARTNERS, LLC Contact: Dave Carter, President 4516 Lovers Lane, Suite #224 Dallas, Texas 75225

#### SURVEYOR

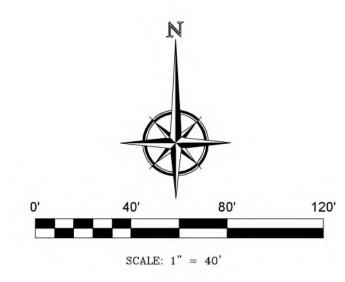
Date

RINGLEY & ASSOCIATES, INC. 701 S. Tennessee Street McKinney, Texas 75069 LHR@Ringley.com



Drawn by Date Mark Staab | 07/07/2022 | 1" = 40' | 2021-071 | 2021-071-PP.DWG

(214)-244-1777972-542-1266



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#### LEGEND

₩ WATER VALVE WATER METER - FIRE HYDRANT

O POWER POLE

 GUY ANCHOR (TR) TELEPHONE RISER

FOC FIBER OPTIC CABLE BOX TVR CABLE TELEVISION RISER

CoServ UTILITY MARKER (Labeled) FOC W UTILITY MARKER (Labeled)

O SANITARY SEWER MANHOLE

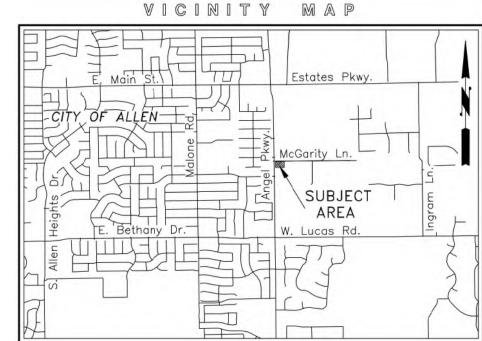
BOUNDARY LINE ADJOINER BOUNDARY LINE

OVERHEAD POWER LINE

— GAS — GAS — GAS — GAS —

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#### ABBREVIATIONS

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G. WARD PAXTON FLP I, LTD. Called 156.018 Acres
Doc. No. 20101220001392070
D.R.C.C.T. COSERV GAS COSERV GAS POINT OF /2" IRF W/Red Cap BEGINNING McGARITY LANE (Variable Width Right-of-way) 5/8" IRF W/Pink Cap N 45°00'40" E "TxDOT" (CM) 32.65 N 89°23'24" E - 319.15' 1 5/8" IRF W/Pink Cap "TxDOT" (CM) (Item 10I.) STATE OF TEXAS No. 2020030600032650 & Doc. No. 20200306000326240 D.R.C.C.T. PENNINGTON PARTNERS, LTD. Called 21.751 Acres Vol. 5184, Pg. 1102 D.R.C.C.T. 70,505 Sq. Feet (Item 10i.) 5' COSERV GAS, LTD. 1.619 Acres Vol. 4667, Pg. 920 D.R.C.C.T. (Item 10h.) 30' N.T.M.W.D. WATER EASEMENT Doc. No, 94-0098906 HWY. S 89°14'38" W - 341.95' 5/8" IRF W/Cap RPLS 4838 (CM) F.M. PENNINGTON PARTNERS, LTD.

#### SURVEYOR'S CERTIFICATION

To: PENNINGTON PARTNERS, LTD, a Texas limited partnership; NDC HOLDINGS, LP and 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 Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 7, 8, 9, 10, 11a, 13, 14, 16, 17, 18, and 19 of Table A thereof. The field work was completed on March 21, 2022.

Date of Plat or Map: March 22, 2022

. H. RINGLEY \* 4701 ×

LAWRENCE H. RINGLEY, R.P.L.S. No. 4701

#### LEGAL DESCRIPTION

SITUATED in the City of Lucas, in the William Snider Survey, Abstract No. 821 of Collin County, Texas and being a part of that certain called 21.751 acre tract of land described in a deed to Pennington Partners, Ltd., recorded in Volume 5184, Page 1102, Deed Records, Collin County, Texas (D.R.C.C.T.) and being more particularly described by metes & bounds as follows:

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#### TITLE COMMITMENT NOTES:

This Survey was prepared in conjunction with a Title Commitment prepared by FIDELITY NATIONAL TITLE INSURANCE COMPANY under GF No. FT-135-9001352100359 with an effective date of September 27, 2021, at 8:00 a.m. and issued on February 11, 2022, at 8:00 a.m. This Surveyor has reviewed the items listed in Schedule B of said commitment and has concluded that the following items AFFECT or DO NOT AFFECT the Subject Tract as noted. No additional research of easements was performed by Ringley & Associates,

1. The following restrictive covenants of record itemized below (We must either insert specific recording data or delete this exception):

under Clerk's File No. 20171102001464860, Real Property Records, Collin County, Texas. THIS ITEM BLANKETS AND AFFECTS THE ENTIRE SUBJECT TRACT.

10g. Easement granted to American Telephone and Telegraph Company, recorded on December 18, 1928 in Volume 271, Page 623, Real Property Records, Collin County, Texas. THIS SURVEYOR CAN NOT DETERMINE IF THIS EASEMENT AFFECTS THE SUBJECT TRACT BY THE DESCRPTION GIVEN WITHIN THIS RECORDED INSTRUMENT.

10h. 30' wide Water Pipeline Easement granted to North Texas Municipal Water District, recorded on November 3, 1994 in Clerk's File No. 94-0098906, Real Property Records, Collin County, Texas. THIS ITEM AFFECTS THE WEST SIDE OF THE SUBJECT TRACT, AS SHOWN.

10i. 5' wide Natural Gas Pipeline Easement granted to CoServ Gas, Ltd., recorded on May 15, 2000 in Volume 4667, Page 920, Real Property Records, Collin County, Texas. THIS ITEM AFFECTS THE WEST SIDE OF THE SUBJECT TRACT. AS SHOWN.

GENERAL NOTES:

- 1. At the time of this Survey, This Surveyor did not see any evidence of current earth moving work, building construction or building additions.
- 2. There is currently No Proposed Changes to the right-of-way of McGarity Lane along the north line of the Subject Tract. Additional right-of-way was recently purchased by the State of Texas along the west line of the Subject Tract for the expansion of F.M. Highway 2551 (Angel Parkway). The State of Texas has monumented the additional right-of-way as shown (ALTA, Table A item 17).
- 3. At the time of this Survey, this Surveyor did not see any evidence of the site currently being used as a solid waste dump, sump or sanitary landfill.
- 4. At the time of this Survey, this Surveyor did not observe any encroachments or protrusions upon the Subject Tract.
- 5. At the time of this Survey, the Subject Tract was vacant and un-improved. There is no buildings, party walls, pavement or striped parking spaces (ALTA, Table A, Items 7, 8, 9 & 10).
- 6. The Subject Tract is accessed from the public right-of-way of F.M. Highway 2551 (Angel Parkway) along the west boundary line and McGarity Lane along the north boundary line. There is currently no curb cuts or driveways along F.M. Highway 2551 or McGarity Lane onto the Subject Tracts.

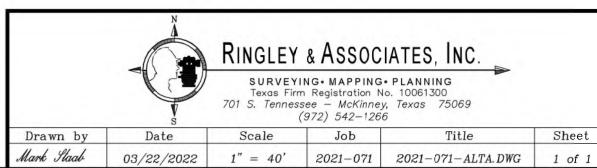
#### ALTA/NSPS Land Title Survey

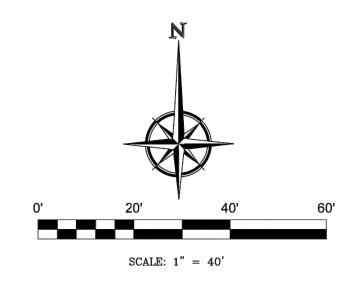
1.619 Acre Tract situated in the William Snider Survey, Abstract No. 821 City of Lucas Collin County, Texas

#### PROPERTY ADDRESS

Un-Assigned by the City of Lucas at the time of this Survey

Collin County Appraisal District Parcel No. 1217837





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- FOC FIBER OPTIC CABLE BOX TVR CABLE TELEVISION RISER
- CoServ W UTILITY MARKER (Labeled)
- FOC UTILITY MARKER (Labeled)
- O SANITARY SEWER MANHOLE
- 6" Live Oak
  TREE TYPE & SIZE

BOUNDARY LINE

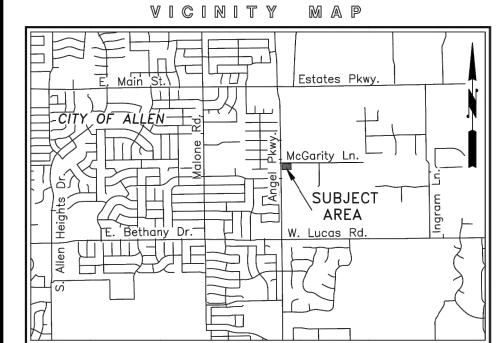
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#### Top of Manhole\_ EL=646.95 \_ E-12"SS \_\_\_\_\_ \_ E-12"SS -\_ E-12"SS \_ E-12"SS \_\_\_\_\_ \_ E-12"SS \_\_\_\_ COSERV GAS G. WARD PAXTON FLP I, LTD. Called 156.018 Acres Doc. No. 20101220001392070 D.R.C.C.T. COSERV GAS 1/2" IRF W/Red Cap McGARITY LANE "un-marked", Bears S 89°23'24" W - 30.04' Asphalt Road (Variable Width Right-of-way) 646.17 // 646.08 Triple Trunk (6"+7"+9") \_\_\_\_\_\_ $N 89^{\circ}23'24" E - 319.15'$ W/Pink Cap "TxDOT" (CM) +644.23 +644.19 +644.45 +645.13 PENNINGTON PARTNERS, LTD. Called 21.751 Acres Vol. 5184, Pg. 1102 D.R.C.C.T. PENNINGTON PARTNERS, LTD. Called 21.751 Acres Vol. 5184, Pg. 1102 D.R.C.C.T. 70,505 Sq. Feet 1.619 Acres 643.37+ +643.66 +644.27 +644.76 +643.34 30' N.T.M.W.D. WATER EASEMENT Doc. No, 94-0098906 D.R.C.C.T. 2551 Width 22.8' — HW (Vari F.M. 39.50' S 89°14'38" W - 341.95' W/Cap RPLS 4838 (CM) 5/8" IRF W/Cap RPLS 4838 (CM) PENNINGTON PARTNERS, LTD. Called 21.751 Acres Vol. 5184, Pg. 1102 D.R.C.C.T. +642.36

#### CITY BENCHMARK USED FOR CONTROL

MON #7 = Standard City of Allen monument being a 3 1/2 inch aluminum disk in top of headwall. located 106 feet +/- south of the intersection of Countrybrook Lane and Angel Parkway on the east side of Angel Parkway. Elev. = 637.04

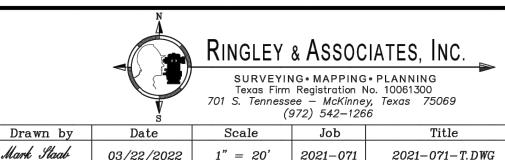
#### SITE BENCHMARKS

BM-1 = X in southwest corner of a utility vault on the north side McGarity Lane and approximately 95'  $\pm$  east of the F.M. Road 2551 (Angel Parkway) eastern edge. Elev.=646.65

BM-2 = X in concrete sidewalk approximately  $120'\pm$ south and 37'± east of the southwest corner of the subject property. Elev.=644.32

#### TOPOGRAPHIC SURVEY

1.619 Acre Tract situated in the William Snider Survey, Abstract No. 821 City of Lucas Collin County, Texas



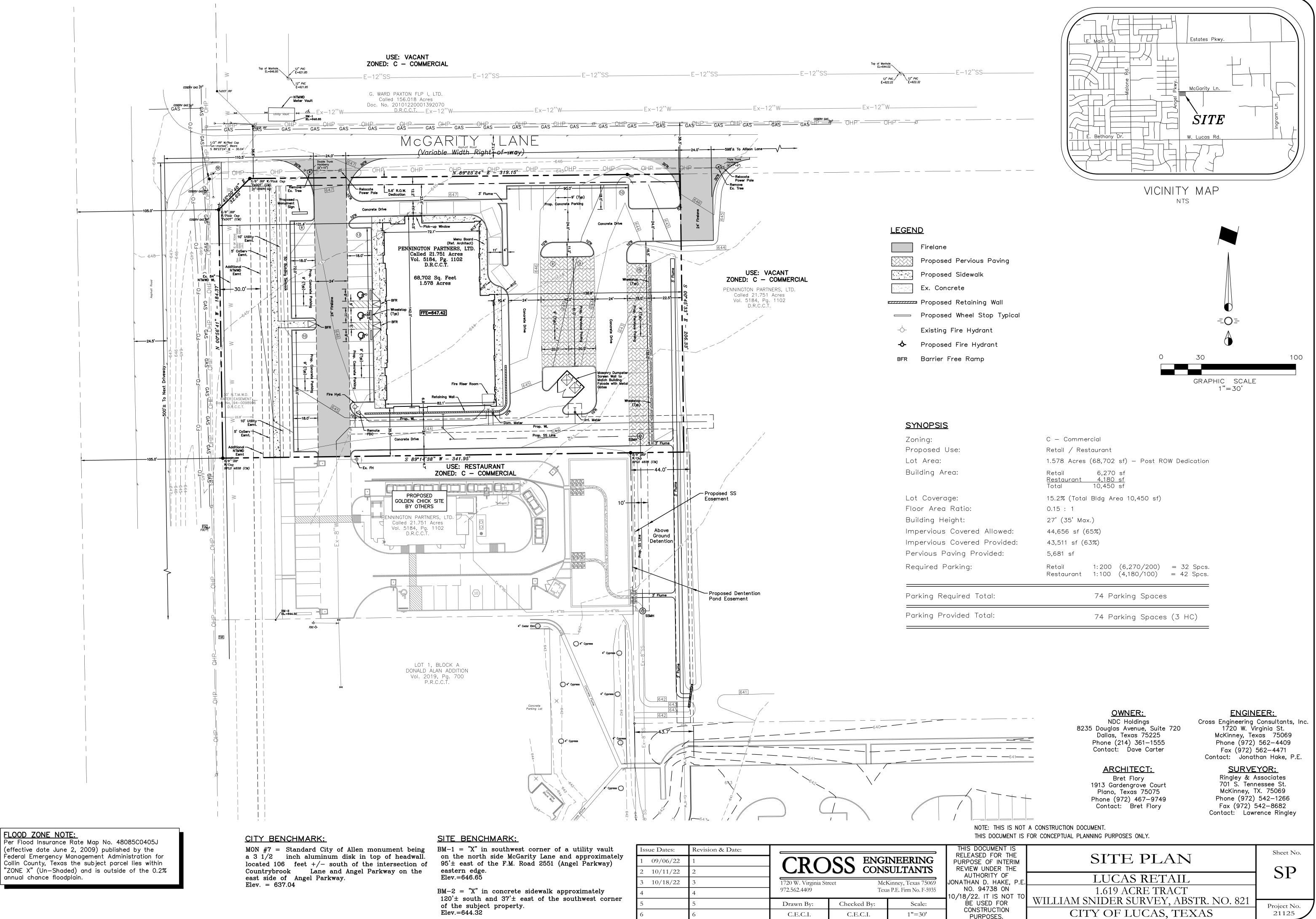
2021-071-T.DWG

03/22/2022 1" = 20' 2021-071

#### PROPERTY ADDRESS

Un-Assigned by the City of Lucas at the time of this Survey

Collin County Appraisal District Parcel No. 1217837



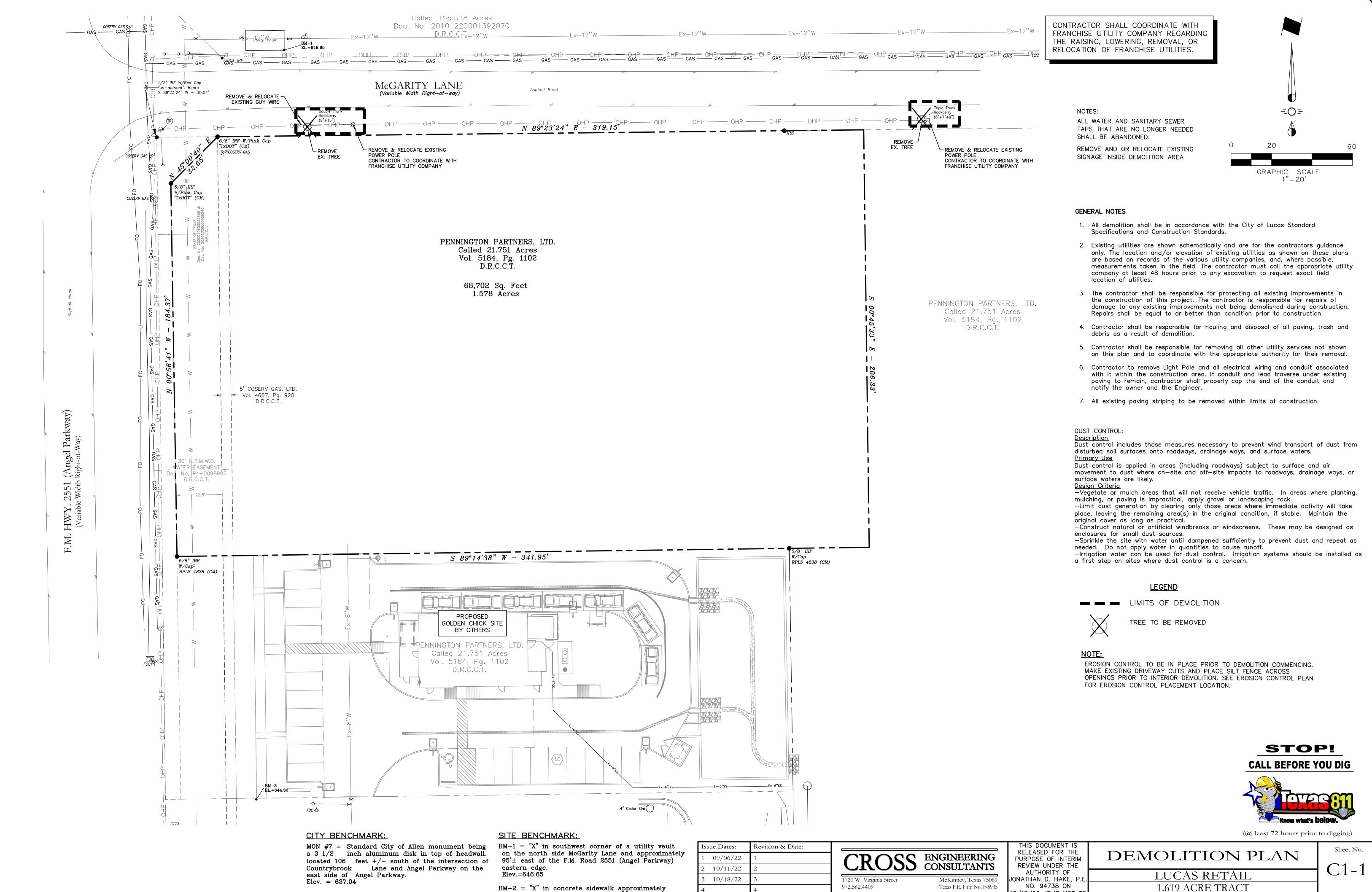
C.E.C.I.

C.E.C.I.

1"=30'

Project No. 21125

CITY OF LUCAS, TEXAS



120'± south and 37'± east of the southwest corner

of the subject property. Elev.=644.32

Project No.

21125

/18/22. IT IS NOT

BE USED FOR

CONSTRUCTION

PURPOSES.

Checked By:

C.E.C.I.

Scale:

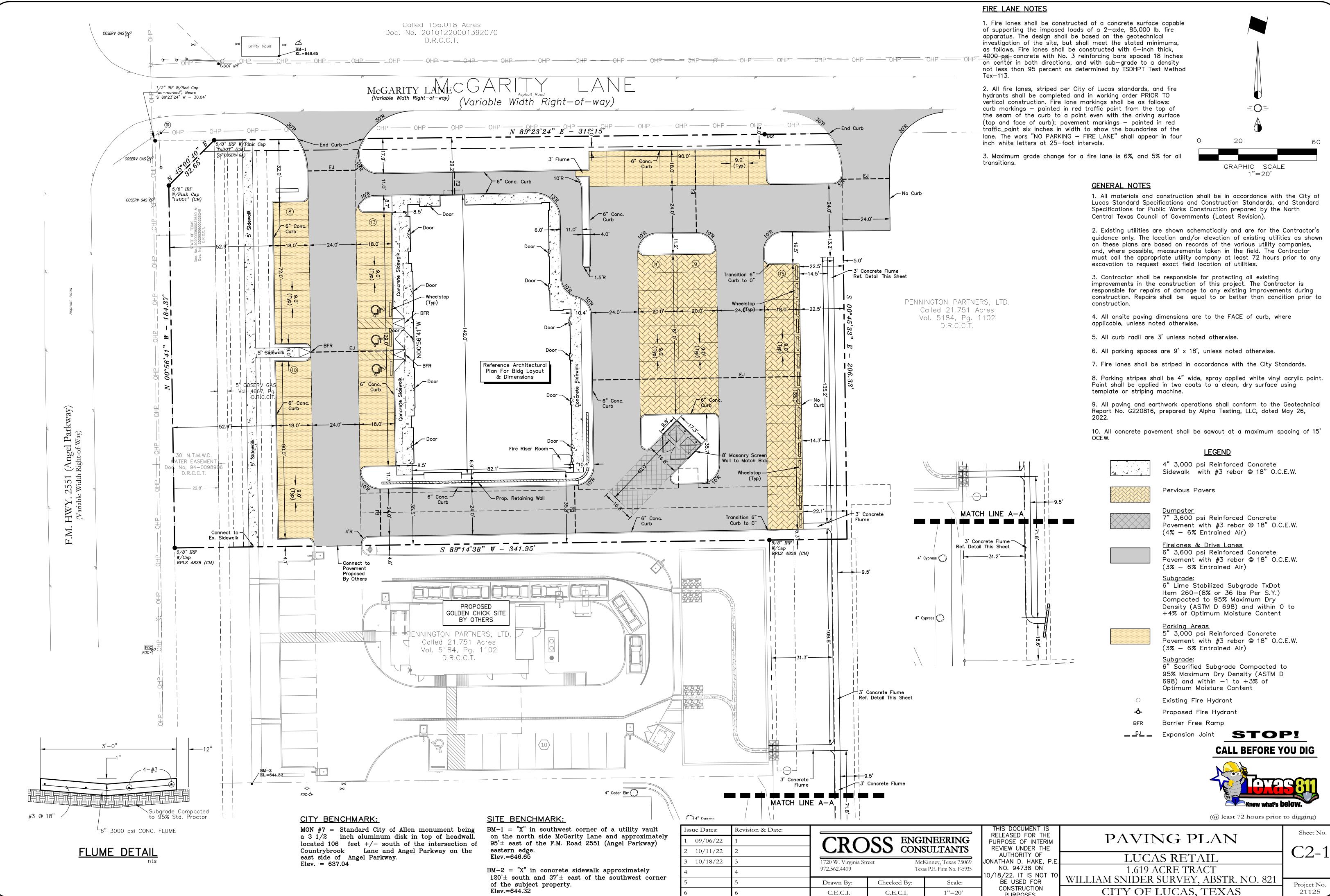
1"=20'

Drawn By:

C.E.C.I.

WILLIAM SNIDER SURVEY, ABSTR. NO. 821

CITY OF LUCAS, TEXAS

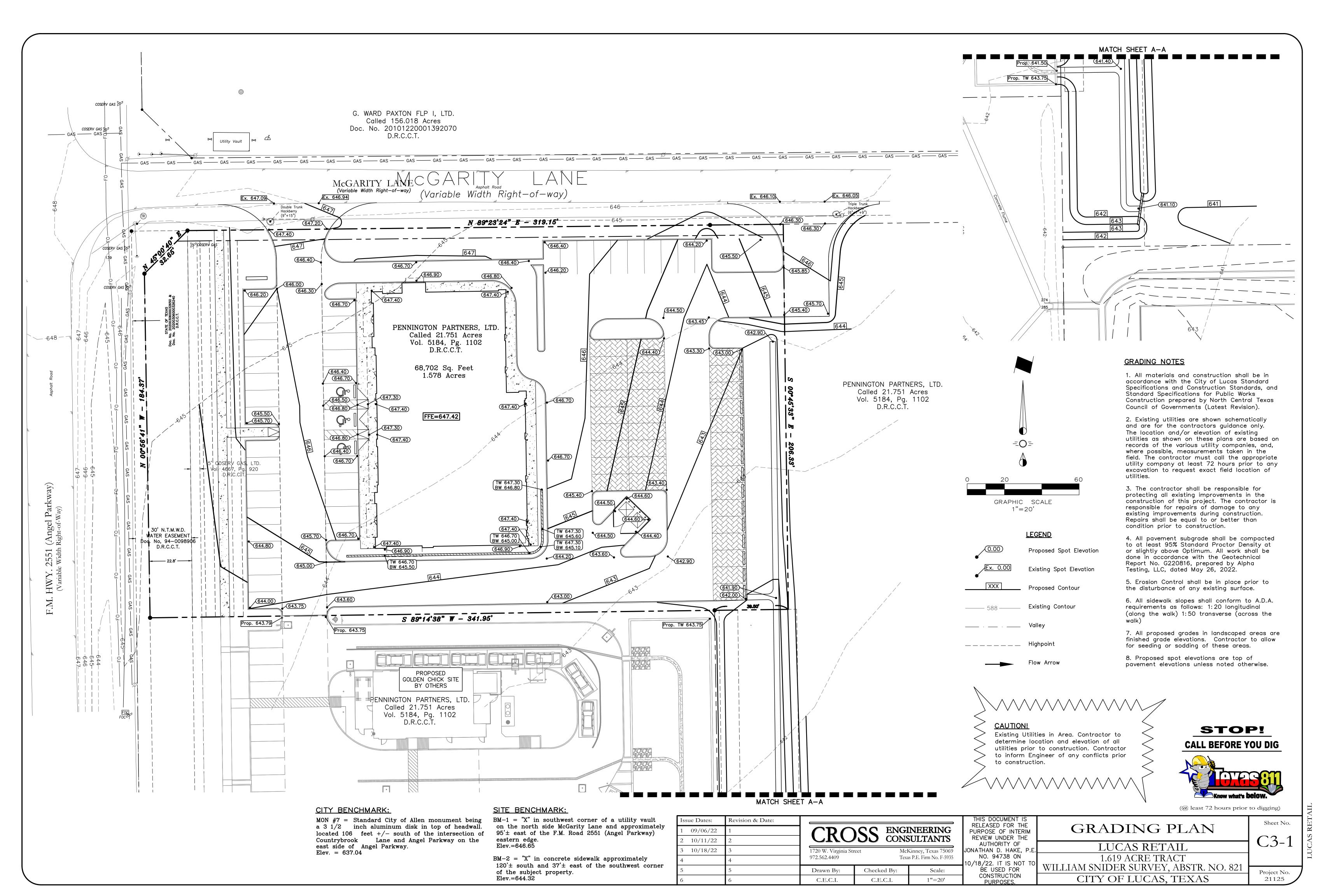


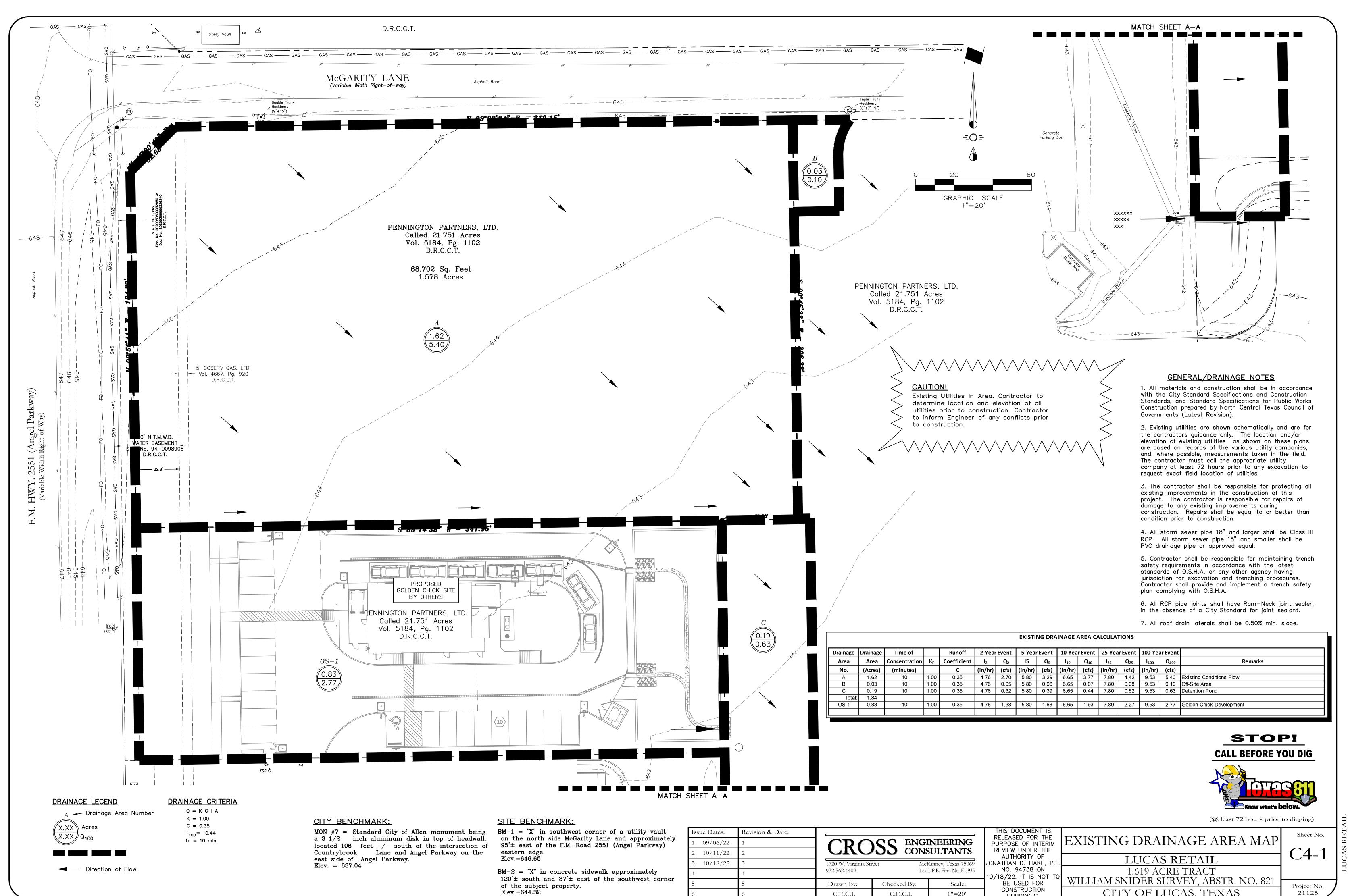
C.E.C.I.

