

AGENDA City of Lucas City Council Meeting June 17, 2021 7:00 PM

City Hall, Council Chambers and Video Conference 665 Country Club Road – Lucas, Texas

Notice is hereby given that a meeting of the Lucas City Council will be held on Thursday, June 17, 2021 beginning at 7:00 pm at Lucas City Hall, 665 Country Club Road, Lucas, Texas 75002-7651 and by video conference, at which time the following agenda will be discussed. As authorized by Section 551.071 of the Texas Government Code, the City Council may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any item on the agenda at any time during the meeting.

On March 16, 2020 Governor Abbott suspended some provisions of the Open Meetings Act in response to the COVID-19 emergency. City Council meetings will also be available through Zoom from your computer or smartphone. To join the meeting, please click this URL:

https://zoom.us/s/95534828374?pwd=ZkJ5cTZkVWNEL3o0WFNCQXBjQ0RvZz09 and enter your name and email address. To join by phone: 1-346-248-7799 Webinar ID: 955 3482 8374 Passcode: 712285

If you would like to watch the meeting live, and not participate via Zoom, you may go to the City's live streaming link at https://www.lucastexas.us/live-streaming-videos/.

If the public desires to speak during a specific agenda item, they must email <u>shenderson@lucastexas.us</u> by 4:00 pm on the day of the meeting. The email must contain the person's name, address, phone number, and the agenda item(s) for which comments will be made. You may also communicate and send your comments to the City Councilmembers directly by emailing citycouncil@lucastexas.us.

Citizen Input

1. Citizen Input

Community Interest

Pursuant to Section 5510415 of the Texas Government Code, the City Council may report on the following items: 1) expression of thanks, congratulations or condolences; 2) information about holiday schedules; 3) recognition of individuals; 4) reminders about upcoming City Council events; 5) information about community events; and 6) announcements involving imminent threat to public health and safety.

2. Items of Community Interest

Consent Agenda

All items listed under the consent agenda are considered routine and are recommended to the City Council for a single vote approval. If discussion is desired, an item may be removed from the consent agenda for a separate vote.

- 3. Consent Agenda:
 - A. Approval of the minutes of the June 3, 2021 City Council meeting. (City Secretary Stacy Henderson)

Regular Agenda

- 4. Consider approval of an application for a site plan, landscape plan, elevations, and final plat submitted by the property owner Bill Shipley on behalf of Tractor Supply for use as a commercial farm and garden retail center on a 5.56-acre tract of land in the William Snider Survey, Abstract Number 821, situated in the City of Lucas, Collin County, Texas, located at 495 South Angel Parkway. (Development Services Director Joe Hilbourn)
- 5. Consider the provision of Law Enforcement Services by Collin County Sheriff's Office, receive a presentation from Collin County Sheriff's Office and provide guidance to the City Manager regarding contractual negotiations. (City Council, City Manager Joni Clarke, Assistant Chief Deputy Mitch Selman, Collin County Sheriff's Office)
- 6. Consider information provided by Birkhoff, Hendricks & Carter and review status of drainage conditions regarding Lemontree Estates and Kingswood Estates drainage and related watershed and provide direction to the City Manager. (City Council, City Engineer Stanton Foerster)
- 7. Discussion and provide direction regarding stormwater and drainage projects and regulations regarding the same. (City Council)

Executive Agenda

8. An Executive Session is not scheduled for this meeting.

As authorized by Section 551.071 of the Texas Government Code, the City Council may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney regarding any item on the agenda at any time during the meeting. This meeting is closed to the public as provided in the Texas Government Code.

9. Reconvene from Executive Session and take any action necessary as a result of the Executive Session.

10. Adjournment.

Certification

I do hereby certify that the above notice was posted in accordance with the Texas Open Meetings Act on the bulletin board at Lucas City Hall, 665 Country Club Road, Lucas, TX 75002 and on the City's website at www.lucastexas.us on or before 5:00 p.m. on June 11, 2021.

Stacy Henderson, City Secretary

In compliance with the American with Disabilities Act, the City of Lucas will provide for reasonable accommodations for persons attending public meetings at City Hall. Requests for accommodations or interpretive services should be directed to City Secretary Stacy Henderson at 972.912.1211 or by email at shenderson@lucastexas.us at least 48 hours prior to the meeting.



Requester: Mayor Jim Olk

Agenda Item Request

Citizen Input

Background Information

NA

Attachments/Supporting Documentation

NA

Budget/Financial Impact

NA

Recommendation

NA

Motion

NA



Requester: Mayor Jim Olk

Agenda Item Request

Items of Community Interest

Background Information

NA

Attachments/Supporting Documentation

NA

Budget/Financial Impact

NA

Recommendation

NA

Motion

NA



Requester: City Secretary Stacy Henderson

Agenda Item Request

Consent Agenda:

A. Approval of the minutes of the June 3, 2021 City Council meeting.

Background Information

NA

Attachments/Supporting Documentation

1. Minutes of the June 3, 2021 City Council meeting.

Budget/Financial Impact

NA

Recommendation

City Staff recommends approval of the Consent Agenda.

Motion

I make a motion to approve/deny the Consent Agenda as presented.



City of Lucas City Council Meeting June 3, 2021 6:00 P.M.

City Hall Council Chambers and Video Conference City Hall, 665 Country Club Road, Lucas, Texas

MINUTES

City Councilmembers Present:

Mayor Jim Olk Mayor Pro Tem Kathleen Peele Councilmember Tim Johnson Councilmember Tim Baney Councilmember David Keer Councilmember Phil Lawrence Councilmember Debbie Fisher Councilmember Phil Lawrence (arrived at 7:02 pm)

City Staff Present:

City Manager Joni Clarke City Secretary Stacy Henderson Development Services Director Joe Hilbourn City Engineer Stanton Foerster Fire Chief Ted Stephens Assistant Fire Chief Lance Gant

Mayor Olk called the meeting to order at 6:00 pm.

Executive Agenda – 6:00 pm

1. The City Council will convene into Executive Session as permitted under Texas Government Code, Section 551.074, Personnel Matters, to conduct interviews of Board of Adjustment applicants and discuss Board of Adjustment appointments.

The City Council convened into Executive Session at 6:01 pm.

2. Reconvene from Executive Session and take any action necessary as a result of the Executive Session.

The City Council reconvened from Executive Session at 7:04 pm and took the following action:

MOTION: A motion was made by Mayor Pro Tem Peele seconded by Councilmember Baney to appoint Sean Watts to the Board of Adjustment, Alternate 2 position, promote Brenda Rizos to a regular member position, and promote Michael Dunn to the Alternate 1 position. The motion passed unanimously by a 7 to 0 vote.

The regular portion of the agenda was called to order at 7:04 pm.

Citizen Input

3. Citizen Input

There was no citizen input at this meeting.

Community Interest

4. Community Interest.

Mayor Olk discussed upcoming events related to the Farmers Market and the cancellation of Movie in the Park that will be rescheduled to August 20, 2021.

Consent Agenda

5. Consent Agenda:

- A. Approval of the minutes of the May 20, 2021 City Council meeting.
- B. Approval of Ordinance 2021-06-00931 of the City of Lucas finding that the settlement agreement between the City and CoServ Gas, Ltd. is reasonable; ordering CoServ Gas, Ltd. to implement the rates agreed to in the settlement agreement; requiring reimbursement of Cities' rate case expenses; finding that the meeting at which this ordinance is passed is open to the public as required by law; requiring notice of this ordinance to the company and legal counsel.
- **MOTION:** A motion was made by Councilmember Fisher, seconded by Mayor Pro Tem Peele to approve the Consent Agenda as presented. The motion passed unanimously by a 7 to 0 vote.

Public Hearing

6. Public hearing to consider adopting Ordinance 2021-06-00933 approving the request by Tractor Supply for a specific use permit to allow outside storage on a 5.56-acre part of a tract of land in the William Snider Survey, Abstract Number 821, Tract 16 situated in the City of Lucas, Collin County, Texas, located at 495 South Angel Parkway.

Development Services Director Joe Hilbourn gave a presentation discussing the request and reviewed the conditions recommended by the Planning and Zoning Commission.

Claymore Engineering representing the applicant discussed the outside storage component of the request, location of supply areas, truck loading and unloading areas, as well as customer drive-through pickup locations.

Mayor Olk opened the public hearing at 7:24 pm. There being no audience members wanting to speak, the public hearing was closed at 7:25 pm.

- **MOTION:** A motion was made by Mayor Olk seconded by Mayor Pro Tem Peele to adopt Ordinance 2021-06-00933 approving the request by Tractor Supply for a specific use permit to allow outside storage on a 5.56-acre tract of land in the William Snider Survey, Abstract Number 821, Tract 16 situated in the City of Lucas, Collin County, Texas, located at 495 South Angel Parkway with the following conditions. The motion passed unanimously by a 7 to 0 vote.
 - (1) The Property shall be developed in accordance with the Site Plan attached hereto as Exhibit "B"; the Photometric Plan attached hereto as Exhibit "C"; the Elevations Plan attached hereto as Exhibit "D", and the Landscape Plan attached hereto as Exhibit "E" and made a part hereof for all purposes.
 - (2) The outside storage area shall be contained to the three areas depicted on the Site Plan.
 - (3) The screening wall, trees and plants located on the east Property line shall be perpetually maintained to screen residential from the commercial business.
 - (4) No glare producing luminaires shall be placed on the back portion of the building.

Executive Session

Per Section 551.071 of the Texas Government Code, the City Council convened into Executive Session at 7:29 pm to seek legal advice from the City Attorney.

The City Council reconvened from Executive Session at 7:44 pm. There was no action taken as a result of the Executive Session.

Regular Agenda

7. Consider the request by Stephen DiNapoli for preliminary plat approval for a parcel of land, being 41.512 acres, part of the John Thompson Survey, Abstract 893 and the G. Ducase Survey, Abstract 270 located on the northeast side of Winningkoff Road and north of Christian Lane, located at 950 Winningkoff Road, 970 Winningkoff Road, and 905 Christian Lane.

Development Services Director Joe Hilbourn gave a presentation noting that the plat shown on the screen was an updated plat, and the plat included in the packet was no longer valid.

The applicant, Steve DiNapoli, spoke in favor of the request.

Councilmember Johnson noted his concerns related to the entrance of the subdivision that would be better suited in another location that would accommodate line of site for traffic in the reverse curve area. **MOTION:** A motion was made by Mayor Pro Tem Peele seconded by Councilmember Baney to approve the preliminary plat as submitted in May 2021, the latest submittal to City Staff containing updated notes. The motion passed by a 5 to 2 vote with Councilmember Johnson and Councilmember Lawrence voting in opposition.

8. Consider approval of the Water Rescue Plan submitted by Lucas Fire-Rescue to develop a swift water and lake emergency response program.

Assistant Fire Chief Lance Gant discussed the proposed water rescue plan related to rescue efforts on Lake Lavon. Mr. Gant discussed training, a 10-year budget plan, establishing goals, and resources needed.

The City Council discussed how equipment and calls were prioritized when responding to a water rescue call, changing the plan to a five-year plan rather than a ten-year plan, obtain training for firefighters as soon as possible, and budget considerations.

Mayor Olk asked that the water rescue plan include an equipment replacement schedule.

MOTION: A motion was made by Mayor Olk seconded by Councilmember Johnson to approve the water rescue plan, decrease the training time to allow more individuals to obtain training, change the plan to a five-year plan, and determine budgetary needs. The motion passed unanimously by a 7 to 0 vote.

9. Consider legislative bills that passed in the 87th Legislative Session and provide direction to City Staff and City Attorney if needed.

City Attorney Joe Gorfida reviewed various bills that passed during the 87th Legislative Session. There was no formal action taken on this item, it was for information purposes only.

10. Consider the appointment of Mayor Pro Tem to serve for a one-year period beginning June 3, 2021 and ending May 31, 2022.

MOTION: A motion was made by Mayor Olk seconded by Councilmember Fisher to appoint Kathleen Peele as Mayor Pro Tem for a one-year period beginning June 3, 2021 and ending May 31, 2022. The motion passed unanimously by a 7 to 0 vote.

11. Review the City's submittal procedures and approval requirements relating to the platting process and provide direction to staff on any recommended amendments.

Councilmember Fisher expressed her concerns related to procedures for platting requirements outlined in Article 10.03 of the Code of Ordinances. Councilmember Fisher discussed the design review committee notes that should be presented to the Planning and Zoning Commission prior to approval and suggested a checklist be created by staff that would be part of the application file noting the staff member and date of review of required items. Councilmember Fisher also discussed drainage, co-efficiencies, and how drainage on the site was calculated before and after construction.

Councilmember Fisher requested Article 10.03, of the Code of Ordinances, Subdivisions be reviewed by the Planning and Zoning Commission to determine if additional items are needed for plat submittal and review.

The City Council suggested the following items be included as part of the review of Article 10.03 of the Code of Ordinances.

- How co-efficiencies are calculated
- Checklist for staff
- Review and provide better description related to Section 10.03.039 (2)
- Review and determine appropriate location for Section 10.03.039 (E) and (F) as these items were not legally required for a preliminary plat.
- Review Section 10.03.040 (8) Data Requirements and determine if this should be moved to zoning requirements
- Review Section 10.03.040 (12) and determine if septic should be added
- Review fees and determine if actual costs are being recovered

The City Council was in agreement to have the Planning and Zoning Commission review Article 10.03 of the Code of Ordinances related to Subdivisions and Development to determine if amendments were needed.

12. Adjournment.

MOTION: A motion was made by Mayor Olk seconded by Councilmember Lawrence to adjourn the meeting at 9:03 pm.

APPROVED:

ATTEST:

Mayor Jim Olk

City Secretary Stacy Henderson



Requester: Development Services Director Joe Hilbourn

Agenda Item Request

Consider approval of an application for a site plan, landscape plan, elevations, and final plat submitted by the property owner Bill Shipley on behalf of Tractor Supply for use as a commercial farm and garden retail center on a 5.56-acre tract of land in the William Snider Survey, Abstract Number 821, situated in the City of Lucas, Collin County, Texas, located at 495 South Angel Parkway.

Background Information

Site Plan:

Tractor Supply is proposing 21,930 square feet of retail space with outside storage. The outside storage does require a specific use permit that was approved by the Planning and Zoning Commission on May 13, 2021. The site is currently zoned Commercial Business, and the use fits the area. Impervious cover shown is 61% (a maximum of 65% is permitted). Parking spaces required is 110 (120 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.

Landscape Plan:

Total site area is 242,217 square feet and the building footprint is 21,930 square feet. Total landscape area provided is 92,676 square feet; 15% is required and 38.2% is proposed. Street trees required is 19 (19 are provided). Street shrubs required is 150 (162 are provided). Parking perimeter trees required is 11 (11 are provided). Parking perimeter shrubs required is 85 (92 are provided). Parking interior total site area is 65,367 square feet; landscape area required is 5,229 square feet (8%) and landscape area provided is 4, 077 square feet (6.2%). Trees required is 12 (12 are provided).

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

Architectural Plan:

The proposed building height is 27 feet, 6 inches tall; maximum permitted is 35 feet tall. The proposed building has 100% masonry. The length of the building is just over 120 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.



Final plat:

The lot is 5.65 acres of land and provides for right of way as required for the proposed future Allison Lane. The plat provides easements for drainage, including detention, utility easements, and easements for fire lanes. The plat meets the City's requirements for a plat.

Attachments/Supporting Documentation

- 1. Civil plans, include the landscape plan, site plan, and final plat.
- 2. Elevations
- 3. Photometric Plan
- 4. Location map

Budget/Financial Impact

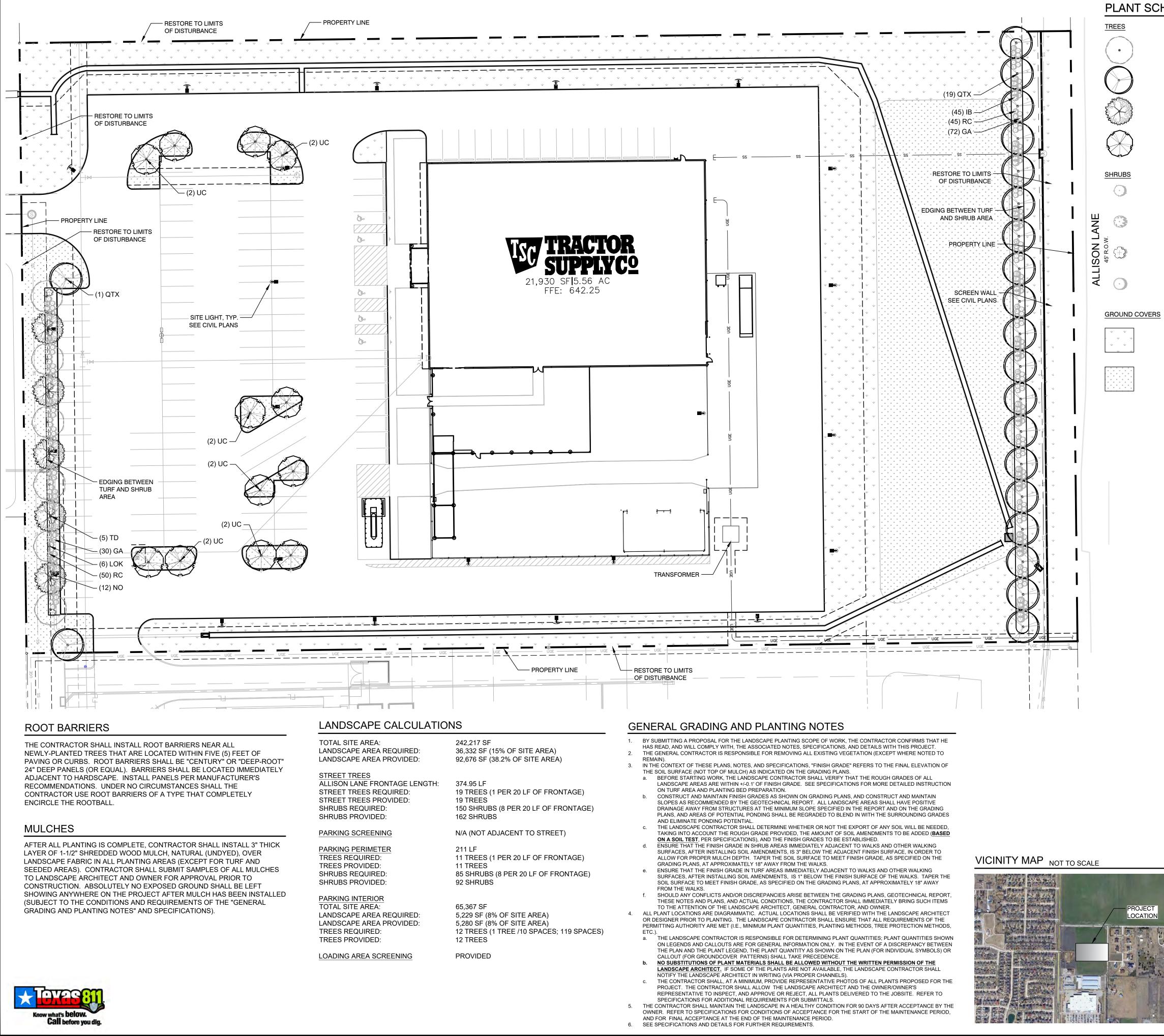
NA

Recommendation

Staff recommends approving the site plan, landscape plan, elevations, and final plat. The Planning and Zoning Commission unanimously recommended approval of the site plan, landscape plan, elevations and final plat at their June 10, 2021 meeting.

Motion

I make a motion to approve/deny the site plan, landscape plan, elevations, and final plat on behalf of Tractor Supply for use as a commercial farm and garden retail center on a 5.56-acre tract of land located at 495 South Angel Parkway.





HEDULE								
	ODE	QTY	BOTANICAL / COMMON NAME	<u>E</u> <u>CALIPER</u>	CONTAINER	SIZE		
L	ОК	6	Quercas virginiana Live Oak	3" Cal.	Cont. or B&B	10`-12`	ERING PHONE: 817.281.0572 WWW.CLAYMOOREENG.COM	
Q	TX	21	Quercus texana Texas Red Oak	3" Cal.	Cont. or B&B	10`-12`	INE INE ISOUTE #1	
Т	D	5	Taxodium distichum Bald Cypress	3" Cal.	Cont. or B&B	10`-12`	ENGINE #1	
U	C	12	Ulmus crassifolia Cedar Elm	3" Cal.	Cont. or B&B	10`-12`		
	ODE A	<u>QTY</u> 102	<u>BOTANICAL / COMMON NAME</u> Abelia grandiflora Glossy Abelia	E <u>CONTAINER</u> 5 gal	<u>SPACING</u> Per Plan	<u>SIZE</u> 24" MIN	REEL IN SHEATER	
IE	3	45	llex cornuta `Burfordii Nana` Dwarf Burford Holly	5 gal	Per Plan	18" Min.	0 3537 52 77 E OF TE	
N	10	12	Nerium oleander `Petite Pink` Dwarf Oleander	5 gal	Per Plan	18" Min.	05-13-2021	
R	C	95	Rhaphiolepis indica `Clara` Indian Hawthorn	5 gal	Per Plan	18" Min.	Ċ	
<u><u> </u></u>	ODE	ΩΤΥ	BOTANICAL / COMMON NAME	<u>E</u> <u>CONT</u>	SPACING	SIZE		
В	G	48,589 sf	Cynodon dactylon `tif 419` Bermuda Grass	Hydromulch			PLA CKA X	
С	Ð	30,849 sf	Cynodon dactylon `tif 419` Bermuda Grass	Sod			RACTOR SUF LOT 1, BLOO LUCAS, T	
				0'	15' 30' Scale 1"	^{60'} = 30'	NO. DATE REVISION	
			C - COMMERCIAL PENNINGTON PARTNERS 3445 SHENANDOAH ST. DALLAS, TX 75205 PH: 214.522.2252 CLAYMOORE ENGINEERIN 301 S. COLEMAN ST. PROSPER, TX 75078 PH: 817.281.0572	CC NG, <u>APPLICANT:</u> NG, INC. CO	(800) 680- 15455 Dallas Pkv Addison, TX www.EvergreenDes	G R O U P 6630 vy., Ste 600 75001 ignGroup.com BILL SHIPLEY	LANDSCAPE PLANTING	
		*****	EAGLE SURVEYING 210 S. ELM ST. SUIT DENTON, TX 76201 PH: 940.222.3009			DNTACT NAME:	TYLER RANK	
		10	5.65 ACRES OF L	EGAL DESCRIPTI AND SITUATED IN TH RACT NO. 821, CITY C	<u>ON:</u> E WILLIAM SNIDER		DESIGN: EMS DRAWN: EMS CHECKED: RM	
		A RE	<u>CITY:</u> LUCAS	COUNTY, TEXAS	<u>STATE:</u> TEXAS		DATE: 5/13/2021 SHEET	
		2000n	COUNTY	<u>SURVEY:</u> LIAM SNIDER	ABSTI	<u>RACT NO.</u> 821		
							File No. 2021-049	

PLANTING SPECIFICATIONS

GENERAL

- A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR
- ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY
- THE OWNER FOR FURTHER QUALIFICATION MEASURES. THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID NURSERY AND FLORAL CERTIFICATE ISSUED BY THE TEXAS DEPARTMENT OF AGRICULTURE, AS WELL AS OPERATE UNDER A COMMERCIAL PESTICIDE APPLICATOR LICENSE ISSUED BY EITHER THE TEXAS DEPARTMENT OF AGRICULTURE OR THE TEXAS STRUCTURAL PEST CONTROL BOARD.
- B. SCOPE OF WORK
 - WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS NOTES AND DETAILS
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS
 - THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

- ALL MANUFACTURED PRODUCTS SHALL BE NEW. B. CONTAINER AND BALLED-AND-BURLAPPED PLANTS
- FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMACTIC CONDITIONS. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM
- ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE.
- ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTBLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL
- ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PI ANTING
- CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES UP TO AND INCLUDING FOUR INCHES IN CALIPER. AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
- MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL. WHERE CALIPER MEASUREMENTS ARE USED, THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE
- ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED. C. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH PALLET OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE COMPOSITION OF THE SOD.
- TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN ½ INCH, FOREIGN MATTER, PLANTS ROOTS, AND SEEDS
- COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8; MOISTURE CONTENT 35 TO 55 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISIEMENS/M: NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER
- NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).
- MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS. TREE STAKING AND GUYING
- STAKES: 6' LONG GREEN METAL T-POSTS.
- GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH DIAMETER STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.
- STEEL EDGING: PROFESSIONAL STEEL EDGING, 14 GAUGE THICK X 4 INCHES WIDE, FACTORY PAINTED DARK GREEN, ACCEPTABLE MANUFACTURERS INCLUDE COL-MET OR APPROVED EQUAL. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR
- THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES

METHODS

- A. SOIL PREPARATION
- BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST. SOIL TESTING
- AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING
- THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURAL CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
- THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE
- FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTS, XERIC PLANTS, TURF, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE
- THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS, EITHER
- INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING: TURF: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF
- ROTOTILLING AFTER CROSS-RIPPING: NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
- PREPLANT TURF FERTILIZER (10-20-10 OR SIMILAR, SLOW RELEASE, ORGANIC) 15 LBS PER 1,000 S.F. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
- TREES, SHRUBS, AND PERENNIALS: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-RIPPING:
- NITROGEN STABILIZED ORGANIC AMENDMENT 4 CU. YDS. PER 1,000 S.F. 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) - 10 LBS. PER CU. YD.
- "CLAY BUSTER" OR EQUAL USE MANUFACTURER'S RECOMMENDED RATE IRON SULPHATE - 2 LBS. PER CU. YD.
- 5. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS. a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +/-0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE
- DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
- THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (BASED ON A SOIL TEST, PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER
- WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS
- e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS. AT APPROXIMATELY 18" AWAY FROM THE WALKS. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS,
- GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
- ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

- B. SUBMITTALS THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB (INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE APPROPRIATE)
- SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY). WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE
- ITEM BEING CONSIDERED. C. GENERAL PLANTING
 - REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES
 - AT THE MANUFACTURER'S RECOMMENDED RATE. TRENCHING NEAR EXISTING TREES: a. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK, WITH A RADIUS
 - EQUAL TO 1' FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE
 - EXCAVATION OR TRENCHING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER
 - SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS. d. ALL SEVERED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY
- DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS. D. TREE PLANTING
 - TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE ROOTBALL, AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES.
- SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE. REMOVE ANY GLAZING THAT MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE. 3. FOR CONTAINER AND BOX TREES, TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT DEFECTS. THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE
- ROOTBALL OF ALL TREES JUST BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO FOUR INCHES ABOVE THE SURROUNDING GRADE
- BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, USE STORED TOPSOIL FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED
- TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL TREES SHALL NOT BE STAKED UNLESS LOCAL CONDITIONS (SUCH AS HEAVY WINDS OR SLOPES) REQUIRE STAKES TO KEEP TREES UPRIGHT. SHOULD STAKING BE REQUIRED, THE TOTAL NUMBER OF TREE STAKES (BEYOND THE MINIMUMS LISTED BELOW) WILL BE LEFT TO THE LANDSCAPE CONTRACTOR'S DISCRETION. SHOULD ANY TREES FALL OR LEAN, THE LANDSCAPE CONTRACTOR SHALL STRAIGHTEN THE TREE, OR REPLACE IT SHOULD IT BECOME DAMAGED. TREE STAKING SHALL ADHERE TO THE FOLLOWING GUIDELINES:
- TWO STAKES PER TREE a. 1"-2" TREES THREE STAKES PER TREE 2-1/2"-4" TREES
- TREES OVER 4" CALIPER GUY AS NEEDED MULTI-TRUNK TREES
- NEEDED TO STABILIZE THE TREE MULTI-TRUNK TREES THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS NEEDED TO STABILIZE THE TREE
- UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE. COVER THE INTERIOR OF THE TREE RING WITH THE WEED BARRIER CLOTH AND TOPDRESS WITH MULCH (TYPE AND DEPTH PER PLANS).
- E. SHRUB, PERENNIAL, AND GROUNDCOVER PLANTING DIG THE PLANTING HOLES TWICE AS WIDE AND 2" LESS DEEP THAN EACH PLANT'S ROOTBALL. INSTALL THE PLANT IN THE HOLE. BACKFILL AROUND THE PLANT WITH SOIL AMENDED PER SOIL TEST RECOMMENDATIONS.
- INSTALL THE WEED BARRIER CLOTH, OVERLAPPING IT AT THE ENDS. UTILIZE STEEL STAPLES TO KEEP THE WEED BARRIER CLOTH IN PLACE. WHEN PLANTING IS COMPLETE, INSTALL MULCH (TYPE AND DEPTH PER PLANS) OVER ALL PLANTING
- BEDS, COVERING THE ENTIRE PLANTING AREA. F. SODDING
- SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN. LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN.
- LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
- ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL UNDERNEATH
- WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD.
- G. MULCH INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TREE RINGS.
- DO NOT INSTALL MULCH WITHIN 6" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES, EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL. H. CLEAN UP
- DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION. DISPOSED LEGALLY OF ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
- INSPECTION AND ACCEPTANCE UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN 1. FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
- WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
- THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS 3. BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.
- .I LANDSCAPE MAINTENANCE THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS.
- THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION. SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING
- A FULL, HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR: THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR
- SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL PRIOR TO FINAL ACCEPTANCE. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
- SODDED AREAS MUST BE ACTIVELY GROWING AND MUST REACH A MINIMUM HEIGHT OF 1 1/2 INCHES BEFORE FIRST MOWING. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESODDED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE. ALL SODDED TURF SHALL BE NEATLY MOWED. K. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SOD, AND IRRIGATION SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE. AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY.
- AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD. THE LANDSCAPE 2. CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A
- RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN THE FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS



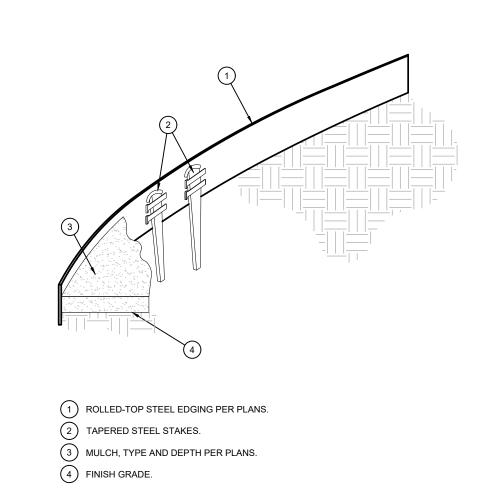
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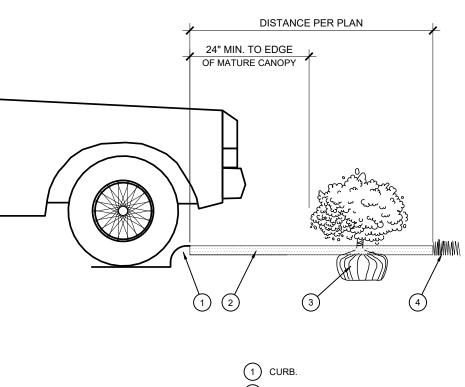
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THREE STAKES PER TREE MINIMUM, QUANTITY AND POSITIONS AS

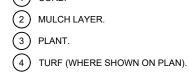


1) INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED) BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE. TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.

