WORKSHOP & REGULAR MEETING
OF THE TOWN COUNCIL

Tuesday, January 16, 2024
6:00 PM
Little Elm Town Hall
100 W Eldorado Parkway, Little Elm, TX 75068

1. **Call to Order Council Workshop at 6:00 p.m.**

   A. Present and Discuss the **2024 Look Ahead.**

   B. Present and Discuss the **Community Waste Disposal Annual Report.**

2. **Roll Call/Call to Order Regular Town Council Immediately Following Council Workshop.**

   A. Invocation.

   B. Pledge to Flags.

   C. Items to be Withdrawn from Consent Agenda.

   D. Emergency Items if Posted.

   E. Request by the Town Council for Items to be Placed on a Future Agenda for Discussion and Recognition of Excused Absences.

F. **Presentation of Monthly Updates.**
Presentation of monthly updates from department heads: concerning law enforcement activities, municipal court, customer service, emergency medical services, fire department response, fire prevention activities, emergency management, ongoing economic development projects, building permits, code enforcement activities, library activities, human resources updates, information technology report, revenue and expenditure report, street construction status, sanitation services, highway construction status, utility operations, parks and recreation activities, as well as facility and fleet updates.

G. Town Council to Highlight Items on the Agenda Needing Further Discussion or Comments Prior to the Regular Session.

3. **Presentations.**

A. Present a **Proclamation Recognizing January 15, 2024 as Dr. Martin Luther King, Jr. Day of Service.**

4. **Public Comments**
Persons may address the Town Council on any issue. This is the appropriate time for citizens to address the Council on any concern whether on this agenda or not. In accordance with the State of Texas Open Meeting Act, the council may not comment or deliberate such statements during this period, except as authorized by Section 551.007, Texas Government Code.

5. **Consent Agenda**
All matters listed under the Consent Agenda are considered to be routine by the Town Council and require little or no deliberation. There will not be a separate discussion of these items and the agenda will be enacted by one vote. If the Council expresses a desire to discuss a matter listed, that item will be removed from the consent agenda and considered separately.

A. Consider Action to Approve the **Minutes from the December 19, 2023, Regular Town Council Meeting.**

B. Consider Action to Approve **Ordinance No. 1748 Providing for Refuse Rates; Providing for a Repealing Clause; Providing for a Severability Clause; and, Providing an Effective Date for Community Waste Disposal for an Annual Market Adjustment per the Current Service Contract.**

C. Consider Action to Accept the **Transfer and Assignment from North Texas Municipal Water District Easements and Facilities to the Town of Little Elm.**

D. Consider Action to Approve a **Professional Services Agreement with Freese and Nichols, Inc., for Construction Observation and Inspection Services Related to the Wastewater Treatment Plant Dewatering & Clarifier Improvements Project in the amount of $97,300, and Authorize the Town Manager to Execute the Contract.**

E. Consider Action to Award **Mr. Jim's Pizza for Pizza Delivery Services in the estimated annual amount of $50,000.**

F. Consider Action to Approve **Change Order #1 to the Construction Contract for the Wood Family Dog Park Expansion Project with Ratliff Hardscape, LTD in the amount of $85,091.**

G. Consider Action to Approve the **Purchase of Playground Equipment for the Cottonwood Park Project from Whirlix Design, Inc. in an amount not to exceed $574,681.**

6. **Regular Items.**

A. Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1744 Regarding a Request to Rezone Approximately 2.476 Acres of Land, Currently Zoned as Light Commercial, Generally Located South of the Intersection of Lake Trail Drive and East Eldorado Parkway, within Little Elm's Town Limit's, in Order to Establish a New Planned Development District Based on Light Commercial Standards, with Modified Development Standards for a Commercial Dog Grooming and Boarding Service with Outdoor Play Areas, and Publicly Accessible Dog Park.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1744:

B. Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1747 Regarding a Request to Rezone a Approximately 4.4780 Acres of Land, Currently Zoned a Light Commercial, Generally Located on the Southeast Corner of South Elm Ridge Road and East University District, within Little Elm's Town Limits, in Order to Establish a New Planned Development District with a Light Commercial Base, within Modified Development Standards, for a Veterinary Clinic with Outdoor Kennel and Retail Buildings.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1747:

C. Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1745 Regarding a Proposed Text Amendments to Chapter 106, Zoning Ordinance, by Amending Certain Sections and Associated Appendices in Order to Establish Compliance with New State Statues as a Result of the Recent Legislative Session and Enable Minor Corrections and Clarifications Throughout the Text.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1745:

D. Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1746 Regarding a Proposed Text Amendments to Chapter 107, Zoning Ordinance, by Amending Certain Sections and Associated Appendices in Order to Establish Compliance with New State Statues as a Result of the Recent Legislative Session and Enable Minor Corrections and Clarifications Throughout the Text.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1746:

E. Present, Discuss, and Consider Action on a **Development Agreement between the Town of Little Elm and Happy Tails of Texas LLC.**

F. Present, Discuss, and Consider Action on a **Development Agreement between the Town of Little Elm and Twin Lakes Vet LLC.**

G. Present, Discuss, and Consider Action to **Appoint a Planning and Zoning Commission Council Liaison Replacement.**

H. Present, Discuss, and Consider Action on **Recommendations from the Charter Review Committee.**

I. Present the **2023 Strategic Report.**

7. **Convene in Executive Session pursuant to Texas Government Code:**

- Section 551.071 for private consultation with the Town Attorney to discuss the COVID-19 pandemic and municipal authority to respond to the COVID-19 outbreak and to seek legal advice with respect to pending and contemplated litigation and including all matters on this agenda to which the Town Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the Town Council.
- Section 551.072 to discuss certain matters regarding real property.

- Section 551.074 of the Texas Government Code to discuss and deliberate personal matters to evaluate performance duties, of a public officer or employee(s).
- Section 551.076 to discuss security matters.
- Section 551.087 to discuss Economic Development.

8. **Reconvene into Open Session**

Discussion and consideration to take any action necessary as the result of the Executive Session:

- COVID-19 Pandemic and the Town's response thereto, including the consideration of an emergency declaration ordinance.
- Section 551.071 for private consultation with the Town Attorney to discuss the COVID-19 pandemic and municipal authority to respond to the COVID-19 outbreak and to seek legal advice with respect to pending and contemplated litigation and including all matters on this agenda to which the Town Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the Town Council.
- Section 551.072 to discuss certain matters regarding real property.
- Section 551.074 of the Texas Government Code to discuss and deliberate personal matters to evaluate performance duties, of a public officer or employee(s).
- Section 551.076 to discuss security matters.
- Section 551.087 to discuss Economic Development.

9. **Adjourn.**

Pursuant to the Texas Open Meeting Act, (Chapter 551, Texas Government Code), one or more of the above items will be taken or conducted in open session following the conclusion of the executive closed session.

Persons with disabilities who plan to attend this meeting and who may need auxiliary aide of service such as interpreters for the hearing impaired, reader or large print are requested to contact the secretary at 214-975-0452 two days prior to the meeting so appropriate arrangements can be made. **BRAILLE IS NOT PROVIDED.**

Respectfully,

Town Secretary

This is to certify that the above notice was posted on the Town's website this 12th day of January 2024 before 5:00 p.m.

Date:	01/16/2024
Agenda Item #:	1. A.
Department:	Administrative Services
Strategic Goal:	Maintain operational integrity and viability
Staff Contact:	Matt Mueller, Town Manager

AGENDA ITEM:

Present and Discuss the **2024 Look Ahead.**

DESCRIPTION:

The Town Manager will present an overview to Town Council regarding projects and initiatives that are planned for 2024.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Information only, no action required.

Date:	01/16/2024
Agenda Item #:	1. B.
Department:	Administrative Services
Strategic Goal:	Ensure strong relationship within the community and region
Staff Contact:	Jason Shroyer, Director of Public Works

AGENDA ITEM:

Present and Discuss the **Community Waste Disposal Annual Report.**

DESCRIPTION:

Community Waste Disposal, the Town's waste management provider, will give Town Council an annual report.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Information only, no action required.

Date:	01/16/2024
Agenda Item #:	3. A.
Department:	Administrative Services
Strategic Goal:	Ensure strong relationship within the community and region
Staff Contact:	Kate Graham, Assistant to the Town Manager

AGENDA ITEM:

Present a **Proclamation Recognizing January 15, 2024 as Dr. Martin Luther King, Jr. Day of Service.**

DESCRIPTION:

Mayor Cornelious will present a proclamation recognizing January 15, 2024 as Dr. Martin Luther King, Jr. Day of Service.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Information only, no action required.

Attachments

2024 Dr Martin Luther King Jr Day of Service Proclamation

LITTLE ELM

Proclamation

WHEREAS, Dr. Martin Luther King, Jr. devoted his life to the advancement of civil rights and public service. He believed in a nation of freedom and justice for all, and challenged all citizens to help build a more perfect union and live up to the purpose and potential of America; and

WHEREAS, Dr. King recognized that everyone can be great because everyone can serve, and during his lifetime encouraged all Americans to serve their neighbors and their communities; and

WHEREAS, Dr. King's legacy is honored each year on the third Monday of January; and

WHEREAS, in 1994, Congress initiated The King Day of Service, a nationwide effort to transform the federal holiday honoring Dr. Martin Luther King, Jr. into a day of community service, grounded in Dr. King's teachings, that helps solve social problems while focusing on bringing people together and breaking down the barriers that have divided us as a nation; and

WHEREAS, hundreds of thousands of volunteers in cities and towns across the nation participate in King Day service projects in all 50 states, the District of Columbia, Guam, and Puerto Rico; and

WHEREAS, the King Day of Service, which falls on January 15th this year, is a time for the people of Little Elm to recognize Dr. King's teachings on advancing equality and opportunity for all by contributing their own time and talents in a day of service; and

WHEREAS, the King Day of Service is an excellent opportunity to take the first step in making service a regular activity in the lives of Little Elm residents. It is an important day to encourage each citizen to take part in service that will benefit communities and neighborhoods and provide a fitting memorial to the life of Martin Luther King, Jr.; and

WHEREAS, the Town of Little Elm salutes members of historically African American fraternities and sororities who have made community service an integral part of their missions including Alpha Phi Alpha, Kappa Alpha Psi, Omega Psi Phi, Phi Beta Sigma, and Iota Phi Theta Fraternities and Alpha Kappa Alpha, Delta Sigma Theta, Zeta Phi Beta, and Sigma Gamma Rho Sororities.

NOW, THEREFORE, we declare January 15, 2024 as **Dr. Martin Luther King, Jr. Day**

of Service 2024 and urge residents to honor the memory of Dr. King, to put his teachings into action, and to find ways to give back to their community.

Given under my hand and Seal of the Town of Little Elm, Texas, this 16th day of January, 2024.

_____

Curtis J. Cornelious, Mayor of Little Elm

Date:	01/16/2024
Agenda Item #:	5. A.
Department:	Administrative Services
Strategic Goal:	Maintain operational integrity and viability
Staff Contact:	Caitlan Biggs, Director of Administrative Services/Town Secretary

AGENDA ITEM:

Consider Action to Approve the **Minutes from the December 19, 2023, Regular Town Council Meeting.**

DESCRIPTION:

The minutes from the December 19, 2023, regular Town Council meeting are attached for approval.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

Minutes - December 19, 2023

D R A F T

Minutes
Town of Little Elm
100 W Eldorado Parkway
Little Elm, Texas 75068
214-975-0404
http://www.littleelm.org

REGULAR TOWN COUNCIL MEETING
TUESDAY DECEMBER 19, 2023 - 6:00 p.m.

Present: Mayor Curtis J. Cornelious; Council Member Neil Blais; Mayor Pro Tem Jamell T. Johnson; Council Member Tony Singh; Council Member Lisa G. Norman; Council Member Andrew Evans; Council Member Michel Hambrick

Staff Present: Caitlan Biggs, Director of Administrative Services/Town Secretary; Jennette Espinosa, Executive Director; Joe Florentino, Assistant Town Manager; Matt Mueller, Town Manager; Chad Hyde, Director of Community Services; Doug Peach, Deputy Town Manager; Fred Gibbs, Director of Development Services; Jason Shroyer, Director of Public Works; Kelly Wilson, Chief Financial Officer; Paul Rust, Fire Chief; Robert Brown, Town Attorney; Rodney Harrison, Police Chief; Shea Rodgers, Chief Information Officer

1. Call to Order Council Workshop at 6:00 p.m.

Meeting was called to order at 6:00 p.m.

A. Discuss an **Overview of Short-Term Rentals.**

Development Services Director Fred Gibbs gave an overview of the item in the attached presentation. Staff will continue to push out educational materials related to our short-term rental ordinance.

B. Present an **Update on Pedestrian Safety Measures for Highway U.S. 380.**

Police Chief Rodney Harrison gave the update on this item. He stated that the police department put an enforcement plan in place for students crossing traffic not at the crosswalks. Staff also met with TxDOT to discuss additional safety measures.

2. Roll Call/Call to Order Regular Town Council Immediately Following Council Workshop.

A. Invocation.

Council Member Neil Blais gave the invocation.

B. Pledge to Flags.

C. Items to be Withdrawn from Consent Agenda.

None.

D. Emergency Items if Posted.

None.

E. Request by the Town Council for Items to be Placed on a Future Agenda for Discussion and Recognition of Excused Absences.

None.

F. **Presentation of Monthly Updates.**
Presentation of monthly updates from department heads: concerning law enforcement activities, municipal court, customer service, emergency medical services, fire department response, fire prevention activities, emergency management, ongoing economic development projects, building permits, code enforcement activities, library activities, human resources updates, information technology report, revenue and expenditure report, street construction status, sanitation services, highway construction status, utility operations, parks and recreation activities, as well as facility and fleet updates.

Town Manager Matt Mueller stated town offices will be closed December 25, 26, and January 1.

G. Town Council to Highlight Items on the Agenda Needing Further Discussion or Comments Prior to the Regular Session.

None.

3. **Presentations.**

A. Present **Certificates of Recognition to Zero Debt College Project Students Who Have Been Awarded the White House Presidential Service Award.**

The Mayor presented the certificates.

B. Recognition of the **19U 2005 Little Elm Fusion for Winning the Tournament of Champions.**

The Mayor presented the certificate.

C. Present **Town Manager Challenge Coin.**

Town Manager Matt Mueller presented Mayor Curtis J. Cornelious with a challenge coin for graduating with his Masters in Business Administration.

4. Public Comments

Persons may address the Town Council on any issue. This is the appropriate time for citizens to address the Council on any concern whether on this agenda or not. In accordance with the State of Texas Open Meeting Act, the council may not comment or deliberate such statements during this period, except as authorized by Section 551.007, Texas Government Code.

None.

5. Consent Agenda

All matters listed under the Consent Agenda are considered to be routine by the Town Council and require little or no deliberation. There will not be a separate discussion of these items and the agenda will be enacted by one vote. If the Council expresses a desire to discuss a matter listed, that item will be removed from the consent agenda and considered separately.

Motion by Council Member Neil Blais, seconded by Council Member Tony Singh ***to approve the Consent Agenda.***

Vote: 7 - 0 - Unanimously

A. Consider Action to Approve the **Minutes from the December 5, 2023, Regular Town Council Meeting.**

B. Consider Action to Approve **Ordinance No. 1743 Amending Article IV, "Senior Center and Community Recreation Center," of Chapter 74, "Parks and Recreation," of the Code of Ordinances of the Town of Little Elm, by Amending Section 74-62, "Community Recreation Center Fees", and Section 74-63, "Facility and Community Room Reservation Rates"; Providing for a Repealer Clause; Providing a Savings Clause; Providing a Severability Clause, and Providing an Effective Date.**

C. Consider Action to Approve the **Canine Ownership Transfer Agreement for the Retirement of Little Elm Police Department Canine Otto.**

D. Consider Action to Approve a **Five-Year Agreement for Flock Safety License Plate Recognition Cameras.**

E. Consider Action to Approve the **Final Acceptance of the FM 423 Green Ribbon Landscaping Improvement Project and Release Retainage Funds in the amount of $64,715.58.**

F. Consider Action to Approve **Amendment #1 to a Professional Services Agreement with Cobb-Fendley & Associates regarding Development Plan Review Services for Fiscal Year 2023-2024 in an estimated amount of $100,000.**

6. Regular Items.

A. Present, Discuss, and Consider Action to Approve the **2024 Strategic Plan.**

Motion by Council Member Neil Blais, seconded by Council Member Andrew Evans ***to table this item to the January 16, 2024 meeting.***

Vote: 7 - 0 - Unanimously

Director of Administrative Services Caitlan Biggs gave an overview of the item in the attached presentation. Council Member Evans requested more time to review the document before voting.

B. Consider Action to Approve an **Interlocal Agreement for Fire Protection Services between the Town of Little Elm and Denton County Fresh Water Supply Districts 8-A, 8-B, 11-A, 11-B, and 11-C.**

Motion by Council Member Michel Hambrick, seconded by Mayor Pro Tem Jamell T. Johnson ***to approve the interlocal agreement.***

Vote: 7 - 0 - Unanimously

C. Consider Action to Approve an **Interlocal Agreement for Fire Protection Services between the Town of Little Elm and Elm Ridge Water Control and Improvement District of Denton County.**

Motion by Council Member Andrew Evans, seconded by Council Member Lisa G. Norman ***to approve the interlocal agreement.***

Vote: 7 - 0 - Unanimously

7. Convene in Executive Session pursuant to Texas Government Code:

- Section 551.071 for private consultation with the Town Attorney to discuss the COVID-19 pandemic and municipal authority to respond to the COVID-19 outbreak and to seek legal advice with respect to pending and contemplated litigation and including all matters on this agenda to which the Town Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the Town Council.
- Section 551.072 to discuss certain matters regarding real property.
- Section 551.074 of the Texas Government Code to discuss and deliberate personal matters to evaluate performance duties, of a public officer or employee(s).
- Section 551.076 to discuss security matters.
- Section 551.087 to discuss Economic Development.

Council convened into Executive Session at 6:54 p.m.

8. Reconvene into Open Session

Discussion and consideration to take any action necessary as the result of the Executive Session:

- COVID-19 Pandemic and the Town's response thereto, including the consideration of an emergency declaration ordinance.
- Section 551.071 for private consultation with the Town Attorney to discuss the COVID-19 pandemic and municipal authority to respond to the COVID-19 outbreak and to seek legal advice with respect to pending and contemplated litigation and including all matters on this

agenda to which the Town Attorney has a duty under the Texas Rules of Discipline and Professional conduct regarding confidential communication with the Town Council.

- Section 551.072 to discuss certain matters regarding real property.
- Section 551.074 of the Texas Government Code to discuss and deliberate personal matters to evaluate performance duties, of a public officer or employee(s).
- Section 551.076 to discuss security matters.
- Section 551.087 to discuss Economic Development.

Town Council reconvenend into Open Session at 8:08 p.m. No action was taken.

9. Adjourn.

Meeting was adjourned at 8:08 p.m.

Respectfully,

Caitlan Biggs
Town Secretary

Passed and Approved this 16th day of January 2024.

Date:	01/16/2024
Agenda Item #:	5. B.
Department:	Finance
Strategic Goal:	Maintain operational integrity and viability
Staff Contact:	Kelly Wilson, Chief Financial Officer

AGENDA ITEM:

Consider Action to Approve **Ordinance No. 1748 Providing for Refuse Rates; Providing for a Repealing Clause; Providing for a Severability Clause; and, Providing an Effective Date for Community Waste Disposal for an Annual Market Adjustment per the Current Service Contract.**

DESCRIPTION:

Community Waste Disposal (CWD) has requested a market adjustment in accordance with the Refuse and Recycling service contract. The market adjustment will become effective on February 1, 2024, for commercial customers only. The Town's current service contract with CWD allows for commercial rates to have an annual adjustment every year effective February 1 for an increase in the CPI, landfill increases, and a fuel cost adjustment. The 2024 Little Elm adjustment worksheet outlines the details behind these various service factors:

- CPI increase of 6.05%
- Fuel increase of -57.45%
- Landfill increase of 5.22%

Ordinance No. 1748 provides for the refuse rates effective date February 1, 2024, for commercial customers.

BUDGET IMPACT:

There is no momentary impact to the Town for this rate adjustment to commercial customers. CWD bills commercial customers directly.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

Ordinance No. 1748 Commercial SW Rates

CWD Letter dated 12.29.2023

Schedule A
CPI Supporting Documentation
Landfill letter

ORDINANCE NO. 1748

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, PROVIDING FOR REFUSE RATES; PROVIDING FOR A REPEALING CLAUSE; PROVIDING FOR A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

BE IT OBTAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS THAT:

SECTION 1. Refuse Rates: From and after the effective date hereof the charges to be collected for sanitation service are as follows:

Refuse Rates	**$**	**Rate** (Effective 10-01-2023)
Residential Customers – garbage (monthly)		15.50
Residential Customers – recycle (monthly)		3.43
Additional Refuse Cart (ea.)		7.70
Additional Recycle Cart (ea.)		2.42
Replacement of Refuse Cart		75.00

Multi-family Rates	**$**	**Rate** (Effective 2-01-2024)
Recycle rates per unit		0.67

Commercial Customers	**$**	**Rate** (Effective 2-01-24)
Front Load Trash - 2 cubic yard		
1 x week		105.69
2 x week		189.67
3 x week		248.80
4 x week		330.43
5 x week		391.37
6 x week		438.56
Front Load Trash - 3 cubic yard		
1 x week		112.92
2 x week		213.36
3 x week		337.47
4 x week		420.52
5 x week		528.74
6 x week		536.02
Front Load Trash - 4 cubic yard		
1 x week		128.86
2 x week		230.17
3 x week		306.82
4 x week		407.71
5 x week		482.34
6 x week		540.86

Front Load Trash - 6 cubic yard		
1 x week		164.76
2 x week		291.93
3 x week		405.34
4 x week		535.90
5 x week		631.65
6 x week		685.10
Front Load Trash - 8 cubic yard		
1 x week		209.10
2 x week		363.99
3 x week		537.63
4 x week		708.77
5 x week		835.02
6 x week		936.99
Front Load Compactors - 6 cubic yard		
1 x week		594.18
2 x week		1,093.87
3 x week		1,831.84
4 x week		2,287.66
Front Load Cardboard - 8 cubic yard		
1 x week		88.76
2 x week		177.51
3 x week		266.20
Front Load Miscellaneous Charges		
Casters (per container)		12.80
Gates (per pick-up)		10.21
Locks (per pick-up)		10.21
Commercial Collection – 95 Gallon Cart (refuse)		
1 x week		24.52
Each additional Carts (1 x week)		19.09
Commercial Collection – 95 Gallon Cart (recycle)		
1 x week		16.30
Each additional Carts (1 x week)		12.18
Commercial Roll Off Services		
35SC Weekday Haul * #		420.62
35SC Weekend Haul * #		456.46
40RC Weekday Haul * #		438.54
40RC Weekend Haul * #		474.32
# Disposal for payload tons up to 54K pds GVW		64.06
# Disposal charge for excess payload over 54K pds		162.45
6 Yard Recycle Containers		
Weekday transport		114.22
Rental		21.21

NOTE: All commercial dumpster customers are charged the monthly rate plus gate charges plus any other miscellaneous services required.

The monthly fee for solid waste collection and disposal services shall be set from time to time by appropriate written resolution ordinance of the Town Council. Such fee shall include collection and disposal charges, monthly billing charges, franchise fees, and applicable sales

tax. The monthly fee for such services shall be charged along with water and sewer charges. A penalty for an overdue bill may be charged.

SECTION 2. Service Fees: From and after the effective date hereof the charges to be collected for service fees associated with providing refuse services are as follows:

Service Fees	**$**	**Rate** (Effective 02-01-19)
Delinquent Fee (failure to pay)		50.00
Return Check Fee		30.00

SECTION 3. Repeal of conflicting ordinances: All ordinances or parts of ordinances in force when the provisions of this ordinance become effective, which are inconsistent or in conflict with the terms or provisions contained in this ordinance, are hereby repealed to the extent of any such conflict. This Ordinance amends those refuse rates previously established by Ordinance Nos. 1089, 1121, 1257, 1307, 1370, 1434, 1476, 1535, 1586, 1654, 1701, and 1728.

SECTION 4. Severability Clause: If any clause, phrase, sentence, paragraph or section of this ordinance shall be void or unconstitutional for any reason, such invalidity shall not affect any other provisions of the ordinance and such clause, phrase, sentence, paragraph or section is hereby declared severable.

SECTION 5. Saving Clause: This Ordinance shall be cumulative of all other ordinances of the Town and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are in direct conflict with the provisions of this Ordinance. This Ordinance amends those refuse previously established by Ordinance No. 1089, 1121, 1257, 1307, 1370, 1434, and 1476, 1535, 1586, 1654, 1701, and 1728.

SECTION 6. Providing for Publication: Providing for the publication of this caption of this ordinance and effective date hereof. The newspaper having general circulation in the Town shall be effective immediately upon its passage and publication.

SECTION 7. Effective date: This Ordinance shall take effect immediately following its adoption and publication in accordance with and provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas, on the 16th day of January 2024.

TOWN OF LITTLE ELM, TEXAS

_____
Curtis J. Cornelious, Mayor

ATTEST:

_____
Caitlan Biggs, Town Secretary

December 29, 2023

Matt Mueller
Town Manager
Town of Little Elm
100 West Eldorado
Little Elm, TX 75068-5060

RE: Commercial Cost Adjustment Effective February 01, 2024

Dear Matt:

In accordance with the Contract with Community Waste Disposal, LP for Collection of Solid Waste, Community Waste Disposal (CWD) request an annual cost adjustment. This notice is to inform you of our request for a cost adjustment effective February 01, 2024. Attached is a new schedule "A" outlining the changes in rates. Also included are the CPI index, the Henry Hub Natural Gas Spot Prices, and a worksheet that recaps the changes in disposal, fuel, and landfill.

The information below is a sample that reflects the adjustment for Town of Little Elm commercial customer base.

2023 Commercial 35 SC Haul	$ 410.19	2023 Commercial 1x8x1	$ 203.76
2024 Commercial 35 SC Haul	$ 420.62	2024 Commercial 1x8x1	$ 209.10

If you would like to schedule a meeting with Town Management/Staff to discuss CWD's 2024 cost adjustment request. Please contact Municipal Coordinator, Robert Medigovich at 972.333.6106.

Sincerely,

Chyna Nguyen
Accounts Receivable Manager

Enc: Schedule A for 2024
Adjustment Worksheet
CPI Statistical Data
Henry Hub Fuel Prices

CC: Robert Medigovich
Greg Roemer
Jim Huyck
Jason Roemer
Kelly Wilson
Doug Peach

2010 California Crossing Road
Dallas, Texas 75220-2310
Telephone
972.392.9300 or 817.795.9300
Facsimile
972.392.9301

2023 LITTLE ELM ADJUSTMENT WORKSHEET

Note: CWD considers this material as proprietary rate information that could affect their competiveness if the waste services contract goes to competitive bid process. Therefore, CWD requests that their market adjustment, extension request letters and all associated discussion information to be exempt from public disclosure. CWD request this information is exempt from Public Records, and is only allowed to be part of Public Records, after a ruling of the Attorney General of Texas.

CPI Information		
CPI Nov 2022	**282.445**	
CPI Nov 2023	**299.532**	
Change	**17.087**	
CPI-U LESS ENERGY (Nov 23)		**6.05%**

Fuel worksheet

Henry Hub Natural Gas Spot Price
(Dollars per Million BTU)
(Sept, Oct, and Nov)

	2022	***2023***
Week 1	9.17	2.57
Week 2	8.30	2.52
Week 3	8.42	2.71
Week 4	7.69	2.62
Week 5	6.63	2.66
Week 6	6.01	2.91
Week 7	6.29	3.20
Week 8	5.48	2.86
Week 9	5.12	2.89
Week 10	4.57	3.17
Week 11	4.34	2.46
Week 12	6.06	2.74
Week 13	6.41	2.64
Average	**6.50**	**2.77**
Dollar Change		**(3.73)**
Percent of Change		**-57.45%**

Landfill Information		
Landfill Prior	36.00	
Current	37.88	
Difference in $	1.88	
Percentage		**5.22%**

	F/L	R/O	R/O Excessive Weight	Resi Trash	Resi Rcy
CPI	65%	55%	0%	69%	83%
Fuel	5%	5%	0%	4%	5%
Disposal	30%	40%	100%	27%	12%
	100%	100%	100%	100%	100%

	F/L	R/O	R/O Excessive Weight	Resi Trash	Resi Rcy
CPI	3.93%	3.33%	0.00%	4.17%	5.02%
Fuel	-2.87%	-2.87%	0.00%	-2.30%	-2.87%
Disposal	1.57%	2.09%	5.22%	1.41%	0.63%
Total	**2.63%**	**2.54%**	**5.22%**	**3.29%**	**2.78%**

Schedule A

Town of Little Elm Solid Waste Collection and Recycling Serivces

Cost Adjustment for Commercial Customers Only

For the period of;

February 01, 2024 to January 31, 2025

Note: CWD considers this material as proprietary rate information that could affect their competiveness if the waste services contract goes to competitive bid process. Therefore, CWD requests that their market adjustment, extension request letters and all associated discussion information to be exempt from public disclosure. CWD request this information is exempt from Public Records, and is only allowed to be part of Public Records, after a ruling of the Attorney General of Texas.

Solid Waste Collection and Recycling Serivces	Feb 1, 2023 City Pricing with Franchise Fee	Feb 1, 2023 CWD Rate	Billing Fee 3.75%	Rate Minus Billing Fee	CPI Adjustment 6.05%	CNG Fuel Adjustment -57.45%	Disposal Adjustment 5.22%	Total Adj	Pre Billing Fee Rate	Billing Fee 3.75%	Feb 1, 2024 CWD Rate	Feb 1, 2024 City Pricing with Franchise Fee
Residential Multi-Family Recycling Rate												
			Percent of Adjustment		83%	5%	12%					
Rate Per Unit	**$0.66**	**$0.57**	$0.02	$0.55	$0.03	-$0.02	$0.00	**$0.01**	$0.56	$0.02	**$0.58**	**$0.67**
Front Load Commercial Trash Container Services												
			Percent of Adjustment		65%	5%	30%					
2 Cubic Yard												
One time per week	**$102.99**	**$89.56**	$3.24	$86.32	$3.39	-$2.48	$1.35	**$2.26**	$88.58	$3.32	**$91.90**	**$105.69**
Two times per week	**$184.82**	**$160.71**	$5.81	$154.90	$6.09	-$4.45	$2.43	**$4.07**	$158.97	$5.96	**$164.93**	**$189.67**
Three times per week	**$242.44**	**$210.82**	$7.62	$203.20	$7.99	-$5.84	$3.18	**$5.33**	$208.53	$7.82	**$216.35**	**$248.80**
Four times per week	**$321.97**	**$279.97**	$10.12	$269.85	$10.61	-$7.75	$4.23	**$7.09**	$276.94	$10.39	**$287.33**	**$330.43**
Five times per week	**$381.35**	**$331.61**	$11.99	$319.62	$12.57	-$9.18	$5.01	**$8.40**	$328.02	$12.30	**$340.32**	**$391.37**
Six times per week	**$427.34**	**$371.60**	$13.43	$358.17	$14.09	-$10.29	$5.61	**$9.41**	$367.58	$13.78	**$381.36**	**$438.56**
3 Cubic Yard												
One time per week	**$110.03**	**$95.68**	$3.46	$92.22	$3.63	-$2.65	$1.44	**$2.42**	$94.64	$3.55	**$98.19**	**$112.92**
Two times per week	**$207.90**	**$180.78**	$6.53	$174.25	$6.85	-$5.01	$2.73	**$4.57**	$178.82	$6.71	**$185.53**	**$213.36**
Three times per week	**$328.83**	**$285.94**	$10.34	$275.60	$10.84	-$7.92	$4.32	**$7.24**	$282.84	$10.61	**$293.45**	**$337.47**
Four times per week	**$409.76**	**$356.31**	$12.88	$343.43	$13.51	-$9.87	$5.38	**$9.02**	$352.45	$13.22	**$365.67**	**$420.52**
Five times per week	**$515.20**	**$448.00**	$16.19	$431.81	$16.98	-$12.40	$6.76	**$11.34**	$443.15	$16.62	**$459.77**	**$528.74**
Six times per week	**$522.30**	**$454.17**	$16.42	$437.75	$17.21	-$12.57	$6.86	**$11.50**	$449.25	$16.85	**$466.10**	**$536.02**
4 Cubic Yard												
One time per week	**$125.56**	**$109.18**	$3.95	$105.23	$4.14	-$3.02	$1.65	**$2.77**	$108.00	$4.05	**$112.05**	**$128.86**
Two times per week	**$224.30**	**$195.04**	$7.05	$187.99	$7.39	-$5.40	$2.94	**$4.93**	$192.92	$7.23	**$200.15**	**$230.17**
Three times per week	**$298.99**	**$259.99**	$9.40	$250.59	$9.85	-$7.20	$3.92	**$6.57**	$257.16	$9.64	**$266.80**	**$306.82**
Four times per week	**$397.30**	**$345.48**	$12.49	$332.99	$13.09	-$9.57	$5.21	**$8.73**	$341.72	$12.81	**$354.53**	**$407.71**
Five times per week	**$470.01**	**$408.70**	$14.77	$393.93	$15.49	-$11.32	$6.17	**$10.34**	$404.27	$15.16	**$419.43**	**$482.34**
Six times per week	**$527.01**	**$458.27**	$16.56	$441.71	$17.37	-$12.69	$6.92	**$11.60**	$453.31	$17.00	**$470.31**	**$540.86**
6 Cubic Yard												
One time per week	**$160.54**	**$139.60**	$5.05	$134.55	$5.29	-$3.86	$2.11	**$3.54**	$138.09	$5.18	**$143.27**	**$164.76**
Two times per week	**$284.45**	**$247.35**	$8.94	$238.41	$9.38	-$6.85	$3.73	**$6.26**	$244.67	$9.18	**$253.85**	**$291.93**
Three times per week	**$394.97**	**$343.45**	$12.41	$331.04	$13.02	-$9.51	$5.18	**$8.69**	$339.73	$12.74	**$352.47**	**$405.34**
Four times per week	**$522.19**	**$454.08**	$16.41	$437.67	$17.21	-$12.57	$6.85	**$11.49**	$449.16	$16.84	**$466.00**	**$535.90**
Five times per week	**$615.48**	**$535.20**	$19.34	$515.86	$20.29	-$14.82	$8.08	**$13.55**	$529.41	$19.85	**$549.26**	**$631.65**
Six times per week	**$667.58**	**$580.50**	$20.98	$559.52	$22.00	-$16.07	$8.76	**$14.69**	$574.21	$21.53	**$595.74**	**$685.10**
8 Cubic Yard												
One time per week	**$203.76**	**$177.18**	$6.40	$170.78	$6.72	-$4.91	$2.67	**$4.48**	$175.26	$6.57	**$181.83**	**$209.10**
Two times per week	**$354.67**	**$308.41**	$11.15	$297.26	$11.69	-$8.54	$4.66	**$7.81**	$305.07	$11.44	**$316.51**	**$363.99**
Three times per week	**$523.85**	**$455.52**	$16.46	$439.06	$17.27	-$12.61	$6.88	**$11.54**	$450.60	$16.90	**$467.50**	**$537.63**
Four times per week	**$690.64**	**$600.56**	$21.71	$578.85	$22.76	-$16.63	$9.06	**$15.19**	$594.04	$22.28	**$616.32**	**$708.77**
Five times per week	**$813.65**	**$707.52**	$25.57	$681.95	$26.82	-$19.59	$10.68	**$17.91**	$699.86	$26.24	**$726.10**	**$835.02**
Six times per week	**$913.02**	**$793.93**	$28.70	$765.23	$30.09	-$21.98	$11.98	**$20.09**	$785.32	$29.45	**$814.77**	**$936.99**
6 Yard Front Load Compactors												
			Percent of Adjustment		65%	5%	30%					
6 Yard												
One time per week	**$578.98**	**$503.46**	$18.20	$485.26	$19.08	-$13.94	$7.60	**$12.74**	$498.00	$18.68	**$516.68**	**$594.18**
Two times per week	**$1,065.88**	**$926.85**	$33.50	$893.35	$35.13	-$25.66	$13.99	**$23.46**	$916.81	$34.38	**$951.19**	**$1,093.87**
Three times per week	**$1,784.96**	**$1,552.14**	$56.10	$1,496.04	$58.83	-$42.97	$23.43	**$39.29**	$1,535.33	$57.57	**$1,592.90**	**$1,831.84**
Four times per week	**$2,229.13**	**$1,938.37**	$70.06	$1,868.31	$73.47	-$53.67	$29.26	**$49.06**	$1,917.37	$71.90	**$1,989.27**	**$2,287.66**
Commercial Special Services												
			Percent of Adjustment		100%	0%	0%					
Casters (per pick-up)	**$12.08**	**$10.50**	$0.38	$10.12	$0.61	$0.00	$0.00	**$0.61**	$10.73	$0.40	**$11.13**	**$12.80**
Gates (per pick-up)	**$9.63**	**$8.37**	$0.30	$8.07	$0.49	$0.00	$0.00	**$0.49**	$8.56	$0.32	**$8.88**	**$10.21**
Locks (per pick-up)	**$9.63**	**$8.37**	$0.30	$8.07	$0.49	$0.00	$0.00	**$0.49**	$8.56	$0.32	**$8.88**	**$10.21**
Front Load Cardboard Container (OCC)												
			Percent of Adjustment		65%	5%	30%					
8 Cubic Yard												
One time per week	**$86.48**	**$75.20**	$2.72	$72.48	$2.85	-$2.08	$1.14	**$1.91**	$74.39	$2.79	**$77.18**	**$88.76**
Two times per week	**$172.97**	**$150.41**	$5.44	$144.97	$5.70	-$4.16	$2.27	**$3.81**	$148.78	$5.58	**$154.36**	**$177.51**
Three times per week	**$259.38**	**$225.55**	$8.15	$217.40	$8.55	-$6.24	$3.40	**$5.71**	$223.11	$8.37	**$231.48**	**$266.20**
6 Yard Recycle Containers												
			Percent of Adjustment		83%	5%	12%					
Weekday Transport	**$111.14**	**$96.64**	$3.49	$93.15	$4.68	-$2.68	$0.58	**$2.58**	$95.73	$3.59	**$99.32**	**$114.22**
			Percent of Adjustment		100%	0%	0%					

Schedule A

Town of Little Elm Solid Waste Collection and Recycling Serivces

Cost Adjustment for Commercial Customers Only

For the period of;

February 01, 2024 to January 31, 2025

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Solid Waste Collection and Recycling Serivces	Feb 1, 2023 City Pricing with Franchise Fee	Feb 1, 2023 CWD Rate	Billing Fee 3.75%	Rate Minus Billing Fee	CPI Adjustment 6.05%	CNG Fuel Adjustment -57.45%	Disposal Adjustment 5.22%	Total Adj	Pre Billing Fee Rate	Billing Fee 3.75%	Feb 1, 2024 CWD Rate	Feb 1, 2024 City Pricing with Franchise Fee
Rental	**$20.00**	**$17.39**	$0.63	$16.76	$1.01	$0.00	$0.00	**$1.01**	$17.77	$0.67	**$18.44**	**$21.21**
Commercial Trash Cart Sevice												
			Percent of Adjustment		69%	4%	27%					
First Trash Poly-Cart	**$23.75**	**$20.65**	$0.75	$19.90	$0.83	-$0.46	$0.28	**$0.65**	$20.55	$0.77	**$21.32**	**$24.52**
Each Additional Cart	**$18.48**	**$16.07**	$0.58	$15.49	$0.65	-$0.36	$0.22	**$0.51**	$16.00	$0.60	**$16.60**	**$19.09**
Commercial Recycle Cart Sevice												
			Percent of Adjustment		83%	5%	12%					
First Recycle Poly-Cart	**$15.86**	**$13.79**	$0.50	$13.29	$0.67	-$0.38	$0.08	**$0.37**	$13.66	$0.51	**$14.17**	**$16.30**
Each Additional Cart	**$11.86**	**$10.31**	$0.37	$9.94	$0.50	-$0.29	$0.06	**$0.27**	$10.21	$0.38	**$10.59**	**$12.18**
Roll Off Compactors												
			Percent of Adjustment		55%	5%	40%					
35 SC Weekday Haul * #	**$410.19**	**$356.69**	$12.89	$343.80	$11.44	-$9.88	$7.18	**$8.74**	$352.54	$13.22	**$365.76**	**$420.62**
35 SC Weekend Haul * #	**$445.14**	**$387.08**	$13.99	$373.09	$12.41	-$10.72	$7.79	**$9.48**	$382.57	$14.35	**$396.92**	**$456.46**
40 RC Weekday Haul * #	**$427.67**	**$371.89**	$13.44	$358.45	$11.93	-$10.30	$7.48	**$9.11**	$367.56	$13.78	**$381.34**	**$438.54**
40 RC Weekend Haul * #	**$462.56**	**$402.23**	$14.54	$387.69	$12.90	-$11.14	$8.09	**$9.85**	$397.54	$14.91	**$412.45**	**$474.32**
			Percent of Adjustment		0%	0%	100%					
* Disposal for weight up to 27 tons GVW	**$60.88**	**$52.94**	$1.91	$51.03	$0.00	$0.00	$2.66	**$2.66**	$53.69	$2.01	**$55.70**	**$64.06**
# Excess Payload for trucks over 27 tons GVW	**$154.39**	**$134.25**	$4.85	$129.40	$0.00	$0.00	$6.75	**$6.75**	$136.15	$5.11	**$141.26**	**$162.45**
			Percent of Adjustment		100%	0%	0%					
Trip Charge (Dry Run) - weekday	**$198.67**	**$172.76**	$6.24	$166.52	$10.07	$0.00	$0.00	**$10.07**	$176.59	$6.62	**$183.21**	**$210.69**
30 Yard Open Top Roll Off Containers												
			Percent of Adjustment		100%	0%	0%					
Delivery	**$197.26**	**$171.53**	$0.00	$165.33	$10.00	$0.00	$0.00	**$10.00**	$175.33	$6.57	**$181.90**	**$209.19**
Trip Charge (Dry Run) - weekday	**$197.26**	**$171.53**	$0.00	$165.33	$10.00	$0.00	$0.00	**$10.00**	$175.33	$6.57	**$181.90**	**$209.19**
			Percent of Adjustment		100%	0%	0%					
Weekly Rental	**$68.84**	**$59.86**	$0.00	$57.70	$3.49	$0.00	$0.00	**$3.49**	$61.19	$2.29	**$63.48**	**$73.00**
			Percent of Adjustment		55%	5%	40%					
Haul Weekday (plus disposal) * #	**$531.92**	**$462.54**	$0.00	$445.82	$14.83	-$12.81	$9.31	**$11.33**	$457.15	$17.14	**$474.29**	**$545.43**
Haul Weekend (plus disposal) * #	**$569.92**	**$495.58**	$0.00	$477.67	$15.89	-$13.72	$9.97	**$12.14**	$489.81	$18.37	**$508.18**	**$584.41**
			Percent of Adjustment		0%	0%	100%					
* Disposal for weight up to 27 tons GVW	**$68.34**	**$59.43**	$0.00	$57.28	$0.00	$0.00	$2.99	**$2.99**	$60.27	$2.26	**$62.53**	**$71.91**
# Excess Payload for trucks over 27 tons GVW	**$172.48**	**$149.98**	$0.00	$144.56	$0.00	$0.00	$7.55	**$7.55**	$152.11	$5.70	**$157.81**	**$181.48**

U.S. BUREAU OF LABOR STATISTICS

Databases, Tables & Calculators by Subject

Special Notices 12/05/2023

Change Output Options: From: 2013 To: 2023 GO

include graphs include annual averages More Formatting Options

Data extracted on: December 21, 2023 (2:54:29 PM)

Consumer Price Index for All Urban Consumers (CPI-U)

Series Id: CUURS37ASA0LE,CUUSS37ASA0LE
Not Seasonally Adjusted
Series Title: All items less energy in Dallas-Fort Worth-Arlington, TX, all urban consumers, not seasonally adjusted
Area: Dallas-Fort Worth-Arlington, TX
Item: All items less energy
Base Period: 1982-84=100

Download: .xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2013	214.034		215.132		214.590		215.479		216.630		216.241		215.472	214.706	216.239
2014	216.948		218.185		218.293		218.085		218.872		219.281		218.398	217.903	218.893
2015	219.851		221.760		221.630		221.408		222.473		223.021		221.817	221.209	222.425
2016	224.102		225.823		226.910		227.315		227.995		228.292		226.940	225.868	228.013
2017	228.486		229.667		230.934		231.424		233.624		234.845		231.645	229.824	233.467
2018	234.774		235.907		237.847		237.289		238.686		240.358		237.587	236.353	238.822
2019	241.185		242.060		241.921		243.642		245.477		244.604		243.399	242.075	244.724
2020	244.920		246.282		245.301		247.299		248.120		247.458		246.709	245.580	247.838
2021	249.525		252.804		256.633		258.483		259.068		260.725		256.710	253.500	259.920
2022	265.048		270.139		273.652		275.387		279.907		282.445		275.095	270.329	279.860
2023	285.488		290.556		293.118		293.177		295.764		299.532			290.056	

12-Month Percent Change
Series Id: CUURS37ASA0LE,CUUSS37ASA0LE
Not Seasonally Adjusted
Series Title: All items less energy in Dallas-Fort Worth-Arlington, TX, all urban consumers, not seasonally adjusted
Area: Dallas-Fort Worth-Arlington, TX
Item: All items less energy
Base Period: 1982-84=100

Download: .xlsx

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2
2013	2.3		2.1		1.7		2.1		1.9		1.2		1.8	2.0	1.7
2014	1.4		1.4		1.7		1.2		1.0		1.4		1.4	1.5	1.2
2015	1.3		1.6		1.5		1.5		1.6		1.7		1.6	1.5	1.6
2016	1.9		1.8		2.4		2.7		2.5		2.4		2.3	2.1	2.5
2017	2.0		1.7		1.8		1.8		2.5		2.9		2.1	1.8	2.4
2018	2.8		2.7		3.0		2.5		2.2		2.3		2.6	2.8	2.3
2019	2.7		2.6		1.7		2.7		2.8		1.8		2.4	2.4	2.5
2020	1.5		1.7		1.4		1.5		1.1		1.2		1.4	1.4	1.3
2021	1.9		2.6		4.6		4.5		4.4		5.4		4.1	3.2	4.9
2022	6.2		6.9		6.6		6.5		8.0		8.3		7.2	6.6	7.7
2023	7.7		7.6		7.1		6.5		5.7		6.0			7.3	

U.S. Energy Information Administration

NATURAL GAS

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Referring Pages:
- Natural Gas Futures Prices (NYMEX)

View History: Q Daily ® Weekly O Monthly Q Annual

Download Data (XLS File)

Henry Hub Natural Gas Spot Price

A DOWNLOAD

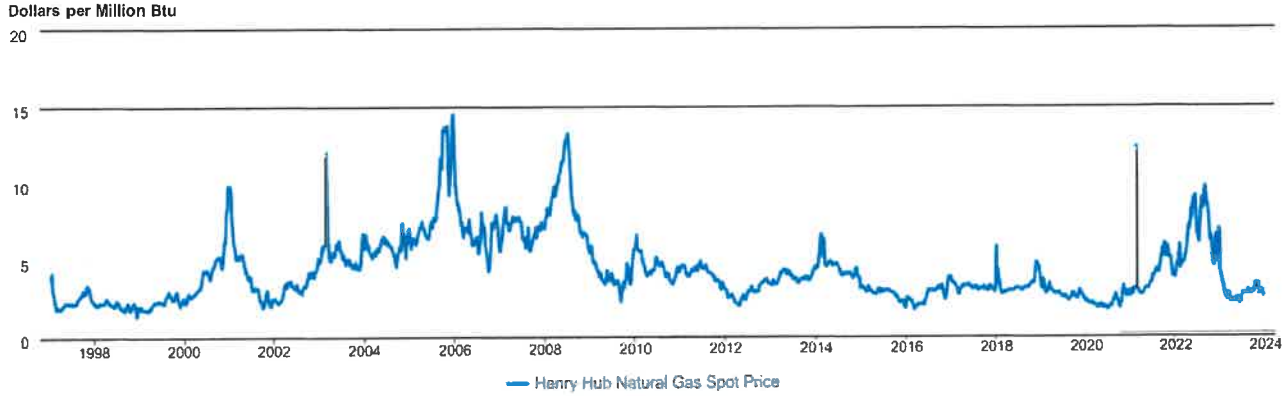

Chart Tools

no analysis applied

This series is available through the EIA open data API and can be downloaded to Excel or embedded as an interactive chart or map on your website.

Henry Hub Natural Gas Spot Price (Dollars per Million Btu)

	Week 1		Week 2		Week 3		Week 4		Week5	
Year-Month	End Date	Value	End Date	Value	End Date	Value	End Date	Value	End Date	Value
1997-Jan			01/10	3.79	01/17	4.19	01/24	2.98	01/31	2.91
1997-Feb	02/07	2.53	02/14	2.30	02/21	1.91	02/28	1.82		
1997-Mar	03/07	1.86	03/14	1.96	03/21	1.91	03/28	1.84		
1997-Apr	04/04	1.88	04/11	1.98	04/18	2.04	04/25	2.14		
1997-May	05/02	2.15	05/09	2.29	05/16	2.22	05/23	2.22	05/30	2.28
1997-Jun	06/06	2.17	06/13	2.16	06/20	2.22	06/27	2.27		
1997-Jul	07/04	2.15	07/11	2.15	07/18	2.24	07/25	2.20		
1997-Aug	08/01	2.22	08/08	2.37	08/15	2.53	08/22	2.54	08/29	2.58
1997-Sep	09/05	2.77	09/12	2.76	09/19	2.85	09/26	3.08		
1997-Oct	10/03	3.00	10/10	2.83	10/17	2.89	10/24	3.21	10/31	3.42
1997-Nov	11/07	3.16	11/14	3.25	11/21	2.89	11/28	2.55		
1997-Dec	12/05	2.51	12/12	2.34	12/19	2.34	12/26	2.21		
1998-Jan	01/02	2.26	01/09	2.11	01/16	2.05	01/23	2.11	01/30	2.08
1998-Feb	02/06	2.28	02/13	2.21	02/20	2.20	02/27	2.22		
1998-Mar	03/06	2.18	03/13	2.22	03/20	2.23	03/27	2.30		
1998-Apr	04/03	2.41	04/10	2.57	04/17	2.46	04/24	2.40		
1998-May	05/01	2.23	05/08	2.14	05/15	2.20	05/22	2.13	05/29	2.09
1998-Jun	06/05	2.10	06/12	2.00	06/19	2.11	06/26	2.38		
1998-Jul	07/03	2.39	07/10	2.36	07/17	2.21	07/24	2.05	07/31	1.95
1998-Aug	08/07	1.86	08/14	1.85	08/21	1.93	08/28	1.81		
1998-Sep	09/04	1.72	09/11	1.83	09/18	2.07	09/25	2.24		
1998-Oct	10/02	2.20	10/09	1.99	10/16	1.73	10/23	1.90	10/30	1.89
1998-Nov	11/06	2.11	11/13	2.27	11/20	2.12	11/27	2.08		
1998-Dec	12/04	1.34	12/11	1.60	12/18	1.93	12/25	1.95		
1999-Jan	01/01	1.84	01/08	2.00	01/15	1.81	01/22	1.81	01/29	1.76
1999-Feb	02/05	1.79	02/12	1.81	02/19	1.79	02/26	1.70		

2018-Aug	08/03	2.80	08/10	2.96	08/17	3.00	08/24	3.01	08/31	2.97
2018-Sep	09/07	2.94	09/14	2.93	09/21	3.03	09/28	3.06		
2018-Oct	10/05	3.23	10/12	3.30	10/19	3.26	10/26	3.32		
2018-Nov	11/02	3.28	11/09	3.58	11/16	4.23	11/23	4.67	11/30	4.43
2018-Dec	12/07	4.49	12/14	4.38	12/21	3.73	12/28	3.26		
2019-Jan	01/04	2.92	01/11	2.89	01/18	3.50	01/25	3.19		
2019-Feb	02/01	2.90	02/08	2.59	02/15	2.65	02/22	2.71		
2019-Mar	03/01	2.91	03/08	3.28	03/15	2.89	03/22	2.86	03/29	2.71
2019-Apr	04/05	2.70	04/12	2.72	04/19	2.62	04/26	2.56		
2019-May	05/03	2.59	05/10	2.60	05/17	2.67	05/24	2.66	05/31	2.66
2019-Jun	06/07	2.45	06/14	2.41	06/21	2.40	06/28	2.34		
2019-Jul	07/05	2.31	07/12	2.47	07/19	2.44	07/26	2.30		
2019-Aug	08/02	2.24	08/09	2.11	08/16	2.21	08/23	2.27	08/30	2.28
2019-Sep	09/06	2.46	09/13	2.64	09/20	2.63	09/27	2.52		
2019-Oct	10/04	2.33	10/11	2.26	10/18	2.25	10/25	2.25		
2019-Nov	11/01	2.62	11/08	2.82	11/15	2.73	11/22	2.58	11/29	2.49
2019-Dec	12/06	2.38	12/13	2.24	12/20	2.28	12/27	2.03		
2020-Jan	01/03	2.05	01/10	2.09	01/17	2.06	01/24	1.93	01/31	1.95
2020-Feb	02/07	1.89	02/14	1.90	02/21	2.00	02/28	1.88		
2020-Mar	03/06	1.80	03/13	1.86	03/20	1.82	03/27	1.74		
2020-Apr	04/03	1.63	04/10	1.77	04/17	1.72	04/24	1.85		
2020-May	05/01	1.71	05/08	1.84	05/15	1.63	05/22	1.78	05/29	1.76
2020-Jun	06/05	1.70	06/12	1.70	06/19	1.52	06/26	1.57		
2020-Jul	07/03	1.71	07/10	1.78	07/17	1.77	07/24	1.72	07/31	1.82
2020-Aug	08/07	2.13	08/14	2.17	08/21	2.39	08/28	2.52		
2020-Sep	09/04	2.16	09/11	2.16	09/18	1.93	09/25	1.68		
2020-Oct	10/02	1.65	10/09	1.91	10/16	2.17	10/23	2.74	10/30	3.09
2020-Nov	11/06	2.78	11/13	2.75	11/20	2.39	11/27	2.39		
2020-Dec	12/04	2.69	12/11	2.44	12/18	2.70	12/25	2.72		
2021-Jan	01/01	2.38	01/08	2.74	01/15	2.82	01/22	2.54	01/29	2.71
2021-Feb	02/05	3.12	02/12	4.63	02/19	12.18	02/26	2.86		
2021-Mar	03/05	2.79	03/12	2.65	03/19	2.53	03/26	2.54		
2021-Apr	04/02	2.54	04/09	2.45	04/16	2.59	04/23	2.76	04/30	2.88
2021-May	05/07	2.95	05/14	2.93	05/21	2.91	05/28	2.86		
2021-Jun	06/04	3.03	06/11	3.12	06/18	3.28	06/25	3.28		
2021-Jul	07/02	3.72	07/09	3.65	07/16	3.73	07/23	3.93	07/30	4.06
2021-Aug	08/06	4.15	08/13	4.10	08/20	3.90	08/27	4.07		
2021-Sep	09/03	4.49	09/10	4.87	09/17	5.42	09/24	5.03		
2021-Oct	10/01	5.68	10/08	5.87	10/15	5.54	10/22	4.95	10/29	5.68
2021-Nov	11/05	5.48	11/12	4.99	11/19	4.91	11/26	4.90		
2021-Dec	12/03	4.32	12/10	3.68	12/17	3.78	12/24	3.85	12/31	3.57
2022-Jan	01/07	3.80	01/14	4.42	01/21	4.50	01/28	4.60		
2022-Feb	02/04	5.78	02/11	4.19	02/18	4.39	02/25	4.62		
2022-Mar	03/04	4.57	03/11	4.70	03/18	4.68	03/25	5.14		
2022-Apr	04/01	5.41	04/08	6.08	04/15	6.64	04/22	7.10	04/29	6.81
2022-May	05/06	8.04	05/13	7.47	05/20	8.21	05/27	8.79		
2022-Jun	06/03	8.54	06/10	8.95	06/17	7.93	06/24	6.43		
2022-Jul	07/01	6.35	07/08	5.90	07/15	6.76	07/22	7.76	07/29	8.74
2022-Aug	08/05	8.14	08/12	8.15	08/19	9.19	08/26	9.56		
2022-Sep	09/02	9.17	09/09	8.30	09/16	8.42	09/23	7.69	09/30	6.63
2022-Oct	10/07	6.01	10/14	6.29	10/21	5.48	10/28	5.12		
2022-Nov	11/04	4.57	11/11	4.34	11/18	6.06	11/25	6.41		
2022-Dec	12/02	6.06	12/09	4.60	12/16	6.78	12/23	6.35	12/30	4.06
2023-Jan	01/06	3.65	01/13	3.46	01/20	3.17	01/27	3.08		
2023-Feb	02/03	2.64	02/10	2.34	02/17	2.41	02/24	2.18		
2023-Mar	03/03	2.60	03/10	2.48	03/17	2.47	03/24	2.06	03/31	2.01
2023-Apr	04/07	2.14	04/14	2.09	04/21	2.21	04/28	2.20		
2023-May	05/05	2.03	05/12	2.10	05/19	2.29	05/26	2.17		
2023-Jun	06/02	1.93	06/09	1.99	06/16	2.05	06/23	2.28	06/30	2.58
2023-Jul	07/07	2.53	07/14	2.53	07/21	2.54	07/28	2.59		
2023-Aug	08/04	2.49	08/11	2.76	08/18	2.59	08/25	2.53		
2023-Sep	09/01	2.57	09/08	2.52	09/15	2.71	09/22	2.63	09/29	2.66
2023-Oct	10/06	2.91	10/13	3.20	10/20	2.86	10/27	2.89		
2023-Nov	11/03	3.17	11/10	2.46	11/17	2.74	11/24	2.64		
2023-Dec	12/01	2.72	12/08	2.62	12/15	2.38				

- = No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

Release Date: 12/20/2023
Next Release Date: 12/28/2023

Referring Pages:

- Natural Gas Futures Prices (NYMEX)

REPUBLIC SERVICES

Sustainability in Action

September 12, 2023

VIA EMAIL ONLY

Jason Roemer
JRoemer@communitywastedisposal.com
2010 California Crossing Rd
Dallas, TX 75220

Jason,

One of our core values at Republic Services is to provide a safe and efficient service to every customer. When you utilize our landfills, not only do we want to give you the landfill experience you expect, but we pride ourselves on going above and beyond.

The waste disposal agreement, effective October 2022, allows for a CPI adjustment annually based on the Water, Sewer, and Trash Collection Services index. We have calculated the year-over-year increase of this index to be 5.22%, resulting in a rate increase to the amounts below.

Landfill	Material	Current Price	New Rate
[redacted]	[redacted]	[redacted]	[redacted]
Camelot Landfill	MSW, C&D	$36.00	$37.88
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

*Note, the City of Fort Worth Fee will be adjusted as implemented by the City and in addition to the rate shown above.

We appreciate you as a customer and are grateful for your business with us.

Sincerely,

Clint Dickerson

Clint Dickerson

General Manager

Date:	01/16/2024
Agenda Item #:	5. C.
Department:	Finance
Strategic Goal:	Maintain operational integrity and viability
Staff Contact:	Kelly Wilson, Chief Financial Officer

AGENDA ITEM:

Consider Action to Accept the **Transfer and Assignment from North Texas Municipal Water District Easements and Facilities to the Town of Little Elm.**

DESCRIPTION:

The Town and North Texas Municipal Water District (District) entered into a contract dated March 27, 2003, that outlined the District to acquire, construct, own, operate and maintain certain water transmission facilities, including but not limited to approximately 19,000 linear feet of 30" water transmission pipeline and appurtenances (the Facilities) from a going generally located at Eldorado Parkway and Burlington Northern Santa Fe RR to a point generally located at the eastern boundary of the Town, now known as the Little Elm Mansell Pump Station and Ground Storage Tank (the Project).

The contract allowed the acquisition of easements and the construction of Facilities to provide for the transportation of potable water from the District to the Town. The contract provided that upon payment and retirement of the Project bonds, the District would convey the Facilities to the Town and the Town would assume all responsibility for the Facilities. This transfer and assignment agreement acknowledges the various obligations and commitments of the parties have been satisfied with regard to the Project and is intended to transfer, convey, and assign the Facility to the Town.

BUDGET IMPACT:

All financial obligations have been met, and the asset will be added to the Town's capital assets.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

NTMWD Transfer and Assignment-Water Transmission Line

Exhibit A Little Elm Water Pipeline LEWCF 03-1

TRANSFER AND ASSIGNMENT OF NORTH TEXAS MUNICIPAL WATER DISTRICT EASEMENTS AND FACILITIES TO THE TOWN OF LITTLE ELM, TEXAS

For ten dollars good and other valuable consideration, the North Texas Municipal Water District (NTMWD) does hereby agree to transfer, assign, and convey its interest in and to those certain Easements and Judgments, and Facilities located therein, owned by NTMWD listed in Exhibit "A" attached hereto and incorporated by reference herein as is set forth at length to the Town of Little Elm, Texas (the Town):

WHEREAS, NTMWD and the Town are Parties to that certain Water Transmission Facilities Contract dated March 27, 2003 (the Contract); and,

WHEREAS, the Contract required the District to acquire, construct, own, operate and maintain certain water transmission facilities, including, but not limited to approximately 19,000 linear feet of 30" water transmission pipeline and appurtenances (the Facilities) from a point generally located at Eldorado Parkway and Burlington Northern Santa Fe RR to a point generally located at the eastern boundary of the Town, now known as the Little Elm Mansell Pump Station and Ground Storage Tank (the Project); and

WHEREAS, the Contract provides that the District would acquire the easements necessary to construct the water transmission pipeline and related facilities to provide for the transportation of potable water from the District to the Town; and,

WHEREAS, in order to construct, operate, maintain, repair and replace the Water Transmission Pipeline NTMWD has acquired certain Easements, and easement rights pursuant to final Judgments in eminent domain proceedings, said Easements and Judgments being listed on Exhibit "A" attached hereto and incorporated by reference as if set forth at length herein (the Easements); and,

WHEREAS, the District constructed a Water Transmission Pipeline and related facilities within the Easements necessary to transport the water (the Facilities); and,

WHEREAS, the Contract provided that upon payment and retirement of the Project bonds that NTWMD would convey the Easements and Facilities to the Town and that the Town would assume all responsibility for the Facilities; and,

WHEREAS, the Project bonds have been paid and retired; and

WHEREAS, the parties would like to acknowledge that the various obligations and commitments of the Parties have been satisfied under the above Contract with regard to the Project.

WHEREAS, this Assignment is intended to transfer, convey and assign the Easements and Facilities to the Town.

NOW THEREFORE, know all men by these present that:

1. NTMWD does hereby sell, convey, transfer and assign all of its interest in and to those certain Easements attached hereto as Exhibit "A" and incorporated by reference herein as if set forth at length herein;

2. By virtue of this Assignment, NTMWD hereby conveys its interest to the fullest extent possible, including all rights, benefits, duties, and obligations existing under the term of the Easements, including the right to enforce the terms of the Easements or Judgments against the Grantor of the Easement, or the Condemnee's under any Judgment, previously obtained by NTMWD as shown on Exhibit "A".

3. The District acknowledges that its right, title, and interest to the Facilities and the Project has automatically vested in the Town by virtue of the Town's payment and requirement of the Bonds, and to any extent necessary, the District hereby conveys, transfers, delivers, and vests all its right, title and interest to the Facilities and the Project of the Town.

4. By accepting this Assignment, the Town assumes all responsibility for the Easements including operation, maintenance, and repair of the Facilities. The Town further acknowledges that NTMWD having fulfilled its obligations under the terms of the Contract shall have no further obligation in any respect to the Easements or Facilities, including but not limited to, their operation, maintenance, repair or any costs otherwise associated with the Easement or Facilities.

5. This Assignment is made without any warranty or representation of any manner whatsoever by NTMWD, save and except the Warranty of Title set forth below and the Town accepts the Assignment of Easements on an AS IS WHERE IS basis and acknowledges that no representations or warranties have been made by NTMWD, regarding the nature, extent, or condition of the Easements or the condition of the Facilities located within the Easements, except for the Warranty of Title set forth below.

6. Nothing contained in this Assignment shall alter the terms of that certain Contract between the parties referenced herein. There are no other oral agreements or understandings between the parties regarding the subject matter of this Assignment.

7. This conveyance is subject to all matters of record which are valid and subsisting, including easements, rights-of-way, covenants, conditions, restrictions, oil and gas leases, mineral severances, and other instruments of record, affecting the Easements, or any part thereof.

8. Notices required under this Assignment shall be sent to the following addresses:

IF TO NTMWD: Executive Director
North Texas Municipal Water District
501 East Brown Street
Wylie, Texas 75098

IF TO LITTLE ELM: City Manager
Town of Little Elm
_____
_____

or to such other addresses as either party hereto may from time to time designate in writing and delivered in accordance with this paragraph to the other party. Notices, consents, approvals, and communications may be given by personal delivery, mail, or overnight service shall be deemed delivered upon receipt. Any party may change its address for notice hereunder to any other location by the giving of 30 days' notice to other party in the manner set forth in this paragraph.

9. If any part of this assignment or any other agreement entered into pursuant hereto is contrary to, prohibited by or deemed invalid under applicable law or regulation, such provision shall be deemed inapplicable and deemed omitted to the extent so contrary, prohibited or invalid, but the remainder hereof shall not be invalidated thereby and shall be given full force and effect so far as possible.

10. By executing this assignment, NTMWD represents that it is the owner and holder of the Easements and Judgments, and Facilities located therein, shown on Exhibit "A". NTMWD does hereby bind itself, its officers, directors, and successors to warrant and forever defend all and singular the Easements and Judgments to the Town of Little Elm, Texas, and is successors against any person whomsoever lawfully claiming or to claim against the rights conveyed in this Assignment, by through or under NTMWD but not otherwise.

WITNESS OUR HANDS, on this _____ day of _____, 2023.

NORTH TEXAS MUNICIPAL WATER DISTRICT

By: _____
Name: Jennafer P. Covington
Title: Executive Director and General Manager

Acceptance:

THE TOWN OF LITTLE ELM, TEXAS

By: _____
Name: _____
Title: _____

STATE OF TEXAS §
§
COUNTY OF COLLIN §

Before me, the undersigned authority, on this day personally appeared_____, as _____; acknowledged to me that she is the duly authorized representative of and for the NORTH TEXAS MUNICIPAL WATER DISTRICT, a Texas political subdivision, and he/she executed the said instrument for the purposes and consideration therein expressed and in the capacity therein stated.

Given under my hand and seal of office this _____ day of _____, 2023.

_____
Notary Public in and for the State of Texas

My Commission Expires: _____

STATE OF TEXAS §
§
COUNTY OF _____ §

Before me, the undersigned authority, on this day personally appeared_____, as _____; acknowledged to me that she is the duly authorized representative of and for the TOWN OF LITTLE ELM, TEXAS, and he/she executed the said instrument for the purposes and consideration therein expressed and in the capacity therein stated.

Given under my hand and seal of office this _____ day of _____, 2023.

_____
Notary Public in and for the State of Texas

My Commission Expires: _____

Exhibit "A"

Little Elm Water Pipeline LEWCF 03-1

Doc	TRACT OWNER	Date	Document Number	Page	Vol
1	Newman Family Trust & Darling Frisco Parnters, Ltd.	12/12/06	2006-150775		
2	Jim Newman, Dale Newman & Darling Frisco Parnters, Ltd.	12/12/06	2006-150776		
3	Jim Newman, Dale newman & Darling Frisco F	12/12/06	2006-150777		
4	Curtis Hawley Property Owners Release	10/09/06	Executed		
5	Frisco Industrial Partners, Ltd.	02/08/06	20060208000167510		
6	Jerry Cobb	01/19/06	2006-7000		
7	TXDot Permit-Approval	04/01/05	Executed		
8	Eldorado Tollway, Ltd. & Cobb Family Partners	03/21/07	20070321000381900	Agreed Judgment	
9	Eldorado Fairways	06/13/05	2005-70017		
10	Grace Presbytery Inc. a Texas Non-Profit Corp.	10/04/05	2005-122988		
11	Robert Johnson, Sr., Robert Johnson, Jr. & Eric Johnson	06/13/05	2005-70016		
12	DFW Re Investments	10/04/05	2005-122992		
13	City of Frisco	04/08/05	2005-0045450		
14	Hunter Tract Associates	10/04/05	2005-122991		
15	Hunter Tract Associates	10/04/05	2005-122990		
16	Hunter Tract Associates	10/04/05	2005-122989		
17	City of Frisco	01/12/09	20090112000030390		
18	Adama, Ltd.	02/14/08	2008-15431	Agreed Judgment	
18-1	Adama, Ltd.	07/21/05	Original Petition in Condemnation		
18-2	CMTEX Easement Consent	10/07/09	Executed		

9/17/2010

Date:	01/16/2024
Agenda Item #:	5. D.
Department:	Public Works
Strategic Goal:	Ensure excellence in public services while keeping up with the growth in the community
Staff Contact:	Jason Shroyer, Director of Public Works

AGENDA ITEM:

Consider Action to Approve a **Professional Services Agreement with Freese and Nichols, Inc., for Construction Observation and Inspection Services Related to the Wastewater Treatment Plant Dewatering & Clarifier Improvements Project in the amount of $97,300, and Authorize the Town Manager to Execute the Contract.**

DESCRIPTION:

The Town operates a 4 MGD wastewater treatment plant, generating clean effluent for Lake Lewisville and solids for transport to Denton Landfill. Solids undergo dewatering before transport, a crucial process for reducing volume, improving operation, and cutting costs. The current belt-press dewatering system, in operation since the early 2000s, faces significant failures due to aging, making parts difficult to source and lacking redundancy.

Considering these failures, the best course is to replace the system. The Public Works team, after evaluating various technologies, identifies the volute dewatering press as the most cost-effective solution. This newer technology, with fewer moving parts than the current belt press, utilizes metal plates to squeeze water from solids, producing a drier "cake" and consuming less electricity. To meet the Texas Commision of Environmental Quality (TCEQ) redundancy requirements, two units of the volute dewatering press will be installed. The construction bid for the project was awarded in late September and the contractor has begun sourcing the equipment. This contract with Freese and Nichols, Inc., includes construction phase services up to and including inspection services for the installation of the new volute press system. These units are highly specialized and require multiple disciplines for installation and start-up. A complete list of services is as follows:

- Observing construction progress on a weekly basis. At least 2 days per week on-site will allow for consistency of observation and allow the Resident Project Representative (RPR) to focus on current and upcoming work by the Contractor.
- Confirm and track the Contractor’s progress on requirements prior to the belt filter press equipment demolition/temporary dewatering press operations. This is a critical sequence of the project.
- Review and recommend submittals, change orders and requests for information (RFI).
- Review and recommend monthly pay requests from the contractor.

The cost for these services is $97,300 and funding is available in the Utility Capital Improvement Program.

BUDGET IMPACT:

Funding for this project has been programed in the Utility Capital Improvement Program and funding will be coming from 2021 CO Bonds and Utility CIP reserves.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

Contract

ENGINEERING SERVICES PROPOSAL

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

2711 N. Haskell Avenue, Suite 3300 • Dallas, Texas 75204 • 214-217-2200 • FAX 817-735-7491 www.freese.com

TO: Jason Shroyer, PE
Director of Public Works
Town of Little Elm

CC: Daniel Huffines, Cody Collier

FROM: Erin Flanagan, PE, BCEE

SUBJECT: Scope and Fee – WWTP Dewatering Improvements Resident Project Representative

DATE: October 26, 2023

PROJECT: LTE22844

Mr. Shroyer,

Please find the below scope of professional services and attached fee spreadsheet for your review regarding the Town of Little Elm, Wastewater Treatment Plant (WWTP) Dewatering Improvements Resident Project Representative (RPR). This scope and fee is based on providing a part-time (average of 20 hours/week) RPR on-site during construction of the WWTP Dewatering Improvements project. The current WWTP Dewatering Improvements contract only includes construction general representation. The addition of a part-time RPR would provide value to the Town by:

- Observing construction progress on a weekly basis. At least 2 days per week on-site will allow for consistency of observation and allow the RPR to focus on current and upcoming work by the Contractor.
- Helping to confirm and track the Contractor's progress on requirements prior to the belt filter press equipment demolition/temporary dewatering press operations. This is a critical sequence of the project.
- Being a resource to the Town in change order reviews and negotiation.
- Being a resource to assist in expediting requests for information, submittals, and construction issues with the Engineer's design team.
- Contributing to pay application reviews by providing direct coordination with the Contractor on work percent completes as well as confirming materials on hand.
- Attendance at monthly progress meetings to engage in discussion and provide review of schedule and the Contractor's upcoming work.
- Allowing plant staff/operators the ability to focus on their plant operational duties.

Anticipated Scope of Services:

1. **Resident Project Representative:** Provide a part-time RPR for an average of 20 hours/week for 22 weeks. Part-time duration is anticipated between June 2024 and October 2024, based on the Contractor's current schedule.

Professional Services Fee:
The above scope of services is to be completed for a time and materials (cost plus max) fee of $97,300.

I appreciate the opportunity to assist the Town with this service. Please let me know if you have any questions.

Sincerely,

Erin Flanagan

Erin Flanagan, PE, BCEE

Attachments – Work Order Agreement and Fee Spreadsheet

EXHIBIT B - WORK ORDER

MAPS # _____ **MAPS DATE:** _____

CONSULTANT NAME Freese and Nichols, Inc.

Pursuant to and subject to the referenced Master Agreement for Professional Services (MAPS), between the TOWN of Little Elm, Texas ("Owner"), and Consultant, Owner hereby requests that Consultant perform, and Consultant agrees to perform, the work described below upon the terms set forth in said MAPS and in this Work Order:

Work Order #: _____

Consultant Project #: _____

Project Name: WWTP Dewatering Improvements Resident Project Representative

INVOICE SUBMITTAL

Billing Period:	Monthly-Through the end of each month, billed by the 10th of the following month.
Invoice Mailing Instructions:	Mail to: TOWN of Little Elm Accounts Payable 100 W. Eldorado Pkwy. Little Elm, TX 75068 Email to: accounts.payable@littleelm.org Include work order number, PO number, billing period, and project name,

OWNER OPTIONAL INFORMATION:

1. **Work Site:** Consultant Offices unless otherwise stated.
2. **Work to be performed:** All work shall be in accordance with the scope listed below and as listed in the Master Agreement for Professional Services.
3. **Drawings / Plans are / are not attached.**
4. **Date and Time to Commence:** Upon Receipt of Purchase Order and Sign Work Order.
5. **Other:** N/A

CONSULTANT PROVIDED INFORMATION:

1. Scope of Work:

PROJECT DESCRIPTION

The WWTP Dewatering Improvements Resident Project Representative (Project) is generally described as follows:

Part-time resident project representative (RPR) services to support the Town and Engineer/Freese and Nichols (FNI) during the construction of the WWTP Dewatering Improvements project.

SCOPE OF SERVICES

ADDITIONAL SERVICES: FNI shall render the following professional services in connection with the Project:

The Engineer will have a Resident Project Representative on the Site on a part-time basis at an average of 20 hours per week. In performing these services, it is understood that FNI does not guarantee the Contractor's performance, nor is FNI responsible for the supervision of the Contractor's operation and employees. FNI shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by the Contractor, or any safety precautions and programs relating in any way to the condition of the premises, the work of the Contractor or any Subcontractor. FNI shall not be responsible for the acts or omissions of any person (except its own employees or agents) at the Project site or otherwise performing any of the work of the Project.

A. The duties, responsibilities, and the limitations of authority of the Resident Project Representative, and designated assistants, are as follows:
    1. Resident Project Representative is Engineer's agent at the site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding Resident Project Representative's actions. Resident Project Representative's dealings in matters pertaining to the on-site Work shall in general be with Engineer and Contractor, keeping Client advised as necessary. Resident Project Representative's dealings with Subcontractors shall only be through or with full knowledge and approval of Contractor. Resident Project Representative shall generally communicate with Client with the knowledge of and under the direction of Engineer.

    2. These services are based on the use of FNI's standard General Conditions for construction projects. Modifications to these services required by use of other general conditions or contract administration procedures are an additional service. If General Conditions other than FNI's standard are used, the Client agrees to include provisions in the General Conditions that require Contractor to include FNI: (1) as an additional insured and in any waiver of subrogation rights with respect to such liability insurance purchased and maintained by Contractor for the Project (except workers' compensation and professional liability policies); and (2) as an indemnified party in the Contractor's indemnification provisions where the Client is named as an indemnified party.

B. Duties and Responsibilities of Resident Project Representative:
    1. Schedules: Review the progress schedule, schedule of Shop Drawing submittals and schedules of values prepared by Contractor and consult with Engineer concerning acceptability.

    2. Conferences and Meetings: Attend meetings with Contractor, such as progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:
    a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of Contract Documents; and assist Engineer in serving as Client's liaison with Contractor when Contractor's operations affect Client's on-site operations.

    b. Assist in obtaining from Client additional details or information, when required for proper execution of the Work.

4. Shop Drawings and Samples: Advise Engineer and Contractor of the commencement of any Work requiring a Shop Drawing or Sample if the submittal has not been approved by Engineer.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:
    a. Conduct on-site observations of the Work in progress to determine if the Work is in general proceeding in accordance with the Contract Documents.

    b. Report to Engineer whenever Resident Project Representative believes that any Work will not produce a completed Project that conforms generally to the Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of Work the Resident Project Representative believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

    c. Verify that tests, equipment and systems start-up and operating and maintenance training are conducted in the presence of appropriate personnel, and the Contractor maintains adequate records thereof; and observe record and report to Engineer appropriate details relative to the test procedures and start-ups.

    d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to Engineer.

6. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

7. Request for Revisions: Consider and evaluate Contractor's suggestions for revisions to Drawings or Specifications and report with Resident Project Representative's recommendations to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

8. Records: Maintain orderly files for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents, including all Work Change Directives, Addenda, Change Orders, Field Orders, written Amendments, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, submittals and correspondence received from and delivered to Contractor and other Project related documents.

9. Reports:
    a. Consult with Engineer in advance of scheduled major tests, inspections or start of important phases of the Work.

    b. Draft proposed Written Amendments, Change Orders and Work Change Directives, obtaining backup material from Contractor and recommend to Engineer written Amendments, Change Orders, Work Change Directives, and Field Orders.

    c. Report immediately to Engineer and Client the occurrence of any accident.

10. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Client, noting particularly the relationship of the payment requested to the schedule of values, Work completed and

materials and equipment at the Site but not incorporated in the Work.

11. Certificates, Maintenance and Operation Manuals: During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to Engineer for review and forwarding to Client prior to final payment for the Work.

12. Completion:
    a. Before Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

    b. Observe whether Contractor has performed inspections required by laws or regulations, ordinances, codes or order applicable to the Work, including but not limited to those to be performed by public agencies having jurisdiction over the Work.

    c. Conduct a final inspection in the company of Engineer, Client and Contractor and prepare a final list of items to be completed or corrected.

    d. Observe whether all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

C. Limitations of Authority of Resident Project Representative:
    1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items), unless authorized by Engineer.

    2. Shall not exceed limitations of Engineer's authority as set forth in Agreement or the Contract Documents.

    3. Shall not undertake any of the responsibilities of Contractor, Subcontractor, Suppliers, or Contractor's superintendent.

    4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

    5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work or any activities or operations of Client or Contractor.

    6. Shall not accept shop drawing or sample submittals from anyone other than the Contractor.

    7. Shall not participate in specialized field or laboratory tests or inspections conducted by others, except as specifically authorized by Engineer.

2. **Time Line:** Consultant will complete resident project representative services within 400 calendar days from receipt of notice to proceed from the TOWN. Completion of the construction phase services is dependent upon the completion of the WWTP Dewatering Improvements project.

3. **Compensation:** Consultant will provide Professional Services as outlined in the scope of work on time and materials basis with an estimate to complete the work as follows:

TOTAL ADDITIONAL SERVICES (Time and Materials) $97,300

ACCEPTANCE:

This Work Order is accepted on the terms set forth herein and in the MAPS referenced above, as indicated by the signatures below.

TOWN OF LITTLE ELM	**FREESE AND NICHOLS, INC.**
Matthew Mueller, TOWN Manager	Erin Flanagan, PE, BCEE Principal / Vice President
	Printed Name & Title
	01/08/2024
Date	Date

Town of Little Elm Dewatering and Clarifier Improvements - Construction Inspection Services 10/26/2023 Detailed Cost Breakdown	Project Fee Summary	
	Basic Services	$ -
	Special Services	$ 97,300
	Total Project	$ 97,300

Tasks					Labor						
Phase	Task	Activity	Basic or Special	Task Description	Corey Anderson Constr Inspector $209					Total Hours	Total Labor Effort
			Special	**Resident Project Representation Services**							$ -
			Special	On-Site Services (20 hrs/week x 22 weeks)	440					440	$ 95,570
											$ -
											$ -
											$ -
				Total Hours / Quantity	**440**	**-**	**-**	**-**	**-**	**440**	
				Total Effort	**$ 95,570**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 95,570**

Tasks					Expenses						
Phase	Task	Activity	Basic or Special	Task Description	Tech Charge	Miles	Meals	Hotel	B&W (sheet)	Other	Total Expense Effort
			Special	**Resident Project Representation Services**							$ -
			Special	On-Site Services (20 hrs/week x 22 weeks)		2,642					$ 1,731
											$ -
											$ -
											$ -
				Total Hours / Quantity	**-**	**2,642**	**-**	**-**	**-**	**-**	
				Total Effort	**$ -**	**$ 1,731**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,731**

Date:	01/16/2024
Agenda Item #:	5. E.
Department:	Finance
Strategic Goal:	Maximize community recreation and leisure activities
Staff Contact:	Chad Hyde, Director of Community Services

AGENDA ITEM:

Consider Action to Award **Mr. Jim's Pizza for Pizza Delivery Services in the estimated annual amount of $50,000.**

DESCRIPTION:

Fresh, hot, pizza delivery is required for birthday parties and events hosted at The Cove. Approximately 450 deliveries take place annually, with an estimated quantity of 6,000 pizzas.

Bid 2024-09 was advertised in the local newspaper and posted on the Town's eProcurement system for this service. Four (4) offers were received, with the lowest bidder being Mr. Jim's Pizza.
The initial agreement is for twelve (12) months; with four (4), twelve (12) month options to renew.

BUDGET IMPACT:

Funding is available in the Parks and Recreation Fund.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

2024-09 Tabulation

Town of Little Elm
Bid Tabulation
Bid 2024-09 Annual Agreement for Pizza & Delivery

				Mr.Jims Pizza		Papa John's		575 Pizzeria		Slingin' Pizza	
				Little Elm, TX		Dallas, TX		Little Elm, TX		Little Elm, TX	
Line #	Description	QTY	UOM	Unit	Extended	Unit	Extended	Unit	Extended	Unit	Extended
1	Cheese or Pepperoni Pizza, large (14", 8 slices), delivered	6000	EA	$7.99	$47,940.00	$9.45	$56,700.00	$12.00	$72,000.00	$16.99	$101,940.00

Papa John's Line Item Notes:

A 4.99 delivery fee is added to every order.

575 Pizzeria Line Item Notes:

Large pizzas are 18 inches with 12 slices.

Date:	01/16/2024
Agenda Item #:	5. F.
Department:	Development Services
Strategic Goal:	Maximize community recreation and leisure activities
Staff Contact:	Wesley Brandon, Town Engineer

AGENDA ITEM:

Consider Action to Approve **Change Order #1 to the Construction Contract for the Wood Family Dog Park Expansion Project with Ratliff Hardscape, LTD in the amount of $85,091.**

DESCRIPTION:

In September 2023, Town Council approved a construction contract with Ratliff Hardscape to complete the Wood Family Dog Park Expansion. The project includes the addition of Large Dog Area B that was not included in the 2018 contract to build the two original dog areas due to budget constraints. Specific amenities include natural turf, fencing, concrete sidewalks, and irrigation. The project is currently under construction and is expected to be completed in Spring 2024. The project is funded by $300,000 in contributions made through a separate donation agreement approved by Town Council in May 2023, as well as $50,000 in funding provided by the Community Development Corporation.

In order to maintain the initial approved budget of $350,000, staff identified several items that could be removed while still meeting the project's primary goals. After construction started, the same donor committed to providing an additional $50,000 in funding to add a pavilion (with concrete foundations) and landscaping to the project's scope of work. Additional funding from the Community Development Corporation has also been identified.

BUDGET IMPACT:

Base Bid (Original)	$ 340,516.50
Contingency	$ 9,483.50
Change Order 1	$ 85,091.00
Total Project Cost	**$ 435,091.00**

Funding for this change order is available through the $50,000 as described in the approved donation agreement, and the remaining $35,091.00 is identified in the Community Development Corporation budget. The change order will be executed once the additional donor funds have been received.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

Project Layout
Proposed Change Order 1
Original Bid Tabulation
Donation Agreement

AREA 6

AREA 8

AREA 3

AREA 5

AREA 7

AREA 4

AREA 1

AREA 2

PROPOSED WORK AREA

CHANGE ORDER 1
ADD PAVILION SLAB

CHANGE ORDER 1
ADD PAVILION

TRAIL CONNECTION

PEDESTRIAN BRIDGE

LARGE DOG AREA A

LARGE DOG AREA B

SMALL DOG AREA

INTERPRETIVE BOARDWALK

POND

APPROX. FLOODPLAIN

APPROX. FLOWAGE EASEMENT

PARKVIEW APARTMENTS

3 STORY STONE & STUCCO APARTMENT BUILDING

A TRACT OF LAND DESCRIBED IN A DEED TO LOAR MAIN MARKET LLC CC#D015-126894 R.P.R.D.C.T.

TRAIL CONNECTION TO SPLASHPAD

EXISTING SPLASHPAD

SEE EX. CONDITIONS & DEMOLITION PLAN FOR BENCHMARK INFORMATION.