C.E.C.I.

1"=20'

PURPOSES.





Project No.

21125

CITY OF LUCAS, TEXAS

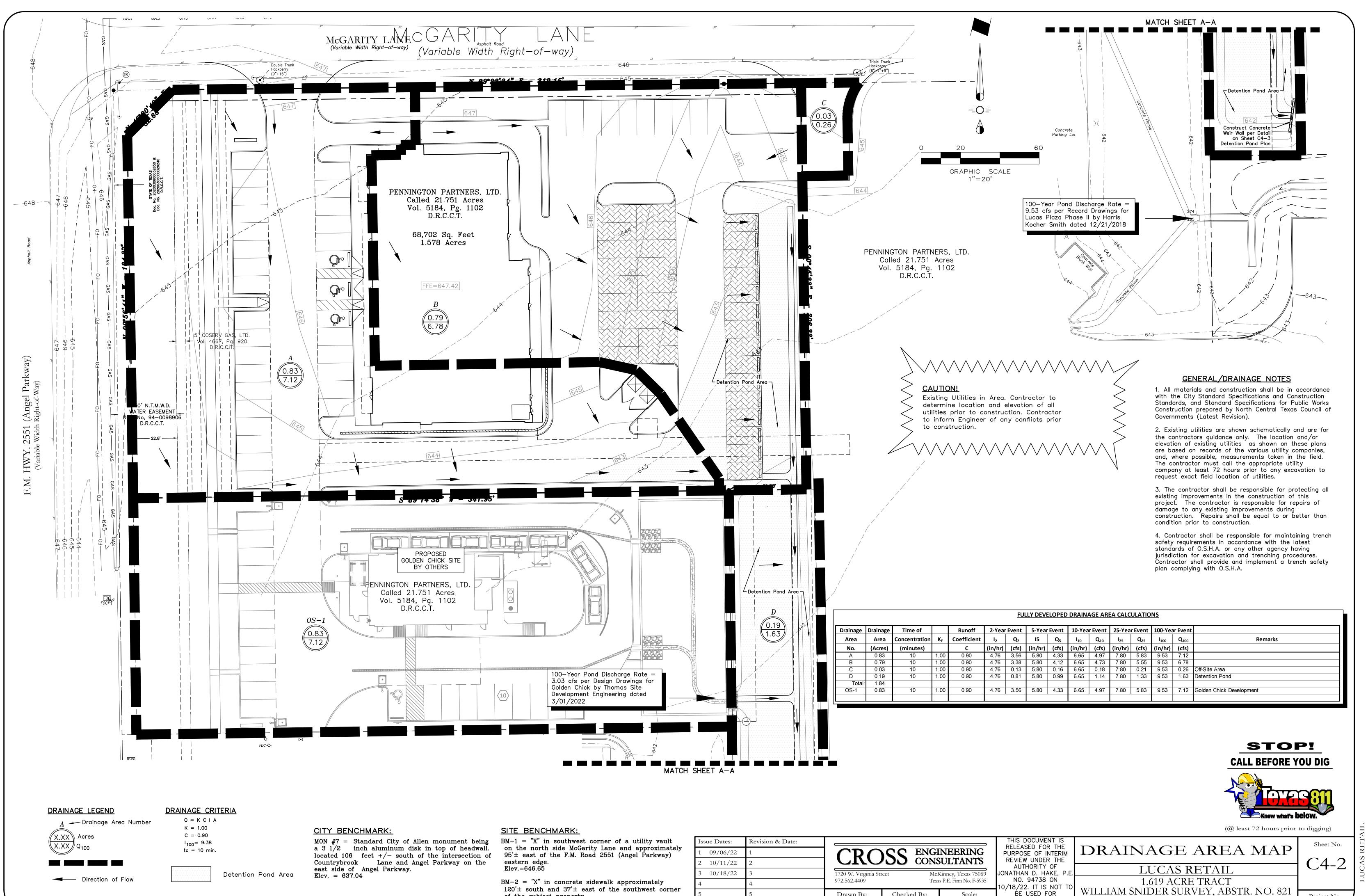
CONSTRUCTION

PURPOSES.

C.E.C.I.

C.E.C.I.

1"=20'



of the subject property. Elev.=644.32

Project No.

21125

CITY OF LUCAS, TEXAS

BE USED FOR

CONSTRUCTION

PURPOSES.

Checked By:

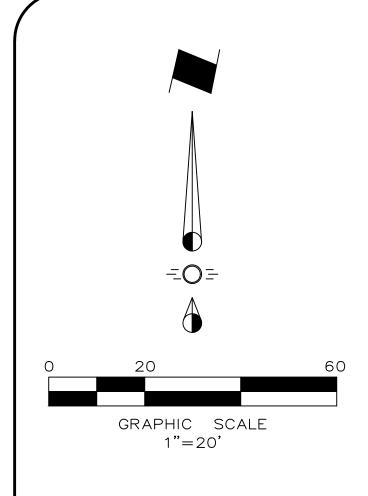
C.E.C.I.

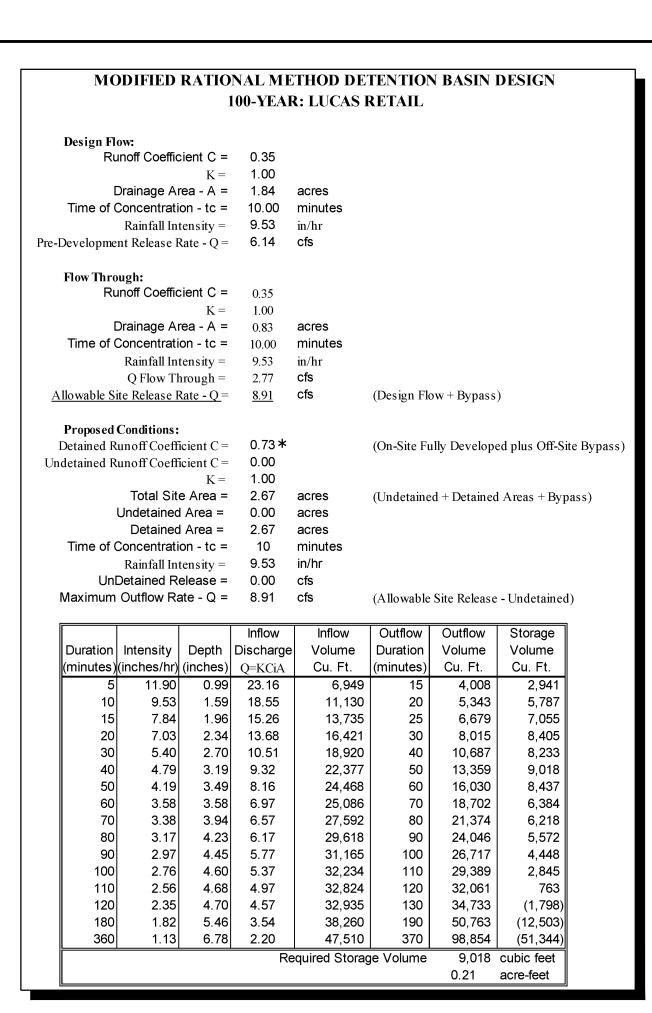
Drawn By:

C.E.C.I.

Scale:

1"=20'





MODIFIEI	KAII(		ETHOD DE R: LUCAS F		N BASIN	DESIGN
Design Flow:						
Runoff Coeffi	cient C =	0.35				
rtanen coom	K=	1.00				
Drainage A			acres			
Time of Concentrat			minutes			
Rainfall In		7.80	in/hr			
Pre-Development Release	•		cfs			
Flow Through:						
Runoff Coeffi	cient C =	0.35				
	K =	1.00				
Drainage A	.rea - A =	0.83	acres			
Time of Concentrat	ion - tc =	10.00	minutes			
Rainfall I	itensity =	7.80	in/hr			
	hrough =	2.27	cfs			
Allowable Site Release	<u>Rate - Q</u> =	<u>7.29</u>	cfs	(Design Flo	ow + Bypass	)
Proposed Conditions		ر ب		(a = :		
Detained Runoff Coef				(On-Site Fu	ılly Develop	ed plus Off-Site
Undetained Runoff Coef						
T ( 10:	K =	1.00		~~ .		
	te Area =		acres	(Undetaine	d + Detamed	d Areas + Bypas
Undetaine		0.00	acres			
Time of Concentral	d Area =	2.67 10	acres minutes			
		7.80	in/hr			
Rainfall Ir UnDetained F			cfs			
Maximum Outflow R			cfs	(Allowable	Sita Ralanca	e - Undetained)
Maximan Samow I	.a.o	7.20	0.0	(1110 wable	Site release	- Chactamea)
		Inflow	Inflow	Outflow	Outflow	Storage
Duration Intensity		Discharge	1	Duration	Volume	Volume
(minutes)(inches/hr			Cu. Ft.	(minutes)	Cu. Ft.	Cu. Ft.
5 9.72	1	1	5,684	15	3,280	2,403
10 7.80	1	1	9,122	20	4,373	4,748
15 6.44	1	1	11,297	25	5,467	5,830
20 5.78	1	1	13,519	30	6,560	6,959
30 4.45	1	1	15,612	40	8,747	6,865
40 3.94		1	18,431	50	10,934	7,497
50 3.44	1	1	20,115	60	13,120	6,994
60 2.93	1	1	20,559	70	15,307	5,252
70 2.76 80 2.58	1	1	22,553	80 90	17,494	5,059
90 2.41	1	1	24,138	100	19,681 21,867	4,457
100 2.23	1	1	25,313 26,079	110	21,867 24,054	3,446 2,025
110 2.06	1	1	26,079	120	24,054 26,241	195
120 1.88	1	1	26,383	130	28,427	(2,044)
180 1.44	1	1	30,312	190	20,42 <i>1</i> 41,548	(11,235)
360 0.88	1	1	37,133	370	80,909	(43,776)
300  0.00	J. 29	<u> </u>				
		KE	equired Storag	ye volume	7,497 0.17	cubic feet acre-feet
					/	

#### Detention Note: \*Composite "C" in shown in the Proposed Condition Detention Calculation is the combination of existing conditions for the Golden Chick site plus the fully developed conditions for the retail site. The detention pond is sized to bypass the existing conditions from the Golden Chick site.

	M	ODIFIED	RATIO	NAL MI	ETHOD DE	TENTIO	N BASIN	DESIGN	
				10-YEAF	R: LUCAS F	RETAIL			
	Design Fl		siont C -	0.25					
	RI	unoff Coeffic		0.35					
	ı	Drainaga A	K =	1.00 1.84	coros				
		Drainage A Concentrati		1.04	acres				
	Time or (				minutes				
D	D1	Rainfall In	-	6.65 4.28	in/hr				
Pre-	-Developme	ent Release I	kate - Q =	4.20	cfs				
	Flow Thro	ough:							
		unoff Coeffic	cient C =	0.35					
			K =	1.00					
	[	Drainage A	rea - A =	0.83	acres				
	Time of 0	Concentrati	ion - tc =	10.00	minutes				
		Rainfall In	tensity =	6.65	in/hr				
		Q Flow Tl	-	1.93	cfs				
1	Allowable S	ite Release I	<u> Rate - Q</u> =	<u>6.21</u>	cfs	(Design Flo	ow + Bypass	)	
		Conditions:		0.70 *		(0. 6! 7			
		Cunoff Coeff				(On-Site Fu	ılly Develop	ed plus Off-S	ite Bypass
U <sub>1</sub>	ndetained R	lunoff Coeff							
		T-4-1 0:4	K =	1.00			1 . 5		
			e Area =	2.67	acres	(Undetaine	d + Detamed	d Areas + Byp	pass)
		Undetained		0.00	acres				
	Time a of (	Detained		2.67	acres				
	time of 0	Concentrati		10	minutes				
	Llal	Rainfall In	•	6.65	in/hr				
		Detained R Outflow Ra		0.00 6.21	cfs cfs	/ A 11 1 1 1	C' D 1	** *	1)
	Maximum	Outilow Re	ale - Q –	0.21	CIS	(Allowable	Site Release	e - Undetained	1)
				Inflow	Inflow	Outflow	Outflow	Storage	]
	Duration	Intensity	Depth	Discharge	Volume	Duration	Volume	Volume	
	(minutes)	(inches/hr)	(inches)	Q=KCiA	Cu. Ft.	(minutes)	Cu. Ft.	Cu. Ft.	
	5	8.29	0.69	16.16	4,847	15	2,796	2,051	
	10	6.65	1.11	12.96	7,777	20	3,729	4,048	
	15	5.50	1.38	10.72	9,648	25	4,661	4,987	
	20	4.94	1.65	9.63	11,554	30	5,593	5,961	
	30	3.81	1.91	7.43	13,367	40	7,457	5,910	
	40	3.37	2.25	6.57	15,764	50	9,322	6,443	
	50	2.94	2.45	5.73	17,191	60	11,186	6,005	
	60	2.50	2.50	4.87	17,542	70	13,050	4,492	
	70	2.35	2.74	4.58	19,238	80	14,915	4,323	
	80	2.20	2.93	4.29	20,582	90	16,779	3,804	
	90	2.05	3.07	3.99	21,524	100	18,643	2,881	
	100	1.89	3.15	3.68	22,103	110	20,508	1,595	
	110	1.74	3.19	3.39	22,383	120	22,372	12	
	120	1.59	3.18	3.10	22,313	130	24,236	(1,923)	
	180	1.20	3.60	2.34	25,260	190	35,422	(10,162)	
	360	0.73	4.37	1.42	30,649	370	68,980	(38,331)	
				Re	equired Storaç	ge Volume	6,443	cubic feet	
							0.15	acre-feet	
	,								

**CITY BENCHMARK:** 

	MO	<b>DDIFIED</b>	RATIO		ETHOD DE : LUCAS R		N BASIN	DESIGN
	Design Fl	ow:						
	Rı	inoff Coeffic	cient C =					
	_		K =	1.00				
		Drainage Ai		1.84	acres			
	time of (	Concentrati		10.00	minutes			
Pre-	Developme	Rainfall In nt Release I	-	4.76 3.07	in/hr cfs			
	Flow Thro	ագիւ						
		ugn. Inoff Coeffic	cient C =	0.35				
			K=	1.00				
	[	Drainage Ai	rea - A =	0.83	acres			
	Time of (	Concentrati	on - tc =	10.00	minutes			
		Rainfall In		4.76	in/hr			
		Q Flow Th	_	1.38	cfs			
<u>A</u>	Allowable S	ite Release I	<u>Rate - Q</u> =	<u>4.45</u>	cfs	(Design Flo	ow + Bypass	)
	-	Conditions:		Ne				
		unoff Coeff				(On-Site Fu	lly Develop	ed plus Off-Site
Un	idetained R	unoff Coeff		0.00 1.00				
		Total Sit	K= - Δrea	2.67	acres	(Undotaino	d + Dotaina	d Areas + Bypas
		Undetained		0.00	acres	(Ondetaine	u   Detaillet	ı Aleas + Dypas
		Detained		2.67	acres			
	Time of (	Concentrati	on - tc =	10	minutes			
		Rainfall In	tensity =	4.76	in/hr			
		Detained R		0.00	cfs			
	Maximum	Outflow Ra	ate - Q =	4.45	cfs	(Allowable	Site Release	e - Undetained)
				Inflow	Inflow	Outflow	Outflow	Storage
	Duration	Intensity	Depth	Discharge		Duration	Volume	Volume
	` '	(inches/hr)	, ,	_	Cu. Ft.	(minutes)	Cu. Ft.	Cu. Ft.
	5	5.94	0.50		3,473	15	2,002	1,472
	10 15	4.76 3.95	0.79 0.99		5,567 6,929	20 25	2,669 3,336	2,898 3,593
	20	3.55	1.18		8,303	30	4,003	4,300
	30	2.75	1.38		9,648	40	5,338	4,310
	40	2.43	1.62		11,367	50	6,672	4,695
	50	2.11	1.76		12,338	60	8,007	4,331
	60	1.79	1.79		12,560	70	9,341	3,219
	70	1.68	1.96		13,753	80	10,676	3,077
	80	1.56	2.08		14,595	90	12,010	2,585
	90	1.45	2.18		15,261	100	13,345	1,917
	100	1.34	2.23		15,671	110	14,679	992
	110	1.22	2.24		15,694	120	16,014	(319)
	120 180	1.11 0.83	2.22 2.48		15,577	130 190	17,348	(1,771)
	360	0.83	2.48 2.96		17,388 20,798	370	25,355 49,375	(7,967) (28,578)
	300	0.43	2.30		equired Storag			cubic feet
				1/0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	v 0141116	7.000	CADIC ICCL II

#### SITE BENCHMARK:

BM-1 = "X" in southwest corner of a utility vault on the north side McGarity Lane and approximately  $95'\pm$  east of the F.M. Road 2551 (Angel Parkway) MON #7 = Standard City of Allen monument being a  $3 \frac{1}{2}$  inch aluminum disk in top of headwall. located 106 feet +/- south of the intersection of Countrybrook Lane and Angel Parkway on the east side of Angel Parkway.

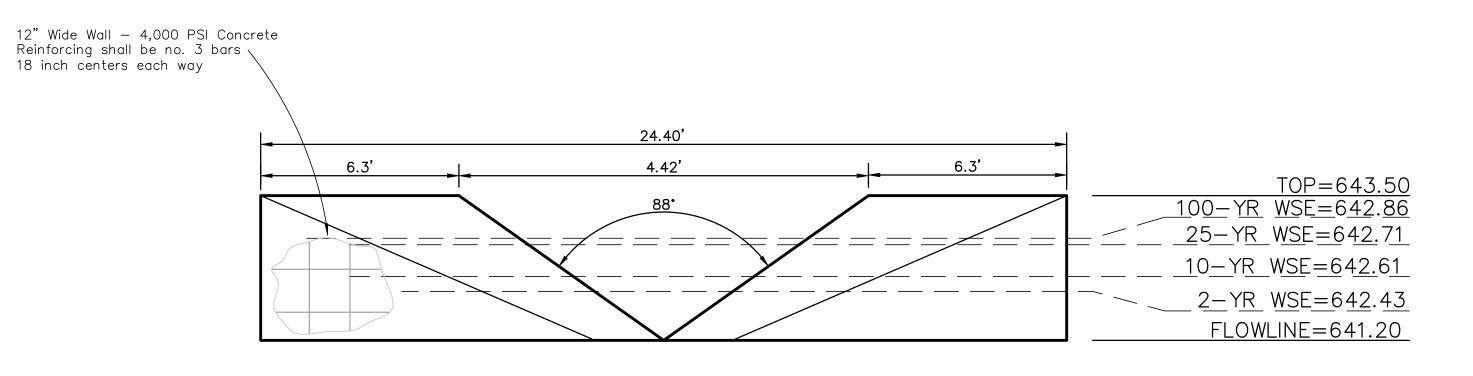
Elev. = 637.04 eastern edge. Elev.=646.65

BM-2 = "X" in concrete sidewalk approximately 120' $\pm$  south and 37' $\pm$  east of the southwest corner of the subject property. Elev.=644.32

CITY OF	<b>LUCAS</b>	<b>TABLE</b>	1	RAINFALL	<u>INTENSITY</u>

Dura	ation	Ra	infall Intens	ity (in/hr) b	y Storm Fre	quency (Yea	ars)
min	hr	2-year	5-year	10-year	25-year	50-year	100-year
5	0.083	5.94	7.24	8.29	9.72	10.80	11.90
10	0.167	4.76	5.80	6.65	7.80	8.68	9.53
15	0.25	3.95	4.80	5.50	6.44	7.14	7.84
30	0.5	2.75	3.33	3.81	4.45	4.93	5.40
60	1	1.79	2.18	2.50	2.93	3.26	3.58
120	2	1.11	1.37	1.59	1.88	2.11	2.35
180	3	0.826	1.03	1.20	1.44	1.62	1.82
360	6	0.494	0.620	0.728	0.882	1.00	1.13
720	12	0.291	0.366	0.431	0.522	0.595	0.673
1440	24	0.171	0.215	0.253	0.307	0.350	0.395

				STA	AGE - STORA	GE -DISCHARG	E				
	YEAR EVENT	Elevation (ft)	FLOWLINE	HEAD (ft)	V-NOTCH ANGLE°	Wetted Area (ft <sup>2</sup> )	Velocity (fps)	Q Release (CFS)	Q Allowable (CFS)	VOLUME (ft³)	VOLUME (ac-ft)
		643.00		0.00		0.00	0.00	0.00		10,571	0.243
		643.00		1.80		3.13	3.41	10.66		10,571	0.243
	100-Year	642.86		1.66		2.66	3.27	8.71	8.91	9,018.0	0.207
POND	25-Year	642.71		1.51		2.20	3.12	6.87	7.29	7,497	0.172
WEIR	10-Year	642.61	641.20	1.41	88.00	1.92	3.02	5.79	6.21	6,443	0.148
		642.50	041.20	1.30	] 88.00	1.63	2.90	4.73		5,180	0.119
	2-Year	642.43		1.23		1.46	2.82	4.12	4.45	4,695	0.108
		642.00		0.80		0.62	2.27	1.40		1,662	0.038
		641.50		0.30		0.09	1.39	0.12		113	0
		641.20		0.00	]	0.00	0.00	0.00		-	-





(@ least 72 hours prior to digging)

DETENTION POND PLAN

C4-3

Sheet No.

ssue Dates: RELEASED FOR THE CROSS ENGINEERING CONSULTANTS 09/06/22 PURPOSE OF INTERIM REVIEW UNDER THE 10/11/22 AUTHORITY OF 10/18/22 JONATHAN D. HAKE, P.E. 1720 W. Virginia Street McKinney, Texas 75069 Texas P.E. Firm No. F-5935 NO. 94738 ON 972.562.4409 Checked By: Drawn By: Scale:

C.E.C.I.

1"=20'

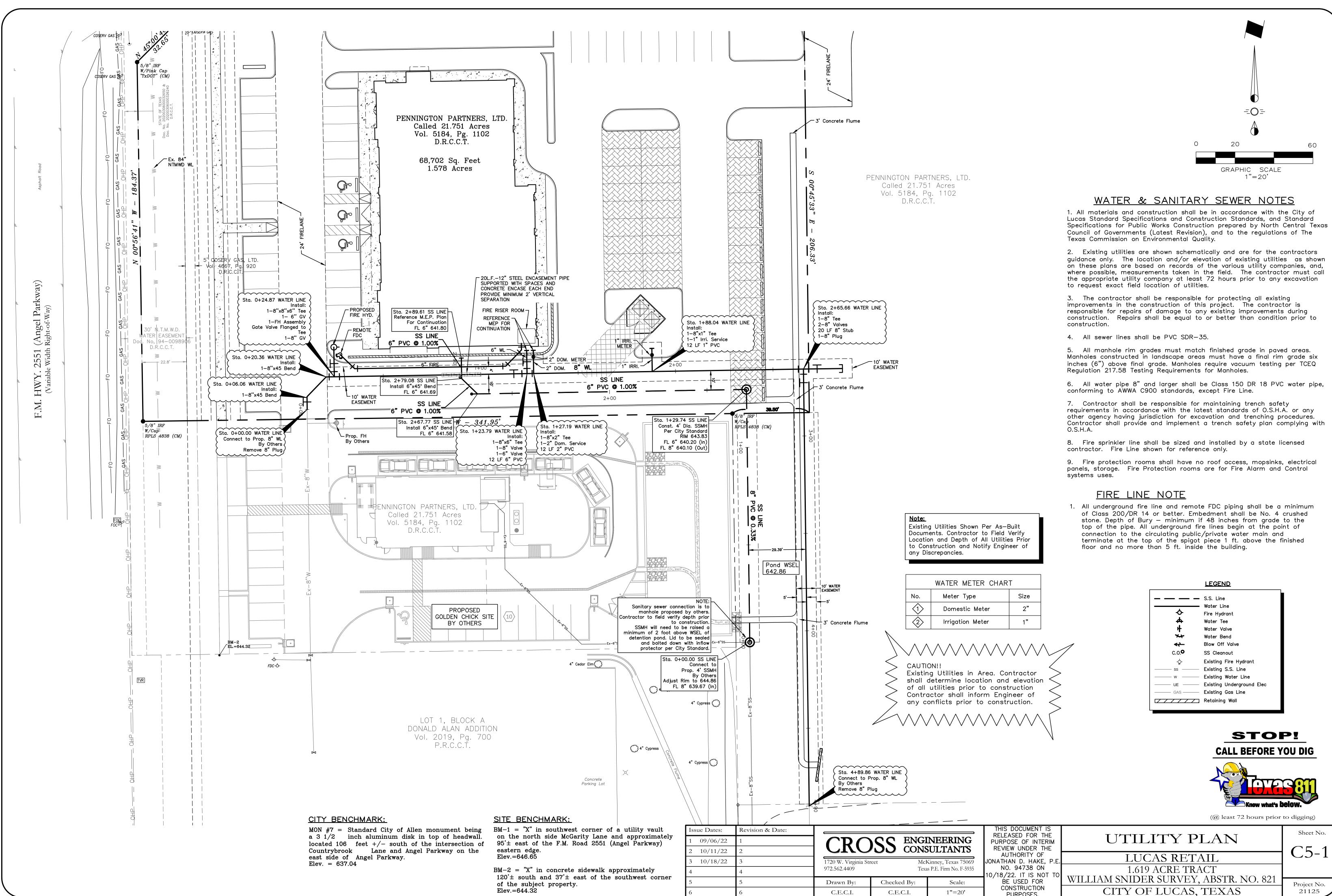
C.E.C.I.

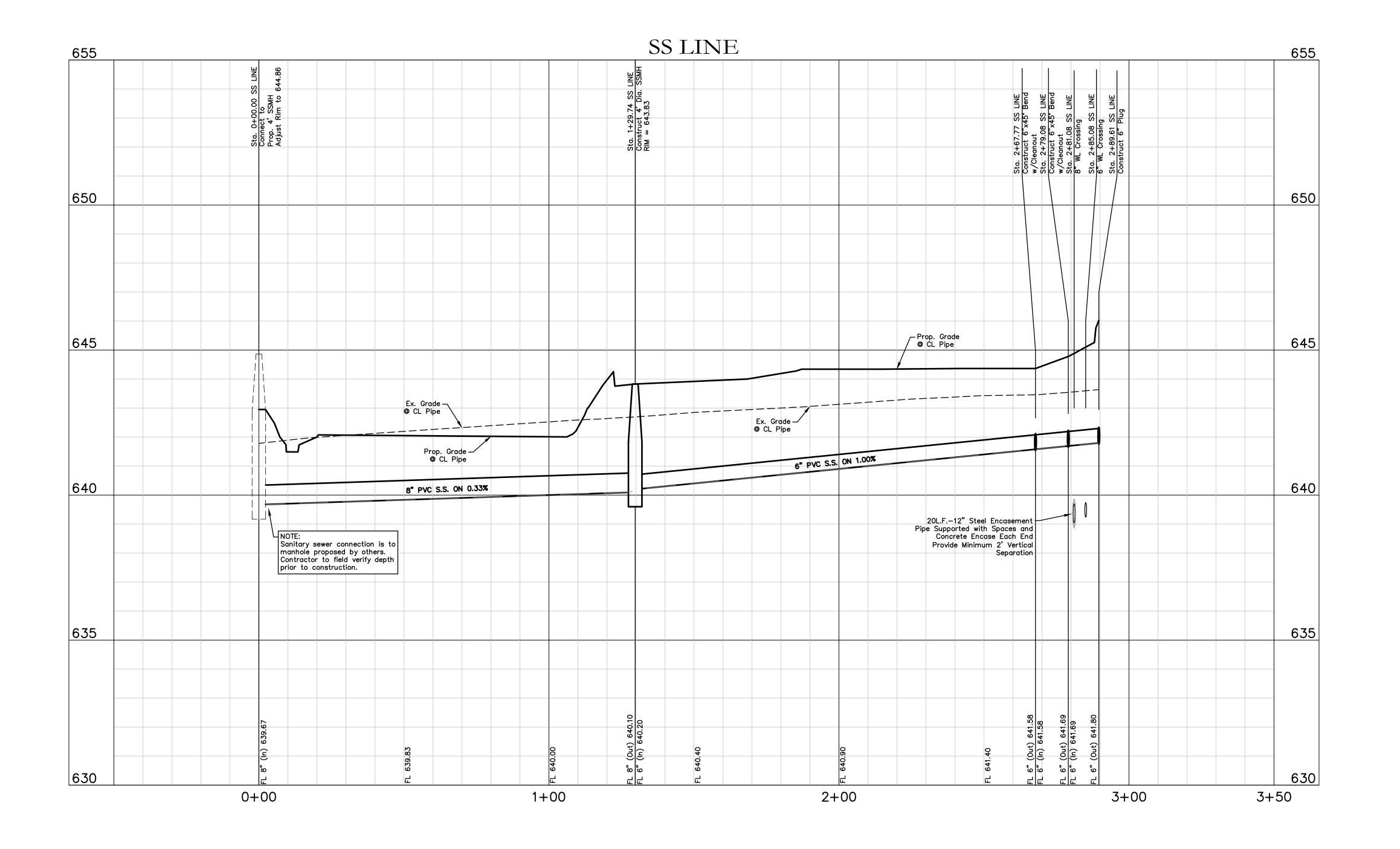
Revision & Date:

0/18/22. IT IS NOT TO
BE USED FOR
CONSTRUCTION
PURPOSES.

THIS DOCUMENT IS

LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS







(@ least 72 hours prior to digging)

BM-1 = "X" in southwest corner of a utility vault on the north side McGarity Lane and approximately 10cated 106 feet +/- south of the intersection of Countrybrook Lane and Angel Parkway on the east side of Angel Parkway.

Elev. = 637.04

BM-2 = "X" in concrete sidewalk approximately  $120'\pm$  south and  $37'\pm$  east of the southwest corner of the subject property. Elev.=644.32

	Issue Dates:	Revision & Date:	T		
ly	1 09/06/22	1			NEERING
	2 10/11/22	2		CONS	SULTANTS
	3 10/18/22	3	1720 W. Virginia St		Kinney, Texas 75069
	4	4	972.562.4409	Texa	as P.E. Firm No. F-5935
r	5	5	Drawn By:	Checked By:	Scale:
	6	6	C.E.C.I.	C.E.C.I.	H: 1"=20' V: 1"=2'

THIS DOCUMENT IS	
RELEASED FOR THE	CANTTTA
PURPOSE OF INTERIM	SANITA
REVIEW UNDER THE	
AUTHORITY OF	
NATHAN D. HAKE, P.E.	
NO 04779 ON	

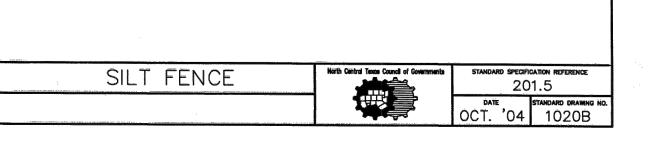
ARY SEWER PROFILE LUCAS RETAIL NO. 94738 ON
10/18/22. IT IS NOT TO
BE USED FOR
CONSTRUCTION
PURPOSES.