TEEL EDGING CALE: NOT TO SCAL



PARKWAY



(1) TYPICAL WALKWAY OR PAVING

TYPICAL PLANTING AREA

TYPICAL CURB AND GUTTER

1) INSTALL ROOT BARRIERS NEAR ALI

NEWLY-PLANTED TREES THAT ARE LOCATED

WITHIN FIVE (5) FEET OF PAVING OR CURBS

BARRIERS SHALL BE LOCATED IMMEDIATELY

CIRCUMSTANCES SHALL THE CONTRACTOR

ADJACENT TO HARDSCAPE. UNDER NO

USE ROOT BARRIERS OF A TYPE THAT

COMPLETELY ENCIRCLE THE ROOTBALL.

LINEAR ROOT BARRIER MATERIAL. SEE

PLANTING NOTES FOR TYPE AND

MANUFACTURER'S SPECIFICATIONS

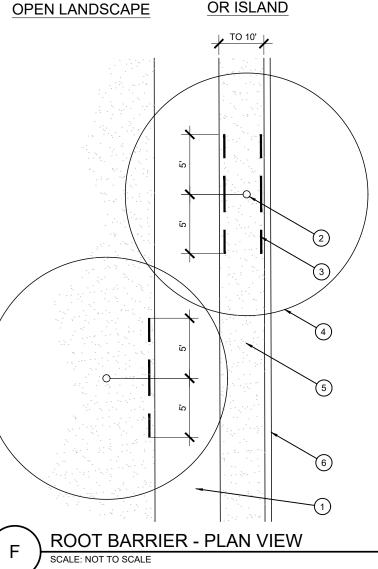
MANUFACTURER. INSTALL PER

TREE TRUNK

TREE CANOPY

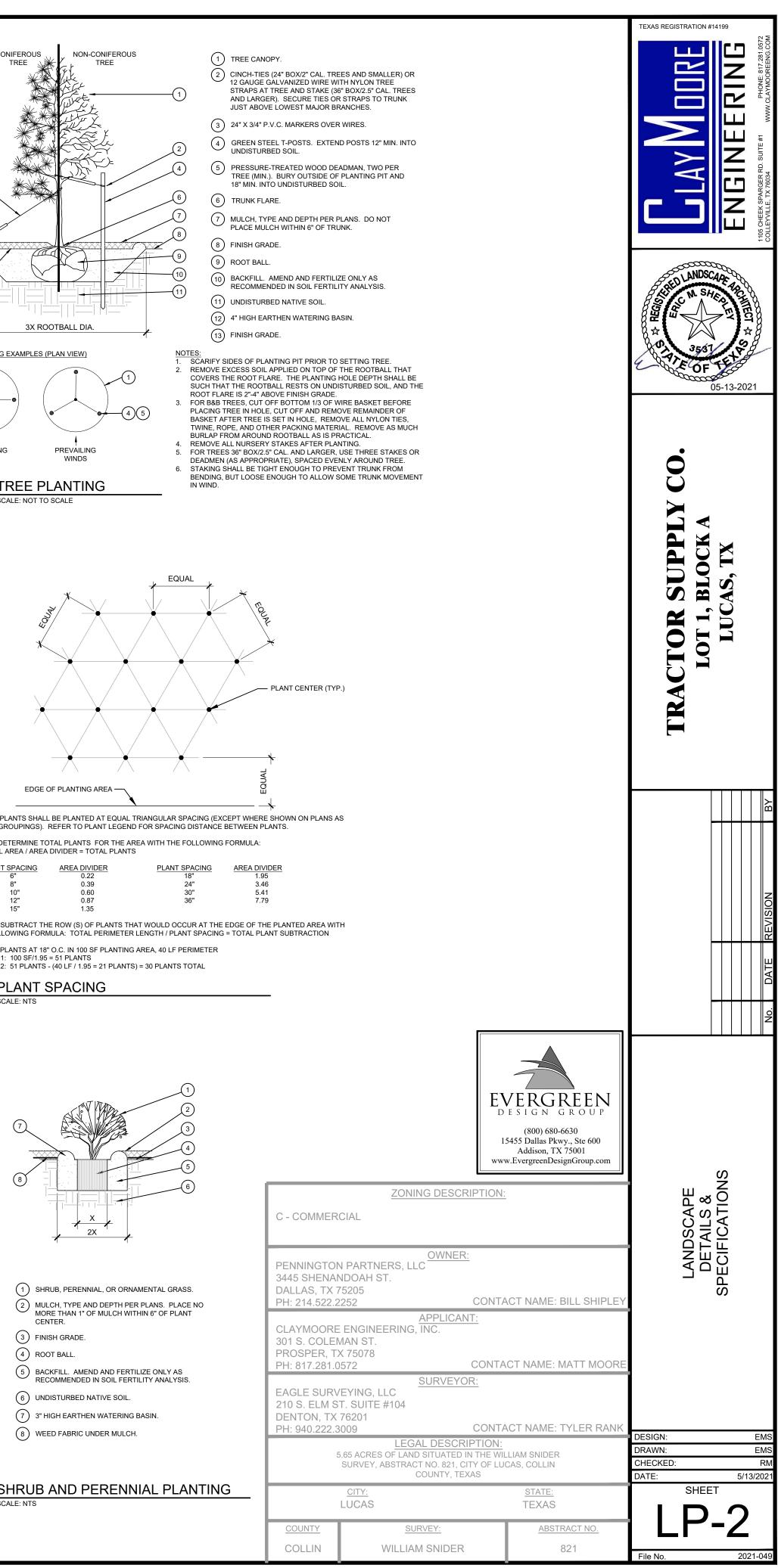
PLANTING AT PARKING AREA SCALE: NOT TO SCALE

OPEN LANDSCAPE



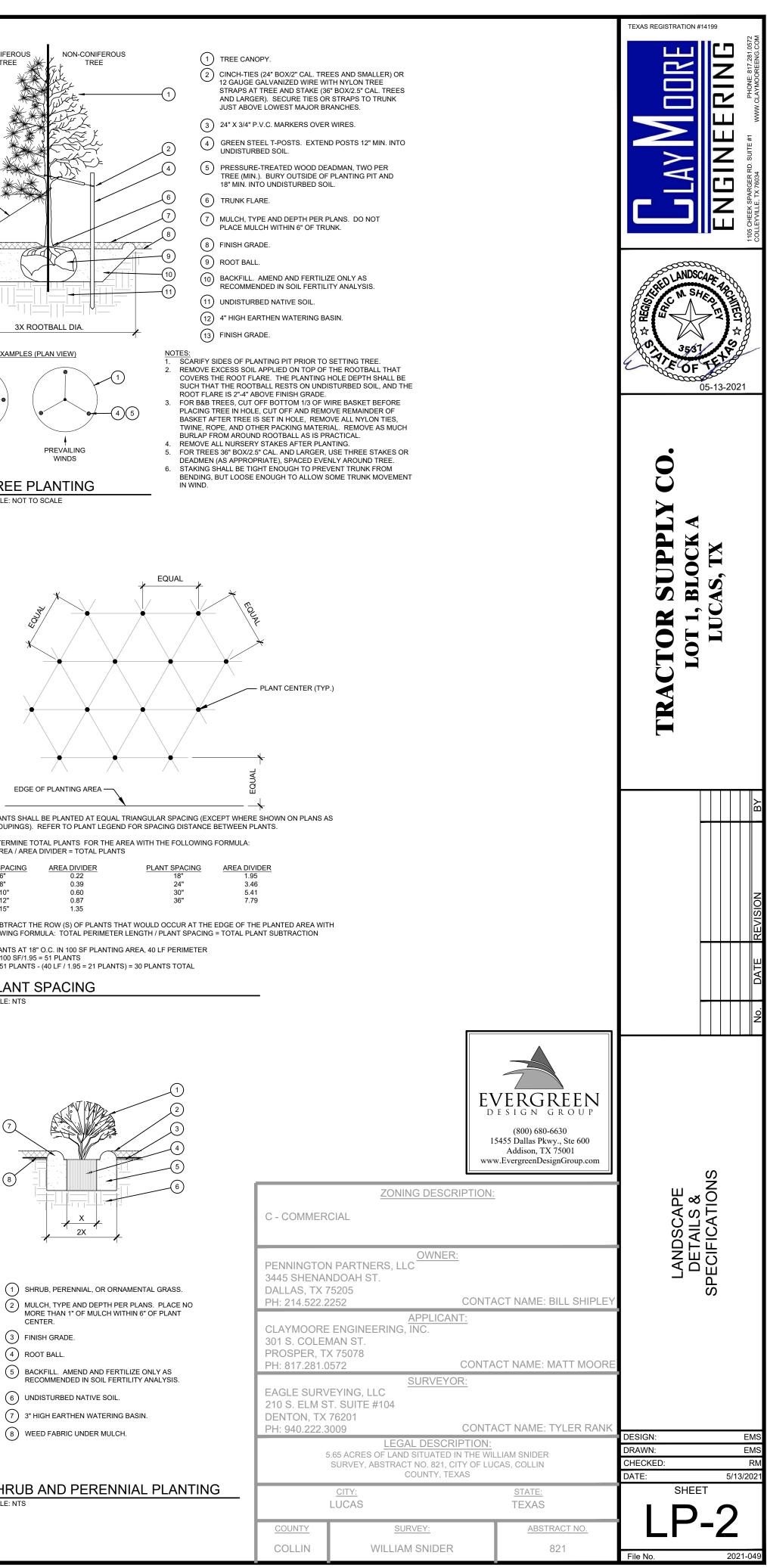
TREE 3X ROOTBALL DIA. STAKING EXAMPLES (PLAN VIEW) PREVAILING PREVAILING WINDS WINDS

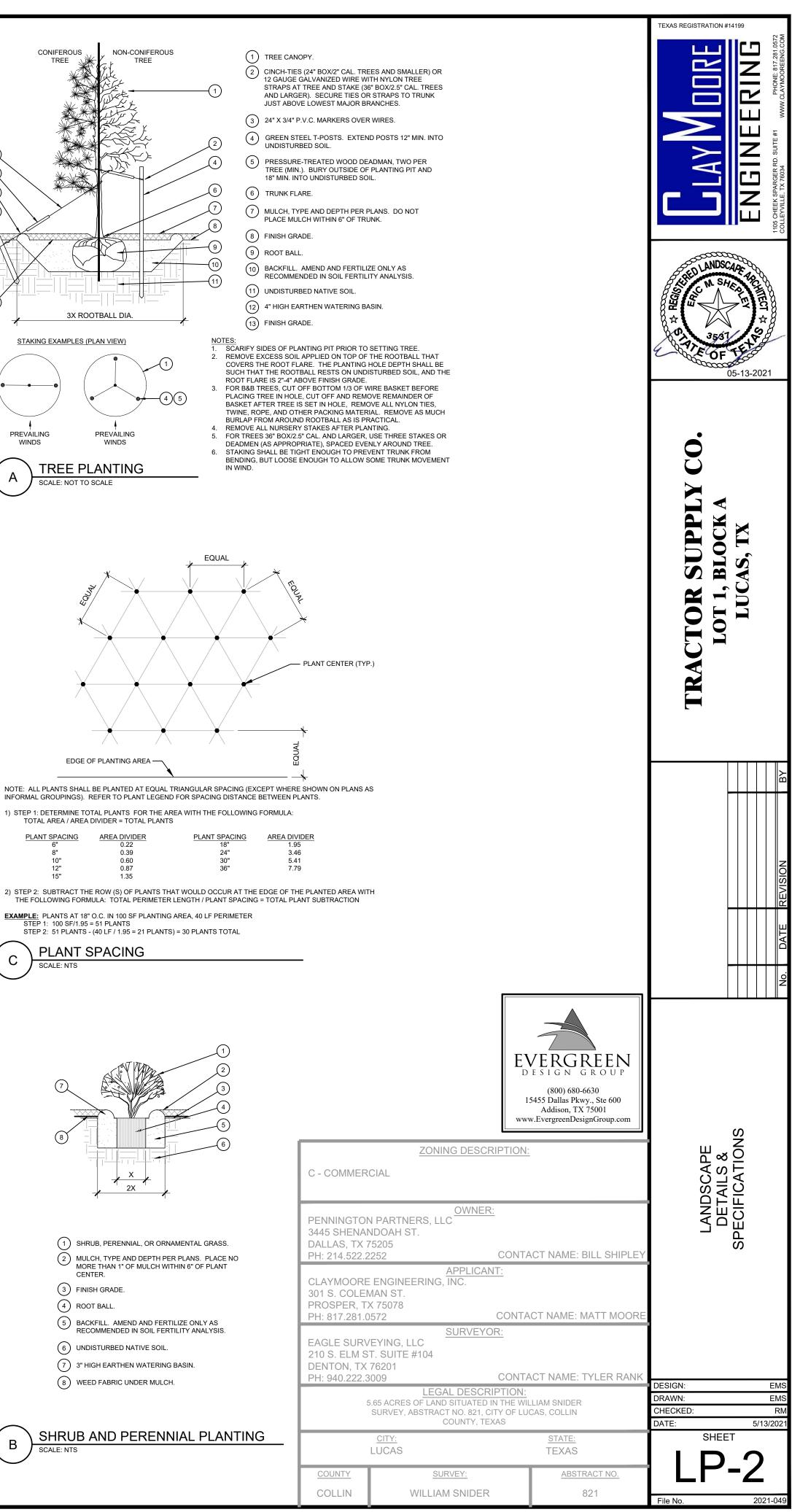


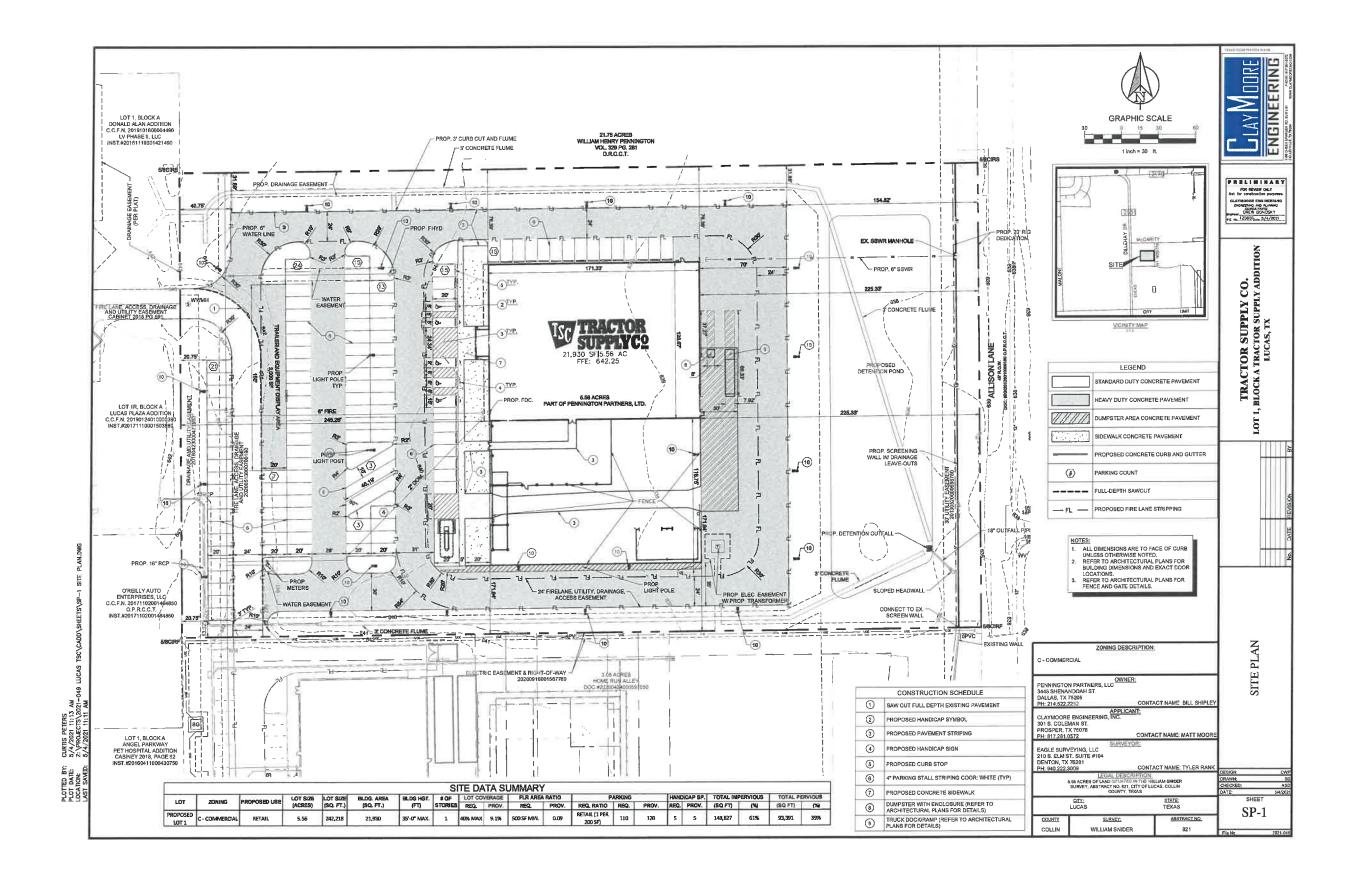


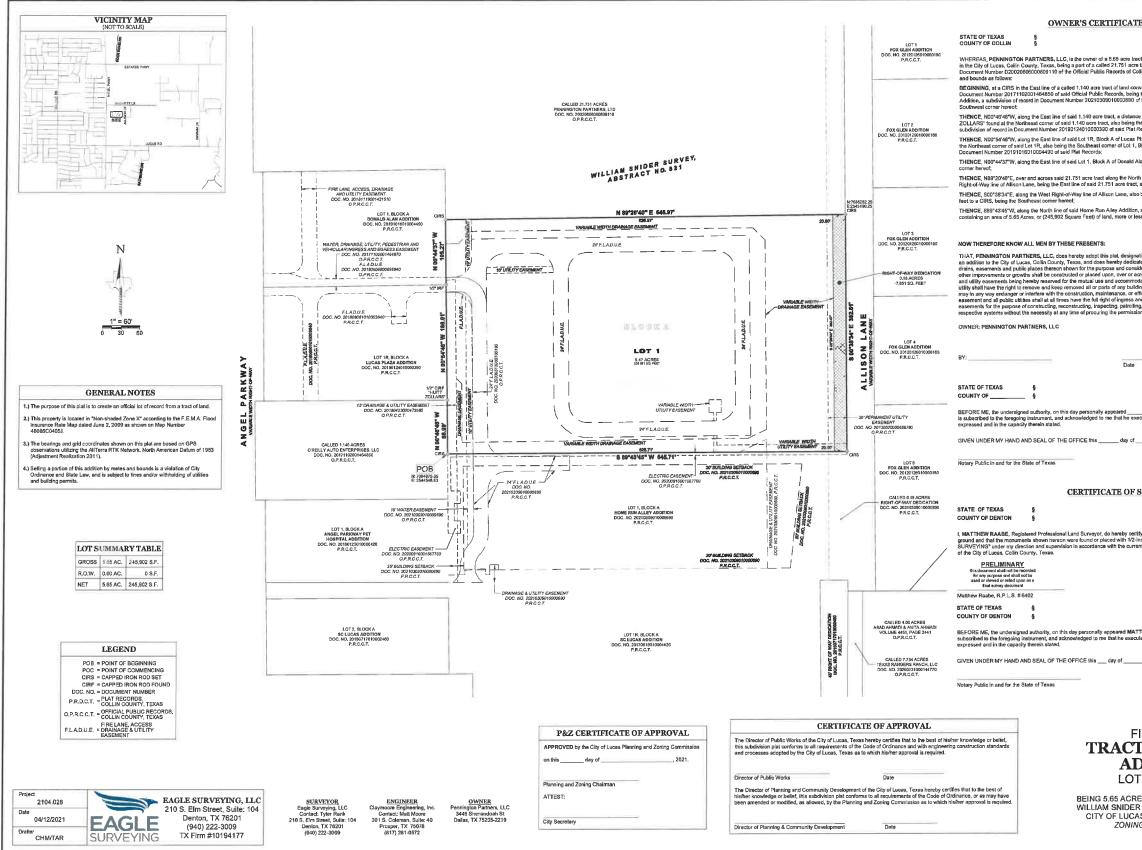
TOTAL AREA / AREA DIVIDER = TOTAL PLANTS PLANT SPACING

PLANT SPACING









OWNER'S CERTIFICATE & DEDICATION

WHEREAS, PENNINGTON PARTNERS, LLC, is the owner of a 5.65 area tract out of the William Snider Survey, Abstract Number 821, situated in the City of Lucas, Colin County, Texas, being a part of a called 21.751 acrea trad conveyed by Warranty Deed with Vendor's Lien of record in Document Number D2020(606006005110 of the Official Public Records of Colin County, Texas, and being more particulary described by meles and bounds as follows:

BEGINNING, at a CIRS in the East line of a called 1.140 acre truct of land conveyed to O'Reilly Auto Enterprises, LLC by deed of record in Document Number 20171102001464850 of said Official Public Records, being the Northwest commer of Lot 1, Block A of Home Run Alkey Addison, a subdivision of record in Document Number 202103090 0000580 of the Plant Records of Collin County, Tarsa, and also being the

THENCE, NOVI4746/9W, along the East line of said 1.140 acre tract, a distance of 88.99 feet to a 1/2" iron rod with plastic cap stamped "HUITT ZOLLARS" found at the Northeast corner of said 1.140 acre tract, also being the Southeast corner of Lot 1R, Block A of Lucas Plaza Addition, a subdivision of record in Document Mumber 2019/12/101000390 of task Plat Records.

THENCE, NOU"5448"W, along the East line of said Lot 1R, Block A of Lucas Plaza Addition, a distance of 185.01 feet to a ½ iron rod found at the Northeast comer of said Lot 1R, also being the Southeast comer of Lot 1, Block A of Donald Alain Addition, a subdivision of record in Document (Number 201910)601004480 of said Har Records;

THENCE, N00*44'37"W, along the East line of said Lot 1, Block A of Donald Alan Addition, a distance of 105.27 feet to a CIRS at the Northwest normer benef.

THENCE, N89*20'40"E, over and across said 21.751 acre tract along the North line hereof, a distance of 646.97 feet to a CIRS in the West Right-of-Way line of Allison Lane, being the East line of said 21.751 acre tract, and also being the Northeast comer hereof;

THENCE, S00'38'34"E, along the West Right-of-Way line of Allison Lane, also being the East line of said 21.751 acre tract a distance of 382.61 feet to a CIRS, being the Southeast corner hereof;

THENCE, SB3*4545"W, along the North line of said Home Run Alley Addition, a distance of 645.71 feet to the POINT OF BEGINNING and containing an area of 5.65 Acres, or (245,902 Square Feet) of land, more or less.

ThiAT, PENNINGTON PARTNERS, LLC, does tready actual tais plaid designating herein described property as TRACTOR SUPPLY ADDITION, an addition to the City of Lucan, Colin County, Tenss, and does hereity dedicate to public use forever all atrets, alleys, parts, watercourses, drains assements and public places thereon shown for the purpose and consideration therein expressed. No haldings, fences, trenss, shrubs or other improvements are gravitariable to constructed or placed upon, over or across the drainage and utility essements are shrubs. The mutual use and counterplace to all public utilities desiring to use same. All and any public utility shall have the right to remove and keeps removed all or parts of any buildings, hences, trens, shrubs or other improvements are gravitariable withit may in any way enclosely or the mutual use and accommodation of all public utilities desirent to a drainage and utility easements and all public utilities shall at times have the full right of fingress and agrees to or from and upon the easid drainage and utility easements and all public utilities shall at times have the full right of fingress and agrees to or from and upon the easid drainage and utility easements and all public utilities or structuring, inspecting partotiliting, maintaining and adding to or removing all or parts of its respective systems without the necessity at any time of procuring the permission of anyone.