NORTH

GRAPHIC SCALE
0 60 120
1 inch = 60'

REVISIONS

NO.	DATE	DESCRIPTION

OVERALL LAYOUT PLAN

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121 • Fax: 817.335.7437
(TX REG. F-1114)

McCORD PARK PHASE 2
BID PACKAGE 2 - PARK IMPROVEMENTS
LITTLE ELM, TX

REGISTERED LANDSCAPE ARCHITECT
ELIZABETH M. CRAWFORD
2480
STATE OF TEXAS
9/27/2018

JOB NO.	B001712.004
DESIGNED BY:	EMC
DRAWN BY:	TDD
CHECKED BY:	EMC
DATE:	SEPTEMBER 27, 2018
SHEET:	L0.00

FILENAME - Layout Overall.dwg
PLOTTED BY: Tim Dunaway
PLOTTED ON: Wednesday, September 26, 2018
PLOTTED AT: 10:29:39 AM

TOWN OF LITTLE ELM

CHANGE ORDER # 1 **PO #** **CONTRACT #** 2023-20

BID/PROJECT NAME: Wood Family Dog Park Expansion

VENDOR NAME: Ratliff Hardscape

Item	Description		Amount	Days (+/-)
1	Add Concrete at Entryway - 435 SF @ $8/SF	$	3,480.00	0
2	Add 1 Small Pavilion	$	35,255.00	0
3	Add 2 Small Pavilion Slabs	$	33,960.00	0
4	Add 4-inch Caliper Shade Trees - 10 @ $1,150 EA	$	11,500.00	0
5	Add Ornamental Tree - 1 @ $896 EA	$	896.00	0
6		$	-	
7		$	-	
8		$	-	
9		$	-	
10		$	-	
11		$	-	
12		$	-	
13		$	-	
14		$	-	
15		$	-	
16		$	-	
	Total Change	**$**	**85,091.00**	**0**

Change in Contract Price:		Change in Contract Times:	
Original Contract Price:	$340,516.50	Original Number of Days:	
Change Order #1	$ 85,091.00	Change Order 1	
Change Order #2	$0.00	Change Order 2	
Change Order #3	$0.00	Change Order 3	
Change Order #4	$0.00	Change Order 4	
Change Order #5	$0.00	Change order 5	
New Contract Amount	$425,607.50	New Number of Days	
Percentage of Original Contract:	24.99%	New End Date:	

Please amend the PO by adding or deducting the following amounts to/from the funding sources listed here:

Account Number	Amount

APPROVAL: Contractor

Signature Contractor | Printed Name & Title | Date

APPROVAL: Town of Little Elm

Project Manager | Date | Director | Date

Inspector | Date | Town Manager | Date

FINANCE / PURCHASING

Is the change order amount over 25% of the original contract? ____ Yes ____ No

If yes, date of Council authorization (approval of new amount) _____ Date

Was a budget amendment form needed / submitted? ____ Yes ____ No

JE Date for budget transfer. _____ Date

Purchasing Manager | Date | Finance | Date

				Ratliff Hardscape, LTD		Green Scaping (C. Green Scpaing, LP)	
				Total Price	$340,516.50	Total Price	$433,797.00
Line #	Description	QTY	UOM	Unit	Extended	Unit	Extended
1	Erosion Control	1	LS	$15,600.00	$15,600.00	$15,900.00	$15,900.00
2	Misc. Demolition and Site Preperation	1	LS	$23,400.00	$23,400.00	$59,940.00	$59,940.00
3	Tree Protection	1	LS	$5,200.00	$5,200.00	$2,600.00	$2,600.00
4	Earthwork for Site	1	LS	$50,050.00	$50,050.00	$52,882.00	$52,882.00
5	Electrical Service	1	LS	**$34,886.00**	$34,886.00	$95,320.00	$95,320.00
6	6 foot Wide Concrete Trail	1100	SF	$8.00	$8,800.00	$8.20	$9,020.00
7	8 foot Wide Concrete Trail	700	SF	**$8.00**	$5,600.00	$8.10	$5,670.00
~~8~~	~~Integral Color Concrete with Salt Finish~~	~~435~~	~~SF~~	~~$18.00~~	~~$0.00~~	~~$12.00~~	~~$0.00~~
~~9~~	~~Concrete Bench Pad~~	~~90~~	~~SF~~	~~$8.00~~	~~$0.00~~	~~$10.00~~	~~$0.00~~
~~10~~	~~Small Pavilion~~	~~2~~	~~LS~~	~~**$35,255.00**~~	~~$0.00~~	~~$46,460.00~~	~~$0.00~~
~~11~~	~~Small Pavilion Concrete Slab~~	~~2~~	~~EA~~	~~$16,980.00~~	~~$0.00~~	~~$20,830.00~~	~~$0.00~~
12	5 foot Height Fence - Vinyl Coated Chainlink	630	LF	**$50.00**	$31,500.00	$62.00	$39,060.00
13	5 foot Height Pedestrian Gate at Bullpen Entr	4	EA	$490.00	$1,960.00	$1,350.00	$5,400.00
14	5 foot Height Maintenance Gate - Vinyl Coate	1	EA	**$1,010.00**	$1,010.00	$2,700.00	$2,700.00
15	8 inch Width Concrete Mow Strip	305	LF	$18.50	$5,642.50	$26.00	$7,930.00
16	18 inch Width Concrete Mow Strip	630	LF	$26.00	$16,380.00	$34.00	$21,420.00
~~17~~	~~Park Bench~~	~~2~~	~~EA~~	~~$4,433.00~~	~~$0.00~~	~~$2,920.00~~	~~$0.00~~
~~18~~	~~Trash Receptacles~~	~~2~~	~~EA~~	~~$4,303.00~~	~~$0.00~~	~~$2,240.00~~	~~$0.00~~
19	Dog Park Rules Signage	1	EA	**$1,300.00**	$1,300.00	$2,315.00	$2,315.00
20	Dog Waste Bag Dispenser	6	EA	$1,170.00	$7,020.00	$760.00	$4,560.00
~~21~~	~~Dog Wash Station~~	~~1~~	~~EA~~	~~$19,825.00~~	~~$0.00~~	~~$10,720.00~~	~~$0.00~~
22	Subsurface Drainage	1	LS	$3,380.00	$3,380.00	**$3,360.00**	$3,360.00
23	Artificial Turf on Aggregate Base	440	SF	**$12.50**	$5,500.00	$23.00	$10,120.00
~~24~~	~~Decorative River Rock~~	~~675~~	~~SF~~	~~**$6.50**~~	~~$0.00~~	~~$13.00~~	~~$0.00~~
~~25~~	~~Decorative Moss Boulder~~	~~1~~	~~EA~~	~~**$260.00**~~	~~$0.00~~	~~$1,380.00~~	~~$0.00~~
~~26~~	~~Planting Mulch and Bed Prep~~	~~50~~	~~CY~~	~~$110.50~~	~~$0.00~~	~~$203.00~~	~~$0.00~~
~~27~~	~~Mulch Shoulder~~	~~11~~	~~CY~~	~~$98.00~~	~~$0.00~~	~~$120.00~~	~~$0.00~~
~~28~~	~~4 inch Caliper Shade Tree~~	~~14~~	~~EA~~	~~**$1,150.00**~~	~~$0.00~~	~~$1,185.00~~	~~$0.00~~
~~29~~	~~Ornamental Tree~~	~~5~~	~~EA~~	~~$896.00~~	~~$0.00~~	~~$900.00~~	~~$0.00~~
~~30~~	~~5 Gallon Shrub~~	~~182~~	~~EA~~	~~$60.00~~	~~$0.00~~	~~**$30.00**~~	~~$0.00~~
~~31~~	~~3 Gallon Shrub~~	~~26~~	~~EA~~	~~$60.00~~	~~$0.00~~	~~$29.00~~	~~$0.00~~
32	Solid Sod - Celebration Bermudagrass	53000	SF	$0.75	$39,750.00	**$0.60**	$31,800.00
~~33~~	~~Steel Edging~~	~~85~~	~~LF~~	~~**$7.00**~~	~~$0.00~~	~~$11.00~~	~~$0.00~~
34	Permanent Irrigation System	1	LS	$83,538.00	$83,538.00	**$63,800.00**	$63,800.00

				Home Run Construction LLC		A&C Construction, Inc.	
				Total Price	$558,473.40	Total Price	$397,454.25
Line #	Description	QTY	UOM	Unit	Extended	Unit	Extended
1	Erosion Control	1	LS	**$5,000.00**	$5,000.00	$6,500.00	$6,500.00
2	Misc. Demolition and Site Preperation	1	LS	**$5,800.00**	$5,800.00	$9,750.00	$9,750.00
3	Tree Protection	1	LS	$3,500.00	$3,500.00	$5,850.00	$5,850.00
4	Earthwork for Site	1	LS	$34,500.00	$34,500.00	**$18,450.00**	$18,450.00
5	Electrical Service	1	LS	$65,685.00	$65,685.00	$99,435.00	$99,435.00
6	6 foot Wide Concrete Trail	1100	SF	**$7.05**	$7,755.00	$12.35	$13,585.00
7	8 foot Wide Concrete Trail	700	SF	**$8.00**	$5,600.00	$12.35	$8,645.00
~~8~~	~~Integral Color Concrete with Salt Finish~~	~~435~~	~~SF~~	~~**$11.75**~~	~~$0.00~~	~~$15.60~~	~~$0.00~~
~~9~~	~~Concrete Bench Pad~~	~~90~~	~~SF~~	~~**$7.00**~~	~~$0.00~~	~~$14.30~~	~~$0.00~~
~~10~~	~~Small Pavilion~~	~~2~~	~~LS~~	~~$36,865.95~~	~~$0.00~~	~~$80,600.00~~	~~$0.00~~
~~11~~	~~Small Pavilion Concrete Slab~~	~~2~~	~~EA~~	~~**$8,300.00**~~	~~$0.00~~	~~$19,500.00~~	~~$0.00~~
12	5 foot Height Fence - Vinyl Coated Chainlink	630	LF	$118.73	$74,799.90	$59.50	$37,485.00
13	5 foot Height Pedestrian Gate at Bullpen Entr	4	EA	$1,100.00	$4,400.00	$1,066.00	$4,264.00
14	5 foot Height Maintenance Gate - Vinyl Coate	1	EA	$2,200.00	$2,200.00	$2,496.00	$2,496.00
15	8 inch Width Concrete Mow Strip	305	LF	$41.50	$12,657.50	**$13.65**	$4,163.25
16	18 inch Width Concrete Mow Strip	630	LF	$50.80	$32,004.00	$32.50	$20,475.00
~~17~~	~~Park Bench~~	~~2~~	~~EA~~	~~$2,800.00~~	~~$0.00~~	~~$3,510.00~~	~~$0.00~~
~~18~~	~~Trash Receptacles~~	~~2~~	~~EA~~	~~**$1,600.00**~~	~~$0.00~~	~~$3,120.00~~	~~$0.00~~
19	Dog Park Rules Signage	1	EA	$1,600.00	$1,600.00	$2,340.00	$2,340.00
20	Dog Waste Bag Dispenser	6	EA	$817.00	$4,902.00	$1,560.00	$9,360.00
~~21~~	~~Dog Wash Station~~	~~1~~	~~EA~~	~~$11,900.00~~	~~$0.00~~	~~$4,550.00~~	~~$0.00~~
22	Subsurface Drainage	1	LS	$6,800.00	$6,800.00	$11,050.00	$11,050.00
23	Artificial Turf on Aggregate Base	440	SF	$16.00	$7,040.00	$13.65	$6,006.00
~~24~~	~~Decorative River Rock~~	~~675~~	~~SF~~	~~$12.22~~	~~$0.00~~	~~$11.05~~	~~$0.00~~
~~25~~	~~Decorative Moss Boulder~~	~~1~~	~~EA~~	~~$545.00~~	~~$0.00~~	~~$2,340.00~~	~~$0.00~~
~~26~~	~~Planting Mulch and Bed Prep~~	~~50~~	~~CY~~	~~$99.72~~	~~$0.00~~	~~$910.00~~	~~$0.00~~
~~27~~	~~Mulch Shoulder~~	~~11~~	~~CY~~	~~**$90.90**~~	~~$0.00~~	~~$230.00~~	~~$0.00~~
~~28~~	~~4 inch Caliper Shade Tree~~	~~14~~	~~EA~~	~~$1,207.15~~	~~$0.00~~	~~$1,266.00~~	~~$0.00~~
~~29~~	~~Ornamental Tree~~	~~5~~	~~EA~~	~~**$545.00**~~	~~$0.00~~	~~$1,580.00~~	~~$0.00~~
~~30~~	~~5 Gallon Shrub~~	~~182~~	~~EA~~	~~$33.00~~	~~$0.00~~	~~$58.50~~	~~$0.00~~
~~31~~	~~3 Gallon Shrub~~	~~26~~	~~EA~~	~~**$28.00**~~	~~$0.00~~	~~$45.50~~	~~$0.00~~
32	Solid Sod - Celebration Bermudagrass	53000	SF	$1.16	$61,480.00	$1.20	$63,600.00
~~33~~	~~Steel Edging~~	~~85~~	~~LF~~	~~$8.50~~	~~$0.00~~	~~$8.00~~	~~$0.00~~
34	Permanent Irrigation System	1	LS	$222,750.00	$222,750.00	$74,000.00	$74,000.00

				AUI Partners, LLC	
				Total Price	$534,543.82
Line #	Description	QTY	UOM	Unit	Extended
1	Erosion Control	1	LS	$18,183.45	$18,183.45
2	Misc. Demolition and Site Preperation	1	LS	$24,749.49	$24,749.49
3	Tree Protection	1	LS	**$618.74**	$618.74
4	Earthwork for Site	1	LS	$81,142.44	$81,142.44
5	Electrical Service	1	LS	$105,000.00	$105,000.00
6	6 foot Wide Concrete Trail	1100	SF	$18.00	$19,800.00
7	8 foot Wide Concrete Trail	700	SF	$19.45	$13,615.00
~~8~~	~~Integral Color Concrete with Salt Finish~~	~~435~~	~~SF~~	~~$15.65~~	~~$0.00~~
~~9~~	~~Concrete Bench Pad~~	~~90~~	~~SF~~	~~$34.37~~	~~$0.00~~
~~10~~	~~Small Pavilion~~	~~2~~	~~LS~~	~~$49,974.79~~	~~$0.00~~
~~11~~	~~Small Pavilion Concrete Slab~~	~~2~~	~~EA~~	~~$22,893.28~~	~~$0.00~~
12	5 foot Height Fence - Vinyl Coated Chainlink	630	LF	$85.44	$53,827.20
13	5 foot Height Pedestrian Gate at Bullpen Entr	4	EA	**$154.68**	$618.72
14	5 foot Height Maintenance Gate - Vinyl Coate	1	EA	$1,237.47	$1,237.47
15	8 inch Width Concrete Mow Strip	305	LF	$31.04	$9,467.20
16	18 inch Width Concrete Mow Strip	630	LF	**$25.54**	$16,090.20
~~17~~	~~Park Bench~~	~~2~~	~~EA~~	~~**$2,165.58**~~	~~$0.00~~
~~18~~	~~Trash Receptacles~~	~~2~~	~~EA~~	~~$2,227.45~~	~~$0.00~~
19	Dog Park Rules Signage	1	EA	$1,856.21	$1,856.21
20	Dog Waste Bag Dispenser	6	EA	**$721.86**	$4,331.16
~~21~~	~~Dog Wash Station~~	~~1~~	~~EA~~	~~**$3,093.69**~~	~~$0.00~~
22	Subsurface Drainage	1	LS	$3,712.42	$3,712.42
23	Artificial Turf on Aggregate Base	440	SF	$27.34	$12,029.60
~~24~~	~~Decorative River Rock~~	~~675~~	~~SF~~	~~$20.79~~	~~$0.00~~
~~25~~	~~Decorative Moss Boulder~~	~~1~~	~~EA~~	~~$965.23~~	~~$0.00~~
~~26~~	~~Planting Mulch and Bed Prep~~	~~50~~	~~CY~~	~~**$80.63**~~	~~$0.00~~
~~27~~	~~Mulch Shoulder~~	~~11~~	~~CY~~	~~$225.00~~	~~$0.00~~
~~28~~	~~4 inch Caliper Shade Tree~~	~~14~~	~~EA~~	~~$2,227.45~~	~~$0.00~~
~~29~~	~~Ornamental Tree~~	~~5~~	~~EA~~	~~$1,126.10~~	~~$0.00~~
~~30~~	~~5 Gallon Shrub~~	~~182~~	~~EA~~	~~$57.22~~	~~$0.00~~
~~31~~	~~3 Gallon Shrub~~	~~26~~	~~EA~~	~~$51.97~~	~~$0.00~~
32	Solid Sod - Celebration Bermudagrass	53000	SF	$1.10	$58,300.00
~~33~~	~~Steel Edging~~	~~85~~	~~LF~~	~~$29.12~~	~~$0.00~~
34	Permanent Irrigation System	1	LS	$109,964.52	$109,964.52

STATE OF TEXAS §
§
COUNTY OF DENTON §

WOOD FAMILY DOG PARK EXPANSION AGREEMENT

This Wood Family Dog Park Expansion Agreement ("**Agreement**"), is entered into this _____day of_____, 2023, by and between _____ (hereinafter referred to as the "**Donor**"), and the Town of Little Elm, Texas ("**Town**"). The Donor and the Town are sometimes referred herein together as the "**Parties**" and individually as a "**Party**".

Recitals:

1. This Agreement is made to facilitate the expansion of the Wood Family Dog Park ("**Dog Park**") and to recognize the contributions of the Donor towards such expansion efforts.

2. The Dog Park, located at 1001 Witt Road, was established in 2020 and currently consists of 103,800 square feet.

3. The Donor has expressed interest in funding an expansion of the Dog Park to add an additional 60,800 square feet to the Dog Park, which expansion is estimated to cost Three-Hundred Thousand and 00/100 Dollars ($300,000).

4. The Town, in recognition of such donation, wishes to honor the Donor through a memorial plaque to be placed at the entrance of the newly expanded Dog Park area.

NOW, THEREFORE, for and in consideration of the above and foregoing premises, the benefits to each of the Parties from this Agreement, and other good and valuable consideration, the sufficiency of which is hereby acknowledged and agreed, North West Ranch and the Town do hereby agree as follows:

Section 1. Incorporation of Premises. The above and foregoing Recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

Section 2. Term. This Agreement shall be effective as of the date of execution of this Agreement by the last of the Parties to do so ("**Effective Date**"). This Agreement shall remain in full force and effect from the Effective Date until all obligations set forth in the Agreement are satisfied.

Section 3. Agreements. Donor and the Town agree as follows:

A. Within 60 days of the Effective Date, Donor shall deposit with the Town Three-Hundred Thousand and 00/100 Dollars ($300,000) (the "**Donated Funds**"), which Donated Funds shall be held in escrow by the Town for the exclusive use of funding the expansion of the Dog Park.

B. The Town agrees that the Donated Funds will be used solely for costs of expanding the Dog Park.

C. The Town shall, by the time that the Dog Park expansion is completed, erect a bronze memorial plaque that would read as follows:

"David Clyde Wallace
in Loving Memory of his wife Della Y Wallace
and Friend Lou Propst"

_____

FOR THE DONATION OF THE FUNDS THAT MADE THIS EXPANDED PORTION OF THE WOOD FAMILY DOG PARK POSSIBLE"
"

D. The Town shall place the memorial plaque at the entrance of the newly expanded Dog Park area.

E. The plaque described herein shall be erected by the Town at no cost to the Donor and the Donor shall have no maintenance or other responsibilities in this matter regarding the plaque.

Section 4. <u>Miscellaneous</u>.

A. This Agreement and any dispute arising out of or relating to this Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without reference to its conflict of law rules. In the event of any dispute or action under this Agreement, venue for any and all disputes or actions shall be instituted and maintained in Denton County, Texas.

B. It is acknowledged and agreed by the Parties that the terms hereof are not intended to and shall not be deemed to create a partnership, joint venture, joint enterprise, or other relationship between or among the Parties.

C. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect other provisions, and it is the intention of the Parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision shall be added to this Agreement which is legal, valid and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

D. The rights and remedies provided by this Agreement are cumulative and the use of any one right or remedy by either Party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the Parties may have by law statute, ordinance, or otherwise. The failure by any Party to exercise any right, power, or option given to it by this Agreement, or to insist upon strict compliance with the terms of this Agreement,

shall not constitute a waiver of the terms and conditions of this Agreement with respect to any other or subsequent breach thereof, nor a waiver by such Party of its rights at any time thereafter to require exact and strict compliance with all the terms hereof. Any rights and remedies any Party may have with respect to the other arising out of this Agreement shall survive the cancellation, expiration or termination of this Agreement, except as otherwise expressly set forth herein.

E. All exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

F. Any of the representations, warranties, covenants, and obligations of the Parties, as well as any rights and benefits of the parties, pertaining to a period of time following the termination or expiration of this Agreement shall survive termination or expiration.

G. This Agreement is made subject to the existing provisions of the Charter of the Town of Little Elm, its present rules, regulations, procedures and ordinances, and all applicable laws, rules, and regulations of the State of Texas and the United States.

H. The undersigned officers and/or agents of the Parties hereto are the properly authorized persons and have the necessary authority to execute this Agreement on behalf of the Parties hereto.

I. This Agreement may be only amended or altered by written instrument signed by the Donor and the Town.

F. The headings and captions used in this Agreement are for the convenience of the Parties only and shall not in any way define, limit or describe the scope or intent of any provisions of this Agreement.

K. This Agreement is the entire agreement between the Parties with respect to the subject matters covered in this Agreement. There are no other collateral oral or written agreements between the Parties that in any manner relates to the subject matter of this Agreement, except as provided or referenced in this Agreement.

EXECUTED by the Parties on the dates set forth below, to be effective as of the date first written above.

DONOR:	**TOWN OF LITTLE ELM, TEXAS**
By: _____	By: _____ Town Manager
Date: _____	Date: _____

ATTEST:

By:_____
Town Secretary

Date:	01/16/2024
Agenda Item #:	5. G.
Department:	Development Services
Strategic Goal:	Maximize community recreation and leisure activities
Staff Contact:	Wesley Brandon, Town Engineer

AGENDA ITEM:

Consider Action to Approve the **Purchase of Playground Equipment for the Cottonwood Park Project from Whirlix Design, Inc. in an amount not to exceed $574,681.**

DESCRIPTION:

The Cottonwood Park Project is located at the southern end of Lobo Lane, near the existing Cottonwood Creek Marina. The project includes amenities and improvements as listed in the "Lakefront Park" phase of the Cottonwood Park Master Plan, such as pavilion structures, expanded shoreline activities (playground, picnic, and lawn game areas), walking trails, parking areas, and restrooms.

In order to avoid potential material scheduling and cost issues, staff have received a quote for the proposed playground equipment from Whirlix Design, Inc. The company is listed on BuyBoard (Contract #592-19, Vendor #3120), a Texas-based purchasing cooperative that allows municipalities to purchase pre-procured equipment and forgo the traditional procurement process.

BUDGET IMPACT:

The cost of the equipment is $574,681, and funding is allocated within the town's capital improvement fund.

RECOMMENDED ACTION:

Staff recommends approval.

Attachments

Playground Equipment Proposal

Playground Equipment Conceptual Rendering

Date: **February 21, 2023** **UPDATED 02.21.23**
Project: **Cottonwood Park**
Location: **Little Elm, Texas**

To: The Town of Little Elm

BUYBOARD CONTRACT # 679-22 (*updated September 2022*), VENDOR # 3120

We are a self-reporting vendor for Buy Board. Please send all purchase orders, payments, etc. directly to the Whirlix Design team.

Proposal Expires: 60 Days from The Above Date
Please note that current fluctuations in material pricing may cause a proposal increase between now and the acceptance of this agreement.

Series:	***Landscape Structures, Playground Design 1153765-01-06***
Surface:	***FIBAR Engineered wood Fiber Surfacing***
Installation:	***Included: By Factory Trained and Certified Installers***
Quantity/Sizes:	***See Renders on this Proposal***

Base Bid: Specified Playground Equipment by Landscape Structures and Safety Surfacing
$604,928.00
BuyBoard Discount applied, new total = *$574,681.00*
(Five Hundred Seventy-Four Thousand Six Hundred Eighty-One Dollars)

- Playground Design by Landscape Structures
- 300 Series Engineered Wood Fiber Safety Surfacing by FIBAR
(*DOES NOT require or include Stone Base*)

Base Bid Includes:

- Full Submittal Package
- Warranty as Specified
- Certified Installation
- Playground Design as Noted
- Safety Surfacing as Noted
- Freight

Base Bid Excludes:

- Sales Tax
- Drainage
- Textura, Oracle, Etc.
- Professional Liability Insurance
- Construction Management Software Required for Project
- Payment, Performance, or Maintenance Bonds
- Use of Credit Cards as Payment
- Demolition of Existing Structure

- Excavation and Removal of Soil
- Stone Base for Loose-Fill EWF (none required)
- Haul off or On-Site Disposal of Remaining Dirt
- Tuff Timber or Concrete Border
- Drilling Through Rocky Soil
- Hitting of New or Existing Sprinkler pipes
- Hitting of private electrical, water, sewer, internet, etc. that are not detectible during a commercial line location
- Sod Replacement due to Reasonable Path of Travel to Project or Play Area Location. We need access to project location.
- Surveying of Site
- Craning of Equipment
- Logistical Issues that Prevent Truck or Equipment Access to Site
- Special Augers or Drilling Equipment
- Certified Payroll / Progress Billing
- Setting of Control Points or Benchmarks
- Remobilization Charges Due to Weather or Project Delays
- Offsite Storage of Equipment Due to Weather or Project Related Delays
- On Site Security
- Permitting and Inspections
- Third Party Inspections
- Wet Stamped Engineering Drawings
- Dumpster
- Latrine on Site
- Soil Testing
- Geotechnical Report

Prepared by Greg Hawkins · Whirlix Design Inc · ghawkins@whirlix.com · 972.824.4815

Payment terms will be based, in part, on credit review that is pulled from The Experian Business Division.

TERMS: 60% Deposit Due Upon Approval of Project and 40% Due When Material Ships.

Pursuant to Tex. Prop. Code § 53.159, Whirlix will need any and all Bond information at the time of Signed Proposal, Contract, and / or Deposit.

All taxes now or hereafter levied by federal, state or local authority upon the sale of any of the forgoing products to be paid for by the purchaser. All quotations are subject to the conditions printed on the following pages if any and when accepted are subject to the approval of an officer of this company.

TERMS AND CONDITIONS OF SALE

TERMINOLOGY:

The party, to whom this Proposal is submitted will be called the "Purchaser" and Whirlix Design Inc., will be called the "Company." The word "parties" means collectively the Purchaser and the Company.

GENERAL CONDITIONS:

(a) The Company reserves the right to accept or reject any proposal by Purchaser.

(b) All proposals accepted by the Company shall be subject to all the terms and conditions stated on the face and back of this Proposal.

(c) This Proposal, when accepted by an officer of the Company, shall constitute the complete agreement between the parties hereto and it is expressly agreed and stipulated that there are no promises, representations, provisions or understandings of any nature whatsoever pertaining to the subject matter hereof not expressly stated herein.

(d) No modification of this Proposal and no modification of any ensuing agreement shall be of any force and effect unless the same shall be in writing, signed by the duly authorized representative of the Purchaser and thereafter accepted by an officer of the Company, indicating the agreed price and schedule adjustment, if any.

(e) All provisions of the contract ensuing from this Proposal shall be subject to all restrictions and regulations of the United States, of any State Government or any subdivision or agency thereof, whether imposed by legal or administrative authority or by voluntary cooperation with any agency, public or private, in existence at the time the Company accepts this Proposal. The goods and/or services described herein (or on the specification provided herewith) comply with applicable safety and health standards issued pursuant to the Occupational Safety and Health Standards Act of 1970 ("the Act") and in effect on this date as such standards are interpreted and understood by the Company. These standards may be amended and/or their meaning may be clarified prior to shipment or performance, and if such change or clarification requires changes in the goods and services described herein, the Company shall make the necessary changes available to the Purchaser. Purchaser shall pay the Company for any and all such changes at the Company's prices therefor in effect at time of shipment or performance, as the case maybe. The foregoing provisions shall not be construed to modify or affect in any manner whatsoever the Company's disclaimer of any liability for consequential damages contained elsewhere in these terms and conditions of sale.

(f) The Company shall be excused from all responsibility or liability for nonperformance or delayed performance caused by failure of the Purchaser to convey information necessary for the Company to complete its work, any labor difficulty, fire, flood, accident, transportation difficulty, material or fuel or power shortage, war, governmental action or any contingency of whatsoever nature, in whole or in part, beyond its control. If, during the period of delayed performance resulting from any cause in whole or in part beyond the Company's control, the Company's costs are increased, the Company shall be entitled to pass those cost increases on to the Purchaser and Purchaser hereby agrees to pay same. If any delay not within the Company's control, in whole or in part, prevents performance for twelve (12) months or more, the Purchaser or the Company may cancel the remaining unperformed portion of this Proposal.

(g) The provisions of the contract ensuing from this Proposal shall be interpreted and enforced in accordance with the laws of the state of Texas.

(h) The provisions of the contract ensuing from this Proposal shall be binding upon the heirs, administrators, executors, legal representatives, successors or assigns to the parties hereto.

(i) If installation is included in this Proposal, the Purchaser shall provide at no cost to the Company water, electricity, telephone and sanitary facilities unless otherwise agreed in writing. If the installation superintendent finds that these utilities are not available or that, for any other reason the site is not ready for installation, it shall be the obligation of the Purchaser to assume all costs occasioned by failure to timely supply such utilities, proper information or adequate storage.

(j) It is agreed that the material or equipment described on the face hereof is not consumer goods and that title thereto remains in the Company until the total price has been paid in cash, at which time title will pass to the Purchaser, unless the Terms of Payment as described on the face hereof otherwise provide.

(k) To the fullest extent permitted by law, the Company shall indemnify, defend and hold harmless Purchaser from and against all claims, damages, losses and expenses, including but not limited to attorneys fees arising or resulting from performance of the work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting there from, but only to the extent of the companies negligence. In any and all claims against the Purchaser by any employee of the Company the indemnification obligation under this paragraph shall not be limited in any way by any limitation on the amount or type of changes, compensation or benefits payable by the Company under worker's compensation acts, disability benefits acts or other employee benefit acts. The obligation of the Company assumed hereunder shall in no event be construed to extend to the liability of any architect or engineer retained by the Purchaser or others. In no event shall the Company be liable to the Purchaser on a claim of any kind, including negligence, for any interruption of operation, loss of anticipated profits or for special, indirect or consequential damages of any nature. The Purchaser shall indemnify and hold the Company harmless from any loss or damage to the Company's work or material resulting from weather, fire, flood, windstorm, other trades or any other peril or cause not within the exclusive control of the Company.

(l) Any amount past due shall accrue interest at 1.5% per month.

(m) The Company shall be entitled to recover all legal fees and other costs of collection of payment from Purchaser.

(n) Purchaser shall, upon notice of completion of installation of each separable unit of Company's work, inspect same. The Purchaser shall conclusively be presumed to have made complete and final acceptance thereof unless written objection is conveyed within ten (10) days of Company's notice.

(o) Any dispute between the parties arising out of or pertaining in any way to this Proposal, the contract ensuing from it and/or any goods purchased or work performed by the Company shall, at the Company's sole option, be resolved by binding arbitration held in or such other location as the Company may select and give notice of said location to Purchaser.

PRICES:
Unless otherwise specifically stated on the face of this proposal, all prices are:

(a) F.O.B. shipping point;
(b) Subject to revision to conform to the Company's price in effect at time of shipment;
(c) Quoted on delivered basis where installed by others to include delivery to nearest freight station or railroad;
(d) Do not include the cost of any surety bond for performance or payment of the Company's work, and
(e) Based on full-time, continuous labor without interruption during regular working hours until completion and subject to revision if the Purchaser requires overtime work or changes to the work, including additional time for performance, increased labor costs, overhead and profit.

SHIPPING CONDITIONS:
Unless otherwise specifically stated on the face hereof, all deliveries and shipments are subject to the following conditions:

(a) F.O.B. shipping point, with no transportation or other allowances;
(b) Partial shipments may be made at the Company's sole discretion. Payment for such partial shipment(s) shall be made in the proportion of the contract price that the partial shipment bears to the whole, in accordance with the terms of payment set forth on the face hereof, and
(c) Shipping dates are approximate. It shall be the responsibility of the Purchaser to advise as to the earliest shipping dates when material may be conveyed, as governed by actual building conditions. If shipment is made and the building is not ready to receive the equipment, the Purchaser must arrange storage in a dry place and assume responsibility for same.

MAINTENANCE:
After delivery the Company shall have no responsibility for maintenance and Purchaser agrees to maintain the material or equipment at its own expense, or until the arrival of the Company's installers.

CLAIMS:
The Company's responsibility for loss, damage, delay, or non-delivery ceases upon delivery of material or equipment to a public carrier, and any such claim must be filed against the carrier by the consignee or the Purchaser. Claims for shortages, errors in packing or overcharges must be made to the Company within twenty (20) days after receipt of shipment or such claim shall be deemed to have been waived.

CANCELLATIONS OR POSTPONEMENTS:

(a) No contract ensuing from this Proposal is subject to cancellation or postponement by the Purchaser except upon written consent of the president of Whirlix Design Inc.
(b) Any such duly authorized cancellation of postponement shall be subject to a charge to reimburse the Company for all costs incurred in connection therewith, including reasonable profit and damages for Company's work to date of termination.
(c) The Company reserves the right to refuse shipment during any period when, in its sole judgment, the Purchaser's credit is unsatisfactory, or until receipt of full or partial advance payment.

SIZES AND WEIGHTS:
Measurements, dimensions and weights are subject to variations and are not guaranteed by the Company.

LIMITED WARRANTY:
As the exclusive limited remedy of the Purchaser, the Company warrants the equipment or material listed on the face hereof to be free from defects in material or workmanship under normal use and service, its obligation under this warranty being limited to the repair or replacement, F.O.B. its factory, for any part or parts of its own manufacture which shall, within one (1) year after date of shipment of such equipment or material to the Purchaser, be returned to it with transportation charges prepaid and of which Company has received written notice of such alleged defects and further provided that this material or equipment shall have been maintained in its original installation or shall have been in the continuous possession of the original user. This warranty is expressly in lieu of all other express or implied warranties including, but not limited to, any warranty of merchantability or fitness for a particular purpose, and of all other obligations and liabilities on the Company's part. The Company neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of its material or equipment. There are no warranties except those stated in the Proposal. The Company makes no representations whatsoever in regard to merchandise, equipment, parts or accessories not of the Company's own manufacture, the Company's liability in such cases being limited to such warranty, if any, as the manufacturer thereof may grant to the Company and if none, to the warranties herein expressed. In recognition of the fact that the Company's price makes no provision for such risk, the Company shall not be liable for direct, special or consequential damages or delays, including but not limited to lost profits, good will, loss of time, inconvenience or commercial loss, if such occurs, on account of defective material or workmanship or delays or accelerations in shipment, nor will any allowance be granted for any repairs, alterations, work done or expense incurred in connection with any repairs, alterations or replacements. The Company shall in no way be liable or responsible for injuries or damages to persons or property arising out of the use or operation of all the material or equipment within described, including component parts thereof, and the Purchaser hereby agrees to indemnify and save harmless the Company from all such liability and responsibility. The Company reserves the right to make any changes in design, additions to and improvements in its product without imposing any obligation upon itself to install them on its product previously manufactured.

Whirlix
Always in Motion

_____

(PURCHASER SIGN BELOW) APPROVED AND ACCEPTED:

_____ _____

PLACE DATE DATE

_____

PURCHASER'S FIRM NAME

BY_____ BY_____

AUTHORIZED PREPRESENTATIVE OFFICER'S SIGNATURE

TITLE_____ TITLE_____

Whirlix Design Inc.
1761 International Parkway, Suite 125
Richardson, TX 75081

Whirlix Design Inc.
1761 International Parkway, Suite 125
Richardson, TX 75081

Signature: Wesley Brandon _____ **DATE:** 6/13/2023

landscape structures
Cottonwood Park in Little Elm
1153765-02-03-03 • 06.06.2023
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Date:	01/16/2024
Agenda Item #:	6. A.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1744 Regarding a Request to Rezone Approximately 2.476 Acres of Land, Currently Zoned as Light Commercial, Generally Located South of the Intersection of Lake Trail Drive and East Eldorado Parkway, within Little Elm's Town Limit's, in Order to Establish a New Planned Development District Based on Light Commercial Standards, with Modified Development Standards for a Commercial Dog Grooming and Boarding Service with Outdoor Play Areas, and Publicly Accessible Dog Park.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1744:

DESCRIPTION:

Location. Generally located south of the intersection of Lake Trail Drive and East Eldorado Parkway, within Little Elm's town limits.

Background.

The subject property consists of two commercial lots totaling approximately 2.49 acres, currently zoned Light Commercial. The property was annexed into the Town in 1966 through Ordinance No. 19. The adjacent properties on the East and West are also commercial uses; the property to the West is used by Disciples of Christ Bible Fellowship Church and the property to the East is currently vacant undeveloped land. Town owned property containing a lift station sits adjacent to the property's northeast corner. The property to the South is owned by the US Army Corp of Engineers (ACoE), utilized for flood control, with the Town's "Lakefront Trail" running along the lakeshore. East Eldorado Parkway runs along the northern property boundary, with vacant undeveloped land, zoned Light Commercial, across the road.

Of the 2.49 acres, 1.6 acres fall within the ACoE flowage easement, meaning that development of that land is limited in order to retain a certain amount of impervious cover and slope for flood

control purposes. This has created great challenges in finding a suitable property owner/tenant that can work with such a limited building area and still be able to utilize the entire site to make development financially feasible. After Staff discussions with multiple interested parties, the property was purchased by Happy Tails LLC, operating as the Dog Stop. Dog Stop is an all-inclusive indoor/outdoor dog care facility offering dog grooming, dog daycare, dog boarding, dog obedience training, in-home services, and a pet retail store, with over 20 locations across the country.

The applicant first approached the Town with a concept proposal for a dog boarding and grooming business earlier this year. To utilize the space within the flowage easement, the applicant proposed creating a free-to-use dog park, open to the public, with a connection to the existing Lakefront Trail. However, operating a business with multiple outdoor dog runs requires approval of a Specific Use Permit. Since the property size, shape, and location within the flowage easement pose challenges to developing to the full extend of the Town's standards, in coordination with Staff, the applicant has decided the best approach is the request a new Planned Development District.

The applicant officially submitted the request in August and has been working with Town Staff to create plans and narrative that will fit within the Town's vision for the Eldorado corridor and accommodate the needs of the proposed business operation.

It should be noted that while the Town may approve limited improvements within the flowage easement, prior to actual construction, the applicant would still have to obtain proper approvals from the ACoE.

Proposal.
The applicant is proposing to rezone the subject property to a Planned Development district based on Light Commercial Standards with modifications in order to allow for one, one-story, 7,980 square-foot commercial building, with approximately 2,300 square feet of outdoor dog run area, 1,250 square feet of dog splash pad area, and a publicly accessible dog park area occupying the majority of the rear of the property.

The applicant is proposing to meet the Light Commercial District standards the following modifications:

1. Outdoor Kennels/Play Areas allowed on the south and west sides as depicted in the site plan.
2. Outdoor Splash Pad allowed on the east side of the building as depicted in the site plan.
3. Increased signage as depicted in Façade Plans.
4. Varying materials percentages as stated and shown in Façade Plans.
5. Single Dumpster enclosure approximately 12 ft. x 14 ft.
6. Landscape buffer eliminated along the firelane hammer head on the western property line.
7. Allowed white vinyl fencing for dog Kennels/Play areas adjacent to building.
8. Allowed vinyl coated chain link fencing around Outdoor Splash Pad.
9. Dog Parks allowed on south end of property as shown in Site Plan.
10. Dog Parks allowed to use six-foot-tall vinyl coated chain link fence.

The applicant is proposing to build a publicly accessible, amenitized, dog park that can be accessed by both the Lakefront Trail and the store parking lot.

Uses.
The applicant requests that "Kennel, with Outside Runs" by allowed by right through this PD process, specifically as depicted on the Site Plan. Currently "Kennel, with Outside Runs" requires a Specific Use Permit. The applicant is also proposing an outdoor splash pad, which is not currently included within the Town's Use Chart.

Zoning Standards.
The applicant is proposing to meet all Height, Area, and Setback requirements for Light Commercial Zoning.

Development Standards.
The proposed elevations for the building have three out of the four elevations meeting the masonry requirements, and two of the elevations meeting the glazing requirement. Elevation percentages are as shown below, with the primary facades that face the street bolded:

Elevation	Glazing %	Masonry %	Metal Cladding %	Stucco %
North	**30**	**57**	**35**	**8**
East*	**30**	**80**	**4**	**16**
South	0	100	0	0
West*	**22**	**90**	**0**	**0**
**partial street frontage*				

The southern elevations will mostly be screened by the fenced-in play areas so glazing is not a priority for the south elevation. There are roll up doors to connect indoor and outdoor play areas when weather permits.

Landscape Standards.
The applicant is proposing to meet most landscape standards with new plantings and retaining exiting trees along the perimeter to provide additional screening for the dog park area.

The applicant is requesting to limit the perimeter planting on the west side of the property due to the hammerhead fire lane needed for current fire coverage until the neighboring property develops. The hammerhead will allow fire apparatus to safely maneuver in and out of the site and is necessary for Fire Marshal approval. Staff and the applicant have explored other options for placement and due to site conditions have not been able to find a more suitable location. Staff and the applicant have agreed to including in the Development Agreement that will accompany the PD to Town Council to approval to provide a provision to remove excess concrete once the adjacent property is developed and has a connecting fire lane.

Parking.
The proposal has sufficient parking for the retail use in the front, kennel use in the back, and added parking to accommodate visitors to the dog park.

Subdivision.
The proposed development layout showing one cohesive lot meets the Town's subdivision requirements. The property will need to go through the platting process, combining both lots, once the civil plans are deemed by staff as "approvable" during the Site Development Permit.

Signage.
The applicant is requesting to be allowed larger wall signs than would be permitted by right. The proposed building would be allowed a maximum of 200 square feet. The main wall sign is approximately 70 square feet as shown in the elevations.

If the applicant only did their main sign they would not need the sign waiver. However, they are requesting to add four other signs, an outline of a dog and three dog paws. Since this is a dog

related business, the metal structures become a sign instead of “fine art” due to having a connection to the business. These signs include a silhouette of a dog measuring 16 feet by 19 feet, for a total of 304 square feet on the northern façade, facing Eldorado Parkway. On the east façade, the applicant is proposing three dog paw silhouettes, each measuring 4 feet by 4 feet each, for a total of 48 square feet. These four signs plus the main sign result in a total sign area of 422 square feet, exceeding the typical allowance by 222 square feet.

In chapter 86 “Signs”, Section 4 “Purpose”, it is stated that the Town’s purpose for regulating signs is to “…maintain and enhance the aesthetic environment […] and the quality of life by preserving and enhancing the appearance of the streetscape which affects the image of the Town…”. Depending on the site, content, and design of the sign, a larger sign over 200 square feet can negatively affect the Town’s appearance. However, given the neutral message, design, and transparency of the silhouette signs, the proposed landscape along the property frontage, as well as the proximity to the Lakefront District, Staff does not perceive a negative impact on the visual environment.

Fire, Engineering, Building.
The Fire, Engineering, and Building department have reviewed the proposed plans and determined them to be acceptable for the purposes of this rezoning request. This is not an approval of any of the plans for construction

Comprehensive Plan.
The Future Land Use Plan identifies this property as retail/commercial so the proposed development request align's with the Town's Comprehensive Plan vision.

Commission Findings.
At their regular meeting on December 7, 2024 the Planning and Zoning Commission held a public hearing and discussed the proposed request in the context of the surrounding development, its proximity to the Lakefront District, operation of the future dog park areas and the splash pad, parking for the dog park areas, recycling needs and mitigation of unpleasant smells from the dumpster area. The Planning and Zoning Commission unanimously (6-0) approved the request with the conditions suggested by Staff.

- Standard details of the fencing types will be provided and approved by staff.
- Maintenance and signage for the park will be provided.
- The applicant and Staff explore the possibility of moving the dumpster to the corner near the pump station.

After the Commission hearing, the applicant provided the fence details, maintenance and signage for the park area, and relocated the dumpster enclosure to behind the existing pump station. Revisions have been reflected on the attached plans and additional documents included in the Ordinance and Development Agreement, with the exception of the landscape plans, which still show the dumpster enclosure in the original location.

Otherwise, the applicant has made effort toward the Town’s vision for the area through the proposed site and building improvements, and their overall willingness to provide a quality development for the Town. Staff is generally supportive of this request as the property has proven to be a very challenging undertaking for various other types of businesses and interested developers. With only about half of the site developable due to the flowage easement, the applicant has found a creative solution to utilize vacant open space in a way that benefits the business and contributes toward provision of outdoor amenities for Little Elm residents and visitors.

BUDGET IMPACT:

This item has no budget impact.

RECOMMENDED ACTION:

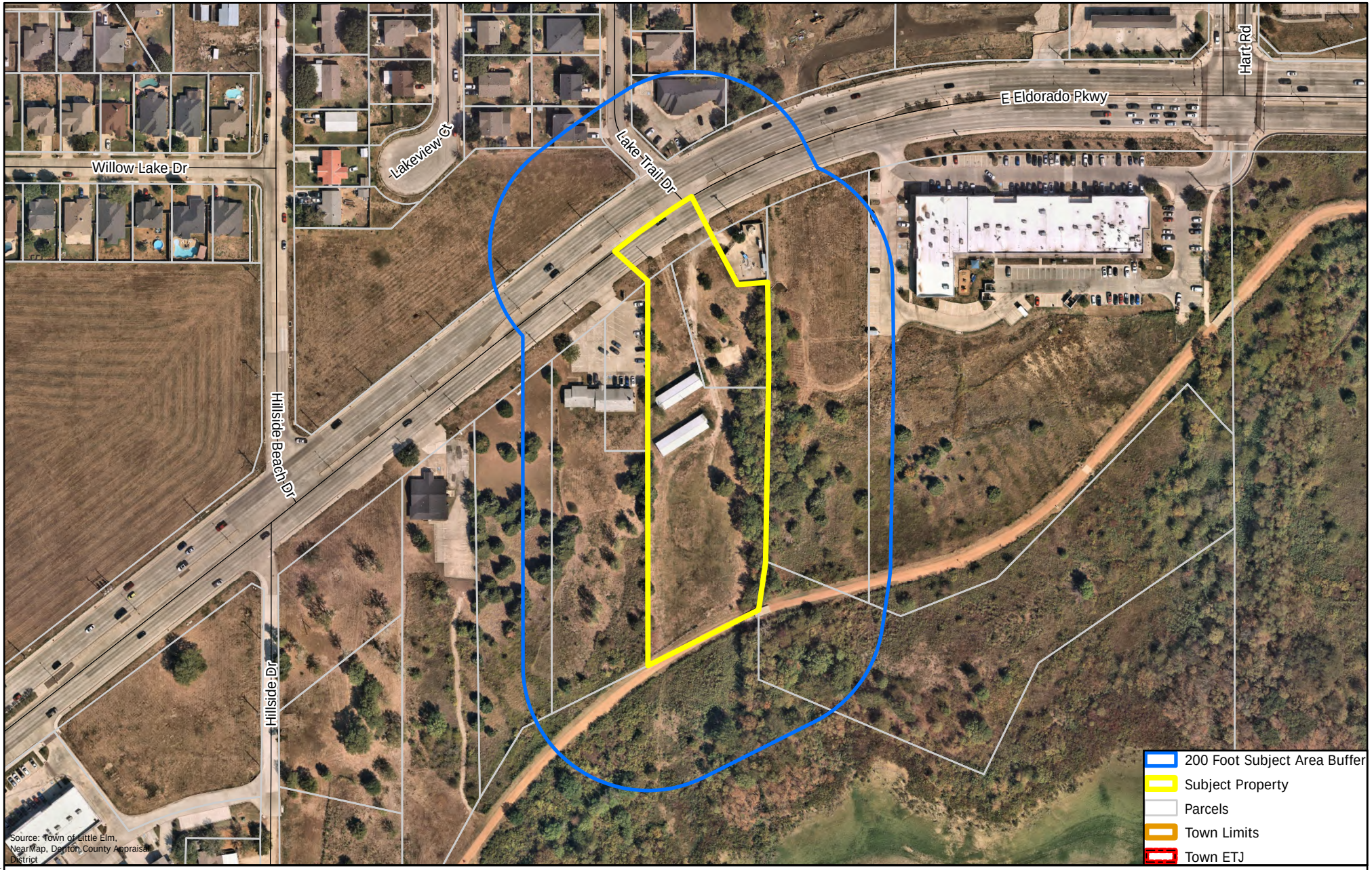
The Planning and Zoning Commission recommends approval of the request. While all previous conditions placed on the request by the Planning and Zoning Commission have been addressed, Staff requests the following condition be added:

- Landscape Plans shall be revised to show new dumpster enclosure location.

Attachments

Location Map

Ordinance No. 1744 - The Dog Stop PD

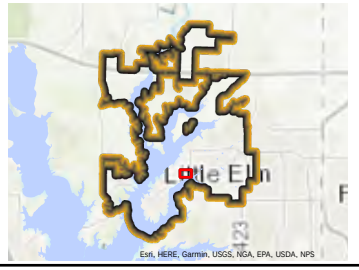


The Dog Stop (PD-23-03342)
Little Elm, TX 75068

Town of Little Elm
Denton County, Tx

Date: 11/20/2023

0 100 200
US Feet



This product is to be used for graphical representation only. The accuracy is not to be taken/ used
as data produced for engineering purposes or by a Registered Professional Land Surveyor
for the State of Texas. For this level of detail, supervision and certification of the produced data by a Registered Professional Land Surveyor for the State of Texas would have to be performed.
Town of Little Elm and its members assume no responsibility for the accuracy of said data.

Project Location: G:\GIS\For Town\Employee\GIS\eServices\Jose\LocationMap\

TOWN OF LITTLE ELM

ORDINANCE NO. 1744

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE, BY ESTABLISHING A NEW PLANNED DEVELOPMENT – LIGHT COMMERCIAL (PD-LC) DISTRICT IN ORDER TO ALLOW A NEW COMMERCIAL DEVELOPMENT WITH MODIFIED USES AND DEVELOPMENT STANDARDS ON APPROXIMATELY 2.476 ACRES OF LAND LOCATED AT 802 AND 804 EAST ELDORADO PARKWAY, GENERALLY SOUTH OF THE INTERSECTION OF LAKE TRAIL DRIVE AND EAST ELDORADO PARKWAY; PROVIDING A SAVINGS CLAUSE; CORRECTING THE OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, the Town possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate land uses under Chapter 211 of the Texas Local Government Code; and

WHEREAS, a request for Planned Development-Light Commercial (PD-LC) with modified development standards on approximately 2.476 acres of land, more specifically described in the exhibits, attached hereto; and

WHEREAS, this zoning change is in accordance with the most current adopted Comprehensive Plan of the Town of Little Elm; and

WHEREAS, the Town Council and the Planning & Zoning Commission of the Town of Little Elm, in compliance with the laws of the State of Texas and the ordinances of the Town of Little Elm, have given the required notices and held the required public hearings and afforded a full and fair hearing to all property owners generally and to all persons interested in and situated in the affected area and in the vicinity thereof regarding the requested zoning change described herein; and

WHEREAS, at its regular meeting held on December 7, 2023 the Planning & Zoning Commission considered and made recommendations on Case No. PD-23-03342; and

WHEREAS, after due deliberations and consideration of the recommendation of the Planning & Zoning Commission and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determined that the request is in the interest of public health, safety and welfare of the citizens of the Town of Little Elm.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. ZONING AMENDMENT. That Ordinance No. 226 of the Town of Little Elm, Texas, the same being the Comprehensive Zoning Ordinance of the Town, is hereby amended by establishing a new Planned Development-Light Commercial (PD-LC) based on Light Commercial (LC) district requirements with modified uses and development standards, on property located at 802 and 804 East Eldorado, within Little Elm's town limits, on approximately 2.476 acres of land more particularly described in **Exhibit A**, and attached hereto, subject to all of the terms and conditions set forth herein, the terms and conditions of the Comprehensive Zoning Ordinance, and all other applicable ordinances, laws, rules, regulations, and standards.

SECTION 3. CONDITIONS AND REGULATIONS. The permitted standards shall be in accordance with the Light Commercial (LC) District, and all applicable provisions of Chapter 106 – Zoning Ordinance in general, plus as specified herein:

a. The Zoning and Land Use Regulations, and all conditions set forth in **Exhibit B** attached hereto and made a part hereof for all purposes shall be adhered to in their entirety for the purposes of this Planned Development. In the event of conflict between the provisions of **Exhibit B** and provisions of any other exhibit, the provisions of **Exhibit B** control.

b. Dog Kennel with outside runs, dog splash pad, and future publicly accessible dog parks shall be allowed as shown in **Exhibit C**.

c. Hammerhead paving shall be removed at the time the adjacent property to the west develops and provides Fire and Access easements. Upon hammerhead removal, tree and shrub planting shall be provided in compliance with

landscaping requirements per Town Ordinance, at the time of planting.

SECTION 4. PLANNED DEVELOPMENT MASTER PLAN. The Concept Plan and related plans, images, and documents approved and described as **Exhibit C** attached hereto and made a part hereof are approved. The subject property shall be improved in accordance with the plans set forth in **Exhibit C**.

a) If, after two years from the date of approval of the Planned Development Master Plan, no substantial development progress has been made within the PD, then the Planned Development Master Plan shall expire. If the Planned Development Master Plan expires, a new Planned Development Master Plan must be submitted and approved according to the procedures within the Zoning Ordinance, Planned Development Districts. An extension of the two year expiration shall be granted if a development application for the PD has been submitted and is undergoing the development review process or if the Director of Development Services determines development progress is occurring.

b) The Planned Development Master Plan shall control the use and development of the property, and all building permits and development requests shall be in accordance with the plan until it is amended by the City Council.

c) If a change to the Concept Plan, if any, is requested, the request shall be processed in accordance with the development standards in effect at the time the change is requested for the proposed development.

SECTION 5. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are indirect conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. ZONING MAP. The official zoning map of the Town shall be amended to reflect the changes in zoning made by this ordinance.

SECTION 6. PENALTY. Any person, firm, or corporation violating any of the provision of this ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars ($2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

SECTION 7. SEVERABILITY. The sections, paragraphs, sentences , phrases, and words of this Ordinance are severable, and if any section or provision of this ordinance or the

application of that section or provision to any person, firm, corporation, situation or circumstance is for any reason judged invalid or unconstitutional, the adjudication shall not affect any other section or provision of this ordinance or the application of any other section or provision to any person, firm, corporation, situation or circumstance, nor shall adjudication affect any other section or provision of the Comprehensive Zoning Ordinance of the Town of Little Elm, Texas, and the Town Council hereby declares that it would have adopted the valid portions and applications of the ordinance without the valid parts and to this end the provisions of this ordinance shall remain in full force and effect.

SECTION 8. REPEALER. That all ordinances of the Town of Little Elm in conflict with the provisions of this ordinance be and the same are hereby repealed to the extent of that conflict.

SECTION 9. EFFECTIVE DATE. That this Ordinance shall take effect immediately upon its adoption and publication in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

Town of Little Elm, Texas

_____

Curtis Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

Exhibit A

Metes and Bounds

METES AND BOUNDS DESCRIPTION
2.476 ACRES
OUT OF LOT 1 AND LOT 2, BLOCK A, CARTER ESTATES
IN THE MATTHEW JONES SURVEY, A-667
TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS

All that certain 2.476 acres of land, which is out of the property described in the deeds to Eduardo Chaparro and Manuel Alonzo, recorded in Document Number 2016-18030 and 2017-1405 in the Deed Records of Denton County, Texas (D.R.D.C.T.), which is the remainder of Lot 1 and Lot 2, Block A, Carter Estates, recorded in Cabinet P, Slide 347 in the Plat Records of Denton County, Texa (P.R.D.C.T.), in the Matthew Jones Survey, A-667, Town of Little Elm, Denton County, Texas and more particularly described by metes and bounds as follows: (All bearings shown hereon are based on the Texas Coordinate System of 1983, North Central Zone)

BEGINNING at a 1/2" iron rod found for the southwest corner of the 37 square foot right-of-way dedication to the State of Texas, recorded in Document Number 2009-14727 D.R.D.C.T., common to the northeast corner of Tract 2 – 0.418 acres, described in the deed to Premier Family Limited Partnership, recorded in Document Number 2013-128480 D.R.D.C.T., in the south right-of-way line of East Eldorado Parkway (R.O.W. Varies) and in the west line of said Lot 1, Block A, Carter Estates, and from which a found 1/2" iron rod bears South 73° 28’ West - 0.27', which is a point of a curve to the right, having a central angle of 05° 40' 49”, a radius of 1086.00', and a chord bearing and distance of North 56° 50' 07” East – 107.62’;

THENCE along said curve to the left, along the south right-of-way line of said East Eldorado Parkway, an arc distance of 107.66’ to a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most northerly northeast corner of the herein described tract, common to the northwest corner of the 0.328 acre tract described in the deed to the Town of Little Elm, recorded in Document Number 2008-5764 D.R.D.C.T.

THENCE South 29° 34' 28" East - 110.27' to a 1/2" iron rod with a cap found for the southwest corner of said 0.328 acre tract;

THENCE North 83° 15' 13" East - 76.74' to the most easterly northeast corner of the herein described tract, in the west line of Lot 1R, Block 1, One Elm Place Addition, recorded in Document Number 2016-205 P.R.T.C.T., from which a 1/2" iron rod with a cap stamped “LS 3047” found for the northwest corner of said Lot 1R, Block 1, One Elm Place Addition bears North 00° 34' 29" East – 145.54', and from which a found 1/2" iron rod with a cap bears North 83° 15' 13" East – 0.94’;

THENCE South 00° 34' 29" West - 126.97' to a Corp of Engineers brass monument found for the most easterly southeast corner of the herein described tract, in the north line of Lake Lewisville;

THENCE South 29° 03' 18" West - 106.57' (plat called 107.06’) along the north line of said Lake Lewisville, to a Corp of Engineers brass monument found for corner;

THENCE South 03° 21' 22" West - 305.63' continuing along the north line of said Lake Lewisville, a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most southerly southeast corner of the herein described tract,

THENCE South 61° 00' 31" West - 170.93' continuing along the north line of said Lake Lewisville, a 1/2" iron rod found for the southwest corner of the herein described tract, common to the southeast corner Tract 1 -1.591 acres described in said deed to Premier Family Limited Partnership;

THENCE North 00° 10' 54" West - 333.61' (plat called 334.02’) to a P.K. Nail in concrete found for a point for corner, common to the most easterly northeast corner of said Tract 1, common to the southeast corner of said Tract 2;

THENCE North 00° 08' 43" East - 302.49' to the POINT OF BEGINNING and containing 2.476 acres of land.

Exhibit B
PD Standards

Exhibit B

Planned Development District Standards

Except as otherwise set forth in these development standards, the development of this area shall follow the regulation of the Town of Little Elm's Zoning Ordinance and the Subdivision Ordinance, as they exist, or may be amended, at the time of development.

General Conditions for PD:

1. Purpose:

   The purpose of this Planned Development is to allow for a commercial retail building, housing a dog boarding, daycare, grooming facility with outdoor dog play areas and publicly accessible dog park areas as provided in Exhibit C. This PD will allow for alternative standards to building design, signage, and an alternative to the foundation planting requirement.

2. Project Location:

   The proposed PD site is commonly known as 802 East Eldorado Parkway, Little Elm, Texas 75068. A legal description is set forth in Exhibit A, and a site plan is set forth in Exhibit C. The Property is zoned Light Commercial and under the Future Land Use map approved by Little Elm, is surrounded by Light Commercial. Currently, the adjacent parcel to the west of the Property (currently used as a church) is zoned single family, the adjacent land south of the property is the Lake Lewisville Floodplain, the land on the north across East Eldorado Parkway is Light Commercial, and the adjacent land to the east is Light Commercial. No land adjacent to the PD site is used as residential.

3. Use Regulations:

   All permitted uses in the Light Commercial (LC) district shall be allowed with the same provisions and restrictions, including uses permitted by a Specific Use Permit (SUP) and Conditional Use Permit (C), except as noted below may be allowed by right as shown in Exhibit C:

   Light Commercial to allow for the following waivers and amendments:

   a. Two outdoor publicly accessible dog parks located on the south side of the property as depicted in Exhibit C;

   b. Outdoor play areas adjacent to the south side of the building as depicted in Exhibit C;

c. One small outdoor play area adjacent to the west side of the building as depicted in Exhibit C;

d. One outdoor splash pad adjacent to the southeast side of the building as depicted in Exhibit C;

4. Base Zoning District:

The permitted uses and standards will be in accordance with the (LC) Light Commercial zoning as defined in the Zoning Ordinance, unless otherwise specified in the PD regulations.

5. Height and Area Regulations:

This PD shall follow and conform to all Landscape Requirements set forth for Light Commercial zoning as defined in Zoning Ordinance section 106.06.08 – Special area and height regulations.

6. Conceptual Site Plan:

Exhibit C identifies and locates the waivers and amendments of this PD. The proposed development will have design elements as currently included in the design requirements of the Light Commercial Zoning except as otherwise specified in Exhibit C.

7. Landscape Requirements:

All provisions within Article VI. Division 4. Landscaping and Tree Preservation shall be met, as it exists or may be amended in accordance with the standards in effect at the time of development, or requested change, unless otherwise described below and shown on the Landscape Plans attached hereto.

a. The outdoor play areas adjacent to the building will utilize artificial turf instead of grass;

b. The Foundation Planting Requirements will be met through provision of a shaded outdoor seating structure.

c. Due to lot size constraints, in lieu of placing a landscape buffer and vehicular screening along the west side of the hammer head, if and when the adjacent parcel to the west of the subject property is developed and attaches a fire lane to the location of the hammer head as depicted on Exhibit C, the portion of the hammer head south of the southern fire lane boundary (that runs parallel to east/west) shall be removed and replaced with planting.

Landscape Point System for less than three acres equals 25 points.

Points applicable to PD design:

5 pts	Buffer Berms
5 pts	Open space provision
5 pts	Shaded or decorative outdoor seating areas
5 pts	Public art small
5 pts	Public dog parks (one for small dogs and one for large dogs)
5 pts	Enhanced hardscape (meandering walking trails in and near the public dog parks)

8. Screening Standards:
   Subject property is surrounded by commercial uses and will therefore not require a masonry perimeter wall. The PD shall follow all applicable requirements within DIVISION 3. –SCREENING WALLS AND FENCES with the following exceptions:

   a. Outdoor Dog Play Areas shall have at least 8 foot white vinyl screening fence, or better. Splash Pad are shall have a black vinyl coated chain-link fence, or better. Dog Park Areas shall have at least 6 foot black vinyl coated chain-link fence, or better.

9. Architectural Standards:
   This PD shall follow and conform to all architectural guidelines set forth for Light Commercial zoning as defined in Zoning Ordinance section 106.06.05 – Architectural standards for commercial structures, except as otherwise depicted on the plans as part of Exhibit C.

10. Parking Standards:
    All parking requirements in section 106.06.41 will be followed. This PD shall require 1 parking space per 500 square feet of kennel/boarding/daycare floor area, per section 106.06.45. The site plan depicted in Exhibit C exceeds the parking space required by section 106.06.45.

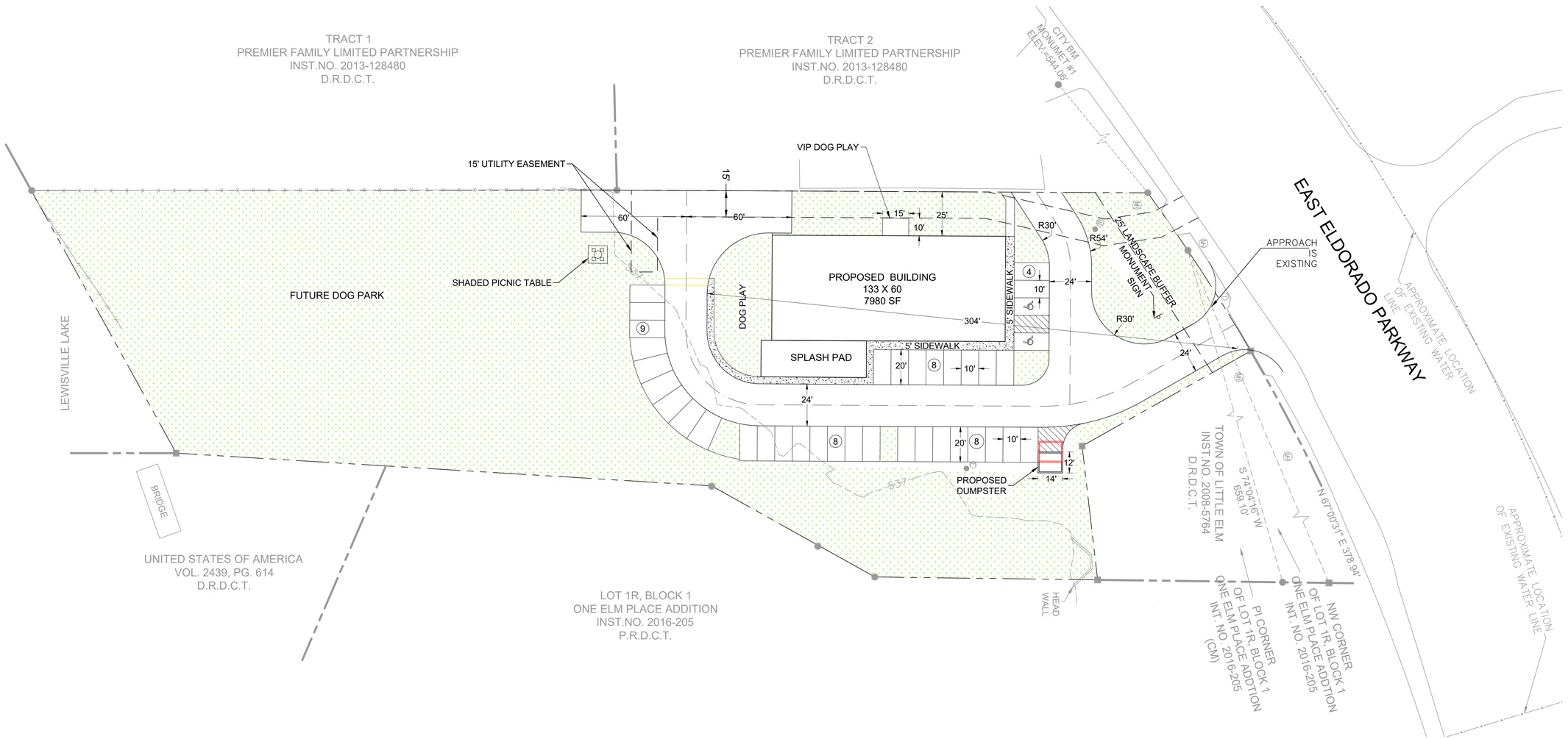
11. Signs:
    All provisions within Chapter 86 – Sign Ordinance shall be met except as specified below:

    a. North Facade is allowed an additional 304 sq ft perforated metal sign in the form of a dog, as shown within Exhibit C.
    b. East Façade is allowed an additional three perforated metal paw prints 4 foot x 4 foot, each.

Requested waivers and other amendments contained herein:

1. Dog parks located on the south side of the property as depicted in Exhibit C (approximately one acre);
2. Outdoor play areas adjacent to the south side of the building as depicted in Exhibit C;
3. One outdoor play area adjacent to the west side of the building as depicted in Exhibit C;
4. One outdoor splash pad adjacent to the southeast side of the building as depicted in Exhibit C;
5. Artwork and signage on the building and sign monument as depicted in Exhibit C (approximately 304 square feet on the north elevation of the building; approximately 48 square feet on the east elevation of the building; and approximately 60 square feet on the sign monument near Eldorado Parkway pursuant to Little Elm's sign ordinance Section 86-13(b)(7)c);
6. Varying materials in percentages as stated and depicted in Exhibit C (North Elevation: 30% Glazing, 35% Metal Cladding, & 57% Masonry, 8% Stucco; East Elevation: 30% Glazing, 4% Metal Cladding, 80% Masonry, & 16% Stucco; West Elevation: 22% Glazing, 90% Masonry, 10% Stucco; South Elevation 100% Masonry). Due to building function Glazing requirements were not able to be met on the West Elevation.
7. A single dumpster enclosure approximately 12 ft. X 14 ft. due to lot size restrictions.
8. Regarding the publicly accessible dog parks, six-foot black vinyl coated chain link fencing.
9. Regarding the outdoor dog play areas adjacent to the building, eight-foot solid white vinyl fencing.
10. Regarding the outdoor dog water park play area, transparent fencing such as thick glass, plexiglass, wrought iron, or similar.

Exhibit C
Development Plans



NOTE:

PROPOSED ENTRANCE UTILIZE EXISTING CURB CUT.

SITE DATA:

SITE AREA = 2.47 AC
EXISTING ZONING = LIGHT COMMERCIAL
PROPOSED ZONING = PLANNED DEVELOPMENT - LIGHT COMMERCIAL
PARKING SIZE = 20' (L) X 10' (W)
PARKING REQUIRED = KENNEL SPACE: 1 PER 500SF = 15 SPACES
RETAIL: 1 PER 200SF = 3 SPACES
TOTAL NO. OF PARKING REQUIRED = 18 SPACES
TOTAL NO. OF PARKING PROVIDED= 37 SPACES
TOTAL ADA PARKING PROVIDED = 2 SPACES
FIRE LANE WIDTH = 24'

3_PROPOSED SITE PLAN.dwg

PROPOSED SITE PLAN

TURNKEY TRACT

PRELIMINARY
FOR INTERIM REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND ARE NOT INTENDED FOR REGULATORY APPROVAL PERMIT, BIDDING OR CONSTRUCTION PURPOSES, THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

NAVEEN KHAMMAMPATI 123697
NAME P.E. NO.

DATE 12/21/2023
TBPE FIRM #F22283

NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Firm Name and Address

TURNKEY TRACT
2770 MAIN ST #171
FRISCO, TX 75033
F-22283
nkcivilengineer4@gmail.com
214-483-1599

Project Name and Address

THE DOG STOP

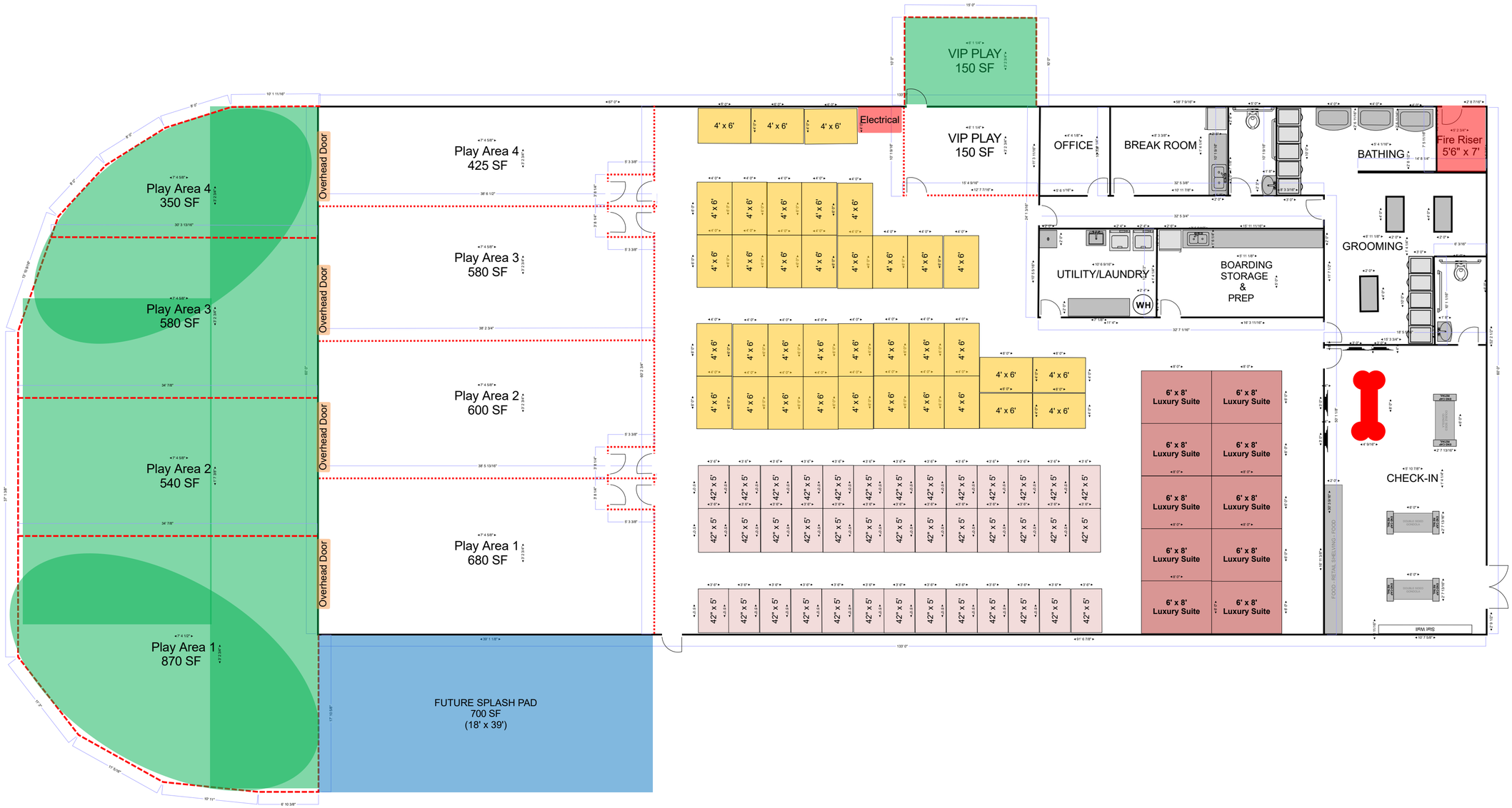
802 E ELDORADO PKWY
LITTLE ELM, TEXAS 75068

Project	Sheet
Date 12 / 21 / 2023	03 / 09
Scale	

LAYOUT: PROPOSED SITE PLAN

PATH: C:\TJT\OneDrive\200_2000_DogStop\DRAWINGS\

10 [6' x 8'] (Luxury), 39 [3.5' x 5'] and 36 [4' x 6']
TOTAL 85 Kennels
Building Total 7980 SF



ELEMENT ARCHITECTS + interiors

CONCEPTUAL RENDERING

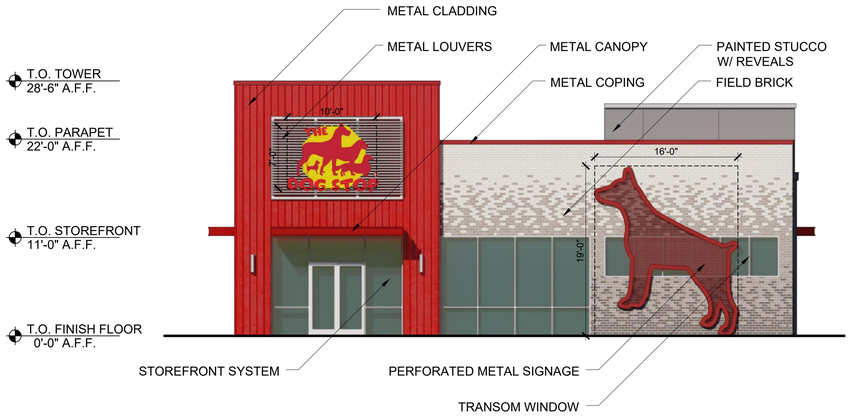
THE DOG STOP

NOV 13
2023

802 EAST ELDORADO PKWY.
LITTLE ELM, TX

23053_dog Stop_elevations_231113.dwg 4:48 PM

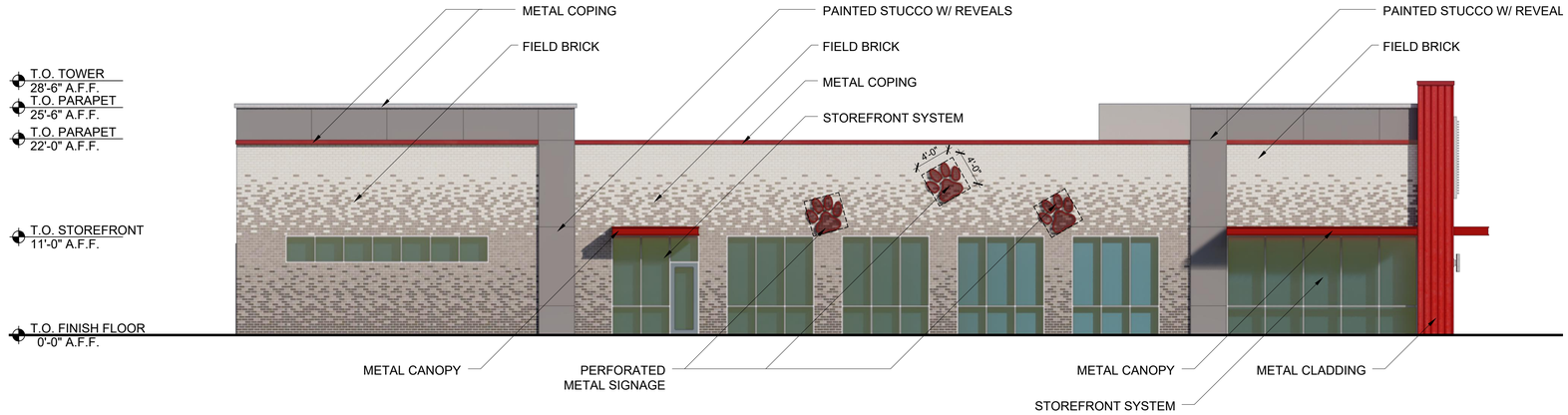
THIS DRAWING IS FOR PRESENTATION PURPOSES ONLY. ANY AND ALL FEATURES, MATTERS AND OTHER INFORMATION DEPICTED HEREON OR CONTAINED HEREIN ARE FOR ILLUSTRATIVE MARKETING PURPOSES ONLY, ARE SUBJECT TO MODIFICATION WITHOUT NOTICE, ARE NOT INTENDED TO BE RELIED UPON BY ANY PARTY AND ARE NOT INTENDED TO CONSTITUTE REPRESENTATIONS AND WARRANTIES AS TO THE SIZE AND NATURE OF IMPROVEMENTS TO BE CONSTRUCTED (OR THAT ANY IMPROVEMENTS WILL BE CONSTRUCTED) OR AS TO THE IDENTITY OR NATURE OF ANY OCCUPANTS THEREOF.



01 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

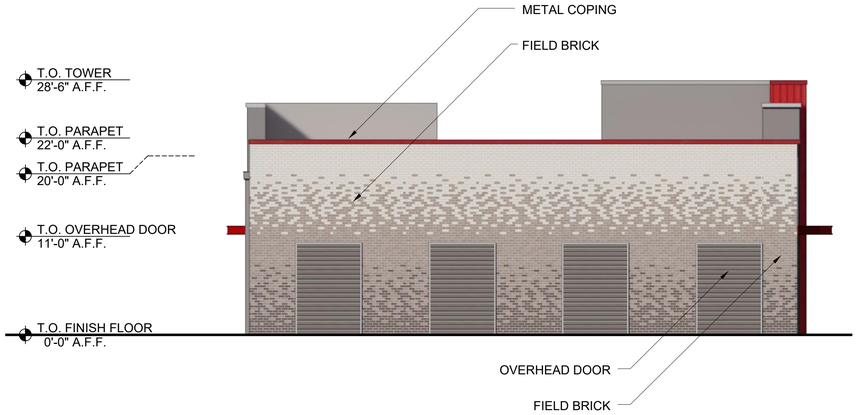
DATA TABLE:	
GLAZING	30%
METAL CLADDING	35%
MASONRY	57%
STUCCO	8 %
SIGNAGE	370 SF



02 EAST ELEVATION

SCALE: 1/8" = 1'-0"

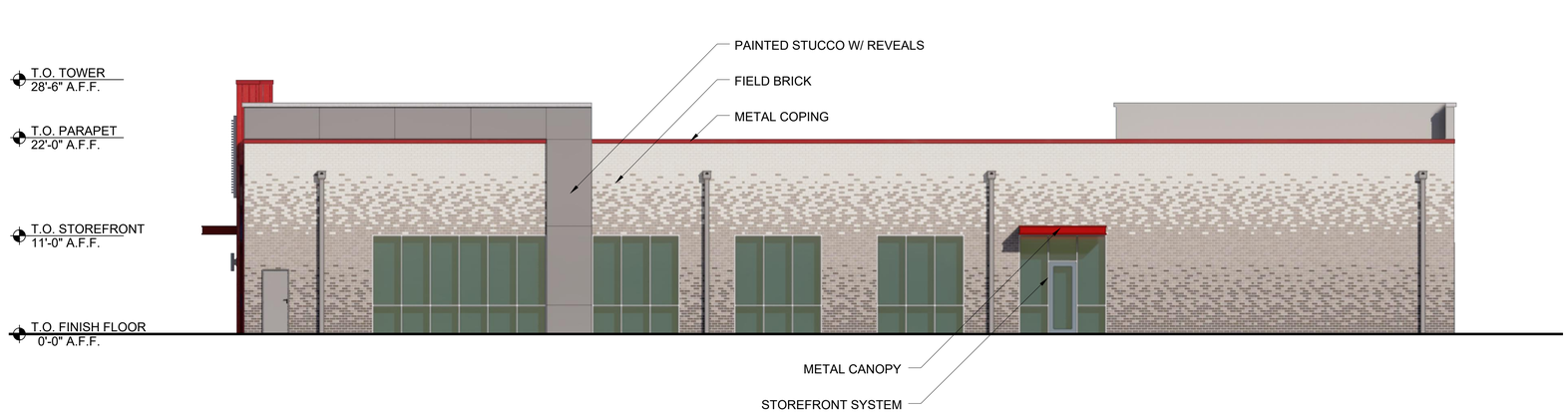
DATA TABLE:	
GLAZING	30%
METAL CLADDING	4%
MASONRY	80%
STUCCO	16%
SIGNAGE	48 SF



03 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

DATA TABLE:	
GLAZING	0%
MASONRY	100%



01 WEST ELEVATION

SCALE: 1/8" = 1'-0"

DATA TABLE:	
GLAZING	22%
MASONRY	90%
STUCCO	10%

MATERIAL LEGEND :	
METAL CLADDING:	PAC-CLAD - HIGHLINE C1 CARDINAL RED
MASONRY :	BRICK - CLOUD CERAMIC CLOUD GREY & ASH GREY & BLACK DIAMOND
STUCCO :	PAINT - SHERWIN WILLIAMS SW 7024 FUNCTIONAL GRAY

GENERAL NOTES:

-PRELIMINARY SITE PLAN, ALL LINEWORK IS APPROXIMATE AND PENDING RECEIPT OF SURVEY / CAD LINEWORK. NOT FOR CONSTRUCTION

ELEMENT ARCHITECTS + interiors

PRELIMINARY ELEVATIONS

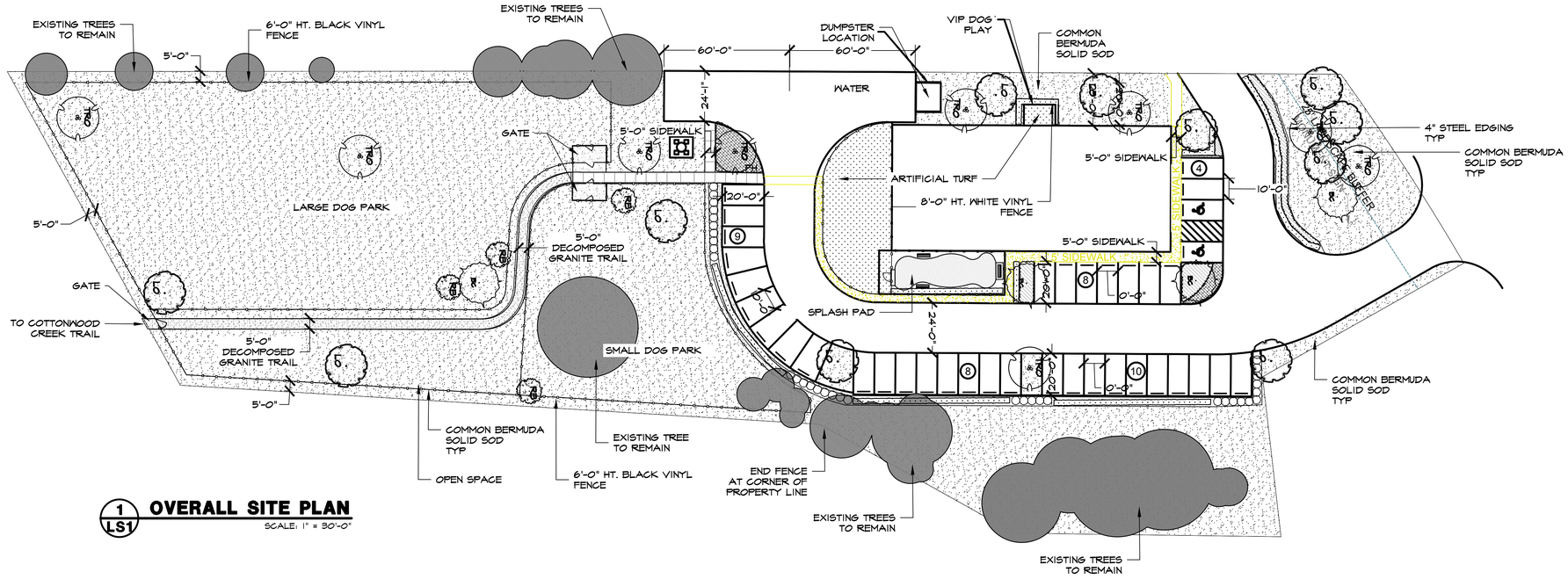
THE DOG STOP

NOV 13
2023

802 EAST ELDORADO PKWY.
LITTLE ELM, TX

23053_dog Stop_elevations_231113.dwg 4:48 PM

THIS DRAWING IS FOR PRESENTATION PURPOSES ONLY. ANY AND ALL FEATURES, MATTERS AND OTHER INFORMATION DEPICTED HEREON OR CONTAINED HEREIN ARE FOR ILLUSTRATIVE MARKETING PURPOSES ONLY, ARE SUBJECT TO MODIFICATION WITHOUT NOTICE, ARE NOT INTENDED TO BE RELIED UPON BY ANY PARTY AND ARE NOT INTENDED TO CONSTITUTE REPRESENTATIONS AND WARRANTIES AS TO THE SIZE AND NATURE OF IMPROVEMENTS TO BE CONSTRUCTED (OR THAT ANY IMPROVEMENTS WILL BE CONSTRUCTED) OR AS TO THE IDENTITY OR NATURE OF ANY OCCUPANTS THEREOF.

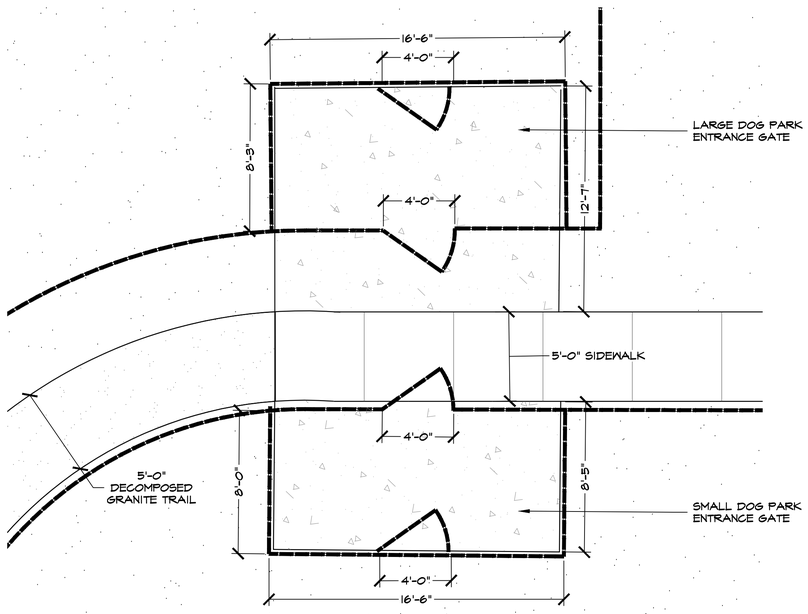


1 LS1 OVERALL SITE PLAN

SCALE: 1" = 30'-0"

PLANT LIST

- EXISTING TREES TO REMAIN
- BC — BALD CYPRESS / TAXODIUM DISTICHUM (4" CALIPER)
- TRO — TEXAS RED OAK / QUERCUS BUCKLEYI (4" CALIPER)
- LO — LIVE OAK / QUERCUS VIRIGINANA (4" CALIPER)
- RB — FOREST PANSY RED BUD / CERCIS CANADENSIS 'FOREST PANSY' (3" CALIPER)
- DWARF BUFORD HOLLY / BUFORDII NANA
- LITTLE BLUE STEM / SCHIZACHYRIUM SCOPARIUM
- BLUE RUG JUNIPER / JUNIPERUS HORIZONTALIS 'WILTONII'
- UPRIGHT ROSEMARY / ROSMARINUS OFFICINALIS 'UPRIGHT'
- ARTIFICIAL TURF
- SOLID COMMON BERMUDA SOD
- DECOMPOSED GRANITE



2 LS1 DOG PARK GATE DETAIL

SCALE: 1/4" = 1'-0"

STUDIO 13 DESIGN GROUP

Studio 13 Design Group, PLLC.
386 W. Main Street
Lewisville, Texas 75057
469-635-1900

TBAE Firm #BR643

REGISTERED LANDSCAPE ARCHITECT — LEONARD W. REEVES — 1977 — STATE OF TEXAS

November 14, 2023

NORTH

30 15 0 30

1" = 30' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Landscape Plan

The Dog Stop

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
	PER CITY COMMENTS		10/17/2023
1	Plans Revised per City Comments	CA	11-7-2023
2	Plans Revised per City Comments	CA	11-14-2023
3			

PROJECT SGC001

PLATE 1

SHEET LS1

Plotted by: Station11 Plot Date: 11/14/2023 4:11 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 – The Dog Stop\DWG\SGC001 – LS.dwg Saved By: Station11 Save Time: 11/14/2023 4:04 PM

LANDSCAPE NOTES:

1. A TREE PERMIT IS REQUIRED FOR ALL REMOVAL OF ALL TREES, PROTECTED AND UNPROTECTED.
2. PLANT MATERIAL SHALL BE MEASURED AND SIZED ACCORDING TO THE LATEST EDITION OF THE TEXAS NURSERY & LANDSCAPE ASSOCIATION (TNLA) SPECIFICATIONS, GRADES AND STANDARDS.
3. ALL PLANT SUBSTITUTIONS ARE SUBJECT TO **TOWN OF LITTLE ELM** APPROVAL AND MUST BE SPECIFIED ON THE APPROVED LANDSCAPE PLAN.
4. GROUND COVERS USED IN LIEU OF TURF GRASS MUST PROVIDE COMPLETE COVERAGE WITHIN ONE (1) YEAR OF PLANTING AND MAINTAIN ADEQUATE COVERAGE AS APPROVED BY THE **TOWN OF LITTLE ELM.**
5. TREES MUST BE PLANTED FOUR FEET (4') OR GREATER FROM CURBS, SIDEWALKS, UTILITY LINES, SCREENING WALLS AND/OR OTHER STRUCTURES. THE **TOWN OF LITTLE ELM** HAS FINAL APPROVAL FOR ALL TREE PLACEMENTS.
6. TREE PITS SHALL HAVE ROUGHENED SIDES AND BE TWO TO THREE TIMES WIDER THAN THE ROOT BALL OF THE TREE IN ORDER TO FACILITATE HEALTHY ROOT GROWTH.
7. TREES SHALL NOT BE PLANTED DEEPER THAN THE BASE OF THE "TRUNK FLARE".
8. THE TREE PIT SHALL BE BACKFILLED WITH NATIVE TOPSOIL FREE OF ROCK AND OTHER DEBRIS.
9. BURLAP, TWINE AND WIRE BASKETS SHALL BE LOOSENED AND PULLED BACK FROM THE TRUNK OF TREE AS MUCH AS POSSIBLE.
10. TREES SHALL NOT BE WATERED TO EXCESS THAT RESULTS IN SOIL SATURATION. IF SOIL BECOMES SATURATED, THE WATERING SCHEDULE SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE AND ABSORPTION OF THE EXCESS WATER.
11. A 3" LAYER OF MULCH SHALL BE PROVIDED AROUND THE BASE OF THE PLANTED TREE. THE MULCH SHALL BE PULLED BACK 4" FROM THE TRUNK OF THE TREE.
12. NO PERSON(S) OR ENTITY MAY USE IMPROPER OR MALICIOUS MAINTENANCE OR PRUNING TECHNIQUES WHICH WOULD LIKELY LEAD TO THE DEATH OF THE TREE. IMPROPER OR MALICIOUS TECHNIQUES INCLUDE, BUT ARE NOT LIMITED TO, TOPPING OR OTHER UNSYMMETRICAL TRIMMING OF TREES, TRIMMING TREES WITH A BACKHOE, OR USE OF FIRE OR POISON TO CAUSE THE DEATH OF A TREE.
13. ALL BEDS TO HAVE 3" OF COMPOSTED SOIL, LIVING EARTH TECHNOLOGY, OR APPROVED EQUAL TO A DEPTH OF 8" MINIMUM.
14. ALL PLANT BEDS SHALL BE TOP-DRESSED WITH A MINIMUM OF 3 INCHES OF HARDWOOD OR OTHER MULCH.
15. TREES OVERHANGING WALKS AND PARKING SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 7 FEET. TREES OVERHANGING PUBLIC STREET PAVEMENT DRIVE AISLES AND FIRE LANES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 14 FEET.
16. A VISIBILITY TRIANGLE MUST BE PROVIDED AT ALL INTERSECTIONS. SHRUBS ARE NOT TO EXCEED 30 INCHES IN HEIGHT. TREES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 7 FEET AT TIME OF PLANTING.
17. TREES PLANTED ON A SLOPE SHALL HAVE THE SOIL STAIN AT THE AVERAGE GRADE OF SLOPE.
18. NO SHRUBS SHALL BE PERMITTED WITHIN AREAS LESS THAN 3 FEET IN WIDTH. ALL BEDS LESS THAN 3 FEET IN WIDTH SHALL BE GRASS, GROUNDCOVER OR SOME TYPE OF FIXED PAVING.
19. THE OWNER, TENANT, AND/OR THEIR AGENTS, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE, ESTABLISHMENT, AND PERMANENCE OF PLANT MATERIAL. ALL LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE, BUT NOT LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, AND OTHER ACTIVITIES NECESSARY FOR THE MAINTENANCE OF LANDSCAPED AREAS.
20. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT IS DAMAGED, DESTROYED, OR REMOVED SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR SIZE AND VARIETY WITHIN 30 DAYS UNLESS OTHERWISE APPROVED IN WRITING BY THE **TOWN OF LITTLE ELM.**
21. LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OFF TRASH, LITTER AND WEEDS.
22. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO IRRIGATE ALL LANDSCAPE AREAS. OVERSPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM.
23. NO PLANT MATERIAL SHALL BE ALLOWED TO ENCROACH ON RIGHT-OF-WAY, SIDEWALKS OR EASEMENTS TO THE EXTENT THAT THE VISION OR ROUTE OF TRAVEL FOR VEHICULAR, PEDESTRIAN, OR BICYCLE TRAFFIC IS IMPEDED.
24. NO PLANTING AREAS SHALL EXCEED 3:1 SLOPE. 3' HORIZONTAL TO 1' VERTICAL.
25. EARTHEN BERMS SHALL NOT INCLUDE CONSTRUCTION DEBRIS. CONTRACTOR MUST CORRECT SLIPPAGE OR DAMAGE TO THE SMOOTH FINISH GRADE OF THE BERM PRIOR TO ACCEPTANCE.
26. ALL WALKWAYS SHALL MEET A.D.A. AND T.A.S. REQUIREMENTS.
27. CONTACT **TOWN OF LITTLE ELM'S** PLANNING DEPARTMENT AT FOR LANDSCAPE INSPECTION. NOTE LANDSCAPE INSTALLATION MUST COMPLY WITH APPROVED LANDSCAPE PLANS PRIOR FINAL ACCEPTANCE BY THE **TOWN OF LITTLE ELM** AND/OR OBTAINING A CERTIFICATE OF OCCUPANCY.
28. FINAL INSPECTION AND APPROVAL OF SCREENING WALLS, IRRIGATION AND LANDSCAPE IS SUBJECT TO ALL PUBLIC UTILITIES, INCLUDING BUT NOT LIMITED TO MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER APPURTENANCES, TO BE ACCESSIBLE, ADJUSTED TO GRADE AND TO THE **TOWN OF LITTLE ELM'S** PUBLIC WORKS DEPARTMENT STANDARDS.
29. PRIOR TO CALLING FOR A LANDSCAPE INSPECTION, CONTRACTOR IS RESPONSIBLE FOR MARKING ALL MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER UTILITY APPURTENANCES WITH FLAGGING FOR FIELD VERIFICATION BY THE PUBLIC WORKS DEPARTMENT.

PLANT LIST

SYMBOL	COMMON/BOTANICAL NAME	SIZE	SPACING	QUANTITY	REMARKS
LO	LIVE OAK / QUERCUS VIRGINIANA	4" CALIPER	AS SHOWN	10	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN,
TRO	TEXAS RED OAK / QUERCUS BUCKLEYI	4" CALIPER	AS SHOWN	9	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN
BC	BALD CYPRESS / TAXODIUM DISTICHUM	4" CALIPER	AS SHOWN	3	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN,
RB	FOREST PANSY REDBUD / CERCIS CANADENSIS 'FOREST PANSY'	3" CALIPER	AS SHOWN	4	5' MINIMUM SPREAD; MINIMUM 8' HEIGHT; 2" MIN. CAL.; FULL HEAD NURSERY GROWN
	DWARF BUFORD HOLLY / BUFORD11 NANA	36" HEIGHT	AS SHOWN	287	FULL PLANTS
	LITTLE BLUESTEM GRASS / SCHIZACHYRIUM SCOPARIUM	1 GALLON	12" O.C.	479	FULL PLANTS
	BLUE RUG JUNIPER / JUNIPERUS HORIZONTALIS 'WILTON11'	1 GALLON	12" O.C.	584	FULL PLANTS
	UPRIGHT ROSEMARY / ROSMARINUS OFFICINALIS 'UPRIGHT'	3 GALLON	AS SHOWN	36	FULL PLANTS
	DECOMPOSED GRANITE	4" DEPTH	SQUARE FEET	1,783	MINIMUM 100% COVERAGE
	ARTIFICIAL TURF	SOLID SOD	SQUARE FEET	2,462	MINIMUM 100% COVERAGE
	COMMON BERMUDA SOLID SOD	SOLID SOD	SQUARE FEET	64,315	MINIMUM 100% COVERAGE

LANDSCAPE PROVIDED

SITE TREE REQUIREMENTS

A. 10 % OF GROSS VEHICULAR AREA TO BE LANDSCAPED.
ONE (1) TREE PER 400 SQ. FT. OF REQUIRED LANDSCAPED AREA.
VEHICULAR AREA: 27,386 SQ. FT.
PROVIDED:
LANDSCAPED AREA: 2,773 SQ. FT. (10%)
TREES: 22 SHADE TREES, 4 (3") ORNAMENTAL TREES

PARKING LOTS

B. PROVIDED:
ALL PARKING SPACES MUST BE LOCATED WITHIN 70 FT OF LARGE CANOPY TREE.
ONE TREE PER ISLAND AND ONE ISLAND FOR EVERY TEN (10) SPACES.

PERIMETER LANDSCAPE REQUIREMENTS

C. 1-4" CAL. CANOPY TREE / 40 LF OF LANDSCAPE EDGE
253 LF OF FRONTAGE / 40 LF = 7 - 4" CAL. TREES REQUIRED.
3-3" ORNAMENTAL TREES / 5 SHADE TREES
7 SHADE TREES / 5 ORNAMENTAL TREES = 2- 3" ORNAMENTAL TREES REQUIRED.
PROVIDED: 7 - 4" CALIPER CANOPY TREES PROVIDED
4 - 3" CALIPER ORNAMENTAL TREES PROVIDED.

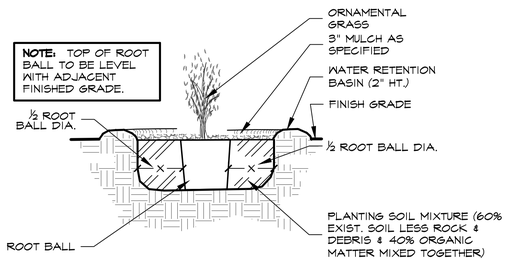
D. 36" HEIGHT EVERGREEN SHRUBS PROVIDED AS VEHICULAR SCREENING.