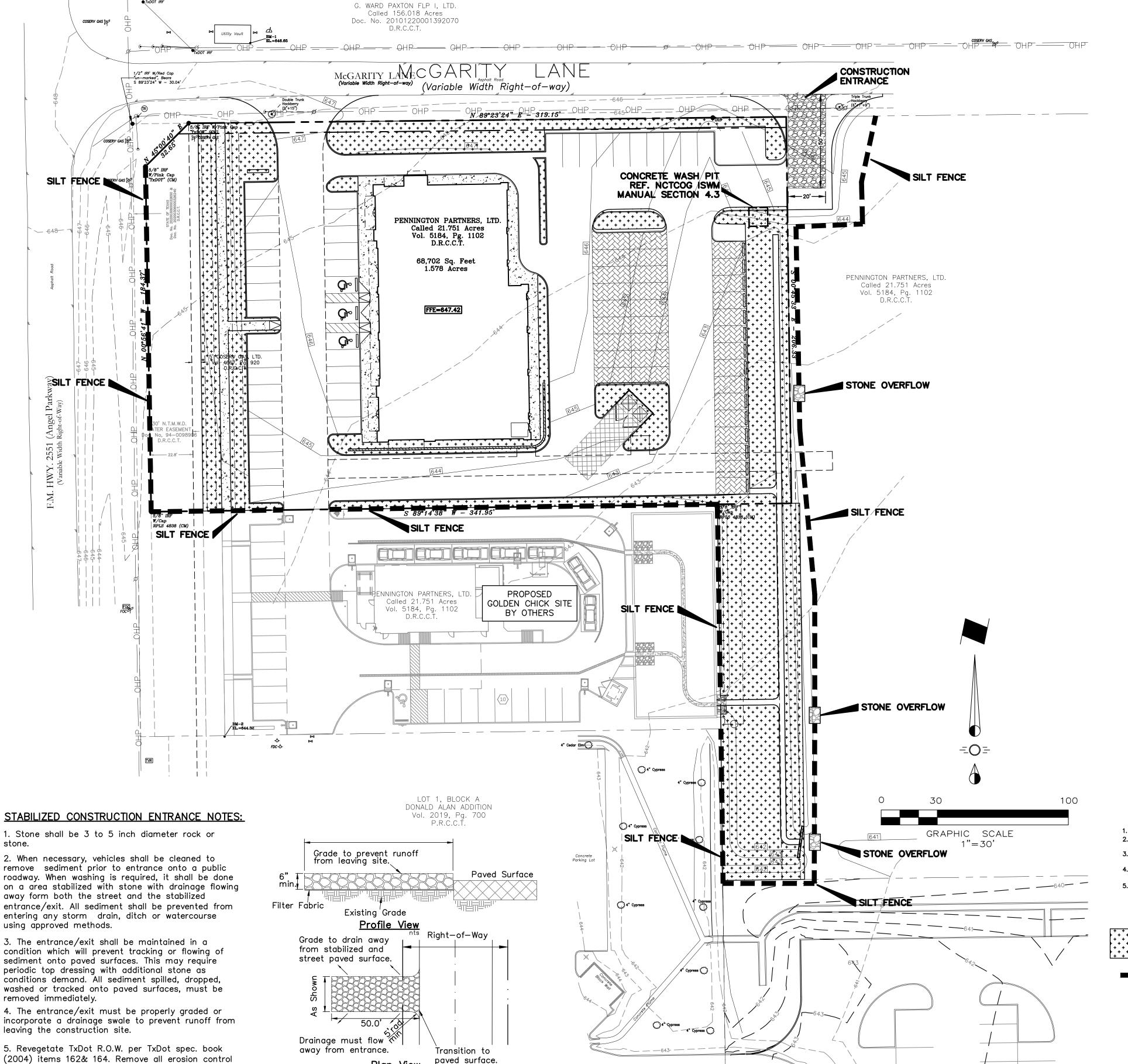
1.619 ACRE TRACT
WILLIAM SNIDER SURVEY, ABSTR. NO. 821
CITY OF LUCAS, TEXAS

Sheet No.



- POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
- 2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER
- 3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
- 4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WIRE BACKING, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
- 5. INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS
- 6. SILT FENCE SHALL BE REMOVED WHEN FINAL STABILIZATION IS ACHIEVED OR ANOTHER EROSION OR SEDIMENT CONTROL DEVICE IS EMPLOYED.
- 7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.





#### STORMWATER POLLUTION PREVENTION NOTES

- 1. It is the intent of the information provided on this sheet to be used as the general guidelines of the storm water pollution prevention plan for this project to establish a minimum basis of compliance with federal regulations.
- The Storm Water Pollution Prevention Plan shall meet the requirements for storm water discharges from construction sites published in the TPDES general permit no. Txr 150000, dated March 5, 2018, issued pursuant to section 26.040 of the Texas Water Code and Section 402 of the Clean Water Act, by the Texas Commission on Environmental Quality (TCEQ).
- 2. The Storm Water Pollution Prevention Plan should address three aoals: a) diversion of upslope water around disturbed areas of
- the site; b) limit the exposure of disturbed areas to the shortest
- duration possible; and
- c) removal of sediment from storm water before it leaves the site.
- The contractor will submit the NOI and shall have the Storm Water Pollution Prevention Plan available onsite.
- 4. The contractor must amend plans whenever there is a change in design, construction, operation, or maintenance of the plan, or when the existing plan proves ineffective. Modifications including design and all additional materials and work shall be accomplished by the contractor at no additional expense to the owner.
- 5. Stabilization measures are to be inspected at a minimum of once every 7 days and within 24 hours after any storm event greater than 0.50 inches. Repairs and inadequacies revealed by the inspection must be implemented within 1 calendar day following the inspection. Rain gauge shall be placed on-site to measure and record.
- 6. An inspection report that summarizes inspection activities and implementation of the storm water pollution prevention plan shall be retained and made part of the plan.
- 7. All contractors and subcontractors identified in the plan must certify as to an understanding of the NPDES general permit before conducting any activity identified in the pollution prevention plan.
- 8. The contractor shall adopt appropriate construction site management practices to prevent the discharge of oils, grease, paints, gasoline, and other pollutants to storm water. Appropriate practices can include: Designating areas for equipment maintenance and repair; regular collection of wastes; conveniently located waste receptacles; and designating and controlling equipment washdown. Contractor shall also provide adequate trash collection receptacles, and ensure regular and proper removal from
- 9. The contractor shall amend or modify this plan as required by construction means, methods, and sequence. Modifications shall not compromise the intent of the requirements of the law and this plan. Modifications shall not be basis for additional cost to the owner.
- 10. Areas of construction elsewhere on the jobsite shall conform to the detail shown on the plans.
- 11. Borrow areas, if excavated, shall be protected and stabilized utilizing the plan details. All work shall conform to governmental requirements and become part of the Storm Water Pollution Prevention Plan (SWPPP). This work shall be done by the contractor at no additional expense to the
- 12. All non-paved areas shall be mulched and seeded with erosion protection immediately upon completion of final grading. This includes all ditches and embankments. The contractor shall maintain final grading and keep seeded areas watered until fully established and accepted by owner.
- 13. The contractor shall construct a stabilized construction entrance/exit at designated traffic entrance/exit points prior to entering/exiting onto any
- 14. The contractor shall construct a silt fence at all locations shown on plans. The silt fence shall be constructed as detailed this sheet.
- 15. All public disturbed areas shall have sod 4' from back of curb w/ silt fence, and curlex beyond to limits of disturbed area until fully vegetated. All private disturbed ground areas shall be fully re-vegetated with 6lbs of a combination of perennial rye (4lbs) and Bermuda (2lbs) per 1000 sf, upon completion of final grading. These measures shall remain in place until all permanent landscaping measures are met.

#### **PHASING**

- 1. INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE
- 2. INSTALL INLET PROTECTION WHEN INLET AND FRONT PAVING ARE COMPLETE.
- 3. REMOVE SILT FENCE AT PAVING CONNECTION POINTS FOR DRIVE CONNECTIONS 4. REMOVE CONSTRUCTION ENTRANCE AFTER ALL INTERIOR
- CONSTRUCTION IS COMPLETE AND POUR ENTRY PAVING. 5. REMOVE SILT FENCE AND INLET PROTECTION WHEN

#### **LEGEND**

PERMANENT BMP'S ARE IN PLACE.

DISTURBED AREA = 2.04 ACRES



AREA TO BE SODDED/LANDSCAPED POST CONSTRUCTION

■ ■ SILT FENCE



TEMPORARY CONSTRUCTION ENTRANCE



(@ least 72 hours prior to digging)

#### **CITY BENCHMARK:**

MON #7 = Standard City of Allen monument being a 3 1/2 inch aluminum disk in top of headwall. located 106 feet +/- south of the intersection of Countrybrook Lane and Angel Parkway on the east side of Angel Parkway. Elev. = 637.04

devices from TxDot R.O.W. upon establishment of

70% vegatative cover inside TxDot R.O.W.

#### SITE BENCHMARK:

BM-1 = X in southwest corner of a utility vault on the north side McGarity Lane and approximately 95'± east of the F.M. Road 2551 (Angel Parkway) eastern edge. Elev.=646.65

STABILIZED CONSTRUCTION ENTRANCE/EXIT

BM-2 = "X" in concrete sidewalk approximately 120'± south and 37'± east of the southwest corner of the subject property. Elev.=644.32

Issue Dates:	Revision & Date:			
1 09/06/22	1			NEERING
2 10/11/22	2		CONS	SULTANTS
3 10/18/22	3	1720 W. Virginia St		Kinney, Texas 75069
4	4	972.562.4409	Texa	as P.E. Firm No. F-5935
5	5	Drawn By:	Checked By:	Scale:
6	6	C.E.C.I.	C.E.C.I.	1"=30'

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JONATHAN D. HAKE, P.E NO. 94738 ON 10/18/22. IT IS NOT T

BE USED FOR

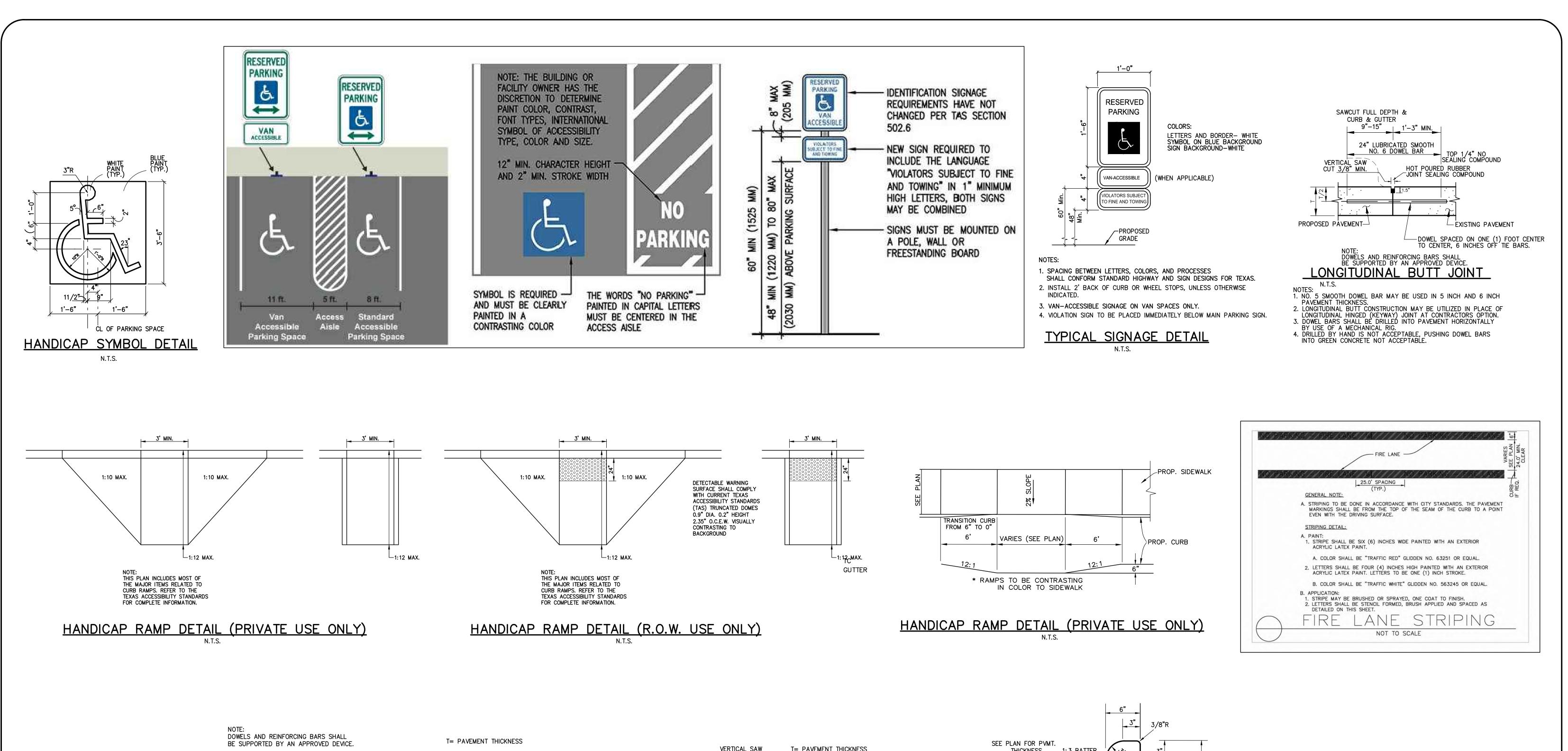
CONSTRUCTION

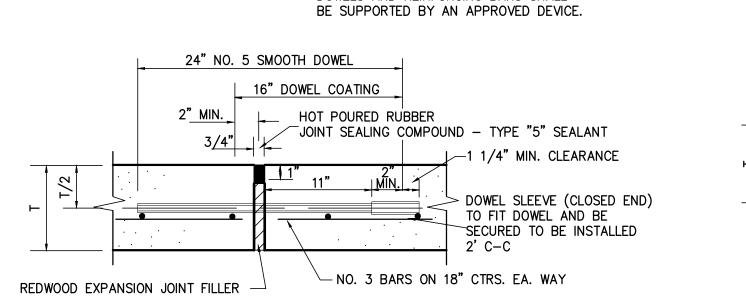
PURPOSES

EROSION CONTROL PLAN LUCAS RETAIL

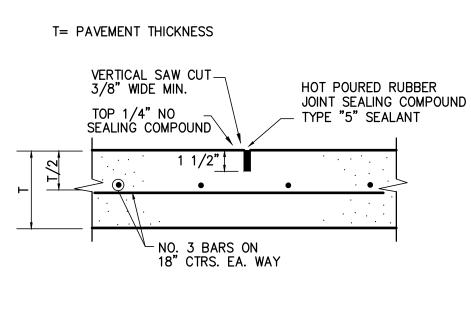
1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

Sheet No.



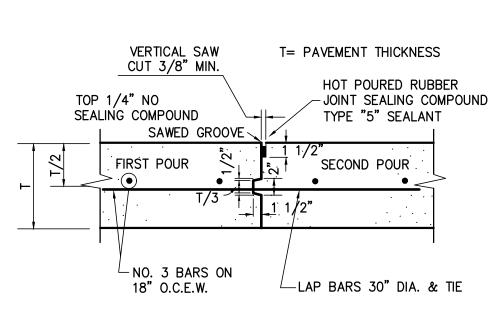




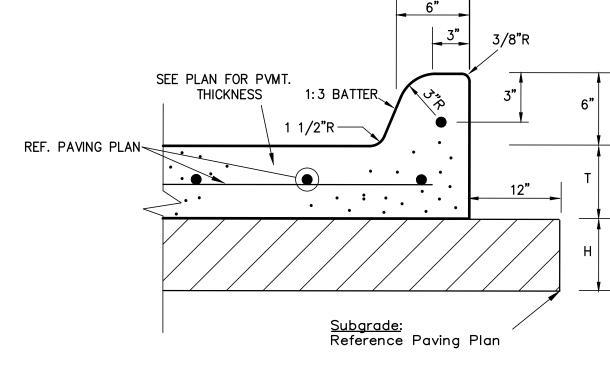


SAWED DUMMY (CONTROL) JOINT

MAXIMUM SPACING IS 15' CTRS. (TYP.)

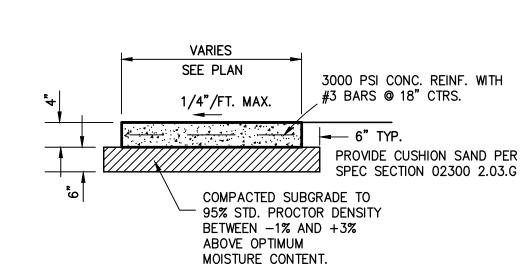


**CONSTRUCTION JOINT** 



PAVEMENT SECTION WITH CURB

NTS



SIDEWALK DETAIL

Issue Dates:	Revision & Date:			
1 09/06/22	1			NEERING
2 10/11/22	2		CONS	SULTANTS
3 10/18/22	3	1720 W. Virginia Str		Kinney, Texas 75069
4	4	972.562.4409	Texa	as P.E. Firm No. F-5935
5	5	Drawn By:	Checked By:	Scale:

C.E.C.I.

C.E.C.I.

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AUTHORITY OF	
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CONSTRUCTION	Γ

PURPOSES.

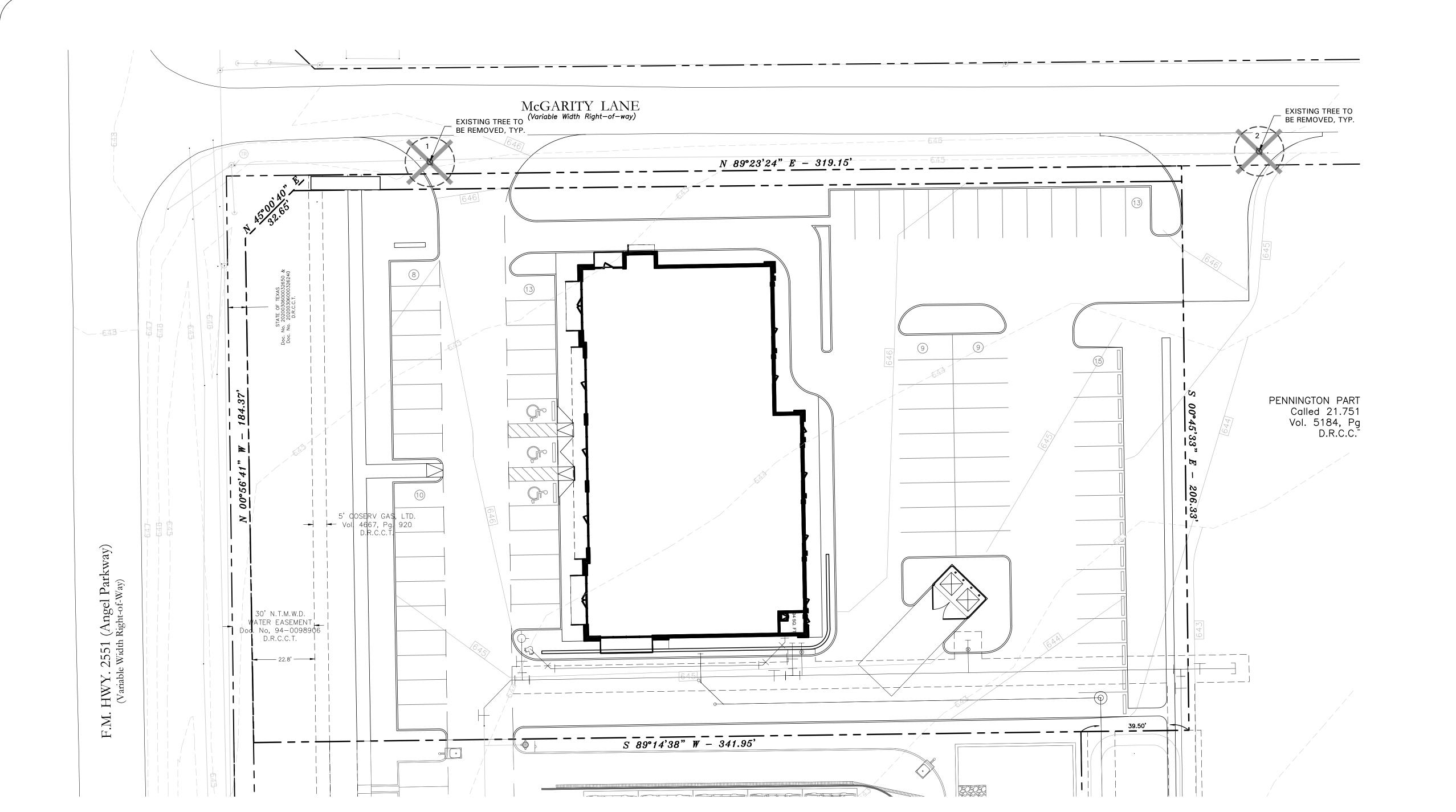
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ONSTRUCTION DETAILS	
LUCAS RETAIL	

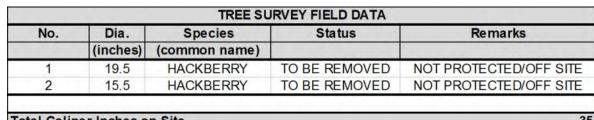
1.619 ACRE TRACT

CITY OF LUCAS, TEXAS

Sheet No.

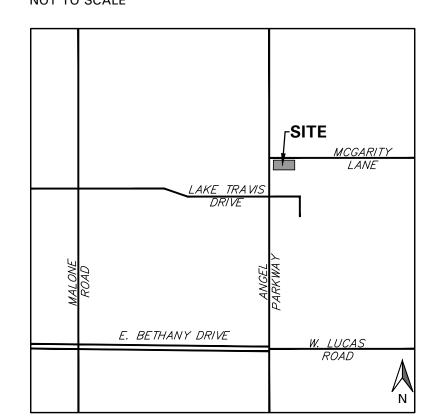
WILLIAM SNIDER SURVEY, ABSTR. NO. 821 Project No. 21125





Total Caliper Inches on Site
Total Caliper Inches Removed
Total Mitigation Inches Required
Total Mitigation Inches Provided

VICINITY MAP NOT TO SCALE



OWNER:
NDC HOLDINGS
214-361-1555
DAVE@NDCHOLDINGS.COM
8235 DOUGLAS AVENUE, SUITE 720
DALLAS, TEXAS 75225

LUCAS RETAIL ADDITION LOT 1, BLOCK A

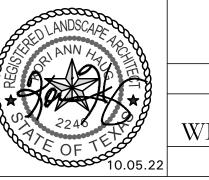


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				INEERING		
2	2 10.05.22	2 CNOS CONS				
3 T720 W. Virginia Street McKinno		Kinney, Texas 75069				
4	4		972.562.4409	as P.E. Firm No. F-5935		
5	5		Drawn By: Checked By:		Scale:	
<u> </u>	6		TIM	KAH	1" = 20' - 0"	

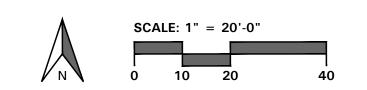
Suite 501

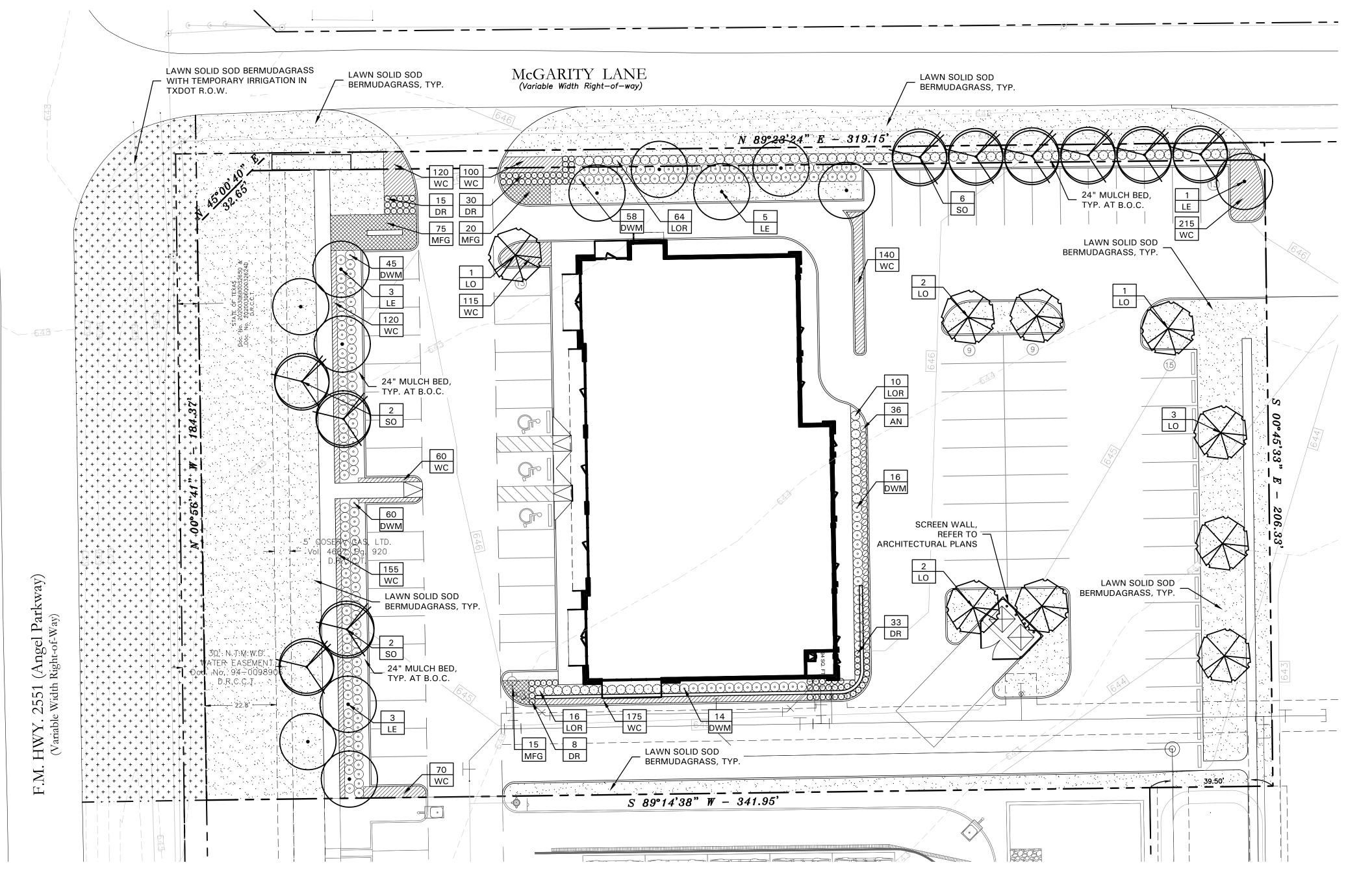
4245 North Central Expy

Dallas, Texas 75205



TREE PRESERVATION PLAN
LUCAS RETAIL
1.619 ACRE TRACT
WILLIAM SNIDER SURVEY, ABSTR. NO. 821
CITY OF LUCAS, TEXAS





#### PLANT LIST

Cynodon dactylon

SYMBOL	BOTANICAL NAME TREES	COMMON NAME	QTY.	SIZE	REMARKS
LE	Ulmus parvifolia 'Sempervirens'	Lacebark Elm	12	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
LO	Quercus virginiana	Live Oak	9	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
so	Quercus shumardii	Shumard Red Oak	10	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
	SHRUBS/GROUNDCOVER				
AN	Juniperus tobira 'Andorra'	Andorra Juniper	36	5 gal.	container full, 20" spread, 24" o.c.
DR	Rosa 'Red Drift'	Red Drift Rose	86	5 gal.	container full, 18" spread, 24" o.c.
DWM	Myrica pusilla	Dwarf Wax Myrtle	193	5 gal.	container full, 20" spread, 36" o.c.
LOR	Loropetalum chinense 'Purple Diamond'	Loropetalum 'Purple Diamond'	90	5 gal.	container full, 20" spread, 36" o.c.
MFG	Nassella tenuissima	Mexican Feathergrass	110	1 gal.	container full, 24" o.c.
WC	Fuonymus fortunei 'Coloratus'	Wintercreeper	1270	4" pots	container (3) 12" runners min., 12" o.c.

NOTE: ALL TREES SHALL HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES PLANT LIST IS AN AID TO BIDDERS ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES ON PLAN. ALL HEIGHTS AND SPREADS ARE MINIMUMS. ALL PLANT MATERIAL SHALL MEET OR EXCEED REMARKS AS INDICATED.

Common Bermudagrass



solid sod, refer to Solid Sod Notes

4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

#### LANDSCAPE NOTES

- 1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
- 2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
- 3. CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
- 4. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
- 5. ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
- 6. TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
- 7. ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 8. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
- 9. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

#### MAINTENANCE NOTES

- 1. THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
- 2. ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
- 3. ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
- 4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
- 5. ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
- 6. CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

#### **SOLID SOD NOTES**

- 1. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
- 2. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
- 3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
- 4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

#### **GENERAL LAWN NOTES**

- 1. CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.
- 2. CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.
- 3. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- 4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
- 5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.
- 6. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
- 7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

#### LANDSCAPE TABULATIONS

#### THE CITY OF LUCAS, TEXAS

1. 15% of the gross lot (excludes ROW) shall be landscaped.

Total Site: 70,503 s.f. Required

10,575 s.f. (15%) 17,233 s.f. (24%)

#### STREET FRONTAGE 1. One (1) tree and eight (8) shrubs per 20 l.f.

#### ANGEL PARKWAY: 200 I.f.

Provided Required (10) trees, 4" cal. (10) trees, 4" cal. (121) shrubs, 5 gal. (80) shrubs, 5 gal.

#### McGARITY LANE: 236 I.f Required

(12) trees, 4" cal. (12) trees, 4" cal. (118) shrubs, 5 gal. (128) shrubs, 5 gal.