BEFORE ME, the undersigned authority, on this day personally appeared ______, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed this same for the purposes and considerations therein expressed and in the capacity therein stated.

2021

CERTIFICATE OF SURVEYOR

I, MATTHEW RAABE, Registered Professional Land Surveyor, do hereby certify that this plat was prepared from an actual survey made on the ground and that the monuments shown hereon were found or placed with 1/2-inch iron nods with green plastic caps stamped "EAGLE SURVEYING" under my direction and supervision in accordance with the current provisions of the Texas Administrative Code and the Ordinances of the City of Luces, Coltin County, Texas.

Date

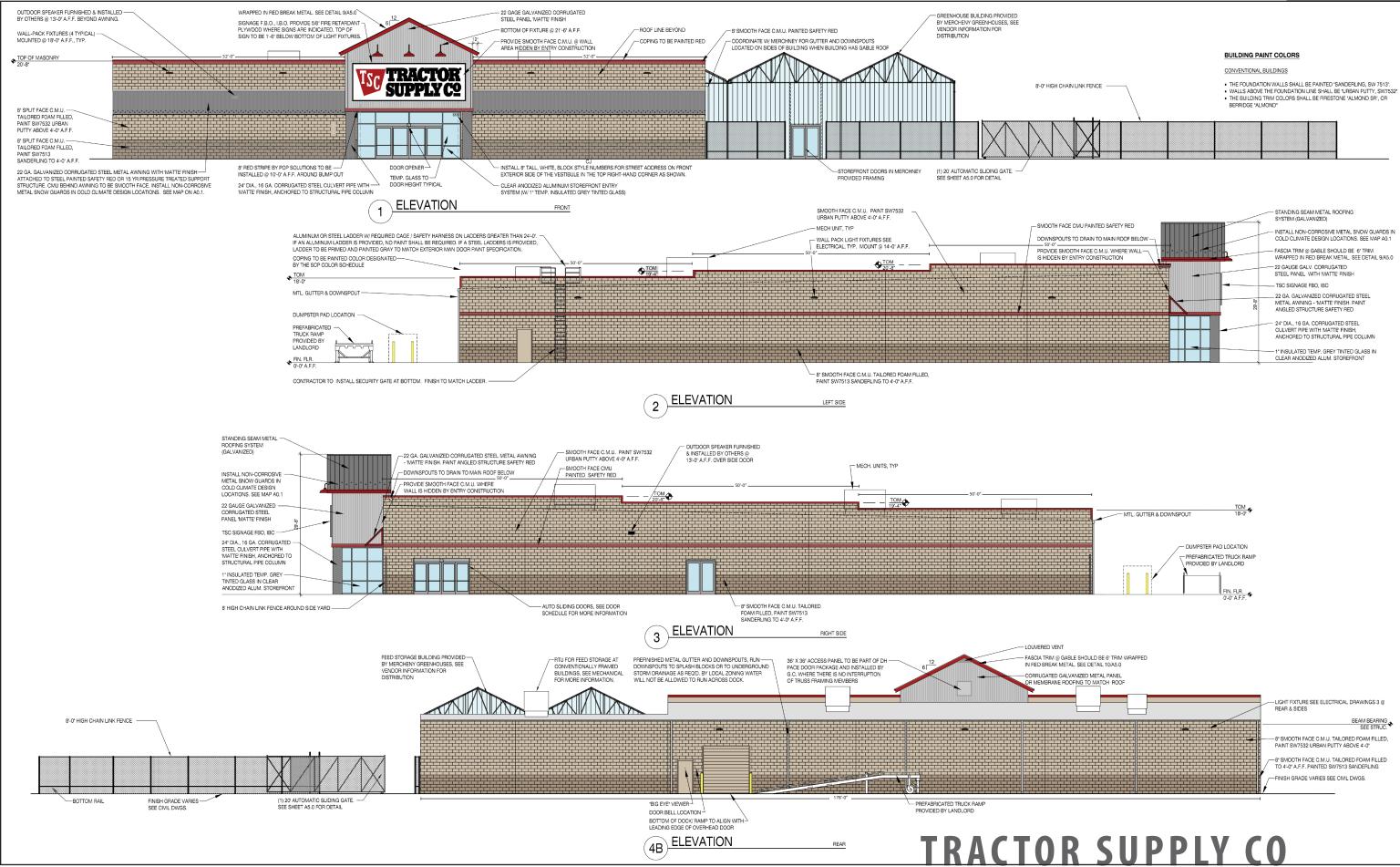
BEFORE ME, the undersigned authority, on this day personally appeared MATTHEW RAABE, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

, 2021.

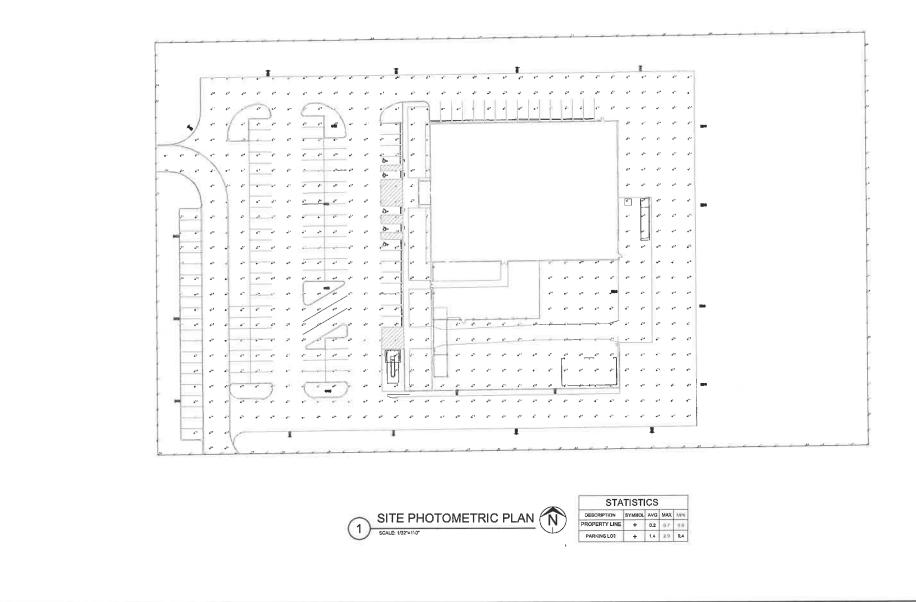
FINAL PLAT **TRACTOR SUPPLY ADDITION** LOT 1, BLOCK A

BEING 5.65 ACRES OF LAND SITUATED IN THE WILLIAM SNIDER SURVEY, ABSTRACT No. 821, CITY OF LUCAS, COLLIN COUNTY, TEXAS ZONING: C (COMMERCIAL)

PAGE 1 OF 1









Location map Tractor Supply



Tractor Supply



Requester: City Council City Manager Joni Clarke Assistant Chief Deputy Mitch Selman, Collin County Sheriff's Office

Agenda Item Request

Consider the provision of Law Enforcement Services by Collin County Sheriff's Office, receive a presentation from Collin County Sheriff's Office and provide guidance to the City Manager regarding contractual negotiations.

Background Information

In October of 2006, the City of Lucas entered into an interlocal agreement with Collin County Sheriff's Office for the provision of law enforcement services. The current interlocal agreement with Collin County Sheriff's Office will be expiring on September 30, 2021. The Lucas City Council requested to have an opportunity to discuss public safety as it relates to law enforcement services and the contract negotiations with Collin County Sheriff's Office. Of particular interest to the Lucas City Council is the evaluation of call data to determine appropriate staffing levels and to discuss any additional measures that would help guide law enforcement services, and the City of Lucas would not be able to offer its citizens such an inclusive program without a significant financial investment.

Attachments/Supporting Documentation

- 1. Existing Interlocal Cooperation Agreement for Law Enforcement Services
- 2. Draft of a proposed Interlocal Cooperation Agreement for Law Enforcement Services (the same agreement that the County is using with Country Lakes and Trinity Falls)

Budget/Financial Impact

City of Lucas Law Enforcement Costs by Fiscal Year

Fiscal			Operating/		Add'l	
Year	Deputy 1	Deputy 2	Maintenance	Vehicle	Hours	Total
20-21	\$105,309	\$92,628	\$14,512			\$212,449
19-20	\$103,855	\$96,094	\$14,454			\$214,403
18-19	\$ 97,406	\$89,356	\$14,324	\$83,987		\$285,073
17-18	\$ 97,948	\$85,630	\$14,000	\$83,987		\$281,565



16-17	\$ 93,278	\$ 3,100	\$4,802	\$101,180
15-16	\$ 87,108	\$ 3,100		\$ 90,208

The City of Lucas law enforcement budget for fiscal year 20-21 is \$250,000. Cost figures for fiscal year 21-22 will be provided by Collin County as soon as they are available.

Recommendation

NA

Motion

NA



Three (3)

Office of the Purchasing Agent Collin County Administration Building 2300 Bloomdale Rd, Ste 3160 McKinney, TX 75071 972-548-4165

Vendor:	City of Lucas Joni Clarke, City Manager			Effective Date 10/1/2020 Contract No. 2017-238				
	665 Country Club Road Lucas, TX 75002			Contract	Law Enforcement Services			
Awarded by	Court Order No.:			2	2017-670-0-11			
Amendment	1	Court Order No.:		2018-831-10-01				
Amendment	2	Court Order No.:			19-1023-11-04			
Amendment Amendment				2010-9107-10-05				
	YOU AR	e directed to make	THE FOLL		ENT TO THIS CONTRACT			
ITEM #1	For the period October 1, 2020 through September 30, 2021 the reimbursement amount will be:							
	Deputy 1:		\$	105,309.00				
	Deputy 2:		\$	92,628.00				
	Maintenance &	Operations:	\$	14,000.00				
	Vehicle Insuran	ce (\$256 Each)	\$	512.00				
				212,449.00	(four payments of \$53,112.25)			
11 (-171 17 (6)	Force Majeure: or breached thi and to the exter control, includin actions, emban emergency (eac Majeure Event continue and sh Event.	s Agreement, for any nt such failure or dele ag, without limitation: goes or blockades in th of the foregoing, a shall give notice to t all use diligent efforts	le or respo failure or ay is cause acts of Go effect on "Force Ma he other p to end th	delay in fulfilling o ad by or results fro ad; flood, fire or ex n or after the da ajeure Event"). A p party, stating the e failure or delay a	er party, nor be deemed to have defaulted under or performing any term of this Agreement, when om acts beyond the affected party's reasonable plosion; war, invasion, rlot or other civil unrest; ite of this Agreement; or national or regional early whose performance is affected by a Force period of time the occurrence is expected to and minimize the effects of such Force Majeure			

Except as provided herein, all terms and conditions of the contract remain in full force and effect and may only be modified in writing signed by both partles.

ACCEPTED BY:
JONI CLARKE (Print Name)
CIty Manager
- City of burgs
Mu Clarke
SIGNATURE
TILE
DATE: 9/18/07)

ACCEPTED AND AUTHORIZED BY AUTHORITY OF COLLIN COUNTY COMMISSIONERS' COURT

Collin County Administration Building 2300 Bloomdale Rd, Ste 3160 McKlriney, Texas 75071

Michelle Charnos Purchasing Agent DATE:

Collin County Law Enforcement

Contract No. 135

COURT ORDER NO. 2017- CMO -09-11

THE STATE OF TEXAS

COUNTY OF COLLIN

Subject: Interlocal Agreement, Law Enforcement Services, City of Lucas - Sheriff

On **September 11, 2017,** the Commissioners Court of Collin County, Texas, met in **regular session** with the following members present and participating, to wit:

Keith Self Susan Fletcher Cheryl Williams Chris Hill Duncan Webb Not Present County Judge, Presiding Commissioner, Precinct 1 Commissioner, Precinct 2 Commissioner, Precinct 3 Commissioner, Precinct 4

During such session the court considered a request for approval of an Interlocal Agreement with the City of Lucas.

Thereupon, a motion was made, seconded and carried with a majority vote of the court for approval of an Interlocal Agreement with the City of Lucas for Law Enforcement Services. Same is hereby approved as per the attached documentation.

Keith Self. County Judge

Susan Fletc her, Commissioner, Pct. 1



Chervl Williams. Commissioner, Pct. 2

Chris Hill, Commissioner, Pct. 3

Not Present Duncan Webb, Commissioner, Pct. 4

ATTEST:

Stacey Kemp, Ex-Officio Clerk

Commissioners Court Collin County, T E X A S

STATE OF TEXAS COUNTY OF COLLIN

INTERLOCAL COOPERATION AGREEMENT FOR LAW-ENFORCEMENT SERVICES

This Interlocal Cooperation Agreement for Law-Enforcement Services (the Agreement) is made by and between Collin County (County), and the City of Lucas, a municipal corporation (City).

WHEREAS, City desires to contract with County for law-enforcement services to be provided by the Collin County Sheriff's Office, as specified; and

WHEREAS, County is willing to provide such services under this Agreement, and

WHEREAS, City and County desire to use their authority under the Interlocal Cooperation Act of the Texas Government Code, chapter 791; and

NOW THEREFORE, City and County, for mutual consideration, agree as follows:

1. <u>TERM.</u> This Agreement is effective as of October 1, 2017 (the Effective Date), and its term will continue for four years from the Effective Date to the Expiration Date. *See* Gov't Code, § 791.011(i). Contract Year 1 will run from October 1, 2017, to September 30, 2018. Contract Years 2, 3, and 4 will start on October 1 of each successive year.

2. <u>COUNTY'S OBLIGATIONS.</u>

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2.1 **Law-Enforcement Services**. County will, through the Sheriff's Office, provide City with law-enforcement services as described in paragraph 2.5(a) and Exhibit A, in accordance with the Sheriff's Office's policies and procedures and local,

state, and federal law. These services will include general preventive patrol, answering calls for police assistance, investigations, traffic control and enforcement, and any other services related to law enforcement and the protection of the citizens of City. County will not perform services ordinarily performed by City's Code Enforcement Department, such as enforcement of chapter 6 of the City of Lucas Code of Ordinances (Health & Sanitation).

2.2 **Planning and Supervision**. County will plan, organize, and supervise all tasks and matters that are part of its provision of law-enforcement services and County's performance under this Agreement. County will assign, allocate, direct, supervise, and discipline County personnel.

2.3 **City Requests.** County will promptly consider all requests from City received through the Liaison Officer or the Sheriff's Office's communications division (Dispatch) for law-enforcement services. County will make every reasonable effort to comply with these requests consistent with: (1) this Agreement, (2) the Sheriff's Office's policies and procedures, and (3) local, state, and federal law.

2.4 **County's Liaison Officer**. City may confer with County's Liaison Officer—the Commander of Operations in the Sheriff's Office—about County's performance under this Agreement. The Commander will oversee County's performance and devote sufficient time and attention to reasonably ensure County's proper performance. The Commander and the chain of command will supervise deputies, officers, and employees who provide County's performance. The Commander and the chain of commander. The Commander and the chain of command will supervise deputies, officers, and employees who provide County's performance. The Commander and the chain of commander with any

deputies, officers, or employees of other sheriff's offices, police departments, or other agencies or entities, who may also provide services along with County.

2.5 **Deputies**.

General. County will dedicate two deputies to provide services to City. a. These deputies will cover more shifts per week in the city than the one deputy provided under past versions of this Agreement. But no more than one deputy will ordinarily patrol in the city in one shift. County will select and structure shifts and work hours to best serve City, in light of City's requests and the history and pattern of service calls, reports or occurrences of crime, and other law-enforcement or emergency circumstances. County will generally provide law-enforcement services inside City's geographic or jurisdictional boundaries during the days and times set forth in **Exhibit** A. During these times, County will provide at least one uniformed deputy, who will use reasonable efforts to devote full time and attention to serving City and patrolling within City's limits. This deputy, however, may leave the city limits only to respond to emergency calls for service or to respond to calls to assist other deputies or officers. In addition, other deputies or officers may assist the dedicated deputy as needed, without adding to County's ordinary obligations under this Agreement. During times not specified in Exhibit A, County will continue to provide law-enforcement services in the manner and at the level currently provided to other, similarly populated, unincorporated areas in Collin County.

b. **Body-Worn Cameras**. In 2015, the legislature passed a body-worn-camera program. *See* Occupations Code, §§ 1701.651–1701.663. If and when the Sheriff's Office implements a policy to equip patrol deputies generally with body-worn cameras,

then the deputies dedicated to providing services to City will be equipped with the same cameras and supporting equipment and software. City agrees to negotiate and agree to reasonable terms, including price and payment terms, to reimburse County for the costs of the equipment, software, and licenses, as well as costs of integrating the dedicated deputies into the Sheriff's Office's body-worn-camera system. These costs include costs of statutorily required deputy training and the cost of obtaining services under a program established or approved by, or registered with, the Texas Department of Information Services. *See* Occupations Code, § 1701.654.

County will be responsible for complying with state body-worn-camera law, including the provisions related to deputy training, policy, data retention, release of recordings or other information, and reporting. In an incident involving City, County will provide City's officials and City's attorneys and experts with reasonable viewing of any relevant recordings—including those made by in-vehicle or body-worn cameras—consistent with investigative, law-enforcement, or criminal- or civil-defense requirements, including those in section 1701.660 of the Occupations Code. The Sheriff alone will make all decisions about public or other release of records, including decisions under sections 1701.661–1701.663 of the Occupations Code or the Public Information Act, Texas Gov't Code, chapter 552.

At this Agreement's end or termination and if City has paid all reimbursement amounts under this paragraph, County will transfer the cameras, equipment, software, licenses, and other rights and property associated with the two dedicated deputies' integration into the Sheriff's Office's body-worn-camera program to City—except where the law or a contract prohibits such transfer. If City has not paid all

reimbursement amounts, then County will retain all the equipment, property, and other rights and will not refund reimbursement payments. In other words, City will have the option to complete all reimbursement payments and obtain the equipment and other property and rights or forfeit all claim to them.

2.6 **Reports of Services**. The Sheriff's Office will provide City with written reports of all law-enforcement activity within the City, in form and content that are consistent with the Sheriff's Office's policies and procedures.

2.7 <u>PATROL VEHICLES</u>.

a. **Two Patrol Vehicles**. County will initially provide two Patrol Vehicles to provide law-enforcement services to City. The parties expect to have at least two Patrol Vehicles in service during this Agreement's term. But City may increase or reduce the number of vehicles in service under paragraphs 2.8 and 3.1(f), below.

Patrol Vehicle 1 will be unit #55255, which is the same vehicle as has been in service under the parties' Interlocal Cooperation Agreement for Law-Enforcement Services (October 1, 2013–September 30, 2017). County believes that Patrol Vehicle 1 has a remaining useful life for patrol purposes of approximately two years after April 26, 2017.

A "**replacement Patrol Vehicle**" is a Patrol Vehicle that is purchased or put into service under this Agreement to replace Patrol Vehicle 1 or 2, or an earlier replacement Patrol Vehicle or a new Patrol Vehicle. A "**new Patrol Vehicle**" is a Patrol Vehicle that is bought and put into service under this Agreement and whose addition results in more than two vehicles being dedicated to provide services to City.

County will purchase **Patrol Vehicle 2**. City prefers SUVs. In the cases of Patrol Vehicle 2, a replacement Patrol Vehicle, and a new Patrol Vehicle, "Patrol Vehicle" means the made ready vehicle together with the installed equipment, including the radio, computer, in-car camera system, technology for internet connectivity, all software and updates, and emergency equipment, accessories and decals. County may include radar, in which case the radar will become part of the Patrol Vehicle.

b. **Warranties**. County may purchase and maintain available, reasonably priced, warranty or similar third-party protection packages on Patrol Vehicle 2 and a replacement or new Patrol Vehicle, if any, including the equipment, software, and updates, while each vehicle is in service under this Agreement.

The warranties, if any, that apply to Patrol Vehicle 1 will continue according to their terms. County has no duty to obtain a new warranty or other protection for Patrol Vehicle 1 or to buy or extend a warranty or other protection for Patrol Vehicle 1. If County has the opportunity to purchase or extend protection for Patrol Vehicle 1, then County will confer with City and City may elect to have County purchase the protection or extension and reimburse County for its actual costs.

c. **Insurance**. During the time when a Patrol Vehicle is in service under this Agreement and County has the title to the Patrol Vehicle, or the title is in County's name, County will provide insurance for that vehicle. City will have the related reimbursement obligation set out in paragraph 3.1(e), below.

d. **Maintenance**. County will provide the routine and other maintenance for the Patrol Vehicles, until a Patrol Vehicle is transferred to City.

Transfer. "Transfer" means the set of acts reasonably necessary to transfer e. possession and ownership of a Patrol Vehicle to City, including a transfer under paragraph 3.2, below. "Transfer" includes transferring possession of a Patrol Vehicle. as well as transferring the vehicle's title and ownership of the warranties or third-party protection or maintenance plans that cover the vehicle or equipment being transferred. County will not transfer any property or rights in breach of a contract with another party, such as proprietary licenses or software, incident-reporting systems, or licenses or software that would give City access to county or restricted databases or infrastructure. County will de-badge a vehicle and remove software or electronic data as reasonably necessary to meet County's obligations to protect criminal-justice or other confidential information before transfer or ensure that a vehicle has been properly de-badged within 15 business days after transfer. County will bear all costs of debadging a vehicle, if County de-badges it, and of removing software or electronic data. City will bear the costs of transferring a vehicle's title and all other costs of transfer. The parties intend to comply with chapter 791 of the Government Code and section 263.152 of the Local Government Code related to the disposition of surplus property.

Exception: The equipment in Patrol Vehicle 1 belongs to County. If County transfers Patrol Vehicle 1 to City, then County may remove the equipment, including the computer, radar, light bar, and all other emergency equipment. Alternatively, City may buy some or all of the equipment—except for restricted software or licenses or confidential electronic data—at a price and on terms agreed by the parties at the time of the transfer. City will have 10 calendar days to exercise this option after County

notifies City that Patrol Vehicle 1 is to be removed from service under this Agreement or after City elects to remove Patrol Vehicle 1 from service.

2.8 **Patrol Vehicles: Removal from Service or Replacement.** A Patrol Vehicle may be removed from service whenever:

a. County determines that a Patrol Vehicle should be removed from service based upon County's vehicle-replacement schedule and policy, which include an assessment of vehicles that have been damaged or been in an accident;

b. City has paid 100% of the Patrol Vehicle's reimbursement amount (including purchase price and price of installed equipment and software and insurance) and City elects to remove the vehicle from service under the Agreement and take ownership and possession of it under paragraph 2.7(e); or

c. a party terminates this Agreement or it ends on its own terms.

County will confer with City about a determination that a Patrol Vehicle needs to be removed from service and replaced for County to continue its performance, and City may agree to a replacement and the related reimbursement terms, comparable to the ones in paragraph 3.1 adjusted for the then-prevailing prices and circumstances. Alternatively, City may elect to increase or reduce the number of Patrol Vehicles dedicated to service under this Agreement. City's election will not alter County's right to full reimbursement for each Patrol Vehicle bought and put into service under the Agreement. Once County has purchased a Patrol Vehicle and dedicated to service under this Agreement, City has the duty to reimburse County.

3. CITY'S OBLIGATIONS.

3.1 **Payments**. City will pay County the reimbursement amounts set out here, including those for the patrol vehicle, maintenance and fuel, and deputies in paragraphs 3.1(a), (b), (c), and (d); insurance in paragraph 3.1(e); replacement or new patrol vehicles in paragraphs 2.8 or 3(f); additional deputies in paragraph 3.1(g); bodyworn cameras in paragraph 2.5(b); and in Exhibits A and B, which will include amounts negotiated in contract Years 2, 3, and 4.

a. **Reimbursement Amounts**. City will reimburse County the full cost of Patrol Vehicle 2. Patrol Vehicle 2 costs \$83,987,¹ which is its **reimbursement amount**. Two Patrol Vehicles will ordinarily remain in service under this Agreement, and City may increase or decrease the number of vehicles in service under paragraphs 2.8 and 3.1(f). City will also pay County maintenance-and-operations costs, including fuel, of \$7,000 for each vehicle,² or \$14,000 total, in Year 1. City will also reimburse County for each dedicated deputy's salary at (i) County's current deputy at \$97,948 and (ii) one additional deputy at \$85,630, or \$183,578 total, in Year 1, plus overtime pay as set out in Exhibit A. The new deputy's first year salary and benefits are \$76,377, and the deputy's startup costs are \$9,253, or \$85,630 total. If County hires a licensed peace officer as the second or third deputy, then County will refund \$1,710 to City in training costs. The parties will negotiate the reimbursement amounts in

¹ Estimate: The reimbursement amount includes the cost of the make-ready vehicle from the manufacturer, plus the cost of the equipment and software added to make a vehicle a Patrol Vehicle. The cost of Patrol Vehicles 2 and 3 is an estimate as of June 23. The figure will be updated by the time of signing.

² Estimate: The maintenance-and-operations costs are an estimate as of June 23. The figure will be updated by the time of signing.

contract Years 2, 3, and 4. City will pay the reimbursement amounts in four, equal, quarterly installments beginning on October 1 of each contract Year.

b. **Contract Year 1**. In contract Year 1, City will pay the following reimbursement amounts:

Patrol Vehicle 1	\$0		
Patrol Vehicle 2	\$83,987		
Maintenance & Operations 1	\$ 7,000		
Maintenance & Operations 2	\$ 7,000		
Deputy 1	\$97,948		
Deputy 2	\$85,630		
Total	\$281,565		

Each quarterly payment will be \$281,565/4 = \$70,391.25.

c. Reimbursement in Contract Years 2, 3, and 4. The parties will negotiate and agree to the amount of maintenance-and-operations costs and the amount of deputy compensation for City to reimburse County in Years 2, 3, and 4, comparable to the calculations in paragraphs 3.1(a) and (b)—except that the reimbursement amount for the two deputies will be the deputy's actual salary and benefits, without the start-up costs incurred in Year 1 for the new deputy 2. The parties will try to agree to new terms in writing before October 1 of each year.

d. Actual-Cost Variances by 10% or More. At the end of each contract Year, County will evaluate its actual (i) deputy costs and (ii) maintenance-and-operations costs for each Patrol Vehicle. If County's actual costs for a deputy or a Patrol Vehicle exceeded the agreed-upon amount by more than 10% in a year, then City will reimburse County for the difference between the actual costs and the agreed-upon amount. Upon request, County will provide documentation supporting these additional costs. If County's actual costs for a deputy or a Patrol Vehicle fell short of the agreedupon amount by more than 10% in a year and City paid 100% of its reimbursement payments for the contract Year, then County will refund City the difference between the agreed-upon amount and the actual costs.

e. **Insurance**. During the time when County has the title to a Patrol Vehicle, or the title is in County's name, County will provide insurance for that vehicle. In each contract Year, City will reimburse County for the actual cost of providing the insurance. County will bill City for the actual cost of each Patrol Vehicle's insurance.

f. **Replacement or New Patrol Vehicles**. The parties may agree to increase the number of Patrol Vehicles, which County puts in service under this Agreement. If County buys a replacement or a new Patrol Vehicle, then City will reimburse County for such costs in four, equal, quarterly payments on terms parallel to the reimbursement provisions here, but adjusted for the new vehicle type (sedan or SUV), price, equipment costs, and other circumstances.

g. Additional Deputies. The parties may agree to increase the number of deputies, which County dedicates to service in City's limits under this Agreement. If County would have to hire a new deputy, then County will provide City with the start-up costs, including costs of training, certification, protective gear, handgun, rifle with optics and magazines, TASER, flashlight, and stipend. If County dedicates an additional deputy, then City will reimburse County for the start-up costs in the first contract year and reimburse County for the deputy's actual salary and benefits for each contract Year, in four, equal, quarterly payments on terms parallel to the other reimbursement provisions here, but adjusted for the new salary and benefits.