E. FOUNDATION PLANTING AND ORNAMENTAL TREES PROVIDED ON NORTH SIDE OF BUILDING.

E. SOUTH PERIMETER:
REQUIRED 8 FT. MASONRY WALL ALONG ENTIRE LENGTH OF PERIMETER AND A TWENTY (20) FOOT LANDSCAPE BUFFER W/ TREES FIFTEEN (15) FT ON CENTER.
PROVIDED:
43 - 4" CALIPER TREES
8' MASONRY WALL
20 FT LANDSCAPE BUFFER

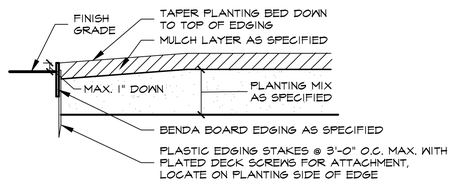
DETENTION POND REQUIREMENTS

C. 1-4" CAL. CANOPY TREE / 30 LF OF LANDSCAPE EDGE
351 LF OF FRONTAGE / 30 LF = 11 - 4" CAL. TREES REQUIRED.
PROVIDED: 12 - 4" CALIPER CANOPY TREES PROVIDED



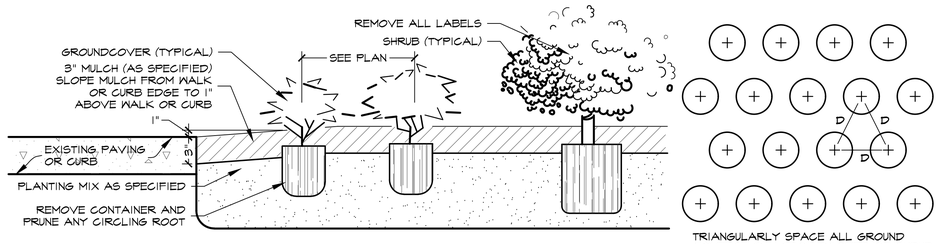
1 L2 **POCKET PLANTING ORNAMENTAL GRASS DETAIL**

NOT TO SCALE



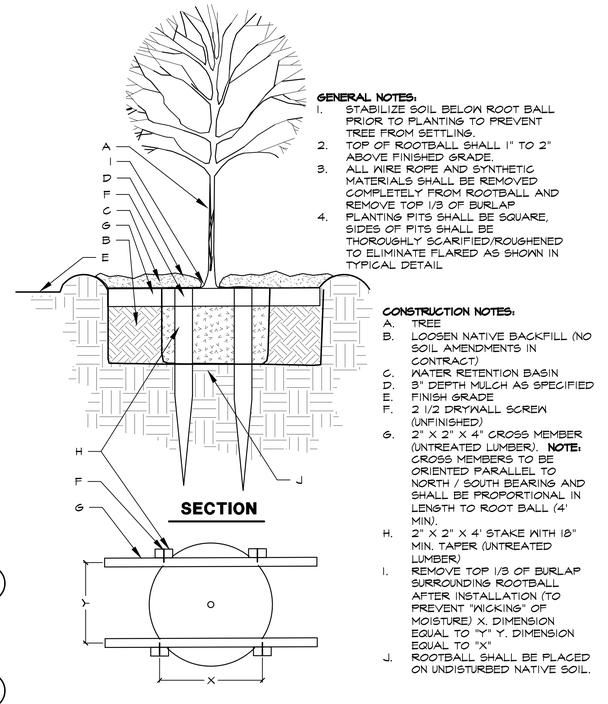
3 L2 **TYPICAL BED EDGING DETAIL**

NOT TO SCALE



2 L2 **SHRUB AND GROUNDCOVER PLANTING DETAIL**

NOT TO SCALE



GENERAL NOTES:
1. STABILIZE SOIL BELOW ROOT BALL PRIOR TO PLANTING TO PREVENT TREE FROM SETTLING.
2. TOP OF ROOTBALL SHALL 1" TO 2" ABOVE FINISHED GRADE.
3. ALL WIRE ROPE AND SYNTHETIC MATERIALS SHALL BE REMOVED COMPLETELY FROM ROOTBALL AND REMOVE TOP 1/3 OF BURLAP
4. PLANTING PITS SHALL BE SQUARE, SIDES OF PITS SHALL BE THOROUGHLY SCARIFIED/ROUGHENED TO ELIMINATE FLARED AS SHOWN IN TYPICAL DETAIL

CONSTRUCTION NOTES:
A. TREE
B. LOOSEN NATIVE BACKFILL (NO SOIL AMENDMENTS IN CONTRACT)
C. WATER RETENTION BASIN
D. 3" DEPTH MULCH AS SPECIFIED
E. FINISH GRADE
F. 2 1/2 DRYWALL SCREW (UNFINISHED)
G. 2" X 2" X 4" CROSS MEMBER (UNTREATED LUMBER). **NOTE:** CROSS MEMBERS TO BE ORIENTED PARALLEL TO NORTH / SOUTH BEARING AND SHALL BE PROPORTIONAL IN LENGTH TO ROOT BALL (4' MIN).
H. 2" X 2" X 4' STAKE WITH 18" MIN. TAPER (UNTREATED LUMBER)
I. REMOVE TOP 1/3 OF BURLAP SURROUNDING ROOTBALL AFTER INSTALLATION (TO PREVENT "WICKING" OF MOISTURE) X. DIMENSION EQUAL TO "Y" Y. DIMENSION EQUAL TO "X"
J. ROOTBALL SHALL BE PLACED ON UNDISTURBED NATIVE SOIL.

4 L2 **TREE PLANTING**

NOT TO SCALE

STUDIO 13 DESIGN GROUP

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TBAE Firm #BR643

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Submittal 11-14-2023

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Landscape Plan

The Dog Stop

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
1	PER CITY COMMENTS		10/17/2023
2	Plans Revised per City Comments	CA	11-7-2023
2	Plans Revised per City Comments	CA	11-14-2023

PROJECT
SGC001

PLATE
2

SHEET
LS2

Plotted by: Station11 Plot Date: 11/14/2023 4:13 PM

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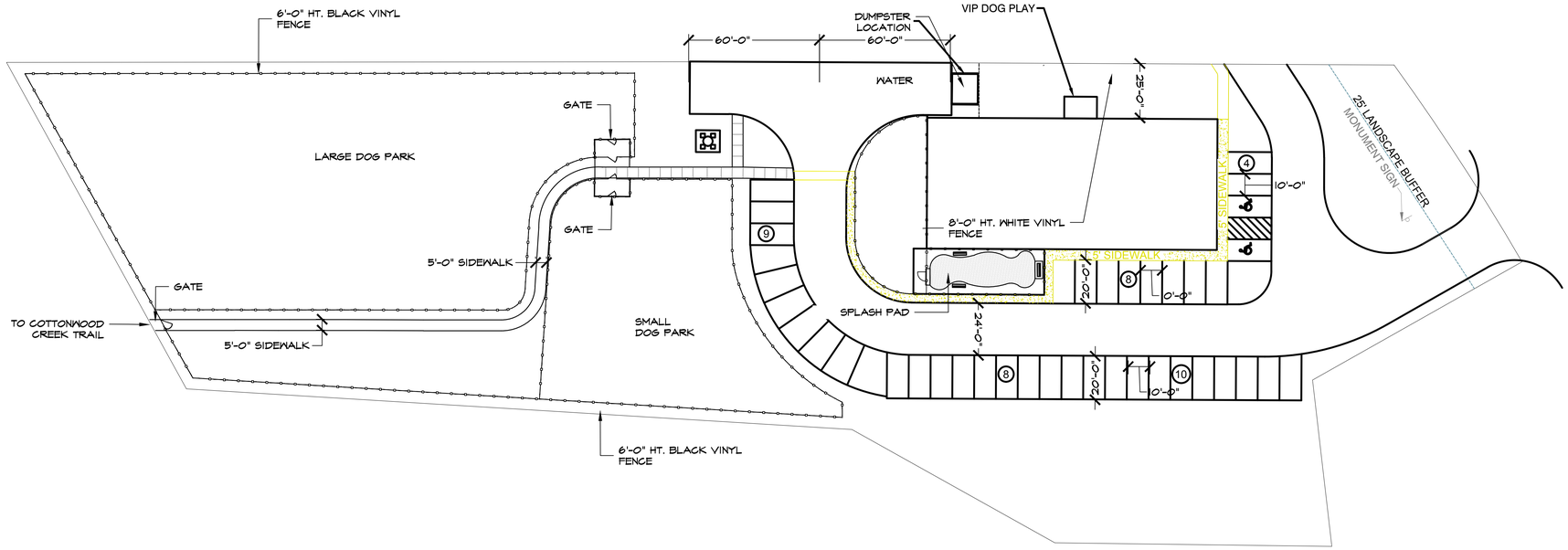

WARNING
EXISTING UNDERGROUND UTILITIES. FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION OR EXCAVATION.

ACCESSIBILITY GENERAL NOTES

1. ALL ACCESSIBLE ROUTES AND RAMPS SHALL CONFORM TO THE TEXAS ACCESSIBILITY STANDARDS (T.A.S.)
2. PUBLIC ACCESSIBLE ROUTES SHALL NOT HAVE A RUNNING SLOPE GREATER THAN 1:20 AND CROSS SLOPE GREATER THAN 1:50.
3. RAMPS SHALL NOT HAVE A RUNNING SLOPER GREATER THAN 1:12 AND A CROSS SLOPE GREATER THAN 1:50.
4. HANDRAILS WILL BE REQUIRED IF RAMP IS LONGER THAN 72 INCHES WITH A MAXIMUM RUNNING SLOPE OF 1:12.

STUDIO 13 DESIGN GROUP

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386 W. Main Street
Lewisville, Texas 75057
469-635-1900

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Submittal 11-14-2023

NORTH

30 15 0 30

1" = 30' - 0"

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One Inch

LANDSCAPE AND SCREENING

Hardscape Layout

The Dog Spot

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
2	Plans Revised per City Comments	CA	11-7-2023
3	Plans Revised per City Comments	CA	11-14-2023

STUDIO 13 PROJECT #
SGC001

PLATE 1

SHEET HS1

Plotted by: Station11 Plot Date: 11/14/2023 4:31 PM

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WALL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES.
2. ALL CONCRETE USED IN FOOTINGS AND PIERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS. CONCRETE USED IN COLUMNS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS
3. ALL REINFORCING SHALL BE NEW BILLET STEEL, ASTM A615, GRADE 60 EXCEPT STIRRUPS SHALL BE GRADE 40 AND SPIRALS SHALL BE ASTM A82, GRADE 60.
4. CONCRETE FOR DRILLED PIERS SHALL BE POURED WITHIN 8 HOURS OF DRILLING PIER HOLES.
5. REFER TO DETAILS FOR TYPE AND SIZE OF BRICK AND STONE WALL REINFORCING.
6. ALL MORTAR TO BE TYPE S. MORTAR COLOR SHALL BE APPROVED BY OWNER PRIOR TO ORDERING MATERIAL. MASONRY CEMENT WILL NOT BE ALLOWED.
7. ALL MORTAR JOINTS ARE TO BE 3/8" CONCAVE TOOLED JOINTS.
8. BRICK CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BRICK INSTITUTE OF AMERICA.
9. BRICK MATERIAL, IF NOT SPECIFIED ON PLANS OR DETAILS, SHALL BE SELECTED BY THE OWNER PRIOR TO CONSTRUCTION.
10. VERIFY ALL DIMENSIONS IN THE FIELD BEFORE MANUFACTURING CAST-STONE.
11. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS, APPLICABLE FEES, AND CITY INSPECTIONS.
12. LAYOUT OF THE PROPOSED SCREENING WALL SHALL BE PERFORMED IN THE FIELD BY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.
13. THE STONE MATERIAL AND PATTERN, IF NOT SPECIFIED ON PLANS OR DETAILS, SHALL BE SELECTED BY THE OWNER PRIOR TO CONSTRUCTION.
14. LAY STONE COURSES LEVEL AND PLUMB. DO NOT EXCEED 1/4" VARIATION FROM LEVEL IN 20 FEET MAXIMUM.
15. CLEAN STONEWORK PROMPTLY AFTER COMPLETION WITH FIBER BRUSHES, CLEAN WATER OR APPROVED CLEANING AGENT. DO NOT USE WIRE BRUSHES OR ACID TYPE CLEANING AGENTS.
16. THE CONTRACTOR SHALL PROVIDE A 4' X 4' MOCKUP OF THE STONE AND BRICK SCREEN WALL FOR THE OWNERS REVIEW PRIOR TO BEGINNING THE STONE WORK. THE APPROVED "MOCKUP" SHALL SERVE AS THE STANDARD FOR THE STONE WORK ON THE PROJECT.

FENCE LAYOUT NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPE AND STRUCTURES WHETHER OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL UNDERGROUND UTILITIES AND WILL BE RESPONSIBLE FOR COSTS INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES OR STRUCTURES CAUSED BY HIS FORCES.
2. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION, AS DESIGNED, WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS OR CONFLICTS EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE PROPOSED WALLS AND COLUMNS. THE OWNER'S ENGINEER SHALL STAKE THE LOCATIONS OF THE PROPERTY, R.O.W. LINES AND EASEMENTS.
4. THE CONTRACTOR SHALL STAKE ALL OF THE FENCE AND COLUMN LOCATIONS FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION. THE OWNER'S REPRESENTATIVE MAY MAKE MINOR ALTERATIONS TO THE LAYOUT AFTER STAKING AND BEFORE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
5. ALL "STEPS" IN THE WALL MADE NECESSARY BY GRADE CHANGES OR EXISTING SLOPE SHALL OCCURR ONLY AT MINOR OR MAJOR COLUMNS. THE MINIMUM "STEP" AT A COLUMN SHALL BE 3" AND THE MAXIMUM "STEP" AT A COLUMN SHALL BE 6".
6. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS.
7. THE ELECTRICAL WORK SHALL INCLUDE ALL NECESSARY CONDUITS, WIRE, FITTINGS, FIXTURES TRENCHING AND OTHE MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND CITY ACCEPTANCE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AS NEEDED FOR FENCE AND COLUMN INSTALLATION. THE CONTRACTOR SHALL RETURN THE SITE TO PRE-CONSTRUCTION CONDITION.

BRICK THIN-WALL NOTES

1. MORTAR SHALL BE TYPE S WITH WELL GRADED SAND
2. BRICK PANEL REINFORCING WIRE SHALL BE 1/4 INCH CENTER TO CENTER 9 GAGE HOT DIPPED GALVANIZED JOINT REINFORCING AT SPECIFIED JOINT SPACING.
3. GROUT FILL SHALL BE PEA-GRAVEL AND PORTLAND CEMENT MIX. GROUT SHALL BE VIBRATED TO ASSURE ALL VOIDS ARE FILLED.
4. BRICK SHALL BE GRADE SW (SEVERE WEATHERING) RATED BRICK.
5. CONCRETE FOR PIERS AND MON STRIP SHALL BE 3000 PSI COMPRESSIVE STRENGTH NORMAL WEIGHT PORTLAND MIX CONCRETE.
6. WIRE TIES AT COLUMNS SHALL BE HOT DIPPED GALVANIZED JOINT REINFORCING AT SPECIFIED JOINT SPACING.
7. SPACING BETWEEN COLUMNS SHALL NOT EXCEED 10 FEET.

WOOD FENCE NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES VERIFY LOCATION OF ALL UTILITIES WITH THE TOWN AND VARIOUS UTILITY COMPANIES BEFORE DRILLING PIERS.
2. ALL CONCRETE USED IN FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY AND REQUIRED PERMITS AND INSPECTIONS. CONSTRUCTION SHALL BE IN ACCORDANCE WITH **CITY OF XX** CODES AND REQUIREMENTS.
4. WOOD MATERIAL FOR FENCE
   - 4.1. STRINGERS-CEDAR, #2 GRADE OR BETTER.
   - 4.2. PICKETS-CEDAR, #2 GRADE OR BETTER.
   - 4.3. CAPS- CEDAR, #2 GRADE OR BETTER
5. ALL FENCE POST TO BE SCHEDULE 40 - GALVANIZED.
6. ALL FASTENERS, NAILS, BRACKETS, STEEL POSTS, ETC.. ARE TO BE HOT DIPPED GALVANIZED.
7. ALL PICKETS ARE TO BE FASTENED TO THE RAILS USING GALVANIZED SCREWS. STAPLES AND/OR NAILS WILL NOT BE ALLOWED. SCREW WITHOUT SPLITTING MEMBERS, DRILL PILOT HOLES IF NECESSARY. ALL SPLIT MEMBERS WILL BE REQUIRED TO BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. ACCURATELY CUT, FIT FASTEN MEMBERS, MAKE PLUMB, LEVEL, TRUE, AND RIGID. DO NOT SPLICE INDIVIDUAL FRAMING MEMBERS BETWEEN SUPPORTS. ERECT FACES OF FRAMING MEMBERS IN STRAIGHT EVEN PLANES TO RECEIVE FINISH MATERIALS. INSTALL STRINGERS WITH BOTTOM EDGES FREE OF DEFECTS. MITER ALL EXPOSED FINISHED JOINTS.
9. REMOVE ALL MARKS, STAMPS, DIRT, LOOSE FIBERS FROM ALL WOOD SURFACES.
10. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.

ORNAMENTAL METAL FENCE NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES.
2. ALL CONCRETE USED IN FOOTING AND PIERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS AND CITY INSPECTIONS.
4. ALL ORNAMENTAL METAL TUBES, POSTS, RAILS AND PICKETS SHALL BE FLUSH AND FREE OF ALL DENTS, SPURS, AND SHARP EDGES AND SHALL BE INSTALLED LEVEL, PLUMB, AND SQUARE.
5. PROVIDE CONTINUOUS WELDS ALONG ALL EDGES OF FENCE MEMBERS.
6. GRIND SMOOTH ALL WELDS.
7. ALL METAL SURFACES SHALL BE PRIMED AND PAINTED WITH TWO COATS OF RUSTPROOF PAINT, COLOR TO BE FLAT BLACK. CONTRACTOR TO SUBMIT SAMPLES AS REQUIRED.
8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS BEFORE MANUFACTURING GATES AND FENCE.
9. ALL ORNAMENTAL METAL FENCE MEMBERS ARE TO BE TUBULAR MEMBERS IN ACCORDANCE WITH ASTM 513 HOT ROLLED STRUCTURAL STEEL 50,000 PSI TENSILE STRENGTH, 60,000 PSI YIELD STRENGTH.
10. FENCE MEMBER SIZES TO BE AS FOLLOWS:
    - 10.1. PICKETS, 3/4" SQUARE 16 GA.
    - 10.2. RAILS, 1-1/2" X 1-1/2" SOLID FLAT 16 GA.
    - 10.3. POSTS, 2" SQUARE 11 GA. ; SEE DETAILS
11. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL FENCE GATES AND OPENERS. SHOP DRAWINGS SHALL INCLUDE ALL PRODUCT CUT SHEETS AS WELL AS INSTALLATION AND MANUFACTURING DETAILS. CONTRACTOR TO BE RESPONSIBLE FOR STRUCTURAL DESIGN OF GATES.
12. CONCRETE FOOTING FOR POSTS SHALL BE 4X POST.
13. POSTS SHALL BE PLACED AT A MINIMUM DISTANCE OF 6'-0" O.C AND A MAXIMUM DISTANCE OF 7'-0" O.C.

GENERAL PAVING NOTES

1. THE LAYOUT OF ALL PROPOSED PAVING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
2. ALL PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DETAILS SHOWN HEREIN.
3. THE SUB GRADE BENEATH ALL PAVING SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. THE EDGES OF ALL FINISHED PAVING AND PLAYGROUND EDGES SHALL BE SMOOTH, GRACEFUL CURVILINEAR OR STRAIGHTFORMS WITH NO INTERRUPTIONS SUCH AS CHORDS, WAVES, JOGS, OR MISSED TANGENTS. ANY PAVEMENT WITH SUCH INTERRUPTIONS SHALL BE SUBJECT TO REPLACEMENT AT NO COST TO THE OWNER.
5. CONCRETE SHALL NOT BE POURED UNTIL THE OWNER'S REPRESENTATIVE HAS INSPECTED THE FORMS AND REINFORCING. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF ALL CONCRETE POURS.
6. PROVIDE AN UNDERCUT HEADER WHEREVER PROPOSED CONCRETE PAVING IS TO ABUT EXISTING CONCRETE PAVING.
7. ALL EXPOSED VERTICAL CONCRETE SURFACES SHALL HAVE A HAND RUBBED FINISH WITH NO HONEYCOMBS OR VOIDS.
8. ALL CONSTRUCTION SHALL CONFORM WITH THE **CITY OF XX** CONSTRUCTION STANDARDS AND DETAILS.

GENERAL MASONRY NOTES

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE SHALL BE 3000 PSI, NORMAL WEIGHT, 28 DAY STRENGTH WITH A 4 TO 6 INCH SLUMP. THE CEMENT SHALL BE TYPE I AND SHALL CONFORM TO ASTM C150. AGGREGATES SHALL CONFORM TO ASTM C33.
2. ALL MIXING, TRANSPORTING, PLACING, AND CURING OF CONCRETE SHALL COMPLY WITH ACI 318.
3. CONCRETE SHALL NOT BE PLACED IN RAINING OR FREEZING WEATHER.
4. CHLORIDES SHALL NOT BE USED.
5. MAXIMUM AGGREGATE SIZE = 1".

CONCRETE REINFORCING STEEL

1. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 60 GRADE AND DEFORMED PER ASTM A305. PROVIDE 38 BAR DIAMETER LAP SPLICES FOR ALL CONTINUOUS BARS UNLESS NOTED OTHERWISE.
2. PROVIDE THE FOLLOWING CLEAR COVER FOR CAST-IN-PLACE REINFORCEMENT:
   - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO THE EARTH. 3"
   - CONCRETE EXPOSED TO EARTH OR WEATHER, NO.5 BAR AND SMALLER. 1½"
   - CONCRETE EXPOSED TO EARTH OR WEATHER, NO.6 THROUGH NO.18 BARS. 2"
   - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND. ¾"
3. ALL REINFORCING STEEL SHALL BE CLEAN AND FREE OF GREASE.

DRILLED PIERS

1. PIERS NOT SPECIFICALLY LOCATED ON THE PLAN SHALL BE CENTERED ON WALL OR BEAM.
2. PIER REINFORCING AND CONCRETE SHALL BE PLACED IMMEDIATELY OR TO WITHIN A MAXIMUM OF 8 HOURS AFTER DRILLING IS COMPLETE.
3. STEEL CASING IS REQUIRED WHEN MORE THAN 2 INCHES OF STANDING WATER IS PRESENT AT THE BOTTOM OF THE SHAFTS PRIOR TO PLACEMENT OF STEEL AND CONCRETE.
4. PROVIDE #4 BAR DIAMETER LAP SPLICES IN ALL VERTICAL PIER REINFORCING AS REQUIRED
5. PROVIDE PIER TO GRADE BEAM DOWELS TO MATCH SIZE, QUANTITY, AND LOCATION OF LONGITUDINAL PIER REINFORCING. MIN DOWEL PROJECTION INTO PIER = 30 BAR DIA. MIN DOWEL PROJECTION INTO BEAM = TOP LONGITUDINAL GRADE BEAM REINFORCING. PROVIDE STANDARD HOOK AT TERMINAL END OF DOWEL IN GRADE BEAM.

STRUCTURAL CONCRETE MASONRY UNIT

1. CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD-BEARING TYPE N-I CONFORMING TO ASTM C90 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI.
2. CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM PRISM STRENGTH OF 1500 PSI AT 28 DAYS.
3. MORTAR SHALL BE ASTM C270, TYPE S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI IN ACCORDANCE WITH ASTM C780. MASONRY CEMENT IS PROHIBITED.
4. COARSE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AND A MAXIMUM AGGREGATE SIZE OF ½" IN ACCORDANCE WITH ASTM C476.REFER TO DETAILS FOR WALL REINFORCING BAR SIZE AND SPACING.
5. REINFORCE HORIZONTAL JOINTS WITH GALVANIZED LADDER-TYPE STEEL IN ACCORDANCE WITH ANSI/ASTM A82. SIDE AND CROSS RODS SHALL BE 9 GA MINIMUM.
6. HORIZONTAL REINFORCEMENT SHALL BE SPACED AT 16" MAXIMUM. PROVIDE A 16" LAP AT SPLICES.
7. JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL AND EXPANSION JOINTS.
8. LAP VERITCAL REINFORCING BARS AT 72 BAR DIAMETERS.
9. LAP HORIZONTAL REINFORCING BARS AT 48 BAR DIAMETERS.
10. PLACE GROUT USING LOW-LIFT METHOD, 6'-8" MAXIMUM LIFTS.

STUDIO 13 DESIGN GROUP

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THESE DOCUMENTS ARE FOR INTERIM REVIEW ONLY AND NOT INTENDED FOR CONSTRUCTION OR BIDDING PURPOSES.

Submittal 11-14-2023

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Hardscape Notes

The Dog Spot

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
2	Plans Revised per City Comments	CA	11-7-2023
3	Plans Revised per City Comments	CA	11-14-2023

STUDIO 13 PROJECT #
SGC001

PLATE 2

SHEET NOTES

Plotted by: Station11 Plot Date: 11/14/2023 4:25 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 - The Dog Stop\DWG\SGC001 HS.dwg Saved By: Station11 Save Time: 11/14/2023 12:19 PM

Spectra® Color Chain-Link... made to perform

Spectra® is the latest generation of Master Halco's residential, commercial and industrial chain-link fence systems. It provides the corrosion protection of zinc, with the durability and attractive appearance of a colored polyester framework and extruded PVC fabric, to ensure years of attractive and reliable performance that blends in beautifully with the environment.

Our Spectra Fencing System

Premium quality frame and fabric is guaranteed for 15 years.

15 Year Warranty

Features and Benefits:

- Zinc-coated steel framework is thoroughly cleaned during the pre-treatment process, then color coated with a 3 mil minimum polyester layer for protection from corrosion.
- All galvanized wire has a 15 mil minimum extruded polyvinyl chloride coating for dual protection from corrosion and the elements.
- Fittings are made of galvanized steel with a 3 mil minimum of polymer layer for protection from corrosion.

Available Colors

Choose from 3 serene colors that blend in perfectly with the environment. Spectra® defines property lines, and will add value to any residential or commercial property.

Midnight Black

Forest Green

Available Wire Gauges (Finish and Core)

Use the finish gauge number when ordering.

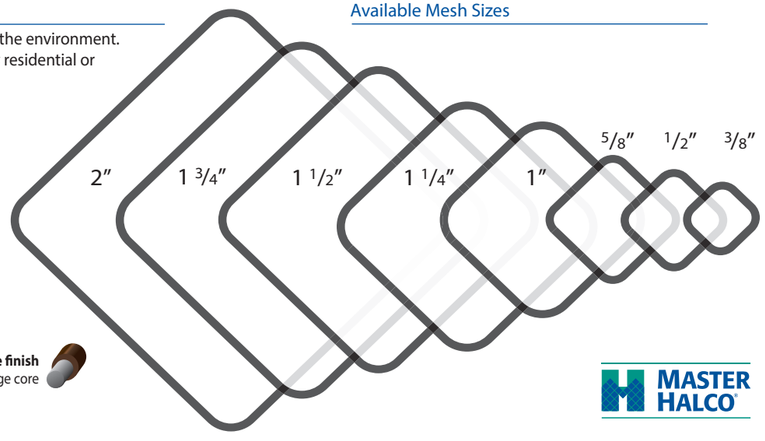
6 gauge finish
9 gauge core

8 gauge finish
11 gauge core

9 gauge finish
13 gauge core

11 gauge finish
14 gauge core

Available Mesh Sizes



MASTER HALCO®

Spectra Bond® Color Chain Link... made to withstand

Spectra Bond® is a step above for Master Halco's color commercial and industrial chain link fence systems. It is extruded bonded wire, which is a better alternative to simple extruded wire. The adhesive added before the wire is extruded seals the vinyl to the wire. This ensures years of attractive and reliable performance with a better protection against nature.

Ball Parks

Perimeter Fence

Tennis Courts

Schools

Government Facilities

High-Security Facilities

Our Spectra Bond® Fencing System

Premium quality fabric and framework is guaranteed for 15 years.

15 Year Warranty

Meets and Exceeds all ASTM Standards

Features and Benefits:

- Zinc-coated steel framework is thoroughly cleaned during the pre-treatment process, then color coated with a 3 mil minimum polyester layer for protection from corrosion.
- All galvanized wire has a 15 mil minimum extruded and adhered polyvinyl chloride coating for dual protection from corrosion and the elements.
- Fittings are made of galvanized steel with a 3 mil minimum of polyester coating for added protection.

Available Colors

Choose from 3 Spectra Bond® colors that will enhance any installation and blend in beautifully with any environment.

Midnight Black | Forest Green | Sierra Brown

Available Wire Gauges (Finish and Core)

Use the core gauge number when ordering.

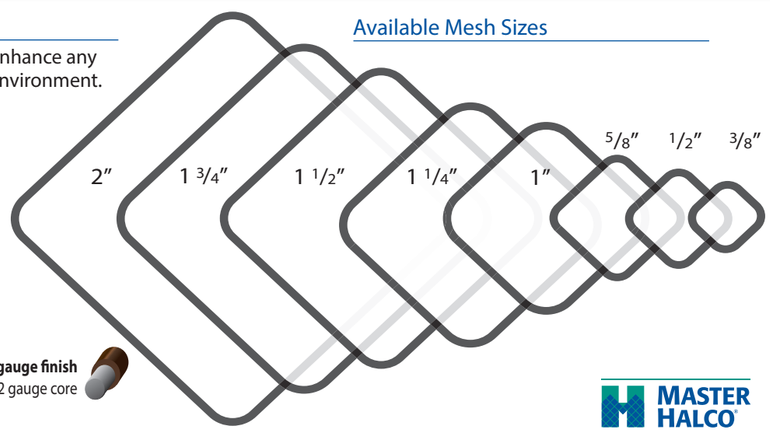
6 gauge finish
9 gauge core

8 gauge finish
11 gauge core

9 gauge finish
12 gauge core

11 gauge finish
14 gauge core

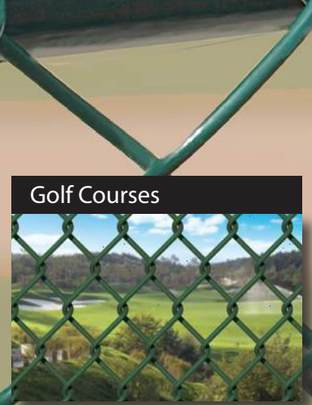
Available Mesh Sizes



MASTER HALCO®

Permafused® Color Chain-Link... made to be durable

Permafused, the next generation in color chain-link fence systems, offers unparalleled performance over ordinary systems, featuring a heavy mill coating that offers superior protection. Its outstanding resistance to ultra violet light and corrosive environments prevents premature fading and decay. It is an ideal choice for commercial applications that need the security of a chain-link fence system and an appearance that blends in beautifully with the environment.


Golf Courses

Perimeter Fence

Tennis Courts

Schools

Government Facilities

High-Security Facilities

Our Permafused Fencing System

Master Halco offers the highest quality products with unmatched reliability.

15 Year Warranty

Meets and Exceeds all ASTM Standards

Features and Benefits:

- Outstanding performance in highly corrosive environments provides years of protection.
- High impact resistance reduces the chance of damage during product handling and installation.
- Exceptional resistance to ultra violet light prevents premature fading.
- Extreme flexibility reduces susceptibility to cracking and chipping, even in changing weather conditions.
- 15 year limited warranty provides confidence and assurance that you've selected one of the best color chain-link fence systems available.

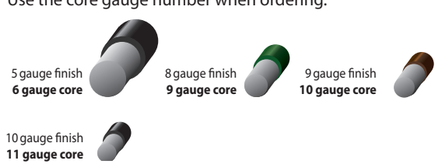
Available Colors

Choose from 3 Permafused colors that will enhance any installation and blend in beautifully with any environment.

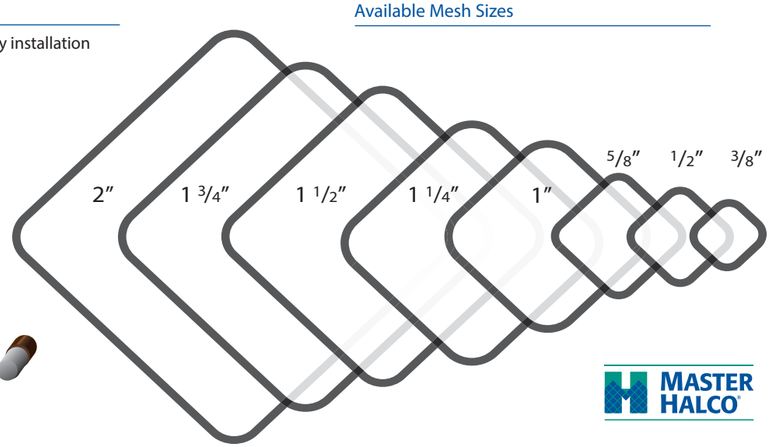
Midnight Black **Forest Green** **Sierra Brown**

Available Wire Gauges (Finish and Core)

Use the core gauge number when ordering.



Available Mesh Sizes



MASTER HALCO®

Galvanized Chain Link Recommendations

	Residential	Commercial
Fabric Type	Galvanized After Weaving and Galvanized Before Weaving	Galvanized After Weaving
Fabric Gauge	9, 11, 11.5, and 12.5 gauge	6, 9, and 11 gauge
Fabric Mesh	1-1/4", 2", 2-1/4", 2-1/2", and 2-3/8"	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"
Fabric Height	3', 42", 4', 5', and 6'	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6'.	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.
Top Rail		**Top Rail**
3' to 5' High	1-3/8" O.D. 17 Gauge 1-3/8" O.D. 16 Gauge	1-5/8" O.D. Deluxe Quality (DQ) 1-5/8" O.D. Full Weight Pipe
6' High and over	1-3/8" O.D. 17 Gauge 1-3/8" O.D. 16 Gauge 1-5/8" O.D. 16 Gauge	1-5/8" O.D. Deluxe Quality (DQ) 1-5/8" O.D. Full Weight Pipe
Line Posts		**Line Posts**
3' to 5' High	1-5/8" O.D. 16 Gauge	1-7/8" O.D. Deluxe Quality (DQ) 1-7/8" O.D. Full Weight Pipe 2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe
6' High and over	1-7/8" O.D. 16 Gauge	2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe
Terminal Posts		**Terminal Posts**
3' to 5' High	1-7/8" O.D. 16 Gauge 2-3/8" O.D. 16 Gauge	2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe 4" O.D. Commercial Quality (CQ) 4" O.D. Deluxe Quality (DQ) 4" O.D. Full Weight Pipe
6' High and over	2-3/8" O.D. 16 Gauge	
For Heavy Gates		6-5/8" O.D. Full Weight Pipe 8-5/8" O.D. Full Weight Pipe

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Malleable, Cast Iron Steel, Pressed Steel, or Die Cast Aluminum
Tie Wires	Aluminum or Galvanized Steel

Slats - Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, White, Redwood, Blue, Desert Sand

Spectra® and Spectra Bond® Color Chain Link Recommendations

FABRIC

Spectra® polymer coating extruded over zinc-coated steel core wire. Polymer coating is a minimum of 15 mil per ASTM F 668 Class 1.

Fabric Gauge	9 gauge and 11 gauge finish	6 gauge, 8 gauge, and 9 gauge finish 6 gauge is not available for 3/8" mesh or 1/2" mesh
Fabric Mesh	1-1/4", 1-1/2", 1-3/4", and 2"	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"
Fabric Height	3', 42", 4', 5', and 6'	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6'.	Knuckle - Knuckle (KK) for 5' and under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.
Top Rail	1-3/8" O.D. Spectra® 17 Gauge or 16 Gauge	1-5/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
Line Posts	1-5/8" O.D. Spectra® 17 Gauge or 16 Gauge	1-7/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
		2-3/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
Terminal Posts	1-7/8" O.D. Spectra® 16 Gauge	2-3/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
	2-3/8" O.D. Spectra® 16 Gauge	2-7/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
		4" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum
Sleeves	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel
Tie Wires	Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire

Slats Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, Redwood, Blue, Desert Sand

FRAMEWORK - TYPE 2

Spectra® polyester resin, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM 1043, external coating Type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film.

FABRIC

Spectra Bond® polymer coating extruded and adhered to zinc-coated steel core wire. Polymer coating is a minimum 15 mils thick per ASTM F668 Class 2a.1.

Fabric Gauge	6 gauge, 9 gauge, 10 gauge, and 11 gauge core	
Fabric Mesh	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"	
Fabric Height	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'	
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.	
Top Rail	1-5/8" O.D. Polyester Standard Weight Pipe (0.140" wall thickness, 2.27 lb./ft.)	1-5/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.111" wall thickness, 1.83 lb./ft.)
Line Posts	2-3/8" O.D. Polyester Standard Weight Pipe (0.154" wall thickness, 3.65 lb./ft.)	2-3/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.130" wall thickness, 3.12 lb./ft.)
Terminal Posts	2-7/8" O.D. Polyester Standard Weight Pipe (0.203" wall thickness, 5.79 lb./ft.)	2-7/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.160" wall thickness, 4.64 lb./ft.)

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum
Sleeves	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel
Tie Wires	Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire

Slats Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, Redwood, Blue, Desert Sand

FRAMEWORK - TYPE 1

Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1a, standard weight pipe, schedule 40. Hot-dipped galvanized with a minimum average 1.8 ounces per square foot of zinc-coated surface area. Note: Heavy Mil Schedule 40 available upon request.

FRAMEWORK - TYPE 2

Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1c, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film. Note: Heavy Mil Schedule 40 available upon request.

Permafused® Color Chain Link Recommendations

FABRIC

Permafused® Polyolefin Coating Fused and Adhered to Zinc-Coated Steel Core Wire per ASTM F Class 2b.

Fabric Gauge	**6 gauge, 9 gauge, 10 gauge, and 11 gauge core**
Fabric Mesh	**3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"**
Fabric Height	**3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'**
Fabric Selvage	**Knuckle - Knuckle (KK) for 5' and Under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.**

	FRAMEWORK - TYPE 1	FRAMEWORK - TYPE 2
	Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM 1043, external coating Type B, zinc with organiz overcoat, 0.9 ounces per square foot with chromate conversion and verifiable polymer film.	Permafused® Heavy Mil, 15 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film. Note: Heavy Mil Schedule 40 available upon request.
Top Rail	**1-5/8" O.D. Polyester Standard Weight Pipe (0.140" wall thickness, 2.27 lb./ft.)**	**1-5/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.111" wall thickness, 1.83 lb./ft.)**
Line Posts	**2-3/8" O.D. Polyester Standard Weight Pipe (0.154" wall thickness, 3.65 lb./ft.)**	**2-3/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.130" wall thickness, 3.12 lb./ft.)**
Terminal Posts	**2-7/8" O.D. Polyester Standard Weight Pipe (0.203" wall thickness, 5.79 lb./ft.)**	**2-7/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.160" wall thickness, 4.64 lb./ft.)**

Gates

Fabric	**Same Gauge and Mesh as Chain Link Selected**
Frame	**Same as Top Rail Selected**

Fittings

Tension and Brace Bands	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel**
Caps, Eye Tops, Rail Ends	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum**
Sleeves	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel**
Tie Wires	**Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire**

Slats - Privacy

Material Composition	**Polyethylene Thermoplastic**
Colors	**Green, Black, Brown, Gray, White, Redwood, Blue, Desert Sand**

Accessories, Framework & Fittings...

for a complete fencing solution

Master Halco® is dedicated to providing a complete range of products for every fencing application. From temporary fencing to high security accessories, and automated gate systems to privacy screening, you'll find a solution that will fit any specific requirement for commercial or residential jobs. All products are constructed to the highest quality standards to deliver optimum performance and ensure efficient installation.

As the leader in the chain-link fencing market, you can look to Master Halco with confidence as your one-stop-shop for all high-quality, chain-link fencing products.

Kennels

High Security

Accessories

Temporary Panels

Gates

Privacy Slats

Framework & Fittings

The proper framework and fittings is a must for every job. Master Halco stocks the largest selection of imported and domestic pipe, tube and fittings in the nation to coordinate with our Chain-Link fabric styles, offering a complete fencing solution.

Whether you are looking to complete a small residential job or a large commercial one, Master Halco offers the perfect combination of products. Below are just a few examples of coordinating pipes, tubes and fittings available.

Pipe & Tube

- CQ20
- Structural
- Dura-Tube 16 Gauge
- RQ 15
- DQ 40
- HQ 30
- Dura-Lite 18 and 17 Gauge
- Schedule 40 Full Weight

Fittings

- Pressed Steel
- Malleable
- Aluminum
- Heavy Mil Color
- Die Cast
- Polyester Coated Color

Date:	01/16/2024
Agenda Item #:	6. B.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1747 Regarding a Request to Rezone a Approximately 4.4780 Acres of Land, Currently Zoned a Light Commercial, Generally Located on the Southeast Corner of South Elm Ridge Road and East University District, within Little Elm's Town Limits, in Order to Establish a New Planned Development District with a Light Commercial Base, within Modified Development Standards, for a Veterinary Clinic with Outdoor Kennel and Retail Buildings.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1747:

DESCRIPTION:

Location. Generally located on the southeast corner of South Elm Ridge Road and East University Drive, within Little Elm's Town Limits.

Background.
The subject property consists of one commercial lot approximately 4.478 acres, currently zoned Light Commercial, located within the 380 Overlay District. The property was annexed into the Town in 2006 through Ordinance No. 809. The adjacent properties to the East, West, and North are also zoned and operating as Light Commercial. To the South of this property is an apartment complex called "Mansions 380", an apartment complex, and to the southwest is open space land utilized for an electrical transmission line easement. The property is bound by US Highway 380 to the North and S. Elm Ridge Road to the West.

The property is currently operating as a veterinary office within a 4,000 square foot structure, which appears to have been originally constructed as a residence in 1971. The applicant, Dr. Donald Bray is the owner of Twin Lakes Pet and Bird Veterinary Clinic, and has been operating the clinic on this property since 2006. Over the years, the clinic has outgrown the existing structure and, in order to

continue operation on this site, requires additional square footage, additional parking, and a large outdoor space.

Constructing a new vet clinic with outdoor runs requires approval of a Specific Use Permit. The applicant would also require relief with regard to some of the site development requirements in order to make this development financially feasible, especially with the project costs and interruption in operations during the construction period. In coordination with Staff, the applicant's best approach is a Planned Development District, based on Light Commercial District standards, with modified uses and site development standards.
Recognizing the Town's vision for the US 380 corridor to maintain a true commercial identity, as well as seeing the opportunity for this particular area to become a destination for all pet needs, the applicant is committed to providing retail space.

Proposal.
The applicant is proposing to rezone the subject property to establish a new Planned Development District utilizing Light Commercial District as the base, with modified uses and development standards. The applicant first submitted the Planned Development request in September 2022, and has been working with Staff to bring the project into compliance with as many applicable development Ordinances as financially feasible, in order to increase the chances of approval and create quality retail space for Little Elm Businesses.
While the proposal meets the majority of the Town's development standards, the applicant is requesting following modifications:

- Allow certain uses by-right and prohibit certain uses
- Modified architectural requirements
- Off-premise signage
- Alternate Foundation Planting

The proposed PD consists of two lots, Lot 1 containing approximately 1.71-acre and Lot 2 containing approximately 2.78-acre. Lot 1, located furthest from US 380, would contain a two-story, 11,719 square-foot veterinary clinic, with kennels, a large outdoor run in the rear, and a drainage pond intended to serve both lots. Lot 2, located adjacent to US 380, would contain two one-story retail buildings, totaling approximately 26,900 square feet, and an outdoor dog run between the two buildings.

Uses.
The applicant has requested as a part of the proposal that certain uses be prohibited from the property. Those uses are:

1. Alternative Financial Services;
2. Sexually-oriented businesses
3. Body art facilities
4. Smoke shops
5. Vice paraphernalia;
6. Gaming or slot machines (excluding arcades);
7. Lewd merchandise sales;
8. Pawn shops; and,
9. Outdoor storage/display.

The applicant has requested the following use be allowed by right, specifically as depicted on the proposed site plan, in addition the allowed uses for LC district in the Schedule of Uses:

1. Animal Clinic with an outdoor run;

Zoning Standards.
The applicant's proposal meets all height, area, and setback requirements of the Town's Zoning Ordinance.

Design Standards.
The applicant is requesting to have the design standards amended for the building materials to the following for each building, with the primary facades that face the street bolded:
Lot 1, Building 1

Elevation	Glazing	Class A	Class B	Class C
North	**20%**	**76%**	**24%**	
East	28%	98%	2%	
South	20%	100%		
West	**12%**	**94%**	**6%**	

Lot 2, Building 2

Elevation	Glazing	Class A	Class B	Class C
North	**24%**	**53%**	**15%**	**32%**
East	0%	60%	40%	
South	0%	6%	94%	
West	**32%**	**53%**	**0%**	**47%**

Lot 2, Building 3

Elevation	Glazing	Class A	Class B	Class C
North	**33%**	**61%**	**0%**	**39%**
East	0%	37%	63%	
South	0%	8%	92%	
West	**36%**	**44%**	**6%**	**50%**

Building 1, the primary elevations that would be most visible from the street are close to meeting the Town's façade materials requirements but fall short on class A materials and glazing for separate elevations. This building is at the rear of the property and is designed to function solely as a veterinary clinic. Typically, a veterinary use will not require a large amount of glazing as storefront uses which are trying to attract customers which is what the glazing requirement is intended for.

Building 2, meets the glazing requirements for the north and west elevations, which are it's primary street facing elevations. Class A materials for Building 2 fall short of the Town's requirement of 80% for primary facades and 20% for secondary facades. The North and West facades would be required to be 80% class A materials instead of the 53% on both facades. The applicant is also proposing to use a large amount of "Wood-like Steel Siding" which falls under a Class C material, intended to be utilized for small accents on the facade. Part of the northern façade of building 2 will not be visible from the street as it will be largely blocked from view by building 3, the part that is blocked is a mixture of brick and stucco.

Building 3 meets the glazing requirements on both primary elevations but does not meet the Class A materials on the primary elevations and on one secondary elevation. The applicant is also proposing to use a large amount of the same "wood-like steel siding" on this building as they are

proposing on Building 2.

The applicant has worked very diligently with staff to meet articulation requirements as well as creating the landmark glass tower feature on both retail buildings.

Landscaping.
The proposed perimeter, interior, foundation, and landscaping points for the site meet the Town's landscaping requirements. The plans show sufficient perimeter tree planting and vehicular screening, and provide a masonry wall along the rear property line.

Parking.
The proposal meets the Town's parking regulation, including space size, ratios, and total amount.

Subdivision.
The applicant will be required to replat as part of the civil site development process. Both properties will be depended on each other being developed in order to obtain fire coverage as well as other civil engineering factors. Additionally, the property will have to work with the neighboring land owner to the east to gain a second point of access since Elm Ridge Road is a dead end and only acts as one point of access. The applicant is also dependent on a shared fire lane between this site the neighboring site to the east. This second point of access is depicted in the site plan as proposed, actual layout of the second point of access is subject to change but will still need staff approval. These two shared access and fire easements will need to be resolved before or during the civil site development process.

Signage.
The applicant is proposing one monument sign to serve the whole development. This will mean that Lot 1 of the development will require a waiver for "off-premise signage" since the veterinary office will be on a separate property. Staff will write the ordinance in a way that limits the "off-premise signage" to only allow one monument and only for businesses that have an active Certificate of Occupancy within the boundary of this Planned Development.

Fire, Engineering, Building.
The Fire, Engineering, and Building department have reviewed the proposed plans and determined them to be acceptable for the purposes of this rezoning request. This is not an approval of the plans for construction.

Comprehensive Plan.
The proposed development is in accordance with the Town's Comprehensive Plan and Future Land Use Plan. The Town envisions this property as a light commercial use, which aligns with the intent of the proposed development.

Recommendation to the Commission.
The U.S. 380 Overlay District (380-OD) is identified in the 2017 Comprehensive Plan as the Town's major commercial hub for employment, and provides enhanced regulations to stimulate high-quality employment opportunities in this area. The intent of this district is to promote the economic development of the area, promoting a job base for the residents of Little Elm, and to regulate the character of growth along the 380 Corridor. The property's location along the US 380 corridor provides opportunity to expand this vision for retail and commercial growth.

The applicant is the current property owner and long-term operator of the veterinary clinic which has outgrown the existing structure. The applicant desires to remain within the Town of Little Elm

and expand the clinic operation to serve the surrounding residents. Additionally, understanding the vision for the corridor, the proposed development concept provides the envisions retail and commercial opportunities on the lot fronting US 380. The applicant envisions this area becoming focused around pet care, creating a center where residents could take their pets for needed care or services, while providing additional retail needs for the residents themselves.

Staff is generally supportive of the request as it provides a quality development with a thought-out vision for the future. Staff is also supportive of long-term business investment that helps to further the vision of the Comprehensive Plan.

Commission Findings.
At their regular meeting on December 7, 2023, the Planning and Zoning Commission held a public hearing and discussed screening, proximity to the adjacent multifamily development, Elm Ridge Road right-of-way redevelopment, and phasing of the proposed two-lot development. The Commission indicated their gratitude for continued reinvestment in the Town and the applicants intent to expand and continue operating their business here. The Commission voted unanimously (6-0) to approve the request with the following condition:

- Site Plan shall be revised to match the Landscape Plan, providing the appropriate setback and fence along the southern portion of the property.

Staff had discussions with the applicant after the meeting and the appropriate plans are included in the Ordinance and Development Agreement attached.

BUDGET IMPACT:

This item has no budget impact.

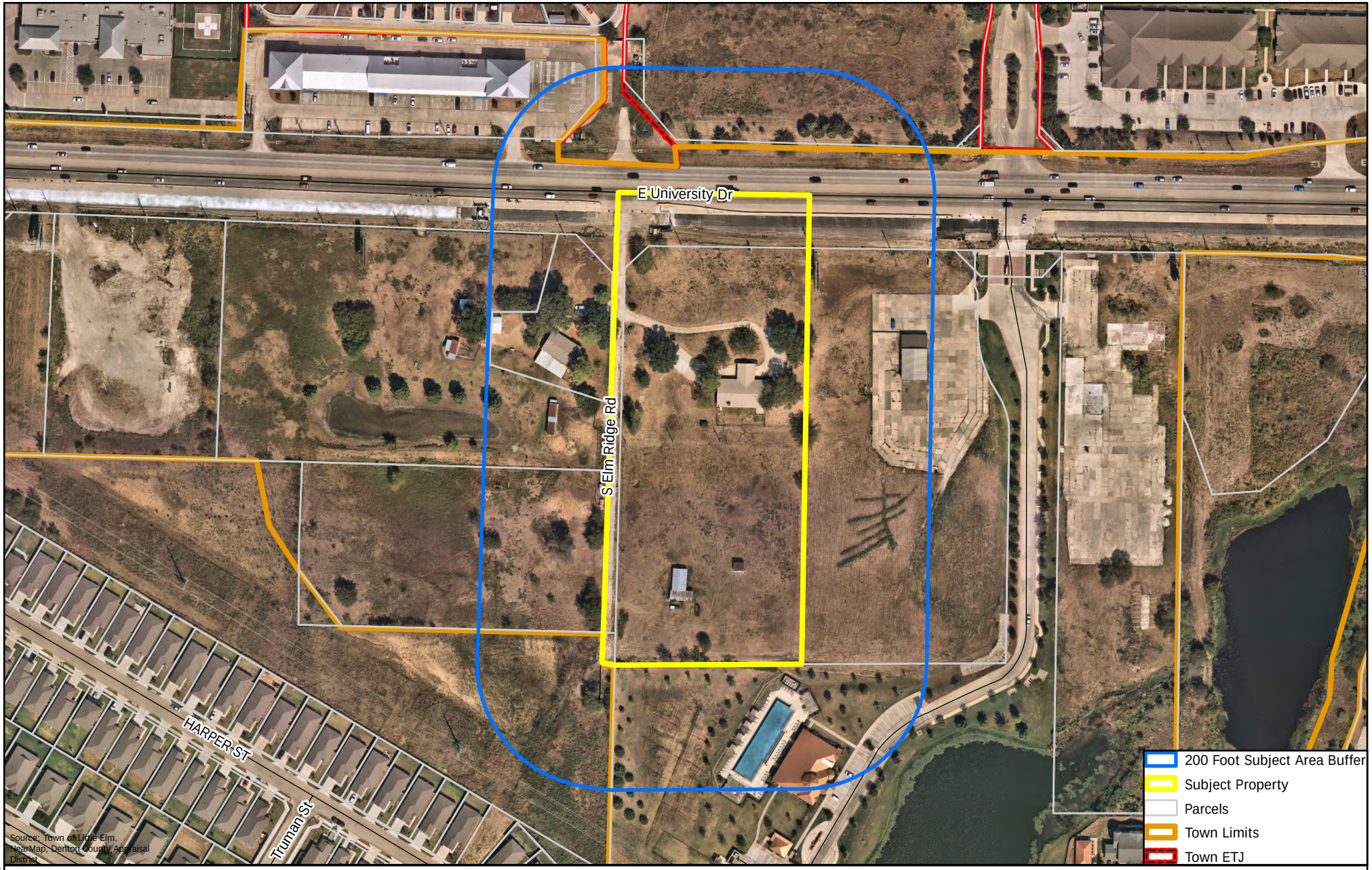
RECOMMENDED ACTION:

The Planning and Zoning Commission recommends approval of the request.

Attachments

Location Map

Ordinance No. 1747 - Twin Lakes PD

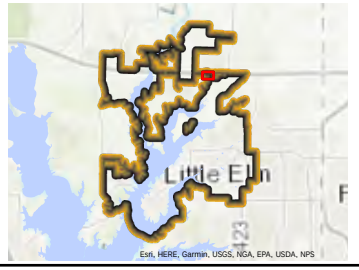


LITTLE ELM

Twin Lakes (PD-22-06012)
Aubrey, TX 76227

Town of Little Elm
Denton County, Tx
Date: 11/20/2023

0 100 200
US Feet



This product is to be used for graphical representation only. The accuracy is not to be taken/ used
as data produced for engineering purposes or by a Registered Professional Land Surveyor
for the State of Texas. For this level of detail, supervision and certification of the produced data by a Registered Professional Land Surveyor for the State of Texas would have to be performed.
Town of Little Elm and its members assume no responsibility for the accuracy of said data.

Project Location: G:\GIS\For Town\Employee\ISDev\Services\Jose\LocationMap\

TOWN OF LITTLE ELM

ORDINANCE NO. 1747

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE, BY ESTABLISHING A NEW PLANNED DEVELOPMENT – LIGHT COMMERCIAL (PD-LC) DISTRICT IN ORDER TO ALLOW A NEW COMMERCIAL DEVELOPMENT WITH MODIFIED USES AND DEVELOPMENT STANDARDS ON APPROXIMATELY 4.478 ACRES OF LAND LOCATED AT 26810 US HIGHWAY 380; PROVIDING A SAVINGS CLAUSE; CORRECTING THE OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, the Town possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate land uses under Chapter 211 of the Texas Local Government Code; and

WHEREAS, a request for Planned Development-Light Commercial (PD-LC) with modified development standards on approximately 4.478 acres of land, more specifically described in the exhibits, attached hereto; and

WHEREAS, this zoning change is in accordance with the most current adopted Comprehensive Plan of the Town of Little Elm; and

WHEREAS, the Town Council and the Planning & Zoning Commission of the Town of Little Elm, in compliance with the laws of the State of Texas and the ordinances of the Town of Little Elm, have given the required notices and held the required public hearings and afforded a full and fair hearing to all property owners generally and to all persons interested in and situated in the affected area and in the vicinity thereof regarding the requested zoning change described herein; and

WHEREAS, at its regular meeting held on December 7, 2023 the Planning & Zoning Commission considered and made recommendations on Case No. PD-22-06012; and

WHEREAS, after due deliberations and consideration of the recommendation of the Planning & Zoning Commission and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determined that the request is in the interest of public health, safety and welfare of the citizens of the Town of Little Elm.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. ZONING AMENDMENT. That Ordinance No. 226 of the Town of Little Elm, Texas, the same being the Comprehensive Zoning Ordinance of the Town, is hereby amended by establishing a new Planned Development-Light Commercial (PD-LC) based on Light Commercial (LC) district requirements with modified uses and development standards, on property located at 26810 US Highway 380, within Little Elm's town limits, on approximately 4.478 acres of land more particularly described in **Exhibit A**, and attached hereto, subject to all of the terms and conditions set forth herein, the terms and conditions of the Comprehensive Zoning Ordinance, and all other applicable ordinances, laws, rules, regulations, and standards.

SECTION 3. CONDITIONS AND REGULATIONS. The permitted standards shall be in accordance with the Light Commercial (LC) District, and all applicable provisions of Chapter 106 – Zoning Ordinance in general, plus as specified herein:

a. The Zoning and Land Use Regulations, and all conditions set forth in **Exhibit B** attached hereto and made a part hereof for all purposes shall be adhered to in their entirety for the purposes of this Planned Development. In the event of conflict between the provisions of **Exhibit B** and provisions of any other exhibit, the provisions of **Exhibit B** control.

SECTION 4. PLANNED DEVELOPMENT MASTER PLAN. The Concept Plan and related plans, images, and documents approved and described as **Exhibit C** attached hereto and made a part hereof are approved. The subject property shall be improved in accordance with the plans set forth in **Exhibit C**.

a) If, after two years from the date of approval of the Planned Development Master Plan, no substantial development progress has been made within the PD, then the Planned Development Master Plan shall expire. If the Planned Development Master Plan expires, a new Planned Development Master Plan must be submitted and approved according to the procedures within the Zoning

Ordinance, Planned Development Districts. An extension of the two year expiration shall be granted if a development application for the PD has been submitted and is undergoing the development review process or if the Director of Development Services determines development progress is occurring.

b) The Planned Development Master Plan shall control the use and development of the property, and all building permits and development requests shall be in accordance with the plan until it is amended by the City Council.

c) If a change to the Concept Plan, if any, is requested, the request shall be processed in accordance with the development standards in effect at the time the change is requested for the proposed development.

SECTION 5. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are indirect conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. ZONING MAP. The official zoning map of the Town shall be amended to reflect the changes in zoning made by this ordinance.

SECTION 6. PENALTY. Any person, firm, or corporation violating any of the provision of this ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars ($2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

SECTION 7. SEVERABILITY. The sections, paragraphs, sentences , phrases, and words of this Ordinance are severable, and if any section or provision of this ordinance or the application of that section or provision to any person, firm, corporation, situation or circumstance is for any reason judged invalid or unconstitutional, the adjudication shall not affect any other section or provision of this ordinance or the application of any other section or provision to any person, firm, corporation, situation or circumstance, nor shall adjudication affect any other section or provision of the Comprehensive Zoning Ordinance of the Town of Little Elm, Texas, and the Town Council hereby declares that it would have adopted the valid portions and applications of the ordinance without the valid parts and to this end the provisions of this ordinance shall remain in full force and effect.

SECTION 8. REPEALER. That all ordinances of the Town of Little Elm in conflict with the provisions of this ordinance be and the same are hereby repealed to the extent of that

conflict.

SECTION 9. EFFECTIVE DATE. That this Ordinance shall take effect immediately upon its adoption and publication in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

Town of Little Elm, Texas

_____

Curtis Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

Exhibit A

Metes and Bounds

EXHIBIT "A"
LEGAL DESCRIPTION

This document represents an accurate on the ground survey of 26810 US-380 in the City of Aubrey, Denton County, Texas, on December 30, 2016.

A tract of land situated in the JOSE GONZALEZ SURVEY, ABSTRACT NUMBER 447, Denton County, Texas and being all of a tract of land described in the deed to Twin Lakes Vet, LLC under Document Number 2007-17942 of the Real Property Records, Denton County, Texas.
The exterior boundary of said tract of land is described as follows:
BEGINNING at a 1/2-inch iron rod found on the South right-of-way of U.S. Highway 380 at the Northeast corner of the said Twin Lakes Vet, LLC tract;
THENCE South 01°26'50"West with the common line between the East line of the said Twin Lakes Vet, LLC tract and the West line of a tract of land described in the deed to future benefits, LLC recorded under County Clerk's file Number 2010-8961 of the said Real Property Records a distance of 667.03 feet to a 3/8-inch iron rod found at the Southwest corner thereof;
THENCE South 89°41'44"West the common line between the North line of a tract of land described in the deed to Western Rim Investors 2015-5. L.P. recorded under County Clerk's File Number 2014-73393 of the aid Real Property Records and the South line of the said Twin Lakes Vet, LLC tract a distance of 298.58 feet to a capped 1/2-inch iron rod stamped "EAGLE SURVEYING" set at the Southwest corner thereof;
THENCE North 01°34'19"East a distance of 581.59 feet to a capped 1/2-inch iron rod stamped "EAGLE SURVEYING" set on the said South right-of-way of U.S. Highway 380;
THENCE North 46°04'20"East along said South right-of-way of U.S. Highway 380 a distance of 131.15 feet to a capped 1/2-inch iron rod found at the beginning of a curve, to the right, having a radius of 11539.16 feet
THENCE along said South right-of-way of U.S. Highway 380 with said curve arc length of 15.32 feet, a chord bearing of South 88°58'32"East a chord length of 15.32 feet to a right-of-way monument with an aluminum cap found for a corner;
THENCE South 88°53'12"East along said South right-of-way of U.S. Highway 380 a distance of 189.73 feet to the POINT OF BEGINNING and enclosing 4.49 of an acre of land more or less.

Exhibit B
PD Standards

26810 Us Highway 380 E

PLANNED DEVELOPMENT REGULATIONS

August 2023

PREPARED BY:

TRIANGLE ENGINEERING LLC

1782 W. MCDERMOTT DRIVE
ALLEN, TX 75013
469.331.8566
TBPE FIRM #11525

26810 US HIGHWAY 380 E
PLANNED DEVELOPMENT DISTRICT
STATEMENT OF INTENT AND PURPOSE

This zoning submittal encompasses approximately 4.49 acres of land within the Town of Little Elm more fully described on the legal description attached as Exhibit A (the "Property"). The planned development ("PD") will allow for the development of an animal clinic with an outdoor run, an animal clinic without an outdoor run and a retail building. This planned development will provide the zoning regulations, as depicted in Exhibit B, necessary to develop the property and the final layout must generally conform to the concept plan, as depicted in Exhibit C.

It is the intent of this PD to primarily follow the Light Commercial (LC) zoning regulations as the base district, with modified development standards as outlined within this PD ordinance, therefore amending the existing Town of Little Elm, Texas zoning map. Any conflict between this PD and the Town of Little Elm Zoning Ordinance shall be resolved in favor of those regulations set forth in this PD, or as may be ascertained through the intent of this PD. As used herein "Zoning Ordinance" means the comprehensive zoning of the Town of Little Elm, Texas, in effect on the effective date of this Agreement, except otherwise defined in this Agreement. Uses and development regulations specifically modified, designated, or included in this PD shall not be subject to amendment of this PD. Uses and development regulations which otherwise are not specifically modified, designated or included in this PD shall be controlled by the "Zoning Ordinance", unless the context provides to the contrary.

As used herein, "Director" means the Director of Development Services.

Project Location

The proposed PD is located at the intersection of 6810 US Highway 380 E. and Elm Ridge Road. The Legal Description (Exhibit A), Development Standards (Exhibit B), and the concept plan (Exhibit C) have been provided.

The property is surrounded by light commercial uses to the east and west, and multi-family residential use to the south. This PD will provide the opportunity to develop the following:

1. Two (2) single-story shopping center retail buildings; and
2. A two-story animal clinic building with an outdoor run.

EXHIBIT B

PLANNED DEVELOPMENT DISTRICT STANDARDS

GENERAL REGULATIONS

Purpose. The purpose of this Planned Development district is to allow for the development of 2 retail buildings and a two-story animal clinic with an outdoor run. All buildings are to be located on two platted lots while cohesively tying into the surrounding light commercial zoning areas.

Use Regulations. No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in Section 106.05.01(b), "Schedule of Uses – Nonresidential".

Base Zoning District. The permitted uses and standards shall be in accordance with Light Commercial (LC) zoning district, unless otherwise specified herein.

Prohibited Uses. Per this PD, the following uses are prohibited on the subject property:

1. Alternative financial Services;
2. Sexually-oriented businesses;
3. Body art facilities;
4. Smoke shops;
5. Vice paraphernalia;
6. Gaming or slot machines (excluding arcades);
7. Lewd merchandise sales;
8. Pawn shops; and
9. Outdoor storage/display.

Permitted Uses. The permitted uses and standards outlined within the Light Commercial (LC) base zoning district shall be permitted within this PD, with the following additional uses:

1. Animal clinic with an outdoor run;
2. Animal clinic without an outdoor run; and
3. Retail (Store, Shopping Center).

All not defined by this PD shall default to the Little Elm Code of Ordinances as set forth at time of adoption, and as amended.

Height and Area Regulations. All building height and lot area requirements shall be defined by Section 106.03.03 “Zoning Districts – Non-residential/commercial/industrial”.

Architectural Standards. All applicable provisions of Section 106.06.05 “Architectural Standards for Commercial Structures (Includes Office, Retail, Commercial, Mixed Use, Etc.), shall be followed.

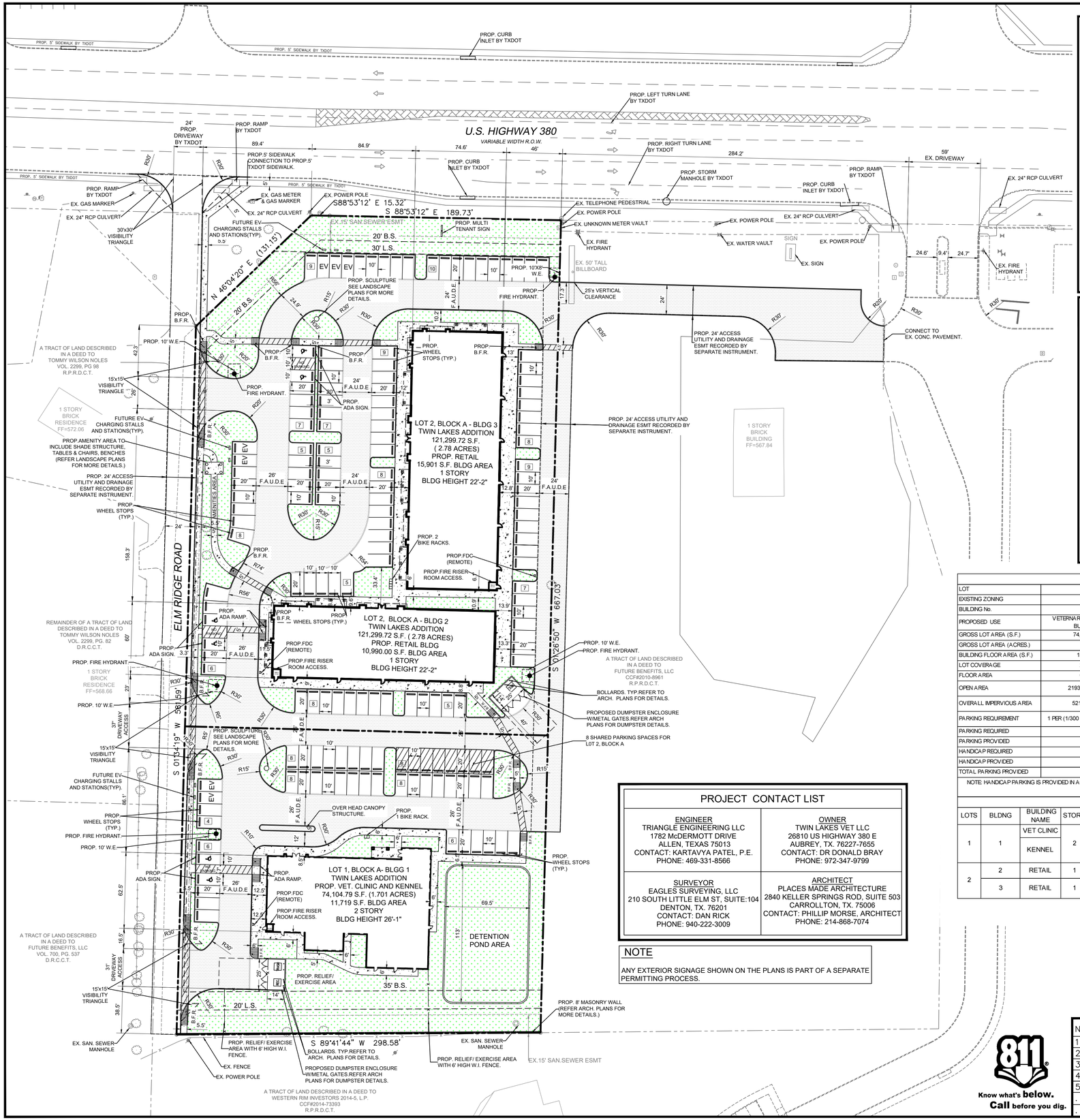
Parking Standards. All applicable provision of Division 4 “Parking, Stacking, and Loading Standards.” Shall be followed.

Commercial Landscape and Screening Requirements. All applicable provisions of Section 106.06.18 “Commercial Landscape Requirements” and Section 106.06.31 “Screening” shall be followed.

Signage. All applicable provisions of chapter 86 “Sign Ordinance”, shall be met unless otherwise stated herein:

1. Per this PD, a single mult-tenant monument sign shall be permitted along the US Highway 380 street frontage.

Exhibit C
Development Plans

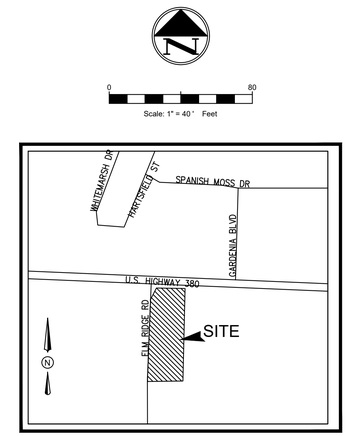


EXISTING LEGEND

1/2" IR FOUND	IRRIGATION VALVE	NO PARKING
1/2" IR SET	WATER VALVE	CONCRETE
5/8" IR FOUND	FIRE HYDRANT	GRAVEL
3/8" IR FOUND	IR. VALVE	BRICK
60-D NAIL FOUND	UTILITY POLE	STONE
PK NAIL SET	WATER METER	WOOD DECK
1/2" IP FOUND	GAS METER	BUILDING WALL
X-FOUND	A.C. PAD	TILE
X-SET	TRANS. BOX	BUILDING LINE
1" IR FOUND	GAS MARKER	EASEMENT
1" IP FOUND	OVERHEAD UTILITY LINE	BOUNDARY
POINT FOR CORNER	GUY WIRE ANCHOR	HIGHBANK LINE
CON. MONUMENT	BARBED WIRE FENCE	PARKING STRIPE
3/4" IP FOUND	IRON FENCE	HANDICAP SPACE
TELE. BOX	CHAINLINK FENCE	POWER POLE
CABLE BOX	WOOD FENCE	TREE
ELECTRIC BOX	PIPE RAIL FENCE	TELEPHONE PEDESTAL
BRICK COLUMN	COVERED AREA	GAS LINE MARKER
STONE COLUMN	ASPHALT	GAS TEST STATION
STORM DRAIN MH.	FIRE LANE STRIPE	BURIED CABLE MARKER
SAN. SEW. CO.	BRICK RET. WALL	IRRIGATION CONTROL VALVE
BOLLARD POST	STONE RET. WALL	UNKNOWN METER VAULT
LIGHT POLE	CON. RET. WALL	ELECTRIC BOX/VAULT
SAN. SEW. MH.		SIGN

SITE LEGEND

CONCRETE CURB
SAW-CUT LINE
FENCE (x x x)
FIRE LANE
STRIPING
FIRE LANE HATCH
SIDE WALK HATCH
LANDSCAPE AREA
PARKING SPACES (X)
MONUMENT/PYLON SIGN
WHEEL STOPS
HANDICAP LOGO
HANDICAP SIGN
RAMP
BOLLARD
TRAFFIC ARROW
FIRE HYDRANT
DUMPSTER (DE / EN)



VICINITY MAP
N.T.S.

SITE GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OR LOCAL JURISDICTION STANDARDS.
2. THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
3. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.
4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.
5. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.
6. ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.
7. THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.
8. ALL CURB RADIUS TO BE 10' OR 2' UNLESS OTHERWISE NOTED ON THE SITE PLAN.

EASEMENT/SETBACK LEGEND

BUILDING SETBACK	B.S.
LANDSCAPE SETBACK	L.S.
FIRE LANE, ACCESS, UTILITY& DRAINAGE EASEMENT	F.A.U.D.E.
BARRIER FREE RAMP	B.F.R.
ELECTRIC VEHICLE	EV

SITE DATA SUMMARY TABLE

LOT	1	2		TOTAL
EXISTING ZONING	LC-LIGHT COMMERCIAL			
BUILDING No.	1	2	3	MIXED
PROPOSED USE	VETERNARY AND KENNEL BUILDING	RETAIL	RETAIL	MIXED
GROSS LOT AREA (S.F.)	74,104.79	121,299.72		195,404.51
GROSS LOT AREA (ACRES.)	1.70	2.78		4.49
BUILDING FLOOR AREA (S.F.)	11,719	10,990	15,901	38,609
LOT COVERAGE	22%	9%	13%	44%
FLOOR AREA	0.13	0.09	0.13	0.35
OPEN AREA	21932.79 S.F.	21144.12 S.F.		43,076.91 SF (0.981 AC)
OVERALL IMPERVIOUS AREA	52172 S.F.	100535 S.F.		1,52,327.60 SF (3.50 AC)
PARKING REQUIREMENT	1 PER (1/300 GFA+1/500 GFA)	1 PER (1/300 GFA + 1/200 GFA)	1 PER 200 GFA	MIXED
PARKING REQUIRED	35	45	80	160
PARKING PROVIDED	40	41	77	158
HANDICAP REQUIRED	2	2	2	6
HANDICAP PROVIDED	2	2	2	6
TOTAL PARKING PROVIDED	42	43	79	164

NOTE: HANDICAP PARKING IS PROVIDED IN A CCORDANCE WITH ADA STANDARDS & HYDRODYNAMIC SEPARATORS AND BMPS WILL BE PROPOSED FOR WATER QUALITY AS PER ENGINEERING STANDARDS

BUILDING DATA SUMMARY TABLE

LOTS	BLDNG	BUILDING NAME	STORY	HEIGHT	USE	AREA (S.F.)	SUB-TOTAL	TOTAL
1	1	VET CLINIC	2	26'-1"	VETERNARY CLINIC	8338		
		KENNEL			VETERNARY CLINIC WITH 29% KENNEL	3,381	11,719	**11,719**
2	2	RETAIL	1	22'-2"	RETAIL	10,990		**10,990**
	3	RETAIL	1	22'-2"	RETAIL	15,901		**38,610**

PROJECT CONTACT LIST

ENGINEER TRIANGLE ENGINEERING LLC 1782 McDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: KARTAVYA PATEL, P.E. PHONE: 469-331-8566	OWNER TWIN LAKES VET LLC 26810 US HIGHWAY 380 E AUBREY, TX. 76227-7655 CONTACT; DR DONALD BRAY PHONE: 972-347-9799
SURVEYOR EAGLES SURVEYING, LLC 210 SOUTH LITTLE ELM ST, SUITE:104 DENTON, TX. 76201 CONTACT: DAN RICK PHONE: 940-222-3009	ARCHITECT PLACES MADE ARCHITECTURE 2840 KELLER SPRINGS ROD, SUITE 503 CARROLLTON, TX. 75006 CONTACT: PHILLIP MORSE, ARCHITECT PHONE: 214-868-7074

NOTE

ANY EXTERIOR SIGNAGE SHOWN ON THE PLANS IS PART OF A SEPARATE PERMITTING PROCESS.

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

NO.	DATE	DESCRIPTION	BY
1	08/24/22	1st CITY SUBMITTAL	KP
2	03/28/23	2 nd CITY SUBMITTAL	KP
3	08/24/23	3 rd CITY SUBMITTAL	KP
4	10/13/23	4 th CITY SUBMITTAL	KP
5	11/10/23	5 th CITY SUBMITTAL	KP
.	.	.	.
.	.	.	.

STATE OF TEXAS
KARTAVYA S. PATEL
97534
LICENSED PROFESSIONAL ENGINEER
11/10/23

SITE PLAN

LC DEVELOPMENT AT US 380 & ELM RIDGE RD

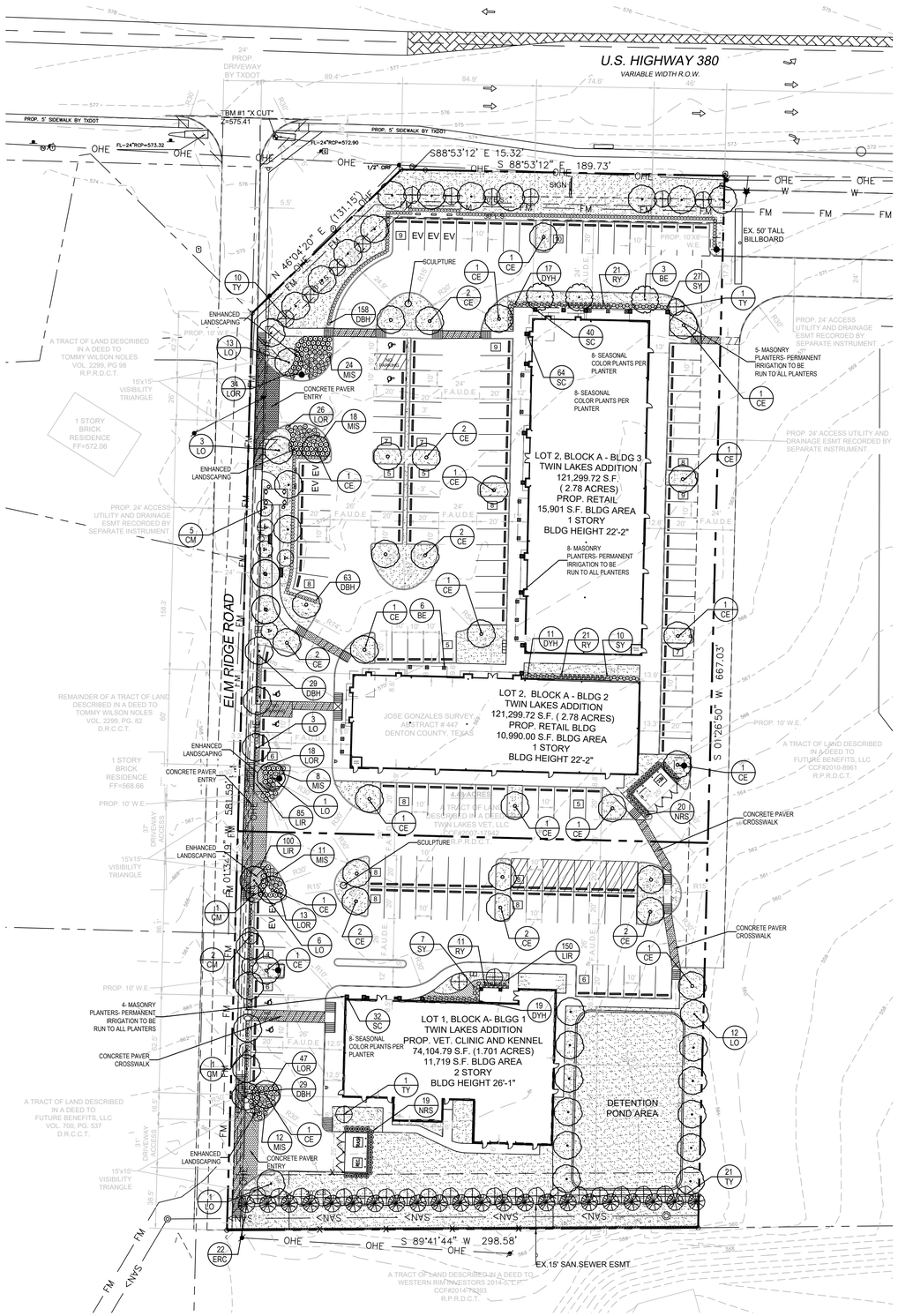
26810 US 380
CITY OF LITTLE ELM
DENTON COUNTY, TX
LOTS 1 & 2 BLOCK A, TWIN LAKES ADDITION

TRIANGLE ENGINEERING LLC
T: 469.331.8566 I F: 469.213.7145 I E: info@triangle-engr.com
W: triangle-engr.com I O: 1782 McDermott Drive, Allen, TX 75013

Planning | Civil Engineering | Construction Management

P.E.	DES.	DATE	SCALE	PROJECT NO.	SHEET NO.
KP	MK	08-24-22	SEE SCALE BAR	089-22	C-3.0

TX. P.E. FIRM #11525



LANDSCAPE TABULATIONS- LOT 2

SITE TREE REQUIREMENTS

Requirements: 10% of gross vehicular area to be landscaped.
(1) tree per 400 s.f. of required landscaped area.
Vehicular Area: (53,005 s.f.)

Required	Provided
5,300.5 s.f. (10%)	7,087.14 s.f. (13%)
Required	Provided
(13) trees	(44) trees (16) 3" cal. ornamental trees

PARKING LOT

Requirement: All parking spaces must be located within 70' of large canopy tree. One (1) tree per island and One island for every (10) spots.

Provided

PERIMETER LANDSCAPE REQUIREMENTS

Requirements- Vehicular screening is required from public R.O.W and abutting properties.

Provided

US Highway 380- (336 l.f.) 1 large tree per 30 l.f. of street frontage and 3 ornamentals for every 5 large trees of perimeter

Required	Provided
11 trees	11 proposed trees- 4" cal.
6 ornamentals	10 ornamentals

West Perimeter- (328 l.f.) 1 large tree per 40 l.f. and 3 ornamental trees for every 5 large trees of perimeter

Required	Provided
8 trees	8 proposed trees- 4" cal
5 ornamental trees	5 ornamental trees 2 existing trees

Perimeter vehicular screening provided with 36" ht. evergreen shrubs

Provided

Foundation planting and amenity area provided- Amenity area to include plaza, shade structure, benches, table and chairs and trash receptacles.

LANDSCAPE DESIGN OPTIONS
25 POINTS REQUIRED

Enhanced hardscape (crosswalks are concrete pavers) - 5 points
Enhanced landscaping - 5 points
Enhanced entry ways paving - 5 points
Masonry planters- 4 min. - 5 points
Small sculpture- 5 points

Total points = 25.00

LANDSCAPE TABULATIONS- LOT 1

SITE TREE REQUIREMENTS

Requirements: 10% of gross vehicular area to be landscaped.
(1) tree per 400 s.f. of required landscaped area.
Vehicular Area: (27,386 s.f.)

Required	Provided
2,783.6 s.f. (10%)	2,773.19 s.f. (10%)
Required	Provided
(7) trees	(27) trees (4) 3" cal. ornamental trees

PARKING LOT

Requirement: All parking spaces must be located within 70' of large canopy tree. One (1) tree per island and One island for every (10) spots.

Provided

PERIMETER LANDSCAPE REQUIREMENTS

West Perimeter- (253 l.f.) 1 large tree per 40 l.f. and 3 ornamental trees for every (5) large trees of perimeter

Required	Provided
7 trees	7 proposed trees- 4" cal.
4 ornamental trees	4 ornamental trees

Perimeter vehicular screening provided with 36" ht. evergreen shrubs
Provided

Foundation planting and ornamental trees provided on the north side of the building.

South Perimeter (Residential Adjacency) - (299 l.f.) Required 8 ft. masonry wall along the entire length of perimeter and a 20' landscape buffer w/ a double row of tree planting
15 ft. on center.

Required	Provided
40 trees	43 proposed trees
8' masonry wall	8' masonry wall
20' landscape buffer	20' landscape buffer

DETENTION POND REQUIREMENTS

Perimeter- (351 l.f.) 1 large tree per 30 l.f. of perimeter

Required	Provided
12 trees	12 trees

LANDSCAPE DESIGN OPTIONS
25 POINTS REQUIRED

Enhanced hardscape (crosswalks are concrete pavers) - 5 points
Enhanced landscaping - 5 points
Enhanced entry ways paving - 5 points
Masonry planters- 4 min. - 5 points
Small sculpture- 5 points

Total points = 25.00

RELIEF / EXERCISE AREA NOTES

1. The area will be screened by the residential adjacency buffer trees and 8' masonry screen wall that will help reduce noise. The dog waste will be cleaned up daily and the turf soil neutralized as needed to eliminate smell.

PLANT MATERIAL SCHEDULE- LOT 2

TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
TREES					
CE	22	Cedar Elm	*Ulmus crassifolia*	4" cal.	B&B, 12' ht., 5' spread, 6' clear straight trunk
CM	5	Crepe Myrtle	*Lagerstroemia indica*	3" cal.	container 6' ht., 3 or 5 cane, tree form
BE	3	Bosque Elm	*Ulmus parvifolia*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
LO	19	Live Oak	*Quercus virginiana*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
TY	11	Tree Yaupon	*Ilex vomitoria*	3" cal.	container, 6' ht., 3 or 5 cane, tree form
SHRUBS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
DBH	250	Dwarf Burford Holly	*Ilex comuta burfordii 'nana'*	5 gal.	container grown, 36" ht., 24" spread
DYH	28	Dwarf Yaupon Holly	*Ilex vomitoria 'Nana'*	3 gal.	container grown, 20" spread
RY	42	Red Yucca	*Hesperaloe parvifolia*	3 gal.	container grown, 12" spread
LOR	75	Loropetalum	*Lorapetalum chinensis*	5 gal.	container grown, 24" ht., 20" spread
MIS	50	Miscanthus	*Miscanthus sinensis*	5 gal.	container full, 24" spread
SY	37	Softleaf Yucca	*Yucca recurvifolia*	3 gal.	container grown, 20" spread
NRS	20	Nellie R. Stevens	*Ilex x 'Nellie R. Stevens'*	7 gal.	container, 36" ht., 30" spread
GROUNDCOVERS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
LIR	85	Liriope	*Liriope Muscari*	4" pots	container full, well rooted
SC	104	Seasonal Color '419' Bermudagrass	*Cynodon dactylon '419'*	4" pots	selection by owner solid sod refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

PLANT LEGEND:

BOSQUE ELM, 4" CAL.
CEDAR ELM, 4" CAL.
LIVE OAK, 4" CAL.
BOSQUE ELM, 4" CAL.
TREE YAUPON, 3" CAL.
CREPE MYRTLE, 3" CAL.
EASTERN RED CEDAR, 3" CAL.
DWARF BURFORD HOLLY, 5 GAL.
SOFT LEAF YUCCA, 3 GAL.
DWARF YAUPON HOLLY, 3 GAL.
RED YUCCA, 3 GAL.
LOROPETALUM, 5 GAL.
MISCANTHUS, 5 GAL.

PLANT MATERIAL SCHEDULE- LOT 1

TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
TREES					
CE	10	Cedar Elm	*Ulmus crassifolia*	4" cal.	B&B, 12' ht., 5' spread, 6' clear straight trunk
CM	4	Crepe Myrtle	*Lagerstroemia indica*	3" cal.	container 6' ht., 3 or 5 cane, tree form
LO	19	Live Oak	*Quercus virginiana*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
TY	24	Yaupon Holly	*Ilex vomitoria*	3" cal.	container 6' ht., 3 or 5 cane, tree form
ERC	22	Eastern Red Cedar	*Juniperus virginiana*	3" cal.	B&B, full to base, 3' spread
SHRUBS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
DBH	47	Dwarf Burford Holly	*Ilex comuta burfordii 'nana'*	5 gal.	container grown, 36" ht., 24" spread
DYH	19	Dwarf Yaupon Holly	*Ilex vomitoria 'Nana'*	3 gal.	container grown, 20" spread
RY	11	Red Yucca	*Hesperaloe parvifolia*	3 gal.	container grown, 12" spread
LOR	32	Loropetalum	*Lorapetalum chinensis*	5 gal.	container grown, 24" ht., 20" spread
MIS	23	Miscanthus	*Miscanthus sinensis*	5 gal.	container full, 24" spread
SY	7	Softleaf Yucca	*Yucca recurvifolia*	3 gal.	container grown, 20" spread
NRS	19	Nellie R. Stevens	*Ilex x 'Nellie R. Stevens'*	7 gal.	container, 36" ht., 30" spread
GROUNDCOVERS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
LIR	250	Liriope	*Liriope Muscari*	4" pots	container full, well rooted
SC	32	Seasonal Color '419' Bermudagrass	*Cynodon dactylon '419'*	4" pots	selection by owner solid sod refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

TOWN OF LITTLE ELM LANDSCAPE NOTES

1. THE OWNER, TENANT AND THEIR AGENT, IF ANY SHALL BE JOINTLY AND SEVERELY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING. ALL REQUIRED SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, AND FERTILIZING, WATERING, WEEDING AND SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF LANDSCAPING.
2. LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH ACTIVITIES COMMON TO MAINTENANCE OF LANDSCAPING.
3. NO SUBSTITUTIONS FOR PLANT MATERIALS ARE ALLOWED WITHOUT WRITTEN APPROVAL BY THE DIRECTOR AND ACKNOWLEDGED BY AN APPROVAL STAMP ON THE LANDSCAPE PLAN.
4. THE RIGHT-OF-WAY ADJACENT TO REQUIRED LANDSCAPE AREAS SHALL BE MAINTAINED BY THE ADJACENT PROPERTY OWNER IN HE SAME MANNER AS THE REQUIRED LANDSCAPE AREA. ALL DRIVEWAYS WILL MAINTAIN VISIBILITY AS APPROVED BY THE DIRECTOR. ALL PLANTINGS INTENDED FOR EROSION CONTROL WILL BE MAINTAINED THE TOWN MAY REQUIRE RELEGATION TO PREVENT EROSION OR SLIPPAGE.
5. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIALS WHICH DIE SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE, WITHIN 30 DAYS OR A DATE APPROVED BY THE DIRECTOR, BASED ON CURRENT SEASONS AND WEATHER CONDITIONS (E.G. DROUGHT OR FREEZE).
6. WHEN POWER LINES ARE PRESENT, TREES SHALL NOT BE PLANTED UNDERNEATH AND SHOULD BE ORIENTED IN A MANNER TO AVOID CONFLICT. SUBSTITUTION OF PLANT MATERIAL IS NOT ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE DIRECTOR.
7. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLER AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
8. ALL TREES ARE TO BE EQUIPPED WITH A BUBBLER IRRIGATION SYSTEM.
9. REQUIRED LANDSCAPED OPEN AREA AND DISTURBED AREAS SHALL BE COMPLETELY COVERED WITH LIVING PLANT MATERIAL, PER THE LANDSCAPE ORDINANCE.
10. ALL LANDSCAPING SHALL BE PLANNED AREAS THAT IS DEFINED BY EDGING, MULCH OR ANOTHER PRACTICE APPROVED BY THE TOWN.
11. ALL STREETSCAPE FURNITURE (BENCHES, BOLLARDS, LAMPPOST, TRASH RECEPTACLES, PATIO FURNITURE, BIKE RACKS, ETC.) SHALL BE A CHIP AND FLAKE RESISTANT METAL, DECORATIVE, AND GENERALLY BLACK "STORM CLOUD" IN COLOR.

LANDSCAPE NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.
4. CONTRACTOR TO PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
5. ALL PLANTING BEDS AND LAWN AREAS TO BE SEPARATED BY STEEL EDGING. NO STEEL TO BE INSTALLED ADJACENT TO SIDEWALKS OR CURBS.
6. ALL LANDSCAPE AREAS TO BE 100% IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM AND SHALL INCLUDE RAIN AND FREEZE SENSORS.
7. ALL LAWN AREAS TO BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

GENERAL LAWN NOTES

1. FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED ON CIVIL PLANS.
2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION, KNOWN AS BOTTOM AND SOIL, FREE FROM LUMPS, CLAY, TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES, CONTAINING NO SALT AND BLACK TO BROWN IN COLOR.
5. *ALL LAWN AREAS TO BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR ARCHITECT PRIOR TO INSTALLATION.*
6. *ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL AND ANY LAWN INSTALLATION*
7. CONTRACTOR SHALL PROVIDE (1") ONE INCH OF IMPORTED TOPSOIL ON ALL AREAS TO RECEIVE LAWN.

SOLID SOD NOTES

1 FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL DESIRED GRADE IN PLANTING AREAS AND 1" BELOW FINAL GRADE IN TURF AREAS.

2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
4. CONTRACTOR TO COORDINATE WITH ON-SITE CONSTRUCTION MANAGER FOR AVAILABILITY OF EXISTING TOPSOIL.
5. PLANT SOD BY HAND TO COVER INDICATED AREA COMPLETELY. INSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
6. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
7. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
8. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
9. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

01 LANDSCAPE PLAN
SCALE 1"=40'-0"
0 20 40 80

LANDSCAPE ARCHITECT
STUDIO GREEN SPOT, INC.
1782 W. McDERMOTT DR.
ALLEN, TEXAS 75013
(469) 369-4448
CHRIS@STUDIOGREENSPOT.COM

REGISTERED LANDSCAPE ARCHITECT CHRIS TRONCALE 2042 STATE OF TEXAS

11.09.2023

LC DEVELOPMENT
US HWY. 380/ELM RIDGE RD.
LITTLE ELM, TEXAS

ISSUE:
CITY COMMENTS 03.30.2023
CITY COMMENTS 08.01.2023
CITY COMMENTS 08.26.2023
CITY COMMENTS 11.09.2023

DATE:
11.09.2023

SHEET NAME:
LANDSCAPE PLAN

SHEET NUMBER:
L.2

SECTION 02900 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

Refer to bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs, and grass)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and Maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

A. American Standard for Nursery Stock published by American Association of Nurserymen: 27 October 1980, Edition; by American National Standards Institute, Inc. (Z60.1) – plant material.