#### PARKING LOT SCREENING

1. Screening may be provided by using a combination of and two (2) of the following: - Evergreen shrubs planted three (3) feet on center in a double staggered row

- A berm of up to three (3) feet high A fence or wall

#### Provided Required shrubs, berm, fence shrubs

PARKING LOT INTERIOR

1. 5' wide perimeter strip 2. 7,000 - 49,999 s.f Total Parking Area to have 5% interior

planting area 3. One (1) shade tree for each ten (10) parking spaces

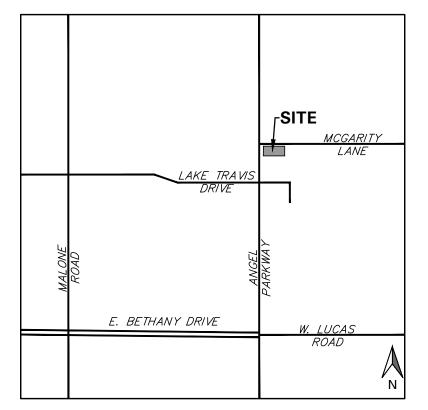
#### 4. No space shall be further than fifty (50) feet from any tree

PARKING AREA - 35,241 s.f. (78 spaces) Required Provided 1,762 s.f. (5%) 2,697 s.f. (7%)

#### (8) trees, 4" cal. (9) trees, 4" cal.

#### **VICINITY MAP**

NOT TO SCALE



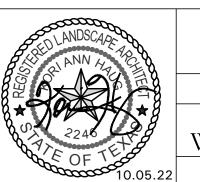
LUCAS RETAIL ADDITION LOT 1, BLOCK A

Issue Dates: Revision & Date: 1 07.14.22 1 08.11.22

TJM

CC ENGINEERING **CONSULTANTS** 2 10.05.22 1720 W. Virginia Street McKinney, Texas 75069 972.562.4409 Texas P.E. Firm No. F-5935 Drawn By: Checked By: Scale:

KAH



OWNER: NDC HOLDINGS

214-361-1555

DAVE@NDCHOLDINGS.COM

8235 DOUGLAS AVENUE, SUITE 720

DALLAS, TEXAS 75225

LANDSCAPE PLAN LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

L2.01

Sheet No.

Project No. 21125

1'' = 20' - 0''

#### **SECTION 32 9300 - LANDSCAPE**

#### PART 1 - GENERAL

#### 1.1 REFERENCED DOCUMENTS

A. Refer to Landscape Plans, notes, details, bidding requirements special provisions, and schedules for additional requirements.

#### 1.2 DESCRIPTION OF WORK

- A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:
- 1. Planting (trees, shrubs and grasses)
- 2. Bed preparation and fertilization
- 3. Notification of sources
- Water and maintenance until final acceptance
- Guarantee

#### 1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen: April 14, 2014 Edition; by American National Standards Institute, Inc. (Z60.1) – plant material
- B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.
- C. Texas Association of Nurserymen, Grades and Standards
- D. Hortis Third, 1976 Cornell University

#### 1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, crushed stone, steel edging and tree stakes. Samples shall be approved by Owner's Authorized Representative before use on the project.

#### 1.5 JOB CONDITIONS

- A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape 1.7 QUALITY ASSURANCE installation. General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

#### 1.6 MAINTENANCE AND GUARANTEE

#### A. Maintenance:

- 1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
- 2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary
- 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.

#### B. Guarantee:

- 1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
- a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials. labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
- b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises 1.8 PRODUCT DELIVERY, STORAGE AND HANDLING immediately.
- c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.
- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft. 4. Acceptance for all landscape work shall be given after final
- inspection by the Owner provided the job is in a complete. undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.
- Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

- A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.
- B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
- C. Selection of Plant Material: 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.
  - 2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.
  - 3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules
  - 4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions,

#### do not measure from branch or root tip-to-tip.

- 5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
- 6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.
- 7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

#### A. Preparation:

- Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
- 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

#### Delivery:

- Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored
- 2. Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available
- 3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
- 4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
- 5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
- 7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

6. Remove rejected plant material immediately from job site.

2.1 PLANTS

- General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant. not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.
- Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.
- Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.
- Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as

#### specified at no additional cost to the Owner.

- Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken PART 3 - EXECUTION root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, 3.1 BED PREPARATION & FERTILIZATION measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)
- Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

#### 2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:

- 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
- 2. Physical properties as follows: a. Clay – between 7-27 percent b. Silt – between 15-25 percent c. Sand – less than 52 percent
- 3. Organic matter shall be 3%-10% of total dry weight.
- 4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of 3.2 INSTALLATION course and fine textured material.
- Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved
- D. Sharp Sand: Sharp sand must be free of seeds, soil particles and
- E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
- G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus micronutrients
- H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.
- Quantities: The drawings and specifications are complementary. 2.3 MISCELLANEOUS MATERIALS Steel Edging: All steel edging shall be 3/16" thick x 4" deep x

16' long with 6 stakes per section, painted black at the factory

as manufactured by The J.D. Russell Company and under its

- trade name DURAEDGE Heavy Duty Steel.
- B. Staking Material for Shade Trees: refer to details. C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.
- D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.
- E. River Rock: 'Colorado' or native river rock, 2" 4" dia.

#### F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed earth base

- Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- All planting areas shall be conditioned as follows:

thousand (1,000) square feet.

- Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one
- All planting areas shall receive a two (2") inch layer of specified mulch.
- 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

#### C. Grass Areas

Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final
- Position the trees and shrubs in their intended location as per
- D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.
- Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.
- F. Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter ( $\frac{3}{4}$ ") inch in diameter. Plants should be thoroughly moist before removing 3.3 CLEANUP AND ACCEPTANCE
- G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or
- H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another END OF SECTION location or have drainage added. Install a PVC stand pipe per

#### tree planting detail as approved by the Landscape Architect if the percolation test fails

- Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top  $\frac{1}{3}$  of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice
- of 'root scoring'. J. Do not wrap trees.
- K. Do not over prune.
- Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.
- M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.
- N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.
- O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.
- P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
- 1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.

#### 2. Pruning shall be done with clean, sharp tools.

3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

#### Q. Steel Curbing Installation:

- Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation
- 2. All steel curbing shall be free of kinks and abrupt bends.
- 3. Top of curbing shall be  $\frac{1}{2}$ " maximum height above final
- 4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.
- 5. Do not install steel edging along sidewalks or curbs.
- 6. Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each

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TREE PLANTING DETAIL NOT TO SCALE

#### TREE PLANTING DETAIL LEGEND **AND NOTES**

- A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR
- NURSERY STOCK. www.anla.org B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE
- C. ROOT BALL: REMOVE TOP 1/3 BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.

SOIL.

- D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE. TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.
- SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE

F. ROOT ANCHOR BY TREE STAKE

E. ROOTBALL ANCHOR RING: REFER TO

MANUFACTURER'S GUIDELINES FOR

SOLUTIONS. STAKE: RFFFR MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT DISTURB ROOTBALL).

- BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.
- MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE
- TREE STAKES TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL AVAILABLE FROM: Tree Stake Solutions

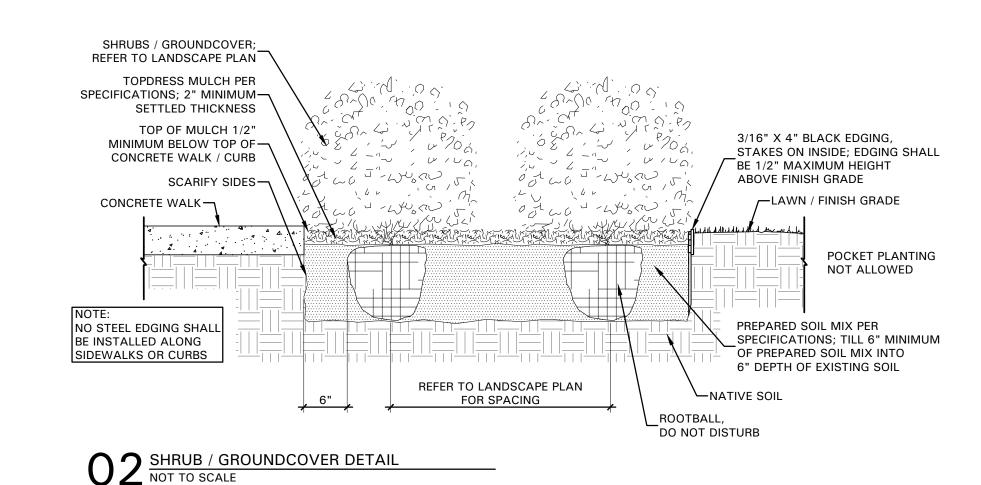
SHOULD NOT BE VISIBLE.

ATTN: Jeff Tuley

(903) 676-6143 jeff@treestakesolutions.com www.treestakesolutions.com

OR APPROVED EQUAL. TREES SHALL BE

- STAKED BELOW GROUND WHERE NECESSARY; ABOVE GROUND STAKING IS EXPRESSLY PROHIBITED.
- K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY MANUFACTURER'S SPECIFICATIONS PRIOR INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.



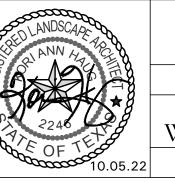


4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

NDC HOLDINGS 214-361-1555 DAVE@NDCHOLDINGS.COM 8235 DOUGLAS AVENUE, SUITE 720 DALLAS, TEXAS 75225

LUCAS RETAIL ADDITION LOT 1, BLOCK A

Issue Dates: Revision & Date: **ENGINEERING** 1 07.14.22 1 08.11.22 CONSULTANTS 2 10.05.22 1720 W. Virginia Street McKinney, Texas 75069 972.562.4409 Texas P.E. Firm No. F-5935 Drawn By: Checked By: Scale: TIMKAH

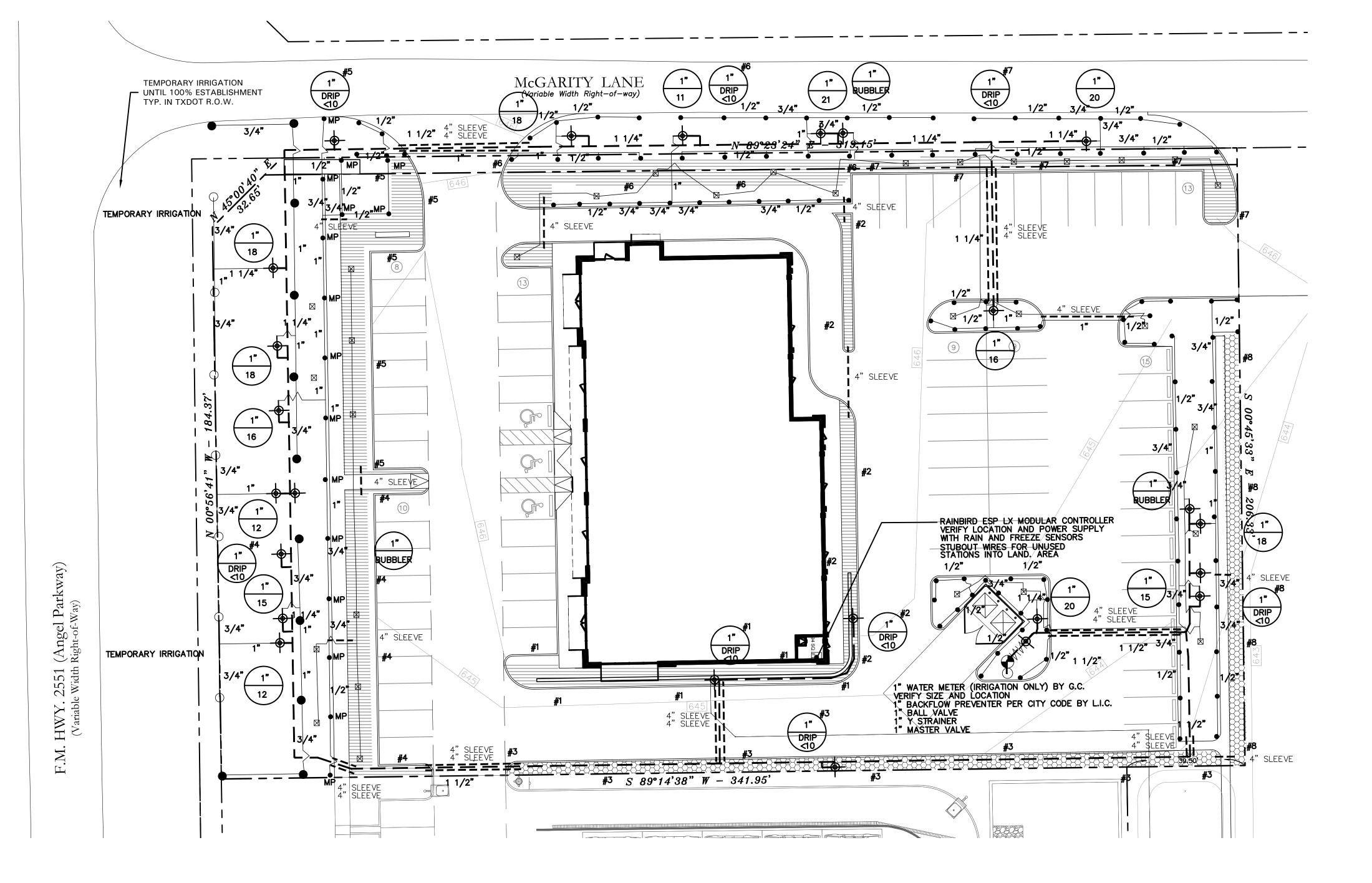


LANDSCAPE SPECIFICATIONS AND DETAILS LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

L2.02 Project No.

Sheet No.

21125



#### **SLEEVING NOTES**

- 1. SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- 2. SLEEVE MATERIAL SHALL BE SCHEDULE 40 PIPE, SIZE AS INDICATED ON PLAN.
- 3. CONTRACTOR SHALL LAY SLEEVES AND CONDUITS AT TWENTY-FOUR (24") INCHES BELOW FINISH GRADE OF THE TOP OF PAVEMENT.
- 4. CONTRACTOR SHALL EXTEND SLEEVES ONE (1') FOOT BEYOND EDGE OF ALL PAVEMENT.
- 5. CONTRACTOR SHALL CAP PIPE ENDS USING PVC CAPS.
- 6. CONTRACTOR SHALL FURNISH OWNER AND IRRIGATION CONTRACTOR WITH AN 'AS-BUILT' DRAWING SHOWING ALL SLEEVE LOCATIONS.

#### **IRRIGATION NOTES**

- 1. THE IRRIGATION CONTRACTOR SHALL COORDINATE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR SO THAT ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
- 2. ALL SPRINKLER EQUIPMENT NUMBERS REFERENCE THE RAINBIRD EQUIPMENT CATALOG UNLESS OTHERWISE INDICATED.
- 3. TEN DAYS PRIOR TO START OF CONSTRUCTION, IRRIGATION CONTRACTOR SHALL VERIFY STATIC WATER PRESSURE. IF STATIC PRESSURE IS LESS THAN 65 P.S.I., NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. DO NOT WORK UNTIL NOTIFIED TO DO SO BY OWNER.
- 4. SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR. SLEEVE MATERIAL SHALL BE SCHEDULE 40, SIZE AS INDICATED ON PLAN. REFER TO SLEEVING NOTES.
- 5. ALL MAIN LINE AND LATERAL LINE PIPING IN PLANTING AND LAWN AREAS SHALL HAVE A MINIMUM OF 12 INCHES OF COVER. ALL PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18 INCHES OF COVER. CONTRACTOR TO VERIFY LOCAL FREEZE DEPTHS AND ADJUST DEPTH OF COVER ACCORDINGLY.
- 6. LAWN SPRAY HEADS SHALL BE RAINBIRD 1804 INSTALLED PER DETAIL SHOWN.
- 7. ROTOR HEADS SHALL BE RAINBIRD 5000 INSTALLED PER DETAIL SHOWN. (WITH BUILT-IN CHECK VALVE)
- 8. NOZZLES SHALL BE RAINBIRD PLASTIC, UNLESS OTHERWISE NOTED. IRRIGATION CONTRACTOR SHALL SELECT THE PROPER ARC AND RADIUS FOR EACH NOZZLE TO ENSURE 100% AND PROPER COVERAGE OF ALL LAWN AREAS AND PLANT MATERIAL. NO WATER SHALL SPRAY ON BUILDING.
- 9. ALL NOZZLES IN PARKING LOT ISLANDS AND PLANTING BEDS SHALL BE LOW ANGLE NOZZLES TO MINIMIZE OVER SPRAY ON PAVEMENT SURFACES.
- 10. ELECTRIC CONTROL VALVES SHALL BE RAINBIRD PEB INSTALLED PER DETAIL SHOWN. SIZE OF VALVES AS SHOWN ON PLAN. VALVES SHALL BE INSTALLED IN VALVE BOXES LARGE ENOUGH TO PERMIT MANUAL OPERATION, REMOVAL OF SOLENOID AND / OR VALVE COVER WITHOUT ANY EARTH EXCAVATION.
- 11. ALL 24 VOLT VALVE WIRING TO BE UF 14 GAUGE SINGLE CONDUCTOR. ALL WIRE SPLICES ARE TO BE PERMANENT AND WATERPROOF.
- 12. AUTOMATIC CONTROLLER SHALL BE INSTALLED AT LOCATION SHOWN. POWER (120V) SHALL BE LOCATED IN A JUNCTION BOX WITHIN FIVE (5') FEET OF CONTROLLER, LOCATION BY OTHER TRADES. RAIN AND FREEZE SENSORS SHALL BE INSTALLED WITH EACH CONTROLLER.
- 13. THE DESIGN PRESSURE IS 65 PSI.
- 14. ELECTRICAL SPLICES AT EACH VALVE AND CONTROLLER ONLY.
- 15. IRRIGATION IN TEXAS IS REGULATED BY: THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) MC-178 / PO BOX 13087 AUSTIN, TEXAS 78711-3087
- 16. TCEQ'S WEBSITE IS WWW.TCEQ.STATE.TX.US.

#### **IRRIGATION LEGEND**

RAINBIRD 1804 POP-UP LAWN HEAD HUNTER MP ROTATOR NOZZLE

RAINBIRD 5000 ROTARY FC

RAINBIRD 5000 ROTARY PC

RAINBIRD BUBBLER (2 PER TREE, TYP.) RAINBIRD PEB SERIES ELECTRIC VALVE

CONTROLLER, SIZE AS INDICATED

WATER METER, SIZE AS INDICATED WITH D.C.A., SIZE AS INDICATED

PVC SCHEDULE 40 SLEEVING

PVC CLASS 200 MAINLINE

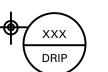
PVC CLASS 200 LATERAL LINE



NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS



NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS

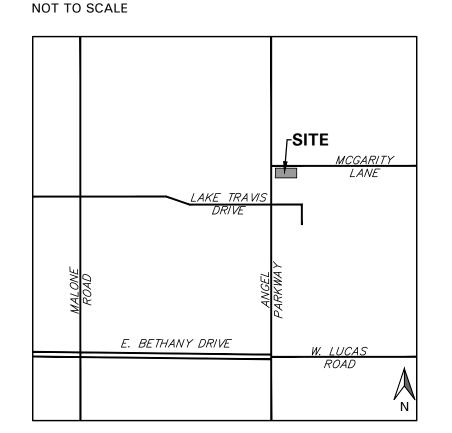


NETAFIM DISC FILTER #DF100-080 NETAFIM PRESSURE REGULATOR #PRV15025 INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS

#### **BUBBLER PIPING CHART**

SIZE OF PIPE 11 - 20 1 1/4" 21 - 30 1 ½" 31 - 40

#### **VICINITY MAP**

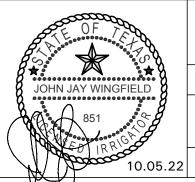


LUCAS RETAIL ADDITION LOT 1, BLOCK A



4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

> **CONSULTANTS** McKinney, Texas 75069 Texas P.E. Firm No. F-5935



OWNER: NDC HOLDINGS

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DALLAS, TEXAS 75225

IRRIGATION PLAN LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

Sheet No. L3.01 Project No.

21125

Issue Dates: Revision & Date: CD CC ENGINEERING 1 07.14.22 1 08.11.22 2 10.05.22 1720 W. Virginia Street 972.562.4409 Drawn By: Checked By: Scale: 1'' = 20' - 0''IJW IJW

#### SECTION 32 8423 - UNDERGROUND IRRIGATION SLEEVES AND UTILITY CONDUITS

PART 1 - GENERAL

#### 1.1 DESCRIPTION

A. Provide underground irrigation sleeves as indicated on the

#### 1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 32 8424 - Irrigation System

#### 1.3 REFERENCED STANDARDS

#### A. American Society for Testing and Materials:

- 1. ASTM D2441 Poly (Vinyl Chloride) (PVC) Plastic Pipe
- 2. ASTM D2466 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 40. 3. ASTM - D2564 Solvent Cements for Poly Vinyl Chloride

#### Plastic Pipe and Fittings.

#### PART 2 - MATERIALS

#### 2.1 DEFINITIONS

- A. Sleeve A pipe within which another pipe is placed for carrying water or other utilities to be installed.
- B. Wire Sleeves A pipe used to carry low voltage irrigation wires for operation of the electric solenoid valves.

#### 2.2 GENERAL

- A. Polyvinyl Chloride Pipe (PVC) Manufactured in accordance
- 1. Marking and Identification Permanently marked with SDR number, ASTM standard number, and the NSF
- (National Sanitation Foundation) seal. 2. Solvent - As recommended by manufacturer to make solvent-welded joints. Thoroughly clean pipe and fittings before applying solvent.

#### **PART 3 - EXECUTION**

#### 3.1 INSTALLATION

- A. Coverage Provide twenty-four inches (24") minimum cover 1.4 MAINTENANCE AND GUARANTEE over top of sleeve from finish grade.
- B. Sleeve Extensions Extend sleeves one foot (1') past edge of pavement or concrete walls. Install 90 degree elbow on each sleeve end and add additional length of same size pipe to extend above finish grade by twelve inches (12"). Cap pipe ends using duct tape.

#### 3.2 BACKFILL

- A. Compaction Place backfill over sleeves in six (6") inch lifts. Tamp firmly into place taking care not to damage sleeve. Complete backfill and compaction to prevent any future settlement. Compact to 85% Standard Proctor.
- B. Damage Repair any damage resulting from improper compaction including pavement repair and replacement.

#### **END OF SECTION**

O 1 SLEEVE DETAIL NOT TO SCALE

ISOMETRIC

05 REMOTE CONTROL VALVE

90 ELBOW SCHEDULE 40 PVC PIPE

#### **SECTION 32 8424 - IRRIGATION SYSTEM**

#### PART 1 - GENERAL

#### 1.1 SCOPE

A. Provide complete sprinkler installation as detailed and specified herein, includes furnishing all labor, material, tools, equipment, and related items for the complete and proper installation of the irrigation system as indicated by the Drawings. All costs associated with this installation, including fees for testing and inspections of the system components are the responsibility of the installer of this

#### B. Work includes but is not limited to:

#### Trenching and backfill. Installation of automatic controlled system.

- 3. Upon completion of installation, supply as-built drawings showing details of construction including location of mainline piping, manual and automatic valves, electrical supply to valves, and specifically the exact location of
- C. All sleeves as shown on plans shall be furnished by General Contractor. Meter and power source shall be provided by General Contractor.

#### 1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Refer to Irrigation Plans for controller, head, and valve locations.
- B. Section 32 8423 Underground Irrigation Sleeves and Utility
- C. Section 32 9300 Landscape
- D. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

#### 1.3 APPLICABLE STANDARDS

- A. America Standard for Testing and Materials (ASTM) Latest
- D2241 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)

2. D2464 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings,

- Thread, Schedule 80 3. D2455 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- 4. D2467 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 80 5. D2564 Solvent Cements for Poly (Vinyl Chloride) (PVC)
- Plastic Pipe and Fittings 6. D2287 Flexible Poly Vinyl Chloride (PVC) Plastic Pipe F656 Poly Vinyl Chloride (PVC) Solvent Weld Primer 8. D2855 Making Solvent - Cemented Joints with Poly

A. The Contractor shall guarantee materials and workmanship for one (1) calendar year after final acceptance by Owner.

(Vinyl Chloride) (PVC) Pipe and Fittings

- B. Guarantee is limited to repair and replacement of defective materials or workmanship, including repair of backfill settlement.
- C. Provide maintenance of system, including raising and lowering of heads to compensate for lawn growth, cleaning and adjustment of heads, and raising and lowering of shrub heads to compensate for shrub growth for one (1) year after completion of installation.

#### 1.5 SUBMITTALS

A. Procedure: Comply with Division I requirements.

- VALVE BOX FLUSH WITH FINISH GRADE

REMOTE CONTROL VALVE WITH 24" LONG LOOP OF CONTROL WIRE

SCHEDULE 40 PVC FITTINGS

PEA GRAVE

45 DEGREE ELL

- B. Product Data: The Contractor shall submit five (5) copies of equipment manufacturer's 'cut sheets' and shop drawings for approval by Owner Authorized Representative prior to installation, including, but not limited to the following: sprinkler head, pipe, controller, valves, backflow prevention devices, valve boxes, wire, conduit, fittings, and all other types of fixtures proposed to be installed on the job. The submittal shall include the manufacturer's name, model number, equipment capacity, and manufacturer's installation recommendations, if applicable, for each proposed item.
- C. No work covered under this section may begin until the

#### Contractor has submitted the required information. No partial submittal shall be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed, except by written consent by the Owner Authorized Representative.

D. Shop drawings include dimensions, elevations, construction details, arrangements, and capacity equipment, as well as manufacturer's installation recommendations.

#### E. Operating and Maintenance Manuals:

- 1. Provide three (3) individually bound manuals detailing operating and maintenance requirements for the irrigation
- 2. Manuals shall be delivered to the Owner Authorized Representative no later than ten (10) days prior to completion of the irrigation system.
- 3. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand, operate, and maintain the equipment.
- 4. Provide the following in each manual: a. Index sheet with Contractor's name, address, telephone number, and contact name.
- b. Duration of guarantee period. Include warranties and guarantees extended to the Owner by the manufacturer of all equipment.
- c. Equipment list providing the following for each item: ) Manufacturer's name 2) Make and model number
- 3) Name and address of local part's representative 4) Spare parts list in detail 5) Details operating and maintenance instructions for major equipment.

#### F. Project Record Documents:

- Comply with Division I requirements. 2. Locate by written dimension, routing of mainline piping, remote control valves, and quick coupling valves. Locate mainlines by single dimensions from permanent site features provided they run parallel to these elements Locate valves, intermediate electrical connections, and quick couplers by two dimensions from a permanent site
- 3. When dimensioning is complete, transpose work to bond 4. Submit three (3) copies of the completed as-built

feature at approximately 70 degrees to each other.

- drawings, along with a CD with PDF files of the same, to the Owner Authorized Representative prior to final acceptance of the work. Mark drawings "Record Prints" Showing Significant Changes". Date and sign drawings.
- G. Quick Coupler Keys: Provide three (3) coupler keys with boiler drains attached using brass reducer.
- H. Controller Keys: Provide three (3) sets of keys to controller
- Use of materials differing in quality, size, or performance from those specified shall only be allowed upon written approval of the Landscape Architect. The decision shall be based on comparative ability of material or article to perform fully all purposes of mechanics and general design considered to be possessed by item specified.
- J. Bidders desiring to make a substitution for specified sprinklers shall submit manufacturer's catalog sheet showing full specification of each type sprinkler proposed as a substitute, including discharge in GPM maximum allowable operating pressure at sprinkler.
- K. Approval of substitute sprinkler shall not relieve Irrigation Contractor of his responsibility to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system.
- It is the responsibility of the Irrigation Contractor to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system. If Irrigation Contractor notes any problems in head spacing or potential coverage, it is his responsibility to notify the Landscape Architect in writing, before proceeding with

------ SPECIFIED SPRAY NOZZLE & BODY

- 1/2" X 6" POLY NIPPLE

- CLASS 200 PVC LATERAL LINE

SXSXTPVCSCHEDULE 40

OUTLET TEE OR ELBOW

- LAG BOLTS OR EXPANSION BOLTS AS REQUIRED

WALL (EXTERIOR OR INTERIOR)

HARD WIRE 117 VOLT A.C. BEHIND CONTROLLER IN FLUSH BOX

HARD WIRE 117 VOLT A.C. POWER TO

FLUSH OUTLET BEHIND CONTROLLER

RIGID STEEL CONDUIT (SAME SIZE AS

STEEL COUPLING (AS REQUIRED)

- RIGID STEEL CONDUIT BELOW

- STEEL SPLICE BOX WITH FRONT ACCESS PANEL

CONDUIT BELOW GRADE) CONDUIT SHALL BE PLUMB.

**CONTROLLER AS SPECIFIED** KEYED LOCK OR PADLOCK

STEEL MALE CONNECTOR

— 1 1/4" RIGID STEEL CONDUIT

- CONTROLLER

FINISH FLOOR

06 WALL MOUNTED CONTROLLER NOT TO SCALE

- STEEL SWEEP ELL

FLOOR OR GRADE

 $02^{rac{\mathsf{POP}\text{-}\mathsf{UP}\;\mathsf{LAWN}\;\mathsf{SPRAY}\;\mathsf{ASSEMBLY}}{\mathsf{NOT}\;\mathsf{TO}\;\mathsf{SCALE}}$ 

- FINISH GRADE

#### work. Irrigation Contractor guarantees 100% coverage of all areas to be irrigated.

- A. Perform testing required with other trades, including earthwork, paving, plumbing, electrical, etc., to avoid unnecessary cutting, patching, and boring.
- B. Water Pressure: This irrigation system has been designed to operate with a minimum static water pressure indicated on Drawings. The Contractor shall take a pressure reading at each water meter prior to beginning construction. Confirm findings to Owner Authorized Representative in writing. If static pressure varies from pressure stated on drawings, do not start work until notified to do so by Owner Authorized Representative.

#### 1.7 COORDINATION

- A. Coordinate installation with other trades, including earthwork, paving, and plumbing to avoid unnecessary cutting, patching
- and boring. B. Coordinate to ensure that electrical power source is in place.
- C. Coordinate system installation with work specified in other sections and coordinate with Landscape Contractor to ensure plant material is uniformly watered in accordance with intent shown on drawings.

#### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Mainline: Mainlines are the piping from water source to operating valves. This portion of piping is subject to surges, being a closed portion of sprinkler system. Hydrant lines are considered a part of sprinkler main.
- B. Lateral Piping: Lateral piping is that portion of piping from operating valve to sprinkler heads. This portion of piping is not subject to surges, being an "open end" portion of

#### 2.2 POLY VINYL CHLORIDE PIPE (PVC PIPE)

Sanitation Foundation) seal.

- A. PVC pipe shall be manufactured in accordance with
- commercial standards noted herein. B. Marking and Identification: PVC pipe shall be continuously and permanently marked with the following information: manufacturer's name, pipe size, type of pipe, and material,

SDR number, product standard number, and the NSF (National

C. PVC Pipe Fittings: Shall be of the same material as the PVC pipe specified and shall be compatible with PVC pipe furnished.

#### 2.3 COPPER TUBING

A. Hard, straight lengths of domestic manufacture only. Do not use copper tube of foreign extrusion or any so-called irrigation tubing (thin wall).

#### 2.4 COPPER TUBE FITTINGS

DBY by 3M.