3.2 **Damage to, or Failure of, a Patrol Vehicle**. A Patrol Vehicle may suffer damage in an accident, or a component or piece of equipment or software may fail to properly perform.

a. **Relatively Minor Damage or Failure**. If a Patrol Vehicle suffers relatively minor damage or failure, including failure of a component or equipment, then County will use the warranties or third-party-protection plan, if any, or insurance to repair the vehicle and return it to service.

b. Patrol Vehicle 1. City has reimbursed County for 100% of Patrol Vehicle 1's cost. Nonetheless, Patrol Vehicle 1 is titled in County's name and County maintains the insurance for it. If County determines, under paragraph 2.8, that Patrol Vehicle 1 should be removed from service before this Agreement's end, then, at City's option, County will transfer Patrol Vehicle 1 to City under paragraph 2.7(e). If Patrol Vehicle 1 is involved in an accident, then County will process the appropriate insurance claim and confer with City about (i) repairing the vehicle and returning it to service under paragraph 3.2(a); (ii) replacing the vehicle under paragraphs 2.8 and 3.1(f); (iii) finding a mutually acceptable vehicle to put into service under this Agreement as a substitute for Patrol Vehicle 1 (including for remaining in service under paragraph 2.1 and which County will eventually transfer to City under paragraphs 2.8 and 2.7(e)); or (iv) reducing the number of Patrol Vehicles under the Agreement, in which case County will make reasonable efforts to provide City with the benefit of its bargain in reimbursing County for Patrol Vehicle 1. County will consider the options of paying insurance proceeds, if any, to City; providing City with a vehicle that is comparable in type, age, and condition to Patrol Vehicle 1 immediately before the accident; or paying

City the fair market value of Patrol Vehicle 1 immediately before the accident, as measured by Kelley Blue Book or similar service.

c. **Patrol Vehicle 2**. Under paragraphs 2.7(a) and 3.1(a) and (b), County will initially purchase Patrol Vehicle 2 and City will reimburse County for the vehicle's cost in four, equal, quarterly payments in contract Year 1. If Patrol Vehicle 2 is involved in an accident, then County will process the appropriate insurance claim and confer with City about (i) repairing the vehicle and returning it to service under paragraph 3.2(a); (ii) replacing the vehicle under paragraphs 2.8 and 3.1(f); (iii) finding a mutually acceptable vehicle to put into service under this Agreement as a substitute for Patrol Vehicle 2 ((including for remaining in service under paragraph 2.1 and which County will eventually transfer to City under paragraphs 2.8 and 2.7(e)); or (iv) reducing the number of Patrol Vehicles under the Agreement, in which case County will make reasonable efforts to provide City with the benefit of its bargain in reimbursing County for the particular Patrol Vehicle. The parties will consider the amount City has paid to County in reimbursement payments for the particular Patrol Vehicle, as well as the Patrol Vehicle's age, condition, miles, fair market value, and expected remaining life immediately before the accident or failure. Under subparagraph (iv), County will consider the options of paying insurance proceeds, if any, to City; providing City with a vehicle that is comparable in type, age, and condition to Patrol Vehicle 2 immediately before the accident; or paying City the fair market value of Patrol Vehicle 2 immediately before the accident, as measured by Kelley Blue Book or similar service.

d. **Replacement or New Patrol Vehicles**. If a replacement or new Patrol Vehicle is involved in an accident, then County will process the appropriate insurance claim and confer with City about a resolution on terms parallel to those in subparagraph (c) in light of the Patrol Vehicle's price, City's total reimbursement payments at the time of the accident, and other relevant circumstances.

3.3 **Case Handling, Fines, and Fees**. As between County and City operating under this Agreement, cases falling within the jurisdiction of the City of Lucas Municipal Court, such as alleged violations of the City of Lucas Municipal Code, which are punishable by fine only or by limited fines, may be filed and handled in the City of Lucas Municipal Court. *See* Code of Criminal Procedure, art. 4.14. In such cases, all fines, penalties, fees, court costs, and similar amounts will be payable to City, as opposed to County, to the extent that the law permits. The Collin County Court, Justices of the Peace: Precinct 3-1 handles Class C misdemeanors (traffic or criminal citations) of state law, which fall under articles 4.11–4.12 of the Code of Criminal Procedure. Otherwise, the criminal jurisdiction of courts over violations of state and local law is governed by chapter 4 of title 1 of the Code of Criminal Procedure. The criminal jurisdiction of federal courts is governed by chapter 211 of title 18 of the United States Code.

3.4 **City's Liaison Officer**. County will confer with City's Liaison Officer the City Manager of the City of Lucas—with regard to City's performance under this Agreement. The City Manager will oversee City's performance, devote sufficient time and attention to City's performance to reasonably ensure City's compliance with its

obligations, and supervise the City officials and employees who provide City's performance.

3.5 **Maps and Changes to Code of Ordinances**. City will continuously provide County with accurate and current maps of the territorial limits and extraterritorial jurisdiction of City. City will also notify County of any changes to the City of Lucas Code of Ordinances, which may relate to County's provision of lawenforcement services to City.

3.6 **Cooperation**. City will take reasonable efforts to cooperate with any requests by County for office space and related equipment, including a computer, word-processing software, internet access, and printer, or for a secure parking or storage space for a Patrol Vehicle. County will reimburse City for reasonable expenses resulting from City's cooperation. City will use reasonable efforts to notify County of any expected reimbursable costs before City incurs or pays those costs.

4. NOTICE AND CONFERENCE; SUSPENSION OF SERVICES.

4.1 **Notice & Conference**. If a party believes that the other party has not met, or is not meeting, an obligation under this Agreement, the party will contact the other's Liaison Officer to discuss the issue. If the aggrieved party does not believe that this informal contact, discussion, and ensuing efforts have fixed the issue, then the party will notify the other's Liaison Officer in writing of the party's belief or complaint with reasonable detail to permit the other party to address the issue. The other party will then have a reasonable time to address the issue and improve its performance. The parties should assess a "reasonable time" under the relevant circumstances and with regard to the nature of the issue.

4.2 **Suspension**. If City fails to make a payment as required by this Agreement within 30 days of the due date, County may suspend service until payment is received, or County may terminate this Agreement under paragraph 5.

4.3 **Notice of Suspension**. If County decides that it will suspend service to City for any reason, including for non-payment of any monies under this Agreement, then County will notify City's Liaison Officer by telephone and in writing of the date service will be suspended. County will use reasonable efforts to provide advance notice of at least five calendar days.

5. <u>TERMINATION.</u>

5.1 **Notice & Conference**. Before a party tries to terminate this Agreement, the party must follow the notice-and-conference procedures in paragraph 4.1.

5.2 **Termination by City**. City may terminate this Agreement by giving a minimum of one year written notice to County prior to termination.

5.3 **Termination by County**. County may terminate this Agreement by giving a minimum of one year written notice to City prior to termination.

5.4 **Recoveries & Remedies**. County will make a substantial investment in this Agreement, particularly in purchasing the Patrol Vehicles, staffing the two deputy positions, and, if it happens, implementing a patrol-wide body-worn-camera program and integrating the dedicated deputies into it. City must reimburse County for all Patrol Vehicles purchased for service under this Agreement, regardless of when this Agreement ends or is terminated.

If the Agreement ends before the end of a contract Year, then City must pay a prorated amount of reimbursement for maintenance-and-operations costs and for deputy compensation for the portion during which County provided services. Also, City forfeits its right to a refund caused by a variance under paragraph 3.1(d).

If City terminates the Agreement, then City will make all payments due within 30 days of the termination.

If County terminates the Agreement in contract Year 1, then City may pay the reimbursement amount for the Patrol Vehicles under the terms for repayment in Year 1, even if the parties do not otherwise perform under the Agreement. In other words, if County terminates in contract Year 1, then City's rights to pay reimbursement on the terms of paragraphs 3.1(a), (b), and (f) survive.

Paragraph 2.5(b) will govern the duties related to, and disposition of, all equipment, property, or rights associated with a body-worn-camera program upon this Agreement's end or termination.

If the Agreement is terminated early, then City's sole recourse and remedies are its right to pay only a prorated amount of reimbursement for maintenance-and-operations costs and for deputy compensation for the contract Year of termination; its right to pay the reimbursement amount for the Patrol Vehicles under the terms for repayment in contract Year 1 if County terminates the Agreement in Year 1; its option under paragraph 2.5(b); its vehicle rights under paragraphs 2.7(e), 2.8, 3.1(f), and 3.2; its fee-and-fine rights under paragraph 3.4; its cooperation-reimbursement rights under paragraph 3.7; and its report rights under paragraphs 2.4 and 5.5.

5.5 At this Agreement's expiration or termination, County will provide all reports that are outstanding under paragraph 2.4 within 15 business days of the expiration or termination.

6. <u>LIMITATION OF EXTRAORDINARY REMEDIES</u>. Each party is entitled only to its benefit of the bargain under this Agreement. The parties are not liable to each other for consequential, incidental, indirect, special, punitive, or exemplary damages or for damages that arise from special circumstances. This provision does not affect either party's rights to remedies set out in this Agreement, including the parties' rights in paragraph 5.4 and County's rights to the reimbursement amounts for Patrol Vehicles, for maintenance-and-operations costs and deputy compensation, and for vehicle insurance for all times County performed under this Agreement, or for defense and indemnification under paragraph 8.

7. <u>LIABILITY.</u>

This Agreement is made for the express purpose of County providing lawenforcement services to City, which is a governmental function or service within the meaning of sections 791.003(3)(A) and 791.011 of the Government Code.

By entering or performing this Agreement, City and County waive no sovereign, statutory, or other immunity or limitation of liability. *See* Gov't Code, § 791.006(c).

8. <u>DEFENSE & INDEMNIFICATION.</u>

City is responsible for any civil liability that arises from County's provision of services under this Agreement. *See* Gov't Code, § 791.006(b). City will defend, indemnify, and hold harmless County from and against all demands, claims, damages,

losses and liabilities, including reasonable attorney's fees and litigation expenses, that arise directly or indirectly from County's performance of this Agreement.

"County's performance of this Agreement" means County's provision of lawenforcement and all other services to City under this Agreement, including a deputy's driving to and from patrol duty in City's territorial limits or extraterritorial jurisdiction, providing services within City's limits or extraterritorial jurisdiction, the fresh pursuit of a person or suspect from inside City to an area outside City, complying with a request by City for services under paragraph 2.3, and transporting a person arrested or detained on a charge of committing an offense in whole or in part inside City to a detention center or to a hospital or other health-care facility. "County's performance" does not include a deputy's responding to a call for service outside City's territorial limits or extraterritorial jurisdiction, including a call to assist another deputy or officer who is not performing a service under this Agreement. "County's performance" also does not include a deputy's diversion during driving to or from patrol duty in City.

For purposes of this paragraph 8, "County" includes its officials, officers, deputies, employees, insurers, and agents.

With regard to the provision of a defense under this paragraph, County will reasonably cooperate with City in defending a claim or suit, including providing reasonable access to, and copies of, documents, electronic or magnetic data, and access to witnesses or other persons with discoverable knowledge such as deputies, employees, or other persons under County's supervision or control.

9. NO THIRD-PARTY BENEFICIARIES.

By entering and performing this Agreement, including the defense-and-indemnity provisions, the parties do not intend to create or confer a benefit on any person or entity, who is not a party to this Agreement. The parties do not intend to create a claim in favor of any person or entity, who is not a party to this Agreement.

To the extent that a party uses insurance or similar coverage or assistance in performing under this Agreement, then "City" and "County" will be interpreted to include the insurance company or other relevant entity.

10. OTHER.

Each party represents and warrants that the person or persons signing this Agreement have the requisite authority under section 791.011(d)(1) of the Government Code.

Each party paying for the performance of governmental functions or services must make those payments from current revenues available to the paying party within the meaning of section 791.011(d)(3) of the Government Code or other provision.

Texas law will govern this Agreement and the relationship between, and claims and defenses of, the parties. *See* Gov't Code, § 791.012.

The parties will treat a photocopy of this agreement as an original copy for all purposes.

11. NOTICES.

A party will send any notice required under this Agreement by the United States Postal Service, Certified Mail, Return Receipt Requested to the following:

> If to City: City Manager City of Lucas 151 Country Club Road

Lucas, Texas 75002 jclarke@lucastexas.us

If to Collin County: Collin County Sheriff's Office Commander of Operations 4300 Community Blvd. McKinney, Texas 75071 mlangan@co.collin.tx.us

With copy to: Collin County Purchasing Agent 2300 Bloomdale Road, Ste. 3160 McKinney, Texas 75071 <u>shoglund@co.collin.tx.us</u>

AGREED TO:

CO

Judge Keith Self / 2300 Bloomdale Road McKinney, TX 75071

CITY OF LUCAS 7-13-11 Date

City of Lucas 151 Country Club Road Lucas, TX 75002

Date

EXHIBIT A

TO INTERLOCAL COOPERATION AGREEMENT

FOR LAW ENFORCEMENT SERVICES

This Exhibit A is incorporated into the Interlocal Cooperation Agreement for Law Enforcement Services between Collin County (County) and the City of Lucas (City) dated ______ (the Agreement), and has the same force and effect as if originally written into the text of the Agreement.

1. **Hours of Service.** Pursuant to the Agreement, County will dedicate two deputies to provide law-enforcement services to City. Each deputy will generally provide services to City, within City's geographic and jurisdictional limits, 40 hours per week, with overtime and Time Off as discussed below. County will determine the shifts or days and times for the provision of services.

2. Vacation, Compensation, Personal and Sick Time. Each dedicated deputy may use vacation, compensation ("comp"), personal, and sick time accrued or allowed pursuant to the policies and procedures of the Collin County Sheriff's Office (Time Off). City acknowledges and agrees that County will not provide alternate personnel during a deputy's Time Off. But County will take reasonable efforts to coordinate the Time Off for the two deputies to provide regular services to City. Otherwise, Time Off does not alter City's obligations under this Agreement. County will notify City of a deputy's scheduled Time Off in advance when possible.

3. **Overtime**. In the event overtime pay is due to a dedicated deputy because of a request by City for particular services under this Agreement, City shall reimburse the County for such overtime pay.

4. The parties will review and evaluate this Exhibit's terms and provision each quarter. The parties may change or edit these terms as agreed.

EXHIBIT B

TO INTERLOCAL COOPERATION AGREEMENT

FOR LAW ENFORCEMENT SERVICES

This Exhibit B is incorporated into the Interlocal Cooperation Agreement for Law Enforcement Services between Collin County (County) and the City of Lucas (City) dated ______ (the Agreement), and has the same force and effect as if originally written into the text of the Agreement.

Under this Agreement, County will purchase and provide Patrol Vehicles 2 and 3 to provide law-enforcement services to City. Depending on circumstances, County may buy and dedicate a replacement or new Patrol Vehicle as well. In the case of Patrol Vehicles 2 and 3, and a replacement or new Patrol Vehicle, a "Patrol Vehicle" means the vehicle together with the installed equipment, including computer, radar, camera, emergency equipment, technology for internet connectivity, and all software and updates, if any. City prefers SUVs as Patrol Vehicles 2 and 3. "Maintenance-and-operations costs" include fuel costs.

1. In **contract Year 1**—October 1, 2017 to September 30, 2018—City will reimburse County for the full cost of Patrol Vehicles 2 and 3, the maintenance-and-operations costs, and the compensation for the dedicated deputies. City will pay the following reimbursement amounts in four, equal, quarterly payments:

Patrol Vehicle 1	\$0
Patrol Vehicle 2	\$83,987
Maintenance & Operations 1	\$7,000
Maintenance & Operations 2	\$7,000
Deputy 1	\$97,948
Deputy 2	\$85,630
Total	\$281,565

Each quarterly payment will be 281,565/4 = 70,391.25.

City will pay overtime reimbursement as set out in Exhibit A.

County pays its sheriff's deputies in Patrol:

Starting \$76,377

mid	\$87,164, and
max	\$97,951. ³

³ Note: These figures were current as of June 23, 2017.

New deputy's salary/benefits	\$76,377
Deputy startup cost	\$3,210
Plate carrier w/pouch	1,277
Helmet	539
Tourniquet w/ holster	65
Stipend	600
TASER	1,387
Flashlight	125
Handgun	409
Handgun ammunition	50
Rifle, optics, case, 6 mags	1,404
Academy ammunition	
	\$85,630

City intends to reimburse County for the costs associated with dedicating two deputies to provide services under this Agreement. As of June 23, 2017, the annual salary and benefits of the deputy, who served City under the parties' Interlocal Cooperation Agreement for Law-Enforcement Services (October 1, 2013–September 30, 2017), was \$97,948. This deputy will continue to provide services under this version of the Agreement. County will also hire one new deputy, whose annual salary and compensation will be \$76,377, with \$9,253 in startup costs, for a total of \$85,630. If a new deputy is already a licensed peace officer, County will refund \$1,710 in training costs.

At the end of the contract Year, County will evaluate its actual costs for each deputy and maintenance-and-operations costs for each Patrol Vehicle. If County's actual costs exceeded the agreed-upon amounts by more than 10% in that year, then City will reimburse County the difference between the actual costs and the agreed-upon amount. If City reimbursed County for 10% more than County's actual costs, then County will refund the difference.

Lastly, City will reimburse County for its actual costs in insuring each Patrol Vehicle under paragraph 3.1(e).

2. In contract Year 2—October 1, 2018 to September 30, 2019—City will reimburse County for the annual compensation for the dedicated deputies as of October 1, 2018, for the annual maintenance-and-operations costs for the Patrol Vehicles, for the costs of a body-worn-camera program, if applicable, under paragraph 2.5(b), and for the annual cost for insuring each Patrol Vehicle for contract

Year 2 under paragraph 3.1(e). The parties will negotiate the reimbursement amounts for Year 2 and will try to agree to them in writing before October 1, 2018.

3. In **contract Year 3**—October 1, 2019 to September 30, 2020—City will reimburse County for the annual compensation for the dedicated deputies as of October 1, 2019, for the annual maintenance-and-operations costs for the Patrol Vehicles, for the costs of a body-worn-camera program, if applicable, under paragraph 2.5(b), and for the annual cost for insuring each Patrol Vehicle for contract Year 3 under paragraph 3.1(e). The parties will negotiate the reimbursement amounts for Year 3 and will try to agree to them in writing before October 1, 2019.

4. In **contract Year 4**—October 1, 2020 to September 30, 2021— City will reimburse County for the annual compensation for the dedicated deputies as of October 1, 2020, for the annual maintenance-and-operations costs for the Patrol Vehicles, for the costs of a body-worn-camera program, if applicable, under paragraph 2.5(b), and for the annual cost for insuring each Patrol Vehicle for contract Year 4 under paragraph 3.1(e). The parties will negotiate the reimbursement amounts for Year 4 and will try to agree to them in writing before October 1, 2020.

Interlocal Agreement between Collin County and the City of Lucas for Law-Enforcement Services

1. **Parties and Authority**. Collin County and the City of Lucas enter this interlocal agreement for the County to provide law-enforcement services to the City of Lucas under the Interlocal Cooperation Act, Texas Gov't Code, Chapter 791. The City of Lucas may contract for peace officers under Sections 791.011 and 791.003(4)(A), Gov't Code.

2. **Term**. This agreement is effective as of the date signed by the last party to sign it (the Effective Date), and its initial term will continue until September 30 in the next calendar year. The initial term may be a partial year. Afterwards, the agreement will renew for one-year periods between October 1 and September 30, unless terminated under section 6. *See* Gov't Code, § 791.011(f), (i).

3. The County's Obligations

3.1 **Law-Enforcement Services**. Through the Sheriff's Office, the County will provide the City of Lucas with law-enforcement services in accordance with the Sheriff's Office's policies and procedures; this agreement; and local, state, and federal law.

"Law-enforcement services" means the services the Sheriff's Office provides to fulfill a sheriff's or a peace officer's duties under Texas law, such as the Code of Criminal Procedure, to keep the peace, intervene to prevent or suppress crime, execute lawful process issued by a judge, and accept custody of persons committed to the county jail. These services include patrolling, responding to calls for police assistance, investigating offenses, enforcing state traffic law, and operating the county jail. See Weber v. City of Sachse, 591 S.W.2d 563 (Tex. Civ. App.-Dallas 1979, writ dism'd). "Law-enforcement services" exclude the (1) enforcement of rules, regulations, or permit requirements enacted by the City of Lucas or a home-owners' association, or restrictions in property deeds, (2) enforcement of regulations or prohibitions on vehicular travel on private property or private roads within the meaning of Section 542.005, Transportation Code, or Section 49.217(c), Water Code, (3) enforcement of county or other traffic regulations that may later be extended to roads in the City of Lucas under an agreement under Section 151.151(b), Transportation Code, or as a result of a petition and order under Sections 542.007–542.0081, Transportation Code, or similar provisions (that is, the City or a district or subdivision and County would have to follow those provisions in the future for such traffic enforcement), (4) provision of detention services beyond taking custody of persons accused of violating state law under Articles 2.17 and 2.18, Code of Criminal Procedure (that is, the Sheriff will not accept custody of persons accused of a local Class C misdemeanor, see Tex. Att'y Gen. Op. No. JM-0151 (1984) (the City of Lucas and the County would have to sign a separate jail-services agreement for such services)), (5) provision of a school resource officer, see Subchapter M, Chapter 1701, Occupations Code, or similar services, and (6) provision of specific security services, such as security at construction sites in the City of Lucas to prevent or deter theft.

3.2 **Dedicated Patrol Services**. Through the Sheriff's Office, the County will dedicate two patrol deputies to provide services to the City of Lucas. The Sheriff's Office will schedule these deputies to patrol in the City of Lucas during their shifts or duty time. Ordinarily only one deputy will patrol in the City of Lucas in one shift. The County will structure shifts and work hours to provide the best coverage and service to the City of Lucas, in light of the City's requests and the history and pattern of service calls, reports or occurrences of crime, and other law-enforcement or emergency circumstances.

Generally, patrol deputies work 12-hour shifts totaling 80 hours in a 14-day work period, although the County may change this to 84 hours per 14-day work period in a future fiscal year. Each dedicated deputy may use vacation, compensation (comp), personal, and sick time accrued or allowed by County policy, and the Sheriff's Office may require a dedicated deputy to attend specific training. The County will not ordinarily provide alternate personnel during a dedicated deputy's time off. But the County will use reasonable efforts to coordinate the scheduling and time off of the dedicated deputies to provide regular service to the City of Lucas.

During a shift or other duty time, a dedicated deputy will use reasonable efforts to devote full time and attention to serving and patrolling within the City of Lucas. A dedicated deputy may, however, leave the City's limits to respond to emergency calls for service or to respond to calls to assist other deputies or officers. In addition, other deputies or officers may assist a dedicated deputy as needed in the City of Lucas.

The City of Lucas may also confer with the County about increasing the number of dedicated patrol deputies. The County would likely require 12–18 months to hire and train new deputies to start additional dedicated deputies. The County would adjust the City of Lucas's annual reimbursement amount under section 4.

3.3 Extra Services. If the City of Lucas wants the Sheriff's Office to provide services in addition to those services listed in sections 3.1 and 3.2, such as security during a special event, the City of Lucas will contact the County's liaison officer (sections 3.7 and 10). The parties may discuss the Sheriff's Office's ability to accommodate the request or whether the City should use another means, such as hiring deputies or other peace officers for off-duty work.

3.4 **Personnel, Planning and Supervision**. The County will employ qualified and licensed peace officers to perform services under this agreement. The County will plan, organize, and supervise all tasks and matters that are part of its performance under this agreement. The County will assign, allocate, direct, supervise, and discipline County personnel.

3.5 **Requests from the City of Lucas**. The County will promptly consider all requests from the City of Lucas received through the liaison officer or the Sheriff's Office's communications division (Dispatch) for law-enforcement services. The County will make every reasonable effort to comply with these requests consistent with (1) this agreement, (2) the Sheriff's Office's policies and procedures, and (3) local, state, and federal law.

3.6 **Suspension of Services**. In the case of emergency, *force majeure* events, or public-safety reasons, the Sheriff may suspend the provision of dedicated patrol services under this agreement. The City of Lucas's reimbursement obligation will be adjusted under section 4.3.

3.7 **The County's Liaison Officer**. The City of Lucas may confer with the County's liaison officer—a Captain in, or the Assistant Chief of, Operations (section 10)—about the County's performance under this agreement. The Assistant Chief and chain of command will supervise the deputies, officers, and employees who provide the County's performance.

3.8 **Reports of Services**. The Sheriff's Office will provide the City of Lucas with written reports of law-enforcement activity within the City's borders in form and content consistent with the Sheriff's Office's policies and procedures.

3.9 **Patrol Vehicles**. The County will provide the patrol vehicle or vehicles necessary to equip the deputies providing dedicated patrol services. The County will equip each vehicle and mark it with appropriate decals. During the agreement's term or a vehicle's patrol life, the County will retain title to the vehicle and will be responsible for the warranty, if any, insurance, service and maintenance, and fuel. The County alone will decide when a vehicle is no longer fit for patrol service. Typically, the Sheriff's Office operates a patrol vehicle for about 110,000 miles before removing it from service. This figure may be higher, depending on the schedule for vehicle delivery.

3.10 **Option for the City of Lucas to Order and Take Title to a Patrol Vehicle**. Currently, the County uses an SUV (*e.g.*, Explorer) or pickup truck (*e.g.*, F-150 Responder) as patrol vehicles. If the City of Lucas meets its payment obligations related to a patrol vehicle under section 4, then the County will transfer the patrol vehicle to the City of Lucas at the end of its service. "Transfer" includes transferring possession of the vehicle, as well as the vehicle's title and ownership of the warranties or other plans that cover the vehicle or equipment. The County will not transfer rights in breach of a contract with another party, such as those for proprietary licenses or software, incident-reporting systems, or licenses or software that would give the City of Lucas access to county or restricted databases or infrastructure. At its expense, the County will de-badge a vehicle and remove software or electronic data as reasonably necessary to meet the County's obligations to protect criminal-justice or other confidential information. The City of Lucas will bear the costs of transferring a vehicle's title and all other costs associated with the transfer. The parties intend to comply with Chapter 791, Government Code, and Section 263.152, Local Government Code, related to the disposition of surplus property.

3.11 **Body-Worn Cameras**. When the Sheriff's Office implements a policy to equip patrol deputies with body-worn cameras, *see* Occupations Code, §§ 1701.651–1701.663, then the deputies who provide services under this agreement will receive the same equipment.

The County alone will be responsible for complying with state body-worn-camera law, including the provisions related to deputy training, policy, data retention, release of recordings or other information, and reporting, and the County will own all data and recordings. In an incident involving the City of Lucas, the County and Sheriff's Office will provide the City of Lucas's officials and their attorneys and experts with reasonable viewing of any relevant recordings including those made by in-vehicle or body-worn cameras—consistent with investigative, lawenforcement, or criminal- or civil-defense requirements, including those in Section 1701.660 of the Occupations Code. The Sheriff alone will make all decisions about public or other release of records, including decisions under Sections 1701.660–1701.663, Occupations Code, or the Public Information Act, Texas Gov't Code, Chapter 552.

The County alone will retain all body-worn-camera property at this agreement's end.