B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.

C. Texas Association of Nurserymen, Grades and Standards.

D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. The Contractor shall, within ten (10) days following acceptance of bid, notify the Architect/Owner of the sources of plant materials and bed preparation required for the project.

B. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, and crushed stone. Samples shall be approved by Architect before use on project.

C. Product Data: Submit complete product data and specifications on all other specified materials.

D. Submit three representative samples of each variety of ornamental trees, shrubs, and groundcover plants for Architect's approval. When approved, tag, install, and maintain as representative samples for final installed plant materials.

E. File Certificates of Inspection of plant material by state, county, and federal authorities with Architect, if required.

F. Soil Analysis: Provide sandy loam soil analysis if requested by the Architect.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.

B. All planting areas shall be conditioned as follows:

1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per manufacturers recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
2. All planting areas shall receive a two (2") inch layer of specified mulch.
3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:

1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint, (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.
2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4' x 8' batter board against the bed areas.

3.2 INSTALLATION

A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.

B. Plant materials shall be delivered to the site only after the beds are prepared and area ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

C. Position the trees and shrubs in their intended location as per plan.

D. Notify the Landscape Architect for inspection and approval of all positioning of plant materials.

E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

JOB CONDITIONS

A. General Contractor to complete the following punch list. Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the finish grade of sidewalks, drives, and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.

B. General Contractor shall provide topsoil as described in Section 02200 - Earthwork.

C. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

1. The Landscape Contractor will be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show a healthy growth and satisfactory foliage conditions.
2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by Owner and Landscape Contractor will be completed prior to written acceptance.
4. After final acceptance of installation, the Landscape Contractor will not be required to do any of the above listed work.

B. Guarantee:

1. Trees shall be guaranteed for a twelve (12) month period after acceptance. Shrubs and groundcover shall be guaranteed for twelve (12) months. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
   a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
   b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
   c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and reinspected for full compliance with Contract requirements. All replacements are to be included under "Work" of this section.

F. Shrub and tree pits shall be no less than two (2) feet, twenty-four (24") inches, wider than the lateral dimension of earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over one (1") inch in diameter. Plants should be thoroughly moist before removing containers.

G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per tree planting detail as approved by the Landscape Architect.

I. Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top 1/3 of the ball, as well as all nylon, plastic string and wire mesh. Container trees will usually be pot bound, if so follow standard nursery practice of 'root scoring'.

J. Do not wrap trees.

K. Do not over prune.

L. Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.

M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.

N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure tree against seasonal prevailing winds.

P. Pruning and Mulching: Pruning shall be directed by the Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by National Arborist Association.

1. Dead wood or suckers and broken badly bruised branches shall be removed. General tipping of the branched is not permitted. Do not cut terminal branches.
2. Pruning shall be done with clean, sharp tools.
3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

Q. Steel Curbing Installation:

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

3.3 CLEANUP AND ACCEPTANCE

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

END OF SECTION

2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a completed, undamaged condition, and there is a stand of grass in all lawn areas. At this time, the Owner will assume maintenance on the accepted work.

C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting, and in the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense of the Landscape Contractor.

1.7 QUALITY ASSURANCE

A. General: Comply with applicable Federal, State, County and Local regulations governing landscape materials and work

B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

C. Selection of Plant Material:

1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will insure the purchased materials will meet and/or exceed project specifications.
2. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
3. Owner and/or Architect shall inspect all plant materials when reasonable at place of growth for compliance with requirements for genus, species, cultivar/variety, size and quality.
4. Owner and/or Architect retains the right to further inspect all plant material upon arrival at the site and during installation for size and condition of root balls, limbs, branching habit, insects, injuries, and latent defects.
5. Owner and/or Architect may reject unsatisfactory or defective material at any time during the process of work. Remove rejected materials from the site immediately. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Preparation:

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

A. Delivery:

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

PART 2 - PRODUCTS

2.1 PLANTS

A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Architect and his decision as to their acceptability shall be final.

B. Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.

C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched, and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae and are to be of specimen quality.

D. Approval: All plant materials shall be subject to the approval of the Owner. All plants which are found unsuitable in growth, or in any unhealthy, badly shaped, or undersized condition, will be rejected by the Landscape Architect, either before or after planting, and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plants as specified.

E. Trees shall be healthy, full-branched, well-shaped and shall meet the trunk diameter and height requirements of the plant schedule. Balls shall be firm, neat, slightly tapered, and well wrapped in burlap. Any tree loose in the ball or with broken ball at time of planting will be rejected. Balls shall be ten (10") inched in diameter for each one (1") inch of trunk diameter, Measured six (6") inched above ball.
Nomenclature conforms to the customary nursery usage: for clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.

F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:

1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
2. Physical properties as follows:
   Clay – between 7-27 percent
   Silt – between 15-25 percent
   Sand – less than 52 percent
3. Organic matter shall be 3%-10% of total dry weight.
4. If requested, provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.

B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.

C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.

E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.

F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

A. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulphur and 4% iron, plus micronutrients.

B. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

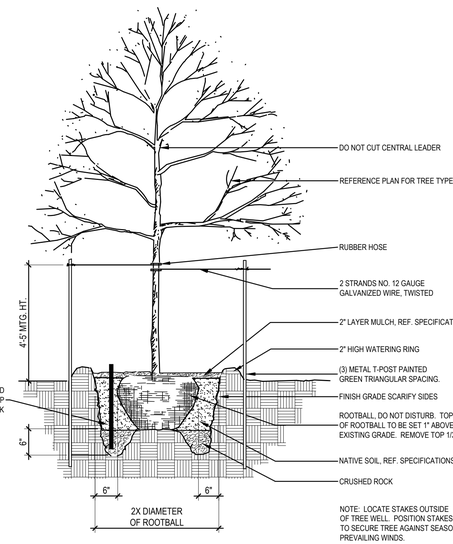
A. Steel Edging: Shall be Ryerson "Estate Curbing", 1/8" x 4" with stakes 4' on center.

B. Staking Material for Shade Trees:

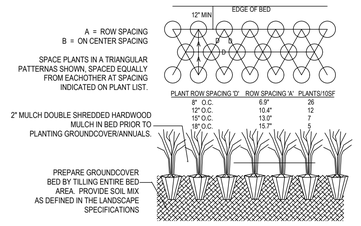
1. Post: Studded T-Post, #1 Armco with anchor plate; 6'-0" length; paint green.
2. Wire: 12 gauge, single strand, galvanized wire.
3. Rubber hose: 2 ply, fiber reinforced hose, minimum ½ inch inside diameter. Color: Black.

C. Gravel: Washed native pea gravel, graded 1 in. to 1-1/2 in.

D. Filter Fabric: Mirafi 140N by Celanese Fibers Marketing Company, available at Loftland Co., (214) 631-5250 or approved equal.



01 TREE PLANTING DETAIL
NOT TO SCALE



02 GROUNDCOVER PLANTING DETAIL
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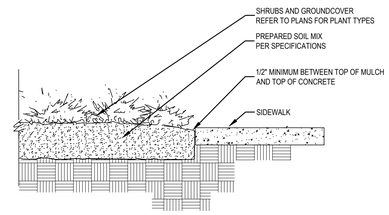
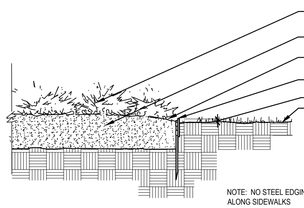


03 SIDEWALK / MULCH DETAIL
no steel along sidewalks
NOT TO SCALE



04 STEEL EDGING DETAIL
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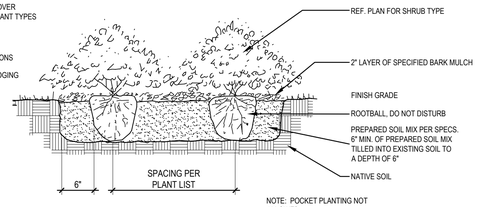
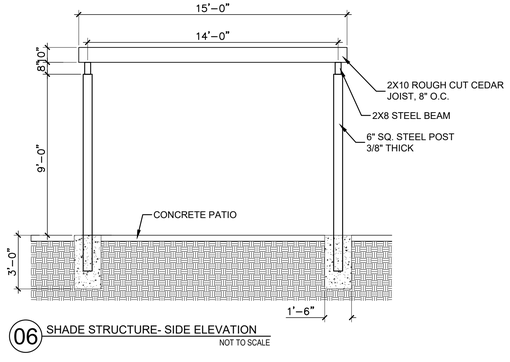
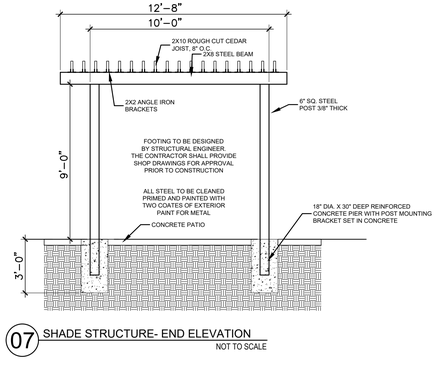


05 SHRUB PLANTING DETAIL
NOT TO SCALE



06 SHADE STRUCTURE- SIDE ELEVATION
NOT TO SCALE



07 SHADE STRUCTURE- END ELEVATION
NOT TO SCALE

SITE FURNISHINGS

1. Tables and chairs shall be:

DuMor- 30" Dia. Steel Table
Model: 485-30
Color to be be determined
Quantity- 4

DuMor- Steel Chair- no arms
Model: 483-20HSNA
Color to be be determined
Quantity- 8

2. Benches shall be"

DuMor 6' Backless Perforated Steel Bench
Model: 104-60
Color to be determined
Quantity- 2

3. Trash Receptacles to be:

DuMor Trash Receptacles-107-32-DM
Rain Bonnet Lid
Surface mounted
Color to be determined
Quantity- 3

Available from:
DuMor Site Furnishings
1-800-323-5664
www.dumor.com

4. Sculpture to be:

Tempest
Surface mounted
Color to be determined
Quantity- 2

Available from:
Terra Sculpture, LLC
800-652-2934
www.terrasculpture.com

5. Contractor shall provide turn-key installation of all site furnishings, but not limited to, shipment, handling, placement, anchoring, etc.

SCULPTURE

TRASH RECEPTACLE

TABLE AND CHAIRS

BENCH

LANDSCAPE ARCHITECT
STUDIO GREEN SPOT, INC.
1782 W. McDERMOTT DR.
ALLEN, TEXAS 75013
(469) 369-4448
CHRIS@STUDIOGREENSPOT.COM

REGISTERED LANDSCAPE ARCHITECT
CHRIS TRONCALE
2042
STATE OF TEXAS

11.10.2023

LC DEVELOPMENT

US HWY. 380/ELM RIDGE RD.
LITTLE ELM, TEXAS

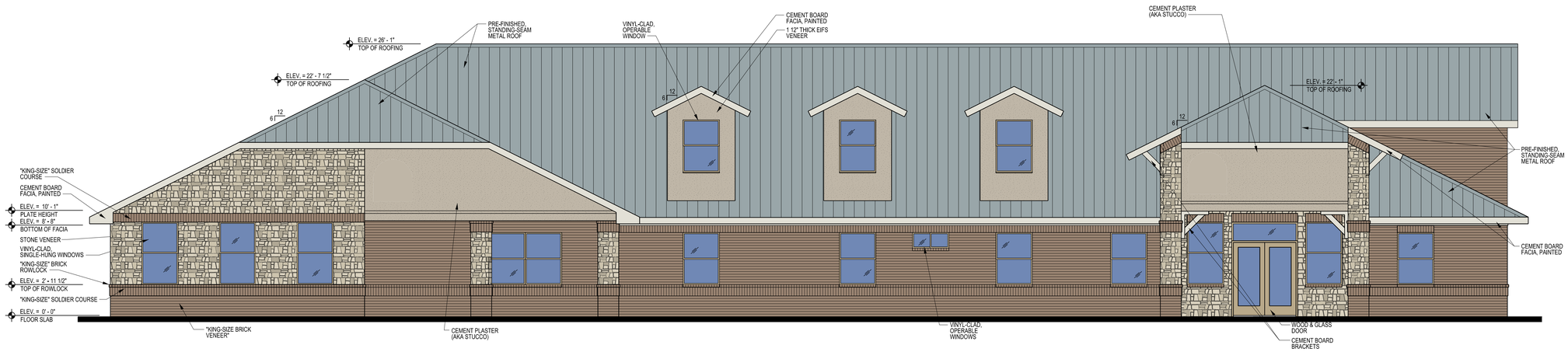
ISSUE:
FOR APPROVAL 08.30.2022
CITY COMMENTS 08.01.2023
CITY COMMENTS 08.25.2023
CITY COMMENTS 11.10.2023

DATE:
11.10.2023

SHEET NAME:
LANDSCAPE SPECIFICATIONS

SHEET NUMBER:

L.3



01 North Elevation - Veterinary Building

3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - NORTH ELEVATION		
BRICK	836 S.F.	55%
STONE	310 S.F.	21%
CEMENT PLASTER	357 S.F.	24%
SUBTOTAL	1503 S.F.	100%
DOORS/ WINDOWS	369 S.F.	20%
TOTAL	1872 S.F	

Notes:

1. All mechanical units shall be screened from public view as required by the
2. All signage areas and locations are subject to approval of Development Services Director
3. When permitted, exposed utility boxes and conduits shall be painted to match the building
4. Roof access shall be provided internally, unless otherwise permitted by the Chief Building Official

Exterior Materials
Twin Lakes Veterinary
Little Elm, Texas

Brick Veneer
Acme Brick
King Size
Sable Oak

LUEDERS
Stone Veneer
Rock Materials
Gray to Tan Lueders

SW 7051
Analytical Gray
Interior / Exterior
Location Number: 246-C2

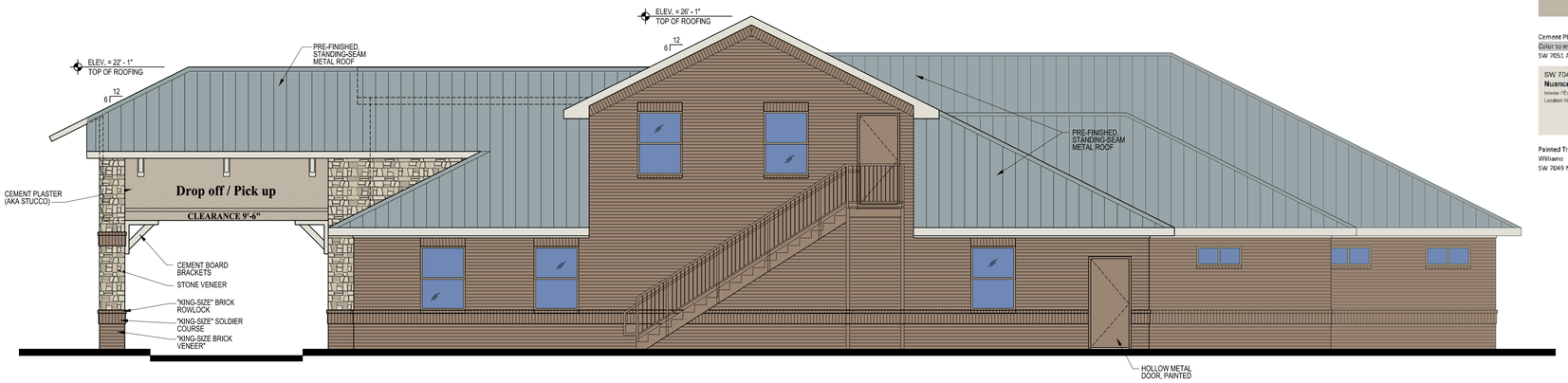
Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

SW 7049
Nuance
Interior / Exterior
Location Number: 258-C7

Painted Trim (Cement board eaves and facia)
Williams
SW 7049 Nuance

Windows
Ply Gem
Beige

Cityscape
Standing seam Metal Roofing
Pac-Clad Cityscape

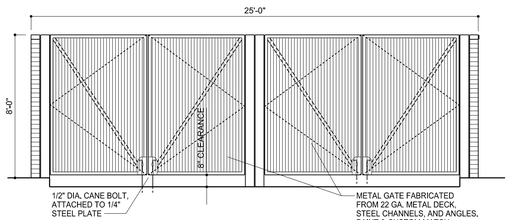


02 West Elevation - Veterinary Building

3/16"=1'-0"

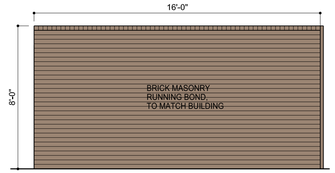
0 1 2 3 4 5 10 20

MATERIAL COVERAGE - WEST ELEVATION		
BRICK	1002 S.F.	88%
STONE	63 S.F.	6%
CEMENT PLASTER	76 S.F.	6%
SUBTOTAL	1141 S.F.	100%
DOORS/ WINDOWS	152 S.F.	12%
TOTAL	1293 S.F	



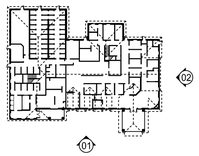
Dumpster Elevation

1/4"=1'-0"



Dumpster Elevation

1/4"=1'-0"



Key Plan

Not to scale

Phillip Morse, Architect
PlacesMade architecture
2940 Keller Springs Road
Suite 503
Carrollton, Texas 75006
214 868 7074
www.placesmadereal.com

places Made architecture
"made up places made real"

SEAL:

If the adjacent seal block does not contain the architect's seal, signature, and date; then this document is incomplete and may not be used for regulatory approval, permit, or construction.

PlacesMade architecture
Phillip Morse, TX Reg No. 17037

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TRI-STAR CONSTRUCTION, INC.
GENERAL CONTRACTORS
3601 Yucca Drive Building #2
Flower Mound, Texas 75028
972-221-5558
www.tristarcorp.org

Twin Lakes Veterinary and Boarding

Little Elm, Texas

Project No.	15031
Date	

Revisions

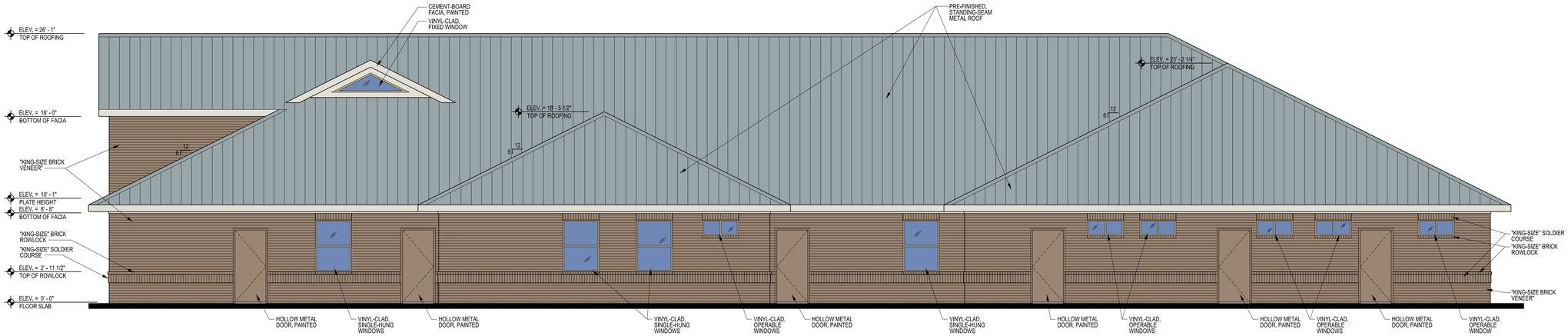
No.	Date
	9-5-22
	3-31-23
	3-31-23

scale verification 1"

Sheet

A2.1C

Color Elevations



01 South Elevation - Veterinary Building

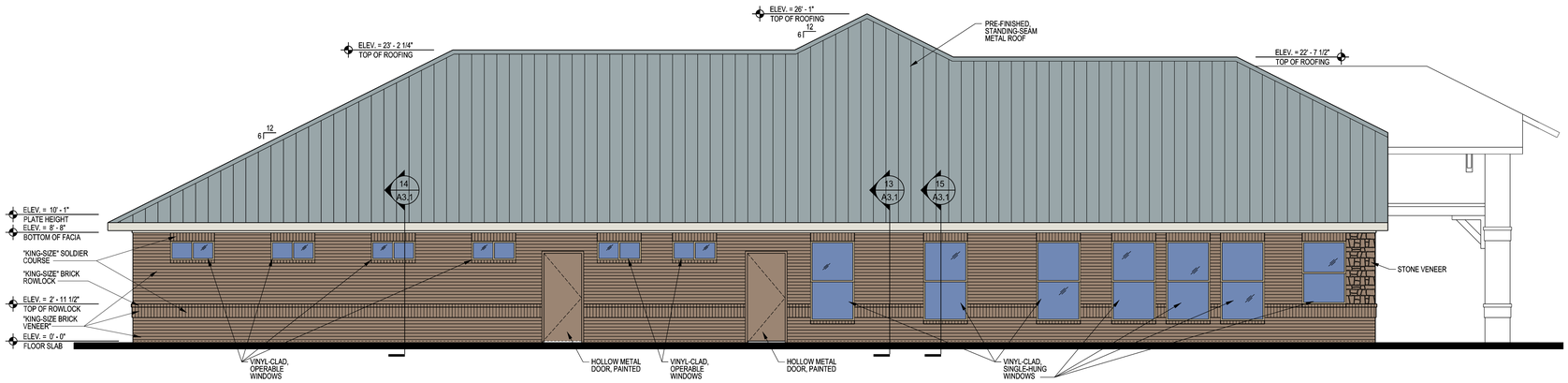
3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	989 S.F.	100%
STONE	0 S.F.	0%
CEMENT PLASTER	0 S.F.	0%
SUBTOTAL	989 S.F.	100%
DOORS/ WINDOWS	246 S.F.	20%
TOTAL	1235 S.F	

Notes:

1. All mechanical units shall be screened from public view as required by the
2. All signage areas and locations are subject to approval of Development Services Director
3. When permitted, exposed utility boxes and conduits shall be painted to match the building
4. Roof access shall be provided internally, unless otherwise permitted by the Chief Building Official

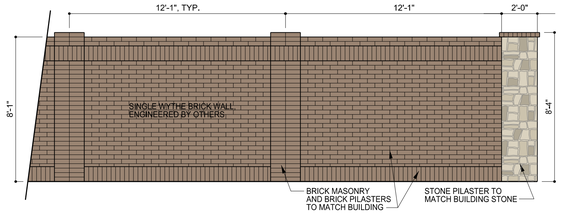


02 East Elevation - Veterinary Building

3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - EAST ELEVATION		
BRICK	623 S.F.	98%
STONE	13 S.F.	2%
CEMENT PLASTER	0 S.F.	0%
SUBTOTAL	636 S.F.	100%
DOORS/ WINDOWS	251 S.F.	28%
TOTAL	887 S.F	



Masonry Screenwall Elevation

1/4"=1'-0"

Exterior Materials
Twin Lakes Veterinary
Little Elm, Texas

Brick Veneer
Acme Brick
King Size
Sable Oak

LUEDERS
Stone Veneer
Rock Materials
Gray to Tan Lueders

SW 7051
Analytical Gray
Interior / Exterior
Location Number: 246-C2

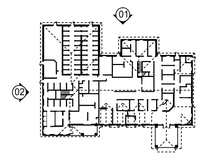
Windows
Ply Gem
Beige

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

SW 7049
Nuance
Interior / Exterior
Location Number: 258-C7

Painted Trim (Cement board eaves and facia)
Williams
SW 7049 Nuance

Cityscape
Standing seam Metal Roofing
Pac-Clad Cityscape



Key Plan

Not to scale

Phillip Morse, Architect
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214 868 7074
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places Made architecture
"made up places made real"

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PlacesMade architecture
Phillip Morse, TX Reg No. 17037

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3601 Yucca Drive Building #2
Flower Mound, Texas 75028
972.221.5558
www.tristarcorp.org

Twin Lakes Veterinary and Boarding
Little Elm, Texas

Project No. 15031

Date

Revisions

No.	Date
	9-5-22
	3-31-23
	7-19-23

scale verification 1"

Sheet
A2.2C

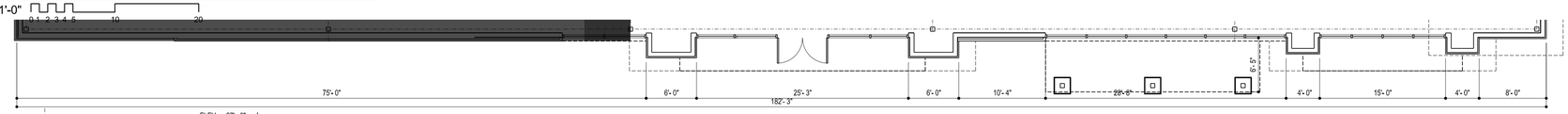
Color Elevations

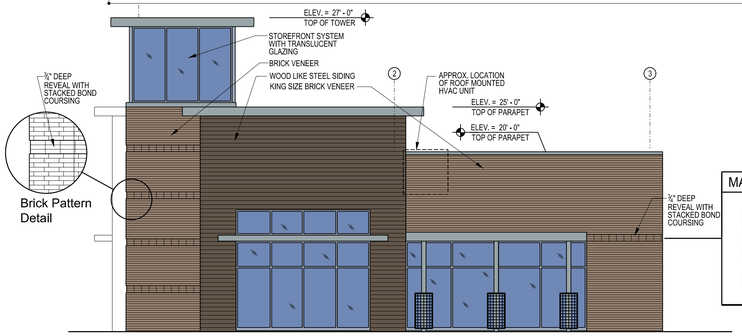
MAT. COVERAGE - NORTH ELEVATION		
BRICK	1674 S.F.	53%
STUCCO	482 S.F.	15%
PAINTED STEEL	216 S.F.	6%
STEEL SIDING	850 S.F.	26%
SUBTOTAL	3222 S.F.	100%
DOORS/ WINDOWS	995 S.F.	24%
TOTAL	4217 S.F.	

MAT. COVERAGE - NORTH ELEV -EXPOSED		
BRICK	662 S.F.	25%
STUCCO	111 S.F.	18%
PAINTED STEEL	191 S.F.	10%
STEEL SIDING	850 S.F.	47%
SUBTOTAL	1814 S.F.	100%
DOORS/ WINDOWS	895 S.F.	33%
TOTAL	2709 S.F.	

01 North Elevation - Building A

1/8"=1'-0"

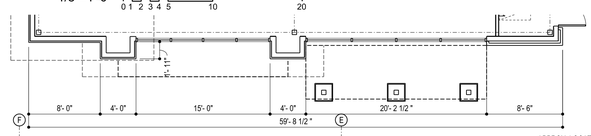




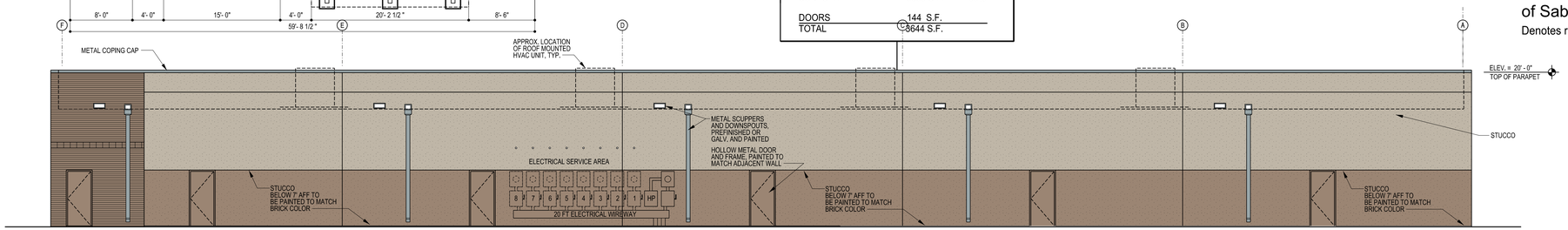
MATERIAL COVERAGE - WEST ELEVATION		
BRICK	550 S.F.	53%
PAINTED STEEL	136 S.F.	13%
STEEL SIDING	348 S.F.	34%
SUBTOTAL	1034 S.F.	100%
DOORS/ WINDOWS	479 S.F.	32%
TOTAL	1513 S.F.	

02 West Elevation - Building A

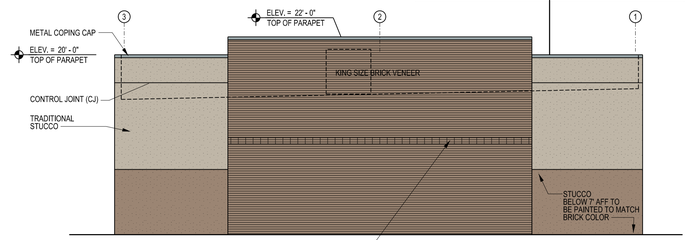
1/8"=1'-0"



MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	216 S.F.	6%
STUCCO	3284 S.F.	94%
SUBTOTAL	3500 S.F.	100%
DOORS	144 S.F.	
TOTAL	3644 S.F.	

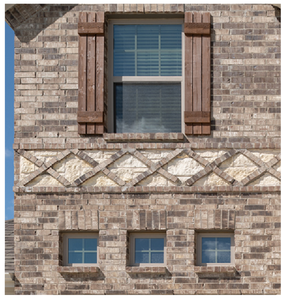


MATERIAL COVERAGE - EAST ELEVATION		
BRICK	752 S.F.	60%
STUCCO	500 S.F.	40%
TOTAL	1252 S.F.	100%



03 East Elevation Building A

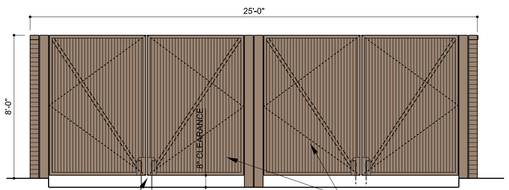
1/8"=1'-0"



Pictorial Example
of Sable Oak Brick Veneer
Denotes range of color, not brick pattern.

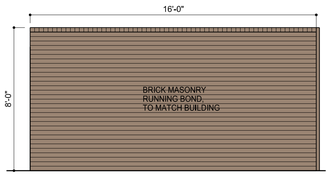
04 South Elevation - Building A

1/8"=1'-0"



Dumpster Elevation

1/4"=1'-0"



Dumpster Elevation

1/4"=1'-0"

Notes:
1. All mechanical units shall be screened from public view as required by the
2. All signage areas and locations are subject to approval of Development Services Director
3. When permitted, exposed utility boxes and conduits shall be painted to match the building
4. Roof access shall be provided internally, unless otherwise permitted by the Chief Building Official

EXTERIOR MATERIALS

Exterior Materials
Twin Lakes Retail
Little Elm, Texas

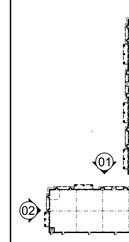
Brick Veneer
Acme Brick
King Size
Sable Oak

Cityscape
Painted Galvanized Metal
Pac-Clad Cityscape

SW 7051
Analytical Gray
Interior / Exterior
Location Number 246-C2

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

Wood-Like Steel Siding
Vesta Steel Siding
5" Plank
Aged Walnut



Key Plan
no scale

Phillip Morse, Architect
PlacesMade architecture
2940 Keller Springs Road
Suite 503
Carrollton, Texas 75006
214 868 7074
www.placesmadereal.com

places Made architecture
"made up places made real"

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PlacesMade architecture
Phillip Morse, TX Reg No. 17037

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TRI-STAR CONSTRUCTION, INC.
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Shell Building for:
Twin Lakes Retail Center
Little Elm, Texas

Project No.	21015
Date	

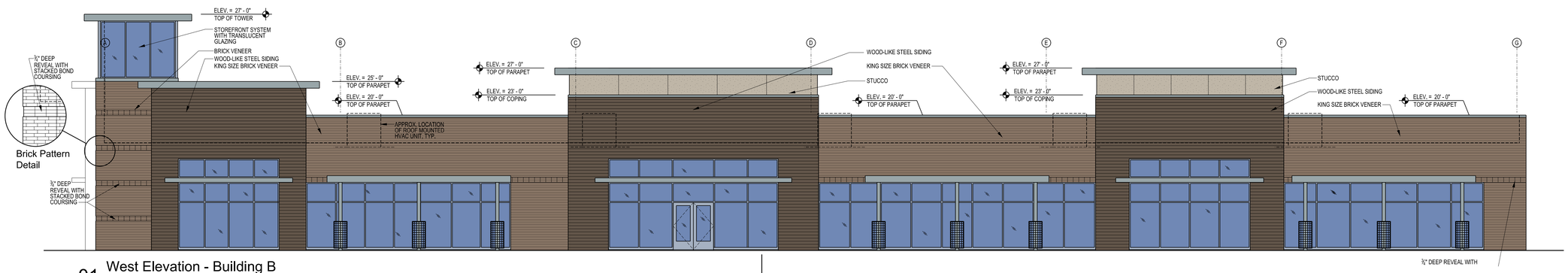
Revisions

No.	Date
	9-5-22
	3-31-23
	7-19-23
	10-16-23
	11-7-23
	11-14-23

scale verification 1"

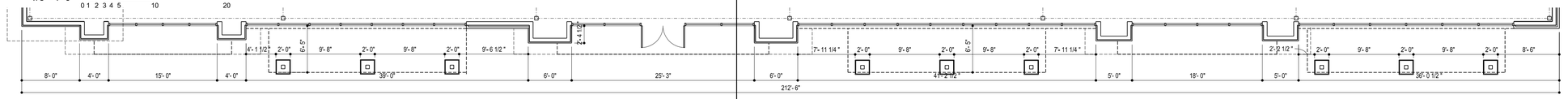
Sheet
A2.1C

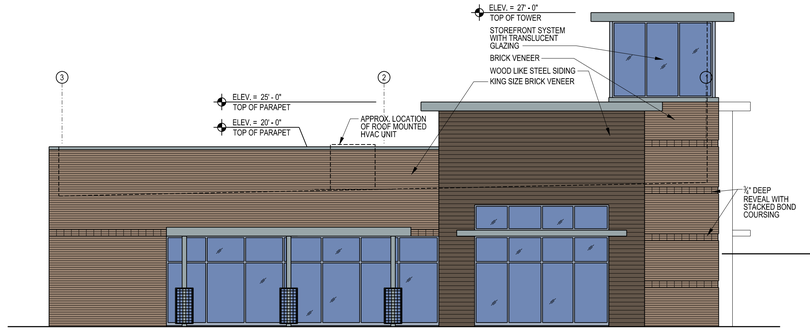
Building A
Color Elevations



01 West Elevation - Building B

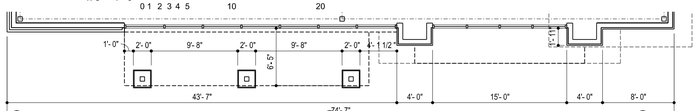
1/8"=1'-0"

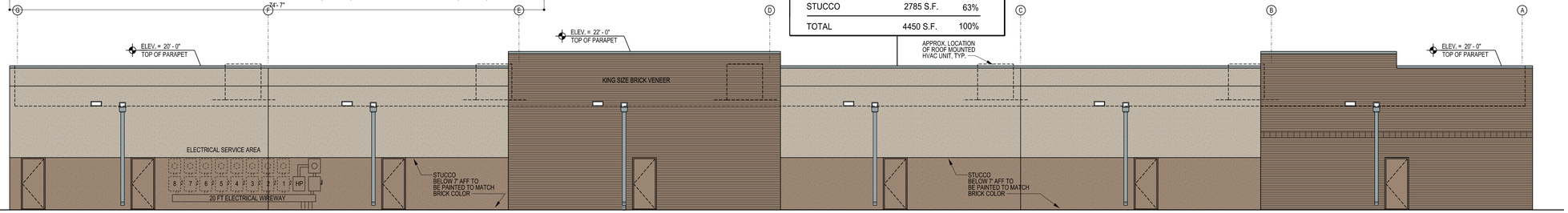




02 North Elevation - Building B

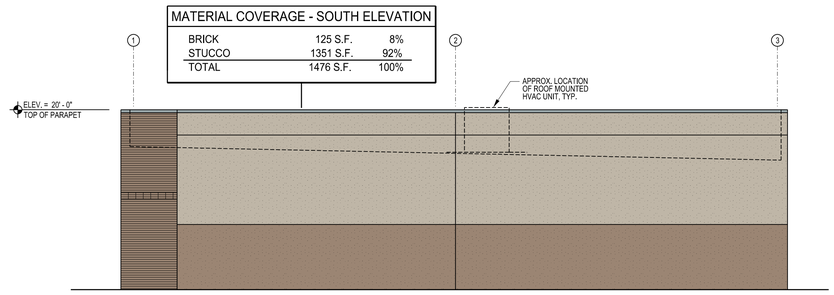
1/8"=1'-0"





03 South Elevation - Building B (Facing Alley)

1/8"=1'-0"



04 East Elevation - Building B

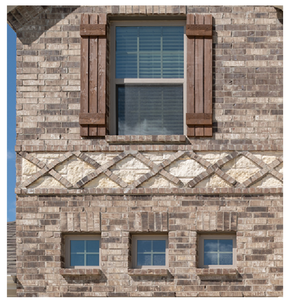
1/8"=1'-0"

MATERIAL COVERAGE - WEST ELEVATION		
BRICK	1398 S.F.	44%
STUCCO	194 S.F.	6%
PAINTED STEEL	366 S.F.	11%
STEEL SIDING	1240 S.F.	39%
SUBTOTAL	3198 S.F.	100%
DOORS/ WINDOWS	1827 S.F.	36%
TOTAL	5025 S.F.	

MATERIAL COVERAGE - NORTH ELEVATION		
BRICK	733 S.F.	61%
PAINTED STEEL	122 S.F.	10%
STEEL SIDING	347 S.F.	29%
SUBTOTAL	1202 S.F.	100%
DOORS/ WINDOWS	593 S.F.	33%
TOTAL	1795 S.F.	

MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	125 S.F.	8%
STUCCO	1351 S.F.	92%
TOTAL	1476 S.F.	100%

MATERIAL COVERAGE - EAST ELEVATION		
BRICK	1665 S.F.	37%
STUCCO	2785 S.F.	63%
TOTAL	4450 S.F.	100%



Pictorial Example
of Sable Oak Brick Veneer
Denotes range of color, not brick pattern.

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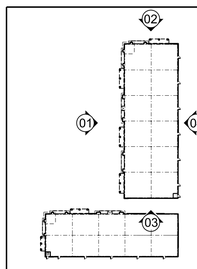
SW 7051
Analytical Gray
Interior / Exterior
Location Number: 746-C2

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

Wood-Like Steel Siding
Vesta Steel Siding
5" Plank
Aged Walnut



Key Plan
no scale

Phillip Morse, Architect
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Shell Building for:
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scale verification 1"

Sheet
A2.2C

Building B
Color Elevations

Date:	01/16/2024
Agenda Item #:	6. C.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1745 Regarding a Proposed Text Amendments to Chapter 106, Zoning Ordinance, by Amending Certain Sections and Associated Appendices in Order to Establish Compliance with New State Statues as a Result of the Recent Legislative Session and Enable Minor Corrections and Clarifications Throughout the Text.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1745:

DESCRIPTION:

Background.

In 1972 the Town of Little Elm first adopted a Zoning Ordinance through Ordinance No. 42. The Zoning Ordinance has been replaced or amended several times since then either comprehensively or in part. The most recent comprehensive Zoning Ordinance amendment occurred in 2019 through Ordinance No. 1527. Since 2019, there have been several small amendments to the Zoning Ordinance, such as adding certain zoning definitions, amending district height requirements, and clarifying the intent and installation of public art in the Lakefront District. However, since 2019, there has not been a chapter wide update of the Zoning Ordinance.

Proposal.

As a result of the 2023 legislative sessions, the legal counsel for the Town has proposed several text amendments to keep the Town compliant with new State Statutes. Over the recent years, Staff have also been keeping track of minor errors and potential changes necessary to clarify or resolve conflicting items through the code, as well as changing land use practices. Considering the state's required changes to the Zoning Ordinance, Staff believe this is an appropriate time to make the necessary minor revisions. Changes other than those recommended by counsel are largely clerical in nature seeking to clarify, standardize, or keep up with land use practices today.

Changes suggested by legal counsel have been noted in the red-lined version and the change log to easily differentiate what is a legal requirement versus other proposed changes.

The changes proposed by legal counsel are as follows:

- 106.02.02 “Board of Adjustment”
  - These changes reflect new legislation related to the compensation and amortization options for property owners and lessees for damages associated with termination of a nonconforming use.

- 106.02.11 “Map amendments to the zoning ordinance”
  - These changes include language specifically provided by new State Statute related to notices sent out when a zoning change would turn a conforming into a nonconforming use.

- 106.05.05 “Nonconforming uses and structures”
  - Changes the minimum timeframe for abandonment from 30 days to six months. Also adds notification and remedy requirements.

The changes proposed by Town Staff are as follows:

- 106.01.14 “Land use definitions”
  - Staff added a definition for “Banquet Hall” and also added it to the Schedule of Uses. Staff has received numerous requests for banquet halls but due to not being specifically defined as a use or in the use chart staff have been interpreting the ordinance to be an accessory use. Being limited to this interpretation has given staff limited ability to work with applicants wishing to open up a Banquet Hall and in some cases such as Knotting Hill, create a PD where the use is added in order to allow for the use. Staff believes this use definition allows for clear understanding of what a Banquet Hall is, how it is used, and what a banquet hall isn’t. This amendment gives the Town Staff and potential applicants a clearer understanding of what is allowed under this use, how to administer this use, and makes the process of allowing this use more efficient.
  - Staff also amended the definitions for “Manufacturing and industrial, heavy” and “Manufacturing and industrial, light”. The changes made removed lines about worker’s skill, which staff felt were not relevant to the land use definition.

- Sections 106.03.02 “Zoning districts – Residential” and 106.06.17 “Multifamily landscape requirements”
  - These changes move the approving authority for Credit for Sloped Areas from the Planning and Zoning Commission and Town Council to the Director of Development Services. There is not likely to be a substantial waiver and if the development is requesting waivers, it would then go before the Planning and Zoning Commission and Town Council under a Planned Development request anyway, at which point, the open space slope can be reviewed and considered.
  - This amendment also quantifies the max slope of open space as not to exceed two percent across the whole area. Previously there was not an amount specified for the max slope, which is why no approval was ever sought out.

- Sections 106.04.01 “US 380 Overlay District” and 106.06.46 “Stacking Standards”
    - These changes changed the use of “car” to “automobile” for the continuity of using the same word across the entire chapter.

- Section 106.05.01 “Schedule of Uses”
    - Staff corrected Communications Tower to Specific Use Permit from Conditional Use Permit to match section 106.05.02 which states Communications Towers require a Specific Use Permit.
    - Staff also added the Banquet Hall Use to the chart, requiring an SUP in LF, LC, HC, LI, and HI districts. This is in response to staff receiving many requests for banquet hall type uses, but not having a clear path to the administrative approval of such a use.

- Section 106.06.05 “Architectural Standards for Commercial Structures”
    - Staff changed the minimum and maximum building materials for buildings over 15,000 square feet to match those of buildings under 15,000 square feet.

- Section 106.06.15 “Plant List”
    - Staff added Latin plant species names in order to clarify recurring questions from Landscape Architects. Staff also removed several invasive species and corrected spelling mistakes.

- Section 106.06.18 “Commercial Landscape Requirements”
    - Staff removed the enhanced entrance way paving option and combined it with the enhanced hardscape option. These were two common points options commonly selected together, negating the positive impact of the points system. Staff also removed the amenity detention pond and combined it under the retention pond option and reduced the points from 10 to 5 since rainwater storage is a requirement of site development.
    - In order to provide developers additional opportunity for enhanced site design, staff also added points for outdoor lighting being “Darksky Approved” in accordance to the Town’s Comprehensive Plan environmental goals and objectives.

- Section 106.03.32 “Residential Fences”
    - Staff have requested that the provision that residential fences cannot be put around a vacant lot in order to match the International Property Maintenance Code which was adopted by the Town.

- Section 106.06.45 “Parking Requirements Per Land Use”
    - Staff also changed “Car” to “Automobile” in this section for continuity throughout the chapter. Staff also removed the provision that allows restaurant parking ratios to decrease to 1:200 from 1:100 when the total building square footage of development is over 15,000 square feet. Staff requests that it remain 1:100 regardless of development size. Staff added a new parking category of restaurant in include restaurants that don’t have any indoor seating and only offer pick-up or delivery, which have become increasingly popular lately and don’t require as much parking as traditional sit-down restaurants.

Comprehensive Plan.
Staff believe these proposed minor changes are still in line with the intent of the current Zoning Ordinance, overall vision for the Town, and work towards the goals and objectives set forth in the Comprehensive Plan.

Commission Findings.
At their regular meeting on December 21, 2023, the Planning and Zoning Commission held a public hearing and discussed parking ratios at banquet hall uses, the maximum slope impact on the amount of open space a development would provide, whether "mechanical" takes into account electric vehicles, the square footage requirement under architectural design, dry amenity pod, drive-thru parking, and alcohol consumption during special events at a banquette hall. The Commission unanimously (6-0) approved the request with the following conditions:

- Section 106.06.05, Table C remove the definition of square footage
- Ensure the use of term "mechanical" within the definition for automobile does not preclude electrical vehicles.

After the meeting, Staff did some additional research and made the following determinations:

- Based on other text within the section, Section 106.06.05, Table C did in fact intend to allow a min of 20% Group A Material and a max of 80% Group B Material, but applicable to both facade types (visible from the street and not visible from the street). Staff made the appropriate revisions to the table to reflect this intent.
- In order to ensure inclusion of electrical vehicles, the word "electrical" was added to the automobile definition.

These revisions have been made and are incorporated into the attached Ordinance.

BUDGET IMPACT:
This item has no budget impact.

RECOMMENDED ACTION:
The Planning and Zoning Commission recommends approval of the request.

Attachments

Chapter 106 Change Log
Ordinance No. 1745

Section	Description	Old	New
106.01.14	Created Definition for Banquet Hall	**NA**	Banquet Hall. An establishment which is rented by individuals or groups to accommodate private functions including, but not limited to, banquets, weddings, anniversaries, and other similar celebrations. Such use, may or may not include: 1) kitchen facilities for the preparation or catering of food; 20 the sale of alcoholic beverages for on-premise consumption, only during the schedules events, and not open to the general public; 3) outdoor gardens or reception facilities.
106.01.14	Edited Definition for Automobile	Automobile. A self-propelled mechanical vehicle designed for use on streets and highways for the conveyance of goods and people, including, but not limited to, passenger cars, trucks, buses, motor scooters, and motorcycles.	Automobile. A self-propelled mechanical or electrical vehicle designed for use on streets and highways for the conveyance of goods and people, including, but not limited to, passenger cars, trucks, buses, motor scooters, and motorcycles.
106.01.14	Enhanced defition of Heavy Manufacturing, removed portion about worker's skill	*Manufacturing and industrial, heavy.* A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale and typically requires access to major thoroughfares, major highways, and/or other means of transportation such as the railroad for transfer of parts and final products. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Heavy industry involves one or more of the following characteristics such as large and heavy products; large and heavy equipment and facilities (such as heavy equipment, large machine tools, and spacious buildings); or complex and numerous processes. The labor for heavy industry often must be highly skilled. Examples of heavy industry include, but are not limited to, steel manufacturing, automotive assembly, machine tool design and construction, boat or aircraft manufacturing, and power plants.	*Manufacturing and industrial, heavy.* A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale and typically requires access to major thoroughfares, major highways, and/or other means of transportation such as the railroad for transfer of parts and final products. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Heavy industry involves one or more of the following characteristics such as large and heavy products; large and heavy equipment and facilities (such as heavy equipment, large machine tools, and spacious buildings); or complex and numerous processes. Examples of heavy industry include, but are not limited to, steel manufacturing, automotive assembly, machine tool design and construction, boat or aircraft manufacturing, and power plants.
106.01.14	Enhanced defition of Light Manufacturing, removed portion about "low skilled workers"	*Manufacturing and industrial, light.* A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Light industry is often assembly-based and is typically consumer-oriented (i.e., most light industrial products are sold to retail stores or end users rather than as intermediate parts for use by other industries). Light industry generally has less environmental impact than those associated with heavy industry. Light industry may employ lower skilled workers with only moderate training and often employ large numbers of people. Light industries require a relatively small amount of raw materials, area and power. Examples of light industry include, but are not limited to, plastic items, clothing, shoes, foods, beverages, personal care and home care products, cosmetics, drugs, furniture, consumer electronics, and home appliances.	*Manufacturing and industrial, light.* A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Light industry is often assembly-based and is typically consumer-oriented (i.e., most light industrial products are sold to retail stores or end users rather than as intermediate parts for use by other industries). Light industry generally has less environmental impact than those associated with heavy industry. Light industries require a relatively small amount of raw materials, area and power. Examples of light industry include, but are not limited to, plastic items, clothing, shoes, foods, beverages, personal care and home care products, cosmetics, drugs, furniture, consumer electronics, and home appliances.
106.02.02	Added new state statute reference, per Town Attorney.	To hear and decide upon the existence of any nonconforming use and to enforce the amortization provisions as set forth in this chapter	To hear and decide upon the existence of any nonconforming use and to enforce the amortization provisions as set forth in this chapter and authorized by Texas Local Government Code Section 211.019.
106.02.11	Added new notice requirement for non conforming uses, per Town Attorney.		In addition to the foregoing notice, the Town shall provide written notice of each public hearing regarding any proposed adoption of or change to a zoning regulation or boundary under which a current conforming use of a property is a nonconforming use if the regulation or boundary is adopted or changed. The notice shall: (i) be mailed by United States mail to each owner of real or business personal property where the proposed nonconforming use is located as indicated by the most recently approved municipal tax roll and each occupant of the property not later than the 10th day before the hearing date; (ii) contain the time and place of the hearing; and (iii) include the following text in bold 14-point type or larger: "THE TOWN OF LITTLE ELM IS HOLDING A HEARING THAT WILL DETERMINE WHETHER YOU MAY LOSE THE RIGHT TO CONTINUE USING YOUR PROPERTY FOR ITS CURRENT USE. PLEASE READ THIS NOTICE CAREFULLY."
106.03.02	Clarification on maximum allowed slope in open space areas and changed approving authority for exceeding the allowed slope.	At the time of site plan approval, the planning and zoning commission and town council may allow a credit not to exceed ten percent of the total required usable open space for adjacent and immediately accessible public parks. The combined credit for areas calculated at a three-to-one basis and for public parks shall not exceed 50 percent of the total usable open space for an individual lot or parcel of land.	At the time of site plan approval, the Director of Development Services may give full or partial credit for open areas that exceed the maximum slope of 2 percent, if it is determined that such areas are environmentally significant and that their preservation would enhance the development.
106.04.01.d	Changed "Car" to "Automobile" for continuity		
106.05.01	Changed Communication Tower to SUP from CUP to match section 106.05.2.		
106.05.01	Add Banquet Hall as new use, allowed only through SUP in LC, HC, LI, HI, and LF		
106.05.05.c.3	Changed time period for abandonedment triggering loss of nonconforming rights, per Town Attorney.	If any such nonconforming use of land ceases for any reason for a period of more than 30 days any subsequent use of such land shall conform to the regulations specified by this chapter for the district in which such land is located.	If any such nonconforming use of land is intentionally abandoned for at least six months, , all nonconforming rights are terminated and any subsequent use of such land shall conform to the regulations specified by this chapter for the district in which such land is located.
106.05.05.k	Added compensation requirements requirements for termination of nonconforming uses for termination per Town Attorney.		k) Termination of Nonconforming Uses and Compensation for such Termination. 1. A person using a property in a manner considered to be a nonconforming use as a result of the adoption of or change to a zoning regulation or boundary may continue to use the property in the same manner unless required by the Town to stop the nonconforming use of the property. 2. If the Town requires a property owner or lessee to stop the nonconforming use of a property as described by Subsection (k)(1), the owner or lessee of the property is entitled to compensation as set forth in Texas Local Government Code Section 211.019(d). 3. Not later than the 10th day after the date the Town imposes a requirement to stop a nonconforming use of a property under this section, the Town shall give written notice to each owner or lessee of the property, as indicated by the most recently approved municipal tax roll, who is required to stop a nonconforming use of the property of the requirement and of the remedies which an owner or lessee of the property is entitled to under Texas Local Government Code Section 211.019(d). 4. A person entitled to a remedy under Texas Local Government Code Section 211.019 may appeal a compensation determination to the board of adjustment not later than the 20th day after the date the determination is made.
106.06.05	Corrected building façade standards typo	Buildings greater than 15,000 square feet Secondary Facades: Min. 80% Group A and Max. 20% Group B	Buildings greater than 15,000 square feet Secondary Facades: Min. 20% Group A and Max. 80% Group B
106.06.15	Added Latin Names to Approved Plant List, minor spelling corrections, removed duplicate or invasive plants.		
106.06.17.a	Clarification on maximum allowed slope in open space areas and changed approving authority for exceeding the allowed slope.	*(5) Credit for sloped areas* . At the time of site plan approval, the Planning and Zoning Commission and Town Council may give full or partial credit for open areas that exceed the maximum slope, if it is determined that such areas are environmentally significant and that their preservation would enhance the development.	*Credit for sloped areas* . At the time of site plan approval, the Director of Development Services may give full or partial credit for open areas that exceed the maximum slope of 2 percent, if it is determined that such areas are environmentally significant and that their preservation would enhance the development.
106.06.18	Amended Lakdscape Points chart. Combined Enhanced entraceway paving and enhanced hardscape, Removed providing dry amentiy detention pond, decreased points for enhanced amenity dentiontion retention pond from 10 to 5, and created "Darksky approved" outdoor lighting for 5 points.		
106.03.32	Added that fences cannot be built around vacant lots.		*Vacant Lots.* Fences cannot be located on vacant or undeveloped lots.
106.06.45	Changed "Car" to "Automobile" for continuity		
106.06.45	Added clarification on 1:200 ratio exemption for restuarants, also added new category of "restaurant, pick-up or delivery only".	1 space per 100 square feet of floor area. Outdoor seating areas (covered or not) under 500 square feet are exempt. When part of a multitenant development 15,000 square feet or greater, 1 space for every 200 square feet.	1 space per 100 square feet of floor area. Outdoor seating areas (covered or not) under 500 square feet are exempt.
106.06.46	Changed "Car" to "Automobile" for continuity		

TOWN OF LITTLE ELM

ORDINANCE NO. 1745

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING CHAPTER 106, ZONING ORDINANCE, BY AMENDING SEC. 106.01.14 – LAND USE DEFINITIONS, SEC. 106.02.02 – BOARD OF ADJUSTMENT, AND SEC. 106.02.11 – MAP AMENDMENTS TO THE ZONING ORDINANCE, SEC. 106.03.02 – ZONING DISTRICT – RESIDENTIAL, SEC. 106.06.17 – MULTIFAMILY LANDSCAPE REQUIREMENTS, SEC. 106.04.01 – US 380 OVERLAY DISTRICT, AND SEC. 106.06.46 – STACKING STANDARDS, SEC.106.05.01– SCHEDULE OF USES, SEC. 106.05.05 – NONFORMING USES AND STRUCTURES, SEC. 106.06.15 – PLANT LIST, SEC. 106.06.18 – COMMERCIAL LANDSCAPE REQUIREMENTS, SEC. 106.06.32 – RESIDENTIAL FENCES, AND SEC. 106.06.45 – PARKING REQUIREMENTS PER LAND USE; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHERE AS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, Town staff has recommended proposed textual changes to the Zoning Ordinance; and

WHEREAS, the Town's Planning and Zoning Commission and the Town Council of the Town of Little Elm, Texas, in accordance with the state law and the ordinances of the Town, have given the required notices and have held the required public hearings regarding the adoption of the proposed amendments; and

WHEREAS, after due deliberations and consideration of the recommendation of the Town's Planning and Zoning Commission, and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determine the various amendments to the Zoning Ordinance are in the best interest of public health, safety, and welfare of the residents of the Town.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. AMENDMENT AND ADOPTION. From and after the effective date of this ordinance, the following sections of Chapter 106, Zoning Ordinance, Sec. 106.01.14 – Land Use Definitions , Sec. 106.02.02 – Board of Adjustments, Sec. 106.02.11 – Map Amendments to The Zoning Ordinance, Sec. 106.03.02 – Zoning District – Residential, Sec. 106.06.17 – Multifamily Landscape Requirements, Sec. 106.04.01 – US 380 Overlay District, and Sec. 106.06.46 – Stacking Standards, Sec. 106.05.01– Schedule of Uses, Sec. 106.05.05 – Nonconforming Uses and Structures, Sec. 106.06.15 – Plant List, Sec. 106.06.18 – Commercial Landscape Requirements, Sec. 106.06.32 – Residential Fences, and Sec. 106.06.45 – Parking Requirements Per Land Use, of the Code of Ordinances of the Town of Little Elm, Texas, are hereby amended through the adoption of the sections attached hereto.

SECTION 3. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are in direct conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. SEVERABILITY. The sections, paragraphs, sentences, phrases, clauses and words of this Ordinance are severable, and if any section, paragraph, sentence, phrase, clause or word in this Ordinance or application thereof to any person or circumstance is held invalid or unconstitutional by a Court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of this Ordinance, and the Town Council of the Town of Little Elm, Texas hereby declares that it would have passed such remaining portions of this Ordinance despite such invalidity, which remaining portions shall remain in full force and effect.

SECTION 7. EFFECTIVE DATE. This Ordinance shall take effect immediately upon its adoption in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

The Town of Little Elm, Texas

_____

Curtis J. Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

ATTACHMENT –
AMENDED SECTIONS OF CHAPTER 106 – ZONING ORDINANCE

Amended Sections

Section106.01.14 - Land use definitions
Section 106.02.02 - Board of Adjustment
Section 106.02.11 - Map amendments to the zoning ordinance
Section 106.03.02 - Zoning districts – Residential
Section 106.04.01 - US 380 Overlay District
Section 106.05.01 - Schedule of Uses
Section 106.05.05 - Nonconforming uses and structures
Section 106.06.05 - Architectural Standards for Commercial Structures
Section 106.06.15 - Plant List
Section 106.06.17 - Multifamily landscape requirements
Section 106.06.18 - Commercial Landscape Requirements
Section 106.06.32 - Residential Fences
Section 106.06.45 - Parking Requirements Per Land Use
Section 106.06.46 - Stacking Standards

Sec. 106.01.14 Land use definitions.

Accessory structure. Any structure, either attached or detached from the main building, located on the same lot, the use of which is incidental to that of the main structure. Accessory structures include, but are not limited to, patio covers, arbors, gazebos, cabanas, outdoor kitchens, recreational fire enclosures, trellis, and structures/sheds or the like. A permit is required for many accessory structures (see sections 106.05.02.1(a) and (b), "accessory uses - residential" and "accessory uses - nonresidential," respectively, for regulations).

Adult Day Service. A daytime care establishment that supports the health, nutritional, social, and daily living needs of adults in a professionally staffed, group setting.

Airport or landing field. A landing facility for fixed or rotary wing aircraft containing a minimum of 60 acres (see section 106.05.02.2(a), "airport/helipad/heliport" for regulations).

Airport/heliport. A place where aircraft and/or helicopters can land and take off, usually equipped with hangars, facilities for refueling and repair, and various accommodations for pilots and passengers (see section 106.05.02.2(a), "airport/helipad/heliport" for regulations).

Alternative energy systems.

(1) *Solar devices.* A solar panel or device is a structure that is intended to capture the light from the sun and transfer that energy to electricity for general use (see section 106.05.02.2(b), "alternative energy sources - solar" for regulations.)

(2) *Wind energy conversion system (WECS).* Any mechanical device, such as a wind charger, windmill, or wind turbine, which is designed to extract kinetic energy from the wind and converts or stores it for practical use or a form of usable energy. (see section 106.05.02.2(c), "alternative energy sources - wind energy" for regulations)

Alternative financial services. A check cashing business, payday advance or loan business, money transfer business, car title loan business or pawn shop (see section 106.05.02.2(d), "alternative financial services" for regulations).

(1) *Bank, savings and loan or credit union.* An establishment, open to the public, for the deposit, custody, loan, exchange or issue of money, the extension of credit, and/or facilitating the transmission of funds and that is typically licensed by the appropriate state or federal agency as a bank, savings and loan association, or credit union. This includes businesses' activities listed under SIC Codes 60 and 61, but excludes pawnshops, check cashing businesses, payday advance/loan businesses and car title loan businesses.

(2) *Car title and loan services.* An establishment that makes small consumer loans that leverage the equity value of a car or other vehicle as collateral where the title to such vehicle is owned free and clear by the loan applicant and any existing liens on the car or vehicle cancel the application. The loan terms are often for 30 days and failure to repay the loan or make interest payments to extend the loan allows the lender to take possession of the car or vehicle. This excludes state or federally chartered banks, savings and loan associations or credit unions engaged primarily in the business of making longer term loans and which make loans that leverage the total equity value of a car or vehicle as collateral.

(3) *Check cashing business.* An establishment that provides to the customer an amount of money that is equal to the face of the check or the amount specified in the written authorization for an electronic transfer of money, less any fee charged for the transaction, and where there is an agreement not to cash the check or execute an electronic transfer of money for a specified period of time, the business of cashing checks, warrants, drafts, money orders, or other commercial paper serving the same purpose for compensation by any person or entity other than a retail seller engaged primarily in the business of selling consumer goods, including consumables to retail buyers, that cashes checks or money orders or issues money orders or money transfers for a minimum flat fee as a service that is

incidental to its main purpose or business. This definition excludes a state or federally chartered bank, savings and loan association or credit union, pawnshop, grocery store or gas station, so long as the gas station does not handle more than 100 such transactions within any calendar month.

(4) *Pawn shop.* A shop that lends money in exchange for valuable personal property as security deposited with it or pledged to it. This definition includes the sale of such securities after repossession and the sale of merchandise generally found in retail stores.

(5) *Payday advance or loan business.* An establishment that makes small consumer loans, usually backed by postdated check or authorization to make an electronic debit against an existing financial account, where the check or debit is held for an agreed-upon term, or until an applicant's next payday, and then cashed unless the customer repays the loan to reclaim such applicant's check. ?

Amenity center. A recreational facility, including, but not limited to, clubhouse, swimming pool, or play area, operated for the exclusive use of private residents or neighborhood groups and their guests, and not open to the general public.

Antenna. An instrument or device consisting of wires, poles, rods, or reflecting discs, designed for transmitting or receiving any portion of the radio, microwave, or electromagnetic spectrum (see section 106.05.02.2(h), "communications antennas" for regulations)

Antenna support structure. Any tower, mast, pole, tripod, box frame, or other structure utilized for the purpose of transmission, retransmission, and/or reception of electromagnetic, radio, television, or microwave signals and used for commercial broadcasting or telecommunication purposes. This definition shall also include a satellite dish exceeding 12 feet in diameter and a microwave-transmitting tower. All radiating equipment must comply with Federal Communications Commission (FCC), Environmental Protection Agency (EPA), Occupational Health and Safety Administration (OSHA), and all other applicable state and federal regulatory agency requirements and guidelines for human safety, as they exist or may be amended. Definition includes ancillary ground equipment. (See section 106.05.02.2(i), "communications support structures/towers" for regulations)

Antenna, stealth. A stealth antenna is a commercial antenna that is designed to be non-obtrusive, or virtually transparent or invisible to the surrounding neighborhood. Stealth antennas include, but are not limited to:

(1) Antennas within a building's attic space,

(2) Antennas on the roof of a minimum three-story building and not visible from the property line of the lot on which the antenna is located,

(3) Antennas on a public utility structure, such as a water tower or high transmission line support tower, and painted to match the structure,

(4) Antennas located within a structure such as a flagpole, church steeple, lamppost, subdivision monument, clock tower, or similar architectural feature, and antennas located on an athletic field light pole.

Antique shop and used furniture. A retail establishment engaged in the selling of works of art, furniture, or other artifacts of an earlier period, with all sales and storage occurring inside a building.

Arcade. An establishment in which there are located six or more skill or pleasure machines used for compensation found in the schedule of uses as "Commercial Amusement, Indoor."

Assembly uses. A building or structure for the gathering together of persons for purposes of civic, social or religious functions.

Athletic stadium or field, private. A private field and/or structure used for sporting events with associated spectator seating, either permanent or temporary.

Athletic stadium or field, public. A field and/or structure owned and operated by the town and/or a local independent school district used for sporting events with associated spectator seating, either permanent or temporary. The stadium may include other accessory buildings such as a food service or catering facility and/or dressing rooms/showers.

Automated dispenser machine. An unmanned, freestanding structure that dispenses goods that may include, but are not limited to, water, ice, entertainment videos or CDs, newspapers, and soft drinks, that may be located outside of or separate from the primary structure.

Automated intake machine. An unmanned, freestanding structure that is designed to receive certain goods that include, but are not limited to, recycling items, library books and donations, that may be located outside of or separate from the primary structure.

Automated teller machine (ATM). An unmanned, freestanding structure that performs banking financial functions at a location that may be separate from the controlling financial institution.

Automobile. A self-propelled mechanical or electrical vehicle designed for use on streets and highways for the conveyance of goods and people, including, but not limited to, passenger cars, trucks, buses, motor scooters, and motorcycles.

Automobile and boat repair, major. A building or portion thereof whose principal use is for the repair, servicing, equipping, or maintenance of motor vehicles or motor vehicle components, including engines, radiators, starters, transmissions, brakes, tires and wheels, seats and similar components that may require overnight outdoor storage of vehicles awaiting or under repair, if screened in compliance with all applicable regulations. General repair or reconditioning of engines, air-conditioning systems, and transmissions for automobiles; wrecker or towing service with on-site storage of vehicles; collision services including body, frame, or fender straightening or repair; customizing; painting; vehicle steam cleaning; tire retreading; insurance estimations with on-site storage; undercoating and rust proofing, and other similar uses.

Automobile and boat repair, minor. A daytime retail operation wherein the sale, installation, and/or inspection of tires, batteries, brakes and other related minor parts or accessories is carried on; specifically intended to exclude major automotive repair and overnight outdoor storage of vehicles awaiting or under repair.

Automobile and boat sales, accessories. A retail shop that sells parts or accessories for vehicles that does not include any installation of same.

Automobile and boat sales, new. Retail sales or leasing of new automobiles, light load vehicles or boats. Sales, rental, and/or leasing of new automobiles or light load vehicles, including, as accessory uses: sales, repair, and automobile storage.

Automobile and boat sales, outside display. The use of any land area for the display and sale of new or used vehicles and accessory parts, including tires, for automobiles, trucks, vans, trailers, or recreation vehicles.

Automobile and boat sales, used. Retail sales or offering for sale of used automobiles, light load vehicles or boats.

Automobile and boat/rv storage. The storage on a lot or tract of operable motor vehicles for the purpose of holding such vehicles for sale, distribution or storage.

Automobile parking garage. A structure for the parking of automobiles.

Automobile parking lot. An area where a fee is charged for parking automobiles.

Automobile wash, automated secondary use. A facility for the washing of motor vehicles, including a self-service operation, operated in conjunction with another primary use, such as fueling stations or convenience stores.

Automobile wash, full service. A facility where a customer may have an automobile, motorcycle, or other vehicles washed in exchange for financial remuneration. This definition generally includes detailing of the vehicle and may include other services, such as leather or upholstery cleaning.

Automobile wash, self service. A facility, typically coin or token operated, used by the customer to wash their own automobiles, motorcycles, and other vehicles.

Bakery, candy or ice-cream shop. A relatively small retail establishment that primarily sells baked goods, candy and other confections, and/or ice-cream/yogurt for on-premises consumption or take-out.

Banquet Hall. An establishment which is rented by individuals or groups to accommodate private functions including, but not limited to, banquets, weddings, anniversaries, and other similar celebrations. Such use, may or may not include: 1) kitchen facilities for the preparation or catering of food; 20 the sale of alcoholic beverages for on-premise consumption, only during the schedules events, and not open to the general public; 3) outdoor gardens or reception facilities.

Bar. An establishment principally for the sale and consumption of alcoholic beverages on the premises that derives 75 percent or more of its gross revenue on a quarterly (three-month) basis from the sale or service of alcoholic beverages, as defined in the Texas Alcoholic Beverage Code, for on-premises consumption. If an establishment is located in a hotel or motel, the gross revenues of the particular establishment, rather than the gross revenues of the entire hotel or motel, will be used in calculating the percentage of revenues derived from the sale or service of alcoholic beverages. (See section 106.05.02.2(e), "bar or brewpub" for regulations)

Bed and breakfast inn. An owner-occupied private home which offers lodging for paying guests not to exceed one week in duration, and which serves breakfast to these guests and which contains one or more guest bedrooms. (See section 106.05.02.2(f), "bed and breakfast" for regulations)

Body art studio. An establishment whose services include tattooing and/or body piercing. Tattooing shall mean the placing of designs, letters, figures, symbols or other marks upon or under the skin of any person, using ink or other substances that result in the permanent coloration of the skin by means of the use of needles or other instruments designed to contact or puncture the skin. Body piercing shall mean the creation of an opening in an individual's body, other than ear piercing, to insert jewelry or other decoration.

Brewpub. An establishment where the on-site brewing of beer occurs as well as tasting and/or retail sales. (See section 106.05.02.2(e), "bar or brewpub" for regulations)

Building material and hardware sales, major. An establishment for the sale of materials customarily used in the construction of buildings and other structures, including outside storage or display of materials or merchandise and may include the rental of construction tools and/or vehicles.

Building material and hardware sales, minor. An establishment for the sale of materials customarily used in the construction of buildings and other structures, without any outside storage or display of materials or merchandise.

Business Service. This group includes establishments primarily engaged in providing off-site services not elsewhere classified to business enterprises on a fee contract basis . Examples include, but are not limited to, plumbing services, cleaning services, computer/equipment repair services with certain on-site storage needs such as fleet vehicles used to provide off-site services to customers.

Campground or *RV park.* Any area that is designed for occupancy by transients using tents, mobile trailers, or recreational vehicles for temporary sleeping purposes. Also, a tract of land on which two or more campsites are located, established, or maintained as temporary living quarters for recreation, education or vacation purposes.

Caretaker's/guard's residence. A residence located on a premises with a main nonresidential use and occupied only by a caretaker or guard, and his/her family, employed on the premises. (see section 106.05.02.2(g), "caretaker or guard residence" for regulations)

Catering service. A business which offers prepared food and drink for consumption elsewhere.

Child care center, incidental. A place designed solely for the care of children belonging to employees and/or patrons of the primary use. The center shall be completely contained within the primary use and shall not constitute more than 15 percent of the main use. The operating hours of the center shall be the same as the primary use and shall not include overnight lodging, medical treatment, counseling, or rehabilitation services. This use may be subject to regulation by the Texas Department of Family and Protective Services.

Child care center. A facility that is licensed to care for any number of children for less than 24 hours per day, at a location other than the permit holder's primary residence. Included in this definition are daycare services, Montessori schools.

Child care, group home. An adult and/or child caring facility licensed by the state, designed to provide resident services to individuals who are physically handicapped, mentally ill, mentally retarded, or developmentally disabled, in which no more than eight such individuals reside with one or more resident counselors or other staff persons. For the purposes of this section, mental illness and developmental disability shall not include illegal use of or addiction to a controlled substance or any criminal behavior.

Child care, foster family home (independent). Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, a single independent home that is the primary residence of the foster parents and licensed to provide care for up to six children up to the age of 18 years.

Child care, foster group home (independent). Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, a single independent home that is the primary residence of the foster parents licensed to provide care for seven to 12 children up to the age of 18 years.

Child care, licensed child care center. Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, an operation providing care for seven or more children younger than 14 years old for less than 24 hours per day at a location other than the permit holder's home.

Child care, licensed child care home. Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, the primary caregiver provides care in the caregiver's own residence for children from birth through 13 years. The total number of children in care varies with the ages of the children, but the total number of children in care at any given time, including the children related to the caregiver, must not exceed 12.

Child care, listed family home. Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, a caregiver at least 18 years old who provides care in her own home for compensation, for three or fewer children unrelated to the caregiver, ages birth through 13 years. Regular care is provided, which is care provided for at least four hours a day, three or more days a week, and more than nine consecutive weeks. The total number of children in care, including children related to the caregiver, may not exceed 12.

Child care, registered child care home. Per the definition of the department of family and protective services (DFPS) or as amended by the DFPS, a caregiver who provides regular care in her own home for not more than six children from birth through 13 years. Child day care can be provided for six additional school-aged children before and after the customary school day. The total number of children in care at any given time, including the children related to the caregiver, must not exceed 12.

Clinic, animal (no outside runs). An animal medical facility designed for immediate and short term care (i.e. not requiring the animal to be boarded or kept within the facility overnight), for diagnosis, treatment of household pets including but not limited to dogs, cats, and birds.

Clinic, animal (with outside runs). A facility for diagnosis, treatment or hospitalization of household pets including but not limited to dogs, cats, birds, and horses.

Clinic/medical lab. Offices for one or more physicians, surgeons or dentists engaged in treating sick or injured persons, but not including rooms for the lodging of patients. The facility may also conduct the testing of blood and other tissue samples for the purpose of diagnosis of diseases.

College, university, or *trade school.* An institution established for educational purposes offering courses for study beyond the secondary education level, including trade schools and commercial schools offering training or instruction in a trade, art, or occupation.

Commercial amusement, indoor. An enterprise providing for indoor recreational activities, services, amusements, and instruction, usually for an admission fee. Uses may include, but are not limited to, bowling alleys, ice or roller skating rinks, bingo parlors, amusement arcades, and/or sports practice areas. Such business shall be constructed to limit noise by installing adequate acoustic barriers.

Commercial amusement, outdoor. An enterprise providing for outdoor recreational activities, services, amusements, and instruction, usually for an admission fee, including, but not limited to, batting cages, miniature golf, go-kart tracks, and carnivals.

Commissary. A facility that is the home base for a restaurant-equipped vehicle that serves as a mobile food vendor. The commissary also is used for the storage and partial production of food items that are delivered to customers by the mobile food vendor located away from the commissary location.

Communication tower/antenna. Any tower, mast, pole, tripod, box frame, or other structure utilized for the purpose of transmission, retransmission, and/or reception of electromagnetic, radio, television, or microwave signals. See also "antenna support structure." (See section 106.05.02.2(h), "communication antennas" for regulations)

Concrete batch plant, permanent. A permanent manufacturing facility for the production of concrete or asphalt.

Concrete batch plant, temporary. A temporary manufacturing facility for the on-site production of concrete or asphalt during construction of a project, and to be removed when the project is completed. Following removal, the tract shall be returned to its previous condition. (See section 106.05.03(a), "batch plants, temporary" for regulations)

Construction yard, field office, temporary. A building, structure, or storage/assembly yard used in conjunction with a development project for housing temporary supervisory or administrative functions related to development, construction, or the sale of real estate properties within the development and subject to removal at completion of construction. A facility used for the temporary office and material storage in connection with a project under construction or remodel. (See section 106.05.03(d), "construction yard, temporary" for regulations)

Contractor's shop. A facility for the contractor's office and the storage and maintenance of contractor's supplies and operational equipment.

Dwelling, assisted living facility. A private facility that provides care for chronically ill, aged, or disabled persons who need some health supervision and related care but not including hospital care. Such facilities do not contain facilities for surgical care or the treatment of alcoholism, drug addiction, communicable disease or injury. A facility designed for adults or children with special needs and/or who need assistance with daily living, including but not limited to the production of meals, assistance with shopping, management of medications and personal grooming. Typically, the resident occupies a room or suite of rooms and eats the majority of meals communally.

Dwelling, assisted living home. A facility located in a private residential home designed for adults who need or desire assistance with daily living, including but not limited to the production of meals, assistance with shopping, management of medications and personal grooming. (See section 106.05.02.2(j), "home child care" for regulations)

Dwelling, boardinghouse or rooming house. A building other than a hotel where lodging and/or meals for three or more persons are provided for compensation.

Dwelling, duplex. A building containing two single-family dwelling units totally separated from each other by an unpierced fire wall from basement to roof, intended or designed for occupancy by two families.

Dwelling, factory-built home. Any manufactured single-family mobile home constructed prior to June 15, 1976. (See also dwelling, HUD-Code manufactured home)

Dwelling, group home. An adult and/or child care facility, licensed by the state, designed to provide resident services to individuals who are physically handicapped, mentally impaired, or developmentally disabled, but does not provide services to individuals with psychiatric, addiction, substance abuse or who exhibit criminal behavior. (See section 106.05.02.2(j), "home child care" for regulations)

Dwelling, HUD-Code manufactured home. A HUD-Code compliant single-family structure constructed after June 15, 1976, designed for long-term residential use that is constructed elsewhere and is moved from the factory or sales location to its permanent site (see also dwelling, factory-built home)

Dwelling, listed family home. A home that provides child care for compensation for three or fewer children, excluding children who are related to the caretaker, for at least four hours a day, three or more days a week, for more than nine consecutive weeks in the caretaker's own residence and that is required to [be] listed with the state. (See section 106.05.02.2(j), "home child care" for regulations)

Dwelling, live-work. A dwelling unit that contains, to a limited extent, a separate commercial component on the ground floor and is typically in the form similar to a townhouse or store with residential quarters above or behind the commercial use.

Dwelling, mobile home. Any manufactured single-family mobile home constructed prior to June 15, 1976.

Dwelling, multifamily. Any building or portion thereof, which is designed, built, rented, leased, or let to be occupied as three or more dwelling units or apartments or which is occupied as a home or place of residence by three or more families living in independent dwelling units. Though residential in use, it is considered a commercial development in regard to and application of development standards and regulations. A building containing three or more dwelling units on a single lot or tract designed to be occupied by three or more families living independent of one another.

Dwelling, patio home. A dwelling on a separate lot with open space setbacks on at least three sides.

Dwelling, single-family, detached. A platted lot containing one dwelling unit, not attached to any other dwelling by any means and is surrounded by open space or yards, designed and constructed for occupancy by one family and has no physical connection to a building located on any other separate lot or tract.

Dwelling, townhome. A structure containing three or more dwelling units with each unit designed for occupancy by one household and each unit attached by a common fire wall.

Electrical power generating plant. All equipment, fixtures, and property operated or maintained in connection with the production of electricity and transmission of electricity produced.

Electrical substation. A location for transforming electricity prior to the distribution of electricity to individual customers.

Fairgrounds/exhibition area. An area that may include structures or outside areas for the exhibition of rodeos, conventions and similar special events.

Family. (1) one or more persons related by blood, marriage, adoption or guardianship occupying a dwelling unit and living as a single housekeeping unit; or (2) a group of persons not all related by blood, marriage, adoption or guardianship occupying a dwelling unit and living as a single housekeeping unit, but not to exceed two persons per bedroom with a maximum total of five such persons occupying a dwelling unit.

Farm accessory building. A structure located on an active farm, ranch, or orchard in which livestock, feed, equipment, vehicles, or accessories necessary for the running of the business are kept, including but not limited to, barns, silos, sheds and exercise pavilions.

Farm, ranch, stable, garden or *orchard.* An area of five acres or more which is used for growing of usual farm products, vegetables, fruits, trees and grain and for the raising thereon of the usual farm poultry and farm animals such as horses, cattle, and sheep and including the necessary accessory uses for raising, treating, and storing products raised on the premises, but not including the commercial feeding of offal or garbage to swine or other animals and not including any type of agriculture or husbandry specifically prohibited by ordinance or law.

Farmers market. An area containing individual vendors who offer fruits, vegetables, herbs, spices, edible seeds, nuts, live plants, flowers, and honey for sale. This definition does include the sale of meat, fish, poultry, eggs, refrigerated dairy products, or home canned or packaged items when the proper health rules and regulations are followed and/or health permit obtained. (See section 106.05.03(c), "farmers market, temporary" for regulations)

Florist. A facility for the retail sale of flowers, ornamental plants, and accessory items. This definition does not include a nursery with outside display. (See also Greenhouse and Nursery)

Fraternal organization, lodge, civic club, fraternity or *sorority.* A group of people whose membership is restricted by a set of bylaws or regulations.

Funeral home/crematorium. A place for the storage of human bodies prior to their burial or cremation, or a building used for the preparation of the deceased for burial or cremation, where cremation occurs within the building, with or without place where ceremonies or gatherings connected to the deceased may occur.

Funeral home/mortuary. A place for the storage of human bodies prior to their burial, or a building used for the preparation of the deceased for burial and the display of the deceased, a place where ceremonies or gatherings connected to the deceased may occur, but does not allow the cremation of human remains.

Gas pumps/fuel sales. A retail fuel sales facility selling fuel for motor vehicles including, but not limited to, automobiles, motorcycles, buses, or recreational vehicles with no ancillary services such as vehicle service, vehicle repair, or sale of items other than fuel. The fueling or gasoline station may be attended or automated.

Golf course, tennis club, polo club, or *country club (private).* An area of 20 acres or more containing a golf course, polo facilities, tennis facilities and/or a clubhouse and available only to private specific membership; such a club may contain adjunct facilities such as private club, dining room, swimming pool, retail sales, and similar recreational or service facilities. A tract of land with at least nine holes for playing the game of golf that may include a clubhouse, dining and snack bar, pro shop, practice facility and other accessory uses.

Greenhouse or *nursery for retail plant sales.* A facility that may include the outside display of plants offered for sale when such display is located behind the front yard line established in the district in which the nursery or greenhouse is located.

Gun or archery range, indoor. Any indoor facility open to the public and occupying all or a portion of a building where firearms are discharged or arrows are shot for either testing or recreation purposes. Such business shall be constructed to limit noise by installing adequate acoustic barriers.

Gunsmith. A retail establishment for the sale and service of guns and related items.

Gymnastics/dance studio/martial arts. A building or portion of a building used by a gymnast, dancer, or martial artist for practice or for instructional classes in gymnastics, dance, or martial arts and similar activities.

Health/fitness center. A facility which promotes physical fitness, weight control, exercise, and personal improvement that may also include massage or bathing.

Heavy machinery sales, service, and storage. A retail or wholesale facility that sells, services and stores heavy machinery such as farm equipment, dredging equipment, paving equipment, etc.

Helipad. A place, typically on the roof of a building or a small ground area where helicopters may land and take off, but without any service or fueling capabilities. (See section 106.05.02.2(a), "airport/helipad/heliport" for regulations)

Home occupation. An occupation, which is secondary to the primary use of a dwelling as a residence, conducted on residential premises by the occupant of the residence. Home occupations shall be subject to the conditions set forth in section 106.05.02.2(k), "home occupations." Any activity carried out for personal gain in a dwelling unit by a resident of the premises, which occupation is secondary to the residential purpose of the premises.

Hospital. An institution or place where sick or injured patients are given medical or surgical care either at public (charity) or private expense.

Hotel. A building or group of buildings designed for and occupied as a temporary abiding place of individuals with access to the rooms from an indoor corridor and providing six or more room units where customary services such as linen, maid service, telephone, and upkeep of furniture are provided for a daily fee.

Hotel, extended stay (also called "residence hotel"). A building or group of buildings used as a temporary dwelling place for individuals in exchange for financial consideration where customary hotel services such as linen, housekeeping service, and telephone are provided. Residence hotel room units are designed to be suitable for long term occupancy with financial consideration typically being calculated on a weekly and/or monthly basis. Typical residence hotel attributes include, but are not limited to, kitchen facilities, and external doorways into room units. (See section 106.05.02.2(l), hotel, extended stay" for regulations)

Hotel, full-service. A full service hotel is considered a top tier hotel in terms of amenities and service provided to the clientele. (See section 106.05.02.2(m), "hotel, full-service" for regulations)

Hotel, limited service. A limited service hotel provides travelers an economical choice with fewer amenities than a full service hotel. (See section 106.05.02.2(n), "hotel, limited-service" for regulations)

Household appliance service and repair. A retail establishment where household appliances are serviced and repaired on site. May also include sales of new or used household appliances.

Incidental retail and service uses. Defined as operating within another establishment, such as a bank branch, nail salon, eyewear service, tax service, etc. within a "big box" store. May also be located within an office complex or hotel, or institution, such as a deli, convenience store, or restaurant for the use of the employees, guests, and students.

Kennel, indoor. An establishment where domesticated animals(four or more dogs, cats or other domestic animals at least four months of age) are housed, groomed, bred, boarded, trained, or sold for commercial purposes that does not include outside pens or runs.

Kennel, outdoor. An establishment where domesticated animals (four or more dogs, cats or other domestic animals at least four months of age) are housed, groomed, bred, boarded, trained, or sold for commercial purposes that includes outdoor pens or runs.

Laundry and/or dry cleaning, commercial. A plant for cleaning garments, fabrics, rugs, uniforms, draperies, or other similar items on a commercial or bulk basis.

Laundry and/or dry cleaning, pickup and receiving station. A facility that only receives and dispenses laundry and dry cleaning that is processed in bulk by a commercial laundry or dry cleaning facility located elsewhere.

Laundry and/or dry cleaning, self-service. A facility for washing and/or dry cleaning garments and similar items where typically the customer supervises and handles the cleaning of his/her garments and items, such as a laundromat. Machines for use are typically of a similar size as found in the home and not a commercial laundry or cleaning plant.

Laundry and/or dry cleaning, small custom shop. A retail establishment for the cleaning of individual garments, fabrics, rugs, draperies or other similar items on the premises, which may include minor garment repair. A custom cleaning shop not exceeding 5,000 square feet of floor area or a pickup station.

Liquor store. A facility for the sale of beer, wine, and/or liquor not for on-premises consumption that derives 75 percent or more of its gross revenue from the on-premises sale of beer, wine, and/or liquor. (See section 106.05.02.2(o), "liquor stores" for regulations).

Machine/welding shop. A facility in which materials are processed by machining, cutting, grinding, welding, etc.

Manufactured home. Any manufactured single-family mobile home constructed prior to June 15, 1976. (See also Dwelling, factory-built home. (See section 106.05.02.2(p), "manufactured home replacement" for replacement regulations)

Manufactured/mobile home display and sales. The offering for sale, storage, or display of trailers, HUD-Code manufactured homes or mobile homes on a parcel of land but excluding the use of such facilities as dwellings either on a temporary or permanent basis. Such use may be permitted with the approval of the town council in the MH Mobile Home District to permit sale of mobile homes or HUD-Code manufactured homes owned by the mobile home park owner or operator for placement in the mobile home park.

Manufacturing and industrial, heavy. A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale and typically requires access to major thoroughfares, major highways, and/or other means of transportation such as the railroad for transfer of parts and final products. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Heavy industry involves one or more of the following characteristics such as large and heavy products; large and heavy equipment and facilities (such as heavy equipment, large machine tools, and spacious buildings); or complex and numerous processes. Examples of heavy industry include, but are not limited to, steel manufacturing, automotive assembly, machine tool design and construction, boat or aircraft manufacturing, and power plants.

Manufacturing and industrial, light. A facility that involves assembly and fabrication activities and the use of machines, tools and labor to make items for use or sale. May also include warehousing, research and development, wholesaling operations with infrequent customer or client visits, and may include related office and shipping areas. Light industry is often assembly-based and is typically consumer-oriented (i.e., most light industrial products are sold to retail stores or end users rather than as intermediate parts for use by other industries). Light industry generally has less environmental impact than those associated with heavy industry. Light industries require a relatively small amount of raw materials, area and power. Examples of light industry include, but are not limited to, plastic items, clothing, shoes, foods, beverages, personal care and home care products, cosmetics, drugs, furniture, consumer electronics, and home appliances.

Media studio. A facility where the production, editing, storage, and/or transmittal of audio/visual media occurs. Includes, but is not limited to, a TV studio, a radio studio, a production or editing facility. (See section 106.05.02.2(q), media studio" for regulations)

Mini-warehouse/self storage. A building containing separate, individual self-storage units for rent or lease. The conduct of sales, business, or any activity other than storage is prohibited within any individual storage unit.

Mixed-use building. A vertical mixed use building that includes a variety of retail, office, and/or residential uses such as lofts, live-work units, apartments and condominiums, but contains nonresidential use in a majority of the ground floor.

Mobile food vendor, food truck. Any person who operates and sells food from a motorized vehicle capable of moving from place to place during the course of the day and may include some preparation of food or drink for sale.

Mobile food vendor, stationary. Any person or persons who operates and sells food from a stationary cart or trailer mounted on a chassis, for a period of 15 calendar days or more per year. Stationary mobile food vendors include, but are not limited to, snow-cone stands, hot-dog carts, and ice-cream carts. Any similar facility that operates for 14 calendar days or less shall be considered a "temporary food establishment" as defined by the town health ordinance, as it exists or may be amended.

Model home. A single-family dwelling in a developing subdivision located on a legally platted lot of record that is limited to temporary use as a sales office for the subdivision and to provide an example of the dwellings which have been built or which are proposed to be built in the same subdivision. (See section 106.05.03(e), "model home, temporary" for regulations)

Motel. A facility offering short-term overnight lodging accommodations on a daily rate to the general public and having direct access to individual guest rooms from the parking area or outside balconies.

Motorcycle sales/service. A facility that sells, leases, and services motorcycles, usually defined as two-wheeled, self-propelled vehicle having one or two saddles or seats, and may have a sidecar attached. For purposes of this chapter, motorbikes, motor-scooters, mopeds and similar vehicles are classified as motorcycles.

Municipal uses operated by the Town of Little Elm. Any structure, park, open space, or roadway owned and/or operated by the Town of Little Elm, including but not limited to town hall, libraries, recreation centers, parks, and roadways.

Museum/art gallery. A building serving as a repository for a collection of natural, scientific, artistic, or literary objects of interest, and designed to be used for viewing, with or without an admission charge, and which may include as an accessory use the sale of goods related to the collection.

Office, administrative, medical, or professional. A building used for the provision of executive, management, or administrative services. Typical uses include, but are not limited to, administrative offices and services including real estate, property management, investment, medical, architect, engineer, travel, secretarial services, accounting organizations and associations, and vehicle rental office without on-site storage of fleet vehicles.

Office, showroom. A building that primarily consists of sales offices and sample display areas for products and/or services delivered or performed off-premises. Catalog and telephone sales facilities are examples. Incidental retail sales of products associated with the primary products and/or services are also permitted. Warehousing facilities shall not exceed 50 percent of the total floor area. This designation does not include contractor's shop and storage yard.

Office, warehouse, distribution center. A building primarily devoted to storage, warehousing, and distribution of goods, merchandise, supplies, and equipment. Accessory uses may include retail and wholesale sales areas, sales offices, and display areas for products sold and distributed from the storage and warehousing areas. Also referred to as "flex space."

Open storage and display, permanent. A secondary land use providing outdoor storage or display of commodities, materials, goods, equipment, vehicles, or merchandise in its normal day-to-day business activities. This definition excludes new and used sale or lease of automobiles, motorcycles recreational vehicles, boats, or watercrafts. This definition does not include temporary outside merchandise display, such as a sidewalk sale. (See section 106.05.02.2(s), "open storage, permanent or ongoing" for regulations)

Open storage and display, temporary. The temporary display of merchandise for sale outside of a building. (See section 106.05.03(f), "open storage, temporary" for regulations)

Open storage and display, under eave display, temporary. The temporary display of merchandise for sale located immediately outside the main entrance to the building and generally in the area that is adjacent to the building and between the building and the walkway/entrance. Items include, but are not limited to, firewood, plants, pumpkins, shopping carts, and other similar items. (See section 106.05.03(g), "open storage, temporary, under eave display" for regulations)

Park or playground. An open recreation facility or park owned and operated by a public agency such as the municipal park department or school board and available to the general public.

Personal service (other than listed). Establishments primarily engaged in providing on-site services to consumers based on intellectual or manual efforts. Examples include, but are not limited to, a licensed massage business, tutoring service, tailor, shoe repair service, barbershop, beauty shop, health studio, spa/salon, or travel consultant.

Portable building sales. A retail establishment that sells portable buildings meant to be used as accessory uses only and not for habitation.

Print shop, major industrial plant. An establishment specializing in long-run printing operations including, but not limited to, book, magazine, and newspaper publishing using engraving, die cutting, lithography, and thermography processes.

Print shop, minor retail shop. An establishment specializing in short-run operations to produce newsletters, flyers, resumes, maps, construction documents and plans, and similar materials using photocopying, duplicating, and blue printing processes. This definition shall include mailing and shipping services, but excludes the on-site storage of heavy load fleet vehicles, such as a Kinko's.

Printing plant, reprographic shop. A facility for the reproduction of materials or drawings on a job order or bulk basis utilizing lithography, off-set printing, or other printing techniques.

Private club. A facility that caters to a limited clientele that requires membership standing in order to participate. May include, but is not limited to, cigar clubs, gaming clubs, pool rooms, or other similar type uses. May require additional licenses from TABC or the state for operation. Does not include not-for-profit gaming operations, such as Bingo, offered by charitable organizations.

Religious facility. A building used primarily for religious assembly and worship and those accessory activities which are customarily associated therewith, and the place of residence for ministers, priests, nuns, rabbis, or other religious personnel on the premises (tax exempt as defined by state law). For the purposes of this chapter, Bible study and other similar activities that occur in a person's primary residence do not constitute a "religious facility."

Research and development center. Facilities for research including laboratories, experimental equipment and operations involving compounding or testing of materials or equipment. Any facility that is determined by health, fire, or building official to be a hazard or nuisance to adjacent property or the community at large, due to the possible emission of excessive smoke, noise, gas, fumes, dust, odor, or vibration, or the danger of fire, explosion, or radiation is not to be included in this category.

Restaurant. A building or portion of a building where food and drink is served for consumption in the building, and where provisions may be made for serving food on the premises outside the building.

Restaurant, dine-in only. An establishment where food and drink are prepared, served and consumed by the general public within an indoor dining area and may include an outdoor seating area.

Restaurant, dine-in only with alcoholic beverages. An establishment where food and drink, including alcoholic beverages, are prepared, served and consumed by the general public within an indoor dining area and may include an outdoor seating area.