A. Cast brass or wrought copper, sweat - solder type. 2.5 WIRE

#### A. Type UF with 4/64" thick waterproof insulation which is Underwriter's Laboratory approved for direct underground

(30 volts AC or less). B. Wire Connectors: Waterproof splice kit connectors. Type

burial when used in a National Electric Code Class II Circuit

#### 2.6 SCHEDULE 80 PVC NIPPLES

#### A. Composed of Standard Schedule 40 PVC Fittings and PVC

#### FINISH GRADE · SIDEWALK OR CURB - ROTARY HEAD - SWING JOINT - LATERAL PIPING

# O3 ROTARY HEAD NOT TO SCALE

#### — VALVE BOX AND LID FINISH GRADE ADAPT INLET AND OUTLET (AS REQUIRED) - PVC LINE PER SPECIFICATIONS TO IRRIGATION SYSTEMS GATE VALVE - FEBCO MODEL 850 DOUBLE CHECK VALVE, LINE SIZE - WASHED ROCK (1/2" - 3/4" DIA.), PER CITY REQUIREMENT **ELEVATION** - MAIN FROM SOURCE PER CITY REQUIREMENT

**T** BACKFLOW PREVENTER NOT TO SCALE



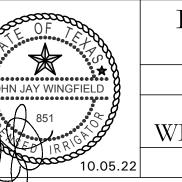
4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

NDC HOLDINGS 214-361-1555 DAVE@NDCHOLDINGS.COM 8235 DOUGLAS AVENUE, SUITE 720 DALLAS, TEXAS 75225

OWNER:

#### LUCAS RETAIL ADDITION LOT 1, BLOCK A

Issue Dates:	Revision & Date:					
1 07.14.22	1 08.11.22	CDC		NEERING		
2	2 10.05.22		CONS	SULTANTS		
3	3		1720 W. Virginia Street McKinney, Texas 75069			
4	4	972.562.4409	Texa	as P.E. Firm No. F-5935		
5	5	Drawn By:	awn By: Checked By: Scale:			
		11107	IIW/			



IRRIGATION SPECIFICATIONS AND DETAILS LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

A. Clean pipe and fitting thoroughly and lightly sand pipe connections to remove residue from pipe. Attach fittings to tubing in an approved manner using 50-50 soft solid core

#### 3.5 POP-UP SPRAY HEADS

A. Supply pop-up spray heads in accordance with materials list and plan. Attach sprinkler to lateral piping with a semi-flexible polyethylene nipple not less than three (3") inches or more than six (6") inches long.

#### 3.6 VALVES

meeting noted standards. No clamps or wires may be used.

Nipples for heads and shrub risers to be nominal one-half inch

 $(\frac{1}{2})$  diameter by eight (8") inches long, where applicable.

B. Polyethylene nipples six (6") inches long shall be used on all

E. Electric valves: Shall be all plastic construction as indicated

F. Backflow Prevention Device: Refer to drawing requirements

A. Staking: Before installation is started, place a stake where

B. Excavations: Excavations are unclassified and include earth, loose rock, rock or any combination thereof, in wet or dry

furnished take preference over this general specification.

C. Backfill: Flood or hand-tamp to prevent after settling. Hand

D. Piping Layout: Piping layout is diagrammatic. Route piping

Representative before proceeding with work.

better condition than before installation.

shown on the drawings.

3.3 PVC PIPE AND FITTING ASSEMBLY

3.4 COPPER TUBING AND FITTING ASSEMBLY

3.2 PIPE INSTALLATION

each sprinkler is to be located, in accordance with drawing.

Staking shall be approved by Owner Authorized

state. Backfill trenches with material removed, provided that

the earth is suitable for compaction and contains no lumps,

clods rock, debris, etc. Special backfill specifications, if

rake trenches and adjoining area to leave grade in as good or

around trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within ball of newly planted trees or

shrubs. In areas where existing trees are present, trenches

shall be adjusted on-site to provide a minimum clearance of

four (4) feet between the drip line of any tree or trench. The

Contractor shall notify the Owner Authorized Representative

A. Sprinkler Mains: Install a four (4") inch wide minimum trench

B. Lateral Piping: Install a four (4") inch wide minimum trench

C. Trenching: Remove lumber, rubbish, and large rocks from

deep enough to allow for installation of sprinkler heads and

trenches. Provide firm, uniform bearing for entire length of

each pipe line to prevent uneven settlement. Wedging or

blocking of pipe shall not be permitted. Remove foreign

matter or dirt from inside of pipe before welding, and keep

piping clean by approved means during and after laying of

A. Solvent: Use only solvent recommended by manufacturer to

fittings of dirt, dust and moisture before applying solvent.

B. PVC to metal connection: Work metal connections first. Use

threaded PVC adapters into which pipe may be welded.

a non-hardening pipe dope such as Permatex No. 2 on

make solvent-welded joints. Thoroughly clean pipe and

valves, but in no case, with less than twelve (12") of cover.

with a minimum of eighteen (18") inches of cover.

in writing of a planned change in trench routing from that

and flow valve. Coordinate exact location with General

A. Sprinkler heads in lawn area as specified on plan.

C. Copper Tubing (City Connection): Type "M"

pop-up spray heads.

2.7 MATERIALS - SEE IRRIGATION PLAN

B. PVC Pipe: Class 200, SDR 21

D. 24V Wire: Size 14, Type UF

on plans.

Contractor.

3.1 INSTALLATION - GENERAL

**PART 3 - EXECUTION** 

A. Supply valves in accordance with materials list and sized according to drawings. Install valves in a level position in accordance with manufacturer's specifications. See plan for typical installation of electric valve and valve box.

#### 3.7 WIRING

- A. Supply wire from the automatic sprinkler controls to the valves. No conduit will be required for UF wire unless otherwise noted on the plan. Wire shall be tucked under the
- B. A separate wire is required from the control to each electric valve. A common neutral wire is also required from each control to each of the valves served by each particular
- C. Bundle multiple wires and tape them together at ten (10') foot intervals. Install ten (10") inch expansion coils at not more than one hundred (100') foot intervals. Make splices

#### 3.8 AUTOMATIC SPRINKLER CONTROLS

A. Supply in accordance with Irrigation Plan. Install according to manufacturer's recommendations.

- A. Sprinkler Mains: Test sprinkler main only for a period of twelve (12) to fourteen (14) hours under normal pressure. If leaks occur, replace joint or joints and repeat test.
- B. Complete tests prior to backfilling. Sufficient backfill material may be placed in trenches between fittings to ensure stability of line under pressure. In each case, leave fittings and couplings open to visual inspection for full period of test.

#### 3.10 FINAL ADJUSTMENT

- A. After installation has been completed, make final adjustment of sprinkler system in preparation for Owner Authorized Representative's final inspection.
- B. Completely flush system to remove debris from lines by removing nozzle from heads on end of lines and turning on
- C. Check sprinklers for proper operation and proper alignment for
- D. Check each section of spray heads for operating pressure and balance to other sections by use of flow adjustment on top of
- E. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arch of angle of spray should be other than shown on drawings. In this case, change nozzles to provide correct coverage and furnish data to Owner

#### Authorized Representative with each change. 3.11 SYSTEM DEMONSTRATION

each valve.

A. Instruct Owner's personnel in operation and maintenance of system including adjusting of sprinkler heads. Use operation

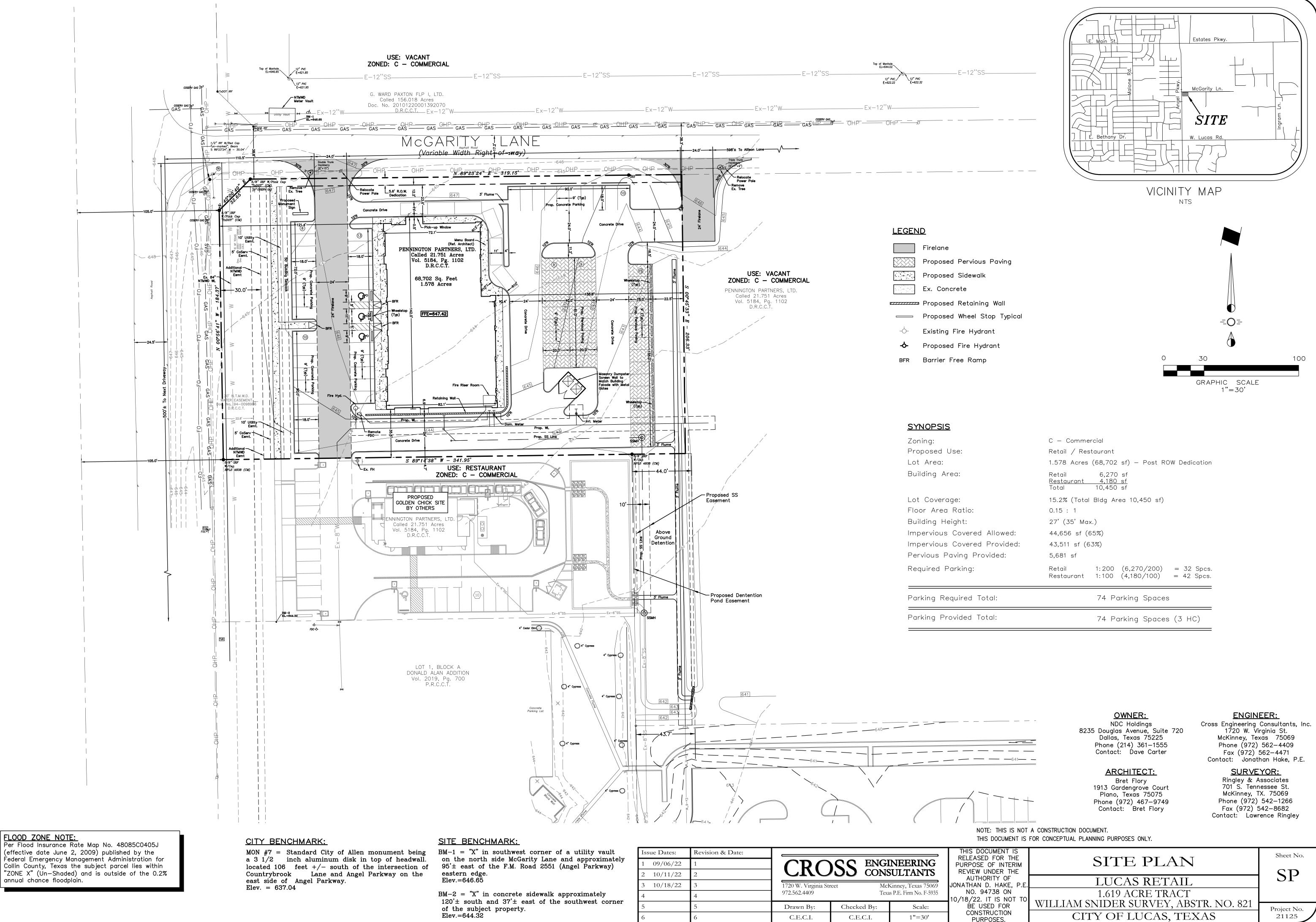
#### and maintenance manual for basis of demonstration. **END OF SECTION**

---- FINISH GRADE SIDEWALK OR CURB — ... - QUICK COUPLER - GRAVEL SWING JOINT MAINLINE PIPING -04 QUICK COUPLER NOT TO SCALE

Sheet No. L3.02

Project No.

21125

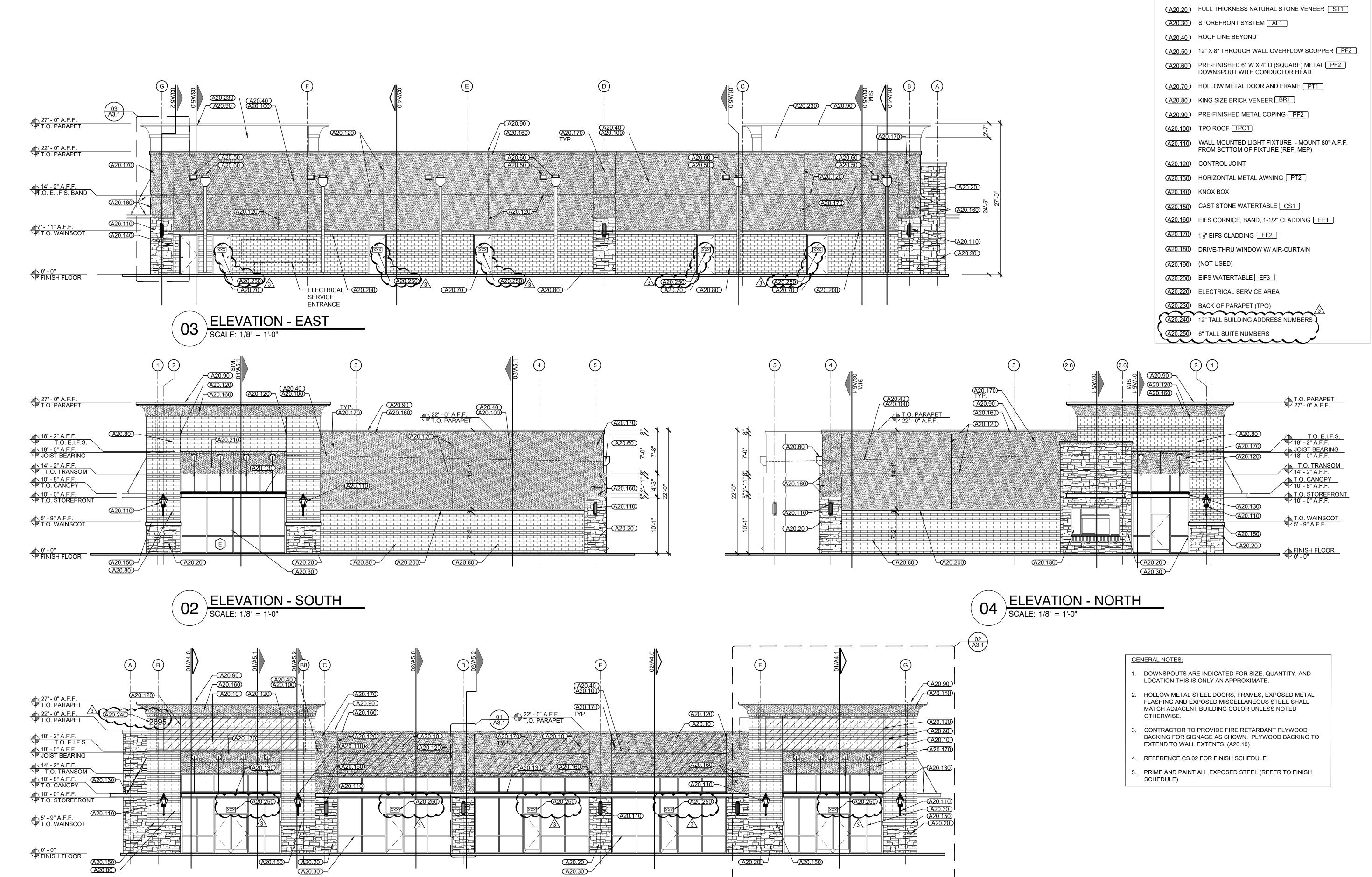


C.E.C.I.

C.E.C.I.

1"=30'

CITY OF LUCAS, TEXAS



**ELEVATION - WEST** 



A20.10 SIGNAGE (BY OTHERS) PROVIDE J-BOX AND CONDUIT



architects

CKUSS ARCHITECTS, PLLC 1255 W. 15TH ST. SUITE 125 PLANO, TEXAS 75075 P: 972.398.6644

# LUCAS RETAIL SHOPPING CENTEF LUCAS, TX.

E: 05/11/22

PROJECT NUMBER:

21140

ISSUE LOG
NO DATE

10.07.22 / CITY COMMENTS

DRAWINGS ISSUED FOR:

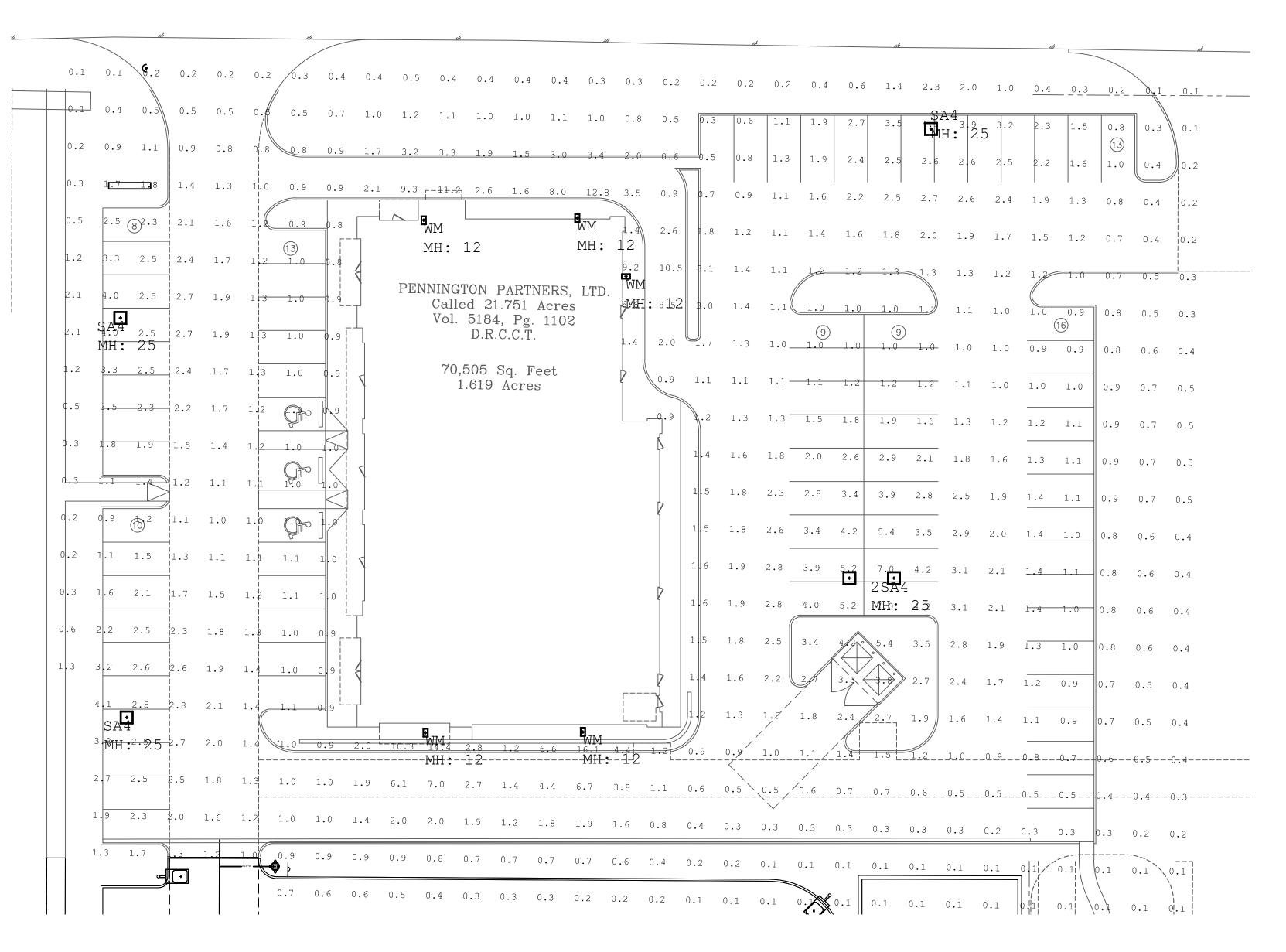
PERMIT SET

SHEET NUMBER

A3.0

EXTERIOR ELEVATIONS

COPYRIGHT © 2022



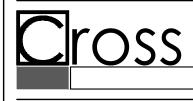
### SITE PLAN - PHOTOMETRICS SCALE: 1' = 20'-0'

-3 3 SA4 0.900 M-E - GALN-SA4A-740-U-T4FT 121 N.A. 18051 -3 1 2SA4 0.900 M-E - GALN-SA4A-740-U-T4FT 121 N.A. 18051	Luminaire Schedule									
C 1 2SA4 0.900 M-E - GALN-SA4A-740-U-T4FT 121 N.A. 18051	Symbol	Qty	Label	LLF	Description	Lum. Watts	Lumens/Lamp	Lum. Lumens		
	<b>—</b>	3	SA4	0.900	M-E - GALN-SA4A-740-U-T4FT	121	N.A.	18051		
5 WM 0.900 Tumark - VTODER 58 N.A 6129	3	1	2SA4	0.900	M-E - GALN-SA4A-740-U-T4FT	121	N.A.	18051		
5 Win 0.500   Bullark X10K0b	<b>→</b>	5	MM	0.900	Lumark - XTOR6B	58	N.A.	6129		

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Site	Illuminance	Fc	1.57	16.1	0.1	15.70	161.00
DICC	TITUMINATION	110	11.07	1 10.1		13.70	1101.00

1. Calc at grade level 2. Mounting

Type SA - 25' AFG Type WM - 12' AFG



05/11/22

PROJECT NUMBER: 21140

**ISSUE LOG** NO DATE 1 08/12/22

08/31/22 10/07/22

SHEET NUMBER

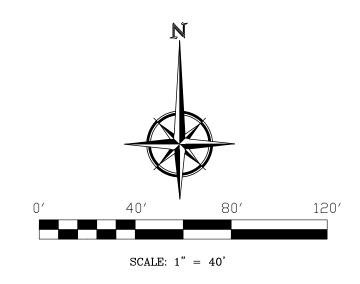
DRAWINGS ISSUED FOR: PERMIT SET



CONTRACTOR SHALL COORDINATE MEP DRAWINGS WITH ALL OTHER DISCIPLINES

Texas Registered Engineering Firm F-9218 5020 Tennyson Parkway - Plano, TX 75024 Dallas / Fort Worth 214.432.3030 Houston 832.532.2007

PHOTOMETRIC -SITE PLAN COPYRIGHT © 2022



The area (acres) shown hereon is based on the mathematical closure of the courses and distances reflected on this Survey. It does not include the tolerances that may be present due to positional accuracy of the boundary monuments in place.

#### REFERENCE BEARING NOTE:

The bearings shown hereon are geodetic and were derived from GPS observations and measurements from City of Allen Control Monument No. 7 and referenced to the Texas State Plane Coordinate System, NAD 83, North Central Zone (4202).

#### FLOOD ZONE NOTE:

This Surveyor has reviewed Flood Insurance Rate Map No. 48085C0405J (effective date June 2, 2009) published by the Federal Emergency Management Administration for Collin County, Texas and based upon said scaled map and graphic plotting, such review revealed that the subject parcel lies within "ZONE X" (Un-Shaded) and is outside of the 0.2% annual chance floodplain.

#### MONUMENT NOTE:

All lot corner monuments set by this Surveyor are 1/2 inch diameter rebar, 18 inches long, topped with a red plastic cap, stamped "RPLS 4701" or if in concrete pavement, a mag nail with a steel washer, stamped "RPLS 4701", unless otherwise noted.

#### SUBDIVISION NOTE:

All proposed lots situated in whole or in part within the city's corporate limits comply with the minimum size requirements of the governing zoning district and the requirements of the subdivision ordinance.

Selling a portion of this addition by metes and bounds is a violation of City Subdivision Ordinance and State of Texas statutes and is subject to fines and witholding of utilities and building permits.

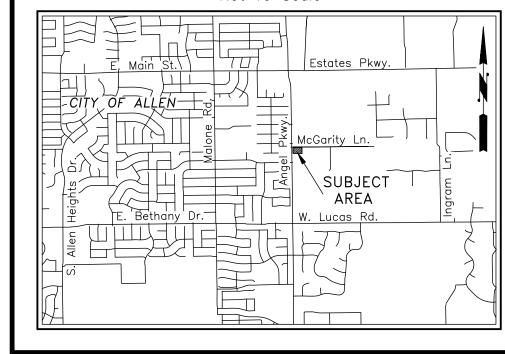
#### PURPOSE STATEMENT:

The purpose of this plat is to abandon an easement and dedicate easements for the development of the subject property.

#### LEGEND

₩ WATER VALVE △ WATER METER -**├**- FIRE HYDRANT ∅ POWER POLE GUY ANCHOR (TR) TELEPHONE RISER FOC FIBER OPTIC CABLE BOX TVR CABLE TELEVISION RISER CoServ UTILITY MARKER (Labeled) FOC W UTILITY MARKER (Labeled) ( ) SANITARY SEWER MANHOLE BOUNDARY LINE ADJOINER BOUNDARY LINE OVERHEAD POWER LINE — GAS —— GAS —— GAS —— GAS — BURIED COSERV GAS LINE BURIED FIBER OPTIC LINE BURIED WATER LINE BURIED 12" WATER LINE SANITARY SEWER LINE (Size Labeled)

#### VICINITY MAP Not To Scale



**ABBREVIATIONS** 

Doc. No. = Document Number

CM = Controlling Monument

IRF = Iron Rod Found

D.R.C.C.T. = Deed Records, Collin County, Texas

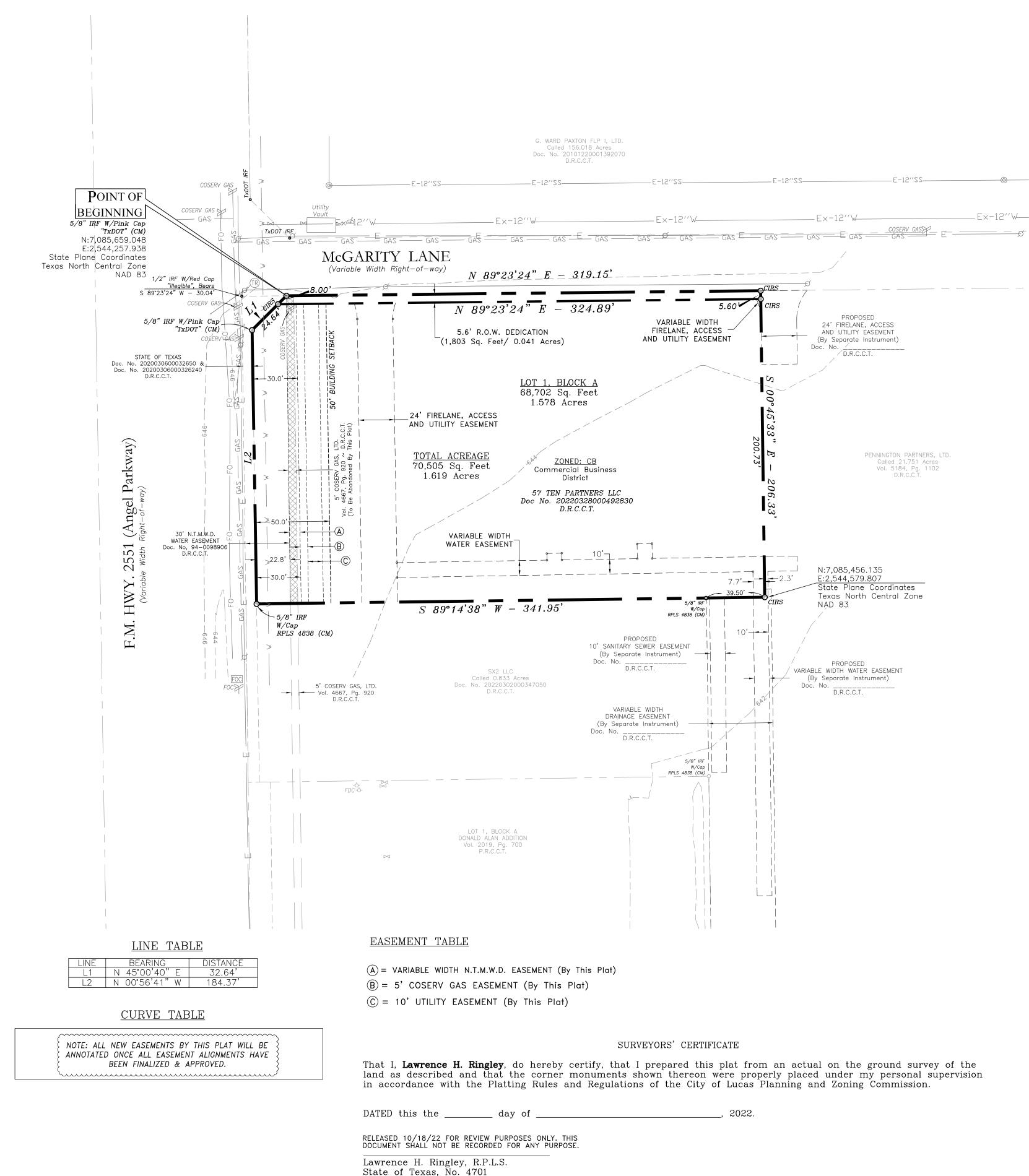
IRS = 1/2 " Iron Rod Set with red plastic cap, stamped "RPLS 4701"

P.R.C.C.T. = Plat Records, Collin County, Texas

TxDOT = Texas Department of Transportation

Vol. = Volume

Pg. = Page



#### OWNER'S CERTIFICATE

STATE OF TEXAS

COUNTY OF COLLIN

WHEREAS, 57 TEN PARTNERS, LLC is the owner of that certain tract of land situated in the City of Lucas, in the William Snider Survey, Abstract No. 821 of Collin County, Texas and being a part of that certain called 21.751 acre tract of land described in a deed to Pennington Partners, Ltd., recorded in Volume 5184, Page 1102, Deed Records, Collin County, Texas (D.R.C.C.T.) and being more particularly described by metes & bounds as

BEGINNING at a 5/8 inch iron rod, topped with a pink plastic cap, stamped "TxDOT", found for the northeastern corner of that certain called 0.0595 acre strip of land, described as "Parcel 59" in a deed to the State of Texas, dated March 5, 2020 and recorded in Document No. 20200306000326240, D.R.C.C.T. and from said beginning point, a found 1/2 inch iron rod, topped with a red plastic cap (illegible stamp), at the intersection of the original east right-of-way line of F.M. Highway 2551 (Angel Parkway - variable width right-of-way) and the south right-of-way line of McGarity Lane (variable width right-of-way) for the northwest corner of said "Parcel 59" and the above described 21.751 acre tract, bears South 89 deg. 23 min. 24 sec. West - 30.04 feet;

THENCE: North 89 deg. 23 min. 24 sec. East, along the common line of said 21.751 acre tract and said McGarity Lane, a distance of 319.15 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4701", set for the northeast corner of this tract;

THENCE: South 00 deg. 45 min. 33 sec. East, departing from said McGarity Lane, over & across said 21.751 acre tract, a distance of 206.33 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4701", set for the southeast corner of this tract;

THENCE: South 89 deg. 14 min. 38 sec. West, continuing across said 21.751 acre tract, at a distance of 39.50 feet, passing a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4838", found on line and continuing across said 21.751 acre tract for a total distance of 341.95 feet to a 1/2 inch iron rod, topped with a red plastic cap, stamped "RPLS 4838", found on the east line of the above described TxDOT Parcel 59 and same being the now current east right-of-way line of said F.M. Highway 2551 (Angel Parkway);

THENCE: North 00 deg. 56 min. 41 sec. West, along the east line of said F.M. Highway 2551 and said Parcel 59, a distance of 184.37 feet to a 5/8 inch iron rod, topped with a pink plastic cap, stamped "TxDOT", found for an angle corner;

THENCE: North 45 deg. 00 min. 40 sec. East, continuing along the east line of said F.M. 2551 and said Parcel 59, a distance of 32.65 feet to the POINT OF BEGINNING and containing 70,505 square feet or 1.619 acres of land.