3.12 **Public Information Act Requests.** If the County receives a request under the Public Information Act, Chapter 552, Gov't Code, that relates to the City of Lucas, the County will notify the City of Lucas under Section 552.305, Gov't Code.

4. The Obligations of the City of Lucas

4.1 **Payments**. The City of Lucas will pay the County the reimbursement amount set out in sections 4.2 and 4.3 each contract year. The City of Lucas may pay the amount in four quarterly installments or in fewer payments.

4.2 Amount

The amount of the City of Lucas's annual payments is the amount necessary to fairly compensate—reimburse—the County for the cost of providing the services under this agreement for the contract year. *See* Gov't Code, § 791.011(e). The County's costs include the annual compensation of each dedicated patrol deputy (salary and benefits), the cost of a deputy's equipment, and the cost of a patrol SUV (*e.g.*, Explorer) or patrol pickup (e.g., F-150 Responder) with equipment, and each vehicle's annual fuel and maintenance. The County's costs will not include indirect costs. The County will document all reimbursable costs each contract year.

For calculating a dedicated patrol deputy's annual compensation, the County's fiscal year is from October 1 to September 30. But the Commissioners Court may adjust the compensation of county employees after January 1 each year. If so, the County will adjust the City of Lucas's payment amount for the portion of the contract year to which the compensation adjustment applies.

The City of Lucas will reimburse the County for the full cost of a dedicated patrol vehicle that the Sheriff's Office puts into service within the City in that contract year. If the Sheriff's Office first puts the dedicated patrol vehicle in service at a time when the City of Lucas cannot adjust its budget and meet its obligation to pay for the vehicle in that contract year, then the City of Lucas may postpone paying for the vehicle to the City's next budget year.

4.3 **Pro Rata Adjustments**. The County will reduce the amount of the City of Lucas's annual payment for any time during the year in which the Sheriff's Office determines that it is unable to dedicate one of the agreed patrol deputies to work in the City of Lucas.

4.4 Annual Procedure

Each year, the County and the City of Lucas will confer about their expectations for the calculation of the City's payment amount in the upcoming contract year. The parties will confer in time for both parties to appropriately plan for their budget years. The County will share expected compensation, equipment, and vehicle costs. The City of Lucas, however, understands that the County will not know of any deputy compensation changes until after January 1 of each year.

4.5 **Maps**. The City of Lucas will reasonably provide the Sheriff's Office with accurate and current maps of its territorial limits and extraterritorial jurisdiction, if any.

4.6 **Cooperation**. The City of Lucas will make reasonable efforts to provide at least part-time office space and internet connection for the dedicated patrol deputies to write and submit reports and make phone calls as part of their work as peace officers.

5. Notice and Conference; Suspension of Services

5.1 Notice & Conference. If a party believes that the other party has not met, or is not meeting, an obligation, the party will contact the other's liaison officer to discuss the issue. If the aggrieved party does not believe that this informal contact, discussion, and ensuing efforts have fixed the issue, then the party will notify the other's liaison officer in writing of the party's belief or complaint with reasonable detail to permit the other party to address the issue. The other party will then have a reasonable time to address the issue and improve its performance. The parties should assess a "reasonable time" under the relevant circumstances and with regard to the issue's nature.

5.2 **Suspension**. If the City of Lucas fails to make a payment as required within 30 days of the due date, the County may suspend service until it receives payment, or the County may terminate the agreement under section 6.

5.3 **Notice of Suspension**. If the County decides that it will suspend service to the City of Lucas for any reason, then the County will notify the City's liaison officer by telephone and in writing of the date the County will suspend service. The County will use reasonable efforts to provide advance notice of at least five calendar days.

6. Termination

6.1 **Notice & Conference**. Before a party tries to terminate this agreement, the party must follow the notice-and-conference procedures in section 5.1.

6.2 **Termination**. A party may terminate this agreement by giving 90 days' written notice to the other party.

6.3 **Recoveries & Remedies**. The County will make a substantial investment in this agreement, particularly in hiring and training new deputies to provide dedicated patrol services and buying patrol vehicles. The City of Lucas must reimburse the County for all patrol vehicles purchased for service under this agreement, regardless of when this agreement ends or is terminated.

If the agreement ends before the end of a contract year, then the City of Lucas must pay a prorated amount of reimbursement for deputy compensation for the portion during which the County provided services.

If the City of Lucas terminates the agreement, then the City of Lucas will make all payments due within 30 days of the termination.

If the County terminates the agreement in contract year 1, then the City of Lucas may pay the reimbursement amount for each patrol vehicle under the terms for repayment in in year 1, even if the parties do not otherwise perform under the agreement. In other words, if the County terminates in contract year 1, then the City of Lucas's rights to pay reimbursement on the terms of section 4 survive.

6.4 **Final Reports**. At this agreement's expiration or termination, the County will provide all reports that are outstanding under section 3.8 within 15 business days of the expiration or termination.

7. **Compliance with Laws**. Each party will comply with all federal, state, and local laws and regulations applicable to its conduct. A party's violation of law that affects the parties' relationship or rights under this agreement is a breach of this agreement as well.

8. Limitation of Extraordinary Remedies. While the parties are entitled to the benefit of their bargain, the parties are not liable to each other for damages in excess of the benefit of the bargain, whether identified as consequential, incidental, indirect, special, punitive, or exemplary damages or for damages that arise from special circumstances. A party will not sue for such damages. This provision does not affect either party's rights to remedies set out in this Agreement, including the rights in sections 3.8, 3.10, 3.11, 3.12, 4.2, 4.3, 6.3, 6.4, 7, 13, 14, 15, and 16, and the County's rights to reimbursement amounts for patrol vehicles and deputy compensation for all periods the County performed under this agreement.

9. No Third-Party Beneficiaries. The City of Lucas and the County do not intend to create or confer a benefit on any person or entity, who is not a party to this agreement. The parties do not intend to create a claim in favor of any person or entity, who is not a party to this agreement.

To the extent that a party uses insurance or similar coverage or assistance in performing under this agreement, then "the City of Lucas," "the City," and "the County" will be interpreted to include the insurance company or other relevant entity.

10. **Sheriff's Office's Liaison Officer**. The City of Lucas may contact a Captain or the Assistant Chief in Operations in the Sheriff's Office, 972.547.5100, as the County's liaison officer for purposes of discussing services or making requests under this agreement.

11. **The City of Lucas's Liaison Officer**. The County will confer with the City of Lucas's liaison officer—the City Manager of the City of Lucas—about this agreement.

12. Other. Each party represents and warrants that the person or persons signing this agreement have the requisite authority under Section 791.011(d)(1), Gov't Code. Each party paying for the performance of a governmental function or service must make those payments from current

revenues available to it under Section 791.011(d)(3), Gov't Code. The parties are not forming a partnership or joint venture by signing this agreement, and the parties waive no form of immunity. *See* Gov't Code, § 791.006(c), (d). The parties will treat a photocopy of this agreement as an original for all purposes.

13. Choice of Law and Venue. Texas law will govern this agreement and the relationship between, and the claims and defenses of, the parties. *See* Gov't Code, § 791.012. Courts in Collin County will have exclusive jurisdiction.

14. **No Additional Waiver**. No waiver or waivers of any breach of default by either party of any term, condition, covenant, or liability und this agreement, or of performance by the other party of a duty under this agreement, will be construed to be a waiver of subsequent breaches or defaults of any kind, under any circumstances.

15. **Immunity not Waived**. The parties do not waive any form of immunity by signing this agreement. This agreement does not create any form of personal liability on the part of any official, officer, employee, or agent, who is an individual, of a party.

16. **Modification**. The parties will modify this agreement with a writing signed by each party's governing body under section 791.011(d), Gov't Code. A party will not try to enforce an ostensible modification that does not meet section 791.11(d), Gov't Code.

17. **Severability**. The agreement's provisions are severable, and if a court holds any word, phrase, clause, sentence, paragraph, section, or other part or its application to a person or circumstance to be invalid or unenforceable, the remainder of the agreement will not be affected.

18. **Assignment**. A party will not try to assign its rights or duties under this agreement to another person or entity without the other party's consent.

19. **Notices**. A party will send any notice required under this agreement by the U.S. Postal Service, Certified Mail to:

If to the City of Lucas:

City Manager City of Lucas 665 Country Club Road Lucas, Texas 75002-7651 972.912.1212 jclarke@lucastexas.us If to Collin County:

Collin County Sheriff's Office Asst. Chief of Operations 4300 Community Blvd. McKinney, Texas 75071 <u>mselman@co.collin.tx.us</u>

With copy to: Collin County Purchasing Agent 2300 Bloomdale Road, Ste. 3160 McKinney, Texas 75071 <u>shoglund@co.collin.tx.us</u> Agreed to:

Collin County

Judge Chris Hill 2300 Bloomdale Road McKinney, TX 75071

Date

Date

City of Lucas

NameTitleCity of Lucas665 Country Club RoadLucas, TX 77002



City of Lucas City Council Agenda Request June 17, 2021

Requester: City Council City Engineer Stanton Foerster

Agenda Item Request

Consider information provided by Birkhoff, Hendricks & Carter and review status of drainage conditions regarding Lemontree Estates and Kingswood Estates drainage and related watershed and provide direction to the City Manager.

Background Information

This item is a follow up on the ongoing efforts to improve drainage in the Lemontree Country Estates and Kingswood Estates neighborhoods. The City Council most recently met on June 4, 2020 to discuss additional analysis and recommendations for the site stemming from the drainage analysis report produced by Birkhoff, Hendricks & Carter (BHC) in 2019. The following is a general summary of the recommendations made by BHC at that time and an update on their status:

- A. Lynn Lane Culvert The culvert is too small and is providing detention during heavy rains. This culvert inlet is located at 1595 Lynn Lane and the outlet is between 1520 and 1580 Lynn Lane. Concrete and other debris has been placed in the ditch east between 1520 and 1580 Lynn Lane. Staff believes, based on aerial photographs, that this debris was placed sometime in 2017. This obstruction has caused a significant impact to Lemontree, Kingswood and Lynn Lane drainage. City Staff is working with a contractor to clear the debris.
- B. Drainage Channel behind #2, #3, and #4 Kingswood Drive The open channel is too narrow and is flat. The small culvert behind #2 Kingswood Drive is an element that was not contemplated in the original design of the Kingswood Estates drainage and is acting as a restriction to the stormwater flow. Since June 2020, Kingswood residents have reestablished elements of the original drainage plan and have significantly improved the drainage situation in the Kingswood neighborhood; however, the culvert is still in place behind Lot #2 and should be removed as soon as possible in an effort to restore the original drainage design.
- C. Citrus Way Culvert The culvert is too small and is providing detention during heavy rains. This culvert inlet is located between #1 and #3 Citrus Way and the outlet is between #6 and #8 Citrus Way at the southeast corner of Citrus Way. *As of June 2021, the City has cleaned the culvert, but no additional action has been taken.*



City of Lucas City Council Agenda Request June 17, 2021

- D. Crossflow from Lemontree Country Estates into Kingswood Estates The original berm had not previously been maintained along the west side of #3, #5, #7, #9, and #11. This berm is needed to direct stormwater south along the common line between Lemontree Country Estates and Kingswood Estates. Kingswood Drive is not designed to accept this stormwater. *Since June 2020, the residents of Kingswood Estates have reestablished the berm and this has improved the drainage significantly. Unfortunately, some homeowners are still channeling water from the west side of their properties to Kingswood Drive. This continues to cause significant problems with drainage in the street right-of-way.*
- E. **Reversing Orchard Lane Stormwater Flow** Currently there is five+/- feet of fall between the northeast corner of Estates Parkway/Orchard Road intersection and the Orchard Road culvert between #8 and #10 Orchard Road. The natural flow is from Estates Parkway to the culvert (south to north). This flow can be reversed to flow from the culvert to Estates Parkway by constructing a new roadside ditch. The ditch would need to be five feet deep and 40 feet wide and have a slope of 0.3%. *The City has taken no action on this item*.
- F. Lemontree Country Estates Drainage Discharge into Kingswood Estates The original designs of the Kingswood Estates contemplated 15 acres of drainage from Lemontree Country Estates into Kingswood Estates. The actual acreage is 46 acres. *The City has taken no action on this item.*
- G. Redirecting the Claremont Springs Stormwater to the East Currently the top of the hill on the south side of Estates Parkway is immediately west of Ingram Lane. To redirect the Claremont Springs stormwater flow from under Estates Parkway to the south side of Estates Parkway the culvert under Estates Parkway would need to be eliminated and the top of the hill would need to be moved to the east side of Amblewood Drive. The new roadside ditch along Estates Parkway would need to be four feet deep and 32 feet wide and have a slope of 0.4%. Additional right-of-way/easements would be required and the reconstruction of seven street/driveway culverts including the culvert under Country Club Road would also be necessary. This redirection would require approval from the 1) Texas Department of Transportation, 2) the Texas Commission on Environmental Quality, and 3) Federal Emergency Management Agency. *City Staff has discussed this idea with TxDOT, but no response has been received from TxDOT*.

The City Council took no formal action at the time of this meeting; however, individual owners and the City have made efforts to improve drainage in line with these recommendations in the months following the discussion. This coincided with a wet Spring season that tested drainage infrastructure throughout the City. Overall, while some progress has already been achieved, there are ample opportunities to further improve drainage at this site by addressing the recommendations made by Birkhoff, Hendricks & Carter.



City of Lucas City Council Agenda Request June 17, 2021

In addition to the previously discussed items, several new ideas were discussed in the June 4, 2020 meeting. These were as follows:

- A. Redirecting water to flow on both sides of Orchard Road. The City has requested a change in scope from BHC to include this item.
- B. Determining what steps would be needed to restore the current drainage plan. The City has requested a change in scope from BHC to include this item.
- C. Potential for improving development at the site through future upstream developments between Lovejoy High School and the neighborhood. *This item is being discussed in a separate item at the June 17, 2021 City Council Meeting.*

Attachments/Supporting Documentation

- 1. Lemontree Drainage Analysis Final Report
- 2. Lemontree Drainage Analysis Supplemental Memo
- 3. Memo Map

Budget/Financial Impact

NA

Recommendation

NA

Motion

I make a motion to...



BIRKHOFF, HENDRICKS & CARTER, L.L.P. PROFESSIONAL ENGINEERS

11910 Greenville Ave., Suite 600

Dallas, Texas 75243

Phone (214) 361-7900

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JOHN W. BIRKHOFF, P.E. GARY C. HENDRICKS, P.E., R.P.L.S. JOE R. CARTER, P.E. MATT HICKEY, P.E. ANDREW MATA, JR., P.E. JOSEPH T. GRAJEWSKI, III, P.E. DEREK B. CHANEY, P.E., R.P.L.S. CRAIG M. KERKHOFF, P.E. JUSTIN R. IVY, P.E.

October 11, 2019

Mr. Stanton Foerster, P.E. City Engineer City of Lucas 665 Country Club Road Lucas, Texas 75002

Re: Lemontree Drainage Analysis Final Report and Concept Plan

Dear Mr. Foerster:

As requested, we have completed a drainage analysis of the basin contributing storm water runoff to Reid Branch Tributary 1. Our analysis consisted of the following:

- 1. Review of the record drawings and drainage calculations provided by the City of Lucas for each of the developments within the basin.
- 2. Field survey of selected existing culverts and drainage features within the basin
- 3. Site investigation including walking the accessible drainage courses within the basin and examining the condition of existing culverts and other drainage features.

We have summarized our observations and possible recommendations from the analysis into the sections that follow:

Lemontree Estates Channel & Driveway Culverts Analysis

The northeast portion of the Lovejoy High School site (13.94 ac) drains undetained, to the southwest corner of the Lemontree Estates Addition. The Lovejoy High School record drawings include drainage calculations that indicate the pre-development 100-year flow rate was 34 cfs and the post-development flow rate was 85.3 cfs. However, after careful review of the calculations, we calculated a pre-development 100-year flow rate of approximately 44 cfs and a post-development flow rate of approximately 39 cfs.

Runoff from the Lovejoy High School site flows overland to a roadside ditch along the west side of Citrus Way. The ditch west of Citrus Way flows south to a culvert under Mandarin Cove at the southwest corner of the Lemontree Estates Addition. The culverts under Mandarin Cove are damaged and are undersized for a 100-year flow rate. The runoff then flows east in a roadside ditch along the south side of Citrus Way and through a series of driveway culverts that are also undersized for a 100-year flow rate. Several of the driveway culverts downstream of Mandarin Cove are also sloping the wrong way (against flow).

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 2 of 7



Image 1: Downstream Face of Mandarin Cove Culvert

Lemontree Estates Channel & Driveway Culverts Recommendations

- 1. Recalculate the total flow in the roadside ditch west of Citrus Way, including the offsite area from the Lovejoy High School and onsite area within the Lemontree Estates Addition, using current engineering design requirements for runoff coefficients, time of concentration and storm intensities.
- 2. At a minimum, we recommend reconstructing the roadside ditch for about 200 feet on each side of Mandarin Cove and replacing the culverts at Mandarin Cove based on the design criteria selected by the City of Lucas.
- 3. A drainage improvements project could also be considered to reconstruct the roadside ditch along the south side of Citrus Way and the driveway culverts from Mandarin Cove to Orchard Lane based on the design criteria selected by the City of Lucas.

Lovejoy High School Pond Analysis

A large portion of the Lovejoy High School site drains to a detention pond on the east side of the high school property. The record drawings for the pond include design calculations for a 34-inch orifice plate to be installed at the outfall structure for the pond. At the time of design and construction, this exceeded design criteria required for development within the City of Lucas.

During our site investigation it was observed that the pond is discharged via a 36-inch HDPE pipe without any restrictor plate. We also observed an erosion control device at the upstream side of the outfall (shown below).

Field surveys indicate low spots in the middle of the berm for the detention pond has near the outfall culvert as much as a foot lower than the north and south ends of the berm. Rock rip rap has been placed on the east side of the berm in this location indicating that water is going over the berm undetained and creating a potentially erosive situation. The Lovejoy High School record drawings include volumetric calculations for the pond and the pond may not be functioning as it was designed based on our observations.

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 3 of 7



Image 2: Lovejoy High School Pond Outfall

Lovejoy High School Pond Recommendations

- 1. Additional surveys and analysis of the pond should be performed to determine if adequate storage is currently provided and if the existing outfall structure should be modified to perform as it was originally designed. Our concept plan exhibit recommends, at a minimum, raising the berm along the east side of the detention pond to be at least 1-foot above the 100-year water surface elevation based on the plans.
- 2. The Lovejoy High School detention pond should be analyzed to determine any improvements necessary to perform in accordance with the design criteria selected by the City of Lucas. This could include performance based on a number of design storms, including more frequently occurring events.
- 3. A detention pond improvements project could be constructed based on the design criteria selected by the City of Lucas.

Rimrock Estates Analysis

The record drawings for Rimrock Estates demonstrate runoff passing through the development via a series of ponds. Pond A is at the downstream limits of the development and is within a drainage easement on two residential lots. The outfall constructed for Pond A does not match the record drawings which may cause the water surface elevation to be higher than anticipated. This condition coupled with a potentially higher release

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 4 of 7

rate from the high school detention pond upstream of this development could cause the Pond A water surface to be higher and potentially have adverse impacts on the two residential lots.

The water surface elevation in Pond B is controlled by a broad crested weir constructed at the downstream end of the pond. Design of this pond is based on the maximum design flow rate from the record drawings for the high school detention pond upstream of the development together with additional offsite drainage areas. The proper function of the high school detention pond is therefore critical to the design of Pond B. Additional discharge from the high school detention pond could cause higher water surface elevations in pond B, potentially going over Rimrock Drive. There is also the potential for adverse impacts to adjacent residential lots in this area.

The discharge from Pond B flows eastward in a swale labeled Pond A which turns northward along the east property line of the Rimrock Estates Addition flowing to a point where the drainage swale turns east towards Orchard Road.



Image 3: Rimrock Estates Pond A (Looking North)

<u>Rimrock Estates Recommendations</u>

- 1. The proper function of the Lovejoy High School detention pond is a crucial element for the proper function of the detention ponds constructed in the Rimrock Estates Addition and therefore addressing any detention pond performance issues would be highly recommended.
- 2. Additional surveys and analysis of the drainage swale downstream of Pond B could be performed to determine the anticipated 100-year depth of flow in "Pond A" to determine if improvements would be required to provide necessary free-board to adjacent properties within the Rimrock Estates Addition.

Lemontree Country Estates Addition (Orchard Road) Analysis

Flow discharged from Pond A in Rimrock Estates drains to a swale which drains to the east in the Lemontree Country Estates Addition to Orchard Road. The drainage plans for Rimrock Estates include a total 100-year release rate of 122.65 cfs. Two 18-inch culverts are provided at Orchard Road. These culverts do not have

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 5 of 7

capacity to convey runoff from the 100-year event. The road is only slightly higher than the top of the culverts indicating that water will overtop Orchard Road in a 100-year storm event.

The property owners on the north and south side of the channel downstream (east) of the Orchard Road culverts met with us while walking the drainage course and indicated that mowing the channel was difficult due to the steep side slopes. We observed a water depth of 1 to 2 -inches from the west property line of the Lemontree Country Estates Addition to just before the east property line. We observed some channel scour and concrete rubble had been dumped in this location.



Image 4: Channel Downstream of Orchard Road (Looking Upstream / West)

The property owner on the north side of the channel indicated there was frequent standing water on the northeast corner of his property and added that the channel does not drain to the east of his property like it did several years ago. We observed standing water east of Orchard Road along the north side of this property.

Lemontree Country Estates Addition (Orchard Road) Recommendations

- 1. Additional surveys and analysis could be performed on the channel and culverts crossing Orchard Road to determine any improvements necessary to perform in accordance with the design criteria selected by the City of Lucas. Our concept plan recommends at a minimum that the the side slopes of the open channel be flattened to 4:1 or flatter. The channel could also be graded steeper to drain better, if permission to grade on to the adjacent tract downstream (east) could be obtained.
- 2. Debris, trash removal and minimal grading could help alleviate the standing water experienced by the property owner on the north side of the channel (east of Orchard Road).

Kingswood Estates, The Farmstead and Claremont Springs Analysis

Runoff conveyed via the channel downstream (east) of Orchard Road continues flowing to the east and northeast through a series of ponds converging with flow from the southeast corner of Lemontree Estates, runoff from Kingswood Estates, runoff from The Farmstread, and flow released from the retention pond in the Claremont Springs Addition located on the south side of Estates Parkway. The drainage conveyance systems at these locations appear to function as designed. The combined flow channelizes and crosses Lynn Lane via

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 6 of 7

eight (8) 48-inch reinforced concrete pipe culverts. We did not observe any significant erosion issues or capacity problems at Lynn Lane.

Stormwater discharged from Claremont Springs flows through The Farmstead crossing Lee Lane via 3 - 6'x3' reinforced concrete box culverts. Drainage calculations from The Farmstead construction plans indicate that the detention ponds provided maintain pre-developed conditions and do not increase runoff within the basin.

Accumulated runoff flowing to the south along Kingswood Drive is conveyed via small undefined roadside swales. Driveways in Kingswood Estates lack culverts and the swales cross each driveway creating a low water crossing at each location. There is very little capacity along these swales, and it appears water ponds in most of the driveways after a storm event, due to grass and silt deposits on the low side of each driveway. Additionally, the swales have a relatively flat slope and water likely stagnates in various flat/low spots along the swales.

Kingswood Estates Recommendations

- 1. At a minimum, we recommend installing a concrete pilot channel in each of the swales from driveway to driveway. This would help to drain most of the water which accumulates in the driveways after a storm event. Without grass impeding flow, a pilot channel should also reduce the likelihood of water stagnating in between driveways. We recommend a concrete pilot channel 2 to 3-ft in width with a 1-inch invert between the driveways, on both sides of the street, for the full length of the north-south portion of Kingswood Drive shown on the exhibit. This approach is unlikely to provide 100-year design storm capacity but should reduce stormwater ponding.
- 2. Alternatively, we recommend a channel be designed along both sides of the road to convey a design storm event as determined by the City. The channel would begin at the downstream end of the drainage channel in the southeast corner of Kingswood Estates. This approach would include installing driveways culverts at each driveway and significant grading efforts to provide ditches along both sides of Kingswood Drive. A portion of each of the driveways would be reconstructed to remove the low water crossing and reconstruct the driveways over the new culverts.

Conclusions

The runoff from the northeast corner of the high school site was slightly reduced, based on our calculations and is not contributing to drainage problems for the existing ditch along Citrus Way, the culverts crossing Mandarin Cove and driveway culverts along the south side of Citrus Way in the Lemontree Estates. At a minimum, we recommend reconstructing the roadside ditch for about 200 feet on each side of Mandarin Cove and replacing the culverts at Mandarin Cove based on the design criteria selected by the City of Lucas. We also recommend consideration of reconstructing the roadside ditch along Citrus Way east of Mandarin Cove and the driveway culverts and designed based on the design criteria selected by the City of Lucas.

A drainage improvements project could also be considered to reconstruct the roadside ditch and the driveway culverts along Citrus Way from west of Mandarin Cove to Orchard Lane based on the design criteria selected by the City of Lucas.

The north end of Lemontree Estates is at the top of the drainage basin and there are no indications that the culvert structure at the southeast corner of the development under Citrus Way lacks capacity to convey the runoff.

Our observations of the Lovejoy High School detention pond indicate less volume may be provided and the outfall structure may not perform as originally designed. This could result in weir flow over the berm, sending

Mr. Stanton Foerster, P.E. Lemontree Estates Addition Drainage Analysis Final Report and Concept Plan October 11, 2019 Page 7 of 7

a higher rate of flow downstream than the original design intended. The design of drainage features downstream of the high school pond in Rimrock Estates are based on the high school pond and outfall structure functioning as originally designed. The water surface elevation through Rimrock Estates could rise causing adverse impacts to the lots and overwhelming other drainage facilities downstream of the high school without some improvements to the detention pond. At a minimum, we recommend the berm for the detention pond be raised to at least 1-foot above the 100-year water surface elevation based on the plans.

The channel crossing the Lemontree Country Estates Addition and the culverts crossing Orchard Lane do not have capacity for a 100-year event. At a minimum, we recommend flattening the side slopes of the channel from Rimrock Estates to the east property line of Lemontree Estates to 4:1 or less for ease of maintenance. A drainage improvements project could also be considered to size the channel and the culverts crossing Orchard Lane in accordance with the design criteria selected by the City of Lucas.

There are no roadside ditches and culverts in the Kingswood Addition and there is some ponding of water in the driveways after a rain event. At a minimum, we recommend installing concrete pilot channels in the swales on both sides of the road from driveway to driveway.