Restaurant, drive-in. An eating establishment where food or drink is served to customers in motor vehicles or where facilities are provided on the premises which encourage the serving and consumption of food in automobiles on or near the restaurant premises. An establishment where food and drink are prepared and ordered via service screens and served to customers either in an outdoor seating area or in their motor vehicles that are temporarily parked and which the food will generally be consumed in their vehicles or off-premises.

Restaurant, drive-through service. An establishment where food and drink are prepared, served and consumed by customers who are given the option of dining within the indoor dining area, the outdoor seating area

or via a service window and drive-through lane to customers in motor vehicles who will be consuming the food off-premises.

Restaurant, pick-up or delivery only. An establishment preparing food to the general public in which the food, once prepared, is either picked up for consumption off-premises, or is delivered to the end user by the restaurant staff.

Restaurant, temporary. A retail food establishment that operates at a fixed location for a limited period of time.

Restaurant, with micro-brewery. An establishment that serves food and alcoholic beverages that prepares handcrafted natural beer or ale intended for consumption on the premises as an accessory use.

Salvage yard, wrecking yard. Any lot upon which four or more motor vehicles of any kind which are incapable of being operated due to condition or a lack of license or have been placed for the purpose of obtaining parts for recycling or resale.

School, charter. An alternative institution to the public school system licensed and funded by the state which provides a basic academic education comparable to that provided in the public schools and receives funding from the state and charges no admission fees to its attendees.

School, private or parochial. A school under the sponsorship of a private or religious agency having a curriculum generally equivalent to public elementary or secondary schools, but not including private or trade or commercial schools, and receives no funding from any governmental agency. Establishments that provide cooperative education (co-op) are included in this definition.

School, public. An educational institution regulated by the state which is operated by the public or an independent school district, having a curriculum that includes kindergarten, elementary or secondary education, but not including private, business, commercial, trade, or craft schools.

Seasonal sales. Temporary display and sale of items customarily associated with a particular season, such as Christmas trees, holiday decorations, firewood; pumpkins, or any other similar product for sale during a recognized holiday.

Senior living facility. A multiple family dwelling means any building or portion thereof which is designed, built, rented, leased or let to contain three or more age-restricted (55 or older) dwelling units or apartments on a single lot, or which is occupied as a home or place of residence by three or more age-restricted (55 or older) families living in independent dwelling units.

Sewage pump station. A facility for transporting sewer including pumps, piping, valves and controls.

Sewage treatment plant. A facility that treats sewage so that it may be returned to the natural water supply without negative effects. Water from a sewage treatment plant is considered "gray water" and is suitable for irrigation but no consumption.

Sexually oriented businesses. Sexually oriented establishments and businesses as defined in town Ordinance No. 628 as it exists or may be amended. Sexually oriented uses include, but are not limited to, adult bookstore, adult video store, adult theater, adult cabaret, sexual encounter center, and nude modeling center. (See section 106.05.02.2(v), "sexually oriented businesses" and the aforementioned town ordinances for regulations)

Smoking establishment. An establishment that sells products and devices primarily for the purpose of smoking or vaping in various forms. These establishments sometime provide a contained area with a separate ventilation system for the purpose of smoking within the associated structure.

Store, big box. A retail establishment with a single-tenant that comprises more than 50,000 square feet, such as Target or Walmart.

Store, convenience. A retail establishment providing for the sale of food items, nonprescription drugs, small household items and gifts. Gasoline and diesel fuel may also be offered for sale. Maximum size of the establishment shall be no more than 6,000 square feet, not including storage areas and administrative offices.

Store, discount, variety or department. A retail establishment offering a wide variety of merchandise in departments and exceeding 6,000 square feet in floor area.

Store, drugstore or pharmacy. A retail establishment for preparing, preserving, compounding and dispensing of drugs and medicines; and may include the display and sale of other merchandise such as cosmetics, notions, fountain service and similar items.

Store, feed. A retail establishment for the sale of grain, prepared feed, and forage for pets, livestock and fowl, but not involving the grinding, mixing, or commercial compounding of such items. An establishment for the selling of corn, grain, and other foodstuffs for animals and livestock and including other implements and goods related to agricultural processes, but not including farm machinery.

Store, furniture, home furnishings and appliance store. A retail facility that sells primarily goods for the home, such as furniture, carpet, appliances, and accessories.

Store, grocery. A retail establishment that displays and sells consumable goods and sundries and may include secondary uses such as a pharmacy, photo shop, banking service, delicatessen, bakery and/or prepared foods.

Store, hardware and home improvement. A retail establishment that sells building materials, paint, cutlery, tools, utensils, screws, nails, etc. This definition does not include "big box" hardware/lumber/home improvement type stores with outdoor display.

Store, incidental retail or service uses. Located within an office or other employment center, such uses include barbershop or beauty shop, smoke shop, candy counter, restaurant, pharmacy, or other incidental activity secondary to the primary office or employment occupancy.

Store, pet shop. A retail establishment offering small animals, fish, or birds for sale as pets and where all such creatures are housed within the building.

Store, shopping center. A group of retail, service, commercial, and restaurant establishments planned, constructed and managed as a single entity with customer and employee parking provided on-site, provision for goods delivery separated from customer access, provision of aesthetically appropriate design and protection from the elements.

Street, private. A thoroughfare which affords access to property abutting thereon for residents of that property and service vehicles only via controlled gate access. The land on which the street is constructed is owned by a homeowners association and the street is maintained by that entity. (See sections 106.05.02.2(t), "private street development/gated communities - existing subdivisions" and (u), "private street development/gated communities - new subdivisions", for regulations)

Street, public. A thoroughfare which affords principal means of access to property abutting thereon. The land on which the street is constructed is owned by a governmental entity and the pavement is maintained by that entity.

Telephone exchange. A telecommunications facility to which subscribers' telephones connect that switches calls among subscribers or to other exchanges for further routing.

Theater, drive-in. An outdoor facility arranged so that patrons can view the screen and receive the sound in the privacy of their cars, or while seated outside.

Theater, indoor. A facility for showing motion pictures to an audience inside an enclosed structure.

Transit center/bus terminal. Passenger terminal or loading facilities for franchised private or publicly-owned transit system.

Truck terminal. An area where trucks used to transport goods are stored or parked between trips.

Truck/trailer/heavy equipment/RV/bus repair. An establishment providing major and minor automobile repair services to heavy load vehicles defined as self-propelled vehicles having a manufacturer's recommended gross vehicle weight (GVW) of greater than 11,000 pounds, such as large recreational vehicles, tractor trailers, buses and other similar vehicles. Such vehicle repair may occur within a structure or outside the structure due to the size of the vehicles.

Truck/trailer/heavy equipment/RV/bus sales. A facility which sells or leases vehicles having a manufacturer's recommended gross vehicle weight (GVW) of greater than 11,000 pounds, such as large recreational vehicles, tractor trailers, buses and other similar vehicles. The term "truck" shall be construed to mean "heavy load vehicle" unless specifically stated otherwise. The sales and leasing facility includes outdoor storage and display of the vehicles listed.

Utility distribution/transmission line. Facilities, including subsidiary stations, that serve to distribute, transmit, transform, or reduce the pressure of gas, water, or electric current, including, but not limited to, electrical transmission lines, gas transmission lines, and metering stations.

Vending kiosk, commercial. An unmanned structure that provides a product for remuneration. Examples are ice machines, video vending machines (see section 106.05.02.2(w), "vending kiosk, commercial" for regulations).

Vending kiosk, not-for-profit. An unmanned structure that provides a product. The fee for such product may be reduced or waived. (See section 106.05.02.2(x), "vending kiosk, not-for-profit" for regulations)

Warehouse. A large facility used primarily for the storage of goods and may include an office incidental to the primary use.

Water pumping station. A facility for transporting water including pumps, piping, valves and controls.

Water reservoir or *well.* An artesian well or manmade underground reservoir where water is collected and kept in quantity for use by a water system.

Water treatment plant. A facility for the purifying, storage, and distribution of town water including a system of reservoirs, channels, and mains.

Wholesale and distribution center. An establishment engaged in the receipt, storage, and distribution of goods, products, cargo, and materials to retailers, wholesalers, agents, brokers, and/or to industrial, commercial, institutional, or professional business users and may include an office incidental to the primary use.

Winery/brewery retail sales. An establishment operated by the holder of a winery or brewery permit which has been lawfully issued to the permittee for the premises by the Texas Alcoholic Beverage Commission (or any successor entity thereto) in accordance with V.T.C.A., Alcoholic Beverage Code ch. 16 for the on-premises consumption of wine and or beer.

Winery/brewery/distillery. A manufacturing plant designed to distill alcoholic spirits such as wine, beer, ale or liquor. No on-premises individual sales of alcoholic drinks are allowed.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1527 , § 2, 10-15-2019; Ord. No. 1582 , § 2, 12-1-2020; Ord. No. 1614 , § 2, 3-2-2021; Ord. No. 1646 , § 2, 11-16-2021; Ord. No. 1692 , § 2, 12-20-2022)

Sec. 106.02.02 Board of adjustment.

(a) *Authority, duties and responsibilities.*

(1) To hear and decide appeals where it is alleged there is error in any order, requirement, decision or determination made by the development services director in the enforcement of this chapter, including any appeal from a vested rights determination by the town manager pursuant to the town's vested rights policy, originally adopted by Resolution No. 11210602, and as amended by Resolution No. 03050801, and detailed in section 106.02.07, "vested rights," and any other applicable amendments.

(2) To hear and decide only such special exceptions as the board of adjustment is specifically authorized to pass on by the terms of this chapter; to decide such questions as are granted; and to grant special exceptions with such conditions and safeguards as are appropriate under this chapter, or to deny special exceptions when not in harmony with the purpose and intent of this chapter.

(3) To hear and decide upon only such variances or modifications of the height, yard, area, coverage and parking regulations as the board is specifically authorized to pass on pursuant to the terms of this chapter.

(4) To hear and decide upon the existence of any nonconforming use and to enforce the amortization provisions as set forth in this chapter and authorized by Texas Local Government Code Section 211.019.

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(5) To provide a reasonable interpretation of the provisions of chapter 22, article III, of the Code of Ordinances relating to substandard structures, to mitigate specific provisions of the substandard structure ordinances which create practical difficulties in their enforcement and to hear cases and make determinations relating to substandard structures.

(b) *Composition of the board and terms of service.*

(1) The board shall consist of five regular members who shall be appointed by the town council. Two of the regular members shall be appointed in one year and the remaining three members shall be appointed in the following year, with terms expiring on February 28 of the year the term ends.

(2) In addition to the five regular members of the board of adjustment, two alternate members of the board, who shall serve in the absence of one or more regular members, shall be appointed by a majority vote of the town council so that all cases heard by the board will always be heard by a minimum of four members. The initial term of office of two of the alternate members shall be one year while the initial term of the other two alternates shall be two years. Thereafter, all of the alternates shall be appointed for two-year terms. In determining which of the two alternate members shall serve in the absence of a member, the alternate members shall be contacted to serve on a rotating basis starting first with the alternate member having the longest tenure. If for any reason more than one member must be absent, more than one (alternate may serve consistent with the provisions of this section.

(3) Each member or alternate member of the board shall be a resident citizen and qualified voter of the town, at the time of his appointment. A member or alternate member who ceases to reside in the town during his term of office must immediately forfeit his office.

(4) The term of office for all members shall be two years. All vacancies on the board shall be filled by the town council.

(5) A regular member may not serve more than two consecutive full terms. This term limitation shall not apply to alternates.

(6) Members of the board may be removed by the town council in accordance with V.T.C.A., Local Government Code ch. 211.

(7) Members and alternates shall serve without compensation.

(c) *Meetings and procedures.* The board shall adopt procedures and rules necessary to the conduct of its affairs and in keeping with the provisions of this chapter and in accordance with state law.

(1) *Meetings.* Meetings shall be held at the call of the chairman and at such other times as the board may determine. The chairman, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. All meetings shall be conducted in accordance with the Texas Open Meetings Act.

(2) *Quorum.* Each case before the board must be heard by at least four members. The concurring vote of at least four members of the board shall be necessary to reverse any order, requirement, decision or determination of the director, or to decide in favor of the applicant on any matter upon which the board is required to act under this Code or to grant any variance authorized by this chapter.

(3) *Election of officers.* At the first scheduled board meeting in March of each year, or as soon thereafter as practicable, the first item of business shall be the selection of the board of adjustment's chairman and vice-chairman by the regular members of the board. The alternate members of the board are not eligible to serve as the board chairman or vice-chairman or to participate in the selection of such chairman or vice-chairman.

(4) *Chairman's duties.* The chairman shall preside over meetings. If a question regarding procedures arises, Robert's Rules of Order, Newly Revised, shall apply.

(5) *Vice-chairman's duties.* The vice-chairman shall assist the chairman in directing the affairs of the board of adjustment. In the absence of the chairman, the vice-chairman shall assume the duties of the chairman.

(6) *Minutes.* The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote indicating such fact, and shall keep records of its examinations and other official actions, all of which are public records and shall be immediately filed in the office of the board.

(7) *Voluntary disqualification for cause.* A member shall disqualify himself from voting whenever he finds that he has a personal or monetary interest in the property or case under review, or that he will be directly affected by the decision of the board.

(d) *Appeal of director's decision.* In exercising its powers, the board may, in conformity with the provisions of the state statutes, as existing or hereafter amended, reverse or affirm, wholly or partly, or may modify the order, requirements, decision or determination appealed from and make such order, requirement, decision or determination, in the board's opinion, as ought to be made and shall have all the powers of the officer from whom the appeal is taken.

(1) Appeals to the board concerning interpretation or administration of this chapter that is not related to a specific application, address, or project may be taken by any person aggrieved or by any officer, department, or board of the town affected by any decision of the director. Appeals to the board concerning interpretation or administration of this chapter that is related to a specific application, address, or project may be taken by a person who (i) filed the application that is the subject of the director's decision, (ii) is the owner or representative of the owner of the property that is the subject of the director's decision, or (iii) is aggrieved by the director's decision and is the owner of real property within 200 feet of the property that is the subject of the director's decision. Additionally, any officer, department, board, or bureau of the town may appeal any director's decision concerning interpretation or administration of this chapter. Such appeals shall be taken within a reasonable time,

not to exceed 20 days, after the decision has been rendered by the director by filing with the official and the board a notice of appeal specifying the grounds thereof. The director shall forthwith transmit to the board all papers constituting the record upon which the action appealed from was taken.

(2) The board shall fix a reasonable time for the hearing of the appeal, give public notice thereof as well as due notice to the parties in interest, and decide the same within a reasonable time. At the hearing, any party may appear in person or by agent or attorney. The board shall decide the appeal at the next meeting for which notice can be provided following the hearing and not later than the 60th day after the date the appeal is filed.

(3) An appeal stays all proceedings in furtherance of the action appealed from, unless the director from whom the appeal is taken certifies to the board after the notice of appeal is filed with him, that, by reason of facts stated in the certificate, a stay would, in his opinion, cause imminent peril to life and property. In such case, proceedings shall not be stayed other than by a restraining order which may be granted by the board or by a court of record on application, on notice to the director from whom the appeal is taken and on due cause shown.

(e) *Appeals resulting from board action.*

(1) Any persons, jointly or severally, aggrieved by a decision of the board under this section, or any taxpayer or any officer, department, or board of the municipality may present to a court of competent jurisdiction a petition, duly verified, setting forth that such decision is illegal, in whole or in part, specifying the grounds of the illegality. Such petition shall be presented to the court within ten days after the filing of the decision in the office of the board and not thereafter.

(2) Any owner, lienholder, or mortgagee of record of property, jointly or severally, aggrieved by the final decision of the board issued under this section, may file in district court a petition, duly verified, setting forth that such decision is illegal, in whole or in part, specifying the grounds of the illegality. Such petition shall be presented to the court within 30 days after the date a copy of the final decision is personally delivered or mailed via first class mail, certified mail return receipt requested, to the owner, lienholder, or mortgagee and not thereafter.

(3) Any person aggrieved by a decision of the board issued under this section, may file in district court a petition, duly verified, setting forth that such decision is illegal, in whole or in part, specifying the grounds of the illegality. Such petition shall be presented to the court within 20 days after the date the decision is rendered by the board and not thereafter.

(f) *Special exceptions.*

(1) A special exception shall not be granted by the board unless and until:

a. Written application for a special exception is submitted indicating the section of this chapter under which the special exception is sought and stating the grounds on which it is requested;

b. Notice must be given at least 15 days in advance of the public hearing. The owner of the property for which special exception is sought or his agent shall be notified by mail. Notice of such hearings must be posted on the property for which the special exception is sought, at the town hall, and notice must be provided in one other public place, such as a newspaper, at least 15 days prior to the public hearing;

c. A public hearing must be held. Any party may appear in person or by agent or attorney;

d. The board shall make a finding that it is empowered under the section of this chapter described in the application to grant the special exception, and that the granting of the special exception will not adversely affect the public interest.

(2) In granting any special exception, the board may prescribe appropriate conditions and safeguards in conformity with this chapter. Violation of such conditions and safeguards, when made a part of the terms under which the special exception is granted, shall be deemed a violation of this chapter and the penalties set forth in section 106.01.11, "penalties and enforcement," shall apply. The board shall prescribe a time limit within which the action for which the special exception is required shall begin or be completed, or both. Failure to begin or complete, or both, such action within the time limit set shall void the special exception, without necessity of further action by the board.

(g) *Variances.*

(1) To authorize upon appeal in specific cases such variance from the terms of this chapter as will not be contrary to the public interest where, owing to special conditions, a literal enforcement of the provisions of this chapter would result in unnecessary hardship and so that the spirit of this chapter is observed and substantial justice is achieved. A variance from the terms of this chapter shall not be granted by the board unless and until a written application for a variance is submitted demonstrating the following:

a. That special conditions and circumstances exist which are peculiar to the land, structure, or building involved and which are not applicable to other lands, structures, or buildings in the same district or area;

b. That a literal interpretation of the provisions of this chapter would deprive the applicant of rights commonly enjoyed by other properties in the same district or area under the terms of this chapter;

c. That the special conditions and circumstances do not result from the actions of the applicant; and

d. That granting the variance requested will not confer on the applicant any special privilege that is denied by this chapter to other lands, structures, or buildings in the same district or area.

(2) Nonconforming use of neighboring lands, structures, or buildings in the same district, and permitted use of lands, structures, or buildings in other districts shall not be considered grounds for the issuance of a variance.

(3) Notice of public hearing must be given as set forth in this section;

(4) A public hearing must be held. Any party may appear in person, or by agent or attorney;

(5) The board shall make findings that the requirements of this section have been met by the applicant for a variance;

(6) The board shall further make a finding that the reasons set forth in the application justify the granting of the variance and that the variance is the minimum variance that will make possible the reasonable use of the land, building, or structure;

(7) The board shall further make a finding that the granting of the variance will be in harmony with the general purpose and intent of this chapter and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

(8) In granting any variance, the board may prescribe appropriate conditions and safeguards in conformity with this chapter. Violation of such conditions and safeguards, when made a part of the terms under which the variance is granted, shall be deemed a violation of this chapter and the penalties set forth in section 106.01.11, "penalties and enforcement," shall apply.

(9) Under no circumstances shall the board grant a variance to allow a use not permissible under the terms of this chapter in the district involved or any use expressly or by implication prohibited by the terms of this chapter in said district.

(h) *Nonconforming uses.*

(1) The board, on its own motion or at the direction of the town council or an interested property owner, may inquire into the existence of any nonconforming use in the Town of Little Elm, and after public hearing and investigation into the conditions created by the use, fire or health hazards created by the use, and any other danger or nuisance to the public due to or created by any condition or use existing on the property, require the discontinuance or termination of such use. The owner of the use under investigation by the board shall have not less than ten days written notice prior to the day of the public hearing. The board, after having heard from any affected parties and the public, shall prescribe a reasonable time period for compliance, discontinuance and termination of the nonconforming use. The board shall, in accordance with Section 211.019 of the Texas Local Government Code, utilize the procedures and owner or lessee compensation criteria contained in said Section in the event the Town determines that a nonconforming use of property shall:

a. In prescribing said time period, the board shall consider the following factors:

1. The capital investment in structures, fixed equipment, and other assets (excluding inventory and other assets that may be feasibly transferred to another site) on the property at the time the use became nonconforming;

2. Any costs that are directly attributable to the establishment of compliance date, including demolition expenses, relocation expenses, termination of leases, and discharge of mortgages;

3. Any return on investment since inception of the use, including net income and depreciation; 4. The anticipated annual recovery of investment, including net income and depreciation; and

5. In accordance with Section 211.019 of the Texas Local Government Code, utilize the procedures and owner or lessee compensation criteria contained in said Section in the event the Town determines that a nonconforming use of property shall cease.

b. If the board establishes an amortization (or compliance) date for a nonconforming use, the use must cease operation on that date and it may not operate thereafter unless it becomes a conforming use. The board shall, pursuant to the requirements of Section 211.019 of the Texas Local Government Code, determine the payment that is due to the owner or the lessee of the property for damages associated with terminating the nonconforming use.

c. For purposes of this section, "owner" means the owner of the nonconforming use at the time of the board's determination of an amortization (or compliance) date for the nonconforming use, and “lessee” means an individual or entity that has a valid lease for the nonconforming use at the time of the board's determination of an amortization (or compliance) date for the nonconforming use.

d. The board shall have the power to subpoena witnesses, documents and things; administer oaths; punish for contempt; and may require the production of documents and other things, under such regulations as it may establish or deem appropriate.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1527 , § 2, 10-15-2019; Ord. No. 1665 , § 2, 5-17-2022)

Sec. 106.02.11. Map amendments to the zoning ordinance.

(a) *Purpose.* The zoning ordinance official zoning map may be changed from time-to-time due to changes in market forces, development opportunities, or individual requests for development other than what is designated on the official zoning map. This section describes the process by which the official zoning map may be changed.

(b) *Authority.* Any person or corporation having a legal or equitable ownership interest in any real property may petition the town council for a change or amendment to the official zoning map or the regulations relating to a specific tract of land located within the town. In addition, the planning and zoning commission may on its own motion or on request from the town council institute a study and proposal for such changes and amendments in the public interest.

(c) *City initiation.* The town council may, from time to time, amend or change by ordinance the boundaries of the various zoning districts or the use and development regulations relating to a specific property in accordance with the manner provided by state law.

(d) *Procedure and approval.*

(1) *Compliance with comprehensive future land use map (FLUP).* Before taking action on any proposed amendment or change, staff shall determine that the proposed amendment is consistent with the goals and vision of the comprehensive plan. If it is not, the staff recommendation shall be for denial unless or until a comprehensive plan change has been effected that would bring the request into compliance with the comprehensive plan.

ARTICLE II, TABLE A	
Future Land Use Plan/Zoning District Conversion Table	
Future Land Use Plan Designation	Supported Zoning Districts*
Estate Residential	AG, SF-RE, CF
Low Density Residential	A-1, A-2, SF-1, SF-2, SF-3, SF-4, SF-X
Medium Density Residential	TH, D, PH, SF-X
High Density Residential	MF, TH, PH
Manufactured Home Area	MH-1, D
Public/Semi-Public	CF
Parks and Open Space	AG, CF
Private Recreation	CF
Town Center	LF, CF
Retail/Office	O, NS, LC, CF
Business Commercial	LC, HC, LI, HI, CF
Lakefront District	N/A
Eldorado Corridor District	N/A

*PD zoning may be supported in any of the FLUP designations

(2) *Comprehensive plan and zoning amendment considered concurrently.* A future land use plan amendment and a zoning change may be requested together, noticed together, and be considered at the same planning and zoning commission and town council meetings. If processed together there will not be an additional application fee. However, if a future land use plan amendment is requested

separate from a zoning request, an application fee is required to be paid. The amount shall be equal to the zoning application fee.

(3) *Notification prior to the planning and zoning commission public hearing.* The commission must hold a public hearing on any application for a zoning map amendment or change prior to making its recommendations and report to the town council. The following state mandated regulations must be met before the public hearing may be convened:

a. Written notice of all public hearings before the commission on a proposed amendment or change to the official zoning map, including an amendment or change to the use and development regulations governing a specific tract of land, must be sent to all owners of real property located within 200 feet of the property on which the change is requested. Notice must be given a minimum of ten days prior to the date set for the public hearing by mailing such notice properly addressed and postage-paid to each taxpayer as the ownership appears on the last approved town tax roll. A certificate of mailing shall be obtained from the postal service and copy of same shall be retained in the case records.

b. In addition to the foregoing notice, the Town shall provide written notice of each public hearing regarding any proposed adoption of or change to a zoning regulation or boundary under which a current conforming use of a property is a nonconforming use if the regulation or boundary is adopted or changed. The notice shall:

(i) be mailed by United States mail to each owner of real or business personal property where the proposed nonconforming use is located as indicated by the most recently approved municipal tax roll and each occupant of the property not later than the 10th day before the hearing date;

(ii) contain the time and place of the hearing; and

(iii) include the following text in bold 14-point type or larger: "THE TOWN OF LITTLE ELM IS HOLDING A HEARING THAT WILL DETERMINE WHETHER YOU MAY LOSE THE RIGHT TO CONTINUE USING YOUR PROPERTY FOR ITS CURRENT USE. PLEASE READ THIS NOTICE CAREFULLY."

c. Notice of such hearing by the planning and zoning commission must be given by publication in the official newspaper of the Town of Little Elm stating the time and place of such public hearing a minimum of ten days prior to the hearing.

d. Public notification signs must be posted, per subsection (e), below, a minimum of ten days prior to the hearing and remain in place until the public hearing by the commission and must remain in place until the hearing before the town council.

e. Notice of the public hearing must be posted at town hall a minimum of 72 hours prior to the commission hearing.

(4) *Commission recommendation.* The town council shall not take action on a proposed zoning amendment without a recommendation from the planning and zoning commission.

(5) *Town council notification and approval.* A public hearing must be held by the town council before adopting any proposed zoning map amendment or development regulation change relating to a specific tract of land. The following state mandated regulations must be met before the public hearing may be convened:

a. Notice of the town council public hearing must be given by publication in the official newspaper of the Town of Little Elm stating the time and place of such public hearing a minimum of 15 days prior to the hearing.

b. Public notification signs posted, per subsection (e), below, must remain in place until the public hearing by town council.

c. Notice of the town council public hearing must be posted at town hall a minimum of 72 hours prior to the hearing.

(6) If a written protest against such change is submitted in accordance with section 106.02.13, "zoning amendment protest procedure," by the owners of 20 percent or more of either (i) the area of the lots or land covered by the proposed change or (ii) the area of the lots or land immediately adjoining the area covered by the proposed change and extending 200 feet from that area, such map amendment shall not become effective except by the favorable vote of three-fourths of all the members of the town council.

(7) In computing the percentage of land area under subsection (6), above, the area of streets and alleys shall be included.

(e) *Public notification signage.*

(1) Any person, firm or corporation requesting a change in zoning from one zoning classification to another zoning classification on a specific site or other amendments to the use and development regulations governing such property shall erect and maintain a notification sign, provided by the town upon said property. Such sign shall be:

a. Sized a standard four-foot by four-foot;

b. Located within 15 feet of the closest, adjacent, most heavily traveled thoroughfare;

c. Located perpendicular to the street so as to be clearly visible and both sides of the sign are clearly readable from the thoroughfare and not obstructed in any manner;

d. Located so as not to create a hazard to traffic on, entering or leaving public rights-of-way abutting the property; and

e. Erected on the subject property at least ten days prior to the public hearing of such request by the planning and zoning commission, and to remain continuously on said property until final action by the town council or withdrawal of the request by the applicant. Removal of the required public notification sign by the applicant prior to final action of the town council shall constitute a withdrawal of the request. Photographic proof (with time stamp) must be provided to staff to ensure that the notification signs have been placed on the property within the required timeframe.

(2) It shall be unlawful for anyone to remove, destroy, deface or obstruct the view of a required sign which gives notice that a zoning hearing has been requested, however, it shall be an affirmative defense to prosecution of the underlying zoning request has been finally approved or denied by the town council or if such request has been withdrawn by the applicant.

(3) In the event the applicant should fail to erect or maintain any required signs in accordance with any appropriate standard in this section, then the public hearing before the planning and zoning commission and/or town council must be postponed to a date in the future that allows adequate time for compliance.

(4) The sign shall be two-sided and state that a zoning change is requested and shall list a phone number of an appropriate town department that may be contacted for information regarding this request.

(5) There shall be a cost attributed to the receiving of each sign by the applicant and such cost shall be listed in the schedule of fees.

(6) Failure to comply with the posting of the signs required by this section 106.02.11(e), "map amendments to the zoning ordinance, public notification signage" or to otherwise strictly comply with the manner in which such signs are posted, shall not invalidate any public hearing or action taken by either the commission or the town council relating to a request to amend the zoning regulations relating to the property.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1587 , § 2, 1-5-2021)

Sec. 106.03.02 Zoning districts—Residential.

(a) *A-1 Single-Family District.*

(1) *Purpose.* The purpose of the A-1 Single-Family District is to allow single family detached dwellings on lots of not less than 10,000 square feet, together with allowed incidental uses.

(2) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE D	
A-1 SINGLE-FAMILY RESIDENTIAL DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	10'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	80'
Minimum lot area	10,000 sq. ft.
Minimum floor area[3]	1,500 sq. ft.

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a one-family dwelling. Lots bordering streets on curves or contours shall be 80 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said A-1 Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 1,500 square feet.

(b) *A-2 Single-Family District.*

(1) *Purpose.* The purpose of the A-2 Single-Family District is to allow single family detached dwellings on lots of not less than 10,000 square feet, together with allowed incidental uses.

(2) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE E	
A-2 SINGLE-FAMILY RESIDENTIAL DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	10'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	6,000 sq. ft.
Minimum lot area (no public sewer)	1 acre
Minimum floor area[3]	1,000 sq. ft.

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a one-family dwelling. Lots bordering streets on curves or contours shall be 60 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said A-2 Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 1,000 square feet.

(c) *SF-RE Single-Family Ranchette Estate District.*

(1) *Purpose.* The purpose of the SF-RE Single-Family Ranchette Estates District is to allow single-family detached dwellings on lots of not less than one acre per family, together with allowed incidental and accessory uses.

(2) *Application.* Lots in a subdivision or plat legally approved and properly recorded in Denton County prior to the effective date of Ordinance No. 427 which do not meet the minimum lot sizes and area requirements set forth in this section shall not be considered to be in violation of said requirements and, for purposes of this section, shall be deemed to conform to the requirements set forth in this section.

(3) *Use regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(4) *Accessory buildings.* The following accessory buildings or shall be permitted as accessory to the principal structure or use within the SF-RE Single-Family Ranchette Estates District in accordance with the following:

a. If the SF-RE parcel is three acres or greater, accessory uses may also include all agricultural/farm buildings including, but not limited to, a stable, barn, pen, corral, kennel, greenhouse, or coop.

b. When allowed, agriculture-related accessory structures shall be made of masonry materials, wood, or cementitious fiber board and are not required to meet the maximum square footage requirements as referenced in section 106.05.01(a), "schedule of uses - residential."

c. The minimum setback from any property line for any accessory agricultural/farm structure shall be 25 feet.

(5) *Height and area regulations.* Height and area regulations. The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE F	
SF-RE SINGLE-FAMILY RANCHETTE ESTATE DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	40'
Minimum side yard setback	20'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	30'
Minimum lot width (at building line)[2]	120'
Minimum lot area	1 acre
Minimum floor area[3]	2,400 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling. Lots bordering streets on curves or contours shall be 120 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said SF-RE Single-Family Ranchette Estate District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 2,400 square feet.

Note 4. Garages may not be used for living quarters unless 2 other enclosed parking spaces are provided on the lot.

(d) *SF-1 Single-Family District.*

(1) *Purpose.* The purpose of the SF-1 Single-Family District is to allow single family detached dwellings on lots of not less than 10,000 square feet, together with allowed incidental uses.

(2) *Uses regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE G	
SF-1 SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	10'
Minimum side yard setback on corner[1]	25'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	10,000 sq. ft.
Minimum floor area[3]	2,000 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 25 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling. Lots bordering streets on curves or contours shall be 60 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said SF-1 Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 2,000 square feet.

Note 4. Garages may not be used for living quarters unless two other enclosed parking spaces are provided on the lot.

(e) *SF-2 Single-Family District.*

(1) *Purpose.* The purpose of the SF-2 Single-Family District is to allow single-family detached dwellings on lots of not less than 8,000 square feet, together with allowed incidental and accessory uses.

(2) *Use regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "Schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE H	
SF-2 SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	10'

Minimum side yard setback on corner[1]	25'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	8,000 sq. ft.
Minimum floor area[3]	1,600 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 25 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling. Lots bordering streets on curves or contours shall be 60 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said SF-2 Single-Family District shall have a floor area, excluding basements, open and screened porches, and garages, of not less than 1,600 square feet.

Note 4. Garages may not be used for living quarters unless 2 other enclosed parking spaces are provided on the lot.

(f) *SF-3 Single-Family District.*

(1) *Purpose.* The purpose of the SF-3 Single-Family District is to allow single-family detached dwellings on lots of not less than 7,000 square feet, together with allowed incidental and accessory uses.

(2) *Use regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE I	
SF-3 SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	6'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	7,000 sq. ft.
Minimum floor area[3]	1,400 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said SF-3 Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 1,400 square feet.

Note 4. Garages may not be used for living quarters unless two other enclosed parking spaces are provided on the lot.

(g) *SF-4 Single-Family District.*

(1) *Purpose.* The purpose of the SF-4 Single-Family District is to allow single-family detached dwellings on lots of not less than 6,000 square feet, together with allowed incidental and accessory uses.

(2) *Use regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE J	
SF-4 SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	6'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	6,000 sq. ft.
Minimum floor area[3]	1,200 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said SF-4 Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 1,200 square feet.

Note 4. Garages may not be used for living quarters unless two other enclosed parking spaces are provided on the lot.

(h) *SF-X Single-Family Mixed Size District.*

(1) *Purpose.* The purpose of the SF-X Single-Family District is to allow a mix of relatively large single-family detached dwellings on lots that range from a minimum of 10,000 square feet to one acre or more, together with allowed incidental and accessory uses.

(2) *Mix of lot sizes.* A minimum of three lots sizes, defined by lot width and overall lot area, shall be provided within the subdivision.

(3) *Minimum and maximum percentages.* A minimum of 20 of the largest lot sizes shall be provided and a maximum of 50 of the smallest lot size may be provided.

(4) *Use regulations.* No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, installed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(5) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE K	
SF-X SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	20'
Minimum side yard setback	6'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (measured at building line)[2]	
Smallest lot width (maximum of 50% of total number of lots)	60'
Medium lot width	75'
Largest lot width (minimum of 20% of the total number of lots)	90'
Minimum lot area	
Smallest lot area (maximum of 50% of total number of lots)	10,000 sq. ft.
Medium lot area	14,520 sq. ft. or ⅓ acre
Largest lot area (minimum of 20% of the total number of lots)	21,780 sq. ft. or ½ acre
Minimum floor area[2]	
Smallest lot area (maximum of 50% of total number of lots)	1,800 sq. ft.
Medium lot area	2,000 sq. ft.
Largest lot area (minimum of 20% of the total number of lots)	2,400 sq. ft.
Minimum number of garage spaces[3]	2

Minimum number of drive spaces	2

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling.

Note 3. Garages may not be used for living quarters unless two other enclosed parking spaces are provided on the lot.

(i) *D Duplex Two-Family District.*

(1) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(2) *Separate utilities.* All utilities shall be provided separately to each duplex such that each unit is individually metered.

(3) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot shall be as follows:

ARTICLE III, TABLE L	
D DUPLEX TWO-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	6'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'/30'[5]
Minimum lot area per family	2,500 sq. ft.
Minimum lot area per family with no sewer	10,000 sq. ft.
Minimum floor area per family[3]	700 sq. ft.
Minimum number of garage spaces[4]	2
Minimum number of drive spaces	2

Note 1. Lot area per family. Every two-family dwelling unit hereafter erected, reconstructed, altered or enlarged shall provide a lot area of not less than 2,500 square feet per family; provided, however, that where a lot has less area than herein required and was of record and in separate ownership at the time of the passage of this chapter, said lot may be occupied by not more than one family. In areas not served by sanitary sewer the minimum lot area per family shall be 10,000 square feet.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling.

Note 3. Floor area. Every two-family unit hereafter erected, constructed, reconstructed or altered shall have a floor area, excluding basements, open and screened porches and garages of not less than 700 square feet per each single-family dwelling unit.

Note 4. Garages may not be used for living quarters unless two other enclosed parking spaces are provided on the lot.

Note 5. Lots may be subdivided into two 30-foot (minimum) wide lots provided that the associated duplex structure be constructed with a fire wall along the shared, common boundary.

(j) *TH Townhome District.*

(1) *Site plan review required.* All townhome developments are subject to site plan review and approval by director. The site plan shall show the typical layout of the townhome lot and an overall layout of the development.

(2) *Site plan approval.* Deviations from the townhome standards in this chapter can be accomplished through the site plan process, subject to review and approval by the planning and zoning commission and town council during public hearings.

(3) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(4) *Minimum parking and garage access.* All townhome developments shall provide rear entry off-street parking with a minimum two car garage. Alleys servicing these developments shall be a minimum 12 feet in width.

(5) *On-street parking.* Parallel parking shall be provided along the curb in the right-of-way, but shall not count toward the minimum number of parking spaces required per unit.

(6) *Open space.* Ten percent of the total townhome development shall be dedicated as usable open space. This area shall be platted as common area (i.e. owned and maintained by the homeowners' association - HOA); open space must be usable but may include up to 50 percent floodplain. Open space should be located to preserve existing trees. If not practical due to the natural restrictions of the tract of land, then one large canopy tree and one small ornamental tree for every 5,000 square feet of required open space shall be provided.

(7) *Minimum street widths and orientation* . Streets adjacent to townhomes shall have a minimum 62-foot right-of-way. All townhomes shall be platted on individual lots and require public street or public easement frontage, but shall not have both front and rear street frontage.

(8) *Front access from sidewalks.* All buildings which have residential unit floor plates within six feet of grade shall include a primary front door entrance into the unit which may be accessed from the sidewalk.

(9) *Front door entry.* The front door entry shall be located a minimum of two feet above the sidewalk elevation and include a minimum 24 square foot stoop. If pre-empted by topographic conditions, the entry may be lowered in elevation, subject to approval of the director. However, up to 50 percent of units may be ADA accessible from the sidewalk provided there is a metal fence separating the private area from the public sidewalk area.

(10) *Landscape buffer and screening.* A ten-foot-wide rear landscape buffer shall be provided and shall contain one tree for every 30 linear feet. When located in commercial zoning districts, masonry screen wall requirements and the ten landscape buffer do not apply, unless backing against single-family residential, which requires eight-foot-high masonry screen wall.

(11) *Window views.* Units must also include windows which provide residents a view of the street or public access easement and sidewalk area.

(12) *Commercial design standards included.* Any and all graphics from the 2009 Commercial Design Standards report not supported by textual technological limitations are hereby codified as supporting material by reference.

(13) *Front yard landscape zones.* Three zones are required between back of curb and the building line, as described below:

a. Streetscape zone (1). A minimum five-foot-wide area adjacent to the back-of-curb for trees and street furniture, including a one-foot dismount strip. An urban tree in a tree well shall be provided for every 25 linear feet in the streetscape zone. For every three urban trees, a bike rack, trash receptacle, bench, lighted bollard, or other approved street furniture is required.

b. Sidewalk zone (2). A minimum six-foot-wide clear sidewalk.

c. Landscape zone (3). A minimum six-foot landscape/patio area adjacent to the building). In order to differentiate the different zones (public v. private) of the sidewalk, townhome may construct a three-foot-high wrought iron, masonry, or cast stone fence. Balcony and patio railings and fences shall be largely transparent and constructed of tempered glass, wrought iron or metal. Masonry columns may be used on patios provided that they are used as accents. Wood fences and railings and chain-link fencing are prohibited.

(14) *Rear yard setback landscaping.* Within the rear building setback, one urban tree is required.

(15) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot shall be as follows:

ARTICLE III, TABLE M	
TH TOWNHOME DISTRICT DEVELOPMENT STANDARDS	
Maximum height	45'
Minimum front yard setback	6'
Maximum front yard setback	12'
Minimum side yard setback[1]	5'
Minimum side yard setback on corner	15'
Minimum rear yard setback	20'
Minimum rear fence setback	5'
Minimum lot width (at building line)	25'
Minimum lot depth	100'
Maximum block length	600'
Minimum number of garage spaces per unit[2]	2
Number of other parking spaces per unit[3]	0.3

Note 1. The minimum side yard is five feet between groups of three to six townhomes; side yard at corner is 15 feet, and requires all three zones referenced in subsection (13) above.

Note 2. Garages may not be used for living quarters.

Note 3. Other parking spaces (for guests or employees) may be located tandem to the garage parking spaces, in a separate parking lot, or on-street.

(k) *PH Patio Home District.*

(1) *Site plan review required.* All patio home developments are subject to site plan review and approval by director. The site plan shall show the layout of the typical patio home lot and an overall layout of the development.

(2) *Site plan approval.* Deviations from the patio home standards in this chapter can be accomplished through the site plan process, subject to review and approval by the planning and zoning commission and town council during public hearings.

(3) *Definition.* Patio homes are single-family dwellings that are smaller in scale than typical residential homes, are located on a unique platted lot, and may have a zero lot line on one side of the building. If the zero lot line is chosen, or any side yard setback smaller than five feet, no windows shall be placed on that side of the patio home. Windows, doors, patios and other features should be placed along the wider side yard setback to create a greater sense of open space.

(4) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(5) *Minimum parking and garage access.* All patio home developments shall provide rear entry off-street parking with a minimum two car garage. Alleys servicing these developments shall be a minimum 12 feet in width.

(6) *On-street parking.* Parallel parking shall be provided along the curb in the right-of-way, but shall not count toward the minimum number of parking spaces required per unit.

(7) *Open space.* Ten percent of the total patio home development shall be dedicated as usable open space. This area shall be platted as common area (i.e. owned and maintained by the homeowners' association); open space must be usable but may include up to 50 percent floodplain. Open space should be located to preserve existing trees. If not practical due to the natural restrictions of the tract of land, then one large canopy tree and one small ornamental tree for every 5,000 square feet of required open space shall be provided.

(8) *Minimum street widths and orientation.* Streets adjacent to townhomes shall have a minimum 62-foot right-of-way. All patio home shall be individually platted and require public street or public easement frontage, but shall not have both front and rear street frontage.

(9) *Front access from sidewalks.* All buildings which have residential unit floor plates within six feet of grade shall include a primary front door entrance into the unit which may be accessed from the sidewalk.

(10) *Front door entry.* The front door entry shall be located a minimum of two feet above the sidewalk elevation and include a minimum 24 square foot stoop. If pre-empted by topographic conditions, the entry may be lowered in elevation, subject to approval of the director. However, up to 50 percent of units may be ADA accessible from the sidewalk provided there is a metal fence separating the private area from the public sidewalk area.

(11) *Landscape buffer and screening.* A ten-foot-wide rear landscape buffer shall be provided and shall contain one tree for every 30 linear feet. When located in commercial zoning districts, masonry screen wall requirements and the ten landscape buffer do not apply, unless backing against single-family residential, which requires eight-foot-high masonry screen wall.

(12) *Window views.* Units must also include windows which provide residents a view of the street or public access easement and sidewalk area.

(13) *Residential architectural standards apply.* Minimum masonry requirements, roof pitch, and design elements listed in section 106.06.03 "architectural standards for residential structures."

(14) *Front yard landscape zones.* Three zones are required between back of curb and the building line, as described below:

a. Streetscape zone (1). A minimum five-foot-wide area adjacent to the back-of-curb for trees and street furniture, including a one-foot dismount strip. An urban tree in a tree well shall be provided for every 25 linear feet in the streetscape zone. For every three urban trees, a bike rack, trash receptacle, bench, lighted bollard, or other approved street furniture is required.

b. Sidewalk zone (2). A minimum six-foot-wide clear sidewalk.

c. Landscape zone (3). A minimum six-foot landscape/patio area adjacent to the building). In order to differentiate the different zones (public v. private) of the sidewalk, townhome may construct a three-foot-high wrought iron, masonry, or cast stone fence. Balcony and patio railings and fences shall be largely transparent and constructed of tempered glass, wrought iron or metal. Masonry columns may be used on patios provided that they are used as accents. Wood fences and railings and chain-link fencing are prohibited.

(15) *Rear yard landscaping.* Within the rear building setback, one urban tree is required.

(16) *Height and area regulations.* The height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot shall be as follows:

ARTICLE III, TABLE N	
PH PATIO HOME DISTRICT DEVELOPMENT STANDARDS	
Maximum height	45'
Minimum front yard setback	6'
Maximum front yard setback	12'
Minimum total side yard setback[1]	10'
Minimum side yard setback on corner	15'
Minimum rear yard setback	20'
Minimum rear fence setback	5'
Minimum lot width (at building line)	35'
Minimum lot depth	100'
Maximum block length	600'
Minimum number of garage spaces per unit[2]	2
Minimum number of other spaces per unit[3]	0.5

Note 1. The minimum total side yard is ten feet between each patio home. This may be split evenly (5/5), with a zero lot line (0/10) or any combination that adds to ten feet; side yard at corner is 15 feet, and requires all three zones referenced in subsection (14) above.

Note 2. Garages may not be used for living quarters.

Note 3. Other parking spaces (for guests or employees) may be located tandem to the garage parking spaces, in a separate parking lot, or on-street.

(l) *MF Multifamily District.*

(1) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(2) *Accessory buildings and use.* Accessory buildings and uses customarily incident to any of the above uses are permitted when not involving the conduct of business other than incidental to the residential use of such lot, including private and storage garages; provided, however, that such accessory buildings comply with section 106.05.021, "accessory uses" and said accessory building shall not be used for commercial purposes. (The term "commercial purposes" shall include part-time businesses.)

(3) *Height and area regulations.* The density, lot coverage, height of buildings, the minimum and maximum dimensions of lots and yards, and other development standards permitted shall be as follows:

ARTICLE III, TABLE O	
MF MULTIFAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum density per acre	16 dwelling units
Maximum lot coverage	40%
Maximum height[1]	45'
Minimum front yard setback	25'
Minimum side yard between buildings	15'
Minimum side yard adjacent to street	20'
Minimum rear yard setback	30'
Minimum lot width (at property line)	70'

Minimum lot width (on curve at building line)	70'
Minimum number of bedrooms per unit	1
Minimum floor area per bedroom:[2]	
One bedroom unit	650 sq. ft.
Two bedroom unit	800 sq. ft.
Three bedroom unit	1,000 sq. ft.
Each additional bedroom over three	200 sq. ft.

Note 1. The height of any apartment building erected on a lot adjacent to single-family residential uses or zoning shall be limited to one story for a distance of 150 feet from the single-family district boundary, inclusive of streets and/or highways.

Note 2. Floor area. Every multifamily unit hereafter erected, constructed, reconstructed or altered shall have a floor area, excluding basements, open and screened porches, patios, and balconies of not less than specified above.

(4) *Courts.* Where an apartment building is erected so as to create inner courts, the faces of all opposite walls in such courts shall be a minimum distance of 30 feet apart and no balcony or canopy shall extend into such court area for a distance greater than five feet.

(5) *Lighting.* Lighting shall be designed and used to discourage crime and undesirable activity and to provide adequate vision, comfort and safety. It should use the lowest possible illumination to effectively allow surveillance. Open-air parking lot lighting shall be designed to provide for uniform lighting throughout the facility with no dark patches or pockets. The use of sensor technologies, timers or other means to activate lighting during the night may be used to conserve energy, provide safety, and promote compatibility between different land uses. In order to direct light downward and minimize the amount of light spill into the dark night sky, lighting fixtures shall be full cut-off fixtures. Open-air parking lot lighting shall not cause direct illumination on adjacent and nearby properties or streets. Fixtures should be of a type or adequately shielded so as to prevent glare from normal viewing angles. All lighting shall conform to this chapter.

(6) *Screening, fences, gates and stacking.* The entire site shall be screened from view on three sides from persons standing at ground level on the site or immediately adjoining property, by a masonry wall (minimum eight feet in height). A wall not more than eight feet in height shall be erected in the front yard that is of at least 50 percent black tubular steel or decorative metal. It is also mandatory for all apartments to be gated communities. Each gate shall be in proper working order at all times. In addition, there shall be a minimum stacking area for four vehicles at each gate.

(7) *Balconies/patios.* When an apartment building is erected so as to create balconies or patios facing a public street such balconies shall not extend beyond the building line.

(8) *Refuse facilities.* Complexes shall provide sufficient refuse facilities, subject to discretionary review and approval by the director and screened in compliance with the zoning ordinance.

(9) *Mechanical equipment.* Mechanical equipment shall be constructed, located and screened so as not to interfere with the peace and comfort of the occupant(s) of any building or residence.

(10) *Mail kiosks.* Mail kiosk shall have a minimum of three required parking spaces for the development within 50 feet, unless a drive-through facility is provided. The mail kiosk must be constructed of 100 percent masonry and constructed of the same materials as the main structure with a metal roof.

(11) *Building design.* Each building must follow the following conditions in addition to the town's architectural and design standards. (See Section 106.06.04 for more detail on architectural design and materials)

a. Except for windows, doors and garage doors, the exterior of all building elevations shall be 100 percent masonry. Cementitious fiberboard may be used for areas not considered conducive for masonry, as determined by the building official, and architectural features, including but not limited to bay windows, dormers, chimneys not part of an exterior wall, and gables.

b. Flat primary roofs are prohibited.

c. The residential building angle to public streets and single-family zoning districts will be between a minimum of 20 to a maximum of 70 degrees, unless parking is provided between the building and the street.

d. As an alternative to angling the buildings along the public street, adjacent buildings may be offset a distance equal to one-half the width of the building closest to the street, not to be less than 30 feet.

(12) *Parking regulations.* The minimum off-street parking and loading regulations shall be poured concrete surfaces, and comply with the following:

a. For buildings other than residential dwellings, one off-street parking space for each 200 square feet of floor area shall be provided.

b. All buildings hereafter erected, reconstructed, altered, enlarged or converted for one or more uses permitted in the Multifamily District shall provide adequate permanent off-street facilities for the loading and unloading of merchandise and good within or adjacent to the building in such a manner as not to obstruct the freedom of traffic movement on the public streets or alleys.

c. Two off-street parking spaces for each apartment dwelling unit plus one space for each additional bedroom unit (more than one) shall be provided. Covered parking spaces for at least 25 percent of the total required parking spaces (not including required guest parking) shall be provided.

d. No dead-end parking will be allowed.

e. Garages, when provided, shall be 100 percent masonry and be constructed of the same materials as the main structure. The garage may be part of the dwelling structure. The garage shall not be used for storage, thereby prohibiting the parking of an operable vehicle. Enclosed garage parking spaces shall be a minimum of ten by 20 feet. Stacking spaces shall not be counted towards required parking spaces.

(13) *Open space.* Each lot or parcel of land must comply with the following conditions in addition to the town's landscaping ordinance.

a. Each lot or parcel of land, which is used for multiple-family residences, shall provide on the same lot or parcel of land, usable open space, in accordance with [table H in section 106.06.18]. The open space shall have a minimum dimension of not less than 30 feet.

b. Of the required open space, 15 percent shall be arranged or located in a contiguous mass. This contiguous mass must be located within the required open space.

c. In meeting this requirements, a credit of three square feet may be applied for each square foot utilized for swimming pools and adjacent decks, patios, or lounge areas within ten feet of a pool; developed and equipped children's play areas; usable portions of recreational buildings; and private balconies and enclosed patios with a minimum dimension of five feet. Tennis courts are specifically excluded from this increased credit allowance. At the time of site plan approval, the planning and zoning commission and town council may allow a credit not to exceed ten percent of the total required usable open space for adjacent and immediately accessible public parks. The

combined credit for areas calculated at a three-to-one basis and for public parks shall not exceed 50 percent of the total usable open space for an individual lot or parcel of land.

d. One large canopy tree shall be provided per 3,500 square feet of required open space.

e. At the time of site plan approval, the Director of Development Services may give full or partial credit for open areas that exceed the maximum slope of 2 percent, if it is determined that such areas are environmentally significant and that their preservation would enhance the development.

(14) *Required amenities.* A minimum of four of the following must be incorporated into each multifamily development. A minimum of two major and two minor amenities must be provided in significant proportion to the development. The scale of the amenities as well as other comparable amenities can be approved through the site plan approval process.

a. Major amenities:

1. Dog park.

2. Indoor exercise facility.

3. Jogging trail.

4. Sport courts and fields (volleyball, baseball, tennis etc.).

5. Swimming pool.

b. Minor amenities:

1. Gazebo.

2. Improved picnic areas (with tables, grills, shading).

3. Playground or tot lot.

4. Putting green.

(15) *Miscellaneous requirements.* The following additional regulations are required for all Multifamily District apartment houses:

a. Separate sewer drain plumbing for all kitchen sinks that route through a grease trap;

b. Washer and dryer connections in each unit;

c. Lint traps on all laundry room washers; and

d. Storm drain debris collectors.

(m) *MH-1 Manufactured Home Single-Family District.*

(1) *Purpose.* Providing for certain manufactured and modular dwellings with specific reference to the seal of approval granted by appropriate state agencies and meeting federal standards and providing for single-family and two-family dwelling units.

(2) *Use regulations.* No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in section 106.05.01(a), "schedule of uses - residential."

(3) *Building materials.* Duplex and single-family residences located within this district may use cementitious fiberboard to fulfill the masonry building requirements.

(4) *Base district note.* The MH-1 District standards remain only for the purpose of establishing a base zoning district to support existing planned developments in Town with a base MH-1 district that were approved before January 5, 2021.

(5) *Height and area regulations.* In said MH-1 Manufactured Home Single-Family District the height of buildings, the minimum dimensions of lots and yards, and the minimum lot area per family permitted on any lot, shall be as follows:

ARTICLE III, TABLE P	
MANUFACTURED HOME SINGLE-FAMILY DISTRICT DEVELOPMENT STANDARDS	
Maximum height	35'
Minimum front yard setback	25'
Minimum side yard setback	6'
Minimum side yard setback on corner[1]	28'
Minimum rear yard setback	20'
Minimum lot width (at building line)[2]	60'
Minimum lot area	6,000 sq. ft.
Minimum floor area[3]	1,000 sq. ft.

Note 1. Where interior lots have been planned or sold fronting on the side street, may project not more than ten feet in front of the line established for buildings by the front yard requirements for the interior lots on the side street, provided this regulation shall not be interpreted to reduce the buildable width of a corner lot in separate ownership at the time of the passage of this chapter, to less than 28 feet, and provided that the side yard regulations above shall be observed.

Note 2. The minimum width of a lot shall be measured at the front building line provided that where a lot has less width than herein required, in separate ownership at the time of the passage of this chapter, this regulation will not prohibit the erection of a single-family dwelling. Lots bordering streets on curves or contours shall be 80 feet in width at the building line.

Note 3. Each dwelling unit hereafter erected, constructed, reconstructed or altered in said Manufactured Home Single-Family District shall have a floor area, excluding basements, open and screened porches and garages, of not less than 1,000 square feet.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1501, § 2, 6-18-2019; Ord. No. 1527 , § 2, 10-15-2019; Ord. No. 1587 , § 2, 1-5-2021)

Sec. 106.04.01 US 380 Overlay District.

(a) *Purpose.* The U.S. 380 Overlay District (380-OD) is identified in the 2017 Comprehensive Plan as the town's major commercial hub for employment. To this end, enhanced regulations are adopted to stimulate high-quality employment opportunities in this area. The 380 Overlay District is intended to substantially advance a legitimate governmental interest that includes promoting the economic development of the overlay district area, promoting a job base for the residents of Little Elm, and to regulate the character of growth along the 380 Corridor.

(b) *Description.* The Town of Little Elm hereby adopts the U.S. Highway 380 Overlay District establishing development standards for properties within the 380 Corridor in the Town of Little Elm jurisdictional limits, regarding use regulations, height regulations, signage, landscaping, and lighting requirements.

(c) *Boundary.* The physical boundaries of the US 380 Overlay District are identified in exhibit A of Ordinance No. 835, as it exists or is amended by town council.

(d) *Use regulations.*

(1) *Permitted uses.* The base zoning district of the subject property determines the permitted land uses in the US 380 Overlay District. Furthermore, the only permitted zoning districts in the overlay district are as follows: LC Light Commercial, HC Heavy Commercial, LI Light Industrial, HI Heavy Industrial, and related PD Planned Development Districts. Permitted land uses are outlined in section 106.05.01(b), "schedule of uses - nonresidential." All applicable regulations for use, yard, area, lot dimensions, utility placement, and landscaping shall be those specified for each district, including planned development stipulations except as otherwise stated in this chapter.

(2) *Prohibited uses.* The following uses are prohibited in the US 380 Overlay District, unless approved through the specific use permit process:

a. Automobile or truck leasing or renting.

b. Automobile sales, new or used.

c. Batching plant (concrete or asphalt, permanent).

d. Boat repair.

e. Boat sales, new or used.

f. Brick company with outside storage.

g. Building materials and hardware (outside display).

h. Church or rectory.

i. Commercial amusement (outdoor).

j. Dance hall.

k. Firing range, indoor/outdoor.

l. Flea market.

m. Heavy vehicle sales or storage.

n. Landfill (commercial).

o. Motorcycle sales with outside display.

p. Open or outside storage of products or materials that are not screened.

q. Pawn shop.

r. Portable building sales.

s. Recreational vehicle sales, new or used.

t. Residence home for the aged.

u. Rock quarries, sand, gravel, or earth excavation.

v. Salvage or reclamation of products that are not screened.

w. School, public primary or secondary.

x. Self-storage or mini warehouse.

y. Sexually oriented businesses.

z. Storage or repair of furniture and appliances, outside building.

aa. Tire retreading and recapping.

bb. Tire sales with outside storage.

cc. Trailer or manufactured home display or sales or rental.

dd. Truck and bus rental or repair.

ee. Truck sales, new or used.

ff. Vehicle or automobile wash, self-serve.

gg. Veterinarian clinic or kennel with outside pens.

hh. Wrecking yard, auto salvage, junkyard, or outside reclamation.

(e) *Buffer zones required between industrial uses or zoning districts and single-family uses or zoning districts.* A buffer zone shall be required between industrial and single-family residential zoning districts or uses to provide separation between the two areas. These special buffering requirements are necessary in order to mitigate the impact associated with adjacent non-compatible uses. A 40-foot transitional buffer is required for industrial uses or zoning districts adjacent to single-family residential uses or zoning districts within the 380 Overlay District. Any transitional buffer area that is provided shall be landscaped and irrigated. Trees shall be provided at a rate of one tree per 30 linear feet. Fifty percent of the trees shall be evergreen and shall be evenly dispersed.

(f) *Height and setback regulations.* In the US 380 Overlay District the height of buildings and the setback regulations shall be as follows:

ARTICLE IV, TABLE A			
US 380 OVERLAY DISTRICT HEIGHT AND SLOPE DEVELOPMENT STANDARDS			
Distance from property line of the closest residential zoning or use	Less than 500'	500' to 750'	Over 750'
Nonresidential uses with residential proximity	3:1 slope	2:1 slope	1:1 slope
Nonresidential uses without residential proximity	1:1 slope		

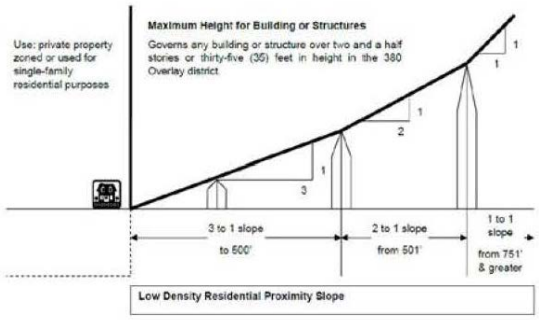
Note 1. Height. There will be no building height limitation as long as the setback regulations set forth below are met. Setbacks (shown above) shall be applied to all buildings over two and one-half stories or 35 feet in height. Buildings that are less than 35 feet in height shall use the setbacks identified in each zoning district. See the figure below for additional information regarding the required setbacks.

Note 2. This includes land zoned or used for single-family residential purposes regardless of jurisdiction.

Note 3. A height setback envelope is a plane projected upward and outward from a site of origination, which is defined as any private property that is zoned or used for single-family residential purposes.

Note 4. When referring to height setback envelopes, all slopes in this chapter are stated as to horizontal run to vertical rise.

Note 5. Surface parking facilities may be located within the height setback envelope, as required for nonresidential uses, so long as the parking does not encroach into the required landscape setbacks.



(g) *Signage.* In the US 380 Overlay District, signs shall be subject to the following regulations:

(1) *Internal illumination.* Outdoor, internally illuminated advertising signs may have a background, letters, and/or symbols of any color combination.

(2) *Monument sign.*

a. *Area*: The maximum area for a monument sign shall be 100 square feet.

b. *Height:* The maximum height for a monument sign shall be ten feet.

(3) *Multi-tenant monument sign:*

a. Area: The maximum area shall be based upon the size of the development.

b. Five acres or less is 150 square feet.

c. For every acre over five acres, the sign size may be increased by ten square feet with the maximum allowed area 240 square feet is permitted.

d. Height: The maximum height shall be 24 feet.

(4) *Wall sign area:*

a. For each one linear foot of primary building face, three square feet of wall sign is allowed. A maximum of 200 square feet of wall signage is allowed per building or tenant.

b. Big box primary tenants may use a total of 400 square feet.

(5) *Electronic message signs:*

a. The portion of the sign that may be electronic message is limited to 60 percent of the total sign.

b. Any change of pictures or information on said sign may not include animation but may include transitions which change at a rate no faster than every six seconds.

(h) *Landscaping.* Landscaping shall conform to the requirements found in the landscaping ordinance. In addition to these requirements, the following are required:

(1) *Perimeter landscaping:*

(2) A thirty-foot front landscape setback adjacent to US 380 shall be maintained. The landscape setback shall generally consist of trees, shrubs, groundcover, berms, and/or related elements.

(3) For the perimeter landscaped area adjacent to US 380, one large canopy tree and one small ornamental tree shall be required every 25 linear feet of street frontage. Trees may be grouped or clustered to facilitate site design.

(i) *Lighting.* The installation of lighting shall limit off-site spill (off the parcel containing the development) to a maximum of 0.5 footcandles at any location on any residential property, and no limit at any location on any nonresidential property, as measurable from any orientation of the measuring device.

(Ord. No. 1407, § 2, 8-15-2017)

Sec. 106.05.01 Schedule of uses.

Land and buildings in each of the following classified districts may be used for any of the following listed uses but no land shall hereafter be used, and no building or structure shall hereafter be erected, altered or converted which is arranged or designed or used for other than uses specified for the district in which it is located as set forth by the use schedule located in section 106.05.01(a) and (b), "Schedule of uses - residential" and "schedule of uses - nonresidential," respectively.

(a) *Residential zoning districts uses.* P=permitted by right; C=conditional use; S=specific use permit required. A blank space indicates the use is prohibited in that district.

ARTICLE V, TABLE A Residential Zoning Districts	**SF-RE**	**SF-1**	**SF-2**	**SF-3**	**SF-4**	**A-1**	**A-2**	**SF-X**	**TH**	**MH-1**	**D**	**MF**
	Ranchette Estate	Single-family	Single-family	Single-family	Single-family	Single-family	Single-family	Single-family	Single-family	Townhome	Manufactured	Duplex Multi
Primary Residential Uses												
Amenity center	P	P	P	P	P	P	P	> P	P	P	P	P
Dwelling, accessory	P											
Dwelling, assisted living facility												S
Dwelling, assisted living home												S
Dwelling, boarding house or rooming house												P
Dwelling, duplex										P	P	P
Dwelling, group home	P	P	P	P	P	P	P	P	P	P	P	P
Dwelling, HUD Code man. home										P		
Dwelling, listed family home	P	P	P	P	P	P	P	P	P	P	P	P
Dwelling, live-work unit	See nonresidential uses											
Dwelling, mobile home											P C	C
Dwelling, model home	C	C	C	C	C	C	C	C	C		C	
Dwelling, multifamily												P
Dwelling, single-family detached	P	P	P	P	P	P	P	P	P	P	P	P
Dwelling, townhome									P	P	P	P
Senior living facility												S
Mixed use building									C	C	C	C
Accessory and Incidental Uses												
Accessory structure	C	C	C	C	C	C	C	C	C	C	C	C
Automated dispenser machine												

Automated intake machine												
Automated teller machine (ATM), off-site												
Caretaker/guard's Residence												
Construction yard, field office temporary	C	C	C	C	C	C	C	C	C	C	C	C
Farm accessory building	C											
Home occupation	C	C	C	C	C	C	C	C	C	C	C	C
Open storage, permanent												
Open storage, temporary												
Seasonal sales												
Solar panels or devices	C	C	C	C	C	C	C	C	C	C	C	C
Vending kiosk, commercial												
Vending kiosk, not-for-profit	C	C	C	C	C	C	C	C	C	C	C	C
Wind energy conversion system (WECS)	C	C	C	C	C	C	C	C	C	C	C	C
Institutional and Special Uses												
Assembly uses	S	S	S	S	S	S	S	S	S	S	S	S
Athletic stadium or field	S	S	S	S	S	S	S	S	S		S	S
Cemetery or mausoleum	S	S	S	S	S	S	S	S	S		S	S
College, university, or trade school	S	S	S	S	S	S	S	S	S		S	S
Farm, ranch, stable, garden, or orchard												
Fraternal organization, lodge, civic club, fraternity, or sorority												
Golf course, tennis club, polo club, or country club (private)	S	S	S	S	S	S	S	S	S		S	S
Gun or archery range, indoor												
Hospital												S
Municipal uses	P	P	P	P	P	P	P	P	P		P	P
Museum/art gallery												
Park or playground	P	P	P	P	P	P	P	P	P	P	P	P

Recreation center	S	S	S	S	S	S	S	S	S		S	S
Religious facility	P	P	P	P	P	P	P	P	P	P	P	P
School, private, charter or parochial	S	S	S	S	S	S	S	S	S		S	S
School, public	P	P	P	P	P	P	P	P	P		P	P
Infrastructure Type Uses												
Airport/landing field/heliport												
Communication tower	S	S	S	S	S	S	S	S	S	S	S	S
Electric power generating plant												
Electric substation	S	S	S	S	S	S	S	S	S	S	S	S
Private utility, other than listed	P	P	P	P	P	P	P	P	P	P	P	P
Sewage pumping station	P	P	P	P	P	P	P	P	P	P	P	P
Sewage treatment plant	S	S	S	S	S	S	S	S	S	S	S	S
Telephone exchange	S	S	S	S	S	S	S	S	S	S	S	S
Transit center/bus terminal												
Utility line	S	S	S	S	S	S	S	S	S	S	S	S
Water reservoir, water pumping station, water well	P	P	P	P	P	P	P	P	P	P	P	P
Water treatment plant	S	S	S	S	S	S	S	S	S	S	S	S
Retail Uses												
Antique shop and used furniture (inside)												
Arcade												
Bakery, candy or ice cream shop												
Bar/brewpub												
Building material and hardware sales, major												
Building material and hardware sales, minor												
Commercial amusement, indoor												
Commercial amusement, outdoor												

Farmers market												
Greenhouse or nursery for retail plant sales												
Heavy machinery sales and storage												
Portable building sales												
Private club												
Restaurant, dine-in												
Restaurant, drive-in												
Restaurant, drive-thru												
Restaurant, with brewpub												
Restaurant, pick-up only												
Smoking Establishment												
Store, big box												
Store, convenience												
Store, discount, variety, or department store												
Store, drugstore or pharmacy												
Store, feed												
Store, florist												
Store, grocery												
Store, hardware & home imp.												
Store, incidental												
Store, liquor												
Store, pet shop												
Store, shopping center												
Store, other than listed above												
Theatre, indoor												
Theatre, drive-in												
Winery/brewery retail sales												
Service Uses												
Alternative financial services												

Bank, savings and loan, or credit union												
Bed and breakfast inn	S	S	S	S	S	S	S	S	S	S	S	S
Body art studio												
Business Service												
Campground or RV park												S
Catering service/commissary												
Child care center								S				S
Child care center, in-home	C	C	C	C	C	C	C	C	C	C	C	C
Clinic/medical lab												
Clinic, animal, with no outside runs												
Clinic, animal, with outside runs												
Contractor's shop with outside storage												
Contractor's shop inside only												
Custom personal service												
Day Service, Adult												
Fairgrounds/exhibition area												
Funeral home/crematorium												
Funeral home/mortuary												
Gunsmith												
Gymnastics/dance studio/ martial arts												
Health/fitness center												
Hotel, extended stay												
Hotel, full service												
Hotel, limited service												
Household appliance service												
Incidental retail and service uses												
Kennel, no outside runs												
Kennel, with outside runs												
Laundry/dry cleaning, commercial												
Laundry/dry cleaning, pickup station												

Laundry/dry cleaning, self-service												
Laundry/dry cleaning, small shop												
Motel												
Office, professional and general administrative												
Personal service (other than listed)												
Print shop, minor retail shop												
Sexually oriented businesses												
Studio, photography, music, artistic, etc.												
Studio, media												
Automobile and Related Uses												
Auto/boat repair, major												
Auto/boat repair, minor												
Auto/boat sales, accessories only												
Auto/boat sales/leasing, new, outside display												
Auto/boat sales, used, outside display												
Auto/boat/RV storage												
Auto parking, lot or garage												P
Auto wash, automated												
Auto wash, full-service												
Auto wash, self-serve												
Gas pumps/fuel sales												
Manufactured/mobile home display and sales										S		
Motorcycle sales/service												
Truck, trailer, heavy equipment, RV and bus, repair												
Truck, trailer, heavy equipment, RV and bus, sales and leasing												
Truck terminal												

Industrial and Manufacturing Uses												
Concrete batch plant, permanent												
Concrete batch plant, temporary	C	C	C	C	C	C	C	C				C
Machine/welding shop												
Manufacturing or industrial uses, heavy												
Manufacturing or industrial uses, light												
Mini-warehouse/self-storage												
Office/showroom												
Print shop, industrial plant												
Research and development center												
Salvage yard, wrecking yard												
Warehouse/distribution center												
Winery/brewery/distillery manufacturing												

(b) *Nonresidential zoning districts uses.* P=permitted by right; C=Conditional Use; S=Specific Use Permit required.

ARTICLE V, TABLE B Nonresidential Zoning Districts	AG	O	NS	CF	LC	HC	LF	LI	HI	
	Agricultur	Office	Neighb	Comm	Light Co	Heavy	Lake fro	Light In	Heav	
Primary Residential Uses										
Amenity center							P			
Dwelling, accessory	P									
Dwelling, assisted living facility		S			S	S				
Dwelling, assisted living home										
Dwelling, boarding house or rooming house										
Dwelling, duplex										
Dwelling, group home										

Dwelling, HUD Code man. home									
Dwelling, listed family home									
Dwelling, live-work unit							P		
Dwelling, mobile home									
Dwelling, model home									
Dwelling, multifamily									
Dwelling, single-family detached	P								
Dwelling, townhome							P	S	S
Senior living facility		S			S		S		
Mixed use building					S	C	P	C	C
Accessory and Incidental Uses									
Accessory structure	C	C	C	C	C	C	C	C	C
Automated dispenser machine			P		P	P		P	P
Automated intake machine			S		S	S		S	S
Automated teller machine, off-site			S		S	S		S	S
Caretaker's/guard's residence						C		C	C
Construction yard, field office, temporary	C	C	C		C	C	C	C	C
Farm accessory building	C								
Home occupation	C				C	C	C		
Open storage, permanent/ongoing	S				S	S		S	S
Open storage, temporary					C	C		C	C
Seasonal sales	C				C	C		C	C
Solar panels, devices, commercial		C			S	C	C	C	C
Vending kiosk, commercial		C			C	C	C	C	C
Vending kiosk, not-for-profit	C	C	C	C	C	C	C	C	C
Wind energy conversion system (WECS)	C	C	C	C	S	C	C	C	C
Assembly uses	S	P	P	P	P	P	P	P	P
Athletic stadium or field	S	S	S	P	S	S		S	S
Cemetery or mausoleum	S	S	S		S	S		S	S
Institutional and Special Uses									
College, university, or trade school	S	P	S	P	P	P	S	P	P

Farm, ranch, stable, garden, or orchard	P								
Fraternal organization, lodge, civic club, fraternity, or sorority		P	P		P	P	P	P	P
Golf course, tennis club, polo club, or country club (private)	S	S	S	P	P	P		P	P
Gun or archery range, indoor				S	S	S		S	S
Hospital		S	S	P	P	P		P	P
Municipal uses operated by the Town of Little Elm	P	P	P	P	P	P	P	P	P
Museum/art gallery		S	S	P	P	P	P	P	P
Park or playground	P	P	P	P	P	P	P	P	P
Recreation center	S	P	P	P	P	P	P	P	P
Religious facility	P	P	P	P	P	P	P	P	P
School, private, charter or parochial	S	S	S	S	S	S	S	S	S
School, public	P	P	P	P	P	P	P	P	P
Infrastructure Type Uses									
Airport/landing field/heliport		C		C	C	C	C	C	C
Alternate energy system	C	C	C	C	S	C	C	C	C
Communication tower	S	S	S	S	S	S	S	S	S
Electric power generating plant	S			S	S	S		S	P
Electric substation	S	S	S	S	S	S	S	S	S
Helipad									
Private utility, other than listed	P	P	P	P	P	P	P	P	P
Sewage pumping station	P	P	P	P	P	P	P	P	P
Sewage treatment plant	S	S	S	S	S	S		S	S
Telephone exchange	S	S	P		P	P	P	P	P
Transit center/bus terminal		P	P		P	P	P	P	P
Utility distribution/transmission line	S	S	S		S	S	S	S	S
Water Reservoir, water pumping station, water well	P	P	P		P	P	P	P	P
Water treatment plant	S	S	S		S	S		S	S
Retail Uses									
Antique shop and used furniture, inside only					P	P	P	P	P

Arcade					S	S	S	S	S
Bakery, candy or ice-cream shop			P		P	P	P	P	P
Bar/brewpub					S	S	P	S	S
Building material and hardware sales, major					P	P	P	P	P
Building material and hardware sales, minor					P	P	P	P	P
Commercial amusement, indoor					P	P	P	P	P
Commercial amusement, outdoor					S	S	S	P	P
Farmers market					S	S	S	S	
Florist			P		P	P	P	P	P
Greenhouse/nursery for plant sales		S			P	P	P	P	P
Heavy machinery sales and storage						P		P	P
Portable building sales					S	P		P	P
Private club					S	S			
Restaurant, dine-in		S	P		P	P	P	P	P
Restaurant, drive-in			S		S	P	P	P	P
Restaurant, drive-thru			S		S	P	P	P	P
Restaurant, with brewpub					P	P	P	P	P
Restaurant, pick-up only					P	P	P	P	P
Smoking Establishment		S	S		S	S	S	S	S
Store, big box					P	P	P	P	P
Store, convenience			P		P	P	P	P	P
Store, discount, variety, or department store					P	P	P	P	P
Store, drugstore or pharmacy					P	P	P	P	P
Store, feed					P	P		P	P
Store, florist			P		P	P	P	P	P
Store, grocery					P	P	P	P	P
Store, hardware and home imp.					P	P	P	P	P
Store, incidental (within another use)					P	P	P	P	P
Store, liquor					S	S	S	S	S
Store, pet shop					S	S	S	S	S
Store, shopping center					P	P	P	P	P
Store, other than listed above					P	P	P	P	P
Theatre, indoor		S			P	P	P	P	P

Theatre, drive-in					S	P		P	P
Winery/brewery retail sales					P	P	P	P	P
Service Uses									
Alternative financial services					S	C		C	C
Bank, savings and loan, or credit union		P			S	P	P	P	P
Banquet Hall					S	S	S	S	S
Bed and breakfast inn	S	P	P		P		P		
Body art studio						S	S	S	S
Business Service	S	S	S		S	S	S	S	S
Campground or RV park	S								
Catering service					P	P	P	P	P
Child care center		S	S		S	S	S	S	S
Child care center, in-home	C								
Cleaning and pressing (small shop/pickup)			P		P	P	P	P	P
Clinic/medical lab		P	P		P	P	P	P	P
Clinic, animal (no outside runs)	S		P		P	P	P	P	P
Clinic, animal (with outside runs)	S				S	P		P	P
Commissary					S	S		S	S
Contractor's shop with outside storage						P		P	P
Contractor's shop inside only					P	P		P	P
Custom personal service		P	P		P	P	P	P	P
Day Service, Adult		S	S		S	S	S	S	S
Fairgrounds/exhibition area		S			S	P		P	P
Fortune teller/psychic						S		S	S
Funeral home/crematorium		S			S	S		S	S
Funeral home/mortuary		S			P	P	P	P	P
Gunsmith					P	P	P	P	P
Gymnastics/dance studio/martial arts		P	P		P	P	P	P	P
Health/fitness center		P			P	P	P	P	P
Hotel, extended stay					S	S	S	S	S
Hotel, full service					P	P	P	P	P
Hotel, limited service					S	S	S	S	S

Household appliance service and repair		S	P		P	P	P	P	P
Incidental retail and service uses			P	P	P	P	P	P	P
Kennel, no outside runs					P	P	P	P	P
Kennel, with outside runs					S	S	S	S	S
Laundry/dry cleaning, commercial						P		P	P
Laundry/dry cleaning, pickup station			P		P	P	P	P	P
Laundry/dry cleaning, self-service					P	P		P	P
Motel									
Office, professional and general administrative		P	P		P	P	P	P	P
Personal service (other than listed)					P	P	P	P	P
Print shop, minor retail shop					P	P	P	P	P
Sexually oriented businesses								C	C
Studio, photography, music, artistry		P	P		P	P	P	P	P
Studio, media		P			P	P	P	P	P
Automobile and Vehicular Uses									
Auto/boat repair, major					S	S		S	S
Auto/boat repair, minor					S	S		S	S
Auto/boat sales, accessories only					P	P	P	P	P
Auto/boat sales/leasing, new, outdoor display					S	S		P	P
Auto/boat sales, used, outdoor display						S		P	P
Auto/boat/RV storage						S		P	P
Auto parking, lot or garage		P			S	P	P	P	P
Auto wash, automated					S	S		S	S
Auto wash, full-service					S	S		S	S
Auto wash, self-serve						S		S	S
Gas pumps/fuel sales					S	S		S	S
Manufactured/mobile home display and sales								S	P
Motorcycle sales/service					S	P		P	P
Truck, trailer, heavy equipment, RV, bus repair								P	P
Truck, trailer, heavy equipment, RV and bus sales and leasing						P		P	P
Truck terminal						P		P	P

Industrial and Manufacturing Uses									
Concrete batch plant, permanent									S
Concrete batch plant, temporary	C	C	C		C	C		C	C
Machine/welding shop								P	P
Manufacturing or industrial uses, heavy									C
Manufacturing or industrial uses, light								C	C
Mini-warehouse/self-storage						S		S	S
Office/showroom						P		P	P
Print shop, industrial						P		P	P
Research and dev't center						P		P	P
Salvage yard, wrecking yard									S
Warehouse/distribution center								P	P
Winery/brewery/distillery manufacturing					S	S	P	P	P

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1582 , § 2, 12-1-2020; Ord. No. 1587 , § 2, 1-5-2021; Ord. No. 1646 , § 2, 11-16-2021; Ord. No. 1682 , § 2, 8-16-2022)

Sec. 106.05.05 Nonconforming uses and structures.

(a) *Intent.* Within the districts established by this chapter or amendments that may later be adopted, there exist lots, structures, and uses of land and structures which were lawful before this chapter was passed or amended, but which would be prohibited, regulated or restricted under the terms of this chapter or future amendments.

(1) It is the intent of this chapter to permit these nonconformities to continue until they are removed, but not to encourage their survival. Such uses are declared by this chapter to be incompatible with permitted uses in the districts involved. It is further the intent of this chapter that nonconformities shall not be enlarged upon, expanded, or extended, nor be used as grounds for adding other structures or uses prohibited elsewhere in the same district.

(2) A nonconforming use of a structure, a nonconforming use of land, or a nonconforming use of a structure and land shall not be extended or enlarged after passage of this chapter by attachment on a building or premises of additional signs intended to be seen from the street or off the premises, or by the addition of other uses of a nature which would be prohibited generally in the district involved.

(3) To avoid undue hardship, nothing in this chapter shall be deemed to require a change in the plans, construction or designated use of any building on which actual construction was lawfully begun prior to the effective date of adoption or amendment of this chapter and upon which actual building construction has been diligently carried on. Actual construction is hereby defined to include the placing of construction materials in permanent position and fastened in a permanent manner; except that where demolition or removal of an existing building has been substantially begun in preparation for rebuilding, such demolition or removal shall be deemed to be actual construction, provided that work shall be diligently carried on until completion of the building involved.

(b) *Nonconforming lots of record.*

(1) In any district in which single-family dwellings are permitted, notwithstanding limitations imposed by other provisions of this chapter, a single-family dwelling and customary accessory buildings may be erected on any single lot of record at the effective date of adoption or amendment of this chapter. Such lot must be in separate ownership and not of continuous frontage with other lots in the same ownership. This provision shall apply even though such lot fails to meet the requirements for area or width standards, or both, that are generally applicable in the district, provided that yard dimensions and other requirements not involving area or width, or both, of the lot must conform to the regulations for the district in which such lot is located. Variance of area, width, and yard requirements may be obtained only through action of the board of adjustment (see section 106.02.02(a)(3) for more information).

(2) If two or more lots or combinations of lots and portions of lots with continuous frontage in single ownership are of record at the time of passage or amendment of this chapter, and if all or part of the lots do not meet the requirements for lot width and area as established by this chapter, the lands involved shall be considered to be an undivided parcel for the purposes of this chapter, and no portion of said parcel shall be used which does not meet lot width and are requirements established by this chapter, nor shall any division of the parcel be made which leaves remaining any with width or area below the requirements stated in this chapter.

(c) *Nonconforming uses of land.* Where, at the effective date of adoption or amendment of this chapter, lawful use of land exists that is made no longer permissible under the terms of this chapter as enacted or amended, such use may be continued, so long as it remains otherwise lawful, subject to the following provisions:

(1) No such nonconforming use shall be enlarged or increased, nor extended to occupy a greater area of land than was occupied at the effective date of adoption or amendment of this chapter;

(2) No such nonconforming use shall be moved in whole or in part to any other portion of the lot or parcel occupied by such use at the effective date of adoption or amendment of this chapter;

(3) If any such nonconforming use of land is intentionally abandoned for at least six months , all nonconforming rights are terminated and any subsequent use of such land shall conform to the regulations specified by this chapter for the district in which such land is located.

(d) *Nonconforming uses of structures.* If a lawful use of a structure, or of structure and premises in combination, exists at the effective date of adoption or amendment of this chapter that would not be allowed in the district under the terms of this chapter, the lawful use may be continued so long as it remains otherwise lawful, subject to the following provisions:

(1) No existing structure devoted to a use not permitted by this chapter in the district in which it is located shall be enlarged, extended, constructed, reconstructed, moved, or structurally altered except in changing the use of the structure to a use permitted in the district in which it located.

(2) Any nonconforming use may be extended throughout any parts of a building which were manifestly arranged or designed for such use at the time of adoption or amendment for this chapter, but no such use shall be extended to occupy any land outside such building.

(3) Any structure, or structure and land in combination, in or on which a nonconforming use is superseded by a permitted use, shall thereafter conform to the regulations for the district in which such structure is located, and the nonconforming use may not thereafter be resumed.

(4) When a nonconforming use of a structure, or structure and premises in combination, is discontinued or abandoned for six consecutive months or for 18 months during any three-year period, the structure thereafter shall not be used except in conformance with the regulations of the district in which it is located.

(5) Where nonconforming use status applies to a structure and premises in combination, removal or destruction of the structure shall eliminate the nonconforming status of the land.

(6) Where nonconforming use status applies to a conforming structure, such use shall be immediately terminated upon transfer to another ownership or lease.

(e) *Changing uses and nonconforming rights.*

(1) Nonconforming use to conforming use. Any nonconforming use may be changed to a conforming use, and once such change is made, the use shall not be changed back to any nonconforming use.

(2) Nonconforming use to another nonconforming use. A nonconforming use may not be changed to another nonconforming use.

(3) Conforming use in a nonconforming structure. Where a conforming use is located in a nonconforming structure, the use may be changed to another conforming use by the process outlined in section 106.05.05(f), expansion of nonconforming uses and structures.

(f) *Expansion of nonconforming uses and structures.* An expansion of a nonconforming use or structure is allowed in accordance with the following.

(1) *Nonconforming use expansion in existing building.* A nonconforming use located within a building may be extended throughout the existing building, provided.

a. No structural alteration, except as provided in section 106.05.05(f)(5) below, may be made on or in the building except those required by law to preserve such building in a structurally sound condition.

b. The number of dwelling units or rooms in a nonconforming residential use must not be increased so as to exceed the number of dwelling units or rooms existing at the time said use became a nonconforming use.

(2) *Nonconforming use prohibited from expansion beyond existing building.* Nonconforming use within a building shall not be extended to occupy any land outside the building.

(3) *Off-street loading and parking.* Nonconforming use of land or building shall not be enlarged, increased, or extended to occupy a greater area of land than was occupied at the time the land became a nonconforming use, except to provide off-street loading or off-street parking space.

(4) *Residential lot exemption.* The minimum residential lot areas for the various zoning districts shall be in accordance with their respective districts except that a lot having less area than herein required which was an official "lot of record" prior to [date of adoption of ordinance], may be used for a single-family dwelling.

(5) *Expansion of nonconforming buildings with conforming uses.* Buildings or structures which do not conform to the area regulations or development standards in this chapter but where the uses are deemed conforming shall not increase the gross floor area greater than ten percent from the date when the building became nonconforming.

(6) Reuse of abandoned or vacant buildings by conforming uses allowed. Buildings or structures which have been vacant or abandoned for less than six months and do not meet the current area regulations or development standards shall be allowed to be reoccupied by a conforming use.

(g) *Restoration of nonconforming structures.*

(1) *Total destruction.* If a nonconforming structure is destroyed by fire, the elements, or other cause, it may not be rebuilt except to conform to the provisions of this chapter.

(2) *Partial destruction.* In the case of partial destruction of a nonconforming structure not exceeding 51 percent of its total appraised value as determined by the Appraisal District, reconstruction will be permitted, but the existing square footage or function of the nonconforming structure cannot be expanded.

(h) *Movement of nonconforming structures.*

(1) *Relocation of a nonconforming structure within a platted lot.* Nonconforming structures may be relocated within the same platted lot.

(2) *Compliance.* Nonconforming structures shall comply with all setback and screening requirements.

(i) *Repairs and maintenance.* On any building devoted in whole or in part to an nonconforming use, work may be done in any period of 12 consecutive months on ordinary repairs, or on repair or replacement of nonbearing walls, fixture, wiring or plumbing, to an extent not exceeding ten percent of the current replacement value of the building, provided that the cubic content of the building as it existed at the time of passage or amendment of this chapter shall be not increased. Nothing in this chapter shall be deemed to prevent the strengthening or restoring to a safe condition of any building or part thereof declared to be unsafe by any official charged with protecting the public safety, upon order of such official.

(j) *Uses under exception provisions not nonconforming uses.* Any use for which a special exception is permitted as provided in this chapter shall not be deemed a nonconforming use, but shall without further action be deemed a conforming use in such district only for the single property granted such exception.

(k) *Termination of Nonconforming Uses and Compensation for such Termination*.

(1) A person using a property in a manner considered to be a nonconforming use as a result of the adoption of or change to a zoning regulation or boundary may continue to use the property in the same manner unless required by the Town to stop the nonconforming use of the property.

(2) If the Town requires a property owner or lessee to stop the nonconforming use of a property as described by Subsection (k)(1), the owner or lessee of the property is entitled to compensation as set forth In Texas Local Government Code Section 211.019(d).

(3) Not later than the 10th day after the date the Town imposes a requirement to stop a nonconforming use of a property under this section, the Town shall give written notice to each owner or lessee of the property, as indicated by the most recently approved municipal tax roll, who is required to stop a nonconforming use of the property of the requirement and of the remedies which an owner or lessee of the property is entitled to under Texas Local Government Code Section 211.019(d).

(4) A person entitled to a remedy under Texas Local Government Code Section 211.019 may appeal a compensation determination to the board of adjustment not later than the 20th day after the date the determination is made.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1635 , § 2, 9-7-2021)

Sec. 106.06.05 Architectural standards for commercial structures (includes office, retail, commercial, mixed use, etc.).

(a) *Intent.* The following apply to nonresidential developments, including institutional buildings:

(1) The intent of this subsection is to create buildings which reflect the lakefront character of Little Elm. The size, disposition and design of buildings play an important role in achieving that goal.

(2) Buildings should be constructed in a manner that allows flexibility to accommodate a range of uses over time in order to avoid the need to demolish and rebuild for successive uses.

(3) Buildings should directly contribute to the attractiveness, safety and function of the street and public areas.

(4) Buildings should be constructed in a manner, and with materials, that are highly durable and will continue to endure and be attractive over a long time, especially adjacent to public and pedestrian areas.

(5) It is not the intent of this section to discourage innovation. The use of exceptional design features, such as tower elements, exposed beams, or other unique and outstanding architectural ornamentation worthy of merit that make a positive contribution to the surrounding visual environment is encouraged.

(b) *Design standards.*

(1) All buildings within a common development, as shown on a development plan, concept plan, or preliminary site plan, shall have similar architectural styles, materials, colors and detailing.

(2) All structures shall be architecturally finished on all sides that can be seen from a public right-of-way with similar styles, materials, colors and detailing.

(3) Facades shall generally be built parallel to the street frontage, except at street intersections, where a facade containing a primary building entrance should be curved or angled toward an intersection.

(4) All buildings shall be designed and constructed in tri-partite architecture so that they have a distinct base, middle and top, separated by horizontal elements (see examples next page).

(5) All buildings shall be constructed of 100 percent masonry finishing material, as outlined in table B and in the proportions illustrated in table C.

(6) All streetscape elements and site amenities, such as bike racks, trash receptacles, lampposts, and tree grates shall be metal, rust and flake/chip resistant, and generally be black "storm cloud" in color. Bollards can be concrete or cast metal and shall be of decorative design.

Examples of Tri-partite Construction

(c) *Exterior materials for all commercial development.*

(1) *Categories of exterior materials.* The Town of Little Elm has categorized exterior building materials for commercial buildings into three categories, as follows:

(2) *Category A* materials are defined as the superior masonry products from which the town prefers buildings to be predominantly constructed. Unless otherwise provided for in this chapter, acceptable Category A masonry finishing materials are brick, natural stone, and manufactured stone.

(3) *Category B* materials are the secondary products that the town recognizes as masonry materials acceptable for use, but also as products that are less desirable and therefore should not be the predominant material. Unless otherwise provided for in this chapter, acceptable Category B masonry finishing materials include three-step stucco, architectural concrete block with integrated color (i.e. split-face CMU), concrete tilt wall (colored or stamped), engineered wood, and cementitious fiberboard with integrated color (in the form of lap siding or board and batten).

(4) *Category C* materials are accent products acceptable in limited application for architectural accents and features and for walls on upper stories of multiple story buildings. Unless otherwise provided for in this chapter, acceptable Category C materials include metal, tile, glass block, exterior insulation and finish systems (EIFS), and wood.

ARTICLE VI, TABLE B	
EXTERIOR CATEGORIES & MATERIALS FOR COMMERCIAL	
Categories	Materials
A	Brick, stone, or manufactured stone
B	Split-face CMU, stucco, cementitious fiber board, engineered wood, tilt-wall construction
C	Metal, wood, tile, glass, EIFS
Prohibited	Plain concrete block, aggregate, vinyl, plastic

(5) *Windows.* Windows and glazing shall be limited to a minimum of 30 percent and maximum of 70 percent of each building elevation facing a street, major access lane, or side yard greater than ten feet. This does not apply to big box buildings (greater than 50,000 square feet in size). Faux (i.e. false) windows are allowed for side yards.

(6) *Roof designs and materials.* For buildings with a visible hip, gable or mansard roof, allowed materials include metal (standing seam), slate or tile (clay or cement, barrel or Roman-shaped).

(7) *Prohibited materials.* Prohibited exterior surface materials include cinder block, vinyl, plastic, and aggregate pea-gravel finished surfaces.

(d) *Facade design standards for buildings 15,000 square feet or smaller.* The following shall apply to all exterior walls of buildings that are 15,000 square feet or smaller and which are clearly visible from a public right-of-way or along an active storefront (see table C):

(1) Walls, excluding windows, doors and other openings, shall be constructed of a minimum 80 percent Group A materials and a maximum of 20 percent Group B materials. However, accent materials from Group C may be allowed in limited application for architectural accents or features.

(2) A big box may use split-face CMU (architectural block) for up to 20 percent of the primary facade, in addition to the 20 percent of other Group B materials.

(3) All exterior walls of buildings less than 15,000 square feet are considered primary facades, regardless of orientation.

(e) *Facade design standards for buildings larger than 15,000 square feet.* The following shall apply to all exterior walls of buildings 15,000 square feet or larger and which are not clearly visible from a public street or along an active storefront, or are constructed on a property line as one of a series of in-line buildings where the wall will become part of a common wall (see table C):

(1) *Primary facades.* Allowed materials. Walls, excluding windows, doors, and other openings, shall be constructed of a minimum 20 percent Group A materials and a maximum of 80 percent Group B materials. In any case, the color of the walls shall match the primary facades.

(2) *Secondary facades.* Secondary facades which are adjacent to the primary facade shall continue the primary facade treatment by wrapping the corner. This may be achieved with elements such as cornices, bases and vertical elements. In all cases, however, wall surface materials shall wrap the corner.