#### OWNER'S DEDICATION

STATE OF TEXAS

COUNTY OF COLLIN

STATE OF TEXAS

That 57 TEN PARTNERS LLC, Owners, do hereby bind themselves and their heirs, assignees and successors of title this plat designating the hereinabove described property as LUCAS RETAIL, an addition to the City of Lucas, and do hereby dedicate to the public use forever the streets, alleys, and right-of-way easements shown thereon, and do hereby reserve the easement strips shown on this plat for the mutual use and accommodation of garbage collection agencies and all public utilities desiring to use or using same. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths that in any way endanger or interfere with the construction, maintenance or efficiency of its respective systems on any of these easements strips, and any public utility shall at all times have the right of ingress and egress to and from and upon the said easement strips for the purpose of constructing, reconstructing, inspecting, patrolling, without the necessity at any time of procuring the permission of anyone. Additionally, I certify that I am the sole owner of the dedicated property and that no other's interest are attached to this property unless otherwise indicated on the required Mortgage Holder Certification that is included on this plat. This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

Witness our hands at LUCAS, Tex	as, this	_ day of	
Dave Carter — President 57 Ten Partners LLC			

COUNTY OF COLLIN BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared DAVE CARTER, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same in the capacity therein stated and

WITNESS MY HAND AND SEAL OF OFFICE, this the \_\_\_\_\_ day of \_\_\_\_\_, 2022.

Notary Public, State of Texas

for the purposes and considerations therein expressed

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas

Chairman, Planning and Zoning Commission ATTEST: Date Signature

Name & Title

Joseph Hilburn,

The Director of Public Works of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required.

Scott Holden, Date Director of Public Works

The Development Services Director of the City of Lucas, Texas hereby certifies that to the best of his/her knowledge or belief, this subdivision plat conforms to all requirements of the Code of Ordinances, or as may have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required.

Development Services Director

"PRELIMINARY PLAT FOR REVIEW PURPOSES ONLY"

Date

SURVEYOR

LUCAS RETAIL PRELIMINARY PLAT LOT 1, BLOCK A 1.619 Acre Tract

Zoned: CB (Commercial Business) William Snider Survey, Abstract No. 821 City of Lucas, Collin County, Texas

<u>OWNER</u>

57 TEN PARTNERS, LLC RINGLEY & ASSOCIATES, INC. 701 S. Tennessee Street McKinney, Texas 75069 LHR@Ringley.com

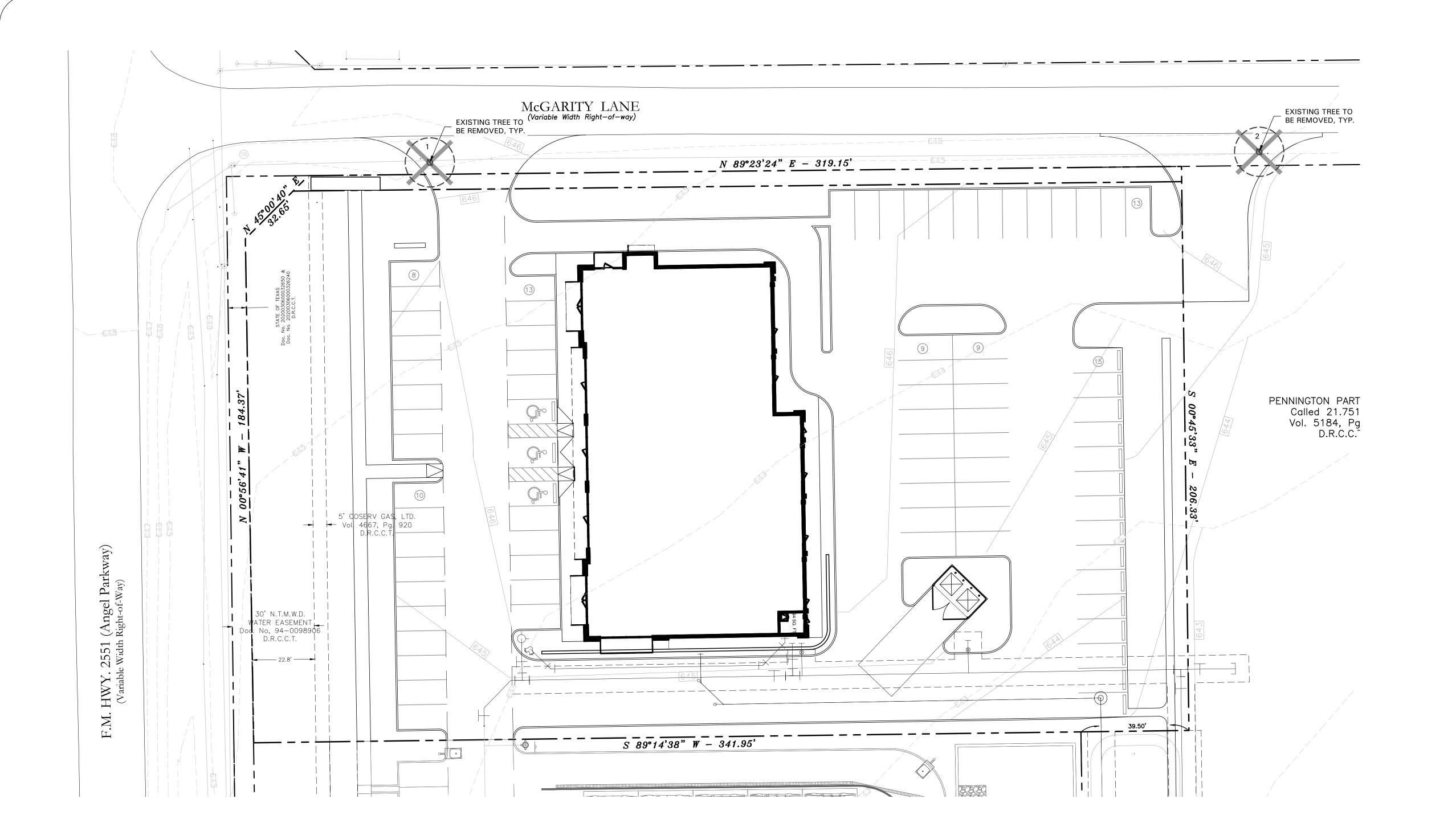
RINGLEY & ASSOCIATES, INC. SURVEYING • MAPPING • PLANNING Texas Firm Registration No. 10061300 701 S. Tennessee – McKinney, Texas 75069 (972) 542-1266 Scale Job

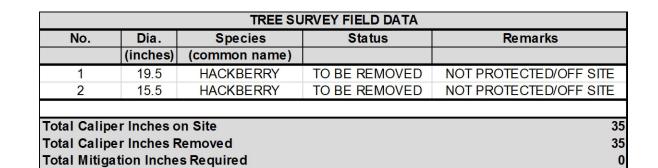
Drawn by Date Mark Staab | 07/07/2022 | 1" = 40' | 2021-071 | 2021-071-PP.DWG

972-542-1266

Contact: Dave Carter, President

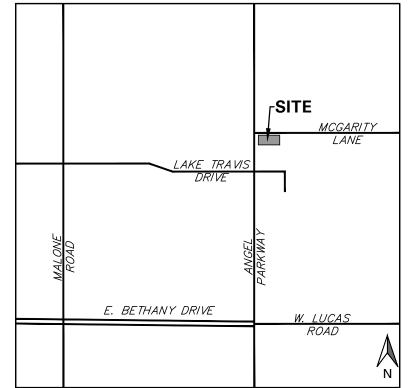
4516 Lovers Lane, Suite #224 Dallas, Texas 75225 (214)-244-1777





Total Mitigation Inches Provided

VICINITY MAP
NOT TO SCALE



OWNER: NDC HOLDINGS 214-361-1555
DAVE@NDCHOLDINGS.COM
8235 DOUGLAS AVENUE, SUITE 720 DALLAS, TEXAS 75225

LUCAS RETAIL ADDITION LOT 1, BLOCK A



Revision & Date:

1 08.11.22 2 10.05.22

Issue Dates:

1 07.14.22

Dallas, Texas 75205 • 214.865.7192 office CROSS ENGINEERING CONSULTANT McKinney, Texas 7 Texas P.E. Firm No. I 1720 W. Virginia Street 972.562.4409

Checked By:

KAH

4245 North Central Expy

Drawn By:

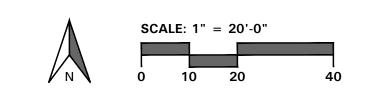
TJM

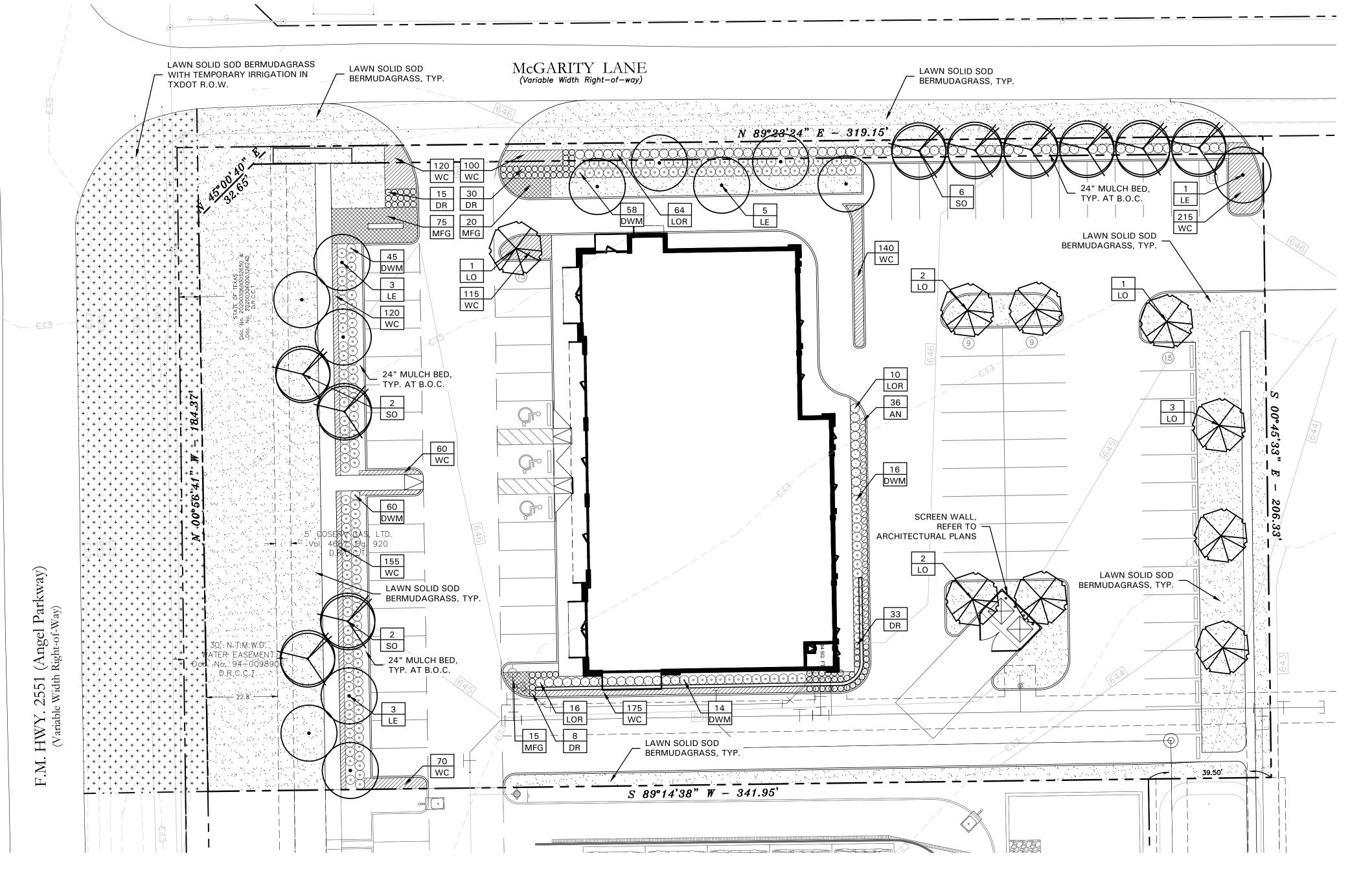
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nney, Texas 75069 P.E. Firm No. F-5935	***************************************
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1" = 20' - 0"	Some of the second

LANDSCAPE AND ALL AND	
0) 2246 P	W
10.05.22	

TREE PRESERVATION PLAN
LUCAS RETAIL
1.619 ACRE TRACT
WILLIAM SNIDER SURVEY, ABSTR. NO. 821
CITY OF LUCAS, TEXAS

Sheet No. L1.01 Project No. 21125





#### PLANT LIST

Cynodon dactylon

SYMBOL	BOTANICAL NAME TREES	COMMON NAME	QTY.	SIZE	REMARKS
LE	Ulmus parvifolia 'Sempervirens'	Lacebark Elm	12	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
LO	Quercus virginiana	Live Oak	9	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
SO	Quercus shumardii	Shumard Red Oak	10	4" cal.	container grown, 15' ht., 5' spread, 5' branching ht., matching
	SHRUBS/GROUNDCOVER				
AN	Juniperus tobira 'Andorra'	Andorra Juniper	36	5 gal.	container full, 20" spread, 24" o.c.
DR	Rosa 'Red Drift'	Red Drift Rose	86	5 gal.	container full, 18" spread, 24" o.c.
DWM	Myrica pusilla	Dwarf Wax Myrtle	193	5 gal.	container full, 20" spread, 36" o.c.
LOR	Loropetalum chinense 'Purple Diamond'	Loropetalum 'Purple Diamond'	90	5 gal.	container full, 20" spread, 36" o.c.
MFG	Nassella tenuissima	Mexican Feathergrass	110	1 gal.	container full, 24" o.c.
WC	Euonymus fortunei 'Coloratus'	Wintercreeper	1270	4" pots	container (3) 12" runners min., 12" o.c.

NOTE: ALL TREES SHALL HAVE STRAIGHT TRUNKS AND BE MATCHING WITHIN VARIETIES PLANT LIST IS AN AID TO BIDDERS ONLY. CONTRACTOR SHALL VERIFY ALL QUANTITIES ON PLAN. ALL HEIGHTS AND SPREADS ARE MINIMUMS. ALL PLANT MATERIAL SHALL MEET OR EXCEED REMARKS AS INDICATED.

Common Bermudagrass



solid sod, refer to Solid Sod Notes

4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

#### LANDSCAPE NOTES

- 1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
- 2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
- 3. CONTRACTOR SHALL PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
- 4. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL FINISHED GRADE IN PLANTING AREAS AND 1" BELOW FINAL FINISHED GRADE IN LAWN AREAS.
- 5. ALL PLANTING BEDS AND LAWN AREAS SHALL BE SEPARATED BY STEEL EDGING. NO STEEL EDGING SHALL BE INSTALLED ADJACENT TO BUILDINGS, WALKS, OR CURBS. CUT STEEL EDGING AT 45 DEGREE ANGLE WHERE IT INTERSECTS WALKS AND CURBS.
- 6. TOP OF MULCH SHALL BE 1/2" MINIMUM BELOW THE TOP OF WALKS AND CURBS.
- 7. ALL LAWN AREAS SHALL BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 8. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLERS AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
- 9. CONTRACTOR SHALL PROVIDE BID PROPOSAL LISTING UNIT PRICES FOR ALL MATERIAL PROVIDED.
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.

#### MAINTENANCE NOTES

- 1. THE OWNER, TENANT AND THEIR AGENT, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE.
- 2. ALL LANDSCAPE SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, FERTILIZING, WATERING, WEEDING AND OTHER SUCH ACTIVITIES COMMON TO LANDSCAPE MAINTENANCE.
- 3. ALL LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH MATERIAL OR PLANTS NOT PART OF THIS PLAN.
- 4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR.
- 5. ALL PLANT MATERIAL WHICH DIES SHALL BE REPLACED WITH PLANT MATERIAL OF EQUAL OR BETTER VALUE.
- 6. CONTRACTOR SHALL PROVIDE SEPARATE BID PROPOSAL FOR ONE YEAR'S MAINTENANCE TO BEGIN AFTER FINAL ACCEPTANCE.

#### **SOLID SOD NOTES**

- 1. PLANT SOD BY HAND TO COVER INDICATED AREAS COMPLETELY. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
- 2. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
- 3. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
- 4. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, OVER-SEED BERMUDAGRASS SOD WITH WINTER RYEGRASS, AT A RATE OF FOUR (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

#### **GENERAL LAWN NOTES**

- 1. CONTRACTOR SHALL COORDINATE OPERATIONS AND AVAILABILITY OF EXISTING TOPSOIL WITH ON-SITE CONSTRUCTION MANAGER.
- 2. CONTRACTOR SHALL LEAVE LAWN AREAS 1" BELOW FINAL FINISHED GRADE PRIOR TO TOPSOIL INSTALLATION.
- 3. CONTRACTOR SHALL FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS AS INDICATED ON CIVIL PLANS. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- 4. ALL LAWN AREAS SHALL BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR LANDSCAPE ARCHITECT PRIOR TO LAWN INSTALLATION.
- 5. CONTRACTOR SHALL REMOVE ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. PRIOR TO PLACING TOPSOIL AND LAWN INSTALLATION.
- 6. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
- 7. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

#### LANDSCAPE TABULATIONS

#### THE CITY OF LUCAS, TEXAS

1. 15% of the gross lot (excludes ROW) shall be landscaped.

Total Site: 70,503 s.f. Required

10,575 s.f. (15%) 17,233 s.f. (24%)

#### STREET FRONTAGE

1. One (1) tree and eight (8) shrubs per 20 l.f.

#### ANGEL PARKWAY: 200 I.f.

Provided Required (10) trees, 4" cal. (10) trees, 4" cal. (121) shrubs, 5 gal. (80) shrubs, 5 gal.

#### McGARITY LANE: 236 I.f

Required (12) trees, 4" cal. (12) trees, 4" cal.

#### (118) shrubs, 5 gal. (128) shrubs, 5 gal.

PARKING LOT SCREENING 1. Screening may be provided by using a combination of and two (2) of the following:

- Evergreen shrubs planted three (3) feet on center in a double staggered row

- A berm of up to three (3) feet high A fence or wall

#### Provided Required shrubs, berm, fence shrubs

PARKING LOT INTERIOR

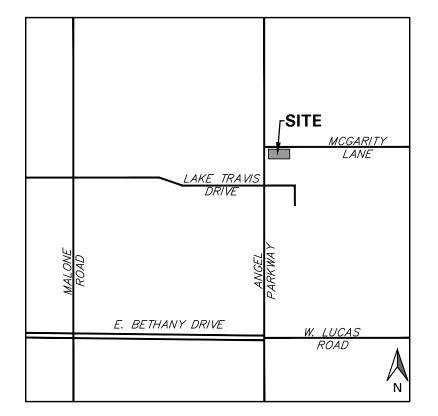
- 1. 5' wide perimeter strip
- 2. 7,000 49,999 s.f Total Parking Area to have 5% interior planting area
- 3. One (1) shade tree for each ten (10) parking spaces 4. No space shall be further than fifty (50) feet from any tree

PARKING AREA - 35,241 s.f. (78 spaces) Required Provided

1,762 s.f. (5%) 2,697 s.f. (7%) (8) trees, 4" cal. (9) trees, 4" cal.

#### **VICINITY MAP**

NOT TO SCALE



LUCAS RETAIL ADDITION LOT 1, BLOCK A

Issue Dates: Revision & Date: CC ENGINEERING 1 07.14.22 1 08.11.22 **CONSULTANTS** 2 10.05.22 1720 W. Virginia Street McKinney, Texas 75069 972.562.4409 Texas P.E. Firm No. F-5935 Drawn By: Checked By: Scale:

TJM

KAH



1'' = 20' - 0''

OWNER: NDC HOLDINGS

214-361-1555

DAVE@NDCHOLDINGS.COM

8235 DOUGLAS AVENUE, SUITE 720

DALLAS, TEXAS 75225

LANDSCAPE PLAN LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

L2.01

Sheet No.

#### **SECTION 32 9300 - LANDSCAPE**

#### PART 1 - GENERAL

#### 1.1 REFERENCED DOCUMENTS

A. Refer to Landscape Plans, notes, details, bidding requirements special provisions, and schedules for additional requirements.

#### 1.2 DESCRIPTION OF WORK

- A. Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:
- 1. Planting (trees, shrubs and grasses)
- 2. Bed preparation and fertilization
- 3. Notification of sources
- Water and maintenance until final acceptance
- Guarantee

#### 1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen: April 14, 2014 Edition; by American National Standards Institute, Inc. (Z60.1) – plant material
- B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.
- C. Texas Association of Nurserymen, Grades and Standards
- D. Hortis Third, 1976 Cornell University

#### 1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, crushed stone, steel edging and tree stakes. Samples shall be approved by Owner's Authorized Representative before use on the project.

#### 1.5 JOB CONDITIONS

- A. General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape 1.7 QUALITY ASSURANCE installation. General Contractor shall leave planting bed areas three (3") inches below final finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the final finish grade of sidewalks, drives and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- B. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

#### 1.6 MAINTENANCE AND GUARANTEE

#### A. Maintenance:

- 1. The Landscape Contractor shall be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show healthy growth and satisfactory foliage conditions.
- 2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary
- 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by the Owner's Authorized Representative will be completed prior to written acceptance.

#### B. Guarantee:

- 1. Trees, shrubs and groundcover shall be guaranteed for a twelve (12) month period after final acceptance. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size or symmetry have been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
- a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials. labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
- b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises 1.8 PRODUCT DELIVERY, STORAGE AND HANDLING immediately.
- c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and re-inspected for full compliance with the contract requirements. All replacements are to be included under "Work" of this section.
- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
- 4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a complete. undamaged condition and there is a stand of grass in all lawn areas. At that time, the Owner will assume maintenance on the accepted work.
- Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting. In the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense to the Landscape Contractor.

- A. General: Comply with applicable federal, state, county and local regulations governing landscape materials and work.
- B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
- C. Selection of Plant Material: 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will ensure the purchased materials will meet and / or exceed project specifications.
- 2. Substitutions: Do not make plant material substitutions. If the specified landscape material is not obtainable, submit proof of non-availability to Landscape Architect, together with proposal for use of equivalent material. At the time bids are submitted, the Contractor is assumed to have located the materials necessary to complete the job as specified.
- 3. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules
- 4. Measurements: Measure trees with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements six inches above ground for trees up to and including 4" caliper size, and twelve inches above ground for larger sizes. Measure main body of all plant material of height and spread dimensions,

#### do not measure from branch or root tip-to-tip.

- 5. Owner's Authorized Representative shall inspect all plant material with requirements for genus, species, cultivar / variety size and quality.
- 6. Owner's Authorized Representative retains the right to further inspect all plant material upon arrival to the site and during installation for size and condition of root balls and root systems, limbs, branching habit, insects, injuries and latent defects.
- 7. Owner's Authorized Representative may reject unsatisfactory or defective material at any time during the process work. Remove rejected materials immediately from the site and replace with acceptable material at no additional cost to the Owner. Plants damaged in transit or at job site shall be rejected.

#### A. Preparation:

- Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape and future development.
- 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

#### Delivery:

- Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored
- 2. Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available
- 3. Protect root balls by heeling in with sawdust or other approved moisture retaining material if not planted within 24 hours of delivery.
- 4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
- 5. Notify Owner's Authorized Representative of delivery schedule 72 hours in advance job site.
- 7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

6. Remove rejected plant material immediately from job site.

2.1 PLANTS

- General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant. not to the outer leaf tips. Plants will be individually approved by the Owner's Authorized Representative and his decision as to their acceptability shall be final.
- Quantities: The drawings and specifications are complementary. 2.3 MISCELLANEOUS MATERIALS Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.
- Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae, and are to be of specimen quality.
- Approval: All plants which are found unsuitable in growth, or are in any unhealthy, badly shaped or undersized condition will be rejected by the Owner's Authorized Representative either before or after planting and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plant as

#### specified at no additional cost to the Owner.

- Trees shall be healthy, full-branched, well-shaped, and shall meet the minimum trunk and diameter requirements of the plant schedule. Balls shall be firm, neat, slightly tapered and well wrapped in burlap. Any tree loose in the ball or with a broken PART 3 - EXECUTION root ball at time of planting will be rejected. Balls shall be ten (10") inches in diameter for each one (1") inch of trunk diameter, 3.1 BED PREPARATION & FERTILIZATION measured six (6") inches above ball. (Nomenclature confirms to the customary nursery usage. For clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.)
- Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect prior to final acceptance, shall be executed by the Landscape Contractor at no additional cost to the Owner.

#### 2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:

- 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
- 2. Physical properties as follows: a. Clay – between 7-27 percent b. Silt – between 15-25 percent c. Sand – less than 52 percent
- 3. Organic matter shall be 3%-10% of total dry weight.
- 4. If requested, Landscape Contractor shall provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of 3.2 INSTALLATION course and fine textured material.
- Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved
- D. Sharp Sand: Sharp sand must be free of seeds, soil particles and
- E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
- G. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulfur and 4% iron, plus micronutrients
- H. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.
- Steel Edging: All steel edging shall be 3/16" thick x 4" deep x 16' long with 6 stakes per section, painted black at the factory as manufactured by The J.D. Russell Company and under its trade name DURAEDGE Heavy Duty Steel.
- B. Staking Material for Shade Trees: refer to details.
- C. Gravel: Washed native pea gravel, graded 1 inch to 1-1/2 inch.
- D. Filter Fabric: 'Mirafi Mirascape' by Mirafi Construction Products available at Lone Star Products, Inc., (469) 523-0444 or approved equal.
- E. River Rock: 'Colorado' or native river rock, 2" 4" dia.

#### F. Decomposed Granite: Base material shall consist of a natural material mix of granite aggregate not to exceed 1/8" diameter in size and shall be composed of various stages of decomposed earth base

- Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.
- All planting areas shall be conditioned as follows:

thousand (1,000) square feet.

- Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per Manufacturer's recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one
- All planting areas shall receive a two (2") inch layer of specified mulch.
- 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

#### C. Grass Areas

Blocks of sod should be laid joint to joint (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- Plant materials shall be delivered to the site only after the beds are prepared and areas are ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final
- Position the trees and shrubs in their intended location as per
- D. Notify the Owner's Authorized Representative for inspection and approval of all positioning of plant materials.
- Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.
- F. Shrub and tree pits shall be no less than twenty-four (24") inches wider than the lateral dimension of the earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over three-quarter ( $\frac{3}{4}$ ") inch in diameter. Plants should be thoroughly moist before removing 3.3 CLEANUP AND ACCEPTANCE
- G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or
- H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another END OF SECTION location or have drainage added. Install a PVC stand pipe per

#### tree planting detail as approved by the Landscape Architect if the percolation test fails

- Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top  $\frac{1}{3}$  of the ball, as well as all nylon, plastic string and wire. Container trees will usually be root bound, if so follow standard nursery practice of 'root scoring'.
- J. Do not wrap trees.
- K. Do not over prune.
- Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.
- M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.
- N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.
- O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure trees against seasonal prevailing winds.
- P. Pruning and Mulching: Pruning shall be directed by the Landscape Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by the National Arborist Association.
- 1. Dead wood, suckers, broken and badly bruised branches shall be removed. General tipping of the branches is not permitted. Do not cut terminal branches.

#### 2. Pruning shall be done with clean, sharp tools.

3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

#### Q. Steel Curbing Installation:

- Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and obtain Owners approval prior to installation
- 2. All steel curbing shall be free of kinks and abrupt bends.
- 3. Top of curbing shall be  $\frac{1}{2}$ " maximum height above final
- 4. Stakes are to be installed on the planting bed side of the curbing, as opposed to the grass side.
- 5. Do not install steel edging along sidewalks or curbs.
- 6. Cut steel edging at 45 degree angle where edging meets sidewalks or curbs.

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized so that they, too, are neat and orderly. All trash and debris shall be removed from the site as work progresses. Keep paved areas clean by sweeping or hosing them at end of each

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TREE PLANTING DETAIL NOT TO SCALE

#### TREE PLANTING DETAIL LEGEND **AND NOTES**

- A. TREE: TREES SHALL CONFORM WITH LATEST AMERICAN STANDARD FOR
- NURSERY STOCK. www.anla.org B. TREE PIT: WIDTH TO BE AT LEAST TWO (2) TIMES THE DIAMETER OF THE ROOT BALL CENTER TREE IN HOLE & REST ROOT BALL ON UNDISTURBED NATIVE
- C. ROOT BALL: REMOVE TOP 1/3 BURLAP AND ANY OTHER FOREIGN OBJECT; CONTAINER GROWN STOCK TO BE INSPECTED FOR GIRDLING ROOTS.

SOIL.

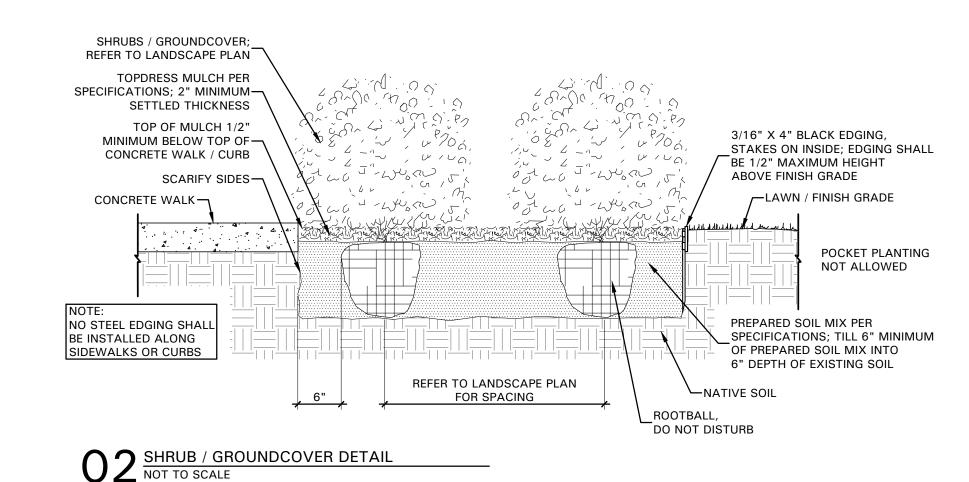
- D. ROOT FLARE: ENSURE THAT ROOT FLARE IS EXPOSED, FREE FROM MULCH, AND AT LEAST TWO INCHES ABOVE GRADE. TREES SHALL BE REJECTED WHEN GIRDLING ROOTS ARE PRESENT & ROOT FLARE IS NOT APPARENT.
- E. ROOTBALL ANCHOR RING: REFER TO MANUFACTURER'S GUIDELINES FOR SIZING. PLACE ROOTBALL ANCHOR RING ON BASE OF ROOTBALL, TRUNK SHOULD BE IN THE CENTER OF THE
- SOLUTIONS. STAKE: RFFFR MANUFACTURER'S GUIDELINES FOR SIZING. INSTALL NAIL STAKES WITH HAMMER OR MALLET FIRMLY INTO UNDISTURBED GROUND. DRIVE NAIL

DISTURB ROOTBALL).