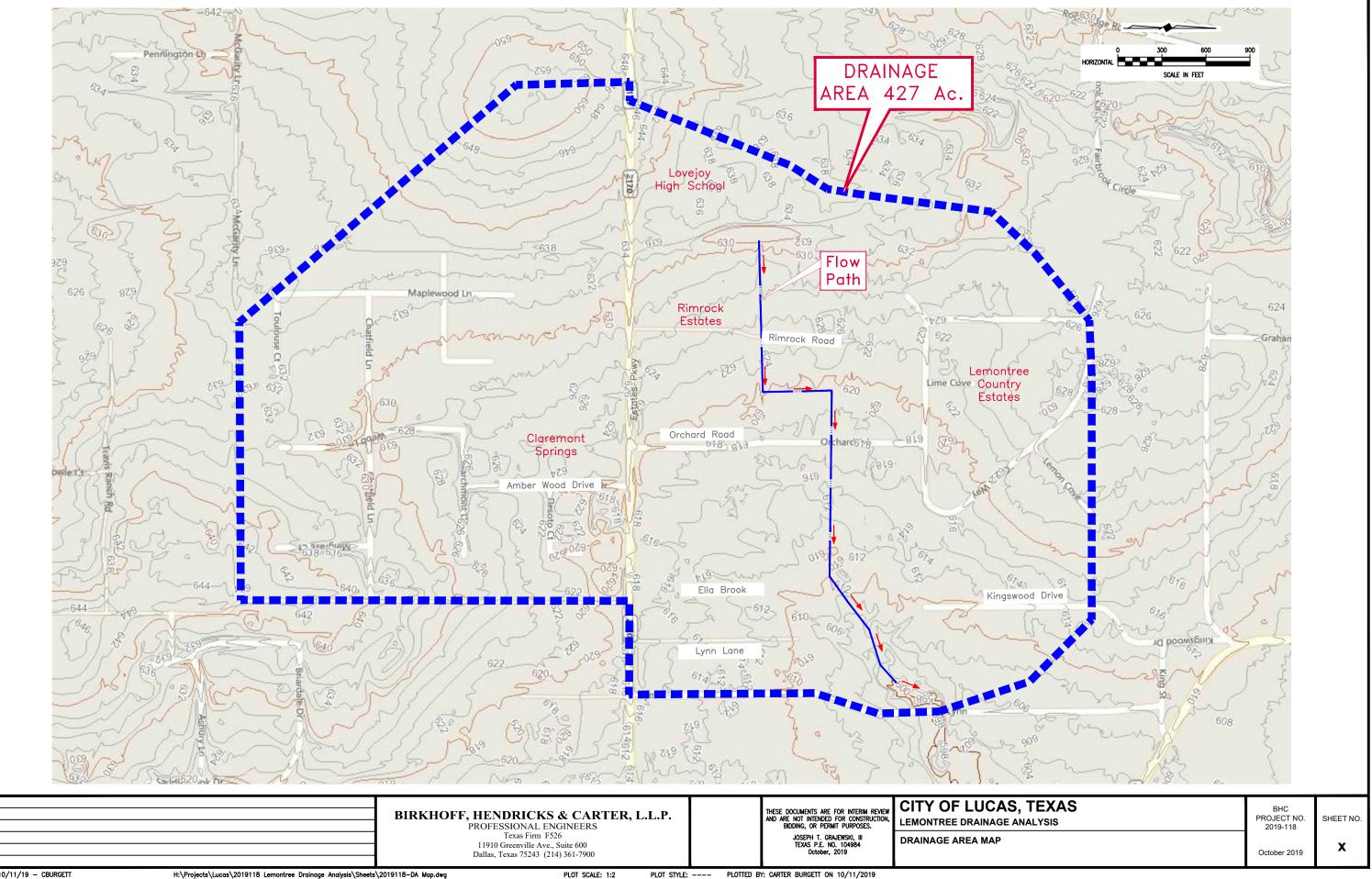
Let us know if there are any questions regarding our observations or recommendations contained in the preliminary report. We are available to discuss this report and our recommendations at your convenience.

Sincerely,

Joseph T. Grajewski, P.E.

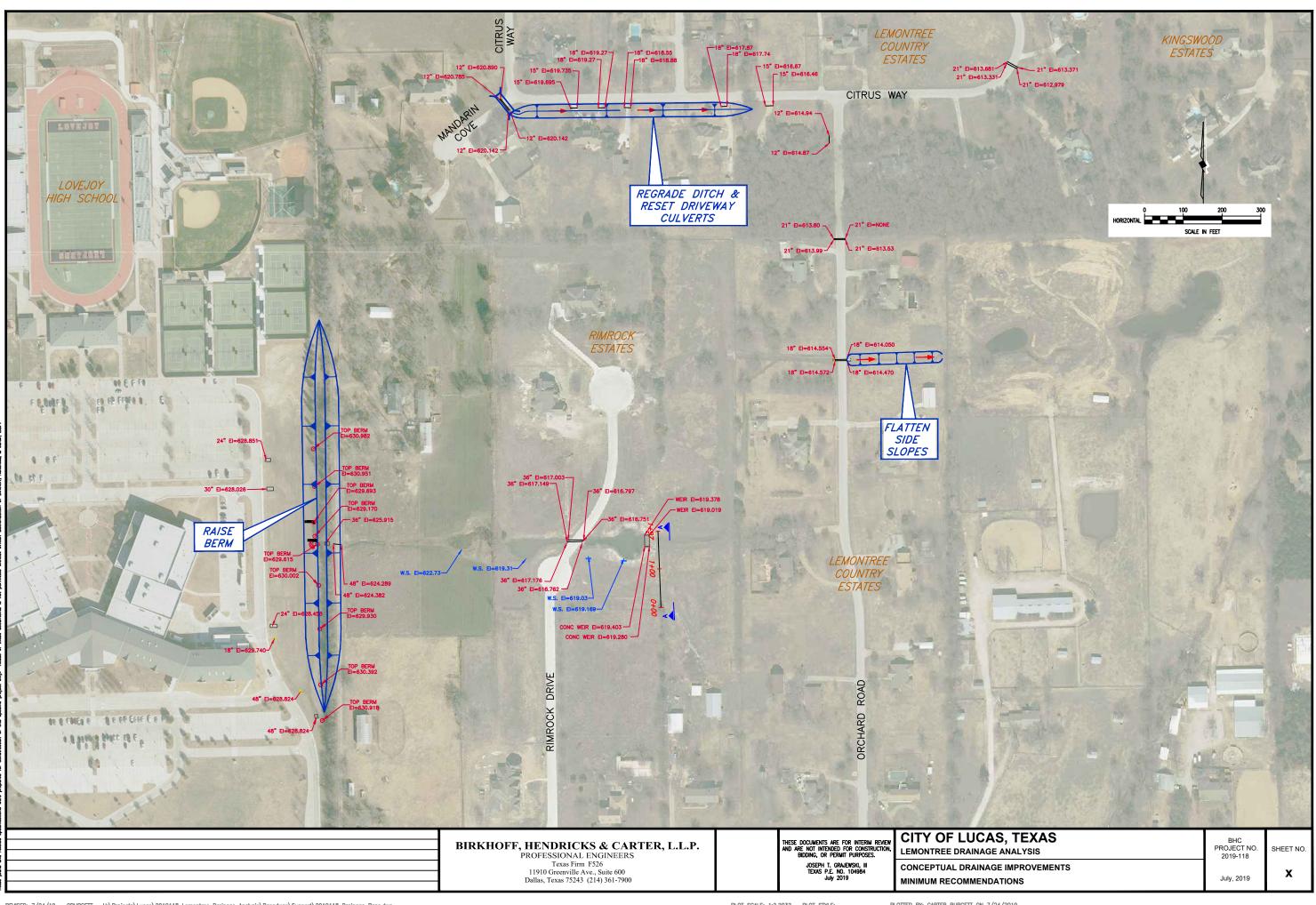
Joe R. Carter, P.E., C.F.M.

Enclosures



REVISED: 10/11/19 - CBURGETT

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BIRKHOFF, HENDRICKS & CARTER, L.L.P.

PROFESSIONAL ENGINEERS

TBPE Firm 526 11910 Greenville Ave., Suite 600 RPLS Firm No. 100318-00 Dallas, Texas 75243

Fax (214) 461-8390

Phone (214) 361-7900

MEMORANDUM

To: Mr. Stanton Foerster, P.E.

From: Mr. Joseph T. Grajewski, P.E.

Date: May 22, 2020

Subject: Lemontree Estates & Kingswood Estates – Supplemental Drainage Analysis

This memorandum supplements our Lemontree Drainage Analysis dated October 11, 2019. Upon review of the original report, additional information from property owners and site visits to review existing flow patterns, the City requested the following supplemental analysis.

A. Capacity of culvert crossing at Lynn Lane for Reid Branch Tributary 1:

The culvert crossing for Reid Branch Tributary 1 at Lynn Lane is made up of eight (8) 48-inch reinforced concrete pipes. Based on flowline elevations and length obtained for one of the eight concrete pipes, the slope is 1.23%. The pipe has a capacity of 159 cubic feet per second (cfs) flowing full without pressure flow. Assuming each of the pipes are at the same slope, a maximum conveyance rate of 1,272 cfs is provided at this crossing. The water velocity is over 12 feet per second for each pipe at this flowrate and warrants downstream erosion control measures. The 100-year flow rate at this location is 1,555 cfs based on the HEC-HMS Hydrologic Model previously prepared for this basin. This analysis ignores the effects of upstream and downstream channel conditions, and any pressure flow from headwater conditions on the upstream side. A hydraulic model of this culvert crossing could be developed using HEC-RAS to calculate the culvert capacity more accurately at this location.

B. Design an open channel cross section in Kingswood Estates to convey drainage across lots 8, 7, & 6): The attached exhibit (Conceptual Drainage Improvements – Kingswood Estates) illustrates the approximate location for the proposed open channel with a typical section (section A-A). Based on 2foot contours, the proposed channel would have an approximate slope of 0.8% over a length of 715 linear feet. The drainage area contributing to this channel generates a 100-year flow rate of approximately 145 cfs. Given the overall slope and 100-year flow rate, the open channel concept is approximately 30-feet in width and could be constructed within an existing Drainage & Utility Easement; however, a temporary construction easement would be required. This would include the removal of a small diameter culvert observed during a site visit on Lot 7.

- C. Capacity of culvert crossing at Citrus Way near the upper southeast corner of Lemontree Estates: Approximately 30 acres of runoff accumulates at the culvert crossing at the southeast corner of Citrus Way. The existing culvert crossing is two 21-inch corrugated metal pipes. Based on flow line shots obtained from field survey, each pipe has a capacity of approximately 17 cfs flowing full without pressure flow providing a maximum capacity of 34 cfs at this location. This area generates a 100-year flow rate of approximately 95 cfs. If the upstream end of the culvert builds up headwater, additional flow could be conveyed through the culverts from the resultant pressure. If water on the upstream end rises high enough, it could flow over the road in a weir flow condition. This situation is likely since there is not much cover on the culverts at this location.
- D. During a field meeting with property owners and representatives from the City, it was reported that offsite runoff from west of Kingswood Estates flows across lots 8-12 and into the roadside channel on the west side of Kingswood Drive. The original drainage design for Kingswood Estates acknowledged this off-site runoff and provided flow arrows indicating that runoff would flow to the south along the west property lines of lots 8-12. A small berm was observed during the site visit, but it lacked an open channel on the west side to provide positive drainage to the south. A small berm with a minimum height of 2.5-feet could be constructed to redirect this offsite runoff. The attached exhibit (Conceptual Drainage Improvements Kingswood Estates) illustrates the limits of the proposed berm with a typical section (section B-B). If the slope of the drainage channel on the west side of the berm is flatter than 0.5%, a concrete pilot channel shall be required per City requirements.
- E. Most of the runoff within this basin from the Lovejoy High School site flows to the east through Lemontree Estates crossing Orchard Road before continuing to the east and ultimately converging with Reid Branch Tributary 1. The City requested a conceptual analysis to re-direct runoff to the south along Orchard Road and then to the east along the open channel for FM 2170 (Estates Parkway).

There are approximately 75 acres draining to the culvert crossing on Orchard Road generating a 100year flow rate of approximately 250 cfs. This would necessitate an open channel approximately 5 feet deep and 40 feet wide to convey flow to the south along Orchard Road and then east along Estates Parkway. The exhibit attached (Conceptual Drainage Improvements – Orchard-Estates Relief Channel) illustrates the location of this proposed open channel. Additional items to consider with this conceptual plan include:

- i.) The distance from the existing culverts crossing Orchard Road to the culverts crossing Estates Parkway downstream of the pond releasing flow from Claremont Estates is approximately 2,230 linear feet. This area is relatively flat and in some cases the topography flows in the opposite direction. An average slope of 0.3% is anticipated for the proposed drainage channel and will require a concrete pilot channel per City requirements.
- ii.) There are no existing drainage easement along this corridor. The drainage channel will not fit within the right-of-way and will require land rights acquisition.

- iii.) Each of the driveway culverts along Orchard Road and Estates Parkway will need to be re-sized and re-constructed for the re-directed flow. A flowrate of 400 cfs on a 0.33% grade requires 2-5'x5' boxes or 1-10'x5' box.
- iv.) Any structures, water lines or franchise utilities within 40-feet of the right-of-way may conflict with the improvements.
- v.) The re-directed flow will converge with discharge from Claremont Estates at the existing culvert crossing Estates Parkway. Runoff from Claremont Estates is discharged from a detention pond. The 100-year discharge release rate from the pond is 168 cfs. This flow combines with the re-directed 250 cfs and continues in the roadside channel along Estates Parkway.
- vi.) Estates Parkway is owned and maintained by the Texas Department of Transportation (TxDOT) and will require their approval for additional flow to be conveyed in the roadside channels within the right-of-way. It is unlikely the existing roadside channels have capacity for an additional 400 cfs of stormwater and channel improvements will be required (and additional land rights obtained). A minimum of seven (7) driveway culverts will need to be replaced and the culvert structure at the intersection of Estates Parkway and Country Club Road will need to be reconstructed to convey the additional flow.
- F. The offsite area contributing the southwest corner of Kingswood Estates is approximately 46 acres. The rational method can be used to calculate the 100-year flowrate from this area.

C = 0.55

I = 5.75 (30 min Time of concentration)

A = 46 acres

 $Q_{100} = C \times I \times A = 145$ cubic feet per second \rightarrow This flow is conveyed via the open channel described in Part B (above).

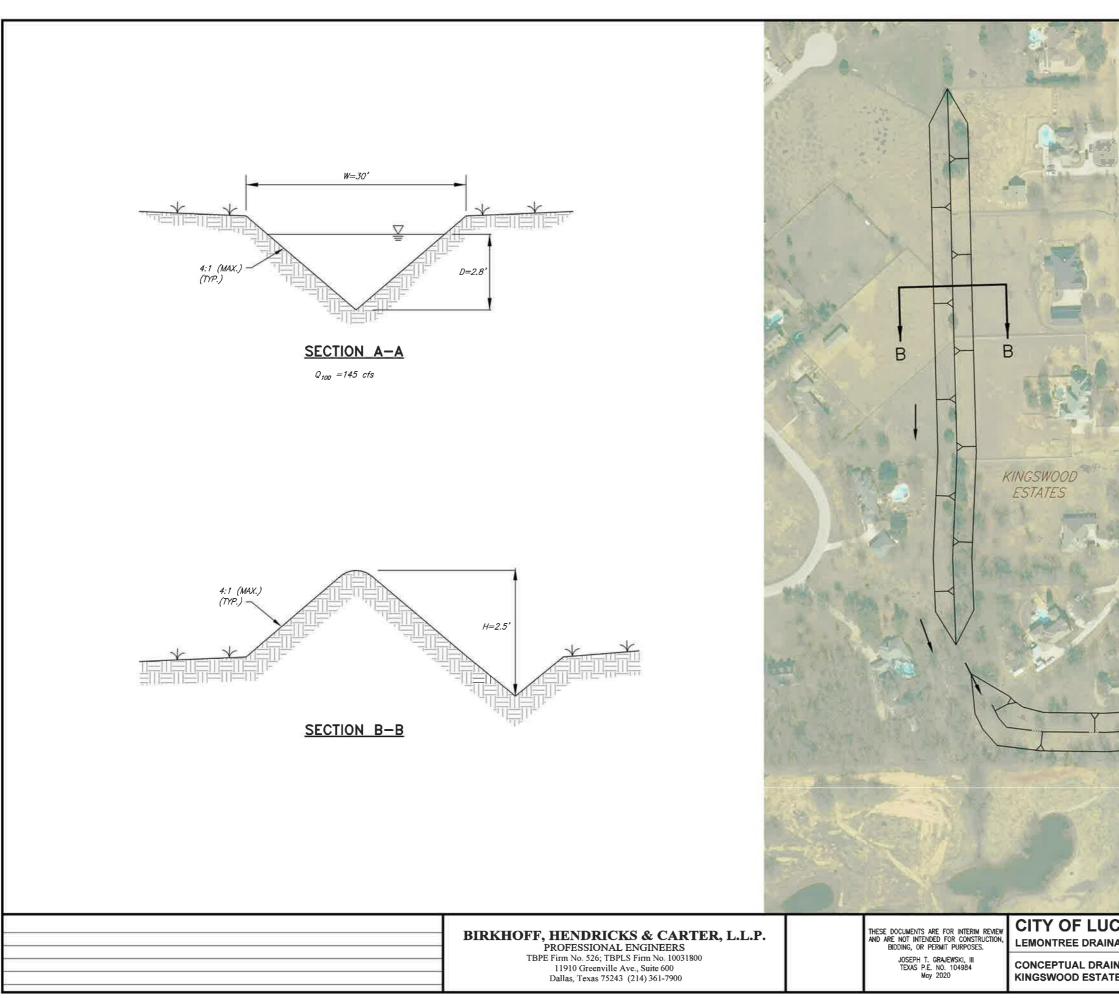
G. Runoff from Claremont Estates on the south side of Estates Parkway is collected in a detention pond and discharged to the north into 3-42-inch reinforced concrete pipe culverts. This flow continues on a north-northwest path (through Farmstead) for approximately 1700 linear feet where it converges with flow conveyed to the east along the south side of Kingswood Estates. The City requested a conceptual analysis to re-direct discharge from the pond in Claremont Estates east along the open channel for Estates Parkway.

The 100-year discharge rate from the Claremont Springs detention pond is 168 cfs. This would necessitate an open channel approximately 4 feet deep and 32 feet wide to convey flow east along Estates Parkway. The exhibit attached (Conceptual Drainage Improvements – Estates Relief Channel) illustrates the location of this proposed open channel. Additional items to consider with this conceptual plan include:

i.) The existing roadside channel along Estates Parkway will be re-constructed to provide the required additional capacity. If the drainage channel does not fit within the right-of-way,

additional land rights will be required. Any structures, water lines or franchise utilities near the existing right-of-way may conflict with the drainage improvements.

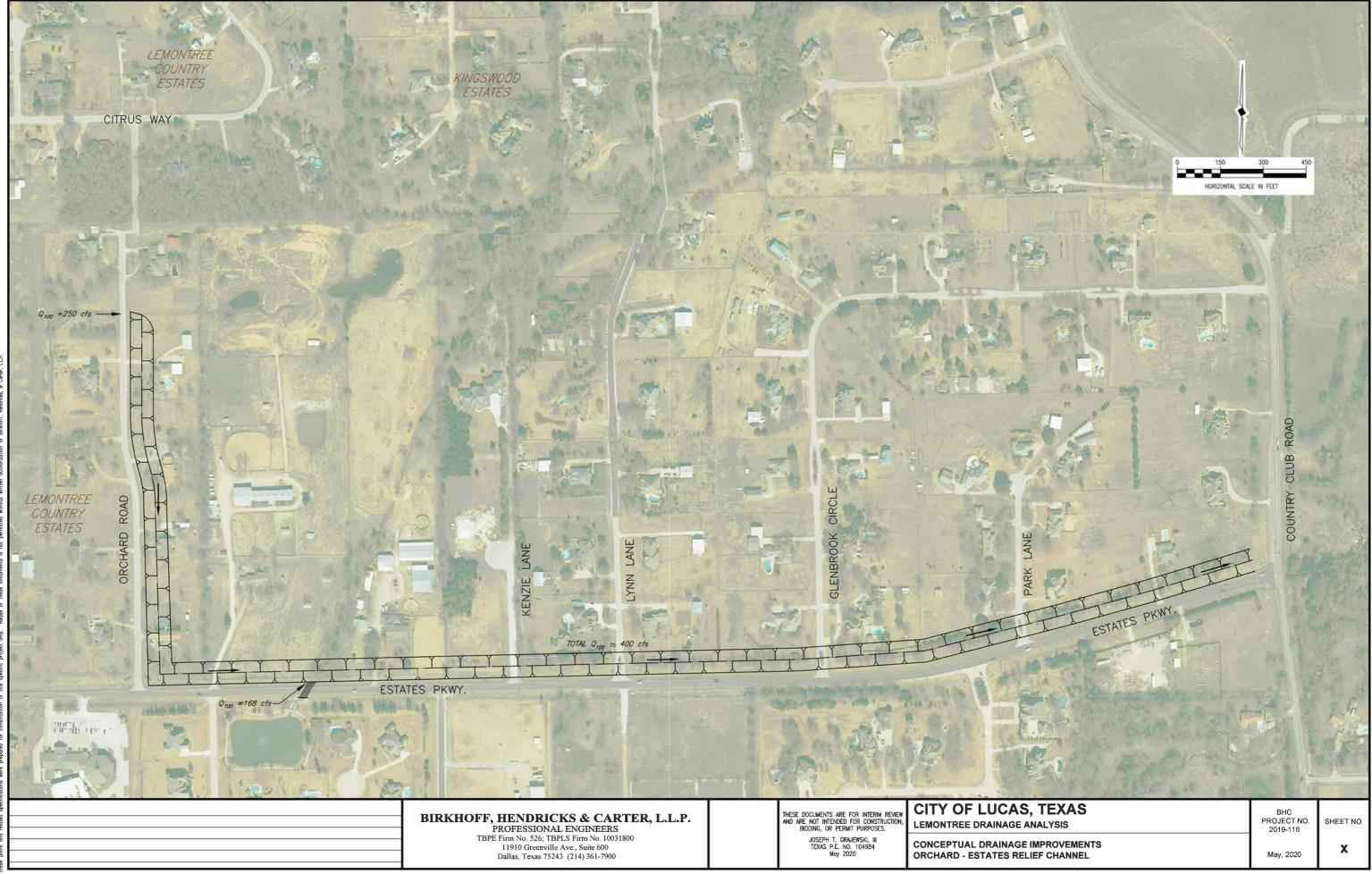
- Estates Parkway is owned and maintained by the Texas Department of Transportation (TxDOT) and will require their approval for additional flow to be conveyed in the roadside channels within the right-of-way.
- iii.) Each of the six (6) driveway culverts along the south side of Estates Parkway will need to be resized and re-constructed for the re-directed flow. A flowrate of 168 cfs on a 0.40% grade requires a 6'x4' box culvert. Additionally, the culvert structure at the intersection of Estates Parkway and Country Club Road will need to be reconstructed to convey the additional flow.



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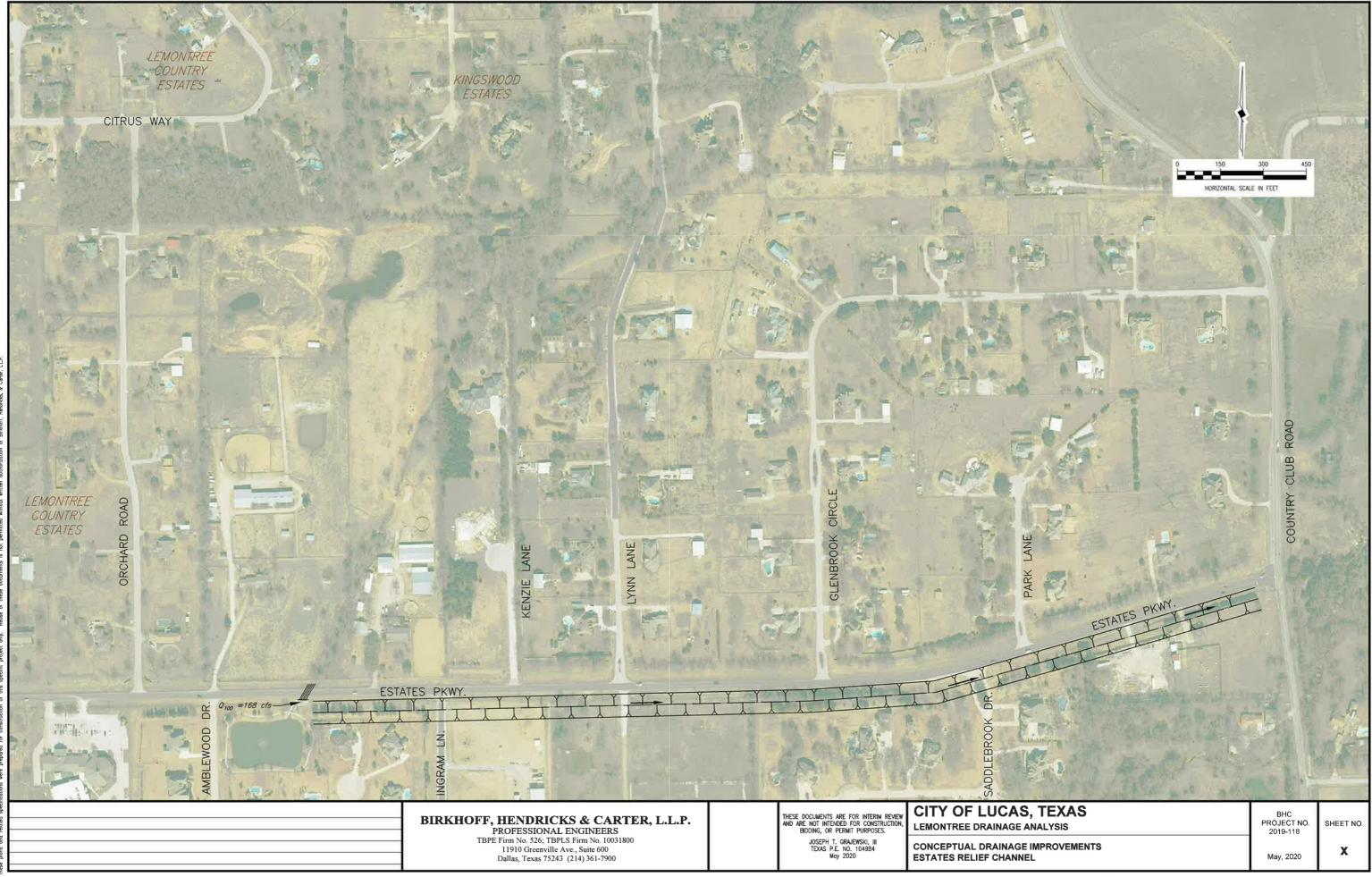
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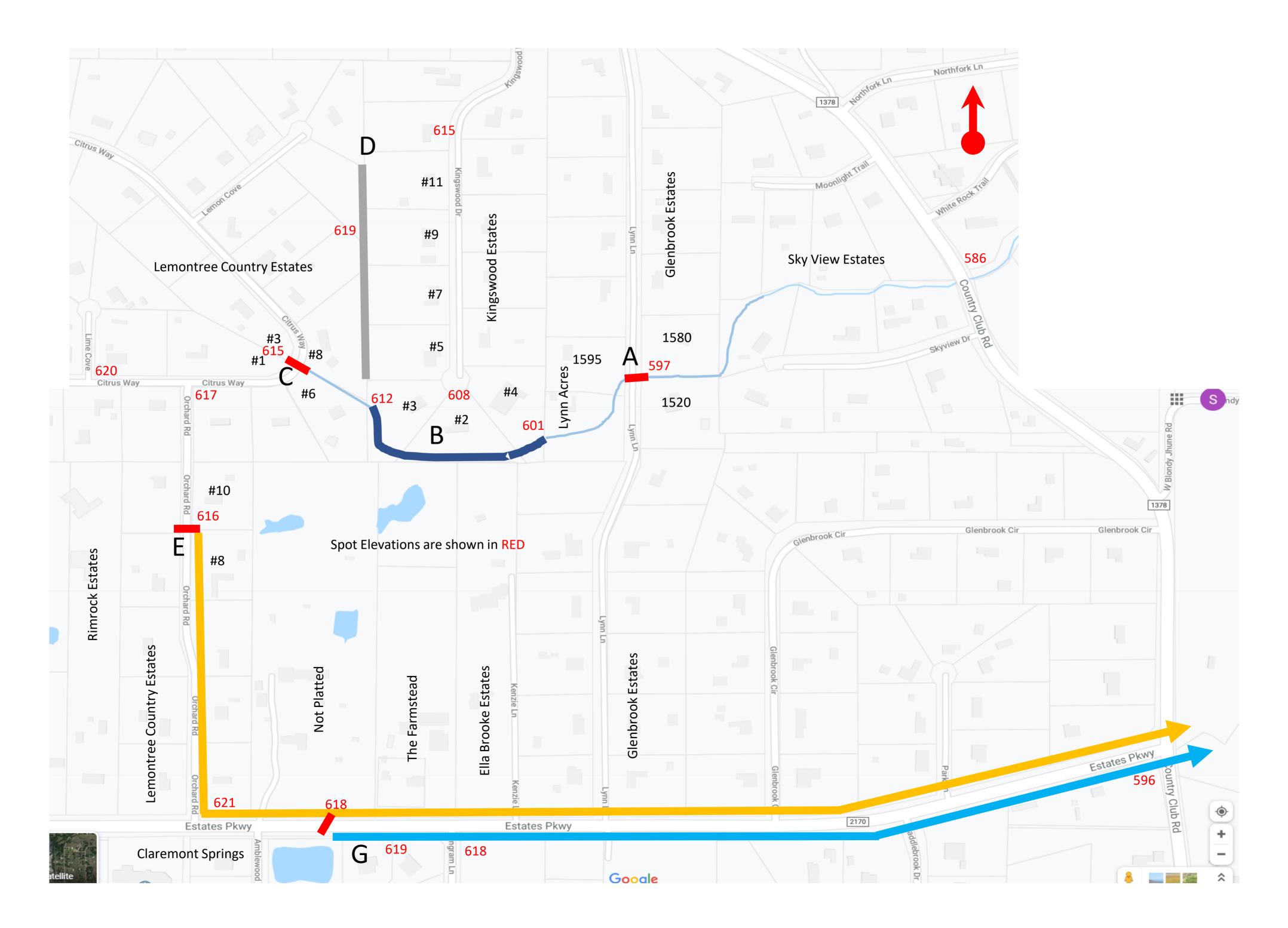


REVISED: 5/26/20 - TTAYLOR H:\Projects\Lucas\2019118 Lemontree Drainage Analysis\Basedwgs\Support\2019118 Orchard - Estates Relief Channel A.dwg

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PLOTTED BY: TY TAYLOR ON 5/26/2020





Requester: City Council

Agenda Item Request

Discussion and provide direction regarding stormwater and drainage projects and regulations regarding the same.