ARTICLE VI, TABLE C

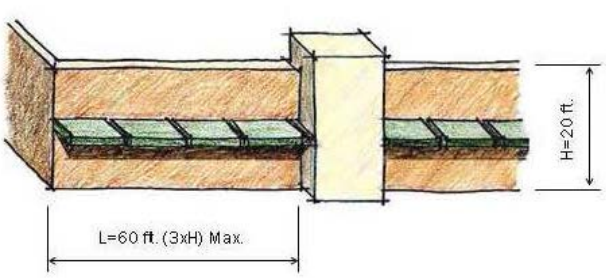
Required Percentages of Exterior Materials For Commercial

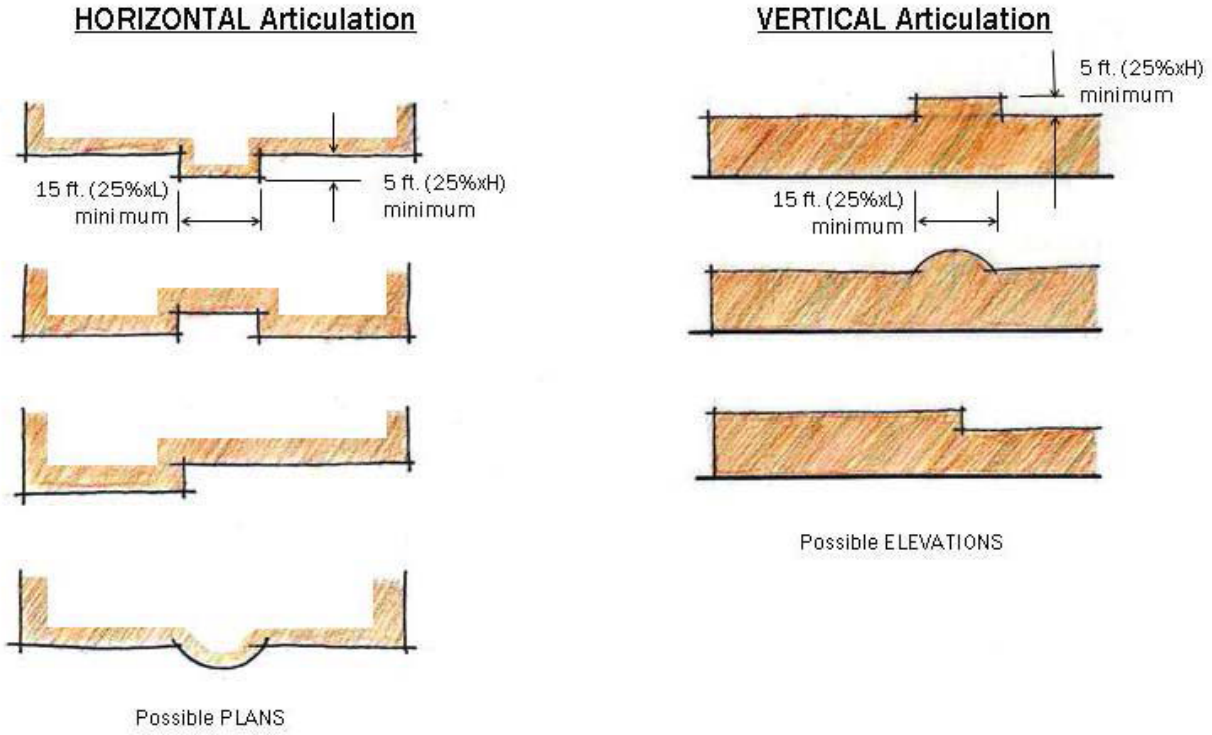
	Facades	Percentage Breakdown	Definition
Buildings of any size	Primary	Min. 80% Group A Max. 20% Group B	Exterior walls on public street or along an active storefront
	Secondary	Min. 20% Group A Max. 80% Group B	Exterior walls NOT clearly visible from a public street or along an active storefront
Buildings greater than 15,000 square feet	Primary	Min. 20% Group A Max. 80% Group B	Exterior walls on public street or along an active storefront
	Secondary	Min. 20% Group A Max. 80% Group B	Exterior walls NOT clearly visible from a public street or along an active storefront

(f) *Building articulation design standards.* Primary facades clearly visible from a public street or along an active storefront shall meet the following minimum standards for articulation:

(1) *Horizontal articulation.* No building wall shall extend for a distance equal to three times the wall's height without having an offset equal to 25 percent of the wall's height, and that new plane shall extend for a distance equal to at least 25 percent of the maximum length of the first plane.

(2) *Vertical articulation.* No wall length shall extend for a distance greater than three times the height of the wall without changing height by a minimum of 25 percent of the wall's height, and that new plane shall extend for a distance equal to at least 25 percent of the maximum length of the first plane. Pitched roofs shall count toward achieving vertical articulation, provided they are 65 degrees or less from horizontal.





(g) *Design standards.*

(1) *Two masonry materials required.* At least two masonry materials shall be used on all exterior facades.

(2) *Roof design.* Roofs shall be peaked with either hip, gable or mansard design with a minimum one-to-four (1:4) pitch, or a parapet wall or false mansard design with a minimum one-to-two (1:2) pitch is

acceptable only if constructed around the entire perimeter of a building so that no flat roof shall be visible from a public street or along an active storefront.

(3) *Landmark buildings.*

a. Buildings which are located on an axis with a terminating street or major access lane or at the intersection of streets and/or major access lane shall be considered a landmark building.

b. Such buildings shall be designed with landmark features which take advantage of that location, such as an accentuated entry and a unique building articulation which is offset from the front wall planes and goes above the main building eave or parapet line.

c. Landmark features shall be in proportion to the building and are subject to review and approval by the director.

(4) *Building color.*

a. The dominant color of all buildings shall be muted, natural or earth-tone shades of color. Black and stark white shall not be used except as an accent color.

b. There are no restrictions on accent colors which comprise less than one percent of the building face including wall signs, except that no high intensity colors, neon colors or fluorescent colors shall be used on exterior surfaces of the building.

c. Bright, reflective, pure tone primary or secondary colors are permissible only in limited application as accent colors on door and window frames, moldings, cornices, canopies, awnings, signs, etc. This provision shall not be construed as a license to employ corporate imaging on the primary building facade.

d. No more than one color shall be used for visible roof surfaces; however, if more than one type of roofing material is used, the materials shall be varying hues of the same color.

(5) *Auxiliary design standards.* All structures shall be designed to incorporate no less than four of the architectural elements from the list below. Buildings over 50,000 square feet must include a minimum of five of the referenced architectural elements:

a. Canopies, awnings, porticos with colonnade or arcades;

b. Raised pilaster cornices (end columns at corner), or quoined corners;

c. Vertical elements (tower, cupola, lighthouse, turret, arches, etc.);

d. Accented windows and doors framed with smooth cobble, cast stone, limestone or other decorative masonry headers and sills; or dormer windows;

e. Outdoor patios and/or courtyards (landscaped and furnished);

f. Decorative ornamentation integrated into the building facade, such as corbels, medallions (non-signage), functioning clocks, niches, wrought iron, balconettes, gargoyles, or horizontal and rhythm patterned brickwork;

g. Other architectural features approved by the director.

(Ord. No. 1407, § 2, 8-15-2017)

Sec. 106.06.15 Plant list.

(a) *Approved list of plant materials.* All required plant material, including required residential trees, shall be from the following list unless alternate plant materials are approved through the landscape plan:

ARTICLE VI, TABLE D - PLANT LIST, APPROVED		
LARGE CANOPY TREES		
Bald Cypress *Taxodium distichum*	Bigtooth Maple *Acer grandidentatum*	Burr Oak *Quercus macrocarpa*
Caddo Maple *Acer floridanum*	Cedar Elm *Ulmus crassifolia*	Chinquapin Oak *Quercus muehlenbergii*
Chinese Pistache *Pistacia chinensis*	Dawn Redwood *Metasequoia glyptostroboides*	Ginkgo *Ginkgo biloba*
Homestead Elm *Ulmus 'Homestead'*	Italian Stone Pine *Pinus pinea*	Lacebark Elm *Ulmus parvifolia*
Southern Live Oak *Quercus virginiana*	Montezuma Cypress *Taxodium mucronatum*	Pecan *Carya illinoinensis*
Pond Cypress *Taxodium ascendens*	Red Oak *Quercus coccinea*	Shantung Maple *Acer truncatum*
Southern Magnolia *Magnolia grandiflora*	Texas Ash *Fraxinus albicans*	Trident Red Maple *Acer rubrum*
Urbanite Ash *Fraxinus pennsylvanica*	Shagbark Hickory *Carya ovata*	Deodar Cedar *Cedrus deodara*
Shumard Red Oak *Quercus shumardii*	Western Soapberry *Sapindus saponaria var. drummondii*	Winged Elm Ulmus alata
American Elm *Ulmus americana*	Chinese Elm *Ulmus parvifolia*	Texas Persimmon *Diospyros texana Scheele*
Autumn Blaze Maple *Acer x freemanii*	Russian Olive *Elaeagnus angustifolia*	Honey Locust Gleditsia triacanthos
Black Walnut *Juglans nigra*	~~Eastern Black Walnut~~ Texas Pistache *Pistacia mexicana*	Eastern Red Cedar Juniperus virginiana var. virginiana
Red Cedar Juniperus virginiana	Sweetgum *Liquidambar styraciflua L.*	~~Texas Pistache~~
SMALL ORNAMENTAL TREES		
American Smoketree *Cotinus obovatus*	Carolina Buckthorn *Frangula caroliniana*	Crepe Myrtle (tree form) *Lagerstroemia indica*
Desert Willow *Chilopsis linearis*	Dogwood *Cornus florida*	Eve's Necklace *Styphnolobium affine*
Flameleaf Sumac *Rhus copallinum*	Golden Raintree *Koelreuteria paniculata*	Italian Cypress *Cupressus sempervirens*
Japanese Maple *Acer palmatum*	Lacey Oak *Quercus laceyi* *Quercus glaucoides*	Mexican Buckeye *Ungnadia speciosa*
Possumhaw Holly	Redbud	Savannah Holly

Ilex decidua *Ilex curtissii*	*Cercis canadensis*	*Ilex x attenuata 'Savannah'*
Teddy Bear Magnolia *Magnolia grandiflora 'Southern Charm'*	~~Viburnum~~ Mexican Plum *Prunus mexicana*	Vitex *Vitex agnus-castus*
Wax Myrtle *Morella cerifera* *Cerothamnus ceriferus* *Cerothamnus pumilus*	Yaupon Holly *Ilex vomitoria Aiton*	River Birch *Betula nigra*
Eastern Redbud *Cercis canadensis*	Eastern Palatka Holly *Ilex x attenuata*	Foster Holly *Ilex x attenuate 'Fosteri'*
Flowering Crabapple *Malus 'Prairifire'*	Afghan (Eldarica) Pine *Pinus eldarica*	Ornamental Plum Prunus cerasifera
Cherry Laurel	Purple Plum Prunus cerasifera 'Atropurpurea'	~~Mexican Plum~~
~~Callery Pear~~	~~Flowering Pear~~	~~Texas Sophora~~
~~Chaste Tree~~		
URBAN TREES		
Allee (Lacebark) Elm *Ulmus parvifolia ALLÉE®*	Chinese Pistache *Pistacia chinensis*	Ginkgo *Ginkgo biloba*
Homestead Elm *Ulmus 'Homestead'*	Lacey Oak *Quercus laceyi* *Quercus glaucoide*	Pond Cypress *Taxodium distichum var. imbricarium*
Shantung Maple *Acer truncatum*	Teddy Bear Magnolia *Magnolia grandiflora 'Southern Charm'*	Urbanite Ash *Fraxinus pennsylvanica*
PALM~~DESERT~~ TREES		
Chinese Windmill *Trachycarpus fortunei*	Dwarf Palmetto *Sabal minor*	Mexican Blue Palm *Brahea armata*
Mexican Sabal Palm *Sabal mexicana*	Pindo Palm *Butia capitata*	Washington Fan Palm *Washingtonia robusta*
EVERGREEN SCREENING SHRUBS (low - less than 5 ft.)		
Agarito *Mahonia trifoliolata*	Boxwood Buxus	Dwarf Abelia *Caprifoliaceae Abelia Grandiflora*
Dwarf Burford Holly *Ilex cornuta 'Dwarf Burford'*	Elaeagnus (Silverberry) *Elaeagnus × ebbingei*	Euonymus *Euonymus*
Grayleaf Cotoneaster *Cotoneaster glaucophyllus*	Indian Hawthorn *Rhaphiolepis indica*	Juniper (several varieties)
~~Nandina~~	Texas Sage *Leucophyllum frutescens*	
EVERGREEN SCREENING SHRUBS (high - 5' or greater)		
Austrian Black Pine *Pinus Nigra*	Cleyera *Cleyera*	*Eastern Red Cedar* *Juniperus Virginiana*

Foster Holly *Ilex x attenuata 'Fosteri'*	Leyland Cypress *Cupressus × leylandii*	Little Gem Magnolia *Magnolia grandiflora*
Nelliey R. Steven's Holly *Ilex 'Nellie R. Stevens'*	Sweet Viburnum *Viburnum odoratissimum*	Waxleaf Ligustrum *Ligustrum japonicum*
OTHER APPROVED SHRUBS		
American Beautyberry *Callicarpa americana L.*	Apache Plume *Fallugia paradoxa (D. Don) Endl. ex Torr.*	Aralia *Aralia*
Aucuba *Aucuba japonica*	Autumn Sage *Salvia greggii A. Gray*	Azalea *Rhododendron subgenus Azaleastrum*
Barberry	Black Dalea *Dalea frutescens A. Gray*	Burning Bush
Chinese Fringe Flower *Loropetalum chinense*	Desert Spoon *Dasylirion wheeleri*	Dwarf Crepe Myrtle
Flowering Quince *Chaenomeles speciosa*	Holly (multiple varieties) *Ilex*	Horizontal Cotoneaster Cotoneaster horizontalis
Leatherleaf Mahonia	Pampas Grass *Cortaderia selloana*	Red Yucca *Hesperaloe parviflora*
Rose (shrub form) *Rosaceae*	Spirea *Spiraea*	Turk's Cap *Malvaviscus arboreus var. drummondii*
VINES		
Boston Ivy *Parthenocissus tricuspidata*	Carolina Jasmine *Gelsemium sempervirens*	Confederate Star Jasmine *Trachelospermum jasminoides*
Coral Honeysuckle *Lonicera sempervirens L.*	Crossvine *Bignonia capreolata*	English Ivy *Hedera helix*
Japanese Honeysuckle *Lonicera japonica*	Rose (climbing variety)	Trumpet Vine *Campsis radicans*
Virginia Creeper *Parthenocissus quinquefolia*		
GROUNDCOVER		
Ajuga *Ajuga*	Asian Jasmine *Trachelospermum asiaticum*	Bermuda Grass *Cynodon dactylon*
Buffalo Grass *Bouteloua dactyloides*	Creeping Juniper *Juniperus horizontalis*	Fountain Grass *Cenchrus setaceus*
Liriope (Monkey Grass) *Liriope*	Mondo Grass *Ophiopogon japonicus*	Purple Wintercreeper *Euonymus fortunei*
St. Augustine Stenotaphrum secundatum	Tall Fescue *Festuca arundinacea*	Zoysia *Zoysia*
Article VI, Table D - Plant List, Prohibited		
Bois D'Arc *Maclura pomifera*	Bradford Pear *Pyrus calleryana*	Catalpa *Catalpa speciosa*
Cottonwood	Hackberry	Lombardy Poplar

Populus fremontii	*C. occidentalis*	*Populus nigra*
Mesquite *Prosopis*	Mimosa *Albizia julibrissin*	Mulberry *Morus nigra*
Red Tip Photinia *Photinia × fraseri*	Siberian Elm *Ulmus pumila*	Silver Maple *Acer saccharinum*

(Ord. No. 1407, § 2, 10-20-2009; Ord. No. 1527 , § 2, 10-15-19)

Sec. 106.06.17 Multifamily landscape requirements.

(a) *Minimum open space.* New multi-family developments shall use the following regulations:

(1) *Open space per bedroom*. Each lot or parcel of land used for multiple-family residences shall provide on the same lot or parcel of land usable open space, in accordance with the table below:

ARTICLE VI, TABLE F MULTIFAMILY OPEN SPACE REQUIRED PER BEDROOM	
Number of Bedrooms	Open Space Required
1	400 square feet
Each additional bedroom over 1	Additional 300 square feet

(2) *Minimum dimensions*. Each open space area shall have a minimum dimension of not less than 30 feet.

(3) *Minimum overall percentage of open space*. No less than 15 percent of the required open space shall be arranged or located as a contiguous mass. This contiguous mass must be located within the required open space.

(4) *Credits for amenities*. In meeting thes requirements, a credit of three (3) square feet may be applied for each square foot utilized for:

a. Swimming pools and adjacent decks, patios or lounge areas within ten feet of a pool;

b. Developed and equipped children's play areas;

c. Usable portions of recreational buildings; and

d. Private balconies and enclosed patios with a minimum dimension of five square feet.

Tennis courts are specifically excluded from this credit allowance.

(5) *Credit for sloped areas*. At the time of site plan approval, the Director of Development Services may give full or partial credit for open areas that exceed the maximum slope of 2 percent, if it is determined that such areas are environmentally significant and that their preservation would enhance the development.

(6) *Access to public parks*. At the time of site plan approval, the planning and zoning commission and town council may allow a credit not to exceed ten percent of the total required usable open space for adjacent and immediately accessible public parks. The combined credit for areas calculated at a three to one (3:1) basis and for public parks shall not exceed 50 percent of the total usable open space for an individual lot or parcel of land.

(7) *Minimum number of trees in open space*. One large canopy tree shall be provided per 1,000 square feet of required open space.

(8) *Hardscape*. All multi-family developments submitted after the adoption of this ordinance shall be required to include stained and stamped crosswalks from parking lots or structures to the main entrances of the buildings and other areas, as determined to be appropriate by the director.

(9) *Stone, gravel and rock*. If stone, gravel, decorative rock, crushed granite or other non-plant derived materials are used in a residential front yard, no more than 20 percent of the yard area may be made up of these materials. Non-plant derived materials should be used as an accent to the areas of the lawn made up of sod, living ground cover, low bushes or plants, or mulch and shall include vegetative

plantings within the stone/rock beds. In no case shall stone, gravel, rock or other non-plant derived materials be installed so that an impermeable surface area is created.

(10) *Mailboxes*. When mailboxes are grouped or clustered, they may be located in the right-of-way. The exterior of the mailbox structure shall be masonry to match the main buildings and the roof made of metal materials or materials that match the main buildings.

(11) *Artificial or synthetic turf*. Artificial or synthetic turf is prohibited.

(12) *Entrances to multi-family developments*. The landscape island at the main or secondary entrances to the multi-family development shall be within a platted lot to be owned and maintained by the management company. Landscaped entries shall be a minimum size of six feet by 30 feet and may include a monument entrance sign. Entry designs shall be subject to the approval of the director.

(13) *Landscaping for corner lots and residential/mulitfamily driveways.*

a. A minimum landscaped area of 900 square feet shall be located at the intersection corner of the lot, and commercial main entrance as shown on the landscape/site plan.

b. The landscaped area shall be provided within an area measured a minimum distance of 40 feet from the projected corner of the intersection on both sides of the lot or main entrance area.

(Ord. No. 1407, § 2, 10-20-2009; Ord. No. 1527 , § 2, 10-15-2019; Ord. No. 1587 , § 2, 1-5-2021)

Sec. 106.06.18 Commercial landscape requirements.

(a) *Interior landscape requirements.*

(1) *Minimum landscaped area*. A minimum of ten percent of the gross vehicular use area shall be devoted to living landscape which includes grass, groundcover, plants, shrubs and trees. This is to be measured from the edge of the parking and/or driveway paving and sidewalks. Where practical, the majority of this landscaped area should be visible from the roadway.

(2) *Minimum trees provided overall*. There shall be a minimum of one large canopy tree planted for each 400 square feet or fraction thereof of required interior landscape area. Three small ornamental trees, a minimum of six feet in height and three inches in diameter, may be substituted for one required large canopy tree not to exceed 25 percent of the required large canopy trees if approved by the town.

(3) *Parking lot islands and terminus row islands*. Interior areas of parking lots shall contain planting islands located so as to best relieve the expanse of paving. Such islands shall contain at least one large canopy tree, and shall be located at the terminus of all parking rows. The remainder of the island space shall be landscaped with shrubs, lawn and living groundcover not to exceed three feet in height. Any trees located within a planting island may be counted towards the required number of interior trees. The minimum total area of such islands shall be ten feet by 18 feet, but may design the radii to facilitate traffic maneuverability.

(4) *Parking lot island spacing*. Planting islands shall not be spaced greater than every ten spaces unless approved on the landscape plan in order to preserve existing trees and natural features or due to unique site features. Islands shall provide one large canopy tree. In all cases, the total area requirements for landscaped islands for the respective parking areas shall be satisfied.

(5) *Parking lot swales*. In some cases, the use of landscaped swales in lieu of curbs and/or curb stops may be allowed. Appropriate drainage plans and plants must be submitted if this option is proposed.

(6) *Parking Lot medians*: There shall be a landscaped median between two rows of head-in parking, at every 20 spaces.

(7) *Big Box parking lot walkway*. "Big Box" stores shall provide a minimum ten (10) foot wide continuous landscape island every eight single rows of parking, with a large canopy tree every 30 linear feet, subject to review and approval by the town. This does not waive the requirement for terminus islands and trees on parking rows.

(8) *Entrances to Big Box stores*. In "big box" developments of 50,000 square feet or more, an urban tree shall be placed in a tree grate or tree well every 30 feet on center within a minimum 12 foot wide sidewalk along active storefronts and mixed-use building fronts. Trees may be clustered so not to block the main entrance. Facade trees are not required in areas with an architectural arcade.

(9) *Vehicular access drives*. A small ornamental tree is required along major access lanes every 25 linear feet within a development where reasonable, subject to review and approval by the director.

(10) *Pedestrian connections*. One urban tree is required along internal pedestrian connections every 30 linear feet.

(11) *Curbs and wheel stops*. All landscaped areas will be protected by a raised four inch concrete curb and/or wheel stop. Wheel stops are required for all perimeter parking spaces. Pavement will not be placed closer than four feet from the trunk of a tree unless approved by the director.

(12) *Hardscape*. All nonresidential developments submitted after the adoption of this ordinance shall be required to include stained and stamped crosswalks from parking lots or structures to the main entrances of the buildings and other areas, as determined to be appropriate by the director.

(13) *Variety*. The applicant is also encouraged to plant a variety of ornamental trees, shrubs and flowers in addition to the required plantings. Any permeable surface not occupied by trees, shrubs, planting beds, signs or other permitted fixtures shall be planted with turf or other living groundcover.

(14) *Stone, gravel and rock*. If stone, gravel, decorative rock, crushed granite or other non-plant derived materials are used in an interior landscape area, no more than 20 percent of the area may be made up of these materials. Non-plant derived materials should be used as an accent to the landscaped areas made up of sod, living ground cover, low bushes, plants, or mulch and may include vegetative plantings within the stone/rock beds. In no case shall stone, gravel, rock or other non-plant derived materials be installed so that an impermeable surface area is created.

(15) *Artificial or synthetic turf prohibited* (e.g. AstroTurf™). Artificial turf is prohibited in interior landscape areas.

(16) *Exception to interior landscape requirements*. Industrial uses shall be exempt from the interior landscape requirements, subject to review and approval by the director.

(b) *Foundation planting and other landscaping.*

a. Foundation plantings or sidewalk tree gates are required for buildings or groups of contiguous buildings that are 5,000 square feet or larger. One large canopy tree four inch minimum caliper, shall be required for every one thousand square feet of gross building area. These trees shall be located within 20 feet of the face of the building. These plantings are intended to provide pedestrian areas while breaking up the large areas of impervious surface. Trees required by other sections of this ordinance will not meet this requirement. Trees can be grouped or planted in singular form. These tree plantings should be placed so as not to impede sign visibility or pedestrian safety.

b. Trees planted less than four feet from the back of curb shall be located in a tree gate with a minimum dimension of four feet.

c. Ornamental trees may be substituted for half of the required large canopy trees at a building's foundation at the rate of five ornamentals for each required large tree with Town approval.

d. The above requirements may be reduced if approved by the Town and additional pedestrian features; such as plazas, seating areas, fountains, and outdoor recreation facilities are provided. These facilities must occupy an area equal to or greater than ten percent of the total building area.

(c) *Landscaping for corner lots and commercial driveways.*

a. A minimum landscaped area of 900 square feet shall be located at the intersection corner of the lot, and commercial main entrance as shown on the landscape/site plan.

b. The landscaped area shall be provided within an area measured a minimum distance of 40 feet from the projected corner of the intersection on both sides of the lot or main entrance area.

(d) *Perimeter landscape requirements.*

(1) *Vehicular screening from right-of-way*. All vehicular use areas shall be screened from all abutting properties and the public right-of-way with a wall, fence, evergreen hedge, berm or other durable landscape barrier. Plants and shrubs used in living barriers shall be at least 36 inches high at time of planting and shall be a type and species from the recommended plant list that will form a continuous hedge. Sporadic breaks in the hedge row may be approved to achieve unique designs. Any landscape barrier not containing live plants or trees shall be a minimum of three feet high at time of installation. One large tree four inch caliper minimum shall be planted per 20 linear feet of landscape edge.

(2) *Additional Screening.* Where any portion of parking lots, drives, access easements or other rights-of-way abut the landscape edge, shrubs 36 inches minimum shall be planted to form a contiguous buffer along the common boundary line.

i. The number of required shrubs shall be calculated solely on the area of the required landscaped edge.

ii. All landscaped areas including shrubs shall be planted in a defined planting bed or Town approved area.

iii. A berm will be required in addition to shrubs if the pad site elevation at the property line is within two feet above or below the ROW elevation.

iv. The berm must be 24 to 40 inches above the average grade of the street and parking lot curbs.

v. The slope of the berm shall not exceed a 33 percent grade.

(3) *Minimum landscape buffer along rights-of-ways*. Except in the Lakefront District, for all residential, nonresidential and multiple-family parcels, a minimum 25 foot landscape buffer adjacent to the right-of-way is required.

(4) *Landscape ROW buffer corner clip*. For all nonresidential and multifamily parcels located at the intersection of two dedicated public rights-of-way (ROW), a minimum 25 foot landscape buffer shall be provided parallel to the corner clip right-of-way dedication.

(5) *Minimum number of trees within ROW landscape buffers*. Landscape buffers adjacent to the public right-of-way shall contain at least one large canopy tree each 20 linear feet or fraction thereof of street frontage, inclusive of driveways. Trees may be grouped or clustered to facilitate site design if approved by the Town.

(6) *Landscape buffers between properties*. A perimeter landscape buffer of at least ten feet in width shall be maintained between adjacent properties. This landscaping can be reduced to five feet when abutting property of the same zoning. This buffer does not apply to various lots within a unified development. Access ways between lots may be permitted through all perimeter landscape areas.

(7) *Minimum number of large trees within perimeter landscape buffers*. Perimeter landscape buffers not adjacent to the public right-of-way shall contain at least one large canopy tree every 25 linear feet or fraction thereof when adjacent to another commercial use, and at least one large canopy tree every 20 linear feet when adjacent to residential uses or zoning. Trees may be grouped or clustered to facilitate site design and shall be appropriately staggered when adjacent to property of the same zoning.

(8) *Minimum number of small trees within perimeter landscape buffers*. For every five large canopy trees or fraction thereof required along the street frontage and perimeter, three ornamental trees shall also be provided.

(9) *Stone, gravel and rock*. If stone, gravel, decorative rock, crushed granite or other non-plant derived materials are used in a perimeter landscape area, no more than ten percent of the area may be made up of these materials. Non-plant derived materials should be used as an accent to the landscaped areas made up of sod, living ground cover, low bushes, plants, or mulch. In no case shall stone, gravel, rock or other non-plant derived materials be installed so that an impermeable surface area is created.

(10) *Artificial or synthetic turf*. Artificial or synthetic turf is prohibited in perimeter landscape areas.

(e) *Residential adjacency landscaping standards.* In order to preserve and protect the integrity, protect the quiet enjoyment and maintain property values of single family and other residential neighborhoods, the Town has determined that it is necessary and appropriate to adopt specialized regulations for non-single family residential uses and buildings that are constructed within 100 feet of properties used for single family residences.

a. A minimum of 20 feet wide landscaped buffer shall be provided adjacent to existing residential or vacant land zoned for residential uses.

b. A double row of trees four inch caliper minimum on offset 15 foot centers is planted within the required rear landscape edge, where 50 percent of the trees are large trees.

(f) *Landscape point system.*

(1) *Purpose*. The purpose of the landscape point system is to afford developers the freedom to design interesting and unique landscaping to augment the architecture of the development. Developers are encouraged to be creative in selecting the amenity type to create unique and memorable features.

(2) *Points shown on plan*. Landscape plans must show a minimum number of points in order to obtain approval. Landscape points are determined by the size of the lot being developed. These requirements are in addition to the interior and perimeter landscaping requirements.

ARTICLE VI, TABLE G

NUMBER OF LANDSCAPE POINTS PER ACRE

Site Size	Minimum Number of Points Required
<3 acres	25 points
Between 3 and 15 acres	30 points
>15 acres	35 points

(3) *List of amenities and points earned.* The following is a list of landscape elements and their associated point value, subject to review and approval by the director:

ARTICLE VI, TABLE H

LANDSCAPE POINTS EARNED PER AMENITY

Amenity Type/Size	Number of Points
Hardscaping, signage, or architectural features that include reference to Little Elm's lakefront character, such as use of sailboats or lighthouses in amenities	10
Enhanced hardscape (Stamped entryway (per design guide), decorative cobble walkways, meandering sidewalks, etc.)	5
Enhanced landscaping (within development and at the entranceways of the development) Enhanced hardscape (Stamped entryway (per design guide), decorative cobble walkways, meandering sidewalks, etc.)	5
Enhanced site canopy (planting perimeter trees one per 30 feet AND locating a parking island every ten spaces)	5
Enhanced streetscape elements (e.g. decorative lampposts, receptacles, decorative bollards, etc.)	5
Use of street furniture (benches, tables and chairs)	5
Enhanced buffers: (providing a landscape buffer five feet more than what is required adjacent to street frontage and perimeter)	5
Open space provision greater than what is required (20 to 30 percent over minimum)	5
Buffer berms (providing 3-foot-high berms along the street frontage)	5
Use of shaded and decorative outdoor seating areas (benches, outdoor dining, etc.)	5
Use of masonry planters with irrigation (minimum 4)	5
Foundation plantings along 75 percent of the building's primary facade	5

Decorative entrance including a landscaped median entry which is a minimum eight feet in width and 60 feet long	5
Public art, small (obelisks, sculptures, statues, clock towers, water fountains, etc.)	5
Public art, large (obelisks, sculptures, statues, clock towers, water fountains, etc.)	10
Enhanced Amenity detention/retention pond (wet with fountain feature)	5
All outdoor lighting is "Darksky Approved" and meets Town's Lighting requirements	5
Other (a developer may propose a unlisted landscape element if it meets the spirit and intent of the ordinance, subject to review and approval by the director)	5

(4) *Developer discretion*. The developer may use any combination of the aforementioned landscape elements to obtain the necessary number of points required for the development. Different lots and landscapes will lend themselves to different types of designs. These regulations attempt to encourage creativity, diversity and water conservation in landscaping.

(5) *Scale, size, type*. Elements, both in terms of quantity and quality, should be in scale with the development, as determined by the Director. Multiple repetitions of an element can be awarded extra points, as determined by the director.

(g) *Approval of landscape site plan alternative waivers.*

a. The town council through a landscape site plan waiver may approve waiver alternatives to the landscape provisions.

b. All waivers must be processed through a developers agreement that is approved by the town council.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1527 , § 2, 10-15-2019)

Sec. 106.06.32 Residential fences.

(a) *General requirements.*

(1) *Permit required.*

a. Fence construction or repair of greater than 50 percent of the length of the fence requires a permit. Repairs with a total length of less than one full length of the fence (side or back yard) may be completed without a permit with materials matching the existing fence.

b. A plan showing exact materials, location, height, dimensions from property lines, sidewalks, curbs, and location of gates must accompany the completed application form and fee. The design of the fence must accommodate vision sight lines at the intersections of two roadways and the intersection of a drive with an alley or a roadway with a five-foot by five-foot triangle in these locations, measured from the edge of pavement.

(2) *Regulations.*

a. *Maximum height of residential fences.* Fences shall not be greater than eight feet in height, excluding a maximum six inches allowance for ground clearance and a decorative cap.

b. *Materials allowed.* No fence material shall be used to construct a fence except for those listed and regulated in this chapter. Generally, residential fences should only be wooden or black tubular steel (powder coated ornamental iron).

c. *Materials prohibited.* Barbed wire, electric, and other injurious fence material is prohibited in the town, unless the property is an agricultural district over five acres in size with a current AG Agricultural exemption tax status, legitimately needed for industrial purposes, or otherwise approved by the director.

d. *Fences that back or side to other residences.* Fences that back or side to another residence may have either side of the fence face the interior of the lot.

e. *Fences located on corner lots.* On all corner lots, fences shall not be closer than 15 feet from the face of any curb, unless otherwise approved by the director.

f. *Fences facing rights-of-way (on back, side or corners).* All fences erected on side yards of corner lots and reverse corner lots or backing to a right-of-way of shall be cedar, board-on-board, with a decorative cap so that a finished fence side faces the street.

g. *Fences located between houses that face the street.* The portion of fence that is parallel to the street and perpendicular to the fence along the side yard must be constructed of cedar, board-on-board, with a decorative cap so that a finished fence side faces the street.

h. *Fences in front yards.* Fences and walls are only allowed in front yards up to 30 inches in height and must be either: split-rail, wrought iron, picket fence, or decorative masonry wall. Lots over one acre in size are exempt from this regulation, subject to review and approval by the director. All front yard fences should generally be 50 percent open, except for walls when allowed.

i. *Public rights-of-way, easements.* No fence shall be erected on public right-of-way or within any drainage easement, unless otherwise authorized by the director.

j. *Within property lines.* Fences shall not encroach upon any property line (front, side, or rear).

k. *Fences adjacent to scenic views.* All fences installed adjacent to a floodplain, creek, or dedicated open space shall be black tubular steel.

l. *Neighborhood integrity grant program.* Properties that have exterior fences improved by the town through the Neighborhood Integrity Grant program shall maintain, repair, and replace the fence to the same standard as it was installed by the town.

m. *Vacant Lots.* Fences cannot be located on vacant or undeveloped lots.

(3) *Required inspections.*

a. A footing inspection is required. The footing inspection must be completed prior to pouring concrete.

b. A final inspection is required and must be scheduled within one week (five business days) of completion.

c. All fence installers are required to be registered with the Town of Little Elm.

d. Fences that fail inspection through the rental registration program shall be repaired or replaced accordingly.

(b) *Wooden fence standards.*

(1) *Vertical posts.* All vertical posts shall be galvanized steel with a minimum two and three-eighths-inch diameter, a minimum CS 20 (.095) thickness, and set in a concrete footing.

(2) *Concrete footings.* Concrete footings shall be a minimum of eight inches in diameter and must be at least six inches deeper than the post depth.

(3) *Spacing of footings.* For fences less than seven feet in height, posts shall be spaced at a maximum of eight feet on center, set in a concrete footing of no less than 24 inches deep. For fences that are seven feet or greater in height, posts shall be spaced at a maximum of six feet on center, set in a concrete footing of no less than 36 inches deep.

(4) *Allowed materials.* Residential wood material shall be stained Western Red Cedar. White wood, if pre-stained or stained a natural brown or earth tone color, is also allowed.

(5) *Construction.* All materials shall be securely fastened, vertical boards to horizontal stringers, stringers to vertical posts, top rail, to ensure an ongoing attractive appearance and safe condition, free from rot, rust, vandalism, and other sources of decay.

(6) *Kick board.* The bottom of the fence shall be designed to prevent ground-to-wood contact and allow drainage beneath it. This can be achieved through the use of a concrete mow strip poured between the fence supports or by installing a two- by six-inch pressure treated kick board to cover the gap between the bottom of pickets and the ground. The kick board may have ground contact so long as it does not inhibit drainage.

(7) *Private residential fence adjacent to a subdivision perimeter wall.* A fence that is parallel to or perpendicular to such wall shall not exceed the height of the adjacent subdivision wall. A fence that is separated from the subdivision screening wall by a public alley or right-of-way is deemed to not be adjacent to the subdivision screening wall. If abutting, the height of the residential fence is allowed to transition or increase in height from the height of the subdivision screening wall to the maximum allowable height of the residential fence, provided that the transition is an even or smooth rate of increase and does not exceed a span of 16 feet in length.

(8) *Fences facing streets.* When a residential fence is visible to the right-of-way, the construction must be board-on-board with a decorative cap and with support posts placed on the inside of the fence (i.e. facing the enclosed area). This applies to both new fences and existing fences being replaced.

(c) *Exceptions.*

(1) *Materials.* The use of chain link, vinyl, split-rail, and composite materials may be allowed, if constructed to manufacturer's specifications, subject to discretionary review and approval by the director. Otherwise, these materials are generally prohibited. Existing non-conforming chain link fences may be replaced with similar material.

(2) *Interior fences.* Defined as fences within the property fence for specific uses, such as dog runs, swimming pool fences, and other similar situations within the interior of a back yard. These interior fences may be constructed of alternate materials, as long as all exterior and shared fence lines are built to compliance with section 106.06.32(a) and (b) and the alternate interior materials are shorter than the exterior fence and not visible to the public, subject to discretionary review and approval by the director.

(3) *Gate embellishments.* Decorative gate embellishments are allowed; however, they shall not exceed the height of the fence by more than two feet.

(4) *Submittal for review and approval.* Alternate materials and methods that deviate from the fence standards listed above may be submitted, subject to discretionary review and approval by the director.

(Ord. No. 1407, § 2, 8-15-2017)

Sec. 106.06.45 Parking requirements per land use.

(a) *Computation of parking spaces.* In computing the number of parking spaces required for any building or development, the following rules shall govern:

(1) The term "floor area" means the gross floor area of the specific use.

(2) Where fractional spaces result, the parking spaces required shall be constructed to be the next higher whole number.

(3) The parking space requirement for a use not specifically mentioned herein shall be the same as required for a use of similar nature, subject to review and approval by the director.

(b) *Compliance upon changes of use.* Whenever a building or use is changed or enlarged in floor area, number of employees, number of dwelling units, seating capacity, or otherwise, which creates a need for an increase in the number of existing parking spaces, such spaces shall then and thereafter comply with the parking requirements set forth herein.

(c) *Off-street parking.* When a building or structure is constructed or expanded, off-street parking shall be provided, per the following table:

ARTICLE VI, TABLE L	
REQUIRED PARKING RATIOS	
Land Use	Parking Ratio
Amusement, indoor commercial	1 space per 200 square feet of floor area.
Amusement, outdoor commercial	1 space per 1,000 square feet within the outer boundaries of the proposed use, including any buildings, exhibit booths and areas devoted to the use.
Assembly uses (non-profit)	1 space per 4 seats in the main auditorium.
Athletic stadium or field	50 spaces per field for fields without fixed seating.
Bank or similar financial establishment	1 space per 300 square feet of floor area.
Big box	1 space per 250 square feet of floor area.
Bowling alley	6 spaces per lane.
Automobile wash (automated)	1 space per 200 square feet of floor area; plus adequate stacking spaces per bay; minimum of 2 spaces.
Automobile wash (self-serve)	2 spaces; plus stacking spaces for each bay.
Child care center	1 space for every 10 students; plus adequate stacking spaces for drop-off lane.
Civic/convention/community center	10 spaces, plus one additional space per 300 square feet of floor area in excess of 2,000 square feet. If an auditorium is included as a part of the building, its floor area shall be deducted from the total and additional parking provided on the basis of 1 space per 4 seats that it contains. The parking ratio can also be determined by a parking demand analysis study for proposed use, subject to review and approval by the director.
College, university or trade school	1 space per classroom, laboratory, or instruction area plus 1 space per 3 students accommodated in the institution.
Convenience store	1 space per 200 square feet of floor area.

Duplex	A concrete drive with a minimum 2 car garage and 2 spaces in driveway per unit.
Golf course	Minimum 30 spaces per 9 holes, plus 1 space per 200 square feet of floor area for country club, retail, office, etc.
Green house or nursery	1 space per 5,000 square feet of outdoor storage area; plus 1 space for each 200 square feet of indoor floor area.
Health/fitness center/ gymnasium	1 space per 200 square feet of floor area.
Hospital	1 space per 2 beds and 1 space per employee on the largest shift.
Hotel	1 space per room, unit or guest accommodation plus 1 space for every 300 square feet of restaurant, office, or conference area
Kennel or stable	1 space per 500 square feet of floor area.
Library or museum	10 spaces, plus 1 space per 300 square feet of floor area.
Lodge, club, or fraternal organization	1 space per 200 square feet of floor area.
Manufacturing, processing, warehousing, and industrial uses	1 space per employee on the maximum working shift plus 1 space for every 1,000 square feet of floor area.
Mini-warehouse (self-storage)	1 space per 5,000 square feet of total floor area.
Mixed use building	See Lakefront Zoning District for parking regulations section 106.04.02.
Mobile home - Manufactured home	A concrete drive with a minimum of 2 spaces, which may include a carport.
Mortuary or funeral home	1 space per 4 seats in funeral service rooms.
Movie theatre or cinema	1 space per 4 seats.
Nursing home	1 space per 6 beds and 1 space for each day staff member.
Office, business or professional	1 space per 300 square feet of floor area.
Office, medical, dental, or health	1 space per 200 square feet of floor area.
Recreational, private or commercial area or building (other than listed)	1 space per 4 persons to be normally accommodated in the establishment.
Restaurant or cafeteria	1 space per 100 square feet of floor area. Outdoor seating areas (covered or not) under 500 square feet are exempt.
Restaurant, pick-up or delivery only	1 space per 200 square feet of floor area.
Retail or personal service	1 space per 200 square feet of floor area.
Retirement housing	1 space per 5 beds.
School, elementary and junior high	1 space per classroom plus 1 space for each 4 seats in any auditorium, gymnasium, or other place of assembly.
School, high school	1 space per classroom, laboratory, or instruction area plus 1 space for every 3 students accommodated in the institution.
Single-Family residential	Minimum 2 car garage with parking for 2 cars in driveway is required. Carports prohibited, unless fully encased with masonry, pitched roof, and attached to the primary residence in the rear yard.
Townhouse	Minimum 2 car garage with parking for 2 cars in driveway is required. Carports prohibited, unless fully encased with masonry, pitched roof, and attached to the primary residence in the rear yard.

Veterinary or animal hospital	1 space per 300 square feet of floor area.

(d) *Parking penalty.* Where parking exceeds the minimum number of required spaces by more than ten percent, landscaping of parking areas shall be increased so that planting islands shall not be spaced greater than every ten spaces rather than the required 12 spaces.

(Ord. No. 1407, § 2, 8-15-2017; Ord. No. 1527 , § 2, 10-15-2019)

Sec. 106.06.46 Stacking standards.

(a) *Minimum size.* A stacking space shall be an area on a site measuring ten feet by 20 feet with direct forward access to a service window or station of a drive-through facility which does not constitute space for any other circulation driveway, parking space, escape lane or maneuvering area.

(b) *Distinctive markings.* All stacking spaces shall be marked with stamped or stained concrete to differentiate the spaces from drive aisles or parking spaces.

(c) *Escape lane.* If the director deems that an escape lane is necessary by to allow vehicles to get out of stacking lane in the event of a stalled vehicle, emergency or accidental entry, it shall be of at least eight feet in width and shall have a negotiable geometric design.

(d) *Minimum number of stacking spaces per land use.* Off-street stacking requirements for drive-through facilities shall be as follows:

ARTICLE VI, TABLE M	
REQUIRED STACKING SPACES	
Type of Land Use	Minimum Number of Stacking Spaces
Banks, financial institutions	3 spaces per line
Automobile wash, automated self-service	3 spaces per wash bay, including one at the bay exit for drying
Automobile wash, full-service	3 spaces per car wash line
Automobile wash, wand-operated self-service	2 spaces per wash bay, including one at the bay exit for drying
Kiosks with drive-thru	2 spaces per line (or per director)
Restaurants with one order window	4 spaces per line
Restaurants with two or more order windows	2 spaces per second line and any subsequent line
Retail, pharmacy, dry cleaners	3 spaces per line

(Ord. No. 1407, § 2, 8-15-2017)

Date:	01/16/2024
Agenda Item #:	6. D.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Hold a Public Hearing, Present, Discuss, and Consider Action on **Ordinance No. 1746 Regarding a Proposed Text Amendments to Chapter 107, Zoning Ordinance, by Amending Certain Sections and Associated Appendices in Order to Establish Compliance with New State Statues as a Result of the Recent Legislative Session and Enable Minor Corrections and Clarifications Throughout the Text.**

Open Public Hearing:
Receive Public Comments:
Close Public Hearing:
Take Action on Ordinance No. 1746:

DESCRIPTION:

Background.

In 1976 the Town of Little Elm first adopted a Subdivision Ordinance through Ordinance No. 70. The Subdivision Ordinance has been or amended several times since it was originally adopted. The most recent comprehensive change to the Subdivision Ordinance occurred in 2018 through Ordinance No. 1444. The Subdivision Ordinance was partially updated in 2019 through Ordinance No. 1531. However, since 2018, there has not been a comprehensive update of the Subdivision Ordinance.

Proposal.

As a result of the 2023 legislative sessions, the legal counsel for the Town has proposed several text amendments to keep the Town compliant with new State Statutes. The engineering team has also proposed several changes to the Subdivision Appendix, specifically the Town's Stormwater and retaining wall sections based in part on new requirements but also creating clearer guidelines. Similar to the planning staff taking the opportunity to make clarifications and minor revisions in Chapter 106, the engineering team are also proposing several amendments to Chapter 107. The proposed changes are specific to the engineering standards details based on their experience with the current standards and developmental and technological shifts in construction science.

Changes suggested by legal counsel have been noted in the red-lined version and the change log to easily differentiate what is a legal requirement versus other proposed changes.

The changes proposed by legal counsel are as follows:

- 107.02.03 “Director of Development Services”
  - Gives Development Services Director the ability to approve plats if there is not sufficient time for P&Z or Council Approval. Recommended by Town Attorney. Should the Director deny a plat, it can be appealed to the Planning and Zoning Commission.

- 107.03.02 “Application Contents”
  - Clarifies that new state statutes allows the Director of Development Services to be allowed to only accept platting submittals on certain days in accordance to a schedule posted on the Town’s website. This is how the Town has already been conducting businesses, but the edit to State Statute clarifies that establishing submittal dates is allowed.

- 107.03.03 “Application submittal process, official filing date, request for thirty-day review period extension”
  - This clarifies that the date the applicant submits the plat, along with a completed application, and pays the fee is the day that shall be considered when starting the 30-day review period.

- 107.08.01 “General Subdivision Policies”
  - Added several clauses that will bring the Subdivision Policies into compliance with new State Statutes that pertain to Right of Way dedication.

- 107.08.03
  - Added language that will bring the Subdivision Policies into compliance with new State Statutes that pertain to Right of Way dedication.

Changes proposed by the engineering team are as follows:

- Chapter 107 Appendix
  - Engineering staff have proposed several changes to remain up-to-date on new state regulations, construction technologies, and best practices. See Engineering Change log for more detailed explanations.

Comprehensive Plan.
Staff believe these proposed minor changes are still in line with the intent of the current Subdivision Ordinance, overall vision for the Town, and work towards the goals and objectives set forth in the Comprehensive Plan.

Commission Findings.
At their regular meeting on December 21, 2023, the Planning and Zoning Commission held a public hearing and discussed different platting scenarios in which the new amendments would be applicable, and retaining wall requirements. The Commission unanimously (6-0) approved the

request with the condition that "his or her designee" be added in Sec. 107.02.03 in case the Director is absent.

After the meeting, Staff confirmed that current language already allows for a designee and therefore no changes have been made to the proposal amendments.

BUDGET IMPACT:

This item has no budget impact.

RECOMMENDED ACTION:

The Planning and Zoning Commission recommends approval of the request.

Attachments

Chapter 107 Change Log

Ordinance No. 1746 - Chapter 107 Amendments

Section	Description	Old	New
107.02.03	Gives Development Services Director the ability to approve plats if there is not sufficient time for P&Z or Council Approval. Recommended by Town Attorney		*Additional Authority* . In the event there is not sufficient time for the Planning and Zoning Commission and/or the Town Council to approve or deny any plat based upon the filing date of such plat, the Planning Director may approve or deny such plat, pursuant to Section 212.0065 of the Texas Local Government Code, as amended. The disapproval of any plat by the Planning Director may be appealed to the Planning and Zoning Commission and/or the City Council.
107.03.02	Adds new state statute reference, Per Town Attorney	Development services staff shall establish submittal deadlines for all applications decided by the director of development services and by the commission. Such submittal schedule will be posted on the town website.	As authorized by Texas Local Government Code Section 212.0015, Development services staff shall establish submittal deadlines for all applications decided by the director of development services and by the commission. Such submittal schedule will be posted on the town website.
107.03.03	Clarification on the Platting process given new legislation, per Town Attorney		...the date the applicant submits the plat, along with a completed plat application and the application fees and other requirements prescribed by Texas Local Government Code Section 212, which date shall also be considered...
107.08.01.b.1	Added new state statute reference, per Town Attorney.		All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).
107.08.01.b.3	Added new state statute reference, per Town Attorney.		All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).
107.08.03	Added new state statute reference, per Town Attorney.		All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).
107 Appendix	Replaced Sec 3.0 and 6.0 with new Sec 3.0 Stormwater design	See Engineering Change log	See Engineering Change log
107 Appendix	Added new Sec 6.0 - Retaining Wall Design Requirements	See Engineering Change log	See Engineering Change log
107 Appendix	Replaced Standard Details	See Engineering Change log	See Engineering Change log

TOWN OF LITTLE ELM

ORDINANCE NO. 1746

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING CHAPTER 107, ZONING ORDINANCE, BY AMENDING SEC. 107.02.03 – DIRECTOR OF DEVELOPMENT SERVICES, SEC. 107.03.02 APPLICATION CONTENTS, SEC. 107.03.03 – APPLICATION SUBMITTAL PROCESS, OFFICIAL FILING DATE, REQUEST FOR THIRTY-DAY REVIEW PERIOD EXTENSION, SEC. 107.08.01 – GENERAL SUBDIVISION POLICIES, SEC. 107.08.03 – STREETS AND ALLEYS, AND APPENDIX CHANGES; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHERE AS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, Town staff has recommended proposed textual changes to the Zoning Ordinance; and

WHEREAS, the Town's Planning and Zoning Commission and the Town Council of the Town of Little Elm, Texas, in accordance with the state law and the ordinances of the Town, have given the required notices and have held the required public hearings regarding the adoption of the proposed amendments; and

WHEREAS, after due deliberations and consideration of the recommendation of the Town's Planning and Zoning Commission, and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determine the various amendments to the Zoning Ordinance are in the best interest of public health, safety, and welfare of the residents of the Town.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. AMENDMENT AND ADOPTION. From and after the effective date of this ordinance, the following sections of Chapter 107, Subdivision Ordinance, Sec.107.02.03 - Director of Development Services, Sec. 107.03.02 - Application Contents, Sec. 107.03.03 - Application Submittal Process, Official Filing Date, Request for Thirty-day Review Period Extension, Sec. 107.08.01 - General Subdivision Policies, Sec. 107.08.03 – Street and Alleys, and Appendix

Standards, of the Code of Ordinances of the Town of Little Elm, Texas, are hereby amended through the adoption of the sections attached hereto.

SECTION 3. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are in direct conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. SEVERABILITY. The sections, paragraphs, sentences, phrases, clauses and words of this Ordinance are severable, and if any section, paragraph, sentence, phrase, clause or word in this Ordinance or application thereof to any person or circumstance is held invalid or unconstitutional by a Court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of this Ordinance, and the Town Council of the Town of Little Elm, Texas hereby declares that it would have passed such remaining portions of this Ordinance despite such invalidity, which remaining portions shall remain in full force and effect.

SECTION 7. EFFECTIVE DATE. This Ordinance shall take effect immediately upon its adoption in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

The Town of Little Elm, Texas

_____

Curtis J. Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

ATTACHMENT –
AMENDED SECTIONS OF CHAPTER 107 – SUBDIVISION ORDINANCE

Amended Sections

Section.107.02.03 - Director of Development Services

Selection.107.03.02 - Application Contents

Section.107.03.03 - Application Submittal Process Official Filing Date, Request for Thirty-day Review Period Extension

Section.107.08.01 - General Subdivision Policies

Section.107.08.03 – Street and Alleys

Appendix

Sec. 107.02.03 Director of development services.

(a) *Responsible official.* The director of development services is the responsible official for the following types of applications, approval of requests for review time extensions, variances, and petitions:

(1) Review and staff report, including a staff recommendation for approval/approval with conditions/disapproval with conditions, for any type of plat;

(2) Approval of requests for an extension of the 30-days review period;

(3) Appeal of a decision on any application for which the town engineer is the responsible official;

(4) Vested rights petition for any application when the director of development services is the responsible official.

(5) Review recommendations by the community development corporation (CDC), and carry out the CDC's decisions, on the following types of applications:

a. Acceptance of fees in lieu of parkland dedication;

b. The portion of an application showing where park land, including trails, is to be dedicated, and whether such dedication is acceptable;

c. Any other portions of applications showing items required by article 107.09, parks and open space.

(b) *Final decision-maker.* The director of development services is the final decision-maker for the following types of applications (subject to any appeal):

(1) Minor plat, as outlined in section 107.04.05, minor plats;

(2) Amending plat, as outlined in section 107.04.08, amending plats;

(3) Extension for a preliminary plat approval, as outlined in section 107.04.03, preliminary plats; and

(4) Certain types of vested rights petitions, as outlined in section 107.10.02, vested rights.

(c) *Additional Authority*. In the event there is not sufficient time for the Planning and Zoning Commission and/or the Town Council to approve or deny any plat based upon the filing date of such plat, the Director of Development Services may approve or deny such plat, pursuant to Section 212.0065 of the Texas Local Government Code, as amended. The disapproval of any plat by the Director of Development Services may be appealed to the Planning and Zoning Commission and/or the City Council.

(Ord. No. 1444, § 2(Att. A), 3-6-2018; Ord. No. 1531, § 2, 11-19-2019)

Sec. 107.03.02 Application contents.

(a) *Application contents generally.* All applications shall be submitted on a form supplied by the development services staff with the required information and exhibits as stated on the application form. Incomplete applications shall not be accepted. Neither the submission or acceptance of an application, however, shall be considered a filing of a plat application for purposes of triggering the Town's statutorily mandated 30-days review period of plat applications. *See*107.03.03 for determining the filing date for the 30-days review period.

(1) *Application timing.*

a. As authorized by Texas Local Government Code Section 212.0015, Development services staff shall establish submittal deadlines for all applications decided by the director of development services and by the commission. Such submittal schedule will be posted on the town website.

b. An application must be considered officially complete in accordance with section 107.03.03(c), determination of completeness, of this subdivision ordinance prior to being processed for review and consideration.

(2) *Fees required.* Every application shall be accompanied by the prescribed fees set forth in the town's fee schedule, as approved by town council and as may be amended from time to time. Fees are not refundable and are not a guarantee of approval. Review of the application will not begin until the appropriate fees have been processed by the town.

(3) *Proof of paid taxes on property.* An application shall not be deemed complete, nor shall it be approved, if there are delinquent town taxes on the subject property.

(b) *Modification of applications prior to approval.* The applicant may modify any submitted application prior to the expiration of the period during which the town is required to act on the application.

(1) *Modifications requested by the town.* Town requested revisions or modifications to any plat are required to be resubmitted to the department services department a minimum of five calendar days prior to the scheduled date for the planning and zoning commission hearing to allow staff adequate time to review the revisions and modifications for completeness and accuracy. Resubmittals for residential replats that require public noticing must be submitted a minimum of 20 calendar days prior to the scheduled date for the planning and zoning commission hearing to allow staff adequate time to review the revisions and modifications for completeness and accuracy and to publicize the public hearing in the official newspaper of the town, as required by state law.

(2) *Additional revisions.* Should certain requested revisions not be completed to the satisfaction of the town staff, additional revisions may be required from the applicant. The additional comments to be addressed may affect the tentatively scheduled planning and zoning commission hearing date (see section 107.04.04).

(3) *Applicant initiated revisions.* In all other instances (e.g., when the applicant chooses to submit a revised application on his own accord because of a change in development decisions), submittal of a modified application shall be subject to additional town staff review.

(Ord. No. 1444, § 2(Att. A), 3-6-2018; Ord. No. 1531, § 2, 11-19-2019)

Sec. 107.03.03 Application submittal process, official filing date, request for thirty-day review period extension.

(a) *Initiation by owner.* An application required under this subdivision ordinance may be initiated only by the owner of the land subject to the application, or by the owner's duly authorized representative. If the applicant is a representative of the property owner, the application shall include a written and notarized statement from the property owner, such as a duly executed power of attorney, authorizing the representative to file the application on the owner's behalf.

(b) *Applicability.* The procedures within this chapter shall apply to all applications that are required by the town and submitted in accordance with this subdivision ordinance.

(c) *Official filing date.* The 30-day time period established by state law, and by this subdivision ordinance, for approving, approving with conditions, or disapproving with conditions, shall begin on the official filing date. The official filing date is defined as the date the applicant submits the plat, along with a completed plat application and the application fees and other requirements prescribed by Texas Local Government Code Section 212, which date shall also be considered the date when the application for a plat is determined to be administratively complete. An application is considered administratively complete , and thus filed, upon the occurrence of all of the following: (1) when all necessary forms, supplemental documents, and copies are submitted and accepted by staff; (2) when staff has determined that the application for a plat meet all requirements of applicable town ordinances so that it may be reviewed by the Planning and Zoning Commission; and (3) all fees associated with the application have been paid and the issuance of a fee receipt by staff has occurred; and

(d) *Request for extension 30-day review period.* Pursuant to Texas Local Government Code, § 212.009(b-2), upon application in writing by the applicant, the Planning and Zoning Commission or, if applicable, the Town Council may approve one or more extensions of right to 30-day action, each such extension not to exceed 30 additional days. The director of development services shall be the responsible official for accepting a request for an extension of the 30-day review period.

(e) *Owners dedication language.* Refer to the plat checklist for the appropriate owner dedication language to include on the plat.

(Ord. No. 1444, § 2(Att. A), 3-6-2018; Ord. No. 1531, § 2, 11-19-2019)

Sec. 107.08.01 General subdivision policies.

(a) *Conformance to plans.*

(1) *Public improvements.* Proposed public improvements serving new development shall conform to and be properly related to the public facility elements of the comprehensive plan, other adopted master plans for public facilities and services, and applicable capital improvements plans, and shall at a minimum meet the service levels specified in such plans.

(2) *Conformance with master thoroughfare plan.* All plats within the town and its ETJ, and corresponding construction plans, shall provide for thoroughfares as shown in the master thoroughfare plan. Minor adjustments to thoroughfare alignments may be allowed without amending the master thoroughfare plan if the town engineer determines the new alignment meets the spirit and intent of the master thoroughfare plan and will not compromise public safety or traffic efficiency. The design and construction of all proposed thoroughfares shall be in conformance with the town's engineering design standards, and is subject to approval by the town engineer. Such approvals shall be required prior to any plat approval.

(3) *Master thoroughfare plan amendment.* If a significantly different roadway alignment or a road type from what is shown on the master thoroughfare plan is proposed, then the master thoroughfare plan shall be amended prior to any plat approval. Submission of a traffic impact analysis (TIA) of the proposed amendment by the developer may be required if the director of development services and the town engineer determine that such an analysis is necessary to fully assess the impact of the proposal upon the town's overall thoroughfare network.

(4) *Water and wastewater plans.* The design and construction of the water system and wastewater system to serve the development shall be in conformance with the town's master plans for water and wastewater facilities and with the engineering design standards. The design is subject to approval by the town engineer prior to approval of the construction plans and the final plat.

(5) *Storm drainage standards.* The design and construction of the storm drainage system to serve the development shall be in conformance with, but not limited to, the town's master plans for stormwater drainage, with the town's storm drainage policies (water reuse master plan), and with the engineering design standards. The design is subject to approval by the town engineer prior to approval of the construction plans and the final plat.

(b) *Adequate public facilities.*

(1) *Adequate services for areas proposed for development.* Land proposed for development in the town and in the town's ETJ shall be served adequately by essential public facilities and services, including, but not limited to, water distribution, wastewater collection and treatment, roadways, pedestrian circulation, storm drainage conveyance, and park and recreational facilities. Land shall not be approved for platting or development until adequate public facilities necessary to serve the development exist or provisions have been made for the facilities, whether the facilities are to be located within the property being developed or offsite. All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).

a. *Street access.* A plat will not be approved unless all of the proposed lots have safe and reliable street access for daily use and emergency purposes.

1. A plat will not be approved unless all of the proposed lots have access to an improved public street (or a public street that will be improved during construction of the proposed development) that meets the town's minimum design and paving standards, or to an

approved public way or mutual access easement that is connected to an improved public street.

2. Except for lots that are provided access from an approved cul-de-sac, all lots within a development shall have at least two means of access or approach. Where development phasing or constraints of the land prevent the provision of a second, separate means of access, the town may accept a temporary, paved street connection provided that a second permanent access point can be reasonably anticipated with future development of adjacent properties.

3. In certain circumstances where providing two means of access to a site is not feasible, the planning and zoning commission may waive this requirement if staff can demonstrate that the site can be adequately served by emergency vehicles and that life and safety issues have not been compromised.

4. For properties situated adjacent to an existing or planned median-divided thoroughfare, at least one of the required access points shall occur at, or through access easement connection to, a median opening (see diagram 107.13.01, median and cross access).

b. *Water.* A plat will not be approved unless all of the proposed lots are connected to a public water system which is capable of providing adequate water for health and emergency purposes.

1. Except for lots along an approved cul-de-sac, all lots shall be provided service connections from a looped water main providing water flow from two directions or sources.

2. Water service shall be sufficient to meet the fire flow requirements of the proposed development, except where a suitable alternative means of fire protection is approved by the fire chief.

3. The town may require the phasing of development and/or improvements to the water system to ensure adequate fire protection.

4. Plats for residential lots greater than one acre in size may use private well water, at the discretion of the town engineer.

c. *Wastewater.* A plat will not be approved unless all of the proposed lots are served by an approved means of wastewater collection and treatment.

1. The projected wastewater discharge of a proposed development shall not exceed the proposed capacity of the wastewater system.

2. The town may require the phasing of development and/or improvements to the sanitary sewer system so as to maintain adequate wastewater capacity.

3. Plats for residential lots greater than one acre in size may use private septic systems, at the discretion of the town engineer.

d. *Storm drainage.* Increased stormwater runoff attributable to new development shall not cause impacts to adjoining, upstream or downstream properties. Impacts are defined as an increase in runoff between pre- and post-development. Where the projected runoff from a new development exceeds runoff from pre-development conditions, the town may require the phasing of development, the use of control methods such as retention or detention, obtaining off-site drainage easements, and/or the construction of off-site drainage improvements as means of mitigation. All designs shall comply with the engineering design standards, as it exists or may be amended.

(2) *Town's cost of review.* Should the town deem that adequate review of the roadway, water, wastewater, or drainage submittal should be outsourced to a third party, the cost of such review shall be passed through to the developer or applicant.

(3) *Property owner's responsibilities.* The property owner shall be responsible for, but not limited to, the following:

a. *Dedication and construction of improvements.* The property owner shall dedicate all rights-of-way and easements for, and shall construct and extend, all necessary on-site and off-site public improvements for water distribution, wastewater collection and treatment, streets, storm drainage conveyance, and other improvements that are necessary to adequately serve each phase of a proposed development at service levels that are consistent with the town's applicable master facilities plans and engineering design standards. All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).

b. *Abutting substandard streets.* Where a substandard street abuts or traverses a proposed development, the town may require the property owner to dedicate additional right-of-way and to improve the street to the current town design and construction standards as set forth in the engineering design standards. Such requirements to improve the substandard street to the town's current standards shall only be imposed following careful review of factors including, but not limited to:

1. The impact of the new development on the street;
2. The timing of the development in relation to need for the street; and
3. The likelihood that adjoining property will develop in a timely manner.

c. In the case of frontage or service roads for state or federally designated highways, the entire abutting right-of-way shall be dedicated to the town and improved to the county, state or federal agency's applicable construction design standards if such improvement is approved by the agency.

d. *Right-turn lanes mandatory.* The town reserves the right to require free right turn lanes into any development from a roadway whose posted speed limit is 40 miles per hour or greater. Should the applicant request a waiver from this requirement, the applicant must provide to the town a study by an acceptable third party that justifies the elimination of the required free right turn lane.

e. *Facilities impact studies.* The town may require that a developer prepare a comprehensive traffic impact analysis (TIA), flood or drainage study or downstream assessment, or other facilities impact studies in order to assist the town in determining whether a proposed development will be supported with adequate levels of public facilities and services concurrent with the demand for the facilities created by the development. The cost of such study or studies shall be borne by the applicant.

f. *Timing and approval of studies.* Any outside study shall be subject to approval by the town engineer prior to approval of the preliminary plat and the construction plans. The town also may require, at the time of approval of a subsequent applications (e.g., final plat), an update of a facilities impact studies that were approved in conjunction with a prior application (e.g., preliminary plat).

g. *Future extension of public facilities.* The property owner shall make provisions for future expansion of the public facilities as needed to serve future developments, subject to the town's oversize participation policies, if applicable.

h. *Operations and maintenance of the public facilities.* The property owner shall provide for all operations and maintenance of the public facilities, or shall provide proof that a separate entity will be responsible for the operations and maintenance of the facilities.

i. *Fiscal security.* The property owner shall provide all fiscal security required for the construction of the public facilities.

j. *Approvals from utility providers.* The property owner shall obtain all necessary approvals from the applicable utility providers other than the town, and shall submit written verification of such approvals to the town with the construction plans.

k. *Compliance with utility providers.* The property owner shall comply with all requirements of the utility providers, including the town and applicable utility districts.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 107.08.03 Streets and alleys.

(a) *Streets basic policy.*

(1) *Street improvements.* In platting a new development, the property owner shall provide additional right-of-way needed for existing or future streets as required by the engineering design standards and as shown on the thoroughfare plan (see table B, thoroughfare types and standards). All street and road dedication requirements for land within a subdivision shall comply with Texas Local Government Code Section 212.010(c).

(2) *Existing substandard streets.*

a. When a proposed residential or nonresidential development abuts one or both sides of an existing substandard street, the developer shall be required to improve the substandard street and its appurtenances (such as curbs and gutters, sidewalks, barrier-free ramps, street trees, etc.) to bring the same to town standards, or to replace it with a standard town street, at no cost to the town other than as may be provided in the town's cost-sharing policies, including any ordinances that are in effect at the time of final plat approval.

b. If the proposed development is located along only one side of a substandard street, and if the town makes a determination that it is not feasible to improve the full width of said substandard street at that time the town may require the developer to pay into escrow, in accordance with section 107.05.04, development agreements, funds for the future improvement of the street as a condition of final plat approval for the development.

c. When a traffic impact analysis (TIA) is required or voluntarily submitted, the findings determined shall not be imposed on the requirements, alignment, rights-of-way, and number of lanes shown on the master thoroughfare plan, as it exists or may be amended. The TIA may be used to justify amendments to the thoroughfare plan, but in no case shall dictate such amendments.

(3) *New perimeter streets.*

a. When a proposed residential or nonresidential development is developed abutting an existing or planned major thoroughfare, minor thoroughfare or collector street as shown on the master thoroughfare plan, the developer shall construct a portion of the abutting street and its appurtenances (such as curbs and gutters, sidewalks, barrier-free ramps, street trees, etc.) to the town's standards for that type of street (per the engineering design standards). If the town engineer determines that it is not feasible to construct the abutting street and its appurtenances at the time of development, the town may require the developer to pay into escrow, in accordance with section 107.05.04, development agreements, funds for the future construction of the street as a condition of final plat approval for the development. The funds placed in escrow or the value of the lanes constructed shall be roughly proportional to the amount of traffic estimated to be generated by the development itself.

b. When a proposed residential or nonresidential development is constructed and has designed an unplanned perimeter street in order to provide access to the site and/or adjacent land, the developer shall construct a portion of the abutting street as described in section 107.08.03(a)(4), new internal streets, below, and under the same conditions.

(4) *New internal streets.*

a. All new streets and their appurtenances internal to a proposed residential or nonresidential development shall, at a minimum, be built to a width and design that will adequately serve the

development, and shall conform to the town's standards as described in the engineering design standards. If oversizing of an internal street is deemed necessary by the town engineer for traffic safety or efficiency (such as adjacent to a school or park site), then the town and/or the applicable entity may participate in such oversizing costs as part of a development agreement/facilities agreement with the developer.

b. Streets which temporarily dead-end at power lines, railroads or similar rights-of-way shall be constructed for at least one-half the distance across these rights-of-way, or provision shall be made to place the construction cost for said improvements in escrow with the town in accordance with section 107.05.04, development agreements.

c. When, in the judgment of the town engineer, it is not feasible to construct an internal street or appurtenances at the time of development of the subdivision, the town may require the developer to pay into escrow funds for the future construction of the street or its appurtenances as a condition of final plat approval for the development, in accordance with section 107.05.04, development agreements.

(5) *Impact fees.* All fees due on the project shall be paid in accordance with the town's impact fee ordinance and/or executed development agreement/facilities agreement.

(b) *Street design and appurtenances.*

(1) *Application of requirements.* Street design requirements are subject to the provisions included in the engineering design standards, development agreements and planned development ordinance (if applicable to the subject property) as well as the regulations contained within this subdivision ordinance.

(2) *Conformity to the master thoroughfare plan.* The general location of streets shall conform to the master thoroughfare plan. For streets that are not shown on the master thoroughfare plan, such as local residential streets, the arrangement of such streets shall:

a. Provide for the continuation or appropriate continuation of existing streets or street stubs from or into surrounding areas - refer to street stub requirements outlined in section 107.08.03(b)(8), stub streets, and connectivity requirements in section 107.08.03(b)(9), street connectivity;

b. Conform to any plan for the neighborhood approved or adopted by the town to address a particular situation where topographical or other conditions make continuance or conformity to existing streets impractical; and

c. Not conflict with existing or proposed streets or driveway openings, including those on the opposite side of an existing or planned thoroughfare, as described within the engineering design standards.

d. New streets that cross divided arterials shall align to the greatest extent possible with opposite streets such that median openings can be shared.

(3) *Relation to adjoining street system.* The proposed street system shall extend all existing major and minor arterials and such existing collector and local streets as may be necessary for convenience of traffic circulation and emergency ingress and egress.

(4) *Maximum cul-de-sac street length.* No cul-de-sac street shall be longer than 600 feet.

(5) *Maximum street length.* No street shall be more than 1,000 feet in length without an intersection with another street which will provide some degree of flexibility in traffic patterns and public convenience.

a. See the engineering design standards for specific design requirements.

b. In certain circumstances, the town may consider minor exemptions to the maximum street lengths if sought by the applicant. These circumstances include, but are not limited to:

1. Rerouting of streets;

2. Increasing the lot count by five percent or more from the previously approved preliminary plat or final plat; or

3. Approval by the planning and zoning commission through a subdivision ordinance variance. Any variance approved by the planning and zoning commission shall include the curvilinear requirement and street calming methods, described below.

(6) *Curvilinear requirement.* When a residential street length exceeds 500 feet but is less than 1,000 feet in length, the design of the street shall include a curve of between 100 to 200 feet radius for a length equal to the curve radius.

(7) *Street calming methods.* When a residential street length exceeds 500 feet but is less than 1,000 feet in length, one or more of the following street calming methods shall be incorporated into the design in addition to the curvilinear requirement (above) in order to reduce traffic velocity and increase safety to pedestrians and cyclists, subject to the review and approval of the town engineer:

a. Street width narrowing with landscaped islands placed approximately every 400 feet;

b. Roundabouts placed approximately in the center of the street length; and/or

c. Landscaped medians that include pedestrian crossing oases included for a minimum of one-third of the street length.

(8) *Street widths and rights-of-way.* Street widths and related rights-of-way shall be designed in accordance with the following:

a. Master thoroughfare plan (adopted on March 24, 2016, and as amended);

b. Planned development ordinance (if applicable to the subject property); and

c. All streets shall be paved with a permanent type of pavement in accordance with the engineering design standards.

TABLE B - THOROUGHFARE TYPES AND STANDARDS								
Criteria	Primary Arterial-1	Primary Arterial-2	Primary Arterial-3	Minor Arterial-1	Minor Arterial-2	Minor Arterial-3	Collector	Urban Mix Residential
Designation	P6D-1	P6D-2	P6D-3	M4D-1	M5U-2	M4U-3	C2U	R
Limited to:	(US 380)	(FM 423, 720 and 2931)	Town and ETJ roadways					
Right-of-way	160'	140'	124'	100'	100'	100'	60'	50'
ROW at intersections	Per Texas DOT		134'	110'	100'	100'	60'	50'
Lanes/division			6LD	4LD	5LU	4LU	2LU	2LU
Roadway width (B-B)			37'	37'	63'	49'	37'	31'
Median width			20'	20'	-	-	-	-
Parkway width			15'	15'	9'	25'	11.5'	9.5'
Parking			No	No	No	No	Yes	Yes

(9) *Street names, street name signs, and traffic control signs.*

a. *Street names.* New streets shall be named so as to provide naming continuity with existing streets, and so as to prevent conflict or "sound-alike" confusion with similar street names. All street names shall be approved by the director of development services prior to any plat approval, and prior to approval of the construction plans and should comply with the town's approved street name policy, as it exists or may be amended.

b. *Cost of signs.* The cost of street name signs and traffic control signs shall be paid for and installed by the developer.

c. *Town standards.* All street name signs and traffic control signs shall conform to the town's details for street name sign design and the latest edition of the Texas "Manual of Uniform Traffic Control Devices" (TMUTCD).

(10) *Traffic studies.* The town engineer may require a traffic impact analysis (TIA) or other type of engineering study from the developer prior to any approval for plats or construction plans to ascertain technical data pertaining to the potential traffic impact of the proposed development on the town's street system. For any study required by the town that is outsourced to a third party, the cost of such study shall be passed through to the developer or applicant.

(11) *Stub streets.*

a. See the engineering design standards for all design requirements.

b. Future connections are required to adjacent vacant properties at locations as approved by the director of development services and the town engineer.

c. When a residential development is constructed in phases requiring a temporary stubbed street, a paved temporary turn-around shall be provided for maneuvering by emergency equipment.

d. A note shall be clearly placed on the final plat indicating that the stub street will be extended with future development (see requirements for temporary turn-arounds in the engineering design standards).

e. All stub streets shall have barricades that meet TMUTCD standards.

f. All stub streets shall have a sign prominently posted at the terminus of the street to indicate no through traffic and that the street will be extended in the future.

1. The sign shall comply with standards established by the town engineer, and

2. Installation and cost of the signs shall be the responsibility of the developer.

(12) *Connectivity.*

a. New residential developments shall provide street connections to adjacent developments, as determined by the director of development services, allowing access between developments for neighborhood traffic and to enhance pedestrian and bicycle connectivity as recommended in the comprehensive plan.

b. Residential developments shall not have direct vehicular access to adjacent commercial or retail developments. Pedestrian and/or bicycle access may be provided, as approved by the director of development services.

(13) *Street lighting required.* Street lighting shall be provided by the developer along all streets and thoroughfares in accordance with the engineering design standards. The developer is responsible for the installation of street lighting and they shall be installed to town standards prior to the town accepting responsibility for the future provision of electricity to the street lights. The town engineer

shall be the responsible official for decisions related to street lighting, and may authorize a minor variance to these regulations, in accordance with section 107.10.01, variances, for a street lighting requirement if such variance will not compromise public health, safety, security and convenience.

(14) *Street lighting placement.*

a. Street lights shall be placed at every street intersection.

b. In addition to intersection placement, street lights shall be spaced no greater than 500 feet apart.

c. Street lighting shall be placed within the right-of-way, either the median or the parkway, or if not practical, within a utility easement.

d. Street lighting shall be placed in such a manner to avoid interference of nearby trees or signs with the intended illumination field.

e. Street lighting shall be chosen and installed according to the engineering design standards and shall conform to the Dark Sky Ordinance (Ordinance No. 703 adopted June 7, 2005), and as amended.

(c) *Private streets.*

(1) *Private streets.* Private streets within the town and/or the ETJ may be allowed in accordance with the zoning ordinance. Private streets shall be designed and constructed to the same standards as for public streets, in accordance with the engineering design standards.

(2) *Town council action required.* Dedicated streets and rights-of-way shall not be designated or used as private streets and such use is prohibited, except where specific approval is given by action of the town council for properties within the town's extraterritorial jurisdiction and upon approval of a specific use permit for properties within the town limits. The town council may add any conditions as deemed appropriate as part of the approval of a private street development.

(3) *Private street development generally.* Private street developments are subject to provisions of the master thoroughfare plan and the subdivision ordinance, as it exists or may be amended. Private street developments shall only be permitted by the approval of a specific use permit or through a planned development district. Private street developments shall be restricted to an area that is surrounded on at least three sides, and in any event no less than approximately 75 percent of the perimeter, by natural barriers or similar physical barriers created by man. Examples of natural barriers would be creeks and floodplains. Examples of similar barriers created by man would be a golf course, school location, park, railroad tracks or a limited access roadway. Non-qualifying man-made barriers include screening walls, local roadways, man-made drainage ditches, detention ponds, landscape buffers, earthen berms, utility easements and rights-of-way. Private street developments may not cross an existing or proposed thoroughfare as shown on the town's adopted master thoroughfare plan nor shall a private street development disrupt an existing or proposed hike and bike route.

(4) *Connectivity.* The comprehensive plan calls for all plans for development in the town to include a high degree of connectivity within developments and between one development and another. Any proposed private street development adjacent to an existing public street subdivision that can be reasonable connected, including by constructing a bridge or culvert, for example, should not be approved as a private street development. The two adjacent subdivisions should allow cross-connectivity using public streets. This is especially important when one of the two adjacent subdivisions has a school site within the development that will be accessed by both developments.

(5) *Criteria for approval for private streets in new developments.* Private street developments within the town may be considered through the specific use permit (SUP) process or through a planned development district. The planning and zoning commission and town council shall use any of the following criteria:

a. Non-disruption of planned public roadways or facilities/projects (thoroughfares, parks, park trails, public pedestrian pathways, etc.);

b. Non-disruption to and from properties of future developments either on-site or off-site to the proposed subdivision;

c. No negative effect on traffic circulation on nearby public streets;

d. Not less than 100 feet of street frontage on which to locate the main entrance gate;

e. No more than two gated street entrances, subject to approval by the town engineer, may face the same thoroughfare;

f. No impairment of access to and from public facilities including schools or public parks;

g. No impairment of the adequate and timely provision of essential municipal services (emergency services, water/sewer improvements or maintenance, etc.);

h. The main entrance to the private street development shall have adequate throat depth to provide for residents, their guests and any accidental access and have an escape aisle for those vehicles not admitted into the subdivision, as determined by the town engineer;

i. Existence of natural and/or qualifying manmade boundaries around 75 percent of the development; and/or

j. Absence of a concentration of private street developments in the vicinity of the requested private street development.

(6) *Conversion of public streets to private streets.* The criteria for converting existing public streets to private streets includes all the criteria, issues and procedures involved with new developments, listed above, plus:

a. Submittal of a petition signed by 100 percent of the owners in the existing subdivision requesting conversion to private streets;

b. Existence of a property owners association that would be responsible for owning and maintaining the converted streets and rights-of-way;

c. Applicants must agree to contract with the town for the purchase of the installed infrastructure and rights-of-way from the Town of Little Elm at fair market appraised value for cash in full payment, and agree to maintain the infrastructure and rights-of-way at town standards thereafter prior to the approval of the specific use permit;

d. All documents are subject to the review and approval of the town attorney; and/or

e. Subsequent to the approval of the private street designation, the entire subdivision affected shall be re-platted to reflect the right-of-way ownership changes.

(7) *Conversion of private streets to public streets.* The town may, but is in no way obligated to, accept private streets for public access and maintenance. Requests to convert private streets to public streets shall be subject to all of the following provisions:

a. The homeowners' association (HOA) shall submit a petition signed by at least 67 percent of its members/lot owners (or a greater number of signatures, if required by the HOA documents or declarations).

b. All of the infrastructure shall be in a condition that is acceptable to the town engineer.

c. All security stations and other structures not consistent with a public street development shall be removed by the HOA, at its cost, prior to acceptance of the streets and appurtenances by the town.

d. All monies in the reserve fund for private street maintenance shall be delivered to the town. Money in the reserve fund in excess of what is needed to bring the streets and appurtenances up to town standards will be refunded to the HOA. Private street developments that exist as of the adoption of this ordinance are not required to deliver a reserve fund balance to the town.

e. The HOA shall prepare and submit a replat to development services for review. Upon approval, the HOA shall file the replat to dedicate the streets and appurtenances to the town.

f. The HOA shall modify and re-file, at its cost, the HOA documents to remove requirements specific to private street developments. The town attorney shall review the modified HOA documents prior to their filing. The HOA shall be responsible for the cost of review by the town attorney.

(8) *HOA requirements.* Private street developments and the related HOA shall meet all requirements of section 107.08.09, HOA requirements, of this ordinance.

(d) *Alleys.*

(1) *Alleys optional.* Alleys are optional for all single-family and two-family residential lots that are greater than 40 feet in width at the front building line.

(2) *Alleys required.* Alleys are required for residential lots that are equal to or less than 40 feet in width at the front building line. When so utilized, alleys shall be constructed according to design criteria in the engineering design standards.

(3) *Alley design.* Permanent dead-end and "hammerhead" alleys are prohibited. All alleys shall have adequate turnouts and street entrances such that vehicular traffic flow is continuous and efficient. Where a temporary dead-end alley situation is unavoidable (such as due to project phasing), a temporary, paved turn-around bulb or turnout onto a street, either of which will require a temporary alley easement, shall be shown on the plat.

(4) *Street access when alleys are present.* No driveway shall access a street when an alley is available unless specifically allowed in writing by the town engineer.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

[Appendix.] Engineering Design Standards

Sec. 1.0 General requirement.

Purpose.

The design criteria and standards section of the subdivision regulations for the Town of Little Elm is intended primarily for use by the developer's engineer. These criteria and standards should enable the engineer to design the required community facilities in a manner acceptable to the town. There may be special circumstances which would call for requirements in excess of those outlined. In most cases, additional requirements will be apparent to the developer's engineer while preparing the plans for the subdivision.

Compliance Required.

Prior to the commission's approval of the final plat, the subdivider shall comply or provide for compliance with the policies and procedures set forth in these regulations for construction of street improvements and utilities. No building, sewer, electrical or plumbing permit shall be issued by the town as to any property in the subdivision until:

1. The preliminary plan has been approved; and
2. The working drawings, specifications and agreements required herein have been reviewed and approved by the affected agencies and, as required, by the town attorney.

Town Design Criteria and Standards.

There are hereby adopted by reference and made a part of these regulations design criteria and standards which shall be controlling in design, construction and installation of street paving, curbs and gutters, sidewalks, utilities and other public improvements required herein. All references to town design criteria and standards shall mean and include those standards and specifications, together with all exhibits, charts, drawings and diagrams appertaining thereto, which have been approved by the town's engineer, adopted by the town council, and placed on file in the office of the town secretary.

Installation and Financing.

The subdivider shall arrange with the town and with utility companies franchised to serve the area in which the subdivision is located for the construction costs of streets and alleys, utility lines and other public improvements. The subdivider shall also arrange for the sequence of work so that underground utilities shall be installed in those portions of streets intended for vehicular traffic before such streets shall be surfaced. If the several improvements required herein have not been installed or constructed prior to submission of the final plat then the final plat shall bear a restriction that no lot shall be occupied and that no municipal services shall be extended thereto until the specified utilities and improvements have been constructed as required.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 2.0 Street standards.

Thoroughfare Design Requirements

A. *Street Widths*

1. Street widths for all subdivisions shall be 31 feet from back of curb to back of curb on residential sections. All streets which are not governed by one of the following conditions shall be considered residential for width design:

2. Designated as a collector (which shall be 37 feet from back of curb to back of curb) or thoroughfare (which shall be 46 feet from back of curb to back of curb) by the town's comprehensive plan.

3. Adjacent to commercial or multifamily land-use where, in the opinion of the town's engineer or the town's planner, additional street width is indicated for proper access and circulation.

4. Where, in the opinion of the town administration or in the opinion of the developer with the concurrence of the town administration, the esthetic value achieved from extra width is dictated by special conditions.

5. In the case of [subsection] (1) above, the section to be constructed shall be in accordance with the comprehensive plan or a revision thereof based on updated conditions. In the case of [subsections] (2) and (3), each condition will be studied individually and approved by the town prior to approval of the subdivision in question.

B. *Street Sections.*

1. Street sections shall be as shown on the following pages for residential, collector and thoroughfare type streets. These sections shall govern except in conditions of [subsections] (2) and (3) above. In those instances, each condition shall be studied by the town's staff individually and designed for the specific situation. Such design must be approved by the town prior to approval of the subdivision in question.

Sidewalk Policy.

Statement of policy on sidewalks.

a. Sidewalks shall be required in those locations where travel by foot is of such a volume as to warrant special protection for pedestrians using the public right-of-way.

b. In general, this requirement shall be considered to have been met when sidewalks are installed along such thoroughfares, arterial streets and other streets that provide major pedestrian access to schools, places of public assembly and commercial centers. Further, sidewalks may be installed by order of the town council upon receipt of a petition signed by more than 60 percent of property owners and 60 percent of properties in any one block face.

c. Sidewalks adjacent to arterials and collectors shall be a minimum of six feet.

d. Sidewalks adjacent to residential streets shall be a minimum of five feet in width.

e. The cost of constructing sidewalks shall be assessed against the abutting property where such property is especially benefited.

f. Developed area criteria.

a. Town initiated. In cases where the town initiates construction of sidewalks, a public hearing shall be held upon the necessity for such construction and the special benefits, if any, that accrue to the property being assessed.

b. Property owner initiated. In cases where sidewalk construction improvements are initiated by a petition of 60 percent or more of the abutting property owners and properties in any one block face, the cost of the improvements shall be assessed against the abutting property owners, following a public hearing upon the necessity for such construction and the special benefits if any, that accrue to the property being assessed.

Criteria for Property Being Developed.

At the option of the developer, required sidewalks shall be installed either with the construction of abutting street improvements or at the building site prior to occupancy. The town may require the construction of the sidewalk improvement in advance of the issuance of a building permit where such sidewalk construction is necessary to protect the public safety.

Street Name Signs.

The subdivider shall install or shall arrange for the installation of street name signs satisfying the specifications of the town.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 3.0 Drainage design requirements

Section 3.1. Introduction

3.1.1 Stormwater Goals and Objectives

The purpose of this manual is to provide *adequate stormwater management* within the Town of Little Elm (Town) and its extraterritorial jurisdiction (ETJ). *Adequate stormwater management* is achieved by the development, adoption, and enforcement of policies and standards for drainage design that achieve the following goals:

1. Protect public health and safety
2. Prevent property damage due to flooding
3. Preserve and enhance water quality and minimize water pollution in Lewisville Lake and other natural waterbodies
4. Stabilize or decrease streambank and channel erosion on creeks, channels, and streams
5. Fully comply with all state, federal, and local regulatory and permitting requirements relating to stormwater and land development
6. Proportionally distribute the cost of necessary drainage improvements
7. Minimize the maintenance cost of drainage facilities constructed
8. Promote sustainable and productive development and redevelopment

This manual is intended to supplement the Town *Code of Ordinances* with procedures and technical criteria to meet the Town's adopted policies. If any policies and requirements set forth herein conflict with, or are inconsistent with, criteria outlined elsewhere, the more stringent criteria shall apply.

3.1.2 Applicability of Stormwater Criteria

The stormwater criteria outlined in this manual applies to development and redevelopment activity within the limits of the Town of Little Elm and its ETJ to the extent legally authorized. Development and redevelopment activities meeting the requirements outlined in **Section 3.1.3.1** require the submittal of a drainage plan for Town review and approval prior to commencement of land disturbing activities.

It is recognized that there will be specific situations not completely addressed by this manual. Unusual circumstances or special designs requiring variance from standards within this manual require the express written approval of the Town Engineer. All requests for variance from the Town's drainage criteria shall be considered based on the standards, procedures, and criteria outlined in **Section 107.10.01** of the Town's *Subdivision Ordinance*.

3.1.3 Stormwater Submittal Requirements

The design of stormwater infrastructure must be performed in accordance with this manual and other applicable Town criteria. All plans and studies with stormwater elements shall be prepared and sealed by a Licensed Professional Engineer with a valid license and a valid registered firm number from the State of Texas.

All applicable calculations, plans, and other documentation necessary to evaluate the design must be provided for review. Upon receiving a stormwater submittal for review, the submittal package will receive a cursory review for completeness of submittal requirements. Incomplete submittals shall be rejected by the City without further review. The Town's review period conforming to State regulations governing subdivision application begins on the date the application is accepted for review.

3.1.3.1 *Stormwater Submittal Elements*

The Town of Little Elm has developed a *Development Application Handbook* to assist developers with the preparation of applications for various types of planning and development activities. Developers shall utilize the applicable forms and checklists in the preparation and submittal of storm drainage plans for development review.

Storm drainage plans shall be prepared for subdivision applications and civil plan submittals that include the following activities:

1. Land disturbing activity or platting of 1.0 acre or more; or
2. Land disturbing activity of less than 1.0 acre where the activity is part of a common plan of development that is 1.0 acre or more.

A common plan of development consists of construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. For the purposes of this policy, this classification may include, but is not limited to, a tract that:

1. Is included in a single concept plan submitted to the Town
2. Is included in a single preliminary plat submitted to the Town
3. Is comprised of contiguous land (or land separated only by roadway and/or drainage rights-of-way or easements) under the same root ownership
4. Is encumbered by a single Master Drainage Study or Plan
5. Is encumbered by a single Developer Agreement, TIF, 380 Agreement or other public/private partnership agreement
6. Is overlaid by a common Homeowner's or Property Owner's Association (HOA or POA), or
7. Is owned or managed by a common Master Developer.

Site developments that do not meet the applicability requirements outlined above will not require a drainage plan submittal. However, all developments with the Town limits and ETJ shall comply with the Town Subdivision Ordinance and development permitting requirements, including but not limited to: building permits, floodplain development permits, SWPPP, and grading permits.

3.1.3.2 *Permitting Requirements*

The engineer must provide proof of compliance with applicable federal, state, and local environmental regulations upon request by the Town. Potential applicable regulations and permits may include, but are not limited to:

1. Section 404 of the Clean Water Act (33 USC 1344)
2. Section 106 of the National Historic Preservation Act
3. Water Rights
4. Section 303(d) Impaired Waters
5. Migratory Bird Treaty Act
6. Water Well Drilling
7. Threatened and Endangered Species Act

8. The Texas Archeological and Research Laboratory Requirements
9. The Antiquities Code of Texas
10. Air Quality
11. TCEQ Dam Requirements

The engineer is responsible for providing documentation of the relevant United States Army Corps of Engineers (USACE)-approved permits prior to beginning modification to the floodplain, or for providing a signed and sealed statement detailing why such permits are unnecessary. A preliminary Section 404 permitting evaluation shall be included as part of the downstream assessment report for the development. Should mitigation be required under Section 404 of the Clean Water Act, the areas shall be identified on the engineering construction plans.

Additional permitting requirements may apply for design of stormwater storage facilities and projects that impact regulatory floodplains. Further guidance is provided in **Sections 3.6.3**, **3.7.3**, and **3.7.4**.

3.1.3.3 *Acceptable Modeling Software*

The design of storm drainage facilities can be aided by and sometimes requires the use of hydrologic and hydraulic modeling programs. **Table 1** lists several widely used modeling software which are acceptable to the Town. The use of a program that is not included in the list requires prior approval by the Town Engineer.

Table 1: Acceptable Hydrologic and Hydraulic Modeling Programs

Software	Hydrologic Calculations	Hydraulic Calculations	FEMA Approved	Water Quality Features
HEC-HMS	X		X	
HEC-RAS		X	X	
Autodesk Suite – Hydraflow, Storm and Sanitary Analysis	X	X		(X)
Bentley Suite – CulvertMaster, FlowMaster, PondPack, StormCAD	X	X	(X)	
Innovyze Suite – ICM, InfoWorks	X	X		X
SWMM (EPA)	X	X		X
XPSWMM	X	X	X	X

The most recent version of the program should be used unless the Town provides an approved effective model developed using a previous version, and in other instances as approved by the Town Engineer. Only Federal Emergency Management Agency (FEMA) approved software can be used for design within the Regulatory Floodplain. Refer to **Chapter 7** for additional guidance on software requirements for floodplain development applications.

Section 3.2. Stormwater Design Standards

3.2.1 Design Frequency for Drainage Features

The design of drainage facilities relies on evaluation of performance during theoretical rainfall events. A rainfall event is classified by its annual exceedance probability (AEP), which describes how likely an event is to occur in a given year. This probability has classically been presented inversely as a return period, giving the estimated time interval between events of a similar size or intensity. For example, the “100-year storm” return period has an AEP of 1%. This does not mean that a storm of this duration or intensity occurs every 100 years—instead, it means that, in any given year, there is a 1% chance of such an event occurring.