STAKES FLUSH WITH "U" BRACKET ADJACENT TO ROOTBALL (DO NOT

F. ROOT ANCHOR BY TREE STAKE

- BACKFILL: USE EXISTING NATIVE SOIL (no amendments) WATER THOROUGHLY TO ELIMINATE AIR POCKETS.
- MULCH: DOUBLE SHREDDED HARDWOOD MULCH 2 INCH SETTLED THICKNESS, WITH 2" HT. WATERING RING; ENSURE THAT ROOT FLARE IS EXPOSED. BELOW GROUND STAKE
- TREE STAKES TREE STAKE SOLUTIONS 'SAFETY STAKE' BELOW GROUND MODEL AVAILABLE FROM:
  - (903) 676-6143 jeff@treestakesolutions.com www.treestakesolutions.com
- IS EXPRESSLY PROHIBITED. K. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A COPY
- SHOULD NOT BE VISIBLE.
- Tree Stake Solutions ATTN: Jeff Tuley
- OR APPROVED EQUAL. TREES SHALL BE STAKED BELOW GROUND WHERE NECESSARY; ABOVE GROUND STAKING
- MANUFACTURER'S SPECIFICATIONS PRIOR INSTALLATION OF TREE STAKES. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S INSTALLATION GUIDELINES, SPECIFICATIONS, AND OTHER REQUIREMENTS FOR TREE STAKE INSTALLATION.



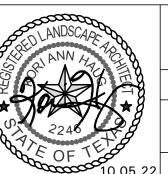


4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

NDC HOLDINGS 214-361-1555 DAVE@NDCHOLDINGS.COM 8235 DOUGLAS AVENUE, SUITE 720 DALLAS, TEXAS 75225

LUCAS RETAIL ADDITION LOT 1, BLOCK A

Issue Dates: Revision & Date: **ENGINEERING** 1 07.14.22 1 08.11.22 CONSULTANTS 2 10.05.22 1720 W. Virginia Street McKinney, Texas 75069 972.562.4409 Texas P.E. Firm No. F-5935 Drawn By: Checked By: Scale: TIMKAH

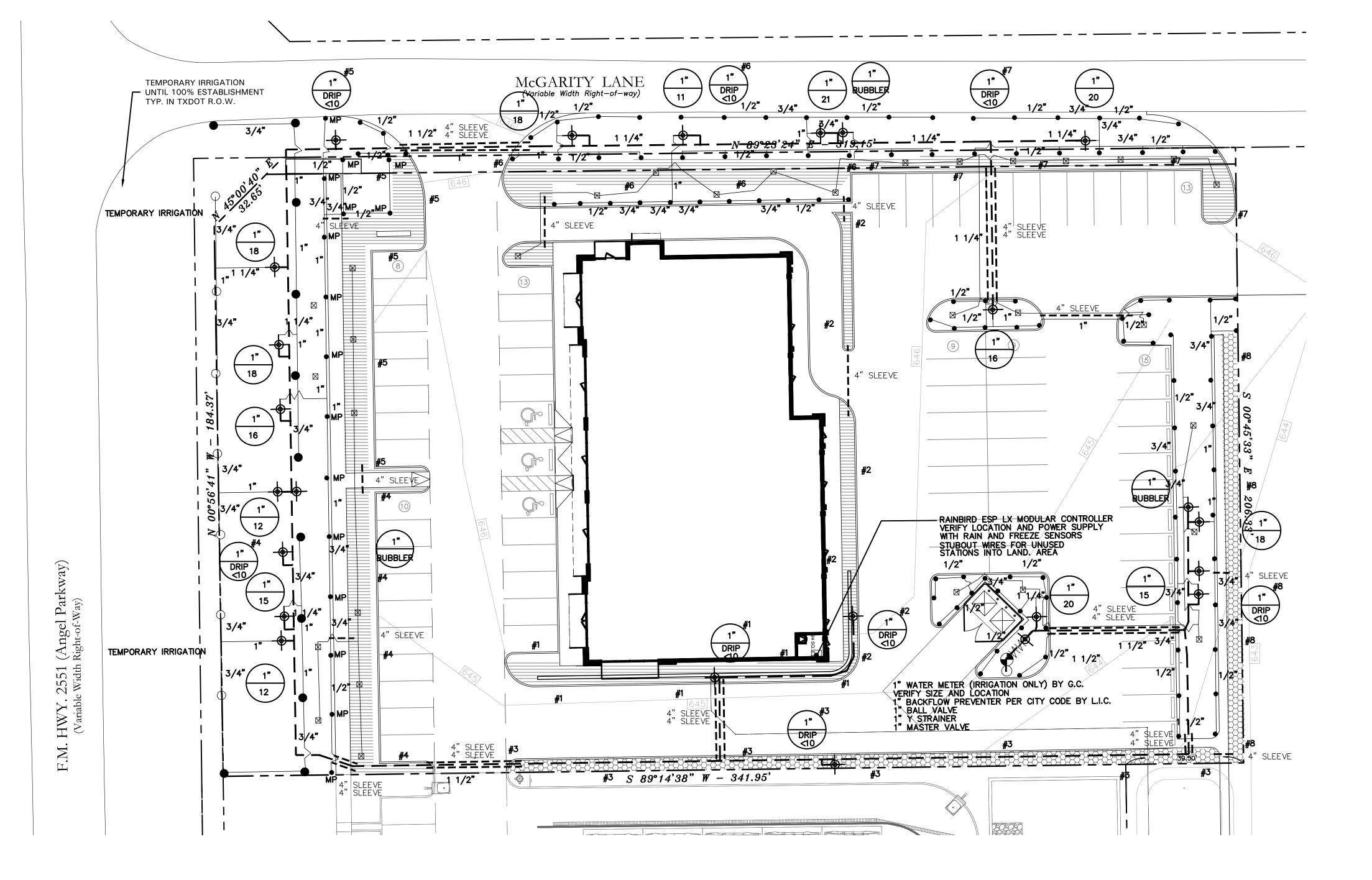


LANDSCAPE SPECIFICATIONS AND DETAILS LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821 CITY OF LUCAS, TEXAS

Project No.

21125

Sheet No. L2.02



#### **SLEEVING NOTES**

- 1. SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- 2. SLEEVE MATERIAL SHALL BE SCHEDULE 40 PIPE, SIZE AS INDICATED ON PLAN.
- 3. CONTRACTOR SHALL LAY SLEEVES AND CONDUITS AT TWENTY-FOUR (24") INCHES BELOW FINISH GRADE OF THE TOP OF PAVEMENT.
- 4. CONTRACTOR SHALL EXTEND SLEEVES ONE (1') FOOT BEYOND EDGE OF ALL PAVEMENT.
- 5. CONTRACTOR SHALL CAP PIPE ENDS USING PVC CAPS.
- 6. CONTRACTOR SHALL FURNISH OWNER AND IRRIGATION CONTRACTOR WITH AN 'AS-BUILT' DRAWING SHOWING ALL SLEEVE LOCATIONS.

#### **IRRIGATION NOTES**

- 1. THE IRRIGATION CONTRACTOR SHALL COORDINATE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR SO THAT ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
- 2. ALL SPRINKLER EQUIPMENT NUMBERS REFERENCE THE RAINBIRD EQUIPMENT CATALOG UNLESS OTHERWISE INDICATED.
- 3. TEN DAYS PRIOR TO START OF CONSTRUCTION, IRRIGATION CONTRACTOR SHALL VERIFY STATIC WATER PRESSURE. IF STATIC PRESSURE IS LESS THAN 65 P.S.I., NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. DO NOT WORK UNTIL NOTIFIED TO DO SO BY OWNER.
- 4. SLEEVES SHALL BE FURNISHED AND INSTALLED BY GENERAL CONTRACTOR. SLEEVE MATERIAL SHALL BE SCHEDULE 40, SIZE AS INDICATED ON PLAN. REFER TO SLEEVING NOTES.
- 5. ALL MAIN LINE AND LATERAL LINE PIPING IN PLANTING AND LAWN AREAS SHALL HAVE A MINIMUM OF 12 INCHES OF COVER. ALL PIPING UNDER PAVING SHALL HAVE A MINIMUM OF 18 INCHES OF COVER. CONTRACTOR TO VERIFY LOCAL FREEZE DEPTHS AND ADJUST DEPTH OF COVER ACCORDINGLY.
- 6. LAWN SPRAY HEADS SHALL BE RAINBIRD 1804 INSTALLED PER DETAIL SHOWN.
- 7. ROTOR HEADS SHALL BE RAINBIRD 5000 INSTALLED PER DETAIL SHOWN. (WITH BUILT-IN CHECK VALVE)
- 8. NOZZLES SHALL BE RAINBIRD PLASTIC, UNLESS OTHERWISE NOTED. IRRIGATION CONTRACTOR SHALL SELECT THE PROPER ARC AND RADIUS FOR EACH NOZZLE TO ENSURE 100% AND PROPER COVERAGE OF ALL LAWN AREAS AND PLANT MATERIAL. NO WATER SHALL SPRAY ON BUILDING.
- 9. ALL NOZZLES IN PARKING LOT ISLANDS AND PLANTING BEDS SHALL BE LOW ANGLE NOZZLES TO MINIMIZE OVER SPRAY ON PAVEMENT SURFACES.
- 10. ELECTRIC CONTROL VALVES SHALL BE RAINBIRD PEB INSTALLED PER DETAIL SHOWN. SIZE OF VALVES AS SHOWN ON PLAN. VALVES SHALL BE INSTALLED IN VALVE BOXES LARGE ENOUGH TO PERMIT MANUAL OPERATION, REMOVAL OF SOLENOID AND / OR VALVE COVER WITHOUT ANY EARTH EXCAVATION.
- 11. ALL 24 VOLT VALVE WIRING TO BE UF 14 GAUGE SINGLE CONDUCTOR. ALL WIRE SPLICES ARE TO BE PERMANENT AND WATERPROOF.
- 12. AUTOMATIC CONTROLLER SHALL BE INSTALLED AT LOCATION SHOWN. POWER (120V) SHALL BE LOCATED IN A JUNCTION BOX WITHIN FIVE (5') FEET OF CONTROLLER, LOCATION BY OTHER TRADES. RAIN AND FREEZE SENSORS SHALL BE INSTALLED WITH EACH CONTROLLER.
- 13. THE DESIGN PRESSURE IS 65 PSI.
- 14. ELECTRICAL SPLICES AT EACH VALVE AND CONTROLLER ONLY.
- 15. IRRIGATION IN TEXAS IS REGULATED BY: THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) MC-178 / PO BOX 13087 AUSTIN, TEXAS 78711-3087
- 16. TCEQ'S WEBSITE IS WWW.TCEQ.STATE.TX.US.

#### **IRRIGATION LEGEND**

RAINBIRD 1804 POP-UP LAWN HEAD HUNTER MP ROTATOR NOZZLE

RAINBIRD 5000 ROTARY FC

RAINBIRD 5000 ROTARY PC

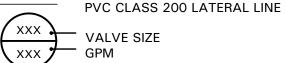
RAINBIRD BUBBLER (2 PER TREE, TYP.)

RAINBIRD PEB SERIES ELECTRIC VALVE CONTROLLER, SIZE AS INDICATED

WATER METER, SIZE AS INDICATED WITH D.C.A., SIZE AS INDICATED

PVC SCHEDULE 40 SLEEVING

PVC CLASS 200 MAINLINE

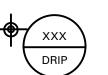




NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS



NETAFIM TECHLINE#TLDL6-1210 (18" LATERAL SPACING, 12" EMITTER SPACING) PVC LATERAL PIPING SIZED AS REQUIRED INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS



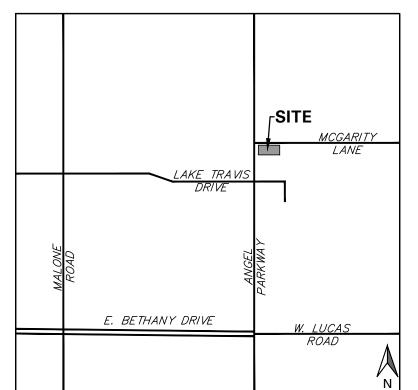
NETAFIM DISC FILTER #DF100-080 NETAFIM PRESSURE REGULATOR #PRV15025 INSTALL ALL EQUIPMENT ACCORDING TO MANUFACTURERS SPECIFICATIONS

#### **BUBBLER PIPING CHART**

SIZE OF PIPE 11 - 20 1 1/4" 21 - 30 1 ½" 31 - 40

#### **VICINITY MAP**

NOT TO SCALE

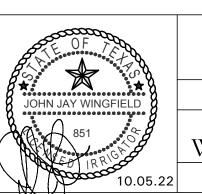


LUCAS RETAIL ADDITION LOT 1, BLOCK A



4245 North Central Expy Suite 501 Dallas, Texas 75205 214.865.7192 office

DALLAS, TEXAS 75225



OWNER: NDC HOLDINGS

214-361-1555

DAVE@NDCHOLDINGS.COM

8235 DOUGLAS AVENUE, SUITE 720

CITY OF LUCAS, TEXAS

IRRIGATION PLAN LUCAS RETAIL 1.619 ACRE TRACT WILLIAM SNIDER SURVEY, ABSTR. NO. 821

Project No. 21125

Sheet No.

L3.01

Issue Dates: Revision & Date: CD CC ENGINEERING 1 07.14.22 1 08.11.22 **CONSULTANTS** 2 10.05.22 1720 W. Virginia Street McKinney, Texas 75069 972.562.4409 Texas P.E. Firm No. F-5935 Drawn By: Checked By: Scale: 1'' = 20' - 0''

IJW

IJW

#### SECTION 32 8423 - UNDERGROUND IRRIGATION SLEEVES AND UTILITY CONDUITS

PART 1 - GENERAL

#### 1.1 DESCRIPTION

A. Provide underground irrigation sleeves as indicated on the

#### 1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 32 8424 - Irrigation System

#### 1.3 REFERENCED STANDARDS

#### A. American Society for Testing and Materials:

Plastic Pipe and Fittings.

- 1. ASTM D2441 Poly (Vinyl Chloride) (PVC) Plastic Pipe
- 2. ASTM D2466 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 40. 3. ASTM - D2564 Solvent Cements for Poly Vinyl Chloride

#### PART 2 - MATERIALS

#### 2.1 DEFINITIONS

- A. Sleeve A pipe within which another pipe is placed for carrying water or other utilities to be installed.
- B. Wire Sleeves A pipe used to carry low voltage irrigation wires for operation of the electric solenoid valves.

#### 2.2 GENERAL

- A. Polyvinyl Chloride Pipe (PVC) Manufactured in accordance
- 1. Marking and Identification Permanently marked with SDR number, ASTM standard number, and the NSF
- (National Sanitation Foundation) seal. 2. Solvent - As recommended by manufacturer to make solvent-welded joints. Thoroughly clean pipe and fittings before applying solvent.

#### **PART 3 - EXECUTION**

#### 3.1 INSTALLATION

- A. Coverage Provide twenty-four inches (24") minimum cover 1.4 MAINTENANCE AND GUARANTEE over top of sleeve from finish grade.
- B. Sleeve Extensions Extend sleeves one foot (1') past edge of pavement or concrete walls. Install 90 degree elbow on each sleeve end and add additional length of same size pipe to extend above finish grade by twelve inches (12"). Cap pipe ends using duct tape.

#### 3.2 BACKFILL

- A. Compaction Place backfill over sleeves in six (6") inch lifts. Tamp firmly into place taking care not to damage sleeve. Complete backfill and compaction to prevent any future settlement. Compact to 85% Standard Proctor.
- B. Damage Repair any damage resulting from improper compaction including pavement repair and replacement.

#### **END OF SECTION**

O 1 SLEEVE DETAIL NOT TO SCALE

SCHEDULE 40 PVC PIPE

#### **SECTION 32 8424 - IRRIGATION SYSTEM**

#### PART 1 - GENERAL

1.1 SCOPE

A. Provide complete sprinkler installation as detailed and specified herein, includes furnishing all labor, material, tools, equipment, and related items for the complete and proper installation of the irrigation system as indicated by the Drawings. All costs associated with this installation, including fees for testing and inspections of the system components are the responsibility of the installer of this

#### B. Work includes but is not limited to:

#### Trenching and backfill. Installation of automatic controlled system.

- 3. Upon completion of installation, supply as-built drawings showing details of construction including location of mainline piping, manual and automatic valves, electrical supply to valves, and specifically the exact location of
- C. All sleeves as shown on plans shall be furnished by General Contractor. Meter and power source shall be provided by General Contractor.

#### 1.2 RELATED WORK SPECIFIED ELSEWHERE

#### A. Refer to Irrigation Plans for controller, head, and valve locations.

- B. Section 32 8423 Underground Irrigation Sleeves and Utility
- C. Section 32 9300 Landscape
- D. Refer to Landscape Plans, notes, details, bidding requirements, special provisions, and schedules for additional requirements.

#### 1.3 APPLICABLE STANDARDS

- A. America Standard for Testing and Materials (ASTM) Latest
- D2241 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR)

2. D2464 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings,

- Thread, Schedule 80 3. D2455 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- 4. D2467 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 80 5. D2564 Solvent Cements for Poly (Vinyl Chloride) (PVC)
- Plastic Pipe and Fittings 6. D2287 Flexible Poly Vinyl Chloride (PVC) Plastic Pipe F656 Poly Vinyl Chloride (PVC) Solvent Weld Primer 8. D2855 Making Solvent - Cemented Joints with Poly

A. The Contractor shall guarantee materials and workmanship for one (1) calendar year after final acceptance by Owner.

(Vinyl Chloride) (PVC) Pipe and Fittings

- B. Guarantee is limited to repair and replacement of defective materials or workmanship, including repair of backfill settlement.
- C. Provide maintenance of system, including raising and lowering of heads to compensate for lawn growth, cleaning and adjustment of heads, and raising and lowering of shrub heads to compensate for shrub growth for one (1) year after completion of installation.

#### 1.5 SUBMITTALS

**PAVEMENT** 

- A. Procedure: Comply with Division I requirements.
- B. Product Data: The Contractor shall submit five (5) copies of equipment manufacturer's 'cut sheets' and shop drawings for approval by Owner Authorized Representative prior to installation, including, but not limited to the following: sprinkler head, pipe, controller, valves, backflow prevention devices, valve boxes, wire, conduit, fittings, and all other types of fixtures proposed to be installed on the job. The submittal shall include the manufacturer's name, model number, equipment capacity, and manufacturer's installation recommendations, if applicable, for each proposed item.
- C. No work covered under this section may begin until the

#### Contractor has submitted the required information. No partial submittal shall be accepted and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed, except by written consent by the Owner Authorized Representative.

D. Shop drawings include dimensions, elevations, construction details, arrangements, and capacity equipment, as well as manufacturer's installation recommendations.

#### E. Operating and Maintenance Manuals:

- 1. Provide three (3) individually bound manuals detailing operating and maintenance requirements for the irrigation
- 2. Manuals shall be delivered to the Owner Authorized Representative no later than ten (10) days prior to completion of the irrigation system.
- 3. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand, operate, and maintain the equipment.
- 4. Provide the following in each manual: a. Index sheet with Contractor's name, address, telephone number, and contact name.
- b. Duration of guarantee period. Include warranties and guarantees extended to the Owner by the manufacturer of all equipment.

c. Equipment list providing the following for each item:

) Manufacturer's name 2) Make and model number 3) Name and address of local part's representative

#### 4) Spare parts list in detail 5) Details operating and maintenance instructions for major equipment.

#### F. Project Record Documents:

- Comply with Division I requirements. 2. Locate by written dimension, routing of mainline piping, remote control valves, and quick coupling valves. Locate mainlines by single dimensions from permanent site features provided they run parallel to these elements. Locate valves, intermediate electrical connections, and quick couplers by two dimensions from a permanent site
- 3. When dimensioning is complete, transpose work to bond 4. Submit three (3) copies of the completed as-built drawings, along with a CD with PDF files of the same, to

feature at approximately 70 degrees to each other.

- the Owner Authorized Representative prior to final acceptance of the work. Mark drawings "Record Prints" Showing Significant Changes". Date and sign drawings.
- G. Quick Coupler Keys: Provide three (3) coupler keys with boiler drains attached using brass reducer.
- H. Controller Keys: Provide three (3) sets of keys to controller
- Use of materials differing in quality, size, or performance from those specified shall only be allowed upon written approval of the Landscape Architect. The decision shall be based on comparative ability of material or article to perform fully all purposes of mechanics and general design considered to be possessed by item specified.
- J. Bidders desiring to make a substitution for specified sprinklers shall submit manufacturer's catalog sheet showing full specification of each type sprinkler proposed as a substitute, including discharge in GPM maximum allowable operating pressure at sprinkler.
- K. Approval of substitute sprinkler shall not relieve Irrigation Contractor of his responsibility to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system.
- It is the responsibility of the Irrigation Contractor to demonstrate that final installed sprinkler system shall operate according to intent of originally designed and specified system. If Irrigation Contractor notes any problems in head spacing or potential coverage, it is his responsibility to notify the Landscape Architect in writing, before proceeding with

------ SPECIFIED SPRAY NOZZLE & BODY

- 1/2" X 6" POLY NIPPLE

CLASS 200 PVC LATERAL LINE

SXSXTPVCSCHEDULE 40

OUTLET TEE OR ELBOW

- LAG BOLTS OR EXPANSION BOLTS AS REQUIRED

— WALL (EXTERIOR OR INTERIOR)

CONTROLLER AS SPECIFIED KEYED LOCK OR PADLOCK

STEEL MALE CONNECTOR

— 1 1/4" RIGID STEEL CONDUIT

- STEEL SWEEP ELL

FLOOR OR GRADE

- HARD WIRE 117 VOLT A.C. BEHIND CONTROLLER IN FLUSH BOX

HARD WIRE 117 VOLT A.C. POWER TO

FLUSH OUTLET BEHIND CONTROLLER

RIGID STEEL CONDUIT (SAME SIZE AS

STEEL COUPLING (AS REQUIRED)

- RIGID STEEL CONDUIT BELOW

- STEEL SPLICE BOX WITH FRONT ACCESS PANEL

CONDUIT BELOW GRADE) CONDUIT SHALL BE PLUMB.

- CONTROLLER

FINISH GRADE

#### work. Irrigation Contractor guarantees 100% coverage of all areas to be irrigated.

- A. Perform testing required with other trades, including earthwork, paving, plumbing, electrical, etc., to avoid unnecessary cutting, patching, and boring.
- B. Water Pressure: This irrigation system has been designed to operate with a minimum static water pressure indicated on Drawings. The Contractor shall take a pressure reading at each water meter prior to beginning construction. Confirm findings to Owner Authorized Representative in writing. If static pressure varies from pressure stated on drawings, do not start work until notified to do so by Owner Authorized Representative.

#### 1.7 COORDINATION

- A. Coordinate installation with other trades, including earthwork, paving, and plumbing to avoid unnecessary cutting, patching
- and boring. B. Coordinate to ensure that electrical power source is in place.
- C. Coordinate system installation with work specified in other sections and coordinate with Landscape Contractor to ensure plant material is uniformly watered in accordance with intent shown on drawings.

#### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Mainline: Mainlines are the piping from water source to operating valves. This portion of piping is subject to surges, being a closed portion of sprinkler system. Hydrant lines are considered a part of sprinkler main.
- B. Lateral Piping: Lateral piping is that portion of piping from operating valve to sprinkler heads. This portion of piping is not subject to surges, being an "open end" portion of

#### 2.2 POLY VINYL CHLORIDE PIPE (PVC PIPE)

Sanitation Foundation) seal.

- A. PVC pipe shall be manufactured in accordance with
- commercial standards noted herein. B. Marking and Identification: PVC pipe shall be continuously and permanently marked with the following information: manufacturer's name, pipe size, type of pipe, and material,

SDR number, product standard number, and the NSF (National

C. PVC Pipe Fittings: Shall be of the same material as the PVC pipe specified and shall be compatible with PVC pipe furnished.

#### 2.3 COPPER TUBING

A. Hard, straight lengths of domestic manufacture only. Do not use copper tube of foreign extrusion or any so-called irrigation tubing (thin wall).

#### 2.4 COPPER TUBE FITTINGS

A. Cast brass or wrought copper, sweat - solder type.

#### 2.5 WIRE

- A. Type UF with 4/64" thick waterproof insulation which is Underwriter's Laboratory approved for direct underground burial when used in a National Electric Code Class II Circuit (30 volts AC or less).
- B. Wire Connectors: Waterproof splice kit connectors. Type DBY by 3M.

#### 2.6 SCHEDULE 80 PVC NIPPLES

#### A. Composed of Standard Schedule 40 PVC Fittings and PVC

#### — FINISH GRADE - SIDEWALK OR CURB - ROTARY HEAD SWING JOINT - LATERAL PIPING

#### 03 ROTARY HEAD NOT TO SCALE

#### — VALVE BOX AND LID — FINISH GRADE ADAPT INLET AND OUTLET (AS REQUIRED) - PVC LINE PER SPECIFICATIONS TO IRRIGATION SYSTEMS GATE VALVE - FEBCO MODEL 850 DOUBLE CHECK VALVE, LINE SIZE - WASHED ROCK (1/2" - 3/4" DIA.), PER CITY REQUIREMENT **ELEVATION** - MAIN FROM SOURCE PER CITY REQUIREMENT



Revision & Date:

1 08.11.22

2 10.05.22

Issue Dates:

1 07.14.22

Suite 501 Dallas, Texas 75205 214.865.7192 office

1720 W. Virginia Street

972.562.4409

Drawn By:

IJW

C ENGINEERING

Checked By:

IJW

CONSULTANTS

McKinney, Texas 75069

Texas P.E. Firm No. F-5935

Scale:

#### NDC HOLDINGS 214-361-1555 DAVE@NDCHOLDINGS.COM DALLAS, TEXAS 75225

### LOT 1, BLOCK A

OF TEXT	
JOHN JAY WINGFIELD	
851 IRR OF 30	W
10.05.22	

***		
	5 4 7 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	IRRIG
FIELD 8	<b>★</b>	
WILLIAM		WILLIAM
10.05.22 CI	10.05.22	CI

IRRIGATION SPECIFICATIONS	
AND DETAILS	
LUCAS RETAIL	
1.619 ACRE TRACT	
WILLIAM SNIDER SURVEY, ABSTR. NO. 821 🕆	_
CITY OF LUCAS, TEXAS	

connections to remove residue from pipe. Attach fittings to tubing in an approved manner using 50-50 soft solid core

#### 3.5 POP-UP SPRAY HEADS

A. Supply pop-up spray heads in accordance with materials list and plan. Attach sprinkler to lateral piping with a semi-flexible polyethylene nipple not less than three (3") inches or more than six (6") inches long.

A. Clean pipe and fitting thoroughly and lightly sand pipe

#### 3.6 VALVES

meeting noted standards. No clamps or wires may be used.

Nipples for heads and shrub risers to be nominal one-half inch

 $(\frac{1}{2})$  diameter by eight (8") inches long, where applicable.

B. Polyethylene nipples six (6") inches long shall be used on all

E. Electric valves: Shall be all plastic construction as indicated

F. Backflow Prevention Device: Refer to drawing requirements

A. Staking: Before installation is started, place a stake where

B. Excavations: Excavations are unclassified and include earth,

furnished take preference over this general specification.

C. Backfill: Flood or hand-tamp to prevent after settling. Hand

D. Piping Layout: Piping layout is diagrammatic. Route piping

Representative before proceeding with work.

better condition than before installation.

shown on the drawings.

3.3 PVC PIPE AND FITTING ASSEMBLY

3.4 COPPER TUBING AND FITTING ASSEMBLY

3.2 PIPE INSTALLATION

each sprinkler is to be located, in accordance with drawing.

Staking shall be approved by Owner Authorized

loose rock, rock or any combination thereof, in wet or dry

state. Backfill trenches with material removed, provided that

the earth is suitable for compaction and contains no lumps,

clods rock, debris, etc. Special backfill specifications, if

rake trenches and adjoining area to leave grade in as good or

around trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within ball of newly planted trees or

shrubs. In areas where existing trees are present, trenches

shall be adjusted on-site to provide a minimum clearance of

four (4) feet between the drip line of any tree or trench. The

Contractor shall notify the Owner Authorized Representative

A. Sprinkler Mains: Install a four (4") inch wide minimum trench

B. Lateral Piping: Install a four (4") inch wide minimum trench

C. Trenching: Remove lumber, rubbish, and large rocks from

deep enough to allow for installation of sprinkler heads and

trenches. Provide firm, uniform bearing for entire length of

each pipe line to prevent uneven settlement. Wedging or

blocking of pipe shall not be permitted. Remove foreign

matter or dirt from inside of pipe before welding, and keep

piping clean by approved means during and after laying of

A. Solvent: Use only solvent recommended by manufacturer to

fittings of dirt, dust and moisture before applying solvent.

B. PVC to metal connection: Work metal connections first. Use

threaded PVC adapters into which pipe may be welded.

make solvent-welded joints. Thoroughly clean pipe and

a non-hardening pipe dope such as Permatex No. 2 on

valves, but in no case, with less than twelve (12") of cover.

with a minimum of eighteen (18") inches of cover.

in writing of a planned change in trench routing from that

and flow valve. Coordinate exact location with General

A. Sprinkler heads in lawn area as specified on plan.

C. Copper Tubing (City Connection): Type "M"

pop-up spray heads.

2.7 MATERIALS - SEE IRRIGATION PLAN

B. PVC Pipe: Class 200, SDR 21

D. 24V Wire: Size 14, Type UF

on plans.

Contractor.

3.1 INSTALLATION - GENERAL

**PART 3 - EXECUTION** 

A. Supply valves in accordance with materials list and sized according to drawings. Install valves in a level position in accordance with manufacturer's specifications. See plan for typical installation of electric valve and valve box.

#### 3.7 WIRING

- A. Supply wire from the automatic sprinkler controls to the valves. No conduit will be required for UF wire unless otherwise noted on the plan. Wire shall be tucked under the
- B. A separate wire is required from the control to each electric valve. A common neutral wire is also required from each control to each of the valves served by each particular
- C. Bundle multiple wires and tape them together at ten (10') foot intervals. Install ten (10") inch expansion coils at not more than one hundred (100') foot intervals. Make splices

#### 3.8 AUTOMATIC SPRINKLER CONTROLS

A. Supply in accordance with Irrigation Plan. Install according to manufacturer's recommendations.

- A. Sprinkler Mains: Test sprinkler main only for a period of twelve (12) to fourteen (14) hours under normal pressure. If leaks occur, replace joint or joints and repeat test.
- B. Complete tests prior to backfilling. Sufficient backfill material may be placed in trenches between fittings to ensure stability of line under pressure. In each case, leave fittings and couplings open to visual inspection for full period of test.