Background Information

Recently, the City Council identified the need to evaluate drainage in the city to identify priorities and goals as it relates to the city's drainage system. The City of Lucas has approximately 325 culverts that it is responsible for maintaining. On September 12, 2019, the Planning and Zoning Commission and the City Council held a joint drainage workshop to discuss challenges throughout the city regarding drainage and consider possible solutions. As a follow up to the workshop, Planning and Zoning discussed drainage related items late in 2019 and early 2020 and recommended revision to the city's culvert specifications.

The City entered a contract with Birkhoff, Hendricks & Carter for a drainage analysis of the Reid Branch Tributary 1 which included the Lemontree Country Estates and Kingswood Estates neighborhoods (agenda item 6).

The City has contracts with Four Star Excavation, Platinum Excavation and Structural Assurance to perform drainage-related activities. During fiscal year 19/20, Four Star Excavation, Inc. has been supplying On-Call Miscellaneous Grading, Excavation, and Finish Work via Work and Purchase Orders. In a timely and efficient manor, Four Star completed the following projects via Work Orders #3, #4, and #5:

- 1. Clean, repair, and riprap culverts under E. Winningkoff Road between Shady Lane and Welborn Lane
- 2. Clean, repair, and riprap culvert under Snider Lane at Shady Lane
- 3. Clean, repair, extend, riprap culvert at 2250 Snider Lane.
- 4. Clean culvert under Lime Cove
- 5. Clean, repair, and riprap culvert under Shady Lane at 1865 Shady Lane
- 6. Clean, repair, extend, riprap culvert at 1780 Snider Lane.
- 7. Replace Mandarin Cove culvert
- 8. Repair culvert at 133 Brockdale Park Road
- 9. Clean and repair several culverts under Orchard Road.
- 10. Extend culvert and add riprap at Christian Lane and Lakeview Drive
- 11. Install culvert at 3 Harvest Way.
- 12. Clean out and riprap outfall 895 Bentwater Drive culvert
- 13. Install Shiloh Drive culvert east of Stinson Road.
- 14. 215 W Blondy Jhune Road 24" RCP 40 LF with riprap on both sides of RCP



15. Cleanout and riprap Forest Grove Road Culvert west of Wolf Creek Drive

The project list below identifies some of the City's drainage situations that need to be evaluated:

- Brookhaven Culvert Repairs (The Brookhaven Culvert Replacement project is included in the CIP and is estimated to cost \$250,000.)
- Winningkoff Culvert Maintenance (800 feet north of East Lucas Road)
- Stinson Road Bridge/Culvert Maintenance at Muddy Creek (scheduled for discussion at the July 1, 2021, City Council meeting).
- East Winningkoff Road/Winningkoff Road Culvert Extension
- Claremont Springs drainage ditches adjacent to Aberdeen Drive do not function properly. Remedy could be concrete line ditches due to the area being flat. The situation was exasperated by some of the culverts being installed at the wrong elevation.
- Drainage in established neighborhoods (i.e., Lemontree and Kingswood agenda item 6) have problematic drainage issues with the most challenging neighborhoods including Glenbrook, King Street and Graham Lane
- West Lucas Road on both sides of roadway west of Ingram (should be resolved with West Lucas Road project currently under design)
- Fox Glen development's drainage does not function and there is pooling of water and a lack of maintenance.

The drainage project list below identifies some of the City's drainage situations that either staff have identified, or citizens have reported:

- Concrete has been dumped into the creek between 1520 and 1580 Lynn Lane (estimate received from Four Star in the amount of \$14,000 but due to ongoing weather issues, have not been able to complete)
- Bellagio Court in Bristol Park Phase 3 detention pond weir maintenance/removal of silt (estimate received from Four Star in the amount of \$12,000 but due to ongoing weather issues, have not been able to complete)
- New Castle drainage discharge into Barry Ranch across Country Club Road
- West side of Stinson Road from Belvedere Park to Muddy Creek
- Culvert under Stinson Road that discharges between 1415 and 1475 Stinson Road.
- Cimarron Addition drainage discharge into Edgewood Estates
- Fairbrook Circle culvert/bridge per TxDOT Bridge Report

The above-referenced list is not an all-inclusive list but rather a snapshot of some of the drainage challenges we face as a community. There are compliance-related issues such as private property owners filling in the flood plain and not maintaining driveway culverts and ditches which has a negative impact on our drainage system. There are funding deficiencies as major



culvert replacement is expensive (the temporary replacement of the Creek Bend culvert was \$26,640 and the replacement of the Wendy Lane Culvert was \$169,000).

Attachments/Supporting Documentation

- 1. 1989 Drainage Policy Flow Chart
- 2. Ordinance #2009-04-00644 Planning & Design Criteria for Stormwater Run-off
- 3. Ordinance #2020-12-00925 Article J "Culverts"
- 4. Article 10.04 Stormwater Runoff Regulations and Control

Budget/Financial Impact

On October 1, 2020, the City Council authorized \$100,000 of the budgeted \$750,000 Improvements Roads (11-8209-301) for drainage related projects. During fiscal year 20/21 the following drainage related expenses have been incurred:

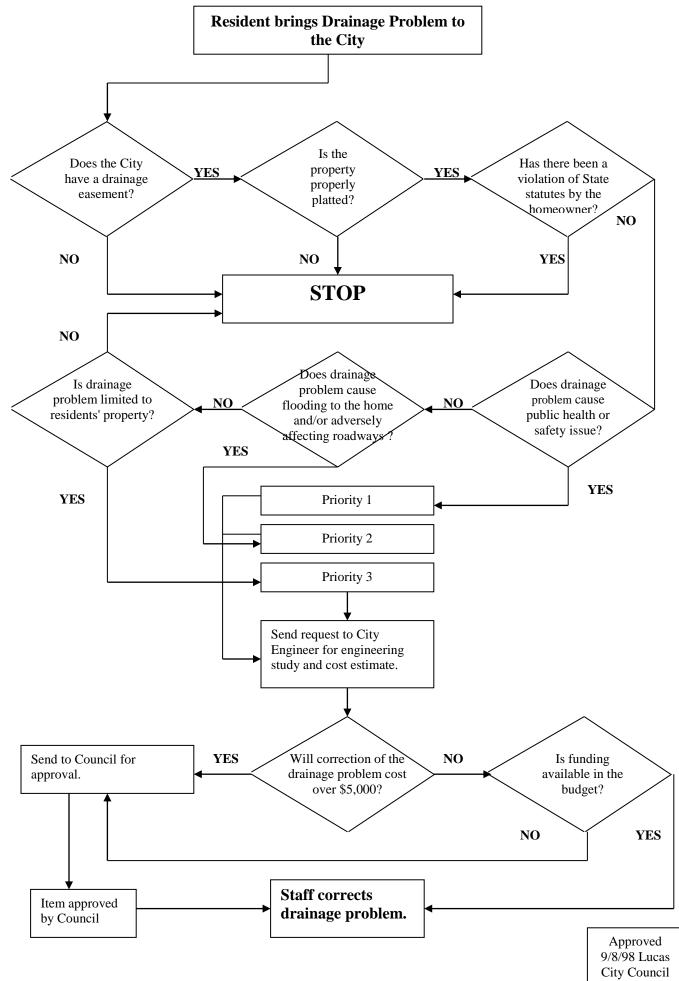
- Winningkoff Road Culvert Inspection BCC \$8,520
- Stinson Road Grading Platinum Excavation \$14,400
- Stinson Road Culvert Inspection BCC \$7,320

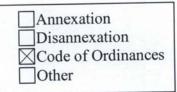
Recommendation

NA

Motion

NA





ORDINANCE # 2009-04-00644 [PLANNING & DESIGN CRITERIA FOR STORMWATER RUN-OFF]

THE CITY COUNCIL OF LUCAS, TEXAS APPROVES THE ADOPTION OF A PLANNING AND DESIGN DRAINAGE CRITERIA FOR STORM WATER RUN-OFF TO BE MAINTAINED ON FILE IN THE OFFICE OF THE CITY SECRETARY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALING CLAUSE; PROVIDING FOR A PENALTY OR FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000) FOR OFFENSES; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council has determined an urgent need for the adoption of guidelines for storm water run-off;

WHEREAS, the City Council desires to adopt the Planning and Design Drainage Criteria for storm water run-off attached hereto as Exhibit "A."

NOW, THEREFORE, BE IT ORDAINED THAT THE CITY COUNCIL OF THE CITY OF LUCAS THAT:

SECTION 1. The City Council hereby approves and adopts the Planning and Design Drainage Criteria ("Criteria") attached as Exhibit "A." The City commits to the implementation of the requirements and guidelines set forth in the adopted Criteria. A copy of the Criteria will be maintained on file in the office of the City Secretary.

SECTION 2. If any section, paragraph, subdivision, clause, phrase or provision of this ordinance shall be judged invalid or unconstitutional, the same shall not affect the validity of this ordinance as a whole or any portion thereof other than that portion so decided to be invalid or unconstitutional.

SECTION 3. That all provisions of the Ordinances of the City of Lucas in conflict with the provisions of this Ordinance be, and the same are hereby repealed and all other provisions of the Ordinances of the City of Lucas not in conflict with the provisions of this Ordinance shall remain in full force and effect.

SECTION 4. That an offense committed before the effective date of this ordinance is governed by the prior law and the provisions of the Code of Ordinances, as amended, in effect when the offense was committed and the former law is continued in effect for this purpose.

SECTION 5. Any person, firm or corporation violating any of the provisions or terms of this Ordinance shall be subject to the same penalty as provided for in the Code of Ordinances, as

amended, and upon conviction in the municipal court shall be punished by a fine not to exceed the sum of Two Thousand Dollars (\$2,000) for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

SECTION 6. This ordinance shall take effect immediately from and after its passage as the law in such case provides.

DULY PASSED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS ON THIS THE 2nd DAY OF APRIL, 2009.

DULY PASSED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN

APPROVED:

in

Bill Carmickle, Mayor

ATTEST:

ecretary ingo,

APPROVED AS TO FORM:

Joe Gorfida, Jr., City Attorney (JJG/cgo/35057)



WATER RUN-OFF MANUAL

PLANNING AND DESIGN DRAINAGE CRITERIA

A. General

The Drainage Criteria included in this section are for the purpose of providing a set of guidelines for planning and designing storm drainage facilities in the City of Lucas, Texas and within its extraterritorial jurisdiction. These criteria will be used by the Department of Public Works, other City Departments, consulting engineers employed by the City, and engineers for private developments in the City.

B. Rational Method for Peak Storm Flows

The formula to be used for calculating peak storm flows for drainage areas less than 200 acres shall be the Rational Method, in which:

Q = CIA, where

Q - is the peak storm flow at a given point in cubic feet per second (cfs)

C - is the runoff coefficient that is equal to the ratio that the peak rate of runoff bears to the average rate (intensity) of rainfall;

I - is the average intensity of rainfall in inches per hour for a storm duration equal to the time of travel for run off to flow from the farthest point of the drainage area to the design point in question;

A - is the drainage area tributary to the design point, in acres.

Note: For drainage areas greater than 200 acres, peak storm flows shall be determined based on a flow routing analysis using detailed hydrographs such as the Soil Conservation Service hydrologic methods that are available in such computer programs as TR-20, HEC-1, etc.

C. Runoff Coefficient

The runoff coefficient (C) shall consider the slope of the terrain, the character of the land use, the length of overland flow and the imperviousness of the drainage area and shall be determined based on ultimate land development. The run-off coefficient for the appropriate land used shall be as follows:

Commercial 0.90 Industrial 0.70 Single Family Residential 0.55 Multi-Family 0.75 Parks and Open Space 0.35 Schools, Churches, etc. 0.75

D. Rainfall Intensity-Frequency

The rainfall intensity-frequency curves should be platted from data from TXDOT or other government sources in our area. The intensity (I) in the formula Q = CIA, is determined from the curves by arriving at a time of concentration for the subject drainage area and adapting a storm frequency upon which to base the design of drainage improvements.

1. Time of Concentration The time of concentration, which is the longest time of travel for runoff to flow from any point of the subject drainage area to the design point, consists of the time required for runoff to flow overland plus the time required to flow in a street gutter, storm drain, open channel or other conveyance facility. A minimum time of concentration of fifteen (15) minutes shall be used for Single Family Residential, Parks and Open Space areas and a minimum time of concentration of ten (10) minutes shall be used for Commercial, Industrial, Multi-Family Residential, School and Church areas. A nomograph, is attached for estimating the time of concentration.

2. Storm Frequency

Required design storm frequencies for storm drainage improvements in the City of Lucas are shown in the following table.

Type of Design Frequency

Facility (years)

*Storm Sewer Systems 25

*Culverts, Bridges, 100

* The drainage system shall be designed to carry those flows greater than the 25-year frequency up to and including a 100-year frequency within defined rights-of-way or drainage easements.

E. Area

The drainage area used in determining peak storm flows shall be calculated by subdividing a map into the watersheds within the basin contributing storm water runoff to the system. Areas shall be determined by planimetering or digitizing.

F. Spread of Water

During the design storm, the quantity of storm water that is allowed to collect in the streets before being intercepted by a storm drainage system is referred to as the "spread of water". In determining the limitations for carrying storm water in the street, the ultimate development of the street shall be considered. The use of the street for carrying storm water shall be limited to the following:

SPREAD OF WATER

Major thoroughfares (divided) - One traffic lane on each side to remain clear. Thoroughfares (not divided) - Two traffic lanes to remain clear. Collector streets - One traffic lane to remain clear.

Residential streets - Six-inch depth of flow at curb and One traffic lane to remain clear.

G. Storm Sewer Design

Storm water in excess of that allowed to collect in the streets shall be intercepted in inlets and conveyed in a storm sewer system. Storm sewer capacity shall be calculated by the Mannings-formula --

Q = AV, and

Q = 1.486 AR2/3S1/2n

where

Q is the discharge in cubic feet per second;

A is the cross-sectional area of the conduit in square feet;

V is the velocity of flow in the conduit in feet per second;

R is the hydraulic radius in feet, which is the area of flow divided by the wetted Perimeter.

S is the slope of the hydraulic gradient in feet per foot;

n is the coefficient of roughness.

The recommended roughness coefficients to use in the design of a storm

sewer system are as follows:

Type of Storm Drain Manning's Coefficient

Concrete Box Culvert 0.015

New Concrete Pipe 0.013 Standard, unpaved, with or without

bituminous coating corrugated

metal pipe 0.024

Paved invert, 25% of periphery paved

corrugated metal pipe 0.021

Paved invert, 50% of periphery paved

corrugated metal pipe 0.018

100% paved and bituminous coated

corrugated metal pipe 0.013

In the design of the storm sewer system, the elevation of the hydraulic gradient of the storm sewer shall be a minimum of 0.5 feet below the elevation of the adjacent street gutter. Storm sewer pipe sizes shall be so selected that the average velocity in the pipe will not exceed 15 feet per second nor less than 3 feet per second. The minimum grade recommended for storm sewer pipe is 0.30%. Closed storm sewer systems shall be installed in all areas where the quantity of storm runoff is 300 cubic feet per second, or less at the discretion of the city. A closed storm sewer system may be constructed when the quantity exceeds 300 cfs, at the discretion of the City. Hydraulic gradients shall be calculated and lines drawn for each storm sewer.

H. Intentionally left blank for future use

I. Open Channel Design

Storm water runoff in excess of that allowed to collect and be conveyed in the streets in developed areas and runoff in undeveloped areas may be carried in grass lined, concrete lined or weathered rock open channels. Earthen, non-vegetated or unlined open channels are not acceptable. Open channel capacity shall be calculated by the Manning's Formula, and roughness coefficients shall be as follows:

Maximum Permissible Type of Lining Roughness Coefficient "n" Mean Velocity Earth (Bermuda grass) 0.035 6 ft. per sec. Concrete Lined 0.015 15 ft. per sec. Weathered Rock 0.030 10 ft. per sec.

Open channels shall be constructed with a trapezoidal cross-section and shall have side slopes no steeper than 3:1 when grass lined and 1.5:1 when lined with

concrete. A right-of -way for all channels of sufficient width shall be dedicated to provide for excavation of the open channel of proper width, plus ten feet on each side to permit ingress and egress for maintenance. Additional width may be considered if sanitary sewer mains are proposed to follow the channel alignment.

J. Culvert Design

At locations of stream or open channel crossings with proposed roadway improvements, it is sometimes necessary to receive and transport storm water under the roadway in culverts. The quantity of flow shall be determined by the appropriate method, and the friction loss through of the culvert shall be calculated by Manning's Formula.

Design of culverts shall include the determination of upstream backwater conditions as well as downstream velocities and flooding conditions. Consideration shall be given to the discharge velocity from culverts, and the limitations specified culverts shall not be less than 18". A headwall is required at exposed ends. Under private drives concrete or steel culverts, under public road concrete culverts are required.

K. Stormwater Detention Pond Design

The basic concept underlying the use of stormwater detention ponds (SDP) involves providing temporary storage of stormwater runoff so that peak rates of runoff can be reduced. Runoff is released from storage at a controlled rate which cannot exceed the capacities of the existing downstream drainage systems or the pre developed peak runoff rate of the site, whichever is less. Stormwater detention ponds may be of two (2) basic types: On-site and Regional. In general, on-site ponds are those which are located off-channel and provide stormwater detention for a particular project of development. Regional ponds are designed to provide stormwater detention in conjunction with other improvements on a watershed-wide basis. The performance and safety criteria in this section apply to all ponds which provide management of peak rates of stormwater runoff, regardless of type.

PERFORMANCE CRITERIA FOR ON-SITE SDP's

On-site SDP's are further classified as either small or large, as follows:

ON-SITE SDP POND CLASS DRAINAGE AREA

Small <25 acres

Large 25-64 acres

For design purposes, any pond with a drainage area larger that 64 acres shall be classified as a regional pond.

2. On-site SDP ponds shall be designed to reduce post-development peak rate of discharge to existing pre-development peak rates of discharge for the 2-, 10-, 25- and 100-year storm events at each point of discharge from the project or development site. In addition, the capacity of the existing downstream systems must be considered in determining the need for managing the 100-year storm event. For the post-development hydrologic analysis, any offsite areas which drain to the pond shall be assumed to remain in the existing developed condition.

3. The Rational Method (RM) may be used for the design of small on-site ponds only. The maximum contributing drainage area to a pond designed with the RM is 50 acres when using this equation.

4. A design method approved by the City Engineer.

PERFORMANCE CRITERIA FOR REGIONAL SDP's

1. Regional SDP's are classified as small or large, based on the following criteria:

REGIONAL IMPOUNDED

POND CLASS VOLUME, AC-FT

Small 0-150

Large >150

Any regional pond with a height of dam over 15 feet shall be classified as a large regional pond.

2. Performance criteria for regional detention ponds shall be determined by the City on a project-by-project basis. The determination shall be based on a preliminary engineering study prepared by the project engineer.

SAFETY CRITERIA FOR SDP's

All ponds shall meet or exceed all specified safety criteria. Use of these criteria shall in no way relieve the engineer of the responsibility for the adequacy and safety of all aspects of the design of the SDP.

1. The spillway, embankment, and appurtenant structures shall be designed to safely pass the design storm hydrograph with the freeboard shown in the table below. All contributing drainage areas, including on-site and off-site area, shall be assumed to be fully developed. Any orifice with a dimension smaller than or equal to twelve (12) inches shall be assumed to be fully blocked.

DETENTION DESIGN STORM FREEBOARD TO TOP POND CLASS EVENT OF EMBANKMENT, FT.

On-site: Small 100 year 0

Large 100 year 1.0

Regional: Small 100 Year 2.0

Large 100 year *

*Design storm event and required freeboard for large regional ponds shall be determined in accordance with Chapter 299 of the Texas Administrative Code (Dam Safety Rules of the Texas Natural Resource Conservation Commission).

2. All SDP's (except small on-site ponds) shall be designed using a hydrograph routing methodology. The Rational Method (RM) may be used only for contributing drainage areas less than fifty (50) acres.

3. The minimum embankment top width of earthen embankments shall be as follows:

TOTAL HEIGHT OF MINIMUM TOP EMBANKMENT, FT. WIDTH, FT.

0-6, 4' 6-10, 6' 10-15, 8' 15-20, 10' 20-25, 12' 25-35, 15'

4. The constructed height of an earthen embankment shall be equal to the design height plus the amount necessary to ensure that the design height will be maintained once all settlement has taken place. This amount shall in no case be less than five (5%) percent of the total fill height. All earthen embankments shall be compacted to 95% of maximum density.

5. Earthen embankment side slopes shall be no steeper than three (3) horizontal to one (1) vertical. Slopes must be designed to resist erosion, to be stable in all conditions and to be easily maintained. Earthen side slopes for regional facilities shall be designed on the basis of appropriate geotechnical analyses.

6. Detailed hydraulic design calculation shall be provided for all SDP's. Stage-discharge rating data shall be presented in tabular form with all discharge components, such as orifice, weir, and outlet conduit flows, clearly indicated. A stage-storage table shall also be provided.

7. When designing SPD's in a series (i.e., when the discharge of one pond becomes the inflow to another), the engineer must submit a hydrologic analysis which demonstrates the system's adequacy. This analysis must incorporate the development of hydrographs for all inflow and outflow components.

8. No outlet structures from SDP's, parking detention, or other concentrating structures shall be designed to discharge concentrated flow directly onto arterial or collector streets. Such discharges shall be conveyed by a closed conduit to the nearest existing storm sewer. If there is no existing storm sewer within 300 feet, the outlet design shall provide for a change in the discharge pattern from concentrated flow back to sheet flow, following as near as possible the direction of the gutter.

9. Stormwater runoff may be detained within parking lots. However, the engineer should be aware of the inconvenience to both pedestrians and traffic. The location of ponding areas in a parking lot should be planned so that this condition is minimized. Stormwater ponding depths (for the 100-year storm) in parking lots are limited to an average of eight (8") inches with a maximum of twelve (12") inches.

10. All pipes discharging into a public storm sewer system shall have a minimum diameter of twelve (12"). In all cases, ease of maintenance and/or repair must be assured.

11. All concentrated flows into a SDP shall be collected and conveyed into the pond in such a way as to prevent erosion of the side slopes. All outfalls into the pond shall be designed to be stable and non-erosive.

OUTLET STRUCTURE DESIGN

There are two (2) basic types of outlet control structures: those incorporating orifice flow and those incorporating weir flow. Weir flow is additionally broken down into two (2) categories: rectangular and V-notch. In each type, the bottom edge of the weir over which the water flows is called the crest. Sharp-crested and broad-crested weirs are the most common types. Generally, if the crest thickness is more than 60% of the nappe thickness, the weir should be considered broad-crested. The coefficients for sharp-crested and broad-crested weirs vary. The respective weir and orifice flow equations are as follows:

1. Rectangular Weir Flow Equation

Q = CLH 3/2where

Q = Weir discharge, cubic feet per second

- C = Weir coefficient
- L = Horizontal length, feet
- H = Head on weir, feet
- 2. V-notch Weir Flow Equation \\
- $Q = Cv \tan(O/2)H 2.5$

where

Q = Weir Flow, cubic feet per second

Cv = Weir Coefficient

- O = Angle of the Weir notch at the apex (degrees)
- H = Head on Weir, feet

3. Orifice Flow Equation

Q = Co A (2gH) 0.5

Where

Q = Orifice Flow, cubic feet per second

- Co = Orifice Coefficient (use 0.6)
- A = Orifice Area, square feet
- $g = Gravitation constant, 32.2 feet/sec^2$
- H = Head on orifice measured from centerline, feet

Analytical methods and equations for other types of structures shall be approved by the City prior to use.

DETENTION POND STORAGE DETERMINATION

The method to be used for determining detention pond volume requirements is governed initially by the size of the total contributing drainage area to the pond.

For contributing areas up to fifty (50) acres, the Rational Method (RM) may be used.

For contributing areas greater than fifty (50) acres, a flow routing analysis using detailed hydrographs must be applied. The Soil Conservation Service hydrologic methods (available inTR-20, HEC-1) can be used. The engineer may use other methods but must have their acceptability approved by the City engineer. These methods may also be used for the smaller areas.

DETENTION POND MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS

1. Silt shall be removed and the pond returned to original lines and grades when standing water conditions occur or the pond storage volume is reduced by more than 10%.

2. To limit erosion, no unvegetated area shall exceed 10 sq. ft in extent.

3. Accumulated paper, trash and debris shall be removed every 4 weeks or as necessary to maintain proper operation.

4. Ponds shall be mowed monthly between the months of May and September.

5. Corrective maintenance is required any time a pond does not drain completely within 60 hours of cessation of inflow (i.e., no standing water is allowed).

6. Structural integrity of pond embankments shall be maintained at all times.

7. Upon completion of development the owners/Homeowners association shall be required to maintain the detention basin in its original designed and approved condition.