Table 2 lists the storm events to be used in the design of drainage facilities.

Table 2: Design Storm Events

Storm Event Name	Storm Event Description	Design Standard
Water Quality	Criteria based on volume of 1.5 inches of rainfall; not a storm frequency.	• Onsite water quality controls
Streambank Protection	2-year return period (50% AEP)	• Low flow channels and velocity check
Conveyance	25-year return period (4% AEP)	• Secondary check for street inundation and open travel lanes
Flood Mitigation	100-year return period (1% AEP)	• Open channels • Primary standard for street and storm drain design

3.2.2 Drainage Impacts

The design of a storm drainage system must account for offsite flows, flows generated by the development, and the impacts on the downstream drainage system. All stormwater discharges from the development shall be conveyed to an adequate outfall. An adequate outfall is a structure or location that is adequately designed as to not cause adverse impacts to adjacent or downstream properties or facilities. An adequate outfall shall have capacity to convey any increased stormwater runoff from the site.

In order to determine the adequate outfall, the engineer must establish the zone of influence for the development. The zone of influence is the point downstream where the discharge from a proposed development no longer has a significant impact upon the receiving stream or storm drainage system. The hydrologic and hydraulic analysis to establish the zone of influence from a proposed development and to demonstrate an adequate outfall for site drainage is called a downstream assessment.

Generally, the zone of influence will be defined by a detailed hydrologic and hydraulic analysis. For watersheds of 100 acres or less at any proposed outfall, the 10% rule of thumb may be used in order to determine the zone of influence. The 10% rule states the zone of influence is considered to be the point where the drainage area controlled by the drainage facility comprises 10% of the total drainage area. If a portion of a larger property is being developed, the zone of influence shall be determined based on the entire property. A detailed study may be required for any drainage area regardless of size at the discretion of the Town Engineer.

It shall be the responsibility of the engineer to contact the Town and inquire about other proposed or approved developments within the zone of influence. At the direction of the Town Engineer, these developments shall be accounted for in the downstream assessment.

Table 3: Zone of Influence (Adequate Outfall) Determination

Item	Parameter	Adverse Impact Determination
1	**Inhabitable Structures**	• No new or increased flooding (0.00 feet) of existing insurable (FEMA) structures (inhabitable buildings).

Item	Parameter	Adverse Impact Determination
2	**Flood Elevations**	• No increase (0.00 feet) in the 2-, 25-, and 100-year water surface elevations unless contained within the owner's property or within an existing channel, roadway, drainage easement, and ROW. • Dry lane and gutter capacity requirements set forth in **Table 10** shall also be met.
3	**Floodplain Ordinance**	• Where provisions of the Town's floodplain ordinance may be more restrictive, the floodplain ordinance shall have authority over the above provisions.
4	**Channel Velocities**	• Proposed channel velocities for 2-, 25-, and 100-year storms cannot exceed the applicable maximum permissible velocity shown in **Table 9**. • If existing channel velocities exceed maximum permissible velocities shown in **Table 9**, no more than a 5% increase in velocities will be allowed. • Exceptions to these criteria will require certified geotechnical/ geomorphologic studies that provide documentation that the higher velocities will not create additional erosion.
5	**Downstream Discharges**	• No increase in downstream discharges caused by the proposed development that, in combination with existing discharges, exceeds the existing capacity of the downstream storm drainage system or existing right-of-way.
6	**Water Quality**	• Compliance with water quality standards and requirements outlined in **Chapter 3**.

3.2.3 Drainage Considerations for Site Grading

3.2.3.1 *Grading Plans*

Grading plans shall be submitted for any land disturbance activities. Existing (pre-project) and proposed (post-project) contours shall be shown. The natural flow of surface waters shall not be diverted or impounded in a manner that damages adjacent property.

Residential development shall be type A, B, or C drainage for each lot within the subdivision as described in Housing and Urban Development (HUD) Federal Housing Administration (FHA) Data Sheet 72, as amended. Type 1 or 2 block grading as shown in the HUD information is preferred. Type 3 and 4 block grading are allowed only if:

1. A flume or channel is constructed at the rear of the lot to intercept runoff; or
2. Runoff from no more than 3 lots is accumulated prior to constructing a drainage system to intercept the runoff.

To ensure adequate drainage between lots after final construction of residential structures, the minimum slope between lot lines is required to be at least 50% steeper than the HUD minimums. Alternatively, the builder may provide a written certification that site grading is as prescribed in the grading plan and may be held responsible for drainage complaints by residents.

The engineer may utilize swales to redirect flows. In such cases, the engineer shall provide more detailed information in addition to the lot grading type (A, B, or C) by indicating spot elevations on each lot. If the site is complex and an overall site grading plan cannot be developed in accordance with the HUD standards, an individual grading plan for each lot shall be submitted by the engineer prior to the issuance of building permits. The individual grading plans shall be coordinated with surrounding lots. For these complex plans, an as-built letter shall be submitted by the engineer prior to final inspection.

3.2.3.2 *Minimum Lot and Floor Elevations*

The minimum elevation for the buildable area (including parking areas) of the lot shall be set at or above the 100-year water surface elevation, or as directed by the Town Engineer. Any inhabitable structure shall have a finished floor elevation 2 feet above the 100-year water surface elevation.

For developments outside of the floodplain, minimum floor elevations shall be at or above the street curb, edge of alley, or rear property line, whichever is lower, unless otherwise approved by the Town Engineer. For lots adjacent to or in the influence of a sump area and a positive overflow, the lot elevation will be at or above the sump area top of curb or the possible maximum pool elevation when the positive overflow is functioning, whichever elevation is higher. Refer to **Section 3.5.2.5** for additional information on positive overflow requirements.

3.2.3.3 *Concentrated Runoff from Development*

Site runoff due to development shall not cause adverse impacts as outlined in **Table 3**. When offsite grading is required or when the development discharges concentrated flow on an adjacent property, off-site conveyance to reach an adequate outfall shall be contained within a drainage easement obtained from the affected property owner(s). Drainage easement requirements are further discussed in **Section 3.3.2.1**.

Section 3.3. Stormwater Quality

The Town of Little Elm is one of the fastest growing cities in North Texas, with almost 70 miles of the town limits along the shoreline of Lewisville Lake. New development in the Town has contributed to increased stormwater runoff. Urban stormwater runoff has had detrimental impacts on the Town's receiving waters, including increased flooding potential, stream channel erosion, and reduced stormwater quality. As undeveloped areas of the Town are developed and older areas are redeveloped, it is imperative that a robust stormwater quality program be implemented to protect the Lewisville Lake and the Town's other natural resources and improve the benefits to human health, fish and wildlife habitat, and recreational opportunities.

Additionally, the Town is subject to Environmental Protection Agency (EPA) and Texas Commission on Environmental Quality (TCEQ) permit regulations governing discharges of stormwater from municipal separate storm sewer systems (MS4s) to surface waters of the state (TXR040000). The Town is required to develop, implement, and enforce a Stormwater Management Program (SWMP) to reduce the discharge of pollutants and protect water quality. This program requires oversight of the design, construction, and maintenance of stormwater controls in the Town to protect and enhance stormwater quality.

The following sections outline the Town's commitment to stormwater quality and water quality provisions that apply to the design of storm drainage facilities.

3.3.1 Post-Construction Stormwater Quality

3.3.1.1 *Post-Construction Stormwater Quality Objectives*

This section will establish criteria for the design, operation, and maintenance of post-construction stormwater controls and the preparation of a Stormwater Quality Plan (SWQP). Specific objectives of the Town's post-construction stormwater policies include:

1. Protect the integrity of watersheds and preserve the health of water resources, including Lewisville Lake;
2. Minimize changes to the site hydrology for land disturbance and redevelopment to reduce flooding, streambank erosion, and pollution;
3. Implement beneficial site design practices;
4. Promote the preservation of green space and other conservation areas;
5. Establish administrative procedures for the submission, review, approval, and disapproval of stormwater best management practices, and for the inspection of approved projects;

6. Establish provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater management to ensure that they continue to function as designed, are maintained appropriately, and pose minimum risk to public safety; and
7. Meet the provisions of the Town's MS4 permit and SWMP.

3.3.1.2 *Stormwater Quality Plan*

A Stormwater Quality Plan (SWQP) shall be prepared for all land disturbing activities of 1 acre or more as part of a subdivision application or civil plan submittal. For land disturbance activities between 1 and 5 acres, the Site Plan can be considered the SWQP. The grading or drainage plans may also be used as the SWQP for capital improvement projects. The SWQP shall be sealed by a Professional Engineer in the State of Texas.

The SWQP shall identify permanent site features and controls that will be included in the design and constructed with the project to minimize and mitigate the project's long-term effects on stormwater quality and quantity. All new development designs shall evaluate site layout to minimize impervious area and impacts to existing natural resources to promote sustainable development.

3.3.1.2.1 Preparation of a SWQP

A preliminary SWQP shall be prepared with the preliminary plat. The final SWQP shall be submitted with the site plan or construction plans. This plan must be accepted by the Town prior to any site activity, including grading. The SWQP shall be developed and coordinated with all portions of the plans, but specifically, the grading plan, the drainage plans, and the landscape plan.

3.3.1.2.2 Post-Construction BMP Selection

Table 4 shows the minimum number of permanent BMPs required based on acreage of post-project impervious area:

Table 4: Minimum Number of Permanent BMPs Required

Impervious Area	Minimum Number of Permanent BMPs
< 5 acres	1
5 acres ≤ Impervious Area ≤ 20 acres	2
> 20 acres	3

The BMPs shall be designed to achieve the water quality design requirements as set forth in **Section 3.3.1.3**. The *iSWM Technical Manual for Site Development Controls* provides guidance on the design and selection of permanent BMPs. It is the responsibility of the engineer to design BMPs that are appropriate address specific site conditions and meet the water quality standards.

Final stabilization of disturbed areas is required for all sites, regardless of size, and shall not be considered a permanent BMP. Final stabilization is defined as 80% coverage with no large bare areas on all portions of the site that are the responsibility of the developer.

3.3.1.3 *Water Quality Design Requirements*

3.3.1.3.1 Floatable Capture Requirements

All storm sewer outfalls to Lewisville Lake shall include a debris separator conforming to the Standard Details. Other applications of debris separators may be approved or required at the discretion of the Town Engineer.

For developments subject to SWQP requirements, debris separators may be considered a permanent BMP to meet the requirements of **Section 3.3.1.2.2**. Where multiple debris separators are installed for a single development, they shall be considered as a single BMP.

3.3.1.3.2 Water Quality Volume Requirements

Studies have shown the 85th percentile storm event (i.e., the storm event that is greater than 85% of the storms that occur) is a reasonable target event to address the vast majority of smaller, pollutant-loaded storms. Based on a rainfall analysis, 1.5 inches of rainfall has been identified as the average depth corresponding to the 85th percentile storm for North Texas. The runoff from these 1.5 inches of rainfall is referred to as the Water Quality Protection Volume (WQ_v).

Developments subject to SWQP requirements are required to demonstrate treatment of the WQ_v by the installation of permanent BMPs. Calculation of the WQ_v shall adhere to procedures outlined in the *iSWM Technical Manual for Water Quality*. Methods to reduce the required WQ_v as outlined in the iSWM manual may also be implemented.

The WQ_v shall not be discharged in a period less than 24 hours. The water quality treatment requirement can be met by providing extended detention in stormwater storage facilities designed for mitigation of peak events. In such instances, these facilities shall be allowed to have a total drawdown time greater than 24 hours but no greater than 48 hours. Refer to **Chapter 6** for additional guidance and requirements concerning the design of stormwater storage facilities.

3.3.1.4 *Permanent Erosion Control*

Adequate control for the erosion is imperative to minimize Total Suspended Solids (TSS) and to protect stormwater quality in natural drainageways. Energy dissipation, channel stabilization and/or permanent erosion control mechanisms are required in instances where the design channel velocities or discharge velocities of pipes, culverts, and flumes exceeds the maximum permissible velocities outlined in **Table 9** and in other instances as determined by the Town Engineer. The *iSWM Technical Manual for Hydraulics* and the *Federal Highway Administration Hydraulic Engineering Circular No. 14* (*FHWA HEC-14*) provide additional guidance on the design of energy dissipators.

3.3.2 Maintenance of Permanent Stormwater Facilities

3.3.2.1 *Drainage Easements*

Easements are required for all public drainage systems that convey stormwater runoff across a development and shall be required for both on-site and off-site public stormwater drainage improvements, including standard engineering channels, storm drain systems, detention and retention facilities, and other stormwater controls. All drainage easements shall be recorded on the plat. The drainage easement must include sufficient area for operation and maintenance of the drainage system, and the developer shall obtain downstream drainage easements until adequate outfall is determined.

Minimum easement requirements are discussed in the following sections. Special circumstances may require additional easement allocation at the discretion of the Town Engineer.

3.3.2.1.1 Open Channels

Drainage easements shall be provided for all open channels. Easements shall encompass all areas lower than a ground elevation defined as being the highest of the following:

1. Two (2) foot above the calculated water surface elevation based on the fully developed 100-year water surface elevation or the 100-year base flood elevation (BFE), whichever is higher.
2. The top of the high bank, if higher than (1) above.

An additional easement of 15 feet on each side of a channel is required by the Town for maintenance and access purposes. For the purposes of this manual, bank slope is measured in a straight line from the toe of the slope to the top of the bank. The slope within the easement shall be no greater than 6:1 (horizontal to vertical) to allow for safe access of crews and equipment. Easements shall be kept free and clear of encroachments, but the

maintenance and access portion of the easement may contain designated fire lanes and parking areas as approved by the Town Engineer.

Engineered channels shall have drainage easements dedicated to meet the requirements of the width of the channel, the 1 foot of freeboard, and access easement.

3.3.2.1.2 Storm Sewer Easements

Easement widths will be rounded up to the nearest 5-foot increment. The minimum width of the storm sewer easement shall be the outside diameter of the storm sewer pipe or horizontal dimension of the storm sewer box plus 10 feet. For pipes or boxes in parallel, the minimum easement shall be equal to the width of the parallel storm drain system plus 10 feet. The minimum storm sewer easement that shall be provided in any case is 15 feet.

3.3.2.1.3 Other Stormwater Facilities

Drainage easements for structural overflows, swales, and berms shall be of sufficient width to encompass the structure or graded area. The proposed centerline of overflow swales shall normally coincide with the centerline of the easement. Drainage easements will generally extend at least 25 feet past an outfall headwall to provide an area for maintenance operations.

Easements for stormwater controls, including detention basins, sediment traps, and retention ponds, shall be negotiated between the Town and the developer but will normally include essential access to all embankment areas and inlet and outlet controls. Essential access is defined as access in at least one location. The entire reach or each section of any drainage facility must be readily accessible to maintenance equipment. Additional easement(s) shall be required at the access point(s), and the access points shall be appropriately designed to restrict access by the public.

3.3.2.2 *Operations and Maintenance Agreements*

All drainage improvements constructed within a development and any existing or natural drainage systems to remain in use shall require a maintenance agreement that identifies responsible parties for maintenance. Both private and public maintenance responsibility shall be negotiated between the municipality and the owner and documented in the agreement. The maintenance agreement shall be written such that it remains in force upon sale of transfer of the property.

The Town will provide for perpetual maintenance, in accordance with adopted Town maintenance standards, of all public drainage facilities located within dedicated easements and constructed to the Town standards. In addition, limited perpetual maintenance may be provided by the Town for riparian areas placed in a drainage easement preserved in their natural state, subject to Town approval. Access shall be provided and dedicated by the developer to all public stormwater facilities in developments for maintenance and inspection by the Town.

A *Stormwater Facility Maintenance Agreement* (SFMA) must be prepared by the engineer for each stormwater control that will not be wholly maintained by the Town. This agreement must outline both preventive maintenance tasks as well as major repairs, identify the schedule for each task, assign clear roles to affected parties, and provide a maintenance checklist to guide future owners. Multiple stormwater controls may be contained within a single SFMA. When areas are identified for detention that also serve other purposes for the development (e.g. parking lots, loading docks) the requirement for a SFMA may be waived.

3.3.2.3 *Inspections*

An annual self-inspection report shall be provided to the Town for all permanent stormwater controls with an active SFMA. The inspection report shall document the condition of the stormwater control and maintenance provisions undertaken to ensure the continued functionality of the stormwater control as designed. Generally, this inspection can be conducted and documented by the owner of the facility unless otherwise stated in the SFMA. An inspection report signed and sealed by a Professional Engineer in the State of Texas shall be submitted to the Town at a minimum of every 5 years, unless otherwise stated in the SFMA. The Town maintains the right, as outlined in

the Town ordinances, to inspect permanent stormwater controls and enforce provisions of the SFMA and this manual.

3.3.3 Temporary Construction Controls

Construction activities shall comply with all applicable federal (EPA), state (TCEQ), and local (Town) stormwater pollution prevention regulations. When the ordinance and applicable regulations are in conflict, the most stringent requirements shall apply.

3.3.3.1 *Stormwater Pollution Prevention Plan*

For all construction projects that will disturb 1 acre or more of land area, the TCEQ requires operators to obtain Texas Pollutant Discharge Elimination System (TPDES) General Permit (TXR150000) coverage for the project. This requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP). A SWPPP shall be provided to the Town and approved prior to the start of any construction. The contractor is responsible for implementing and maintaining the SWPPP, as well as posting and submitting construction site notifications, the Notice of Intent, and the Notice of Termination.

3.3.3.2 *Best Management Practices During Construction*

The SWPPP shall provide a series of best management practices (BMPs) that are appropriate for each phase of construction. The SWPPP shall also identify which owner/operator is responsible for installing, inspecting, and maintaining each BMP during the different phases of construction. All temporary BMPs must be removed after final stabilization is achieved.

Structural BMPs shall comply with the *Town of Little Elm Standard Details*, this manual, and the latest edition of the North Central Texas Council of Governments (NCTCOG) integrated Stormwater Management *(iSWM) Criteria Manual for Site Development and Construction* and *Technical Manual for Construction Controls*. When the iSWM manual, Town Standard Details, or this manual are in conflict, the Standard Details and then this manual shall govern.

Section 3.4. Hydrology

Prior to hydraulic design of drainage facilities, the rate and volume of stormwater runoff at the design point must be determined. The amount of stormwater runoff from a given site is a factor of the intensity and duration of the rainfall event and the size and hydrologic characteristics of the contributing drainage area. The following sections describe the approved hydrologic criteria and procedures to be used in the calculation of design runoff values.

Several sections of this chapter are adapted from the *iSWM Technical Manual for Hydrology*. Please reference the latest edition of the iSWM manual for additional guidance as needed.

3.4.1 Peak Discharges Prepared by Town

Peak discharge data from an appropriate flood study or Town-approved drainage studies shall be used as the design discharges, if such data is available. When no flow rates are available, peak discharges shall be determined by the engineer. All discharge values shall be based on full development of the drainage basin as outlined in the most recently adopted versions of the Town's *Comprehensive Plan*, *Zoning Map*, and *Future Land Use Map*.

3.4.2 Rainfall Intensity

The National Oceanic and Atmospheric Administration (NOAA) *Atlas 14, Volume 11 Precipitation-Frequency Atlas of the United States, Texas (2018)* is recognized as the best available set of rainfall data for the State of Texas. *Atlas 14* provides point precipitation frequency values, with rainfall intensity values varying slightly across the Town. A single coordinate (33.1870, -96.8897) has been selected to define standard rainfall intensity values throughout the Town. The standard rainfall intensities are listed in **Table 5**.

Table 5: Design Rainfall Intensities

Duration		Rainfall Intensity (in/hr) by Return Period and AEP (%)		
Min	**Hr**	**2-Year (50%)**	**25-Year (4%)**	**100-Year (1%)**
5	**0.083**	5.89	9.77	11.92
10	**0.167**	4.69	7.78	9.52
15	**0.25**	3.90	6.44	7.84
30	**0.5**	2.70	4.44	5.40
60	**1**	1.76	2.92	3.56
120	**2**	1.09	1.87	2.33
180	**3**	0.81	1.42	1.79
360	**6**	0.48	0.86	1.11
720	**12**	0.29	0.51	0.66
1440	**24**	0.17	0.30	0.39

3.4.3 Drainage Areas

Drainage area maps and runoff calculations shall include all drainage areas contributing to the site. Separate drainage area maps and runoff calculations shall be prepared for both the existing (pre-project) drainage area and the fully developed (post-project) drainage area. Drainage areas shall follow natural drainage features if future land disturbance is unknown or existing areas will not be changing under fully developed conditions.

Drainage area determinations shall be based on site survey and proposed grading plans, supplemented by recent aerial imagery and topographic maps. Delineations shall be performed utilizing a maximum 2-foot contour interval for existing drainage areas and a maximum 1-foot contour interval for proposed drainage areas. The performance of topographic survey used to delineate drainage areas is the responsibility of the engineer designing the drainage facility.

3.4.4 Time of Concentration

The time of concentration (T_c) is defined as the longest time, without interruption of flow by detention devices, that will be required for water to flow from the upper limit of a drainage area to the point of concentration. Times of concentration can often be assumed based on the typical inlet times shown in **Table 7**.

Alternatively or where no typical inlet time is provided, T_c may be calculated using the National Resource Conservation Service (NRCS, formerly known as the Soil Conservation Service, SCS) methodology. The use of NRCS methodology in lieu of standard inlet times may be at the discretion of the Town Engineer. This method separates the flow through the drainage area into sheet flow, shallow concentrated flow, and open channel flow. The T_c is the sum of travel times for sheet flow, shallow flow and open channel flow. Time of concentration calculations shall be provided by the engineer along with flow path delineations.

Computations for travel time (T_t) for sheet flow, shallow flow, and open channel flow shall adhere to the following methodology.

1. **Sheet Flow:** Sheet flow is the initial flow over the ground surface. The maximum allowable length for sheet flow is 300 feet for undeveloped drainage areas and 100 feet for developed areas. The travel time (T_t) in hours for sheet flow is determined using the following equation:

$$\boldsymbol{T_t = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5}(S)^{0.4}}}$$

T_t = travel time (hr)

n = Manning's roughness coefficient (**Table 9**)

L = flow length (ft)

P_2 = 2-year, 24-hour rainfall, 4.1 in.

S = longitudinal slope (ft/ft)

2. **Shallow Concentrated Flow:** Shallow concentrated flow begins where sheet flow ends. A projected average slope should be established along the flowline for the shallow concentrated flow length. The travel time (T_t) in hours for shallow concentrated flow is determined by the following equation:

$$\boldsymbol{T_t = \frac{L}{3600V}}$$

V = average velocity (fps), calculated as follows:

Unpaved Surfaces = $16.1345 \times S^{0.5}$

Paved Surfaces = $20.3282 \times S^{0.5}$

3. **Open Channel Flow:** Open channel flow is where the runoff is located within a defined channel or in some cases, closed storm systems. The travel time (T_t) for open channel flow is determined using the equation for shallow concentrated flow and using Manning's Equation to determine average velocity (V):

$$\boldsymbol{V = \frac{1.486 R^{\frac{2}{3}} S^{\frac{1}{2}}}{n}}$$

V = average velocity (fps)

R = hydraulic radius (A/P) (ft), where:

A = cross-sectional area (ft^2)

P = wetted perimeter (ft)

S = longitudinal slope (ft/ft)

n = Manning's roughness coefficient (**Table 9**)

3.4.5 Allowable Hydrologic Methods

There are a number of empirical hydrologic methods available to estimate runoff characteristics for a site or drainage subbasin. The following methods have been selected to support hydrologic site analysis for the design methods and procedures included in this manual:

- Rational Method
- Modified Rational Method
- Unit Hydrograph Method

The procedures and approved applications of each method are described in the following sections.

3.4.5.1 *Rational Method*

The rational method is a simple procedure for estimating peak flows from small drainage areas. The use of the rational method is limited to drainage areas of less than 100 acres, unless otherwise approved by the Town Engineer. The formula for calculation of runoff by the rational method is:

$$\boldsymbol{Q = C_f CiA}$$

Q = peak discharge (cfs)

C_f = frequency factor for use with higher intensity storms

C = runoff coefficient

i = rainfall intensity (in/hr) for a period equal to the time of concentration

A = contributing drainage area (acres)

The rational method was initially developed for design applications that considered storms with more frequent return periods than current flood protection standards (less than or equal to 10 years). Less frequent, higher intensity storms require use of a frequency factor (C_f) to account for the fact that infiltration and other initial losses have a proportionally smaller effect on runoff than for more frequent events. **Table 6** provides the frequency factors to be used with rational method applications.

Table 6: Frequency Factors for Rational Formula

Recurrence Interval (years)	Frequency Factor (C_f)
10 or less	1.0
25	1.1
100	1.25

The post-development runoff coefficient "C" shall be based on fully developed conditions. The most intense land use or zoning shall be used to determine the runoff coefficient for the drainage area. **Table 7** gives values for runoff coefficients to be used in applications of the rational method. It is often desirable to develop a composite runoff coefficient based in part on the percentage of different types of surfaces in the drainage area. Composite "C" values and other deviations from the coefficients provided in **Table 7** are subject to the approval of the Town Engineer.

Table 7: Runoff Coefficient Values and Typical Inlet Times

Land Use	Runoff Coefficient "C"	Minimum Inlet Time (min)
Residential:		
Single Family		
Low Density Residential	0.45	10
Medium Density Residential	0.55	10
High Density Residential	0.60	10
Multi-Family		
Manufactured Homes	0.60	10
Light (Townhomes, Duplex)	0.65	10
Heavy (Apartments)	0.85	5
Commercial/Industrial:		
Light	0.70	5
Heavy	0.80	5
Business Districts (Town Center, Office)	0.85	5
Parks and Open Space	0.25	15
Streets, Drives, Walks, and Roofs	0.95	5
Gravel Areas	0.50	
Graded or No Plant Cover	0.40	
Agricultural	0.30	
Forest	0.15	
Streams, Lakes, Water Surfaces	1.00	

3.4.5.2 *Modified Rational Method*

The modified rational method uses the rational method peak flow calculations combined with assumptions about the inflow and outflow hydrographs to compute an approximation of storage volumes for simple detention calculations. Further explanation of the modified rational method and a noniterative approach for detention design calculations are presented in the iSWM manual. The modified rational method is limited in use to applications as described in **Section 3.6.1**.

3.4.5.3 *Unit Hydrograph Method*

The Town requires the use of the NRCS unit hydrograph method for drainage areas larger than 100 acres. The unit hydrograph method requires drainage area, a runoff factor, time of concentration, rainfall, and methodology to consider initial and constant losses. Details of the methodology can and additional guidance can be found in the *SCS National Engineering Handbook, Section 4, Hydrology* and the iSWM manual.

The Town requires the use of HEC-HMS to perform the computations and to develop runoff hydrographs for a drainage area. Additional software may be accepted at the discretion of the Town Engineer. Typical inputs required for development of a HEC-HMS hydrograph are described below.

3.4.5.3.1 Curve Numbers

Use of the runoff curve number (CN) methodology outlined in *Urban Hydrology for Small Watersheds – NRCS Technical Release (TR)-55* is required. Curve numbers indicate the runoff potential of the land cover, considering the combined hydrologic effects of the soil type, land use, hydrologic condition of the soil cover, and the antecedent soil moisture. The NRCS Soil Survey for Denton County may be used to identify the soil group within the watershed subbasins. For computation of design events, an assumption of Antecedent Moisture Condition (AMC) II is required.

The runoff CN values for urban areas provided in *TR-55* are recommended for use. When open space is used as the cover type, fair condition shall generally be assumed. Other CN values may be approved by the Town Engineer. **Table 8** shows the land use categories and corresponding impervious percentages. These values do not supersede the existing conditions, or where proposed impervious conditions are known. For instance, if an industrial area is currently 95% paved, then 95% is the impervious condition that shall be used.

Table 8: Impervious Percentage Values for Land Use Classifications

Land Use	Impervious Condition (%)
Residential:	
Single Family	
Low Density Residential	25
Medium Density Residential	41
High Density Residential	47
Multi-Family	
Manufactured Homes	20
Light (Townhomes, Duplex)	70
Heavy (Apartments)	70
Commercial/Industrial:	
Light	90
Heavy	95
Business Districts (Town Center, Office)	85
Parks and Open Space	6
Streets, Drives, Walks, and Roofs	95
Agricultural	3
Forest	0
Streams, Lakes, Water Surfaces	100

3.4.5.3.2 Design Storm Rainfall

Use of the 24-hour storm duration and SCS Type II distribution is required for peak flow calculations, unless otherwise approved by the Town Engineer.

3.4.5.3.3 Hydrologic Stream Routing

Routing may be needed within the hydrologic model to account for the storage effects of detention facilities or significant channel reaches that are not accounted for in a hydraulic model. Detention and ponding areas shall be modeled using Modified Puls routing with explicit depth-area curves determined from topographic contours. Channel segments shall be modeled using either Modified Puls or Muskingum Cunge methods based on cross sections taken from available topography. For unsteady flow modeling, the routing is accounted for by the hydraulic software being used.

Section 3.5. Hydraulics

Hydraulic design is the process of determining the appropriate capture and transport (or storage) of stormwater that has been generated from a rainfall event to an adequate outfall. Stormwater facilities include, but are not limited to, ditches, streets, inlets, storm drain systems, swales, channels, culverts, ponds, and reservoirs.

Several sections of this chapter are adapted from the *iSWM Technical Manual for Hydraulics*. Please reference the latest edition of the iSWM manual for additional guidance as needed.

3.5.1 Streets and Gutter Flow

Surface drainage along streets is a function of transverse and longitudinal pavement slope, pavement roughness, inlet spacing, and inlet capacity. The design of these elements is dependent on storm frequency and the allowable spread of stormwater. Flow in streets and gutters is governed by Manning's equation for open channel flow:

$$Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$$

Q = flow (cfs)

A=cross-sectional flow area (ft^2)

R = hydraulic radius (ft), as defined previously

S = longitudinal slope (ft/ft)

n = Manning's roughness coefficient (**Table 9**)

Table 9 provides Manning's roughness coefficients and maximum permissible velocities to be used in the design of various drainage facilities in the Town. The Manning's roughness coefficient to be used in calculation of flow in concrete streets and gutters shall be 0.016 unless otherwise approved by the Town Engineer. The iSWM manual provides alternate forms of the Manning's equation with tables and nomographs to be used in the calculation of drainage capacities of streets with triangular, composite, and parabolic sections, as well as streets with curb splits.

Table 9: Roughness Coefficients and Maximum Permissible Velocities

Type of Section/Feature	Roughness Coefficient "n"			Maximum Permissible Velocity (fps)
	Minimum	Normal	Maximum	
Natural Streams				
Stream Section				6
Some Grass and Weeds; Little or No Brush	0.027	0.045	0.048	
Dense Growth of Grass or Brush	0.050	0.055	0.055	
Dense Brush and Trees	0.060	0.065	0.080	
Floodplain/Overbank Areas				6
Grass, Weeds; Some Brush and Trees	0.027	0.045	0.048	
Dense Grass, Weeds or Brush	0.050	0.055	0.065	
Dense Brush and Trees	0.070	0.080	0.150	
Buildings		0.500		N/A
Constructed/Modified Open Channels				
Concrete Blocks	0.015	0.035	0.050	15
Gabion	0.015	0.035	0.050	15
Grass (Maintained)	0.027	0.035	0.040	6
Concrete Riprap	0.014	0.016	0.030	15
Stone Riprap	0.033	0.035	0.036	
Streets				
Concrete Section				N/A
Smooth	0.015	0.016	0.017	
Rough	0.017	0.018	0.019	
Asphalt	0.014	0.015	0.019	
Pipes				15
Reinforced Concrete Pipe	0.012	0.013	0.017	
Corrugated Metal Pipe	0.015	0.022	0.033	
High Density Polyethylene Pipe (HDPE)	0.009	0.011	0.025	
Concrete Boxes (Smooth to Rough)	0.012	0.013	0.020	

3.5.1.1 *Street Drainage Criteria*

The surface drainage system and closed storm drain system for a street must be designed such that in combination, the systems provide enough capacity to fully contain the flow from 100-year storm within the street right-of-way or drainage easement. The Town also enforces a set of criteria for allowable spread of gutter flow depending on street classification, as outlined in **Table 10**. An "open" traffic lane is defined for the purposes of this manual as at least a 12-foot section of pavement that remains dry (no ponding or flowing water) for the duration of the rainfall event to allow for the safe passage of vehicles. Storm sewer inlets shall be provided along paved streets at such intervals to prevent the capacity and spread requirements from being exceeded.

Table 10: Street Drainage Criteria

Type of Street	Allowable Spread
Major Thoroughfare	One traffic lane in each direction to remain open
Collector Street	One moving traffic lane to remain open
Residential Street	n/a

Additional street drainage considerations are listed below:

1. The maximum allowable concentrated flow to a street including flow from driveways and flumes is 3 cfs.
2. Street surface drainage shall not be permitted to cross major thoroughfares or collector streets.
3. At any intersection, only one street shall be crossed with surface drainage, and this shall be the lower classified street.

3.5.2 Stormwater Inlets

Inlets are drainage structures used to collect surface drainage and to convey this water to storm drains or direct outlet to culverts. The capacity of an inlet depends upon its geometry and the cross slope, longitudinal slope, total gutter flow, depth of flow, and pavement roughness. Inlets servicing roadway drainage can be divided into three major classes:

- Curb Inlets
- Grate Inlets
- Combination (Grate and Curb-Opening) Inlets

Inlets may be classified as being on a continuous grade or in a sump. The term "on grade" refers to an inlet located on the street with a continuous slope past the inlet with water entering from one direction. The "sump" condition exists when the inlet is located at a low point and water enters from both directions. Artificial low points created by “seesaw” of street or alley grades will not be permitted. All low point inlets shall be designed in accordance with additional standards outlined in **Section 3.5.2.5**.

The procedures and technical criteria outlined in the iSWM manual shall be used for the hydraulic design of stormwater inlets. Additional criteria for various inlet types are summarized in the following sections. Refer to the Town of Little Elm Standard Construction Details for inlet construction and material requirements.

3.5.2.1 *Curb Inlets*

Curb inlets shall be a minimum of 8 feet in length. Recessed curb inlets are required on all collector and arterial streets. The Town Standard Details for both recessed and standard curb inlets include a depressed gutter line.

Where an alley or street intersects a street, inlets shall be placed in the intersecting alley or street whenever the combination of flow down the alley or intersecting street would cause the capacity of the downstream street to be exceeded. Inlets shall be placed upstream from an intersection whenever possible.

3.5.2.2 *Grate Inlets*

The Town’s MS4 program encourages measures to limit the inflow of floatables to the storm system. The installation of grate inlets in lieu of or in combination with the installation of debris separators in nonresidential developments may be permitted to help meet this objective and may be required in some instances by the Town Engineer for sites outfalling to Lewisville Lake. Installation of grate inlets in other instances requires approval by the Town Engineer. Grate inlets shall be designed with a 50% clogging factor due to the tendency of these inlets to collect debris.

3.5.2.3 *Combination Inlets*

Combination inlets consist of both a curb-opening inlet and a grate inlet placed in a side-by-side configuration, but the curb opening may be located in part upstream of the grate. Combination inlets may only be used with the approval of the Town Engineer.

All debris carried by stormwater runoff that is not intercepted by upstream inlets will be concentrated at the inlet located at the low point. Because this will increase the probability of clogging for grated inlets, the capacity of a combination inlet in sump shall be assumed to be the capacity of the curb inlet, neglecting the grate inlet capacity. On a continuous grade, the capacity of an unclogged combination inlet with the curb opening located adjacent to the grate is approximately equal to the capacity of the grate inlet alone. Capacity shall be computed by neglecting the curb opening inlet and following the design procedures for grate inlets.

3.5.2.4 *Drop Inlets*

The Town allows for the installation of drop inlets to collect water in nonpaved areas, such as ditches and swales. If used, grading plans to direct flow into drop inlets shall be included in the construction plans. Drainage interceptor swales or berms should be used, as required, to direct runoff to the drop inlets. Where swales or other means of collecting and directing runoff into drop inlets are needed, they should be contained in drainage easements according to the requirements outlined in **Section 3.3.2.1**.

Drop inlet capacity shall be evaluated with a 50% clogging factor due to the tendency of these inlets to collect debris. Flow into drop inlets shall be calculated using either the weir flow formula for an unsubmerged inlet or the orifice flow formula when depth of flow exceeds the depth of the opening.

The capacity of an unsubmerged inlet operating as a weir is:

$$\frac{\boldsymbol{Q}}{\boldsymbol{P}} = \mathbf{2.5}\boldsymbol{y}^{\mathbf{3/2}}$$

Q = flow capacity (cfs)

2.5 = weir coefficient (3.1) adjusted for 50% clogged inlet throat

P = perimeter of opening (ft)

y = head/depth (ft)

and the capacity of a submerged inlet operating as an orifice is:

$$\boldsymbol{Q} = \mathbf{0.6}\boldsymbol{A}(\mathbf{2}\boldsymbol{g}\boldsymbol{H})^{\mathbf{0.5}}$$

Q = flow capacity (cfs)

0.6 = orifice discharge coefficient

A = area of inlet opening (ft^2)

g = acceleration due to gravity = 32.2 (ft/s^2)

H = head above centerline of inlet opening height (ft)

Both conditions should be evaluated, and the capacity should be determined from the condition that produces the more conservative value. The capacity calculations for drop inlets will be limited to a maximum head of 1 foot above the flowline of the inlet throat.

3.5.2.5 *Low Point Inlets and Positive Overflow Requirements*

Inlets are required at all low points in the gutter profile. Additionally, the drainage system shall provide for positive overflow at all low points. The term "positive overflow" means that when the inlets do not function properly, or when the design capacity of the conduit is exceeded, the excess flow can be conveyed overland along an open course. Generally, positive overflow is provided along a street or alley, but certain circumstances may require the dedication of drainage easement and construction of a concrete flume sized to carry the overflow. Reasonable judgment should be used to limit the easements on private property to a minimum.

In areas where positive overflow is not feasible, flanking inlets are required on each side of the low point inlet to act in relief of the inlet at the low point if it should become clogged. Flanking inlets shall be located to function before water spread exceeds the allowable spread at the sump location and shall be designed with a combined capacity to match the capacity of the primary sump inlet.

3.5.3 Storm Drain (Closed Systems)

A closed storm drain system shall be required within the right-of-way where the 100-year design storm exceeds the capacity of the street surface drainage system. Closed systems shall be extended to an adequate and acceptable outfall as described in **Table 3**.

3.5.3.1 *Flow in Storm Drains*

3.5.3.1.1 Full and Partial Flow

All storm drains shall be designed by the application of the continuity equation and Manning's equation. The continuity equation is given as:

$$Q = AV$$

Q = flow capacity (cfs)

A = cross-sectional flow area (ft^2)

V = velocity (fps)

Pipe flow shall be determined either through the appropriate charts and nomographs or by direct solutions of the equations. Charts and nomographs for circular pipes flowing full and partially full are included in the iSWM manual. The Texas Department of Transportation (TxDOT) *Hydraulic Design Manual* includes equations for flow in conduits with other cross sections.

Pipes and boxes shall be designed as if flowing full. Design flow depth of less than full to get a lesser wetted perimeter is not acceptable. Four wall wetted perimeter is required in the calculations. There will be hydraulic conditions that cause the conduits to flow partially full. Where this occurs, the hydraulic gradient should be shown at the inside crown of the conduit.

3.5.3.1.2 Hydraulic Gradient and Storm Drain Profile

The hydraulic grade line (HGL) shall be established for all storm drain systems. The 25-year HGL must be at or below the gutter line for pipe systems and 1 foot or more below the top of curb at inlets. For sump conditions

without an existing structural overflow, the 100-year HGL must be 1 foot below the top of curb at the inlet. For systems where no ROW exists, the 100-year HGL must be below finished ground.

Both the fully developed 25-year and 100-year hydraulic gradient lines (HGLs) shall be shown throughout the system. They shall be labeled in the construction plans both in the hydraulic calculations and on the storm drain profile. The design storm HGL shall be below the bottom of the improved subgrade for systems under pavement. For systems outside of the pavement, the HGL shall be lower than all inlet throats. Allowance of additional head may be required for planned future extensions of the storm drainage system.

The HGL shall start at the tailwater elevation or HGL of a connecting feature; the inside top of pipe; or at the HGL determined for a coincident confluence flow condition, whichever is highest. At the discharge end of pipes outfalling to a natural creek or stream, the hydraulic gradient of the creek for the design storm must coincide with the gradient of the storm drainage conduit. If an approved flood hydrograph is available to provide a coincident flow elevation for the system's peak, the table of coincident design frequencies in the iSWM manual can be used to assist with tailwater determination. If an approved flood hydrograph is not available, the starting HGL at the outfall into a creek or channel shall be the 100-year fully developed water surface elevation. Alternatively, a detailed hydrologic and hydraulic study can be performed to determine the coincident tailwater.

3.5.3.1.3 Velocities

Storm drains should operate with velocities of flow sufficient to prevent excessive deposits of solid materials. A minimum full flow velocity of 2.5 fps in the design storm and a minimum slope of 0.5% shall be maintained in the pipe unless otherwise approved by the Town Engineer. Velocities shall not exceed those listed in **Table 9**. Supercritical flow is not allowed in main lines.

3.5.3.1.4 Headlosses

Head losses at structures shall be determined for manholes, junction boxes, wye branches, bends, curves, and changes in pipe sizes in the design of closed conduits. Head losses must be incorporated into the gradient profile. Minimum head loss used at any structure shall be one-tenth (0.10) foot. Refer to the iSWM manual for the equations to calculate energy losses at pipe junctions, bends, manholes, inlets, and other situations.

Pipe direction changes will be curves using radius pipe unless approved by the Town Engineer. Ninety-degree turns on storm sewers or outfalls are prohibited. Laterals shall intersect the trunk line at 60 degrees.

3.5.3.2 *Pipe Material and Roughness Coefficients*

Underground systems shall be constructed with Class III reinforced concrete pipe or as otherwise provided in the Town's standard construction details. Alternate materials may be approved by the Town Engineer. The pipe size shall be a minimum of 18 inches for all public systems. A higher class of pipe may be required when underground storm drainage systems are constructed at shallow or deep elevations. Refer to the pipe manufacturer specifications for cover requirements.

A roughness coefficient will be selected which will represent the average condition of the pipe consistent with the values presented in **Table 9**. Other roughness coefficients may be approved at the discretion of the Town Engineer.

3.5.3.3 *Entrance/Outfall Structures*

Headwalls or sloped end treatments shall be constructed at the pipe ends of all storm drain systems. Sloped end treatments are required along streets when the drainage feature is adjacent and parallel to traffic flow. The sloped end treatment shall be a minimum 6:1 (horizontal to vertical) end section.

Storm drain systems that outfall to a stream, natural channel, or pond shall conform to the existing side slope of the channel and be connected to a headwall. Discharge flowlines of storm sewers are to be 2 feet above the flowline of creeks and channels, unless channel lining is present. Hard armor protection and energy dissipation shall be provided when discharge velocities exceed the maximum allowable velocity in **Table 9** and when specified by the Town Engineer.

3.5.3.4 *Access Points*

A manhole or access lateral shall be constructed at least every 500 feet to provide access into the closed system, or as otherwise directed by the Town Engineer. A lateral used as an access point shall be at least 24 inches in diameter, an approved material, and no more than 50 feet long to an open-air access point. Open air access is considered a designed entrance point or outfall without obstructions.

3.5.4 Open Channels

This section includes the drainage design criteria for ditches, channels, and dams. Land disturbances that include or are adjacent to a stream and result in impacts to the 100-year floodplain shall submit a flood study to meet the requirements of **Chapter 7**. If modifications to a stream or channel are determined to impact the Jurisdictional Waters of the United States (WOTUS), then the plans shall be submitted to the USACE for review and any required permitting shall be performed and approved prior to construction per the requirements of **Section 3.1.3.2.**

3.5.4.1 *Hydraulic Design*

The Town requires a tailwater/headwater analysis on any proposed open channels, upstream and downstream channel transitions, energy dissipation structures, obstructions, or small dams (less than 6 feet). The tailwater/headwater analysis shall be used to determine the actual headwater and tailwater elevations, head losses, capacity, freeboard, and floodplain impacts. If an approved flood hydrograph is available to provide a coincident flow elevation for the system's peak, the table of coincident design frequencies in the iSWM manual can be used to assist with tailwater determination. Alternatively, a detailed hydrologic and hydraulic study will be required.

For channels that require a flood study, a hydrologic routing model and hydraulic analysis will be required to determine impacts on existing floodplains and/or adjacent properties. If a stream or channel has an effective FEMA model and/or a Town Council adopted watershed model, the engineer will be required to use those models for the analysis.

For normal depth (uniform flow) calculations, the Manning's equation and slope-area method is to be used only for initial sizing. Exceptions for small outfall channels will be made at the discretion of the Town Engineer.

Supercritical flow will not be allowed for designed channels. However, for lined channels, the HEC-RAS analysis should include a mixed-flow regime analysis, to make sure no supercritical flow occurs for the designed channel. Mixed or supercritical flow may be allowed for analysis of existing conditions when required.

Upstream or downstream transitions from natural to modified channels along with channel outfalls will require a design based on a hydraulic study and will provide a non-erosive environment. Refer to the iSWM manual for design of channel transitions and energy dissipation.

3.5.4.2 *Types of Channels*

3.5.4.2.1 Unimproved Channels/Natural Streams

Where natural streams connect to improved closed systems and/or improved channels, permanent transitional materials and energy dissipation are required. In areas along natural streams where potentially excessive erosion or head cutting may occur or worsen, grade control structures, drop structures, or other structures may be required to stabilize the stream in order to protect structures or infrastructure.

3.5.4.2.2 Constructed/Modified Open Channels

Where constructed or modified open channels connect to a closed system, natural streams, or a channel of a different material, permanent transitional materials and energy dissipation are required. Modified channels shall be designed with the following minimum criteria:

1. Side Slopes shall be 4:1 (horizontal to vertical) for vegetated channels or as specified by manufacturer for other channel materials.

2. Bottom width shall be at least 6 feet.
3. Minimum channel slope is 1% for vegetated channels and 0.5% for hard armor channels or pilot channels.
4. New channels shall be designed to fully contain the 100-year storm with 1 foot of freeboard at all locations along the channel, or to the elevation of the 100-year flood elevation of Lewisville Lake, whichever is lower.
5. Modification or improvement of existing constructed/modified channels shall at a minimum maintain the existing capacity.
6. The maximum design velocity for all channels shall be as specified in **Table 9**. Higher velocities and/or channel armoring require a sealed geotechnical study for design and approval by the Town Engineer.
7. Each reach of a channel that will require Town maintenance must have a ramp for maintenance access. Ramps shall be at least 10-feet wide and have 15% maximum grade. 12-foot width is required if the ramp is bound by vertical walls.
8. A fence shall be constructed on each side of the channel. Fences are not allowed to cross public channels.
9. New concrete channels are not allowed unless it is required as part of the repair or replacement of an existing concrete channel.

3.5.5 Culverts

3.5.5.1 *General Design Criteria*

Culverts shall be designed based on standard design procedures outlined in the iSWM manual. used to carry ditch or surface flow safely under roadways and driveways in order to meet conveyance standards for the design storm. The driveway or roadway shall have an invert above the pipe for positive overflow. If a culvert is not feasible for a driveway, then the driveway shall be constructed with an invert.

Concrete sloped end treatments are required when culverts are adjacent and parallel to traffic flow. Erosion protection will be provided at the upstream and downstream ends of the sloped end treatment for all culverts. Stabilization and/or energy dissipation shall be provided where allowable channel velocities are exceeded upstream and downstream of the culvert.

Culverts shall be constructed with Class III reinforced concrete pipe or another approved material as shown in the Town's standard construction details. The pipe size shall be a minimum of 24 inches for roadway crossings and 18 inches for driveway culverts. A higher class of pipe may be required when underground storm drainage systems are constructed at shallow or deep elevations. Refer to the pipe manufacturer specifications for cover requirements.

When practical for multiple barrel culverts (3 or more), one of the barrels should be placed at the flowline of the stream with the other barrels at a higher elevation to create a single flow path for lower flows and reduced sediment and debris accumulation.

3.5.5.2 *Minimum Elevations*

Culverts shall be designed with a minimum 1 foot of freeboard between the 100-year headwater elevation and the surface of the road and/or 2 feet of freeboard below any adjacent habitable structure, whichever establishes the more stringent requirement. Other surrounding physical conditions may be cause for an increase in this requirement at the discretion of the Town Engineer.

3.5.5.3 *Slope and Velocity*

The maximum slope using concrete pipe is 10% before pipe-restraining methods must be taken. The minimum slope is 0.5%. Maximum vertical distance from throat of intake to flowline in a drainage structure is 10 feet. Drops greater than 4 feet will require additional structural design.

Velocities in culverts should be limited to no more than 15 feet per second, but downstream conditions very likely will impose more stringent controls. Culvert discharge velocities shall not exceed the maximum permissible

velocities for open channels listed in **Table 9**. Discharge velocities that are too high must be reduced to allowable velocities using appropriate energy dissipation structures or techniques.

3.5.5.4 *Headwater Limitations*

For safety reasons, headwater depth/culvert diameter ratio (HW/D) should not exceed 1.5 for the 100-year event peak flow. Variance to this criteria may be permitted by the Town if justification is provided and sufficient measures are taken to reasonably avoid any safety impacts. Assessment of the impacts caused by exceeding the design headwater depth should account for:

- Hazard to human life and safety.
- Potential damage to the culvert, embankment stability and roadway.
- Traffic interruption in the event of roadway overtopping.
- Anticipated upstream and downstream flood risks, for a range of return frequencies.

The headwater shall be checked for the 100-year storm event elevation to ensure compliance with floodplain management criteria and to ensure it is contained within the right-of-way or easement. The headwater shall not cause damages to the upstream property.

3.5.5.5 *Tailwater Considerations*

If the culvert outlet is operating with a free outfall, the critical depth and equivalent hydraulic grade line shall be determined. If an upstream culvert outlet is located near a downstream culvert inlet, the headwater elevation of the downstream culvert will establish the design tailwater depth for the upstream culvert. For culverts discharging into natural creeks, channels, or ponds, the tailwater shall be assumed to be the 100-year fully developed water surface elevation. If an approved flood hydrograph is available to provide a coincident flow elevation for the system's peak, the table of coincident design frequencies in the iSWM manual can be used to establish the tailwater elevation. Alternatively, a detailed hydrologic and hydraulic study can be performed to establish the tailwater elevation.

3.5.6 Bridges

3.5.6.1 *Hydraulic Design*

A hydrologic and hydraulic analysis using HEC-RAS is required for designing all new bridges, bridge widening, bridge replacement, and roadway profile modifications that may adversely affect the floodplain, even if no structural modifications are necessary. The hydraulic analysis should demonstrate no-rise (0.00 feet) in the water surface elevation for the 100-year storm. Typically, this analysis should include the following:

1. Peak discharges for fully developed watershed conditions,
2. Proposed conditions water surface profiles for design flood and other frequency flood impacts.
3. Consideration of the potential for stream stability problems and scour potential.

Additional discussion on bridge hydraulics is included in the *TxDOT Hydraulic Design Manual*.

3.5.6.1.1 Loss Coefficients for Hydraulic Models

The contraction and expansion of water through the bridge opening creates hydraulic losses. These losses are accounted for through the use of loss coefficients. Contraction (K_c) and Expansion (K_e) Coefficients shall be used at the bridge location in accordance with current FEMA guidelines.

3.5.6.2 *Minimum Elevations*

Bridges shall be designed to pass the 100-year flow with a minimum 1 foot of freeboard between the 100-year surface elevation and the low chord of the bridge. Analysis must consider both the fully developed and FEMA effective discharges, and the freeboard elevation will be set using the most conservative results. Where fully

developed discharges are not available, the Engineer will be required to perform a flood study to determine 100-year water surface elevations.

3.5.6.3 *Scour Analysis*

A scour analysis shall be submitted with bridge design plans. Scour analysis shall be performed in accordance with the latest edition of the TxDOT *Geotechnical Manual*, based on the guidelines and procedures outlined in *HEC-18 Evaluating Scour at Bridges (5th Ed.)*. The HEC-RAS scour routines shall generally be used to perform bridge scour computations. Aerial utility crossings with piers located in the main channel shall also be evaluated for local pier scour using the methodology outlined in *HEC-18*.

Scour revetment shall be provided as needed and shall be designed using the methodology outlined in *HEC-23 Bridge Scour and Stream Instability Countermeasures: Experience, Selection, and Guidance*. Alternative methodologies for scour analysis and revetment may be approved at the discretion of the Town Engineer.

Section 3.6. Stormwater Storage Facilities

Proposed stormwater discharge from a site shall not exceed the calculated discharges from existing conditions for the 2-, 25-, and 100-year design storm. On-site detention may be proposed to mitigate the impacts of increased discharges due to site development. In some instances, detention may be shown to exacerbate potential flooding conditions downstream. In lieu of a detention facility, the Engineer may document that the excess flow will not create adverse impacts as defined in **Table 3**.

3.6.1 Detention Storage Calculation

The modified rational method is allowed for planning and conceptual design for watersheds of 200 acres and less. Sizing is not exact and may result in undersized detention/retention pond requirements. For final design purposes, the modified rational method is allowed only for watersheds of 25 acres and less. The modified rational method is not acceptable for basins in series. Detention basins draining watersheds over 25 acres shall be designed using unit hydrograph methodology. The unit hydrograph method is also allowed for basins with watersheds less than 25 acres and may be required at the discretion of the Town Engineer.

A calculation summary shall be provided on construction plans. For detailed calculations of unit hydrograph studies, a separate report shall be provided to the Town for review and referenced with date, engineer, and title on the construction plans. Stage-storage-discharge values shall be tabulated, and flow calculations for discharge structures shall be shown on the construction plans. Routing calculations must be used to demonstrate that the storage volume and outlet structure configuration are adequate.

3.6.2 Pond and Spillway Geometry

The following criteria shall apply:

1. Detention basin embankments shall have a 10-foot crown width.
2. Fencing may be required around the detention area at the discretion of the Town Engineer.
3. Detention Basins shall be designed with at least one maintenance ramp of at least 10 feet wide with a maximum slope of 15%. Twelve (12) feet in width is required next to vertical walls.
4. A freeboard of 1 foot will be required for all detention ponds.
5. Grassed side slopes shall be 4:1 or flatter and less than 20 feet in height. Slopes protected with concrete riprap shall be no steeper than 2:1. A detailed geotechnical investigation and slope stability analysis is required for grass and concrete slope pavement slopes greater than 12 feet in height. A concrete-lined or structural embankment can be steeper with the approval of the Town Engineer.
6. An emergency spillway shall be provided at the 100-year maximum storage elevation with sufficient capacity to convey the fully urbanized flood mitigation storm assuming blockage of the closed conduit

portion outlet works with 6 inches of freeboard. Spillway requirements must also meet all appropriate state and federal criteria. Design calculations will be added for all spillways.

7. Dry detention basins are sized to temporarily store the volume of runoff required to provide flood protection up to the flood mitigation storm, if required. Dry detention basin design should consider multiple uses, such as recreation. As such, pilot channels should follow the edges of the basin to the extent practical.
8. The bottom of the basin shall have a minimum grade of 1%, although swales may have minimum grades of 0.5%. Concrete flumes shall be provided for slopes less than 0.5% and may have slopes as shallow as 0.2%. They shall be at least 6 feet wide.

3.6.3 Permitting and Dam Safety Requirements

All federal, state, and local laws pertaining to the impoundment of surface water relating to the design, construction, and safety of the impounding structure shall apply. Criteria established by the State of Texas for dam safety (*TAC Title 30, Part 1, Chapter 299*) and impoundment of state waters (*Texas Water Code Chapter 11*) shall apply where required by the state, and where required by the Town Engineer. Should the engineer desire to utilize an existing facility that would qualify under these criteria and the use of the facility changes from an agricultural use to another use, the existing facility may need to be brought into compliance with the TCEQ *dam safety criteria*.

If a dam falls under the TCEQ dam safety criteria, the Town will require review and approval from TCEQ prior to authorizing construction. Copies of any federal, state, or local permits issued for the proposed impoundments shall be submitted to the Town Engineer. TCEQ rules and regulations regarding impoundments shall be followed. In accordance with Texas Water Code §11.142, permanent surface impoundments including retention and detention ponds may be required to obtain a water rights permit from the TCEQ.

Section 3.7. Floodplain Development

The following information is included for reference and to supplement the provisions outlined in the Town's *Flood Control and Prevention Ordinance*. Where codified flood protection provisions conflict with the provisions of this manual, the more stringent of the criteria shall apply.

The Town regulates development in all flood-prone areas. Flood-prone areas include areas located within the FEMA Special Flood Hazard Area (SFHA), flood hazards identified as part of a drainage study or Town Council adopted watershed study, or reported flood-prone areas located in Zone X. Reported flood-prone areas are subject to the requirements of this manual even if a flood zone has not been identified for the area.

Any land disturbance that includes impacts to a flood-prone area or could have impacts on floodplain limits for an associated stream shall require a hydraulic analysis (flood study) to determine drainage easements, establish minimum finished floors for insurable structures, and evaluate proposed modifications to existing floodplains or floodways. Depending upon the proposed project, location, and type of stream, the stormwater submittals may include a Flood Study, No Rise Certification, Floodplain Development Permit, FEMA Letter of Concurrent/Approval, and/or a USACE Section 10 and Section 404 Permit.

3.7.1 Effective Models

When available, effective models provided by the Town are required to be utilized to establish existing conditions and evaluate proposed project impacts to the watershed. When Town adopted models are utilized, any submitted models shall be consistent with the base modeling platform and version. Proposed conditions shall be incorporated into the Town's watershed models and submitted for review.

3.7.2 Compensatory Storage

Compensatory storage is required for all storage lost or displaced in a Regulatory Floodplain due to land disturbance. Hydraulically equivalent compensatory storage requirements for fill or structures placed in the SFHA and/or within a riverine flood hazard area identified in a Town Council adopted watershed study shall be at least equal to the volume of the storage lost or displaced. Such compensation areas shall be designed to drain freely and

openly to the channel and shall be located opposite or adjacent to fill areas. The Regulatory Floodplain storage volume lost below the existing 10-year frequency flood elevation must be replaced below the proposed 10-year frequency flood elevation. The Regulatory Floodplain storage volume lost above the 10-year existing frequency flood elevation must be replaced above the proposed 10-year frequency elevation.

3.7.3 Floodplain Development Permit

Any work to be performed within any flood-prone area of the town required a Floodplain Development Permit. Variances will not be issued from this requirement for proposed projects in the SFHA. Applications for a Floodplain Development permit shall be submitted to the Town with the flood study that evaluates existing conditions and proposed project impacts.

3.7.4 FEMA Submittal Requirements

Coordination with and approval from the Town Floodplain Administrator is required for all floodplain submittals. Payment of a review fee to the Town may be required.

All proposed projects located in the SFHA shall be evaluated for the need of a Conditional Letter of Map Revision (CLOMR). A CLOMR shall be submitted to FEMA in the event that the proposed modifications to the SFHA result in a rise greater than 0.0 feet to the effective base flood elevation. The Town reserves the right to require a CLOMR for any proposed project located within the SFHA.

Upon completion of construction within the SFHA, all applicants shall verify that the site was constructed according the proposed conditions. As-built plans, certified by a professional engineer registered in Texas, shall be submitted to the Town for verification of as-built conditions. Hydraulic modeling to reflect as-built conditions is required for projects constructed without conditional approval or where as-built conditions differ from the proposed conditions modeling. In all cases, a Letter of Map Revision (LOMR) shall be submitted to FEMA for approval.

Sec. 4.0 Water and wastewater design requirements.

Water System.

Water lines adequate for domestic supply and for fire protection needs shall be installed to serve each lot, or tract, in every subdivision where connection is to be made immediately to a community or a utility water system in accordance with the Texas Commission on Environmental Quality and town design standards and specifications. In subdivisions outside the town limits, where such connection to a system is not to be made immediately, plans shall be prepared for future installation of a water distribution system to serve each lot or tract.

A. *Water System Extensions.* Water system extensions shall be designed to provide for a domestic supply of at least 100 gallons per capita per day delivered at a minimum pressure of 50 pounds per square inch. The 100-gallon rate of supply shall not be required if, in the opinion of the town's engineer, the proper point of connection to the existing system for the extension is not capable of supplying such a volume. However, the extension shall be designed to convey the 100-gallon rate should the supply point be subsequently improved. If the 50 pounds minimum pressure cannot be provided by existing system pressure or because of the elevation of the tract to be developed, a booster pump system shall be included which will provide that minimum pressure.

B. *All Supply and Distribution Mains.* All supply and distribution mains installed within a subdivision must extend to the borders of the subdivision as required for future extensions of the system, regardless of whether or not such extensions are required for service within the subdivision.

C. *Fire Hydrants.* Fire hydrants shall be provided at locations such that all areas of development are located within a 500-foot radius from a fire hydrant. All such fire hydrants shall be served by a six inch or larger supply or distribution main.

D. *Extension for Single Customer.*

1. When it is necessary to extend a water line to serve a new single customer where only one meter will be installed, the town at its own expense will extend the said water line up to 100 feet.
2. If a greater distance than 100 feet is required to reach the nearest property line of the new single customer, the said single customer shall pay 100 percent of cost extension in excess of 100 feet.
3. If more than one single customer is served by the main extension, 100 feet of main will be allowed for each single customer thus served, and any excess footage will be paid for at 100 percent.
4. No more than one single customer credit of 100 feet will be allowed each lot or tract of record so served regardless of the number of buildings, occupied or otherwise, which might be located on said lot or tract.
5. Payment will be made in advance of construction.

E. *Extensions to Serve Developers.*

1. The developer will pay 100 percent of the construction cost of the size mains required to serve his development, including the approach main, plus ten percent of the developer's share of the construction cost for engineering, supervision and inspection, or six percent if a private engineer approved by the utilities supervisor is employed by the developer and furnishes approved plats and specifications.
2. When the developer desires that water mains be extended to serve his property, he will submit a request in writing to the utilities supervisor. The property to be served shall be listed showing the

lot, block and subdivision. Two approved plats of the area to be served shall be attached to the request and shall become the property of the town.

3. If the area to be served is a part of a larger area that is owned or controlled by the developer and which is reasonably expected to be served by water in the future, then two approved plats or approved preliminary plats of the larger area shall also be submitted. A tentative design of a main layout will be made of the entire area, but the cost estimate will be made on that portion of the subdivision to be served immediately.

F. *Materials and Workmanship.* All materials and workmanship incorporated in water system extensions shall be in accordance with the currently adopted town construction specifications.

G. *Water Well Design Requirements.* Water well must be meet current standard design practice.

Wastewater System

Sanitary sewers shall be installed to serve each lot, or tract, in every subdivision where connection is to be made immediately to a community disposal system or to a public sewerage system.

A. *Sewer Extensions.*

1. All sewer extensions shall be designed in accordance with the latest applicable rules and regulations as published by the Texas State Department of Health. No sewer lateral shall be smaller than six inch in nominal diameter. All sewers shall be designed with consideration for serving the full drainage area subject to collection by the sewer in question except as modified with the concurrence of the town's engineer because of the projected rate of development or the financial feasibility of the proposed extension.

2. All subdivisions developed subsequent to this ordinance must be served by community sanitary sewerage collection, treatment and disposal systems approved by the town with exceptions granted only if all of the following conditions exist: (1) the subdivision in question is less than five parcels of land, (2) the existing community type collection, treatment and disposal system is not and cannot feasibly, in the opinion of the town's engineer, be made available to the area of development, and (3) percolation tests run by an independent testing laboratory are submitted to both the town and county health department with results showing that a septic tank and spreader field can be developed to provide adequate disposal of the sewage.

B. *Lateral and Sewer Mains.* All lateral and sewer mains installed within a subdivision must extend to the borders of the subdivision as required for future extensions of the collecting system regardless of whether or not such extensions are required for service within the subdivision.

C. *Lift Stations or Separate Treatment Facilities.* The provision for lift stations or separate treatment facilities will not be permitted unless the cost of constructing such lift stations or separate facilities is at least 20 percent less than the costs of constructing an adequate outfall or approach sewer from the existing system.

D. *Septic Tank.* A septic tank with a capacity of not less than 500 gallons and with a drain field of not less than 150 feet shall be installed on each lot in accordance with the regulations of the county and state health officers.

E. *Extensions for Single Customers.*

1. Where it is necessary to extend a sewer line to serve a new "single customer," the town, at its own expense, will extend said sewer up to 100 feet.

2. If a greater distance than 100 feet should be required to extend the line to the nearest property line of the customer, said single customer shall pay the excess over the 100 feet allowable at the rate of 100 [percent] of cost.

3. If more than one single customer is served by the main extension, 100 lineal feet of sewer will be allowed for each single customer thus served, and any excess footage will be paid for at 100 percent of cost.

4. No more than one single customer credit of 100 feet will be allowed for each lot or tract of record so served regardless of the number of buildings, occupied or otherwise, which might be located on said lot or tract.

5. Payment will be made in advance of construction.

F. *Extensions to Serve Developers.* The developer shall pay 100 percent of the construction cost of all sewers including "approach mains," but excepting "service lines," plus ten percent of the developer's share of the construction cost for engineering, supervision and inspection, or six percent if a private engineer approved by the utilities supervisor is employed by the developer and furnishes approved plans and specifications.

1. The developer will also pay 100 percent of the cost of "service lines" to all lots to be served by a sewer located in the street. Said "service lines" will be constructed at the same time as a part of the same contract as all other sewers in the developer's addition. If the sewers are being constructed by town forces, the "service lines" will be constructed by town forces at the time all other sewers within the addition are constructed.

2. The utilities supervisor shall determine the size of "approach main" required to serve developer's property and the actual size to be constructed. Should the town elect to construct a main larger than the developer's required "approach main," the developer will not be charged for the additional size.

3. The amount of developer's payment shall be determined using unit bid prices contained in the award contract.

G. *Connections.* No connection shall be made to any sanitary sewerage system within the town which will permit the entrance of surface water or waste of other than domestic sewage characteristics without the specific authorization by the town council.

H. *Materials and Workmanship.* All materials and workmanship incorporated in the sewage system extensions shall be in accordance with the currently adopted town construction specifications.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 5.0 Other public improvements.

Street Lighting.

1. The following standards shall apply to all arterial thoroughfares:

a. Street lighting shall be placed in the medians, with spacing not to exceed one hundred eighty feet (180') and no closer than one hundred forty-five feet (145') depending on median breaks and intersections.

b. Unless a photometric analysis suggests the use of a different type of luminaire, street lighting shall use a city-approved, standard 250-watt equivalent LED luminaire with a color temperature of 3,000 kelvins.

2. All traffic signal and street lighting construction, testing, and materials shall be in accordance with the city's current standards, details, and specifications unless otherwise noted. All electrical work shall be in accordance with the most current National Electrical Code, town and TxDOT specifications and standards.

3. All lighting luminaries shall use LED lamps.
4. All site plans should provide a copies of the proposed layout of street lighting standards serving the subdivision. The type of all proposed and existing street lighting shall be indicated on the layout.
5. Contractor shall coordinate electrical services with the town and either ONCOR or COSERV representatives (according to their respective area).
6. The contractor shall coordinate with the appropriate utility company and TxDOT/NTTA (if within TxDOT/NTTA ROW) prior to beginning erection of poles, luminaries and structures located near any overhead or underground utilities.
7. Proposed concrete foundation and conduit alignment shall be staked by the contractor and approved by the town prior to installation.

Gas Lines.

The subdivider shall arrange for and shall file his request at the earliest feasible date for gas service desired for his subdivision. Where a source of gas supply is not within a reasonable distance for present installation, but, wider a gas line extension agreement gas service will be extended within five years following the recording of the final plat, those portions of such lines which will lie within the portions of streets intended for vehicular traffic shall be installed. In lieu of such installation the subdivider may defer the paving of streets and alleys until such lines are installed by making appropriate fiscal arrangements with the town.

Electric Power and Telephone Service.

The subdivider shall arrange with the appropriate utility and shall file his request at the earliest feasible date for electric power and telephone service to his subdivision.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 6.0 Retaining Wall Design Requirements.

Design and Construction Standards

A. All retaining walls in excess of four feet (4') in height (measured from the bottom of footing to top of wall) shall be designed by a Professional Engineer licensed in the State of Texas.
B. Retaining walls shall be designed and constructed to support the live load and dead load forces they will be subjected to.
C. Retaining walls shall be designed using a cantilevered reinforced concrete structure, masonry gravity structure, or stone gravity structure. Other retaining wall materials may be approved at the discretion of the Town Engineer.
D. Brick shall not be used as a structural element of a retaining wall, but it may be used as a facing material. Timber material, such as railroad ties, is prohibited for use as any part of a retaining wall, regardless of height.
E. Retaining walls shall have proper fall protection as defined within the Building Code as adopted by the Town.
F. Walls that are anticipated to support a fence or screen wall, either integrally or separately, shall be designed to handle the structural forces of the fence imposed on the wall.
G. *Tiered Retaining Wall Systems*
    1. Tiered retaining wall systems shall be designed such that the upper wall does not place additional surcharge on the lower wall, beyond the design loads of the lower wall.

2. Tiered retaining wall systems shall be designed such that the height of the upper wall is no greater than the height of the lower wall.

Retaining Wall Building Permit

A. Any earth terracing method that supports a structure or vehicle load, or that is at least four feet (4') in height (measured from the bottom of footing to top of wall) shall require a separate building permit.
B. Application for a retaining wall building permit at least four feet (4') in height, or that supports a structure or vehicle load, shall include the following:
    1. A site-specific geotechnical report, sealed by a geotechnical engineer licensed in the State of Texas. This report shall include soil parameters to be used in the design of the retaining wall for sliding and overturning stability. Additionally, global stability analysis shall be included in the geotechnical study for retaining walls with a retained height in excess of ten feet (10') or immediately adjacent to a stream or ponded water.
    2. Retaining wall plans, sealed by a professional engineer licensed in the State of Texas.
    3. Structural calculations, sealed by a professional engineer licensed in the State of Texas, that utilize the parameters provided in the geotechnical report indicating that the retaining wall is stable in sliding, overturning, and internal failure modes.
C. No building permit, other than for a retaining wall, shall be issued for any lot within a subdivision until all retaining walls are constructed in accordance with a grading plan for the subdivision.
D. Any change from the approved grading plan or design for a retaining wall within a subdivision shall not be permitted unless the applicant has submitted plans for the entire subdivision showing the proposed change in grading and the Town Engineer has approved the proposed change(s).

Retaining Wall Maintenance and Easements

A. If, in the opinion of the Town Engineer, site development construction plans indicate the need for the construction of retaining walls greater than four feet (4') in height, private retaining wall easements showing the location of the retaining wall(s) and the no-build zone shall be dedicated and shown on the Preliminary Plat and Final Plat.
B. The retaining wall easement shall include a no-build zone, extending from the retaining wall on both sides, within which any additional load from future construction would exceed the design capacity of the retaining wall.
    a. The no-build zone width shall be at least the clear height of the retaining wall.
    b. No structure (other than the retaining wall), swimming pool, or any other feature which adds load to the retaining wall shall be constructed within the no-build zone.
    c. Exceptions from these requirements may be granted by the Town Engineer if a design and supporting calculations are provided that demonstrate the wall's ability to support the proposed structure.
C. The width of the retaining wall easement shall be a minimum of five feet (5') or the width of the retaining wall (including subsurface elements), whichever is greater, plus the width of the no-build zone.
D. Retaining walls and no-build zones shall be located entirely on one lot and shall not straddle property lines, unless the wall is constructed within a retaining wall easement dedicating the ownership and maintenance responsibility to the Homeowners' or Property Owners' Association.
E. Retaining walls greater than four feet (4') in height and constructed as part of a Subdivision shall be located in a retaining wall easement dedicated to the Homeowners' or Property Owners' Association, and shall be their responsibility to maintain."

Sec. 7 GIS/survey requirements.

Coordinate System.

AutoCAD 2010 (or higher) with water, sanitary sewer, paving, grading, storm sewer. The CAD file of project should be referenced with the NAD_1983_StatePlane_Texas_North_Central_FIPS_4202_Feet projected Coordinate System.

Markers.

1. Markers consisting of minimum three-eighths-inch diameter steel rods at least twenty-four inches long with caps identifying responsible surveying firm or RPLS number shall be placed at all:
    a. Lot and block corners (wherever a lot line bearing changes);
    b. Intersection points of alley and block lines;
    c. Curve and tangent points along block, lot and right-of-way lines within the subdivision; and
    d. Right-of-way dedications.

Monuments.

1. Three dimensional coordinates, reported as state plane coordinates, shall be established using the city's monumentation system and using the city's combined scale factor. The coordinates shall be noted on the plat monuments shall be markers and installed at locations shown on the plat.
2. Subdivision Monumentation.
    a. At least two markers shall be placed at property corners in addition to at least two monuments at opposing ends of the property.
3. Capital Improvements Project Monuments.
    a. Found existing right-of-way monuments, survey markers, or property corners, and proposed monuments shall be shown on the construction drawings and located by station and offset, right or left from the control line, base line or center line, or by northing and easting.
4. If new construction will damage, destroy, or alter existing survey markers, monuments, or property corners, they must be reset prior to final acceptance.
5. Prior to final plat acceptance, all required monuments must be found and reset if damaged during construction.
6. The surveyor will provide two monuments acceptable to the town and establish grid coordinates for the monuments in reference to the Town of Little Elm GPS monuments.
7. Elevations will be established on the two monuments on the vertical datum in reference to the Town of Little Elm GPS monuments.

(Ord. No. 1444, § 2(Att. A), 3-6-2018)

Sec. 8.0 Standard details.

TOWN OF LITTLE ELM
STANDARD DETAILS

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STANDARD DETAILS * TOWN OF LITTLE ELM, TEXAS * DECEMBER 2023

CONSTRUCTION
GENERAL NOTES

GENERAL NOTES

1. IT IS NOT THE INTENT OF THESE CONSTRUCTION NOTES TO COVER ALL DETAILS AND/OR SPECIFICATION REQUIREMENTS OF THE TOWN OF LITTLE ELM. WHEN THERE IS A CONFLICT BETWEEN THESE STANDARDS AND OTHER REGULATIONS, THE CONTRACTOR MUST ABIDE BY THE STRICTEST REQUIREMENT.
2. THE EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN (MAIN LINES, NO LATERAL OR SERVICES SHOWN) ON THE DRAWINGS WERE OBTAINED FROM AVAILABLE RECORDS AND ARE APPROXIMATE. NO WARRANTY IS IMPLIED AS TO THE ACTUAL LOCATION OF EXISTING UTILITIES. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO TRENCHING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND / OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL FRANCHISE AND TOWN UTILITIES PRIOR TO CONSTRUCTION.
3. ANY CONTRACTOR / SUBCONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATIONS. SAID EXISTING IMPROVEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO BERMS, DITCHES, FENCES, AND VEGETATION. ANY REMOVAL OR DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND SHALL BE APPROVED BY THE TOWN OF LITTLE ELM.
4. ALL CONSTRUCTION, TESTING, AND MATERIALS SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE TOWN OF LITTLE ELM. ALL SUBMITTALS MUST BE ORIGINALS WITH SIGNATURES WHERE APPLICABLE; FACSIMILES WILL NOT BE ACCEPTED.
5. TESTING SERVICES FOR PUBLIC PROJECTS SHALL BE PROVIDED BY THE TOWN. COSTS ASSOCIATED WITH THESE TESTS SHALL BE PAID BY THE TOWN. RE-TEST OF FAILED AREAS THAT DO NOT MEET THE REQUIREMENTS STATED WITHIN SHALL BE PAID FOR BY THE CONTRACTOR.
6. ALL TRAFFIC CONTROLS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL REFERENCE FOR (USING TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) STANDARDS AND CONSTRUCTION DETAILS SHALL BE THE LATEST REVISIONS AND/OR AMENDMENTS THEREOF. THE TOWN OF LITTLE ELM USES RAISED PAVEMENT MARKINGS (BUTTONS) FOR STRIPING AND THERMOPLASTIC MARKINGS IN LIEU OF PAINT. THE MINIMUM SIGN SIZE SHALL BE THE STANDARD SIZE IN THE MANUAL. DETAILS ARE AVAILABLE UPON REQUEST FOR THE TYPE OF BUTTON PATTERNS, POSTS, AND CONNECTIONS REQUIRED FOR THE SIGNS.
7. THE CONTRACTOR SHALL MAKE EVERY EFFORT NOT TO IMPEDE TRAFFIC ON EXISTING STREETS, ALLEYS, OR FIRE LANES OPEN TO THE PUBLIC. IN THE EVENT THE CONSTRUCTION WORK REQUIRES THE CLOSURE OF AN EXISTING STREET, ALLEY, OR FIRE LANE, THE CONTRACTOR SHALL REQUEST THE ROAD CLOSURE THROUGH THE TOWN. IF THE CLOSURE ELIMINATES THE SECOND POINT OF ACCESS TO EXISTING BUILDINGS WITH A CERTIFICATE OF OCCUPANCY, THEN THE ACCESS MAY NOT BE CLOSED FOR MORE THAN FORTY-EIGHT (48) HOURS AND WILL REQUIRE FIRE MARSHAL APPROVAL IN EITHER CASE. UNLESS OTHERWISE SPECIFIED BY THE TOWN, ALL OTHER STREETS OR ALLEYS MAY NOT BE CLOSED FOR MORE THAN SEVENTY-TWO (72) HOURS.
8. THE CONTRACTOR SHALL INSTALL TEMPORARY FENCES ADJACENT TO ALL SIDEWALKS AND ADJACENT DEVELOPED PROPERTIES. THE CONTRACTOR MUST ALSO PROVIDE TEMPORARY FENCING WHEN FENCES OR OTHER SCREENING FEATURES ARE REMOVED FOR THE DURATION OF CONSTRUCTION.
9. ALL CONCRETE STRUCTURES, WHETHER PRECAST OR CAST-IN-PLACE, SHALL BE DESIGNED WITH APPROPRIATE SULFATE RESISTANT CEMENT OR EQUIVALENT BASED ON LOCAL SOIL CONDITIONS PER GEOTECHNICAL REPORT. PRECAST MANHOLES OR OTHER SPECIAL STRUCTURES IN ANY RIGHT-OF-WAY OR FIRE LANE EASEMENTS WILL REQUIRE A CERTIFICATION FROM THE MANUFACTURER THAT THE PRODUCT MEETS THE DESIGN CRITERIA AND TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH. CAST-IN-PLACE MANHOLES OR OTHER SPECIAL STRUCTURES IN ANY RIGHT-OF-WAY AND FIRE LANE OR UTILITY EASEMENTS WILL REQUIRE CYLINDERS TO BE MADE FOR STRENGTH TESTS BY AN APPROVED LABORATORY. LABORATORY TEST REPORTS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100-150 CU YD OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQ FT OF SURFACE AREA FOR SLABS OR WALLS. FOUR (4) CYLINDERS SHALL BE MADE. ONE (1) SHALL BE BROKEN AT SEVEN (7) DAYS, TWO (2) SHALL BE BROKEN AT TWENTY-EIGHT (28) DAYS, AND ONE (1) SHALL BE HELD IN CASE OF DAMAGE OF ANY OF THE OTHER THREE (3). THE AVERAGE STRENGTH OF TWO (2) CYLINDERS FROM THE SAME SAMPLE, TESTED AT TWENTY-EIGHT (28) DAYS, IS REQUIRED FOR EACH STRENGTH TEST; ANY STRENGTH TEST BEYOND TWENTY-EIGHT (28) DAYS IS UNACCEPTABLE. IF THE TWENTY-EIGHT (28) DAY DESIGN STRENGTH IS NOT REACHED UPON STRENGTH TESTING THE CYLINDERS, THE DEFICIENT AREA SHALL BE CORED IMMEDIATELY TO BE PROVED OUT. FOR ANY AREAS DEFICIENT IN STRENGTH BY NOT MORE THAN 500 PSI, THE CONTRACTOR SHALL PAY TO THE TOWN ONE (1) TIME THE UNIT BID PRICE PER SQUARE YARD FOR THE AREA DETERMINED TO DEFICIENT IN STRENGTH. FOR ANY AREAS DEFICIENT IN STRENGTH BY MORE THAN 500 PSI BUT NOT MORE THAN 1000 PSI, THE CONTRACTOR SHALL PAY TO THE TOWN TWO (2) TIMES THE UNIT BID PRICE PER SQUARE YARD FOR THE AREA DETERMINED TO DEFICIENT IN STRENGTH. FOR ANY AREAS DEFICIENT IN STRENGTH BY MORE THAN 1000 PSI, THE STRUCTURE SHALL BE REMOVED AND RECONSTRUCTED AT THE FULL EXPENSE OF THE CONTRACTOR. PRIOR TO TOWN ACCEPTANCE OF ANY PENALTY PAYMENTS FOR ANY TRAFFIC BEARING STRUCTURE THAT DOES NOT MEET TWENTY-EIGHT (28) DAY DESIGN STRENGTH, THE DESIGN ENGINEER SHALL PROVIDE A SEALED STRUCTURAL EVALUATION THAT ASSESSES THE PERFORMANCE ADEQUACY OF THE DEFICIENT STRUCTURE AS CONSTRUCTED UNDER THE DESIGN SERVICE LOADS. ALL CORING AND ADDITIONAL LABORATORY TESTING SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
10. BLASTING IS NOT PERMITTED ON THIS PROJECT.
11. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
12. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE WORK.
13. NO TRENCH EXCAVATION SHALL OCCUR UNTIL THE TOWN APPROVES THE TRENCH SAFETY PLAN SUBMITTED BY THE CONTRACTOR.
14. A PRE-CONSTRUCTION CONFERENCE IS TO BE HELD PRIOR TO BEGINNING CONSTRUCTION. THIS CONFERENCE SHALL TAKE PLACE AT A LOCATION SELECTED BY OWNER & ENGINEER. CONTRACTOR TO ARRANGE A MEETING DATE WITH THE OWNER AT LEAST SEVEN DAYS PRIOR TO THE MEETING TIME.
15. CONTRACTOR SHALL NOTIFY THE OWNER, OWNER'S REPRESENTATIVE, AND TCEQ (IF APPLICABLE) BY TELEPHONE A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION STARTUP, FOLLOWED BY A LETTER OF CONFIRMATION.
16. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN ONLY BE ISSUED TO CONTRACTOR ARE TO BE OBTAINED AT THE CONTRACTORS EXPENSE.
17. CONTRACTOR SHALL GIVE A MINIMUM OF 48 HOURS NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
18. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THESE CONSTRUCTION OPERATIONS ARE TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITION AT NO ADDITIONAL COST TO OWNER.
19. WHEN UNLOCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN A LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. THE CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
20. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES TO BE COORDINATED WITH THE OWNER.
21. THE CONTRACTOR SHALL COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES WITH APPLICABLE UTILITY COMPANY OR COMPANIES. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
22. THE CONTRACTOR SHALL LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, AND CONTROL POINTS. THE CONTRACTOR SHALL RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY A REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
23. EXISTING PAVING, BUILDING, AND OTHER ITEMS SHOWN ON PLANS NOT SPECIFICALLY RELATED TO THE WORK OF THE CONTRACTOR IS FOR INFORMATION ONLY.
24. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR.
25. COORDINATES SHOWN FOR STRUCTURE LOCATIONS ARE REFERENCED TO OUTSIDE FACE OF EXTERIOR WALL AT GRADE OR TO CENTERLINE OF STRUCTURE, UNLESS OTHERWISE ON PLANS.
26. EXISTING SURFACE AND SUBSURFACE STRUCTURES (GAS MAINS, WATER MAINS, STORM SEWERS, TELEPHONE CABLES, ETC.) ARE SHOWN ON THE PLANS IF THEIR LOCATION HAS BEEN DETERMINED, BUT IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID DAMAGING THESE EXISTING STRUCTURES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS OR TO SHOW THEM IN THEIR EXACT LOCATION. IF ANY STRUCTURE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE HIS RESPONSIBILITY TO REPAIR THE DAMAGE AT HIS OWN EXPENSE AND RESTORE THE STRUCTURE TO ITS ORIGINAL CONDITION.
27. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS, ELEVATIONS AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES, IF REQUIRED. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT HIS EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT WITH EXISTING UTILITY GRADES.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING "AS-RECORDED" PLANS TO THE ENGINEER OF RECORD SHOWING THE LOCATION OF ALL IMPROVEMENTS. THIS INFORMATION SHALL BE PLACED ON THE ENGINEERING PLANS AND MARKED "RECORD DRAWING" PLANS ALONG WITH THE DATE AND THE NAME OF THE CONTRACTOR BY THE ENGINEER OF RECORD. THESE PLANS SHALL BE FURNISHED TO THE TOWN ELECTRONICALLY IN PDF FORMAT.
29. THE CONTRACTOR SHALL FURNISH A MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE TOTAL CONTRACT PRICE OF ALL PUBLIC AND CERTAIN PRIVATE IMPROVEMENTS. THIS BOND SHALL RUN TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT BY THE TOWN. PRIVATE IMPROVEMENTS REQUIRING A MAINTENANCE BOND INCLUDE, BUT ARE NOT LIMITED TO, FIRE LANES, PRIVATE WATER MAINS, FIRE HYDRANTS, ETC.
30. REFER TO THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) PUBLIC WORKS CONSTRUCTION STANDARDS AND SPECIFICATIONS (LATEST EDITION) FOR REQUIREMENTS FOR ITEMS NOT INCLUDED IN THIS DOCUMENT. FINAL APPROVAL IS AT THE DISCRETION OF THE TOWN ENGINEER.
31. CONTRACTOR SHALL PROVIDE DAILY STREET SWEEPING AND GENERAL SITE CLEANUP FOR THE AREA SURROUNDING THE PROJECT SITE.
32. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO PROPERTY (PUBLIC OR PRIVATE) WITHIN 48 HOURS OF NOTIFICATION BY THE TOWN.

GENERAL ENVIRONMENTAL NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
2. CONTRACTOR SHALL LOCATE MATERIAL STORAGE AREAS AWAY FROM STORMWATER CONVEYANCE SYSTEMS. PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
3. FUEL STORAGE IS NOT ALLOWED ON THIS PROJECT.
4. THE CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIALS SPILLS WITHIN THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TO BE TAKEN TO REMEDY THE PROBLEM.
5. THE CONTRACTOR SHALL DISPOSE OF FUELS, HAZARDOUS MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
6. NO OPEN BURNING IS ALLOWED WITHIN THE CITY LIMITS.

SITE GRADING NOTES

1. THE CONTRACTOR SHALL CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES.
2. EXCESS EXCAVATED MATERIAL SHALL BE STOCKPILED IN DESIGNATED AREA AS SHOWN ON PLANS OR AS DIRECTED BY THE OWNER. REINFORCED FILTER FABRIC FENCE TO BE INSTALLED AROUND STOCKPILE ON DOWNSTREAM SIDE AND BOTH SIDES ADJACENT TO THE DOWNSTREAM SIDE. STOCKPILES ARE NOT TO TRAP OR POND WATER. TOPSOIL TO BE STOCKPILED SEPARATELY. ALL EXCESS EXCAVATED MATERIAL IS TO BE REMOVED FROM THE SITE. CONTRACTOR TO NOTIFY TCEQ AND THE OWNER'S REPRESENTATIVE OF LOCATION OF DISPOSAL BEFORE MATERIAL IS REMOVED.
3. THE FINISHED GRADE ELEVATIONS SHOWN ARE INTENDED TO PROVIDE ADEQUATE DRAINAGE. MINOR FIELD CHANGES MAY BE NECESSARY TO PROVIDE ADEQUATE DRAINAGE. GRADE UNIFORMLY BETWEEN ELEVATIONS SHOWN TO PROVIDE DRAINAGE.
4. ADJUST MANHOLE COVERS, VALVE BOXES, ELECTRICAL MANHOLES, ETC. TO MATCH PROPOSED FINISHED GRADE (NO SEPARATE PAY).
5. RETAINING WALLS SHALL BE NO GREATER THAN 6' IN HEIGHT AT THE END OF WALL.
6. THE MAXIMUM SLOPE IN THE FRONT AND REAR OF SINGLE FAMILY LOTS IS 6:1 UNLESS APPROVED BY THE TOWN ENGINEER.
7. TYPICAL SLOPES ON COMMERCIAL LOTS IS 6:1 WITH A MAXIMUM SLOPE ALLOWED OF 4:1 UNLESS APPROVED BY TOWN ENGINEER.