#### 3.10 FINAL ADJUSTMENT

- A. After installation has been completed, make final adjustment of sprinkler system in preparation for Owner Authorized Representative's final inspection.
- B. Completely flush system to remove debris from lines by removing nozzle from heads on end of lines and turning on
- C. Check sprinklers for proper operation and proper alignment for
- D. Check each section of spray heads for operating pressure and balance to other sections by use of flow adjustment on top of
- E. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arch of angle of spray should be other than shown on drawings. In this case, change nozzles to provide correct coverage and furnish data to Owner

#### 3.11 SYSTEM DEMONSTRATION

each valve.

A. Instruct Owner's personnel in operation and maintenance of system including adjusting of sprinkler heads. Use operation and maintenance manual for basis of demonstration.

#### **END OF SECTION**

Authorized Representative with each change.

----- FINISH GRADE SIDEWALK OR CURB — ... - QUICK COUPLER — GRAVEL SWING JOINT MAINLINE PIPING -

#### BACKFLOW PREVENTER NOT TO SCALE

4245 North Central Expy

8235 DOUGLAS AVENUE, SUITE 720

OWNER:

LUCAS RETAIL ADDITION

Sheet No. L3.02 Project No. 21125

# 05 REMOTE CONTROL VALVE

ISOMETRIC

- VALVE BOX FLUSH WITH FINISH GRADE

REMOTE CONTROL VALVE WITH 24" LONG LOOP OF CONTROL WIRE

SCHEDULE 40 PVC FITTINGS

PEA GRAVEL

45 DEGREE ELL

06 WALL MOUNTED CONTROLLER NOT TO SCALE

FINISH FLOOR

 $02^{rac{\mathsf{POP}\text{-}\mathsf{UP}\;\mathsf{LAWN}\;\mathsf{SPRAY}\;\mathsf{ASSEMBLY}}{\mathsf{NOT}\;\mathsf{TO}\;\mathsf{SCALE}}$ 



#### DEVELOPMENT APPLICATION

City of Lucas, Texas

NAME OF SUBDIVISION AND/OR PROJECT: Lucas Retail Addition	
ITEM SUBMITTED	APPLICATION FEE
Site Plan \$300 + \$10 per acre (i.e. \$500 for a 20 acre site plan)	\$320
Γree Survey/Conservation Plan	N/A
Γree Removal & Site Clearing Permit \$250	N/A
Architectural Plan \$250 + \$50 for any reviews or presentations of amended plans	\$250
Landscape Plan \$200 + \$50 for any reviews or presentations of amended plans	\$200
Park Site Dedication \$1,000 per lot or land dedication per Lucas City Ordinance Sec. 10.03.122	
TOTAL FEES SUBMITTED	\$770
Collin County Appraisal District Short Account Number(s): 1217837 - R-6821-0 Physical Location of Property: Southeast intersection of McGarity Lane and F  (Address and General Location – approximate distance to pear	M 2551 (Angel Parkway)
Physical Location of Property: Southeast intersection of McGarity Lane and Foundation - Approximate distance to near Brief Legal Description of Property (must also attach accurate metes and bounds des William Snider Survey, Abstract 821	FM 2551 (Angel Parkway) est existing street corner) scription):
Physical Location of Property: Southeast intersection of McGarity Lane and Formula (Address and General Location – approximate distance to near Brief Legal Description of Property (must also attach accurate metes and bounds des William Snider Survey, Abstract 821  (Survey/Abstract No. and Tracts; or platted Subdivision Name with the Survey (Survey Survey) (Survey Survey Survey) (Survey Survey Surve	est existing street corner) scription):
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Company Name:    Southeast intersection of McGarity Lane and From the Company Name:   Street/Mailing Address:   State:   TX   Zip code:	est existing street corner) scription):  th Lots/Block) ting Zoning: C  act Phone: 2/1/, 3/4. 1565  Paes, Lant / Marrages  tants
Company Name:    Southeast intersection of McGarity Lane and Frieflegal Description of Property (must also attach accurate metes and bounds des William Snider Survey, Abstract 821    Survey/Abstract No. and Tracts; or platted Subdivision Name with Acreage: 1.619   Existing # of Lots/Tracts: 1   Existing # of Lots/Tracts: 1   Existing # of Lots/Tracts: 1   Existing # of Lots/Tracts: 2   Contact Person:   Dave Carter   Carte	est existing street corner) scription):  th Lots/Block) ting Zoning: C  act Phone: 2/1/, 3/4. 1565  Paes, Lant / Marrages  tants
Southeast intersection of McGarity Lane and Foreign Legal Description of Property:    Southeast intersection of McGarity Lane and Foreign Legal Description of Property (must also attach accurate metes and bounds des William Snider Survey, Abstract 821    Survey/Abstract No. and Tracts; or platted Subdivision Name with Acreage: 1.619   Existing # of Lots/Tracts: 1   Existing # of Lots/Tracts: 2   Contains # Of Lots/Tracts: 3   Existing # of Lots/Tracts: 4   Existing # of Lots/Tracts: 4   Existing # of Lots/Tracts: 5   Existing # of Lots/Tracts: 5   Existing # of Lots/Tracts: 6   Existing # of Lots/Tracts: 6   Existing # of Lots/Tracts: 7   Existing # of Lots/Tracts: 7   Existing # of Lots/Tracts: 7   Existing # of Lots/Tracts: 1   Exis	est existing street corner) scription):  th Lots/Block) ting Zoning: C  act Phone: 2/1/, 3/4. 1565  Paes, Lant / Marrages  tants



#### NAME OF SUBDIVISION and/or PROJECT: Lucas Retail Shopping Center

\*\*READ BEFORE SIGNING BELOW: If there is more than one property owner, complete a separate sheet with the same wording as below. The City requires all original signatures. If applicant is other than the property owner, a "Power of Attorney" with original, notarized signatures is required. (Notaries are available upon submittal)

ALL APPLICATIONS MUST BE COMPLETE, ACCOMPANIED BY THE APPLICABLE CHECKLIST AND TAX CERTIFICATE SHOWING TAXES PAID, BEFORE THEY WILL BE SCHEDULED FOR P&Z AGENDA. It is the applicant's responsibility to be familiar with, and to comply with, all City submittal requirements (in the Zoning & Subdivision Ordinances, and any separate submittal policies, requirements and/or checklists that may be required from City staff), including the number of plans to be submitted, application fees, etc. Please contact City staff in advance for submittal requirements. [Drawings will not be returned to applicant.]

ALL PARCELS/PROPERTIES MUST MATCH IN ACREAGE ALL OTHER DOCUMENTS SUBMITTED WITH NO AMBIGUITY. SUBMISSIONS: Failure to submit all materials to the City with this application will result in delays scheduling the agenda date.

NOTICE OF PUBLIC RECORDS. The submission of plans/drawings/etc. with this application makes such items public record, and the applicant understands that these items may be viewed by the general public. Unless the applicant expressly states otherwise in writing, submission of this application (with associated plans/drawings/etc.) will be considered consent by the applicant that the general public may view and/or reproduce (i.e., copy) such documents.

Applicant agrees to pay any and all monies due to the City including but not limited to park pro rata fee, Tree Removal Permit fee, 3% of construction cost (developer to provide contracts for verification) and including but not limited to other fees that may be required prior to final plat approval.

STATE OF TEXAS	}		
COUNTY OF COLLIN	}	(1)	
attached) for the purposes of t	on this day personally appeared	nitted herein is true and	d correct. I understand that
**Orner / Agent (circle one)			
	O before me, this the Way of Se e of Texas:	1 km hr. 2022.	ELIZABETH BRO Notary Publi STATE OF TEX ID#12673036- My Comm. Exp. Nov.
Notary Public in and for the Stat	e of Texas:		
Official Use Only:	Action Taken		
Planning & Zoning:		Date:	
City Council:		Date:	
Applicant Withdrew: Yes or N	No Applicant Made a Written N	Withdrawal: Yes or No	o Date:



#### **Site Plan Minimum Requirements**

#### Project Name Lucas Retail Shopping Center Preparer Jonathan Hake

This checklist is provided to assist you in addressing the minimum requirements for Site Plan submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Indicate that all information is included on the submitted plans by checking the box next to the required information. Checking the box certifies to the City that you have completely and accurately addressed the issue. If not applicable, indicate an "N/A" next to the box. Return this completed form at the time of application submittal.

If an exception or modification to the regulations is requested, the reason and/or request for each shall be provided directly on the plan and on a separate sheet on letterhead with sufficient details as to allow a determination by the appropriate approval body. Additional information may be required. Reference the specific requirement/s.

Plans are expected to be submitted complete and accurate in all detail as shown by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes, depending on the amount/magnitude of changes or corrections needed. Please keep in mind that changes/additions to previously incomplete or inaccurate plans may generate additional comments at re-submittal of corrected Plans. Therefore, diligence to the initial submittal is paramount to expediting the review process.

#### Included

- X Site boundary is indicated by a heavy solid line intermittent with 2 dash lines, dimensioned with bearings and distances; indicate and label lot lines, setback lines, and distance to the nearest cross street.
- X Site location/vicinity map clearly showing the location of the subject property with cross streets is provided. Indicate scale or NTS and provide north arrow.
- A north arrow is provided with drawing oriented such as that north is located to the top or left side of drawing sheet.
- X A written and bar scale is provided.
- A title block is in the lower right corner that includes large, boldly printed "SITE PLAN", owner and engineer's names, addresses and phone numbers, subdivision name, lot number/s, block number or letter, original submission date, and a log of resubmittal/revision dates since submitted to the City.
- Tree masses are clouded with accurate canopy widths shown to determine critical root zone where located within close proximity to existing or proposed pavement.
- Flood plain boundary is shown and indicates F.I.R.M. Community panel number and date, and flow line of drainage ways and creeks, as applicable.
- Existing topography lines are shown with a light dashed line and proposed contours are shown by a medium weight solid line. Topography is shown at minimum five (5) foot contours referenced to sea level city datum. Spot elevations and additional contours may be required in certain areas depending on topography.
- Accurately located, labeled and dimensioned footprint of proposed structure(s) is/are shown by a solid heavy line.

- Accurately located, labeled and dimensioned footprint of existing structure(s) to remain is/are shown by a heavy dashed line.
- Accurately located and labeled footprint of structure(s) proposed for demolition is/are shown by a light dashed line. Structures to be demolished are clearly labeled/ identified.
- Accurately located footprint of nonresidential structure(s) on abutting properties is/are shown by a light, solid line.
- Adjacent property lines within 500 feet of the subject property lines are shown by a light dashed line.
- Adjacent zoning and land use (e.g. bank with drive-thru, office building, undeveloped etc.) within 500 feet of the property line is indicated.
- Adjacent property owner(s), or subdivision name, with lot, block and recording information, is shown.
- Finished floor elevation of existing and/or proposed structures is referenced to sea level datum.
- Full width of streets and alley rights-of-way with centerlines and backs of curbs or paving edges within 200 feet of the property line are dimensioned and street name or use is labeled.
- Driveways within 200 feet of the property line:
  - o Are accurately located and dimensioned.
  - o Distances to the nearest on-site driveway and/or off-site driveway is accurately located and dimensioned as measured from the centerlines.
  - O Distance to the nearest street is shown as measured from the end of curb-return radius of the adjacent street to the driveway centerline.
  - o Typical radii are shown.
- Drive-thru lanes, menu board location, pick-up window/s, maneuvering area, stacking lanes and escape lanes are indicated and dimensioned.
- X Sidewalks and barrier-free ramps (BFR) within 200 feet of and on the subject property are shown, dimensioned and labeled.
- Off-site streets and roads:
  - o Existing and proposed roadways with medians and median openings adjacent to and within 200 feet of the project site are shown and dimensioned.
  - o Medians, median openings with associated left- turn lanes, continuous left turn lanes, transition and stacking lengths are shown and dimensioned within 200 feet of the project site.
  - Existing, proposed, and required acceleration/deceleration lanes within 200 feet of the project site are shown dimensioned, stacking length indicated, and right-of-way dedication is indicated as applicable.
- All parking spaces are shown, group numbered, and typical dimensions are provided. Indicate required two-foot overhang, as applicable.
- Handicapped parking spaces and barrier-free access points are shown, dimensioned, and labeled.
- Loading and maneuvering areas are indicated, labeled, and dimensioned. Loading area screening method is indicated and labeled.
- method is indicated and labeled.

  Dumpster and/or compactor locations and screening methods are shown. Indicate screening materials and height for all sides. Screening material is to match structure façade with enclosure having solid metal gates. Specs and sketch available from staff.
- Paving materials, boundaries and type are indicated.
- Access easements are accurately located/ tied down, labeled and dimensioned.
- Off-site parking is shown and dimensioned from the off-site parking area to the structure or use as applicable. A parking easement or shared parking agreement is required and is provided in draft format.
- Fire lanes are shown and dimensioned at a minimum of 24 feet in width, with internal radii of not less than 20 feet. Label and use an approximate 20 percent shade for fire lanes to differentiate from other paving. Ensure that required labeling and dimensioning is readable through shading.

- Proposed dedications and reservations of land for public use including, but not limited to, rights-of-way, easements, park land, open space, drainage ways, floodplains and facility sites are accurately located, dimensioned and labeled.
- Screening walls are shown with dimensions and materials. An inset is provided that shows the wall details and column placement as applicable. Plans for masonry walls are to be signed and sealed by a structural engineer and approved by the City Engineer. Channeled or slip-panel/pre-cast walls are prohibited.
- The location of living screens are shown and labeled. Details of a living screen are provided on the Landscape Plan indicating plant species/name, height at planting, and spacing.
- A lighting plan that shows location by fixture type is included. A lighting data chart is used to reference fixture type (i.e. pole or wall pack), maximum height, those requiring shielding, those requiring skirting, wattage and foot-candles of each fixture. No lighting source (i.e. bulb, reflector, etc.) is allowed to be visible from an adjacent property or public street.
- Existing and proposed water and sanitary sewer lines, storm sewer pipe, with sizes, valves, fire hydrants, manholes, and other utility structures on-site or immediately adjacent to the site are shown and labeled.
- Boundaries of detention areas are located. Indicate above and/or below ground detention.
- Monument signage location is indicated. Details of construction materials and architecture are shown on required Building Elevation/Façade Plan. Color, type and texture are to match that of the building.

  Communication towers are shown and a fall distance/collapse zone is indicated.
- Provide Site Data Summary Table that references distinct numbers for each lot and all buildings (existing and proposed) that includes, where applicable:
  - o Existing Zoning
  - o Proposed use(s) for each structure
  - o Total lot area less right-of-way dedications by square feet and acres
  - Square footage of building(s)
  - o Building height (stories and feet)
  - o Percent of lot coverage (building footprint square footage/lot square footage).
  - o For apartment developments, number of living units broken down by number of bedrooms and minimum square footage for each dwelling unit.
  - o Parking required by use with applicable parking ratios indicated for each use
  - o Parking provided indicated
  - o Handicap parking required as per Code of Ordinances and TAS/ADA requirements
  - List of exceptions and/or variance/s requested or previously granted, including dates and approving authority
- Improvements are proposed in TXDOT Right-of-Way and one (1) full set of civil engineering plans has been submitted to: Mohammad Khoshkar, TXDot Office, P.O.Box 90 McKinney, Texas 75069-0090, phone (972)547-2237



#### **Architectural Plan Checklist**

Lucas Retail Shopping Center Preparer Arnold Hernandez

This checklist is provided to assist you in addressing the minimum requirements for Landscape Plan submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Confirm that all information is included on the submitted plans by checking the box next to the required information.

Initialing the box certifies to the City that you have completely and accurately addressed the issue. This completed form must be returned at the time of application submittal.

If an exception or modification to the regulations is requested, the reason and/or request for each shall be provided on a separate sheet on letterhead with sufficient details as to allow a determination by the appropriate approving body. Additional information may be required. Reference the specific requirement. All exception/modification requests must also be specifically listed on the plan/s.

Plans are expected to be submitted complete in all detail as included by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes.

Elevations of all four sides labeled North, East, South, and West with the front elevation designated as such.

✓ Materials calculations table showing for each elevation

- Total surface area of each elevation
- o List of materials (including glazing) with square footage of each material per elevation and percentage of each material per elevation
- Building dimensions (if multiple heights are used, provide dimension for each)
- Provide estimated allowable wall mounted signage size for each elevation.
- ✓ Add the following notes:
  - o "This Façade Plan is for conceptual purposes only. All building plans require review and approval of the Building Inspection Department".
  - "All mechanical units shall be screened from public view"
  - o "When permitted, exposed utility boxes and conduits shall be painted to match the building"
  - o All signage areas and locations are subject to approval by the Building "Inspection Department"
  - "Roof access shall be provided internally, unless otherwise permitted by the Building Official"
- Cross sections of sight lines may be requested to verify screening of mechanical units.
- ✓ A sample board with a maximum size of 11" x 17" shall be provided with color and materials samples to correspond to the Facade Plan.
- ✓ Designate color and materials location on elevations.
- Additional information as requested by staff to clarify the proposed development and compliance with minimum development requirements.



**Project Name** 

LUCAS RETAIL

#### Landscape Plan Checklist

Preparer \_

KORI HAUG

This checklist is provided to assist you in addressing the minimum requirements for <b>Landscape Plan</b> submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Confirm that all information is included on the submitted plans by checking the box next to the required information. <b>Initialing each item certifies to the City that you have completely and accurately addressed the issue</b> . This completed form must be returned at the time of application submittal.
If an exception or modification to the regulations is requested, the reason and/or request for each shall be provided on a separate sheet on letterhead with sufficient details as to allow a determination by the appropriate approving body. Additional information may be required. Reference the specific requirement. All exception/modification requests must also be specifically listed on the plan/s.
Plans are expected to be submitted complete in all detail as included by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes.
Plans shall be to same scale as approved site plan.  A minimum of 15% of the gross area must be landscaped.  The area between the property line and the street shall be included in the landscape plan and shall be maintained by the abutting property owner.  Heights of landscaping materials shall be such that they do not create safety hazards for vehicular traffic by block sight lines at ingress points.  The specifications shall state the common names and scientific names (genus species), sizes, and quantity of all materials to be utilized.  Property abutting a different zoning district must be screened by a living screen. Planting which serves as a living screen shall be evergreens with an initial minimum six-foot (6') height and provided a solid visual barrier within two (2) years after planting.  Additional information as needed for clarity.
- Additional information as needed for clarity.

#### Lucas Code of Ordinances - Sec. 3.18.022 Minimum requirements

The title block in the lower, right-hand corner containing the following: date, scale, site location map, north arrow, and the names, addresses, and telephone numbers of both the property owners and the person preparing the plan.

The addition name, block and lot description along with business name placed in the title block in the lower right-hand corner of the plan.

The property boundary dimensions of the site (bearings and distances).

All existing and proposed public and private streets and sidewalks including street and sidewalk widths.

All existing services: fire hydrants, water mains, and sewer mains within the tract and immediately adjacent to it with pipe size and location indicated.

All proposed water and sanitary sewer pipe lines with sizes indicated and valves, fire hydrants, manholes, and other appurtenances or structures shown.

All existing or proposed water, sewer and irrigation connections, meter location, and size of meters.

All existing and proposed utility and visibility easements.

All existing or proposed buildings on the property, existing structures, access points on and adjacent to the property.

Existing and proposed contours of berms in intervals of one (1) foot.

N/A Detailed structural designs of entryway features.

N/A Screening walls and location, type and height of screening wall, either living or masonry. (Masonry screening walls must be designed by a professional engineer registered in the state. Proposed berming is to be delineated by one-foot contours.)

The following additional information must be submitted on the landscape plan:

- Tabulations of the landscape edge in linear feet. Give the street name and the amount of frontage.
  - o Label streets.
  - o The following information is to be provided on the landscape plan in a tabular format:
    - Indicate the trees/shrubs required and provided.
    - Indicate parking area trees required and provided.
    - Indicate the trees/shrubs required and provided for parking lot perimeter landscaping.
    - Indicate parking lot interior landscaping required and provided.
    - Indicate gross landscape square footage and percentage excluding the city right-of-way (i.e. the landscape provided within the landscape edge and within the interior of the lots).
- Show graphically all plant material existing/proposed.
- Distance of trees/shrubs from sidewalks, curbs, screening walls, and utilities (minimum five (5) feet).
- Spacing between trees/shrubs (varies, check growth specifications).

Complete description of plant materials shown on the plan, including common and botanical names, locations, quantities, container (five-gallon minimum for required shrubs) or caliper sizes (four-inch minimum caliper for required shade trees), heights, spread, and spacing.

Complete description of landscaping and screening to be provided in or near off-street parking and loading areas, including information as to the amount (in square feet) of landscape area compared to gross site square footage. The city right-of-way shall not be included as part of the gross site landscaping.

N/A Size, height, location and material of any proposed seating, lighting, planters, sculptures, decorative paving, and water features.

and water features.

Landscape plans shall contain the certification and stamp of a landscape architect licensed in the state that such plans have been reviewed by such landscape architect and satisfy all requirements of this article.

Irrigation plans shall contain the certification and stamp of an irrigator licensed by the state board of irrigators that such plans were prepared by such irrigator and satisfy all requirements of this article.

Location of sprinkler heads, valves, double-check valves, water meter, automatic controller, rain and freeze sensor, wind sensor, moisture sensor or any control mechanic of whatever kind or make must be shown on all irrigation plans.

N/A Living screens are clearly detailed by fence material, plant material species, plant material spacing, height at time of planting and mature height. Where the Director of Planning feels that there are elevation or topographical differences that would not accomplish the intent of the screening, the Director may request more details.

Public or private street names (including street suffixes and/or prefixes) and right-of-way (ROW) dimensions are indicated for all internal and external streets.

All existing and proposed plant material is graphically shown; species and quantity for each grouping are labeled. A minimum of four different species is shown for each plant type and are distributed throughout the site.

Distance of trees/shrubs from sidewalks, curbs, screening walls, and utilities is indicated. If less than five feet from paving, areas of impervious surface or utility lines, show dimension. Refer to Plant List for other exceptions to planting in paving areas.

N/A A full set of civil engineering drawings, also including the plat, site plan, and landscape plan have been submitted to TXU. Submit these drawings to: TXU Electric Delivery, Attn: Right-of-Way Department, 115 W. 7th Street, Ste. 725, Fort Worth, TX, 76102.

N/A I understand that the City requires an approval letter from TXU Electric Delivery prior to issuance of a building permit where landscaping, parking, or other improvement/s are proposed to encroach within any TXU/TP&L easement/s. TXU has stated a minimum of six weeks to process the review. Approved irrigation within a TXU transmission easement shall be limited to drip and soaker hose irrigation, with the valve for such located outside of the easement.

N/A Residential subdivisions are to have landscaping requirements (Indicate required planting ratio, square footage, linear footage, etc., including required and provided quantities) specifically listed in tabular format on plan for the following:

- a) Landscape Buffer (along external street frontage-provide separate calculations for each street frontage).
- b) Entryway Yard areas (located each side of subdivision entries) are provided for primary and secondary entryways.
- c) Entryway Yard area Trees and Shrubs are provided.
- d) Entryway Medians are shown and dimensioned.
- e) Entryway Median Trees and Shrubs are provided.
- f) Screening Wall plans are provided.



#### Tree Survey and Conservation Plan Minimum Requirements

Project Name	LUCAS RETAIL	Preparer	KORI HAUG	
		•		

This checklist is provided to assist you in addressing the minimum requirements for Tree Survey/Preservation Plan submission. An application is incomplete unless all applicable information noted below is submitted to the Development Services Department. Indicate that all information is included on the submitted plans by checking the box next to the required information.

Initialing the box certifies to the City that you have completely and accurately addressed the issue. If not applicable, indicate an "N/A" next to the box. Return this completed form at the time of application submittal.

If an exception or modification to the regulations is requested, the reason and/or request for each shall be provided on a separate sheet on letterhead and directly on the plans with sufficient details as to allow a determination by the appropriate approval body. Additional information may be required. Reference the specific requirement.

Plans are expected to be submitted complete and accurate in all detail as shown by the checklist. Should plans be determined to be incomplete, they may either be returned to the applicant without further review or marked up with needed changes, depending on the amount/magnitude of changes or corrections needed. Please keep in mind that changes to previously incomplete or inaccurate plans may generate additional comments at re-submittal of corrected Plans. Therefore, diligence to the initial submittal is paramount to expediting the review process.

For the purpose of preparing this Plan, a facade will be each building face (including the face of a parapet roof); the elevation will be that area from just above the roof to the ground.

#### Sec. 3.18.015 Tree replacement requirements

- (a) <u>Replacement of protected trees required</u>. In the event that it is necessary to remove a protected tree, the applicant shall be required to replace the protected tree being removed with an approved replacement tree, as defined herein.
- (b) <u>Restrictions</u>. Any required replacement tree shall not be planted within an area such that the mature canopy of the tree will interfere with overhead utility lines, or that the mature root zone of the tree interferes with wastewater lines, water and all other utility easements, or where the tree will obstruct sidewalks or present hazards to the safe use of the roadway by way of visual impairment.
- (c) <u>Trees required by zoning ordinance or deed restrictions</u>. Trees required to be added per the landscaping requirements in the zoning ordinance or by virtue of deed restrictions shall not be considered as replacement trees.
- (d) <u>Alternate location</u>. Should a lot or parcel of land requesting the removal of trees not be large enough to accommodate the replacement of the caliper inches removed, the planning staff may require an alternate location(s) within the city to place the total caliper inches removed.
- (e) <u>Number of replacement trees</u>. Trees shall be replaced 1 for 1 in measured DBH of the trees removed.

#### Sec. 3.18.016 Tree protection during construction

(a) <u>Generally</u>. A major purpose of this article is to protect all protected trees that are not required to be removed to allow approved construction to occur......

Location/vicinity map is provided identifying the location with cross streets labeled.

Existing tree canopy/masses are accurately shown to determine critical root zone and what effects paving will have in those areas.

N/A Flood plain boundary indicating F.I.R.M. Community Panel number and date, and flow line of drainage ways/creeks, as applicable.

Tree Measurement:

• See Code of Ordinance – Tree Conservation, Chapter 3, Article 3.18.001, page 3-111 Trees proposed for removal shall be painted with a luminescent orange 'X' (or colored flags in lieu of paint), no greater than 6 inches in size. The developer shall be required to maintain tree markings and tags throughout the approval of the project.

An inset is provided on the Plan to detail protective fence installation. Protective fencing shall be installed to the limits of the drip line.

It is understood that construction fencing shall be installed around all protected trees and clusters/groupings and inspected by City staff prior to approval of a grading or building permit. Fencing shall be installed as shown on the Tree Survey/Preservation Plan approved by the City. Areas are indicated where trenching and/or boring is proposed within critical root zone areas of existing, protected trees. Root pruning, canopy trimming, bark protection and/or any other tree protection/preservation methods shall be specified/detailed on plan/s as appropriate.

The following information is to be provided on the Tree Survey/Preservation Plan in a tabular format:

- a) Listing of protected trees by common name of species. See Plant Material/ Protected Tree Guide on Planning Department web page.
- b) Caliper of tree at DBH.
- c) A reference number for all protected trees.
- d) General condition of the tree certified as such by a licensed arborist, forester, landscape architect, or other that is qualified to make such determinations.
- e) Whether proposed for preservation or removal and amount of mitigation required.

Distance of protected trees from sidewalks, curbs, screening walls, and utilities. Proposed grades are indicated, along with any proposed retaining walls and/or tree wells.

Tree Mitigation:

- a) Trees proposed for removal shown by an 'X' using a heavy line.
- b) Replacement trees are indicated on the Landscape Plan by a heavy line denoting the canopy, with a unique identifier/label also provided.
- c) Indicate in the above table the total number of caliper inches proposed for preservation, removal, and any credits earned/requested.
- d) Indicate mitigation method proposed for removal of protected trees:
- e) Mitigation is required at (1:1/ Inch for Inch) = Caliper inches of mitigation required, which indicates the quantity of required 4" minimum caliper trees AND/OR Escrow: \$121.67 x Caliper inches (DBH) of mitigation required.

I have reviewed the Plant Material/ Protected Table Guide for compliance with City Ordinance Sections 3.18.023 - .025.

Title block in the lower right corner that includes large, boldly printed "BUILDING FACADE/ELEVATION PLAN", owner and architect names, addresses and phone numbers, subdivision name, lot number, block number or letter, submission date, and a log of submission/revision dates since submitted to the City.

#### Fee Schedule attached

Impact Fees assessed at time of Final Plat: (Collected at time of or prior to issuance of first building permit)

Water & Sewer Impact Fee Amount to be determined by size of meter.

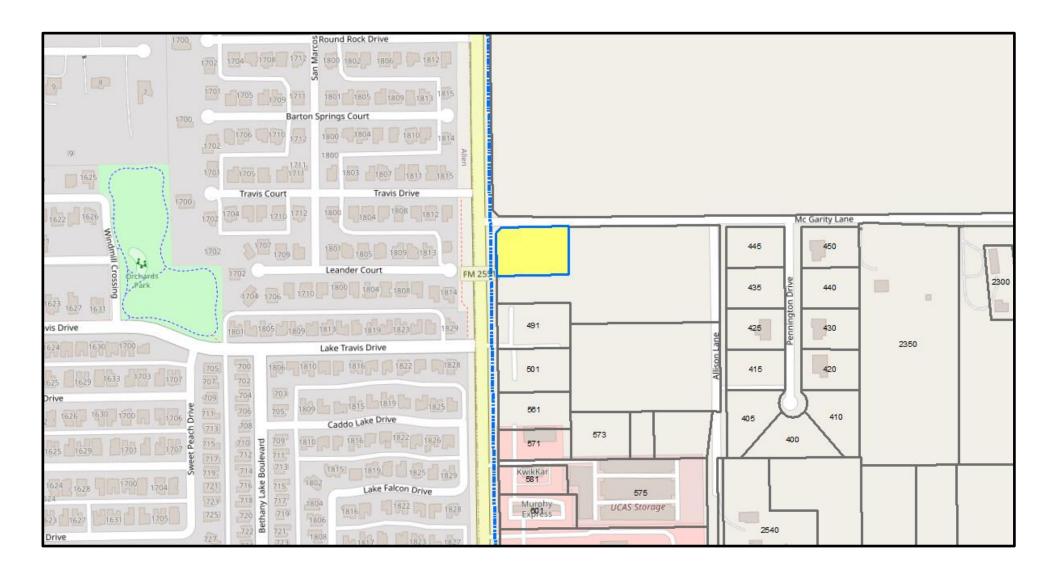
Roadway Impact Fee Amount to be determined by land use, unit classification and impact zone.

If you have any questions, please contact the Planning & Zoning Department at 972-912-1207.



#### **LOCATION MAP: SE CORNER OF MCGARITY LN AND ANGEL PWKY\***





<sup>\*</sup>Affected parcel has not yet been subdivided. Approximate location of proposed parcel shown.