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ORDINANCE 2020-12-00925 [AMENDING ORDINANCE 2009-04-00644, AMENDING ARTICLE J "CULVERTS"

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS, AMENDING CITY OF LUCAS ORDINANCE 2009-04-00644, PLANNING & DESIGN CRITERIA FOR STORMWATER RUN-OFF BY AMENDING ARTICLE J TITLED "CULVERTS"; PROVIDING A CONFLICTS CLAUSE; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUCAS, TEXAS, THAT:

Section 1. City of Lucas, Texas, Ordinance 2009-04-00644 is hereby amended by amending Article J titled "Culverts", to read as follows:

WATER RUN-OFF MANUAL

PLANNING AND DESIGN DRAINAGE CRITERIA

J. Culverts.

At locations of stream or open channel crossings with proposed roadway improvements, it is sometimes necessary to receive and transport storm water under the roadway in culverts. The quantity of flow shall be determined by the appropriate method, and the friction loss through of the culvert shall be calculated by Manning's Formula.

Design of culverts shall include the determination of upstream backwater conditions as well as downstream velocities and flooding conditions. Consideration shall be given to the discharge velocity from culverts, and the limitations specified culverts with the limitation that culvert pipe diameter shall not be a minimum less than 18". A headwall is required at exposed ends. Under private drives driveways, permanent culverts (those with reinforced concrete, asphalt, or AASHTO #3 gravel paving over the culvert) and temporary culverts (those without paving over the culvert) shall be constructed with reinforced concrete or minimum 16 gauge galvanized corrugated steel pipe. Temporary culverts and driveways must be removed within 18 months of permit issuance and the open channel reconstructed to its original design. Under public roads reinforced concrete culverts are required. Permanent culvert design shall include minimum embedment of Class B+ per the North Central Texas Council of Governments (NCTCOG) design manual drawing 3020 dated October 2004.eoncrete or steel culverts, under public road concrete culverts are required.

Section 2. To the extent of any irreconcilable conflict with the provisions of this ordinance and other ordinances of the City of Lucas governing the use and development of the Property and which are not expressly amended by this ordinance, the provisions of this ordinance shall be controlling. Section 3. That all ordinances of the City of Lucas in conflict with the provisions of this Ordinance shall be, and same are hereby, repealed, provided, however, that all other provisions of said Ordinances are not in conflict herewith shall remain in full force and effect.

Section 4. That should any word, sentence, paragraph, subdivision, clause, phrase or section of this Ordinance or of Ordinance 2009-04-00644, as amended hereby, be adjudged or held to be voided or unconstitutional, the same shall not affect the validity of the remaining portions of said Ordinances or Ordinance 2009-04-00644, as amended hereby, which shall remain in full force and effect.

Section 5. An offense committed before the effective date of the Ordinance is governed by prior law and the provisions of the City of Lucas Code of Ordinances in effect when the offense was committed and the former law is continued in effect for this purpose.

Section 6. That this Ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Lucas, and it is accordingly so ordained

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF LUCAS, COLLIN COUNTY, TEXAS, ON THIS 3rd DAY OF DECEMBER 2020.

APPROVED:

Jim Olk, Mayor

ATTEST:

APPROVED AS TO FORM:

Joseph J. Gorfida, Jr., City Attorney (10-_-020:Tht 118796)

Stacy Henderson, City Secretary



ARTICLE 10.04 STORMWATER RUNOFF REGULATIONS AND CONTROL

Sec. 10.04.001 Purpose

The purpose of this article is to diminish threats to the public health and safety caused by the runoff of excess stormwater, to minimize movement of soils resulting from development, to reduce the possibilities of hydraulic overloading of the storm sewer drainage system, to reduce economic losses to individuals and the community at large as a result of erosion and the runoff of excess stormwater, and to protect and conserve land and water resources, while at the same time ensuring orderly development. The provisions of this article are specifically intended to supplement existing ordinances regulating the following:

(1) The subdivision, layout, and improvement of lands located within the city;

(2) The excavating, filling, and grading of lots and other parcels or areas;

(3) The construction of buildings, including related parking and other paved areas, and the drainage of the sites on which those structures and their related parking and other paved areas are located; and

(4) The design, construction, and maintenance of erosion control and stormwater drainage facilities and systems.

Sec. 10.04.002 Definitions

For the purposes of this article, the following definitions are adopted:

<u>Base flood elevation</u>. The elevation delineating the flood level having a one-percent probability of being equaled or exceeded in any given year (also known as the 100-year flood elevation), as determined from flood insurance rate maps (FIRMS) or the best available information.

<u>*Channel.*</u> A natural or manmade open watercourse with definite bed and banks which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water.

City. The City of Lucas.

City engineer. The city engineer or his designee.

City manager. The city manager or his designee.

Conduit. Any channel, pipe, sewer, or culvert used for the conveyance of movement of water, whether open or closed.

<u>Control elevation</u>. Contour lines and points of predetermined elevation used to denote a detention storage area on a plat or site drawing.

<u>Design standards for public improvements</u>. Standards on file in the city's offices to which all designs and the resulting public improvements, must conform.

<u>Detention facility</u>. A facility constructed or modified to restrict the flow of stormwater to a prescribed maximum rate, and to concurrently detain the excess waters that accumulated behind the outlet.

<u>Detention storage</u>. The temporary detaining or storage of stormwater in storage basins, on rooftops, in streets, parking lots, school yards, parks, open space, or other areas under predetermined and controlled conditions, with the rate of drainage therefrom regulated by appropriately installed devices.

Discharge. The rate of outflow of water from any source.

Drainage area. The area from which water is carried off by a drainage system, i.e., a watershed or catchment area.

Excess stormwater runoff. The rate of flow of stormwater discharged from an urbanized drainage area which is or will be in excess of that volume and rate which represented or represents the runoff from the property prior to the date of this article.

<u>Floodplain</u>. The special flood hazard lands adjoining a watercourse, the surface elevation of which is lower than the base flood elevation and is subject to periodic inundation.

Hydrograph. A graph showing, for a given point on a stream or conduit, the runoff flow rate with respect to time.

Land disturbance. Any manmade change to improve or unimprove real estate including but not limited to building structures, filling, grading, excavation, clearing, or removal of vegetation.

(Ordinance 2009-04-00645 adopted 4/2/09)

<u>Municipal separate storm sewer system {MS4</u>}. A conveyance or system of conveyances including roads with drainage systems, municipal city streets, catchbasins, curbs, gutters, ditches, manmade channels or storm drains and similar means of collecting or conveying water runoff. (Ordinance 2020-06-00914 adopted 6/4/20)

<u>One-hundred-year storm</u>. A precipitation event of 24-hours' duration, having a one-percent chance of occurring in any one year.

<u>Peak flow</u>. The maximum rate of flow of stormwater at a given point or in a channel or conduit resulting from a predetermined storm or flood.

Sediment. Any particulate matter that can be transported by fluid flow, and which eventually is deposited.

Stormwater drainage facility. Any element in a stormwater drainage system which is made or improved by man.

<u>Stormwater drainage system</u>. All means, natural or manmade, used for conducting stormwater to, through, or from a drainage area to the point of final outlet including, but not limited to, any of the following: open and closed conduits and appurtenant features, canals, channels, ditches, streams, swales, culverts, streets, and pumping stations.

<u>Stormwater runoff</u>. The waters derived from precipitation within a tributary drainage area flowing over the surface of the ground or collected in channels or conduits.

<u>Time of concentration</u>. The elapsed time for stormwater to flow from the most distant point in a drainage area to the outlet or other predetermined point.

Two-year storm. A precipitation event having a fifty percent chance of occurring in any one year.

<u>Two-year storm runoff</u>. The stormwater runoff having a fifty percent probability of occurring in any one year.

<u>Unprotected channel</u>. A channel which receives stormwater discharge and which is not paved, riprapped, or otherwise improved by addition of manmade materials so as to reduce the potential for erosion.

Upland area. Any land whose surface drainage flows toward the area being considered for development.

<u>Urbanization</u>. The development, change, or improvement of any parcel of land consisting of one or more lots for residential, commercial, industrial, institutional, recreational, or public utility purposes.

<u>*Waterbody*</u>. Any natural or artificial pond, lake, reservoir, or other area which ordinarily or intermittently contains water and which has a discernable shoreline.

<u>*Watercourse*</u>. Any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale, or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed, or banks.

<u>Wet bottom detention basin</u>. A basin designed to retain a permanent pool of stormwater after having provided its planned detention of runoff during a storm event.

Sec. 10.04.003 Permit

Before initiating any activity regulated by this article, an applicant shall be required to obtain a permit from the city which indicated that the requirements of this article have been met. Permit fees shall be located in the city fee schedule for permits.

Sec. 10.04.004 Other requirements

In addition to meeting the requirements of section 10.04.003 and the more specific requirements of sections 10.04.005-10.04.031 of this article and before starting any activity regulated by this article, an applicant shall comply with the requirements set forth in all other related ordinances and state statutes and regulations.

(Ordinance 2009-04-00645 adopted 4/2/09)

Sec. 10.04.005 Specific requirements; general

Sediment shall be maintained on site and excess stormwater runoff shall be detained in connection with any new construction, development, redevelopment, or land use change occurring within the city in accordance with the requirements set forth in this article. (Ordinance 2020-05-00911 adopted 5/7/20)

Sec. 10.04.006 Discharge rate

The peak discharge rate after full development resulting from the proposed development shall not exceed the corresponding peak discharge rate prior to development during storms of 2-year, 5-year, 10-year, and 25-year return frequencies.

Sec. 10.04.007 Flood elevation

There shall be no detrimental effect on the floodway or the flood elevation during a 100-year storm upstream or downstream of the proposed development area as a result of the proposed development.

Sec. 10.04.008 Allowable detention facilities

The increased stormwater runoff resulting from proposed development shall be detained by providing for appropriate detention storage as required by this article. Where streets or parking areas are used for temporary storage of stormwater runoff all manholes for sanitary sewers shall be of a type which prevent the infiltration of the ponded water. Where streets are used for the temporary storage of stormwater runoff, in no case shall the maximum design depth exceed six (6) inches.

Sec. 10.04.009 Detention storage

Designs for detention storage and related appurtenances shall be submitted to the city for approval. Upon submittal of designs of detention storage the city shall make a determination as to whether any or all of the facilities proposed are to become part of the public drainage system. The city shall, at the same time, in the case of a proposed subdivision make a determination as to those control elevations that shall be entered on the final plat or make a determination as to the necessity for deed restrictions on any particular lot in said subdivision requiring the preservation of mandatory drainage facilities. Where a non-subdivided parcel of land is proposed for development, the city shall make a determination as to the need for covenants to maintain responsibility for mandatory drainage facilities. All of said facilities shall be designed and constructed in accordance with the city specifications, and shall be subject to continuing inspection during the construction period in the same manner as any other improvement regulated under this article. Detention facilities associated with residential subdivisions shall be in a separate lot that shall be deeded to the HOA after 75% of the lots in the subdivision are occupied and the lot soil stabilized. Prior to acceptance of the detention facility the city and the developer will inspect the facility to assure it meets all of the requirements of this article. If any deficiencies are found, the developer will be responsible to make the necessary changes at his expense. Wet bottom detention basin shall be aerated or designed to drain within 60 hours.

Sec. 10.04.010 Sizing of detention storage and outlet

Detention storage shall meet the requirements of this article and the city drainage manual.

Sec. 10.04.011 Discharge velocity

The discharge velocity from detention facilities shall not exceed three feet per second unless it is determined by the city that greater velocities will not be harmful to the receiving channel. Where the city's determination is requested, the developer shall make available such hydraulic or hydrologic computations as will adequately support the course of action being requested.

Sec. 10.04.012 Emergency spillway

Emergency spillways shall be provided to permit the safe passage of runoff generated from rainfall events in excess of the 100-year rainfall event.

Sec. 10.04.013 Freeboard

Detention storage areas shall have adequate capacity to contain the storage volume of tributary stormwater runoff with at least one foot of freeboard above the water surface during the 100-year rainfall event.

Sec. 10.04.014 Joint development of control system

Stormwater control systems may be planned in coordination by two or more property owners as long as the potential for damage from stormwater is not increased at intervening locations.

Sec. 10.04.015 Early installation of control systems

Stormwater control measures shall be installed prior to undertaking other grading of site and a schedule of construction for this purpose shall be submitted by the owner(s)/developer(s) prior to construction in the city.

Sec. 10.04.016 Flows from upland areas

The total drainage area must be used in calculating the allowable release rate. The required storage volume will be based on the project area only, with extraneous flows from upland areas being bypassed or discharged via overflow spillways or other devices. Where storm sewers are required they shall be of such size as will provide sufficient capacity to receive the flow generated by five-year storm from upland areas. As to the latter and regardless of whether it has occurred in fact, such upland area shall be deemed to have been fully developed for all

purposes of this requirement.

Sec. 10.04.017 Land disturbance of five acres or more

The developer shall comply with the Texas Commission on Environmental Quality or TPDES and federal NPDES permit for stormwater discharges associated with construction activity and provide a copy to the city prior to starting construction.

Sec. 10.04.018 Land disturbance of more than two acres and less than five acres

The developer shall submit to the city a sediment and erosion control plan that meets the requirements of the Texas Commission on Environmental Quality or TPDES and federal NPDES permit for stormwater discharges associated with construction activity prior to starting construction.

Sec. 10.04.019 All land disturbances

Land disturbances associated with any new construction, development, redevelopment, or land use change on any site of 2,500 square foot or larger or requiring a building permit shall incorporate into the development plan the following elements as minimum:

- (1) Stone construction entrance.
- (2) Silt fence or other sediment retaining device on the low side of the site.
- (3) Temporary seeding of disturbed areas remaining open more than three weeks.
- (4) Immediate removal of soil tracked into the public right-of-way.

(5) Permanent turf established. A copy of the development plan shall be submitted to the city prior to starting construction.

Sec. 10.04.020 Preliminary plats

Information indicating the manner in which the provisions of this article are to be met shall be submitted with the preliminary plats.

Sec. 10.04.021 Requirements for construction plans

Information indicating the manner in which the provisions of this article are to be met shall be submitted with all construction plan submissions or any other plan for improvements which falls under the requirements of <u>section</u> 10.04.005 of this article. All computations, plans, and specifications shall be prepared and sealed by a professional engineer registered in the state.

Sec. 10.04.022 Requirements for final plats

The easements or separate lots required for detention facilities shall be shown on the final plat. The control elevation for each detention facility shall be shown on the plat near the detention facility.

Sec. 10.04.023 Drainage and detention design requirements

All subdivisions and other proposed improvements which are subject to the provisions of <u>section 10.04.005</u> of this article shall incorporate such design features as are required in this article. Variation from these requirements shall require the approval of the city planning commission whose action shall be conditioned upon the following:

(1) That a petition be submitted describing in detail the rationale for the proposed designs change.

(2) That there are special circumstances or conditions affecting the property under consideration such that strict compliance with the provisions of this article would deprive the applicant of the reasonable use of his land.

(3) That the variance is necessary for the preservation and enjoyment of a substantial property right of the proprietor.

(4) That the granting of the variance will not be detrimental to the public health, safety, or welfare or injurious to other property in the territory in which said property is located.

Sec. 10.04.024 Maintenance

Designs of detention facilities will incorporate features which facilitate their inspection and maintenance. The designer shall submit an operation and maintenance (O&M) plan for any detention facility prior to its approval by the city. All privately owned detention facilities may be inspected by representatives of the city at such times as they deem necessary. If deficiencies, or conditions creating nuisances, are found, the owner or homeowners' association shall be required to initiate the necessary corrections within fourteen (14) days, and all deficiencies shall be corrected within forty-five (45) days.

Sec. 10.04.025 Safety features

Designs of detention facilities shall incorporate safety features, particularly at inlets, outlets, on steep slopes, and at any attractive nuisances. These features shall include, but not be limited to, fencing, handrails, lighting, steps, grills, signs, and other protective or warning devices so as to restrict access.

(Ordinance 2009-04-00645 adopted 4/2/09)

Sec. 10.04.026 Specific prohibition and illicit discharges

(a) No person shall introduce or cause to be introduced into the MS4 any discharge that causes or contributes to causing the city to violate a water quality standard, the city's TPDES permit, or any state-issued discharge permit for discharges from its MS4.

(b) No person shall dump, drain, spill, leak, pump, pour, emit, empty, discharge, leach, dispose, throw, place or otherwise introduce or cause, allow, or permit to be introduced any of the following substances in or on any public street, alley, storm sewer, drainage structure, drainage channel, stream, river, pond or any other public property. The following are illicit discharges:

(1) Any used motor oil, antifreeze, grease, solvents, toxic chemicals, paint, stain or any other petroleum product or waste;

(2) Any industrial waste;

(3) Any hazardous waste or infectious waste, including household hazardous waste;

(4) Any garbage, trash, filth, junk, domestic sewage or septic tank waste, cooking oil, grease trap waste, or grit trap waste;

(5) Any trash, rubbish, refuse, or wastepaper;

(6) Any wastewater from a commercial car wash facility; from any vehicle washing, cleaning, or maintenance at any new or used automobile or other vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus, or heavy equipment, by a business that operates more than two (2) such vehicles;

(7) Any wastewater from a commercial mobile power washer or from the washing or other cleaning of a building or mechanical equipment exterior that contains any soap, detergent, degreaser, solvent, other harmful cleaning substance;

(8) Any wastewater from commercial floor, rug, or carpet cleaning;

(9) Any wastewater from the saw cutting, wash down or cleaning of pavement that contains soap, detergent, solvent, degreaser, emulsifier, dispersant, or any other harmful cleaning substance; or any wastewater from the washing or cleaning of pavement where any spill, leak, or other release of petroleum based products, hazardous material, hazardous substance, hazardous waste or other pollutant has occurred, unless all such released material has been previously removed;

(10) Any effluent, overflow or blow down, from a cooling tower, condenser, compressor, emissions scrubber, emissions filter, or boiler;

(11) Any ready-mixed concrete, mortar, ceramic, asphalt base material, hydro mulch material, or any wastewater or substance from the cleaning of any vehicle or equipment containing, or used in transporting or applying, such material;

(12) Any runoff or wash down water from an animal pen, kennel, or foul or livestock containment area;

- (13) Any filter backwash from a swimming pool or fountain;
- (14) Any swimming pool, hot tub water, or public interactive water fountain containing disinfectants;

(15) Any discharge from water line disinfection by hyperchlorination or other means unless the disinfecting chemical has been removed or attenuated to the point where it is not a pollutant;

(16) Any fire protection water, not including firefighting water used by the fire department, containing "hazardous materials" as defined in the fire protection and prevention ordinance of the city;

(17) Any wastewater from a water curtain in a spray room used for painting vehicles or equipment;

- (18) Any contaminated or unpermitted stormwater discharge associated with an industrial activity;
- (19) Any substance or material that will damage, block, or clog the MS4;

(20) Any release from a petroleum storage tank (PST), or any leachate or runoff from soil contaminated by a leaking PST, or any discharge of pumped, confined, or treated wastewater from the remediation of any such PST release;

(21) Any petroleum oil, non-biodegradable cutting oil, transmission fluid, hydraulic fluid, brake fluid, power steering fluid, antifreeze or other household hazardous wastes;

(22) Any rubble, debris, rubbish, tile, concrete, brick, asphalt, or other building material resulting from demolition activities;

(23) Any ashes or burn refuse;

(24) Any weeds, grass cuttings, brush, or other yard debris;

(25) Solid or liquid substances which may cause obstruction to the flow in storm sewers or other interference with the proper operation of the stormwater system;

(26) Any wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;

(27) Any wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials;

(28) Fuels, oils, or other, pollutants used in vehicle and equipment operation and maintenance;

(29) Any discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs; and

(30) Any kind of other matter that will cause damage to the MS4 or any receiving bodies of water.

(c) Sediment and erosion control:

(1) No person shall introduce or cause to be introduced into the MS4 any harmful quantity of sediment, silt, earth, soil, or other material associated with clearing, grading, excavation, landfilling, or other construction activities (including any placement, movement, removal, or disposal of soil, rock, or other earth materials) in excess of what could be retained on site or captured by employing sediment and erosion control measures to the maximum extent practicable.

(2) No person shall implement erosion or sediment control measures not currently approved by the city.

(3) A construction project (commercial, residential, or capital improvement) shall not be considered complete and acceptable by the city until permanent erosion control measures have been installed to the city's satisfaction.

(4) No person shall conduct any land disturbing or construction activities:

(A) On property over one (1) acre in area without a director-approved erosion control design plan and a TCEQ submitted stormwater pollution prevention plan (SWPPP) for that area on properties 5 acres or greater; or

(B) On property less than one (1) acre in area that constitutes more than 50% of the site without a director approved erosion control design plan.

(5) No person shall knowingly fail to install or to maintain erosion control devices as shown or represented in the approved erosion control design plan and/or stormwater pollution prevention plan (SWPPP), including maintenance of grass or sod and sediment cleaning of erosion control devices.

(6) No person shall allow the build-up of off-site sediment from above or below ground construction related activities in any open space areas.

(d) No person shall connect or maintain a line conveying sewage, domestic or industrial, to the MS4.

(e) Any wash water from the service area, garage, or enclosure of a minor auto repair or fuel service station shall not discharge into the MS4.

(f) Regulation of pesticides, herbicides, and fertilizers:

(1) No person shall use or cause to be used any pesticide, herbicide, or fertilizer contrary to any directions for use on any labeling required by state or federal law.

(2) No person shall use or cause to be used any pesticide, herbicide, or fertilizer in any manner that the person knows, or reasonably should know, is likely to cause, or does cause, a harmful quantity of the pesticide, herbicide, or fertilizer to enter the MS4 or waters of the United States.

(3) No person shall dispose of, discard, store, or transport a pesticide, herbicide, or fertilizer, or a pesticide,

herbicide, or fertilizer container, in a manner that the person knows, or reasonably should know, is likely to cause, or does cause, a harmful quantity of the pesticide, herbicide, or fertilizer to enter the MS4 or waters of the United States.

(4) If provided with a display notice containing the provisions of this subsection, pertaining to the regulation of pesticides, herbicides, and fertilizers (or a reasonable description thereof), and the information that any user of the product may obtain further information from the director or designated individual, any person selling pesticides, herbicides, or fertilizers at retail or wholesale shall post the notice prominently where it may be read by purchasers of the product.

(g) Used oil regulation:

(1) No person shall:

(A) Pour, spill, leak, pump, empty, leach, dispose, or otherwise discharge used oil into the MS4 or a sewer, drainage system, septic tank, surface water, groundwater, or watercourse;

(B) Knowingly mix or commingle used oil with solid waste that is to be disposed of in a landfill or knowingly directly dispose of used oil on land or in a landfill; or

(C) Apply used oil to a road or land for dust suppression, weed abatement, or other similar use that introduces used oil into the environment.

(2) All businesses that change motor oil for the public and municipal waste transfer stations are encouraged to serve as public used oil collection centers as provided by <u>V.T.C.A.</u>, <u>Health and Safety Code § 371.024</u>, as amended.

(3) A retail dealer who annually sells directly to the public more than five hundred (500) gallons of oil in containers for use off-premises shall post in a prominent place a sign provided by the city or by the state informing the public that improper disposal of used oil is prohibited by law. The sign shall prominently display the toll-free telephone number of the state used oil information center.

(h) No person shall have inadequate or unsanitary sewage or plumbing facilities, contrary to the public health, safety or welfare or in violation of the codes and ordinances of the city and state that could pollute the MS4 sewer system.

(i) No person shall introduce or cause to be introduced into the sanitary sewer system any discharge of stormwater, polluted or unpolluted, or any discharge that causes or contributes to causing the city to violate a water quality standard, its agreements associated with the regional sewage treatment plants, or any state issued permit.

(j) Any person that causes a spill, release, or other discharge of a prohibited substance or other pollutant to the MS4 is responsible for the cleanup and removal of the substance from the MS4 or any area adjacent to the MS4 that is exposed to stormwater runoff. The owner of the property on which the spill, release, or discharge occurred is responsible for the cleanup or removal of the substance from the MS4 or any area adjacent to the MS4 if the person that caused the spilt release, or discharge to the MS4 is unknown.

(k) Sanitary sewer overflows shall be prevented in any way possible. All sanitary sewer overflows shall be reported to the city as soon as the owner, occupant, or person otherwise having control of the sanitary sewer becomes aware of the overflow and to the appropriate federal and state agencies within twenty-four (24) hours.

(1) No person shall store items segregated for separate collection, disposal, recycling or reuse in a manner that allows pollutants to enter the MS4. Drums, dumpsters and polycarts shall be closed, not leaking, and in good condition.

(m) Parking lot storm drain inlets shall be maintained free of trash, litter, garbage, rubbish, grass clippings, leaves, and other debris material.

(n) Trash and litter on any parcel of land shall be collected for appropriate disposal prior to mowing.

(o) The owner, owner's representative, operator, contractor or developer of property shall comply with the TXR150000 general construction permit, Industrial TXR050000 permit or city approved erosion control design plan relating to said property.

Sec. 10.04.027 Prohibition of illicit connections

(a) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited, including, but not limited to, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(b) A person violates this article if such person connects or maintains a line conveying sewage to the MS4.

(c) Connections in violation of this article must be disconnected and redirected, if necessary, to an approved onsite wastewater management system or the sanitary sewer system upon approval of the director.

(d) Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm sewer system, shall be located by the owner or occupant of that property upon receipt of written notice of violation from the director requiring that such location be completed. Results of these locations are to be documented and provided to the director.

Sec. 10.04.028 Responsibility

The administration of this article shall be the responsibility of the city.

Sec. 10.04.029 Interpretation

In the interpretation and application of this article, the provisions expressed herein shall be held to be the minimum requirements and shall be liberally construed in favor of the city.

Sec. 10.04.030 Appeals

The city council is hereby designated as the appeals board for disputes arising from the application of this article. The council's responsibility shall be to hear appeals where it is alleged by an appellant that there is error in any order, requirement, decision, grant or refusal made by the city in the enforcement of the provisions of this article.

Sec. 10.04.031 Penalties

(a) <u>General</u>. Any person, firm, organization, association, or corporation violating any of the provisions of this article, including violation of any variances granted under the authority of this article, shall be deemed guilty of a violation of a municipal ordinance and each such person or other entity shall be deemed guilty of a separate offense for each and every day or portion thereof that any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of such violation, such person or other entity may be punished by a fine of not less than two hundred and fifty dollars (\$250.00) and not more than two thousand dollars (\$2,000.00).

(b) <u>Additional corrective actions</u>. Any building or structure constructed in violation of the provisions of this article or any use carried on in violation of this article is hereby declared to be a nuisance per se, with any court of competent jurisdiction having the authority to determine that the owner or developer is guilty of maintaining a nuisance per se and to order such nuisance abated. In this connection, the city is hereby authorized to institute any appropriate action or proceeding in any appropriate court to prevent, restrain, correct, or abate any violations of this article.

(Ordinance 2020-06-00914 adopted 6/4/20)



Requestor: Mayor Jim Olk

Agenda Item Request

Executive Session.

An Executive Session is not scheduled for this meeting.

As authorized by Section 551.071 of the Texas Government Code, the City Council may convene into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney regarding any item on the agenda at any time during the meeting. This meeting is closed to the public as provided in the Texas Government Code.

Background Information

NA

Attachments/Supporting Documentation

NA

Budget/Financial Impact

NA

Recommendation

NA

Motion

NA



Item No. 09

Requester: Mayor Jim Olk

Agenda Item Request

Reconvene from Executive Session and take any action necessary as a result of the Executive Session.

Background Information

NA

Attachments/Supporting Documentation

NA

Budget/Financial Impact

NA

Recommendation

NA

Motion

NA