EROSION CONTROL & TREE PROTECTION NOTES

1. CONTRACTOR SHALL FOLLOW ALL STORMWATER POLLUTION PREVENTION PLAN (SWPPP) GUIDELINES AND PERMITS THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE PROPOSED SITE GRADING PLAN. DEVIATIONS FROM THE PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER.
4. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINES.
5. TO AVOID SOIL COMPACTION, NO VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IS ALLOWED IN THE TREE DRIPLINE AREAS.
6. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
7. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

NO.	REVISION	DATE

DESIGN BY:
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CHECKED BY:
SCALE: NONE
JOB NUMBER: -

TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
GENERAL CONSTRUCTION NOTES 1 OF 3

LITTLE ELM

SHEET
1 OF 26

DECEMBER 2023

CONSTRUCTION
GENERAL NOTES

PAVING NOTES

1. ABSOLUTELY NO EARTHWORK, LIME APPLICATION, OR OTHER PREPARATION OF THE SUBGRADE FOR PAVING OF STREETS, ALLEYS, OR FIRE LANES SHALL BE INITIATED WITHOUT AUTHORIZATION FROM THE TOWN'S CONSTRUCTION INSPECTOR. ONCE ALL TESTING OF UNDERGROUND FACILITIES HAS BEEN COMPLETED AND VERIFIED TO MEET THE TOWN'S SPECIFICATIONS, THE TOWN CONSTRUCTION INSPECTOR WILL ISSUE A LETTER TO THE PROJECT OWNER OR SUPERINTENDENT THAT WILL AUTHORIZE THE INITIATION OF ALL SUBGRADE WORK IN PREPARATION FOR PAVING. ALL STREET, ALLEY, AND FIRE LANE RIGHT-OF-WAY OR EASEMENT WIDTH SHALL BE EXCAVATED FULL WIDTH IN ACCORDANCE WITH THE STREET AND SIDEWALK SECTION TO BE CONSTRUCTED. THE SUBGRADE FOR ALL STREETS, ALLEYS, AND FIRE LANES SHALL BE STABILIZED WITH HYDRATED LIME MATERIAL TO A DISTANCE 12 INCHES BEYOND THE BACK OF CURB OR EDGE OF PAVING AS APPLICABLE. THE AMOUNT OF LIME MATERIAL SHALL BE THAT AMOUNT WHICH WILL REDUCE THE PLASTICITY INDEX (PI) BELOW FIFTEEN (15) AS VERIFIED BY TESTING BY AN APPROVED LABORATORY; THE TOWN WILL ADD ONE (1) PERCENT TO THE LABORATORY RESULTS FOR FIELD VARIATION. LABORATORY TESTING (LIME SERIES) SHALL GENERALLY BE CONDUCTED WHEN ALL UTILITIES ARE COMPLETE AND THE ROADWAY SUBGRADE IS COMPLETE. LIME SHALL BE APPLIED BY PERCENTAGE DRY UNIT WEIGHT OF SOIL TREATED TO A MINIMUM IN PLACE COMPACTED THICKNESS OF SIX (6) INCHES. FOR 6" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 37 POUNDS PER SQUARE YARD; FOR 8" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 54 POUNDS PER SQUARE YARD. AFTER APPLICATION OF LIME, PROVIDE A MELLOWING PERIOD AS INSTRUCTED BY TXDOT PUBLICATION "TREATMENT GUIDELINES FOR SOILS AND BASE IN PAVEMENT STRUCTURES." SULFATE TESTS SHALL ALSO BE CONDUCTED ON ALL PAVING PROJECTS IN THE TOWN UNDER THE DIRECTION OF THE APPROVED LABORATORY. FREQUENCY OF TESTS SHALL NOT BE LESS THAN EVERY 300 LINEAR FEET OF SUBGRADE, ALTERNATING FROM LEFT QUARTER POINT TO CENTER LINE TO RIGHT QUARTER POINT. ADDITIONAL TESTING MAY BE DEEMED NECESSARY BY THE TOWN ENGINEER. ALL TESTING FOR THE PRESENCE OF SULFATES IN THE PAVEMENT SUBGRADE SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE SULFATES ARE PRESENT AT AN UNACCEPTABLE CONCENTRATION, THE TOWN MAY REQUIRE A RECOMMENDATION FOR FURTHER TREATMENT OF THE SOIL FROM THE APPROVED LABORATORY, WHICH SHALL BE CONFIRMED BY THE DESIGN ENGINEER OF RECORD FOR THE PROJECT.
2. SUBGRADE TESTING REQUIREMENTS: ALL FILL SHALL BE COMPACTED TO NO LESS THAN 95% OF STANDARD PROCTOR DENSITY AT 0 – 4% ABOVE OPTIMUM MOISTURE CONTENT. FREQUENCY OF TESTING SHALL BE AT LEAST EVERY 300 LINEAR FEET PER 2.0' OF LIFT UNTIL FINAL GRADE, STARTING AT 2.0' ABOVE NATURAL/SOUND GRADE TO TOP OF SUBGRADE. ALL STREET, ALLEY, AND FIRE LANE SUBGRADE SHALL BE COMPACTED TO NO LESS THAN 95% OF STANDARD PROCTOR DENSITY AT 0 – 4% ABOVE OPTIMUM MOISTURE CONTENT. FREQUENCY OF TESTS SHALL NOT BE LESS THAN 300 LINEAR FEET OF SUBGRADE, ALTERNATING FROM LEFT QUARTER POINT TO CENTER LINE TO RIGHT QUARTER POINT. VERIFICATION OF LIME DEPTH, TESTING FOR SUBGRADE GRADATIONS & PULVERIZATIONS, AND PLASTICITY INDICES OF THE SOIL SHALL ALSO BE CONDUCTED; THE FREQUENCY OF THIS TESTING SHALL BE AS PREVIOUSLY MENTIONED. ALL TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF ANY STREET, ALLEY OR FIRE LANE SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE CONTRACTOR. THE ENGINEER SHALL APPROVE THE LABORATORY NOMINATED TO DO THE TESTING OF MATERIALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE TOWN'S SPECIFICATIONS.
3. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALK DAMAGED OR REMOVED BY THE CONTRACTOR ARE TO BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PREEXISTING CONDITION AT HIS EXPENSE BEFORE ACCEPTANCE OF THE WORK.
4. ALL TRAFFIC CONTROLS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
5. REPLACE EXISTING ROADWAY THAT IS CUT BY PIPE TRENCHES WITH SIMILAR ROADWAY.
6. MAINTAIN ALL MANHOLE FRAMES AND COVERS TO BELOW PAVEMENT SUBGRADE ELEVATION UNTIL PLACEMENT OF PAVEMENT BASE HAS BEEN COMPLETED. RAISE MANHOLE FRAMES AND COVERS TO FINISH PAVEMENT GRADES WHEN BASE IS COMPLETE.
7. MINIMUM DESIGN REQUIREMENTS: ALL STREET, ALLEY, PARKING LOT, AND FIRE LANE PAVING SHALL BE DESIGNED AND PERMITTED THROUGH THE TOWN TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT TWENTY-EIGHT (28) DAYS WITH A MINIMUM OF FIVE SACKS (5 sx 1/2) SACKS OF CEMENT AS VERIFIED BY TESTING IN AN APPROVED LABORATORY. TWO BATCH DESIGNS SHALL BE SUBMITTED TO THE TOWN CONSTRUCTION ENGINEER FOR APPROVAL: ONE FOR MACHINE WORK AND ONE FOR HAND WORK. ALL BATCH DESIGNS MUST BE SIGNED BY THE TESTING LABORATORY AND INCLUDE ALL DOCUMENTATION, SUCH AS RESULTS OF FIELD TRIAL TESTING. IF APPLICABLE, ALL BATCH DESIGNS SHALL SPECIFY AN APPROPRIATE SULFATE RESISTANT CEMENT OR EQUIVALENT. SLUMP SHALL BE 1 – 3 INCHES FOR ALL MACHINE WORK AND 2 – 4 INCHES FOR ALL HAND WORK. STREETS (DEPENDING ON CLASSIFICATION), PARKING LOTS, AND FIRE LANES SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES. ALLEYS SHALL HAVE A MINIMUM THICKNESS OF 8"–5"–6". UPON COMPLETION OF CONSTRUCTION, ALL STREETS AND FIRE LANES SHALL BE CORED FOR DEPTH (2" CORES) AT A SPACING OF 300 FT MAXIMUM, ALTERNATING FROM LEFT QUARTER POINT TO CENTER LINE TO RIGHT QUARTER POINT. ALLEYS SHALL BE CORED FOR DEPTH (2" CORES) AT A SPACING OF 300 FT MAXIMUM ALONG THE CENTER LINE. PAVEMENT OF A THICKNESS LESS THAN THE THICKNESS SHOWN ON THE PLANS BY MORE THAN ONE-QUARTER (1/4) INCH BUT LESS THAN THREE-QUARTER (3/4) INCH WILL BE CONSIDERED DEFICIENT. THE CONTRACTOR SHALL PAY TO THE TOWN TWO (2) TIMES THE UNIT BID PRICE PER SQUARE YARD FOR THE AREA DETERMINED TO BE DEFICIENT IN THICKNESS AS DEFINED ABOVE. PAVEMENT DEFICIENT IN THICKNESS BY MORE THAN THREE-QUARTER (3/4) INCH SHALL BE REMOVED AND REPLACED COMPLETELY. THE DEFICIENT AREA SHALL BE CORED IMMEDIATELY ON TEN (10) FOOT CENTERS OR ONE (1) PER PANEL TO BE PROVED OUT. ALL STREETS, ALLEYS, PARKING LOTS, AND FIRE LANES WILL REQUIRE CYLINDERS TO BE MADE FOR STRENGTH TESTS BY THE APPROVED LABORATORY. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN BY AN APPROVED LABORATORY NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100–150 CU YD OF CONCRETE. FOUR (4) CYLINDERS SHALL BE MADE: ONE SHALL BE BROKEN AT 7 DAYS, TWO (2) SHALL BE BROKEN AT TWENTY-EIGHT (28) DAYS, AND ONE SHALL BE HELD IN CASE OF DAMAGE OF ANY OF THE OTHER THREE (3). THE AVERAGE STRENGTH OF TWO (2) CYLINDERS FROM THE SAME SAMPLE, TESTED AT TWENTY-EIGHT (28) DAYS IS REQUIRED FOR EACH STRENGTH TEST; ANY STRENGTH TEST BEYOND TWENTY-EIGHT (28) DAYS IS UNACCEPTABLE. IF THE TWENTY-EIGHT (28) DAY DESIGN STRENGTH IS NOT REACHED UPON STRENGTH TESTING THE CYLINDERS, THE DEFICIENT AREA SHALL BE CORED IMMEDIATELY BE ON TEN (10) FOOT CENTERS OR ONE PER PANEL TO BE PROVED OUT. FOR ANY AREAS DEFICIENT IN STRENGTH BY NOT MORE THAN 500 PSI, THE CONTRACTOR SHALL PAY TO THE TOWN ONE (1) TIME THE UNIT BID PRICE PER SQUARE YARD FOR THE AREA DETERMINED TO BE DEFICIENT IN STRENGTH. FOR ANY AREAS DEFICIENT IN STRENGTH BY MORE THAN 500 PSI BUT NOT MORE THAN 1000 PSI, THE CONTRACTOR SHALL PAY TO THE TOWN TWO (2) TIMES THE UNIT BID PRICE PER SQUARE YARD FOR THE AREA DETERMINED TO BE DEFICIENT IN STRENGTH. PAVEMENT DEFICIENT IN STRENGTH BY MORE THAN 1000 PSI SHALL BE REMOVED AND REPLACED COMPLETELY. NO MORE THAN THREE (3) – FOUR (4) INCH CORES SHALL BE EXTRACTED PER PANEL WITHOUT PRIOR TOWN APPROVAL. A REBAR DETECTOR SHALL BE USED TO ENSURE THAT THE CORED AREAS ARE CLEAR OF ANY REBAR. ALL CORING AND ADDITIONAL LABORATORY TESTING SHALL BE AT THE EXPENSE OF THE CONTRACTOR. THE WIDTH TO BE CONSIDERED FOR ANY DEFICIENCIES SHALL BE THE FULL WIDTH OF THE PAVEMENT.
6. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615/A 615M, GRADE 60.
9. ALL CONCRETE AND REINFORCING STEEL SHALL CONFORM TO CURRENT A.C.I. CODE.
10. ALL WALL STEEL SHALL HAVE A MINIMUM CONCRETE COVER OF 2". SLAB REINFORCING TO HAVE A MINIMUM CONCRETE COVER OF 2" ON TOP AND 3" ON BOTTOM.
11. ALL BAR SPLICES, CORNER DOWELS, AND JOINT DOWELS SHALL HAVE A MINIMUM 40 DIAMETERS, OR 30", WHICHEVER IS GREATER.
12. JOINT AND CORNER DOWELS DESIGNATED AS "EXTRA LENGTH" SHALL HAVE A MINIMUM LAP LENGTH OF 80 BAR DIAMETERS OR 60", WHICHEVER IS GREATER, UNLESS OTHERWISE DIMENSIONED.
13. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" x 3/4".
14. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED, UNLESS OTHERWISE NOTED. WALL FORMING AND CONCRETE PLACEMENT PLAN, TO ALLOW FOR VERTICAL CONSTRUCTION JOINTS, SHALL BE PREPARED AND SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL VERTICAL CONSTRUCTION JOINTS TO INCLUDE STANDARD KEYWAY AND WATERSTOP.
15. SPEED BUMPS ARE NOT PERMITTED IN COMMERCIAL DRIVES OR STREETS.
16. POURED CONCRETE MUST BE CONSOLIDATED BY THE USE OF MECHANICAL VIBRATORS AT A MAXIMUM INTERVAL OF 18". CONTRACTOR SHALL ENSURE THAT CONCRETE IS WORKED AROUND REINFORCEMENT, OTHER EMBEDDED ITEMS, AND AGAINST FORMS TO ELIMINATE VOID SPACES.
17. FIRE LANES SHALL HAVE A MINIMUM TURNING RADIUS OF 30 FEET UNLESS DESIGNED USING AUTOTURN BY TRANSOFT SOLUTIONS, OR EQUIVALENT SOFTWARE. IN NO CASE SHALL A FIRE LANE RADIUS BE LESS THAN 20 FEET UNLESS APPROVED BY THE TOWN ENGINEER.
18. BITUMINOUS SURFACE TREATMENT (CHIP SEAL) SHALL CONFORM TO ITEM 404.4 IN THE NCTCOG PUBLIC WORKS CONSTRUCTION STANDARDS (5TH EDITION)
19. ASPHALT PAVING SHALL CONFORM TO ITEM 302 IN THE NCTCOG PUBLIC WORKS CONSTRUCTION STANDARDS (5TH EDITION).

STORM SEWER SYSTEM NOTES

1. STORM SEWER PIPE IN RIGHT OF WAY, PUBLIC DRAINAGE EASEMENTS, OR FIRE LANES SHALL BE REINFORCED CONCRETE OR DUAL WALL POLYPROPYLENE PIPE CONFORMING TO ASTM F2881.
2. BOX CULVERTS, AND OTHER STRUCTURES IN RIGHT OF WAY OR FIRE LANES SHALL BE REINFORCED CONCRETE AS PER TOWN SPECIFICATIONS AND SHALL BE CONSTRUCTED AS SHOWN IN THE STANDARD DETAILS UNLESS OTHERWISE APPROVED.
3. DENSITY TESTING REQUIREMENTS: FREQUENCY OF TRENCH COMPACTION TESTS SHALL NOT BE LESS THEN ONE EVERY 300 LINEAR FEET OF PIPE PER 2.0' OF LIFT UNTIL FINAL GRADE, STARTING AT 2.0' ABOVE TOP OF PIPE. EVERY OTHER LATERAL, STUBOUT THAT CROSSES THE EXISTING OR PROPOSED STREET, ALLEY, OR FIRE LANE SUBGRADE; INLET; AND JUNCTION BOX WILL RECEIVE A DENSITY TEST EVERY LIFT. ALL DITCHES SHALL BE MECHANICALLY TAMPED AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY AT 0 – 4% ABOVE OPTIMUM MOISTURE. WATER JETTING IS NOT PERMITTED.
4. THE JOINTS SHALL BE CONSTRUCTED AND JOINTED TOGETHER IN SUCH A MANNER THAT NO SPILL THROUGH OF BACKFILL WILL OCCUR. THIS INCLUDES THE LIFT HOLES USED IN CERTAIN PIPE OR BOX SIZES. APPROVED JOINT MATERIALS ARE COLD APPLIED, PLASTIC ASPHALT JOINT COMPOUND; RUBBER GASKETS; AND COLD APPLIED, PREFORMED PLASTIC GASKETS.
5. STORM DRAINAGE INLETS SHALL BE AS INDICATED ON THE APPROVED CONSTRUCTION PLANS. FOR SECONDARY AND MAJOR STREET INTERSECTIONS, A RECESSED TYPE INLET WILL BE REQUIRED. FOR INDUSTRIAL AND RESIDENTIAL STREETS, A CURB LINE INLET WILL BE REQUIRED UNLESS OTHERWISE APPROVED. A ROUND MANHOLE COVER WITH LOCKING DEVICE SHALL BE PLACED ON ALL INLET TOPS. THE TOP SHALL BE PLACED NEAR THE OUTLET PIPE. ALL INLETS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS.
6. ONLY CURB INLETS ARE ALLOWED WITHIN PAVED AREAS. GRATE INLETS ARE ALLOWED ONLY BY TOWN ENGINEER APPROVAL.
7. ALL STORM SEWER OUTFALLS THAT DRAIN TO LAKE LEWISVILLE SHALL INCLUDE A DEBRIS SEPARATOR.
8. ALL STORM SEWER CULVERTS INSTALLED IN PUBLIC RIGHT-OF-WAY OR BENEATH FIRELANES SHALL BE REINFORCED CONCRETE PIPE OR DUAL WALL POLYPROPYLENE PIPE CONFORMING TO ASTM F2881.

DETOURS, BARRICADES, WARNING SIGNS, ETC. NOTES

1. TRAFFIC MUST BE HANDLED THROUGHOUT THE PROJECT DURING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE FOR THE SAFE AND COMFORTABLE PASSAGE OF TRAFFIC WITH MINIMAL INCONVENIENCE TO THE PUBLIC AT ALL TIMES. TRAFFIC LANES SHALL BE ENTIRELY OPEN TO TRAFFIC EACH NIGHT AND NO EQUIPMENT SHALL BE LEFT IN A POSITION OVERNIGHT THAT WILL ENDANGER TRAFFIC.
2. A FLAGGER SHALL BE STATIONED WHERE ANY EQUIPMENT IS WORKING ON THE ROAD OR WHERE ANY OTHER HAZARDS DUE TO CONSTRUCTION OPERATIONS EXIST OR AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES THROUGHOUT ALL PHASES OF CONSTRUCTION. ADEQUACY OF ACCESS WILL BE AT THE DISCRETION OF THE ENGINEER. SAFE ENTRANCE AND EXIT TO ALL DRIVEWAYS SHALL BE PROVIDED WITH A MINIMUM OF INCONVENIENCE.
4. THE CONTRACTOR SHALL NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC.
5. THE CONTRACTOR SHALL NOTIFY THE OWNER OF IMPENDING/UPCOMING LANE CLOSURES AS EARLY AS FIVE WORKING DAYS BUT NO LATER THAN 48 HOURS IN ADVANCE OF LANE CLOSURES.
6. FOR THIS PROJECT, UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER, NO LANE CLOSURES SHALL BE ALLOWED OTHER THAN THOSE IN THE TRAFFIC CONTROL PLAN.
7. THE CONTRACTOR MAY PROPOSE/RECOMMEND MODIFICATIONS TO THE SEQUENCE OF WORK FOR CONSIDERATION BY THE ENGINEER. ANY MAJOR RECOMMENDED MODIFICATION BY THE CONTRACTOR SHALL INCLUDE ANY CHANGES TO THE VARIOUS PAY ITEMS, IMPACT TO TRAFFIC, EFFECT OF OVERALL PROJECT IN TIME AND COST, ETC. THE CONTRACTOR SHALL NOT PROCEED WITH ANY CONSTRUCTION OPERATIONS BASED ON A REVISED PHASE/SEQUENCE UNTIL HE/SHE OBTAINS WRITTEN APPROVAL FROM THE ENGINEER. IF AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE SAFE AND COMFORTABLE MOVEMENT, THE CONTRACTOR SHALL IMMEDIATELY CHANGE HIS OPERATION TO CORRECT THE UNSATISFACTORY CONDITION.
8. THE CONTRACTOR SHALL INSTALL AND MAINTAIN AN ADEQUATE NUMBER OF BARRICADES, WARNING AND DIRECTIONAL SIGNS TO DELINEATE TRAFFIC FOR ANY DETOURS.
9. ALL CONSTRUCTION TRAFFIC SHALL BE REGULATED SO AS TO CAUSE A MINIMUM OF INCONVENIENCE TO THE TRAVELING PUBLIC. AT POINTS WHERE IT IS NECESSARY FOR TRUCKS TO STOP AND UNLOAD, WARNING SIGNS AND FLAGGERS SHALL BE PROVIDED AS NECESSARY TO ADEQUATELY PROTECT TRAVEL.
10. ALL BARRICADES, SIGNS, WARNING LIGHTS, ETC. SHALL BE ACCORDING TO THE LATEST REVISION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
11. THE CONTRACTOR MAY, WITH THE APPROVAL OF AND AS DIRECTED BY THE ENGINEER, BE REQUIRED TO FURNISH ADDITIONAL SIGNS AND BARRICADES TO THOSE INDICATED ON THE PLANS TO MAINTAIN THE SAFE PASSAGE OF TRAFFIC THROUGHOUT THE CONSTRUCTION SITE PARTICULARLY IN THOSE AREAS OF IMMEDIATE WORK.
12. UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE IS MADE, THE CONTRACTOR SHALL SHAPE AND FINISH SUCH PORTIONS OF THE RIGHT-OF-WAY AS MAY HAVE BEEN DISTURBED IN MAKING THE ABOVE PROVISIONS FOR TRAFFIC AND WILL BE REQUIRED TO LEAVE THE ENTIRE RIGHT-OF-WAY IN A SMOOTH, NEAT AND SIGHTLY CONDITION.
13. ALL WORK AND MATERIALS REQUIRED BY THESE PROVISIONS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS OF THE CONTRACT, UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS.
14. CONTRACTOR SHALL HAVE A COMPANY REPRESENTATIVE CERTIFIED IN FLAGGER TRAINING APPROVED BY TXDOT.
15. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF TRAFFIC IN ALL ALLOWABLE DIRECTIONS AT ALL TIMES.
16. THE CONTRACTOR SHALL PROVIDE FOR THE PASSAGE OF TRAFFIC THROUGH THE PROJECT WITH SIGNS, LIGHTS AND BARRICADES IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS REQUIRED FOR MAINTENANCE ACTIVITIES AND TO THE SATISFACTION OF THE ENGINEER.
17. LANE CLOSURES WILL NOT BE ALLOWED UNLESS PRIOR APPROVAL IS GIVEN BY THE ENGINEER. IF LANE CLOSURES ARE APPROVED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER 48 HOURS IN ADVANCE OF THE CLOSURE.

NO.	REVISION	DATE

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TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
GENERAL CONSTRUCTION NOTES 2 OF 3

LITTLE ELM

SHEET
2 OF 26

DECEMBER 2023

CONSTRUCTION
GENERAL NOTES

WATER SYSTEM NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE TOWN'S STANDARD SPECIFICATIONS AND GENERAL DESIGN STANDARDS.
2. ALL TAPPING SLEEVES AND VALVES SHALL BE FULL BODY DUCTILE IRON. WITH PRIOR APPROVAL BY THE TOWN ENGINEER, STAINLESS STEEL SMITH BLAIR 623 MAY BE ALLOWED FOR CONNECTION TO EXISTING LINES TWENTY-INCH (20") OR LARGER.
3. VALVES SHALL BE MUELLER OR WATEROUS, RESILIENT SEATED, 150 PSI TEST.
4. FITTINGS SHALL BE OF THE MECHANICAL JOINT TYPE, FLANGED WHERE APPLICABLE, AND BE MANUFACTURED BY US PIPE, AMERICAN, OR OTHER AS APPROVED BY THE TOWN – CLASS 250. ALL FITTINGS SHALL BE RESTRAINED BY THE USE OF MEGA-LUGS OR APPROVED OTHER AND CONCRETE THRUST BLOCKING.
5. FIRE HYDRANTS SHALL BE MUELLER OR WATEROUS THREE-WAY STANDARD THREAD WITH VALVE IN LEAD OR APPROVED OTHER. ALL MAIN STEAMER NOZZLES SHALL HAVE A NOMINAL INSIDE DIAMETER OF FOUR INCHES (4"). ALL COMMERCIAL FIRE HYDRANTS ARE REQUIRED TO BE INSTALLED WITH 4½"-5" HYDRA-STORZ CONNECTIONS.
6. WATER LINES IN THE AREA OF STORM DRAIN INLETS SHALL BE CONSTRUCTED BEHIND THE INLET BY PULLING THE PIPE USING LONGITUDINAL BENDING IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. FITTINGS MAY BE USED IF BENDING IS IMPRACTICAL; CONSULT WITH THE TOWN'S CONSTRUCTION INSPECTOR.
7. WATER LINES CROSSING UNDER STORM DRAINS AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF EIGHTEEN INCHES (18") CLEARANCE BELOW STORM DRAINS AND TWENTY-FOUR INCHES (24") CLEARANCE BELOW SANITARY SEWER LINES OR OTHERWISE AS GOVERNED BY TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CHAPTER 290 REQUIREMENTS. PARALLEL WATER LINES SHALL BE AT LEAST NINE FEET (9') CLEAR HORIZONTALLY FROM SANITARY SEWER LINES AND MANHOLES. WHERE MINIMUM CLEARANCE CANNOT BE ACHIEVED, WATER LINES SHALL BE ENCASED SIX INCHES (6") AROUND IN CONCRETE TO TEN FEET (10') EITHER SIDE OF THE UTILITY CROSSING. WHERE WATER LINES CROSS CREEKS OR DITCHES THE WATER LINE SHALL BE PROTECTED BY CONCRETE ENCASEMENT AT LEAST TEN FEET (10') PAST THE EMBANKMENT SLOPE ON EACH SIDE.
8. WATER MAINS: ALL WATER MAINS SHALL HAVE A MINIMUM OF FORTY EIGHT (48") COVER OVER THE TOP OF THE PIPE. ALL NEW WATER MAINS SHALL BE PVC PIPE IN ACCORDANCE WITH THE FOLLOWING: C900 DR 14 FOR FOUR-INCH (4") TO SIX-INCH (6"), C900 DR 18 FOR EIGHT-INCH (8") TO TWELVE-INCH (12"), AND C905 DR 18 FOR OVER TWELVE-INCH (12"), ALL "BLUE" IN COLOR AS PER TOWN SPECIFICATIONS; THE PIPE SHALL BE LAID ON A MINIMUM EMBEDMENT (SEE STANDARD CONSTRUCTION DETAILS). WATER MAINS UP TO TWELVE INCHES (12") SHALL BE INSTALLED TWO FEET (2') BACK OF CURB; MAINS LARGER THAN TWELVE INCHES (12") SHALL BE INSTALLED AT LEAST THREE FEET (3') FROM THE BACK OF CURB DEPENDING UPON CONDITIONS. DETECTABLE METALLIC TAPE ("BLUE-CAUTION BURIED WATER BELOW" OR APPROVED OTHER) SHALL BE INSTALLED AFTER INITIAL BACKFILL ON APPROXIMATE CENTERLINE OF PIPE PRIOR TO FINAL BACKFILL ABOVE ALL PVC MAINS.
9. THE CONTRACTOR SHALL INSTALL FIRE HYDRANTS AT THE LOCATIONS SHOWN. A M.J. AND FLANGED TEE WITH A FLANGED END TO M.J. GATE VALVE IS REQUIRED SO THAT THE GATE VALVE IS ANCHORED TO THE MAIN.
10. ALL BOLTS AND NUTS USED WITH MECHANICAL JOINT FITTING SHALL BE "COR-TEN" STEEL OR APPROVED OTHER.
11. THE INSTALLATION OF A BLUE STEMSONTE (OR OTHER) MODEL 88-SSA FIRE HYDRANT MARKER WILL BE INSTALLED OPPOSITE FIRE HYDRANTS JUST OFF CENTER TO THE SIDE OF THE STREET ADJACENT TO THE HYDRANT.
12. POLYETHYLENE ENCASEMENT – THE CONTRACTOR SHALL FURNISH AND INSTALL POLYETHYLENE WRAP AROUND DUCTILE IRON PIPE, RELATED FITTINGS, AND VALVES. THIS WRAP SHALL BE AN 8 MIL THICKNESS POLYTUBE. SEAMS AND OVERLAPS SHALL BE WRAPPED AND HELD IN PLACE BY TWO-INCH (2") WIDE PLASTIC BACKED ADHESIVE TAPE, POLYKEN 900 OR SCOTCHRAP NO. 50, OR AN APPROVED OTHER, WITH APPROXIMATE TWO-FOOT (2') LAPS ON THE POLYTUBE. THE WRAP ON THE BARREL OF THE PIPE SHALL BE LOOSE ENOUGH TO ALLOW THE FILM TO SHIFT WITH THE SOIL. THE WRAP SHALL BE INSTALLED WITHOUT BREAKS, TEARS, OR HOLES IN THE FILM. THE COST OF THE POLYETHYLENE TUBE WRAP AND COMPLETE INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FURNISHING AND THE INSTALLATION OF DUCTILE IRON PIPE, RELATED FITTINGS, AND VALVES.
13. VALVE BOXES SHALL BE FURNISHED AT THE REQUIRED LENGTH IN ORDER TO BE SET TO FINAL GRADE ON EACH GATE VALVE. AFTER THE FINAL CLEAN UP AND ALIGNMENT HAS BEEN COMPLETED, THE CONTRACTOR SHALL POUR A REINFORCED CONCRETE BLOCK 24" X 24" X 6" AROUND ALL VALVE BOXES SO THE FINISHED GRADE IS LEVEL WITH THE FINISHED PARKWAY. ALL VALVE STACK COMPONENTS SHALL BE CAST IRON. VALVE BOXES OVER FOUR FEET (4') DEEP WILL REQUIRE EXTENSIONS. ALL VALVES SHALL BE MARKED WITH A SAW ON THE CURB OR PAVEMENT WITH "V", THE "V" SHALL POINT TO THE LOCATION OF THE VALVE AS FOLLOWS: IF THE VALVE IS IN THE PAVING, THE "V" SHALL BE MARKED UPRIGHT; IF THE VALVE IS OUTSIDE THE PAVING, THE "V" SHALL BE MARKED UPSIDE DOWN.
14. THE CONTRACTOR SHALL COORDINATE OPERATION OF ALL EXISTING VALVES WITH THE TOWN. CONTACT THE TOWN'S PUBLIC WORKS DEPARTMENT AT (972) 377-5556.
15. ALL WATER LINES SHALL BE PRESSURE TESTED TO 200 PSI FOR A THREE (3) HOUR CONTINUOUS PERIOD. LEAKAGE RATE SHALL NOT EXCEED TWENTY-FIVE (25) GALLONS PER INCH OF NOMINAL DIAMETER PER MILE OF PIPE OVER A TWENTY-FOUR (24) HOUR PERIOD. CONTRACTOR SHALL FLUSH AND STERILIZE LINES AND PROVE LINES TO BE FREE OF FECAL COLIFORM ORGANISMS BY OBTAINING SAMPLES FOR LABORATORY TESTS FOR CONTAMINATION. THE CONTRACTOR SHALL REFLUSH AND RESTERILIZE UNTIL ALL SAMPLES PROVE FREE FROM CONTAMINATION.
16. ALL RESIDENTIAL WATER SERVICES SHALL BE AS FOLLOWS:
    A. WATER SERVICES SHALL BE NORMALLY LOCATED AT TWO FOOT (2') OFF EVERY OTHER LOT LINE. A WATER METER BOX, AS APPROVED BY THE TOWN, WITH LOCK LID SHALL BE INSTALLED TWO FEET (2') BACK OF CURB LINE.
    B. SDR-9 POLYETHYLENE SERVICES ARE REQUIRED TO SERVE ALL RESIDENTIAL LOTS AND PATIO HOMES. FOR TOWN HOMES AND DUPLEXES, A SERVICE SHALL BE PROVIDED TO EACH OF THE FAMILY UNITS. SAND EMBEDMENT SHALL BE USED AROUND THE PIPE AND CORPORATION STOP. SURVCIL SADDLES SHALL BE BRASS MOLY WITH DOUBLE BRONZE FLATTENED STRAPS (NO BANDED) – FORD, CAMBRIDGE, A.Y. MCDONALD, OR APPROVED OTHER.
    C. THE UTILITY CONTRACTOR SHALL INSTALL THE WATER SERVICES TO A POINT TWO (2) FEET BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. LINE SHALL BE CONTINUOUS WITH NO FITTINGS UNDER PAVING. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINAL GRADING IN BACK OF THE CURB. EACH SERVICE LOCATION WILL BE MARKED ON THE CURB WITH A SINGLE VERTICAL SAW MARK BY THE UTILITY CONTRACTOR AND TIED TO PROPERTY CORNERS ON THE "AS-RECORDED" PLANS.
    D. IF THERE IS A CURB, THE CURB SHALL BE SAWCUT WITH "T" AT THE POINT WHERE THE SERVICE PIPE PASSES THE CURB.
17. FOR NON-RESIDENTIAL WATER SERVICES, THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINAL GRADING IN BACK OF THE CURB. METER BOXES/VAULTS SHALL BE LOCATED OUTSIDE OF PAVING. EACH SERVICE LOCATION WILL BE MARKED ON THE CURB OR PAVEMENT WITH A SINGLE VERTICAL SAW MARK BY THE UTILITY CONTRACTOR AND TIED TO PROPERTY CORNERS ON THE "AS-RECORDED" PLANS.
18. DENSITY TESTING REQUIREMENTS: FREQUENCY OF TRENCH COMPACTION TESTS SHALL NOT BE LESS THAN ONE (1) FOR ANY PIPE SECTION AND EVERY THREE HUNDRED LINEAR FEET (300') LINEAR FEET OF MAIN PIPE PER TWO FEET (2') OF LIFT UNTIL FINAL GRADE, STARTING AT TWO FEET (2') ABOVE THE TOP OF PIPE. WATER SERVICES ARE TO BE TESTED AT A RATE OF ONE (1) FOR EVERY SIX (6) SERVICES WHICH CROSS THE PROPOSED RIGHT OF WAY OR EVERY THREE HUNDRED LINEAR FEET (300') OF WATER SERVICE INSTALLED. EVERY OTHER FIRE HYDRANT LEAD THAT CROSS THE EXISTING OR PROPOSED STREET, ALLEY, OR FIRE LANE SUBGRADE SHALL ALSO RECEIVE AT LEAST ONE SET OF DENSITY TESTS. ALL DITCHES SHALL BE MECHANICALLY TAMPED AND COMPACTED TO NINETY-FIVE PERCENT (95%) STANDARD PROCTOR DENSITY AT ZERO PERCENT (0%) TO FOUR PERCENT (4%) ABOVE OPTIMUM MOISTURE. WATER JETTING IS NOT PERMITTED.
19. THE CONTRACTOR SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION FOR CURVATURE OF LINES AND/OR DEFLECTION OF PIPE JOINTS. INSTALL BENDS AS REQUIRED.
20. THE CONTRACTOR SHALL PROVIDE FITTINGS, PLUGS, AND OTHER DEVICES FOR USE IN FILLING, FLUSHING, TESTING, ETC. (NO SEPARATE PAY).
21. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURES. (NO SEPARATE PAY).
22. MAINTAIN MINIMUM CLEARANCE OF THREE (3) FEET FROM EDGE OF STRUCTURES TO CLOSEST EDGE OF PIPELINE ADJACENT AND PARALLEL TO EDGE OF STRUCTURE, UNLESS OTHERWISE NOTED ON PLANS.
23. DI-ELECTRIC CONNECTIONS TO BE PREVENTED BY USE OF NON-CONDUCTIVE GASKETS BETWEEN DISSIMILAR PIPING MATERIALS.
24. REFERENCE SPECIFICATIONS FOR REQUIREMENTS ON REQUIRED SEPARATION DISTANCE BETWEEN SEWER AND WATER MAINS AND REQUIREMENTS IN THE EVENT THE SEPARATION DISTANCE CANNOT BE MET.
25. ALL PIPING INSTALLED BY BORING SHALL BE COMPLETED BY DRY BORE METHOD WITHOUT THE USE OF DRILLING FLUID, UNLESS APPROVED BY THE TOWN ENGINEER.

SANITARY SEWER SYSTEM NOTES

1. ALL SANITARY SEWER PIPES FOUR INCHES (4") TO FIFTEEN INCHES (15") NOMINAL SIZE SHALL BE PVC SDR 26 MEETING ASTM D3034. ALL SANITARY SEWER PIPES EIGHTEEN INCHES (18") AND LARGER NOMINAL SIZE SHALL BE PVC MEETING ASTM F679. ALL PIPES SHALL BE "GREEN" IN COLOR AS PER TOWN SPECIFICATIONS AND BE LAID ON A MINIMUM EMBEDMENT (SEE STANDARD CONSTRUCTION DETAILS). DETECTABLE METALLIC TAPE ("GREEN-CAUTION BURIED SEWER BELOW" OR APPROVED OTHER) SHALL BE INSTALLED AFTER INITIAL BACKFILL ON APPROXIMATE CENTERLINE OF PIPE PRIOR TO FINAL BACKFILL.
2. ALL SEWER MAINS SHALL BE A MINIMUM DIAMETER OF EIGHT INCHES (8") AND SHALL MAINTAIN A MINIMUM FLOW VELOCITY OF TWO (2) FEET PER SECOND.
3. ALL RESIDENTIAL SANITARY SEWER SERVICES SHALL BE A MINIMUM FOUR INCHES (4") IN DIAMETER AND EXTENDED TO A POINT TEN FEET (10') INSIDE THE PROPERTY LINE AT A MAXIMUM DEPTH OF FIVE FEET (5'). THE SERVICE SHALL THEN BE EXTENDED AT A FORTY-FIVE DEGREE (45°) ANGLE TO FOUR FEET (4') ABOVE THE FINISHED GRADE AND CAPPED. SEWER SERVICES SHALL BE LOCATED IN THE CENTER OF THE LOT. RESIDENTIAL SEWER SERVICES SHALL NOT TIE INTO MANHOLES.
4. DENSITY TESTING REQUIREMENTS: FREQUENCY OF TRENCH COMPACTION TESTS SHALL NOT BE LESS THAN ONE (1) FOR ANY PIPE SECTION AND EVERY THREE HUNDRED LINEAR FEET (300') OF MAIN PIPE PER TWO FEET (2') OF LIFT UNTIL FINAL GRADE, STARTING AT TWO FEET (2') ABOVE TOP OF PIPE. SEWER SERVICES ARE TO BE TESTED AT A RATE OF ONE (1) FOR EVERY SIX (6) SERVICES STAGGERED OR EVERY THREE HUNDRED LINEAR FEET (300') OF SEWER SERVICE INSTALLED. EACH SEWER MANHOLE WILL RECEIVE A DENSITY TEST EVERY TWO FEET (2') OF LIFT UNTIL FINAL GRADE, ALTERNATING AROUND ALL QUADRANTS. EVERY OTHER MAIN AND STUBOUT THAT CROSSES THE EXISTING OR PROPOSED STREET, ALLEY, OR FIRE LANE SUBGRADE SHALL ALSO RECEIVE AT LEAST ONE SET OF DENSITY TESTS. ALL DITCHES SHALL BE MECHANICALLY TAMPED AND COMPACTED TO NINETY-FIVE PERCENT (95%) STANDARD PROCTOR DENSITY AT ZERO PERCENT (0%) TO FOUR PERCENT (4%) ABOVE OPTIMUM MOISTURE. WATER JETTING IS NOT PERMITTED.
5. AFTER PAVING IS COMPLETED EACH SERVICE LOCATION WILL BE MARKED ON THE CURB WITH A TWO (2) PARALLEL VERTICAL SAW MARKS BY THE UTILITY CONTRACTOR AND TIED TO AT LEAST ONE (1) PROPERTY CORNER ON THE "AS-RECORDED" PLANS. ALL MANHOLES AND CLEANOUTS SHALL BE MARKED ON THE CURB OR PAVEMENT WITH "MH" OR "CO" AS APPLICABLE.
6. VACUUM TESTING OF THE MANHOLES, AND DEFLECTION TESTING ARE REQUIRED ON ALL SEWER LINES. PRIOR TO PAVING, ALL RESIDENTIAL SANITARY SEWER SERVICES SHALL HAVE TV INSPECTIONS.
7. MANHOLES SHALL HAVE A 400# TRAFFIC BEARING FRAME AND COVER AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT TWENTY-EIGHT (28) DAYS.
8. THE DIAMETER OF A MANHOLE CONSTRUCTED OVER THE CENTER OF A SEWER SHOULD VARY WITH THE SIZE OF THE SEWER. FOR EIGHT-INCH (8"), TEN-INCH (10"), AND TWELVE-INCH (12") SEWERS, THE MANHOLE SHALL BE FOUR-FOOT (4') MINIMUM DIAMETER; FOR FIFTEEN-INCH (15") THROUGH TWENTY-SEVEN-INCH (27") SEWERS, THE MANHOLE SHALL BE FIVE-FOOT (5') MINIMUM DIAMETER; FOR THIRTY-INCH (30") AND THIRTY-SIX-INCH (36") SEWERS, THE MANHOLE SHALL BE SIX-FOOT (6') MINIMUM DIAMETER. MANHOLES DEEPER THAN TWELVE FEET (12') SHALL BE A MINIMUM OF FIVE FOOT (5') DIAMETER.
9. THE CONTRACTOR SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION FOR CURVATURE OF LINES AND/OR DEFLECTION OF PIPE JOINTS. INSTALL JOINTS AS REQUIRED.
10. THE CONTRACTOR SHALL PROVIDE FITTINGS, PLUGS, AND OTHER DEVICES FOR USE IN FILLING, FLUSHING, TESTING, ETC. (NO SEPARATE PAY).
11. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING TO WITHSTAND TEST PRESSURES. (NO SEPARATE PAY).
12. PIPING DRAWINGS INDICATE INVERT ELEVATIONS FOR GRAVITY FLOW LINES. SLOPE PIPE UNIFORMLY BETWEEN ELEVATIONS SHOWN; NO VALLEYS OR PEAKS PERMITTED IN GRAVITY FLOW LINES. FOR OTHER PIPING, REFER TO DETAIL SHEETS FOR PIPE ELEVATIONS AT EACH STRUCTURE. SITE PIPING DRAWINGS DO NOT INDICATE VERTICAL BENDS AND TRANSITIONS. WHEN NECESSARY, MAKE VERTICAL TRANSITIONS OR FURNISH AND INSTALL VERTICAL BENDS AT NO EXTRA COST. DO NOT EXCEED MANUFACTURER'S RECOMMENDATIONS FOR CURVATURE OF LINES AND/OR DEFLECTION OF PIPE JOINTS.
13. MAINTAIN MINIMUM CLEARANCE OF THREE (3) FEET FROM EDGE OF STRUCTURES TO CLOSEST EDGE OF PIPELINE ADJACENT AND PARALLEL TO EDGE OF STRUCTURE, UNLESS OTHERWISE NOTED ON PLANS.
14. DI-ELECTRIC CONNECTIONS TO BE PREVENTED BY USE OF NON-CONDUCTIVE GASKETS BETWEEN DISSIMILAR PIPING MATERIALS.
15. THE INTERIOR SURFACE OF ALL MANHOLES AND LIFT STATION WETWELLS SHALL BE CONSTRUCTED WITH POLYMER CONCRETE, ANTIMICROBIAL CONCRETE ADDITIVES, OR APPROVED EQUAL. EXISTING MANHOLES WHICH RECEIVE TIE INS SHALL BE COATED WITH RAVEN 405 EPOXY OR APPROVED EQUAL IF THEY DO NOT ALREADY HAVE CORROSION PROTECTION.
16. RESIDENTIAL SEWER SERVICES SHALL NOT TIE INTO MANHOLES WITHOUT TOWN ENGINEER APPROVAL.

NO.	REVISION	DATE

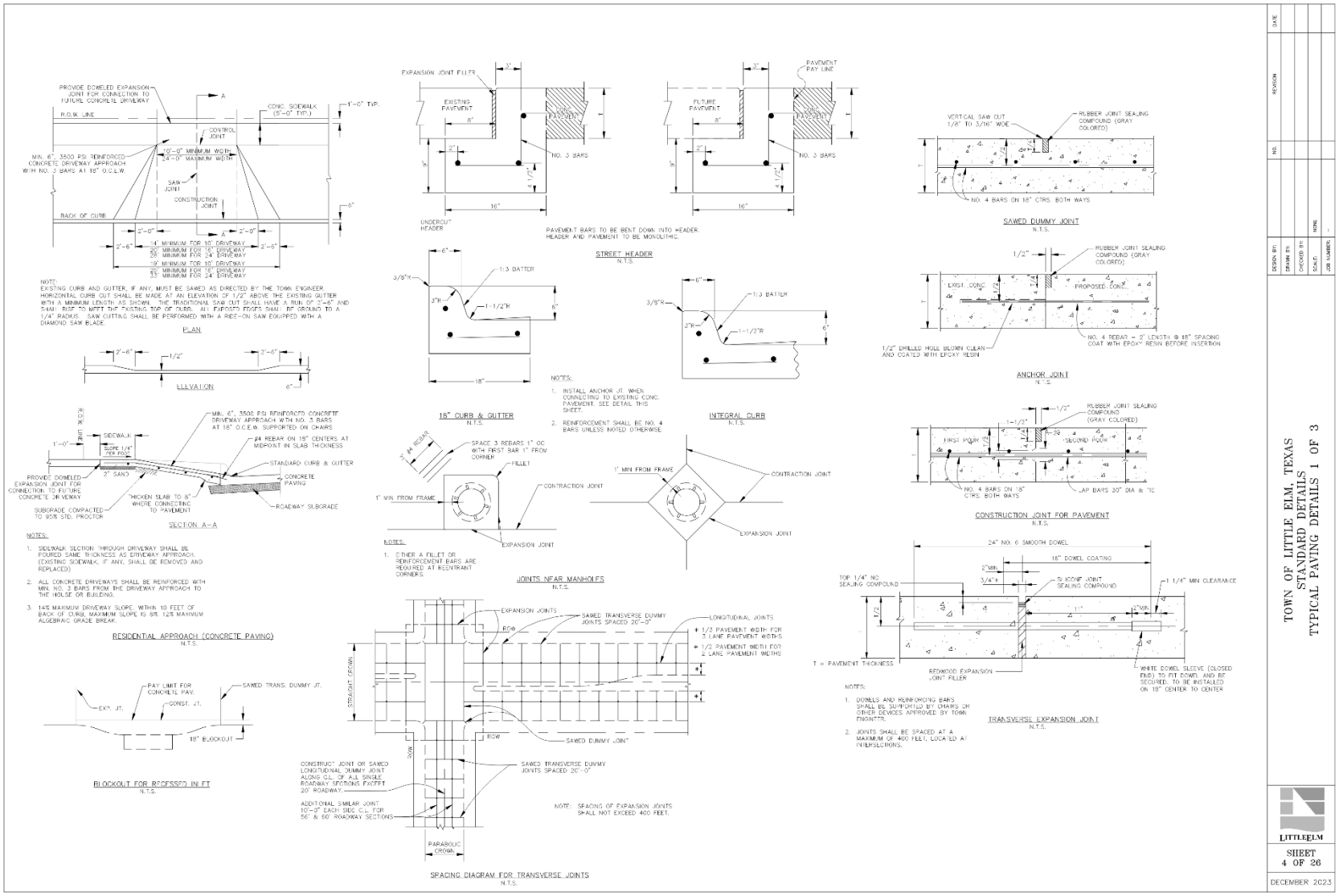
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE: NONE
JOB NUMBER: -

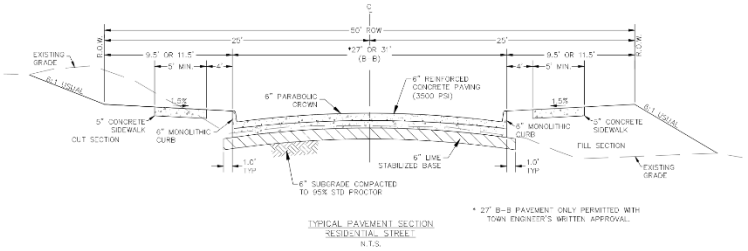
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
GENERAL CONSTRUCTION NOTES 3 OF 3

LITTLE ELM

SHEET
3 OF 26

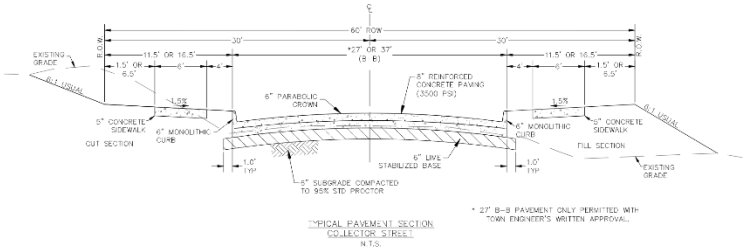
DECEMBER 2023


PROVIDE DOWELED EXPANSION JOINT FOR CONNECTION TO FUTURE CONCRETE DRIVEWAY
R.O.W. LINE
CONC. SIDEWALK (5'-0" TYP.)
1'-0" TYP.
CONTROL JOINT
MIN. 6", 3500 PSI REINFORCED CONCRETE DRIVEWAY APPROACH WITH NO. 3 BARS AT 18" O.C.E.W.
10'-0" MINIMUM WIDTH
24'-0" MAXIMUM WIDTH
SAW JOINT
CONSTRUCTION JOINT
BACK OF CURB
2'-0"
2'-6"
14' MINIMUM FOR 10' DRIVEWAY
20' MINIMUM FOR 16' DRIVEWAY
28' MINIMUM FOR 24' DRIVEWAY
19' MINIMUM FOR 10' DRIVEWAY
25' MINIMUM FOR 16' DRIVEWAY
33' MINIMUM FOR 24' DRIVEWAY
NOTE:
EXISTING CURB AND GUTTER, IF ANY, MUST BE SAWED AS DIRECTED BY THE TOWN ENGINEER. HORIZONTAL CURB CUT SHALL BE MADE AT AN ELEVATION OF 1/2" ABOVE THE EXISTING GUTTER WITH A MINIMUM LENGTH AS SHOWN. THE TRADITIONAL SAW CUT SHALL HAVE A RUN OF 3"-6" AND SHALL RISE TO MEET THE EXISTING TOP OF CURB. ALL EXPOSED EDGES SHALL BE GROUND TO A 1/4" RADIUS. SAW CUTTING SHALL BE PERFORMED WITH A RIDE-ON SAW EQUIPPED WITH A DIAMOND SAW BLADE.
PLAN
1/2"
ELEVATION
6"
MIN. 6" SIDEWALK
1'-0"
SLOPE 1/4" PER FOOT
MIN. 6", 3500 PSI REINFORCED CONCRETE DRIVEWAY APPROACH WITH NO. 3 BARS AT 18" O.C.E.W. SUPPORTED ON CHAIRS
#4 REBAR ON 18" CENTERS AT MIDPOINT IN SLAB THICKNESS
STANDARD CURB & GUTTER
2" SAND
CONCRETE PAVING
PROVIDE DOWELED EXPANSION JOINT FOR CONNECTION TO FUTURE CONCRETE DRIVEWAY
THICKEN SLAB TO 8" WHERE CONNECTING TO PAVEMENT
ROADWAY SUBGRADE
SUBGRADE COMPACTED TO 95% STD. PROCTOR
SECTION A-A
NOTES:
1. SIDEWALK SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH. (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED AND REPLACED)
2. ALL CONCRETE DRIVEWAYS SHALL BE REINFORCED WITH MIN. NO. 3 BARS FROM THE DRIVEWAY APPROACH TO THE HOUSE OR BUILDING.
3. 14% MAXIMUM DRIVEWAY SLOPE WITHIN 10 FEET OF BACK OF CURB, MAXIMUM SLOPE IS 8% 12% MAXIMUM ALGEBRAIC GRADE BREAK.
RESIDENTIAL APPROACH (CONCRETE PAVING)
N.T.S.
PAY LIMIT FOR CONCRETE PAV.
SAWED TRANS. DUMMY JT.
EXP. JT.
CONST. JT.
18" BLOCKOUT
BLOCKOUT FOR RECESSED INLET
N.T.S.
EXPANSION JOINT FILLER
EXISTING PAVEMENT
CURB (VARIED)
NO. 3 BARS
UNDERCUT HEADER
FUTURE PAVEMENT
PAVEMENT PAY LINE
PAVEMENT BARS TO BE BENT DOWN INTO HEADER. HEADER AND PAVEMENT TO BE MONOLITHIC.
STREET HEADER
N.T.S.
1:3 BATTER
3/8"R
1-1/2"R
18" CURB & GUTTER
N.T.S.
NOTES:
1. INSTALL ANCHOR JT. WHEN CONNECTING TO EXISTING CONC. PAVEMENT. SEE DETAIL THIS SHEET.
2. REINFORCEMENT SHALL BE NO. 4 BARS UNLESS NOTED OTHERWISE.
INTEGRAL CURB
N.T.S.
3" #4 REBAR
SPACE 3 REBARS 1" OC WITH FIRST BAR 1" FROM CORNER
FILLET
1' MIN FROM FRAME
CONTRACTION JOINT
EXPANSION JOINT
NOTES:
1. EITHER A FILLET OR REINFORCEMENT BARS ARE REQUIRED AT REENTRANT CORNERS.
JOINTS NEAR MANHOLES
N.T.S.
EXPANSION JOINTS
SAWED TRANSVERSE DUMMY JOINTS SPACED 20'-0"
LONGITUDINAL JOINTS
1/3 PAVEMENT WIDTH FOR 3 LANE PAVEMENT WIDTHS
1/2 PAVEMENT WIDTH FOR 2 LANE PAVEMENT WIDTHS
ROW
STRAIGHT CROWN
SAWED DUMMY JOINT
CONSTRUCT JOINT OR SAWED LONGITUDINAL DUMMY JOINT ALONG C.L. OF ALL SINGLE ROADWAY SECTIONS EXCEPT 20' ROADWAY.
ADDITIONAL SIMILAR JOINT 10'-0" EACH SIDE C.L. FOR 56' & 60' ROADWAY SECTIONS
PARABOLIC CROWN
NOTE: SPACING OF EXPANSION JOINTS SHALL NOT EXCEED 400 FEET.
SPACING DIAGRAM FOR TRANSVERSE JOINTS
N.T.S.
VERTICAL SAW CUT 1/8" TO 3/16" WIDE
RUBBER JOINT SEALING COMPOUND (GRAY COLORED)
NO. 4 BARS ON 18" CTRS. BOTH WAYS
SAWED DUMMY JOINT
N.T.S.
1/2"
EXIST. CONC.
PROPOSED CONC.
1/2" DRILLED HOLE BLOWN CLEAN AND COATED WITH EPOXY RESIN
NO. 4 REBAR - 2' LENGTH @ 18" SPACING COAT WITH EPOXY RESIN BEFORE INSERTION
ANCHOR JOINT
N.T.S.
FIRST POUR
SECOND POUR
LAP BARS 30" DIA & TIE
CONSTRUCTION JOINT FOR PAVEMENT
N.T.S.
24" NO. 6 SMOOTH DOWEL
18" DOWEL COATING
TOP 1/4" NO SEALING COMPOUND
2" MIN.
3/4"±
SILICONE JOINT SEALING COMPOUND
1 1/4" MIN CLEARANCE
T = PAVEMENT THICKNESS
REDWOOD EXPANSION JOINT FILLER
WHITE DOWEL SLEEVE (CLOSED END) TO FIT DOWEL AND BE SECURED TO BE INSTALLED ON 18" CENTER TO CENTER
NOTES:
1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY CHAIRS OR OTHER DEVICES APPROVED BY TOWN ENGINEER.
2. JOINTS SHALL BE SPACED AT A MAXIMUM OF 400 FEET, LOCATED AT INTERSECTIONS.
TRANSVERSE EXPANSION JOINT
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL PAVING DETAILS 1 OF 3
LITTLE ELM
SHEET
4 OF 26
DECEMBER 2023



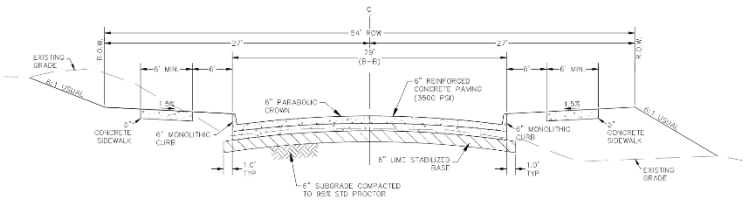
* 27' B-B PAVEMENT ONLY PERMITTED WITH TOWN ENGINEER'S WRITTEN APPROVAL.

TYPICAL PAVEMENT SECTION
RESIDENTIAL STREET
N.T.S.



* 27' B-B PAVEMENT ONLY PERMITTED WITH TOWN ENGINEER'S WRITTEN APPROVAL.

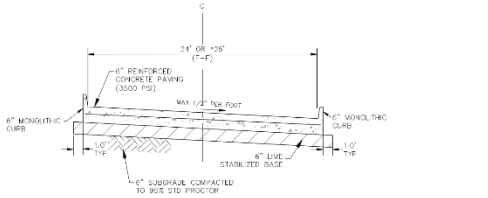
TYPICAL PAVEMENT SECTION
COLLECTOR STREET
N.T.S.



RESIDENTIAL STREET
ALTERNATIVE PAVEMENT SECTION
(29'-0" B-B)
N.T.S.

PAVEMENT NOTES:

1. THESE NOTES ARE A REPRESENTATION OF THE MINIMUM REQUIREMENTS FOR PAVEMENT CONSTRUCTION. THE DESIGN ENGINEER IS RESPONSIBLE FOR PAVEMENT DESIGN, INCORPORATING RECOMMENDATIONS OF THE GEOTECHNICAL REPORT (R-VALUE TO BE MORE STRINGENT).
2. 3500 PSI MACHINE POUR, 4000 PSI HAND POUR (AT DRIVEWAY APPROACH ONLY). REINFORCED CONCRETE PAVEMENT (5.5 SACK/CY), NO. 4 BARS @ 18" O.C.E.W., WITH 6" MONOLITHIC CURB.
3. BAR LAPS SHALL BE 30 BAR DIAMETERS.
4. BAR CHAIRS SHALL BE PROVIDED BY CONTRACTOR.
5. DO NOT PLACE CONCRETE JOINT WITHIN 2 FEET OF GUTTER LINE AT STREET CONNECTION.
6. LIME SHALL BE APPLIED BY PERCENTAGE DRY UNIT WEIGHT OF SOIL TREATED TO A MINIMUM IN PLACE COMPACTED THICKNESS OF SIX (6) INCHES. FOR 6" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 37 LBS/SQ FT; FOR 8" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 54 LBS/SQ FT.
7. LIME STABILIZATION MAY BE OMITTED IF 6" OF FLEXIBLE BASE WITH TENSAR TX7 GEOGRID IS APPLIED TO THE SUBBASE COMPACTED TO 95% STD PROCTOR.
8. FORMING OF PAVEMENT:
   A. SLIP-FORM: SLIP-FORM PAVEMENT METHOD SHALL BE USED FOR ALL PUBLIC STREETS AND ALLEYS UNLESS OTHERWISE APPROVED BY THE TOWN ENGINEER.
   B. HAND FORM: HAND FORMED PAVEMENT METHOD MAY BE USED FOR TURN LANE, DECELERATION LANE, DRIVEWAY APPROACH, OR REPLACING A PANEL OF PUBLIC STREET OR ALLEY.

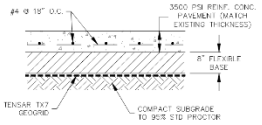


* 26' F-F PAVEMENT REQUIRED WHEN SERVING BUILDINGS 2 STORIES OR HIGHER.

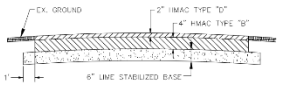
FIRE LANE MAXIMUM RUNNING GRADE IS 6%

SEE FIRE LANE STRIPING DETAIL ON SHEET 10

FIRE LANE
N.T.S.



CONCRETE PAVEMENT REPAIR
TYPICAL SECTION
N.T.S.



ASPHALT TRANSITION
TYPICAL SECTION
N.T.S.

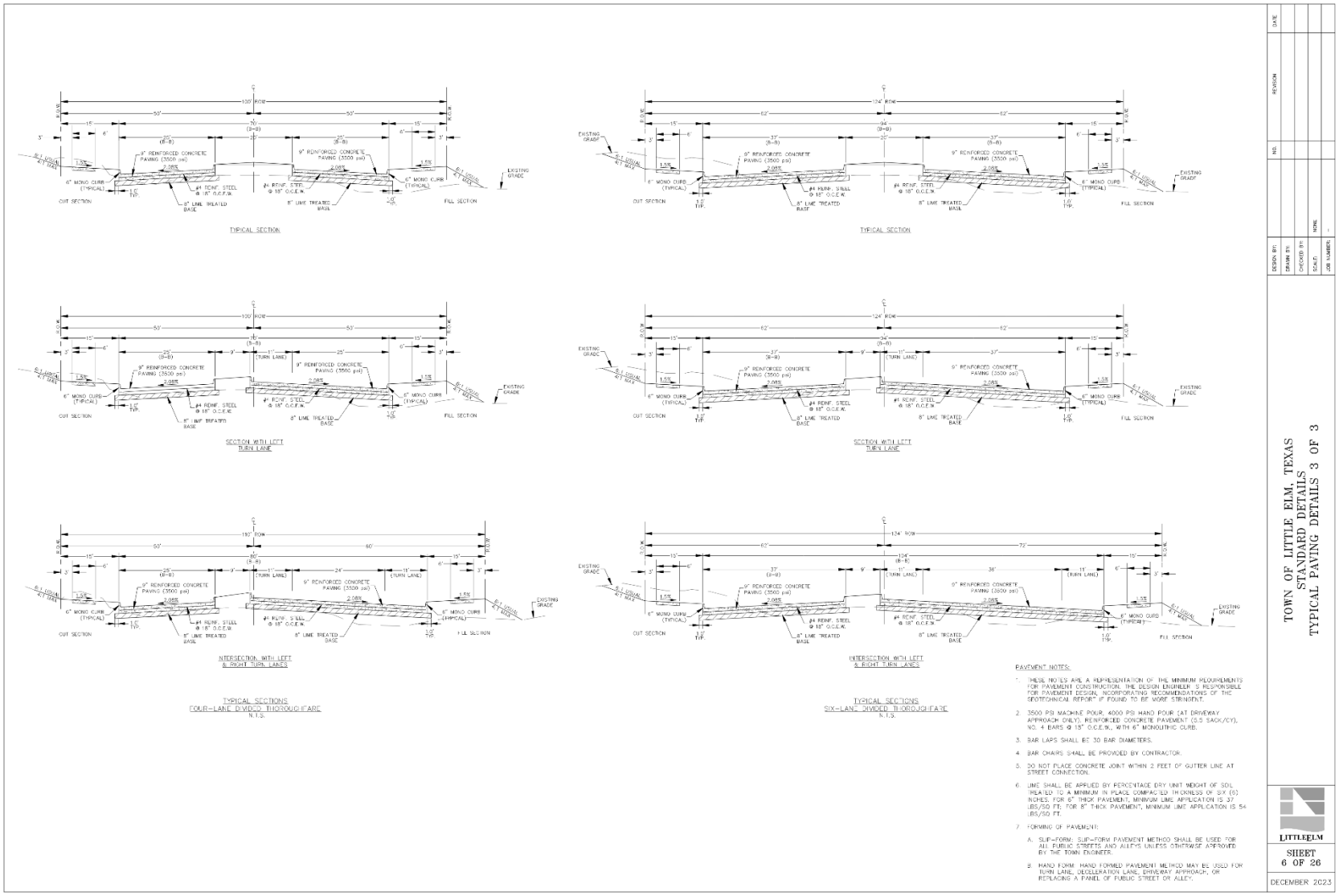
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE: NONE
JOB NUMBER: -

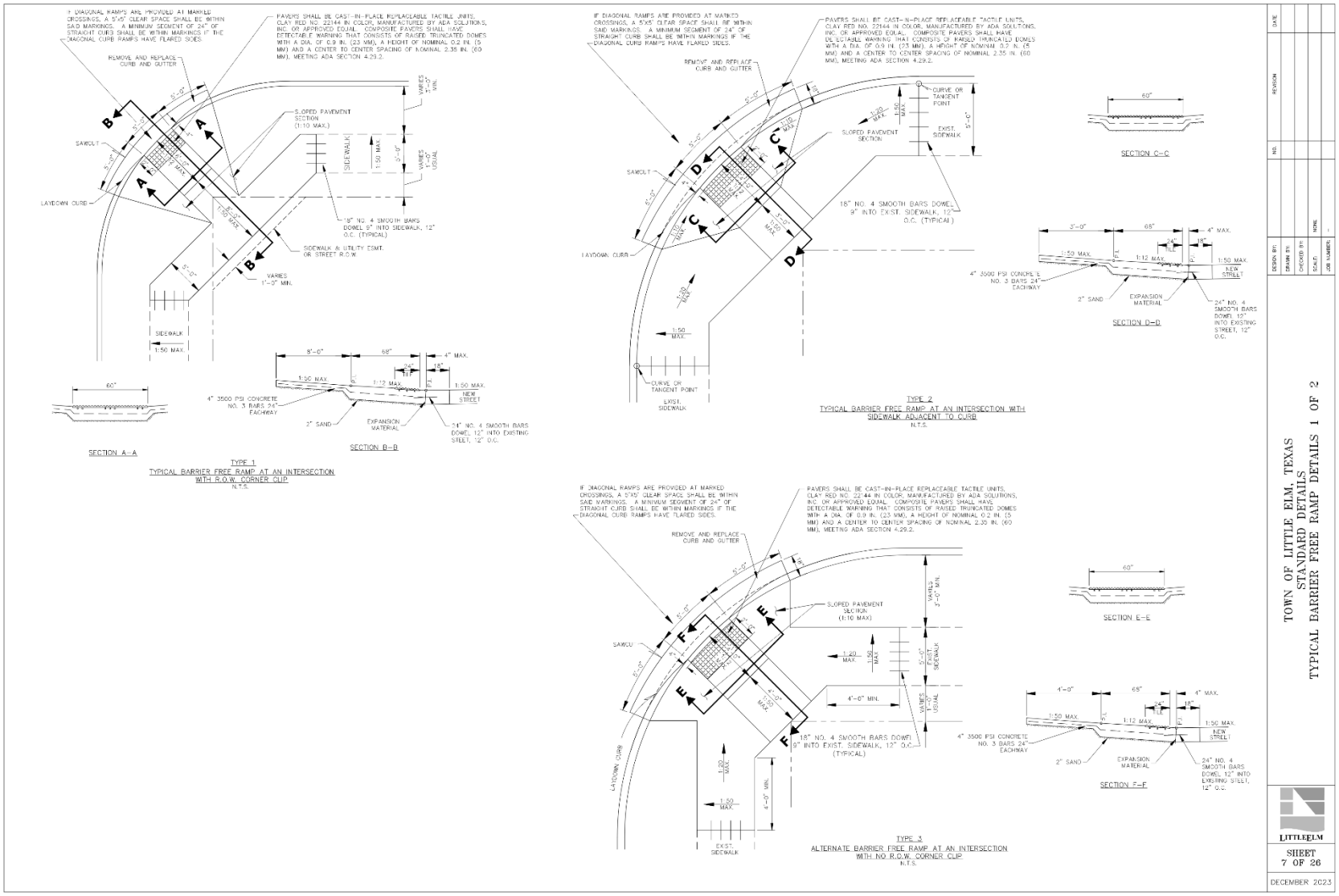
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL PAVING DETAILS 2 OF 3

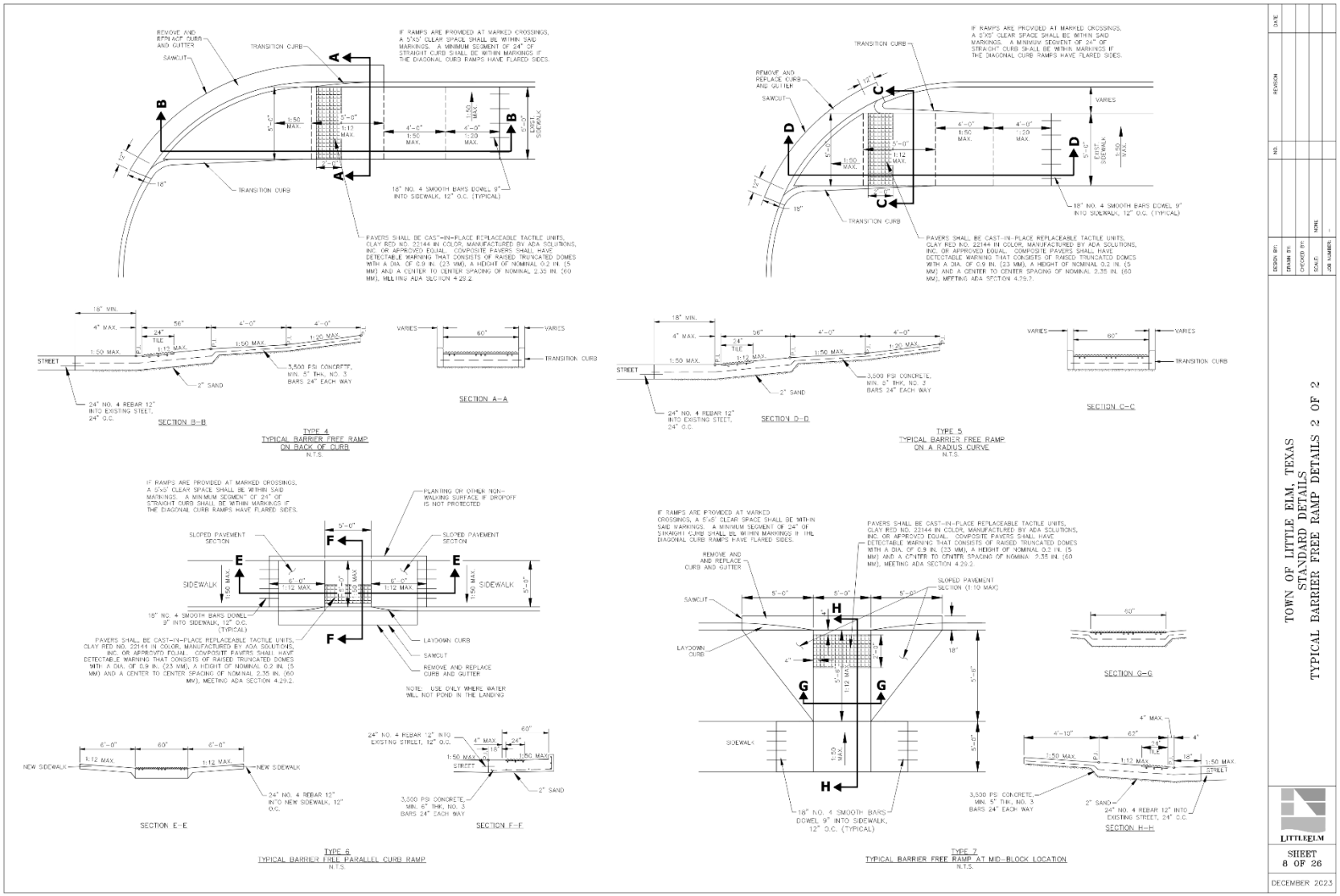
LITTLEELM

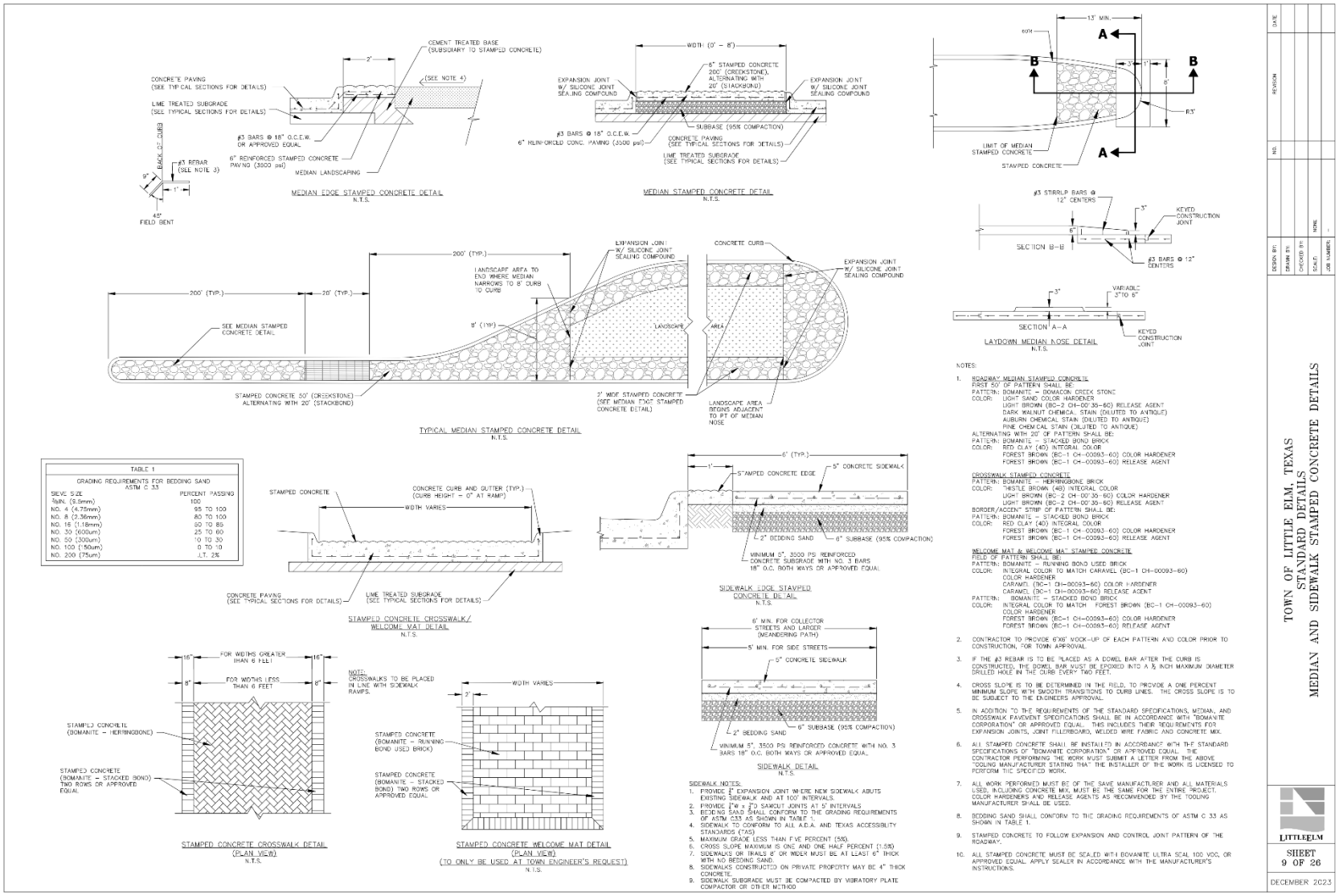
SHEET
5 OF 26

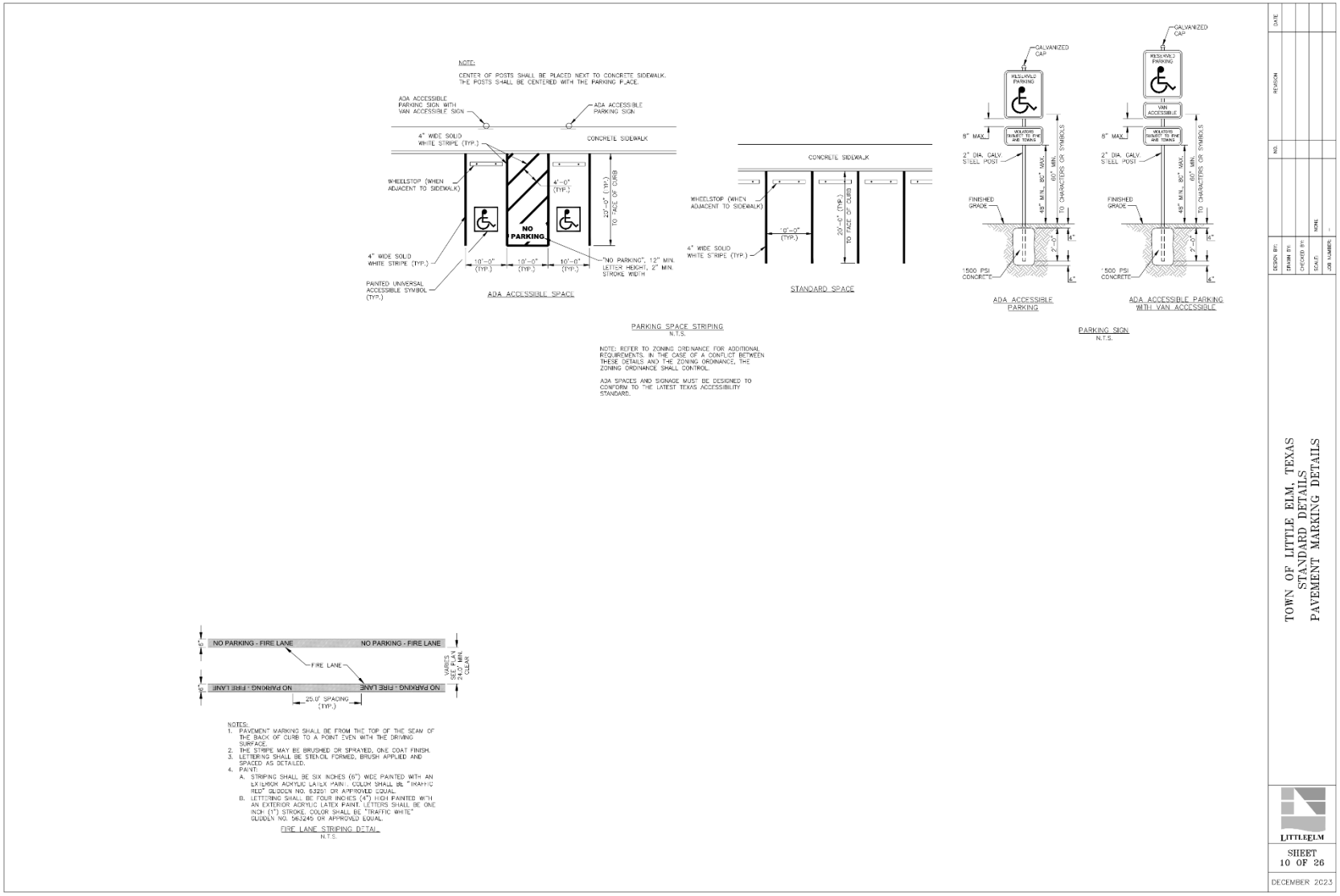
DECEMBER 2023


TYPICAL SECTION
TYPICAL SECTION
SECTION WITH LEFT TURN LANE
SECTION WITH LEFT TURN LANE
INTERSECTION WITH LEFT & RIGHT TURN LANES
INTERSECTION WITH LEFT & RIGHT TURN LANES
TYPICAL SECTIONS FOUR-LANE DIVIDED THOROUGHFARE N.T.S.
TYPICAL SECTIONS SIX-LANE DIVIDED THOROUGHFARE N.T.S.
PAVEMENT NOTES:
1. THESE NOTES ARE A REPRESENTATION OF THE MINIMUM REQUIREMENTS FOR PAVEMENT CONSTRUCTION. THE DESIGN ENGINEER IS RESPONSIBLE FOR PAVEMENT DESIGN, INCORPORATING RECOMMENDATIONS OF THE GEOTECHNICAL REPORT IF FOUND TO BE MORE STRINGENT.
2. 3500 PSI MACHINE POUR, 4000 PSI HAND POUR (AT DRIVEWAY APPROACH ONLY), REINFORCED CONCRETE PAVEMENT (5.5 SACK/CY), NO. 4 BARS @ 18" O.C.E.W., WITH 6" MONOLITHIC CURB.
3. BAR LAPS SHALL BE 30 BAR DIAMETERS.
4. BAR CHAIRS SHALL BE PROVIDED BY CONTRACTOR.
5. DO NOT PLACE CONCRETE JOINT WITHIN 2 FEET OF GUTTER LINE AT STREET CONNECTION.
6. LIME SHALL BE APPLIED BY PERCENTAGE DRY UNIT WEIGHT OF SOIL TREATED TO A MINIMUM IN PLACE COMPACTED THICKNESS OF SIX (6) INCHES. FOR 6" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 37 LBS/SQ FT. FOR 8" THICK PAVEMENT, MINIMUM LIME APPLICATION IS 54 LBS/SQ FT.
7. FORMING OF PAVEMENT:
A. SLIP-FORM: SLIP-FORM PAVEMENT METHOD SHALL BE USED FOR ALL PUBLIC STREETS AND ALLEYS UNLESS OTHERWISE APPROVED BY THE TOWN ENGINEER.
B. HAND FORM: HAND FORMED PAVEMENT METHOD MAY BE USED FOR TURN LANE, DECELERATION LANE, DRIVEWAY APPROACH, OR REPLACING A PANEL OF PUBLIC STREET OR ALLEY.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER:
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL PAVING DETAILS 3 OF 3
LITTLEELM
SHEET
6 OF 26
DECEMBER 2023


TYPE 1
TYPICAL BARRIER FREE RAMP AT AN INTERSECTION WITH R.O.W. CORNER CLIP
N.T.S.
SECTION A–A
SECTION B–B
TYPE 2
TYPICAL BARRIER FREE RAMP AT AN INTERSECTION WITH SIDEWALK ADJACENT TO CURB
N.T.S.
SECTION C–C
SECTION D–D
TYPE 3
ALTERNATE BARRIER FREE RAMP AT AN INTERSECTION WITH NO R.O.W. CORNER CLIP
N.T.S.
SECTION E–E
SECTION F–F
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL BARRIER FREE RAMP DETAILS 1 OF 2
LITTLE ELM
SHEET
7 OF 26
DECEMBER 2023


TYPE 4
TYPICAL BARRIER FREE RAMP
ON BACK OF CURB
N.T.S.
TYPE 5
TYPICAL BARRIER FREE RAMP
ON A RADIUS CURVE
N.T.S.
TYPE 6
TYPICAL BARRIER FREE PARALLEL CURB RAMP
N.T.S.
TYPE 7
TYPICAL BARRIER FREE RAMP AT MID-BLOCK LOCATION
N.T.S.
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL BARRIER FREE RAMP DETAILS 2 OF 2
LITTLEELM
SHEET
8 OF 26
DECEMBER 2023


MEDIAN EDGE STAMPED CONCRETE DETAIL
N.T.S.
MEDIAN STAMPED CONCRETE DETAIL
N.T.S.
TYPICAL MEDIAN STAMPED CONCRETE DETAIL
N.T.S.
LAYDOWN MEDIAN NOSE DETAIL
N.T.S.
TABLE 1
GRADING REQUIREMENTS FOR BEDDING SAND
ASTM C 33
STAMPED CONCRETE CROSSWALK/
WELCOME MAT DETAIL
N.T.S.
SIDEWALK EDGE STAMPED
CONCRETE DETAIL
N.T.S.
SIDEWALK DETAIL
N.T.S.
STAMPED CONCRETE CROSSWALK DETAIL
(PLAN VIEW)
N.T.S.
STAMPED CONCRETE WELCOME MAT DETAIL
(PLAN VIEW)
(TO ONLY BE USED AT TOWN ENGINEER'S REQUEST)
N.T.S.
NOTES:
SIDEWALK NOTES:
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
MEDIAN AND SIDEWALK STAMPED CONCRETE DETAILS
LITTLEELM
SHEET
9 OF 26
DECEMBER 2023


NOTE:
CENTER OF POSTS SHALL BE PLACED NEXT TO CONCRETE SIDEWALK. THE POSTS SHALL BE CENTERED WITH THE PARKING PLACE.
ADA ACCESSIBLE PARKING SIGN WITH VAN ACCESSIBLE SIGN
ADA ACCESSIBLE PARKING SIGN
4" WIDE SOLID WHITE STRIPE (TYP.)
CONCRETE SIDEWALK
WHEELSTOP (WHEN ADJACENT TO SIDEWALK)
4'-0" (TYP.)
20'-0" (TYP.) TO FACE OF CURB
NO PARKING
4" WIDE SOLID WHITE STRIPE (TYP.)
10'-0" (TYP.)
10'-0" (TYP.)
10'-0" (TYP.)
"NO PARKING", 12" MIN. LETTER HEIGHT, 2" MIN. STROKE WIDTH
PAINTED UNIVERSAL ACCESSIBLE SYMBOL (TYP.)
ADA ACCESSIBLE SPACE
CONCRETE SIDEWALK
WHEELSTOP (WHEN ADJACENT TO SIDEWALK)
0'-0" (TYP.)
20'-0" (TYP.) TO FACE OF CURB
4" WIDE SOLID WHITE STRIPE (TYP.)
STANDARD SPACE
PARKING SPACE STRIPING
N.T.S.
NOTE: REFER TO ZONING ORDINANCE FOR ADDITIONAL REQUIREMENTS. IN THE CASE OF A CONFLICT BETWEEN THESE DETAILS AND THE ZONING ORDINANCE, THE ZONING ORDINANCE SHALL CONTROL.
ADA SPACES AND SIGNAGE MUST BE DESIGNED TO CONFORM TO THE LATEST TEXAS ACCESSIBILITY STANDARD.
GALVANIZED CAP
MUST-VOLT PARKING
VIOLATORS SUBJECT TO FINE AND TOWING
8" MAX.
2" DIA. GALV. STEEL POST
60" MIN. 80" MAX.
48" MIN.
TO CHARACTERS OR SYMBOLS
FINISHED GRADE
2'-0"
4"
1500 PSI CONCRETE
4"
ADA ACCESSIBLE PARKING
GALVANIZED CAP
MUST-VOLT PARKING
VAN ACCESSIBLE
VIOLATORS SUBJECT TO FINE AND TOWING
8" MAX.
2" DIA. GALV. STEEL POST
60" MIN. 80" MAX.
48" MIN.
TO CHARACTERS OR SYMBOLS
FINISHED GRADE
2'-0"
4"
1500 PSI CONCRETE
4"
ADA ACCESSIBLE PARKING WITH VAN ACCESSIBLE
PARKING SIGN
N.T.S.
NO PARKING - FIRE LANE
NO PARKING - FIRE LANE
FIRE LANE
VARIES SEE PLAN 24' CLEAR
NO PARKING - FIRE LANE
NO PARKING - FIRE LANE
25.0' SPACING (TYP.)
NOTES:
1. PAVEMENT MARKING SHALL BE FROM THE TOP OF THE SEAM OF THE BACK OF CURB TO A POINT EVEN WITH THE DRIVING SURFACE.
2. THE STRIPE MAY BE BRUSHED OR SPRAYED, ONE COAT FINISH.
3. LETTERING SHALL BE STENCIL FORMED, BRUSH APPLIED AND SPACED AS DETAILED.
4. PAINT:
A. STRIPING SHALL BE SIX INCHES (6") WIDE PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 6329 OR APPROVED EQUAL.
B. LETTERING SHALL BE FOUR INCHES (4") HIGH PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT. LETTERS SHALL BE ONE INCH (1") STROKE. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 56245 OR APPROVED EQUAL.
FIRE LANE STRIPING DETAIL
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
PAVEMENT MARKING DETAILS
LITTLEELM
SHEET
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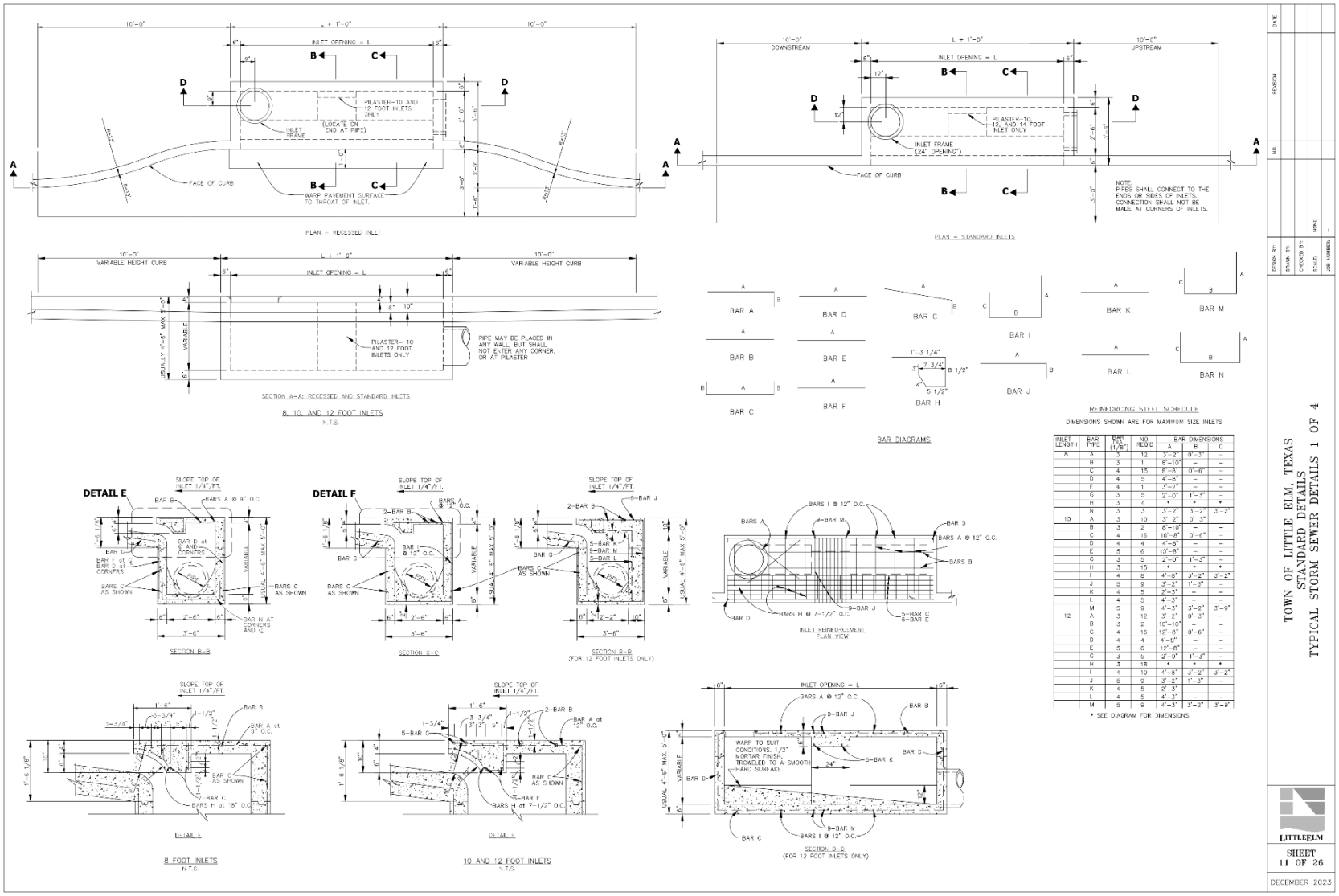
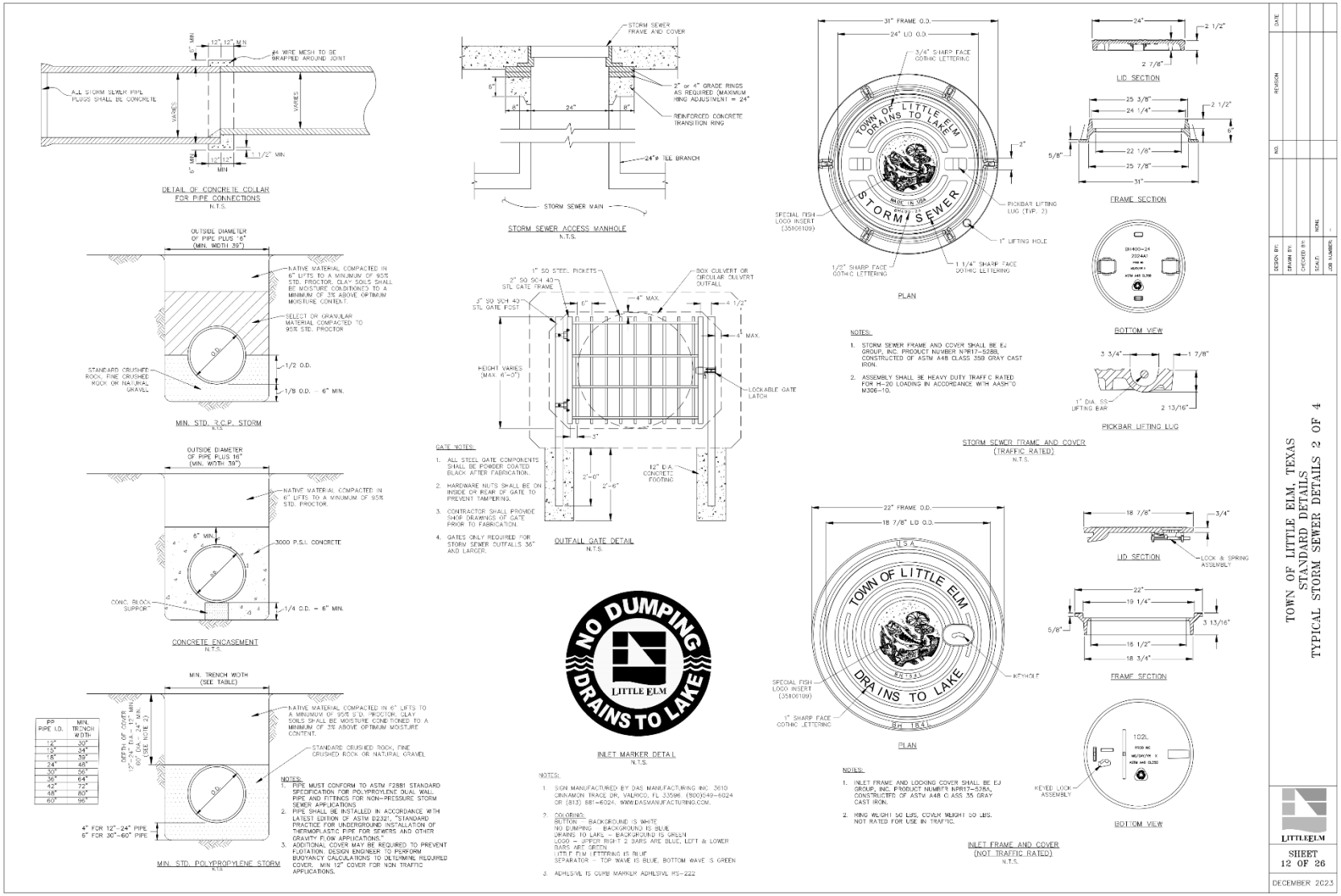
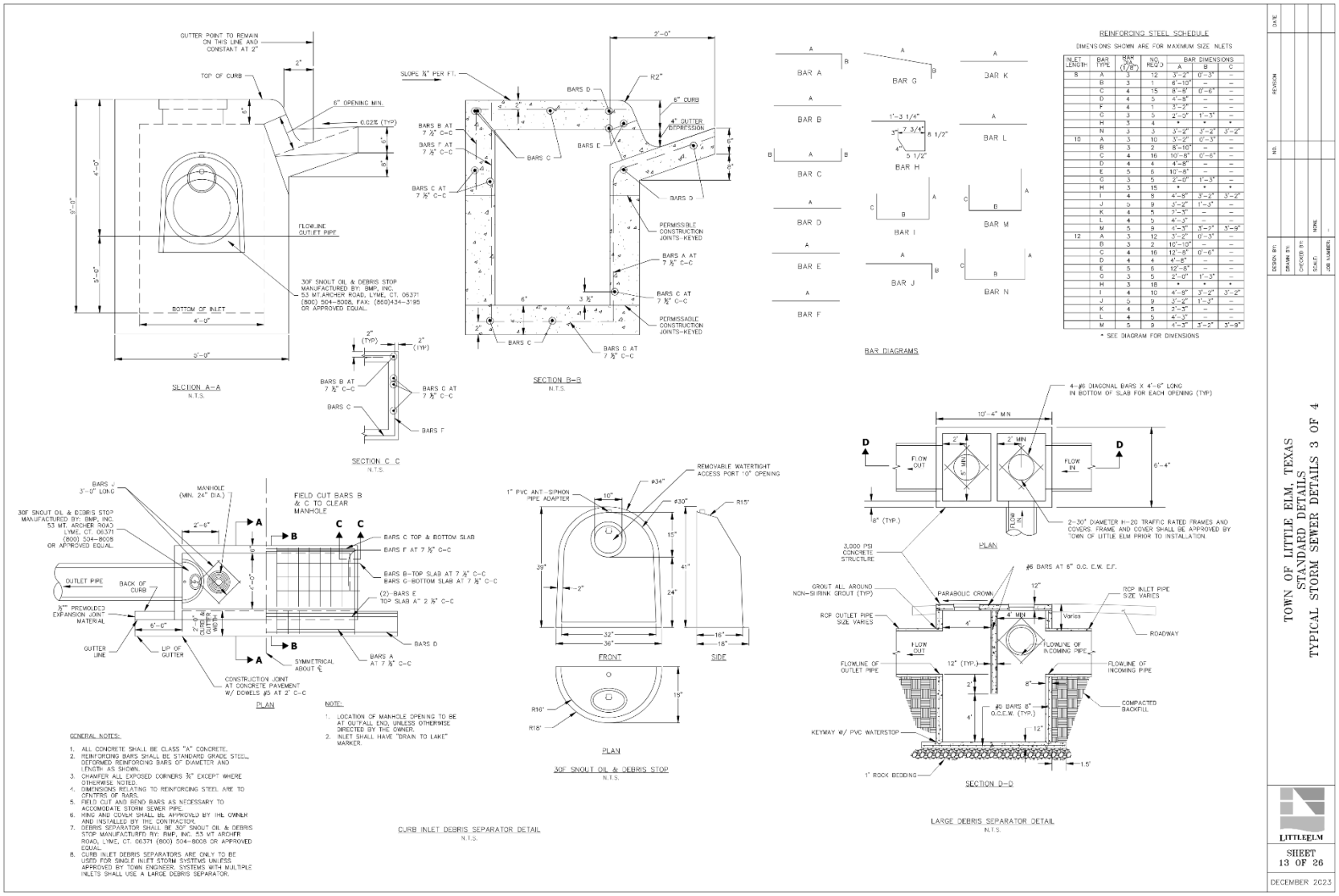
DECEMBER 2023

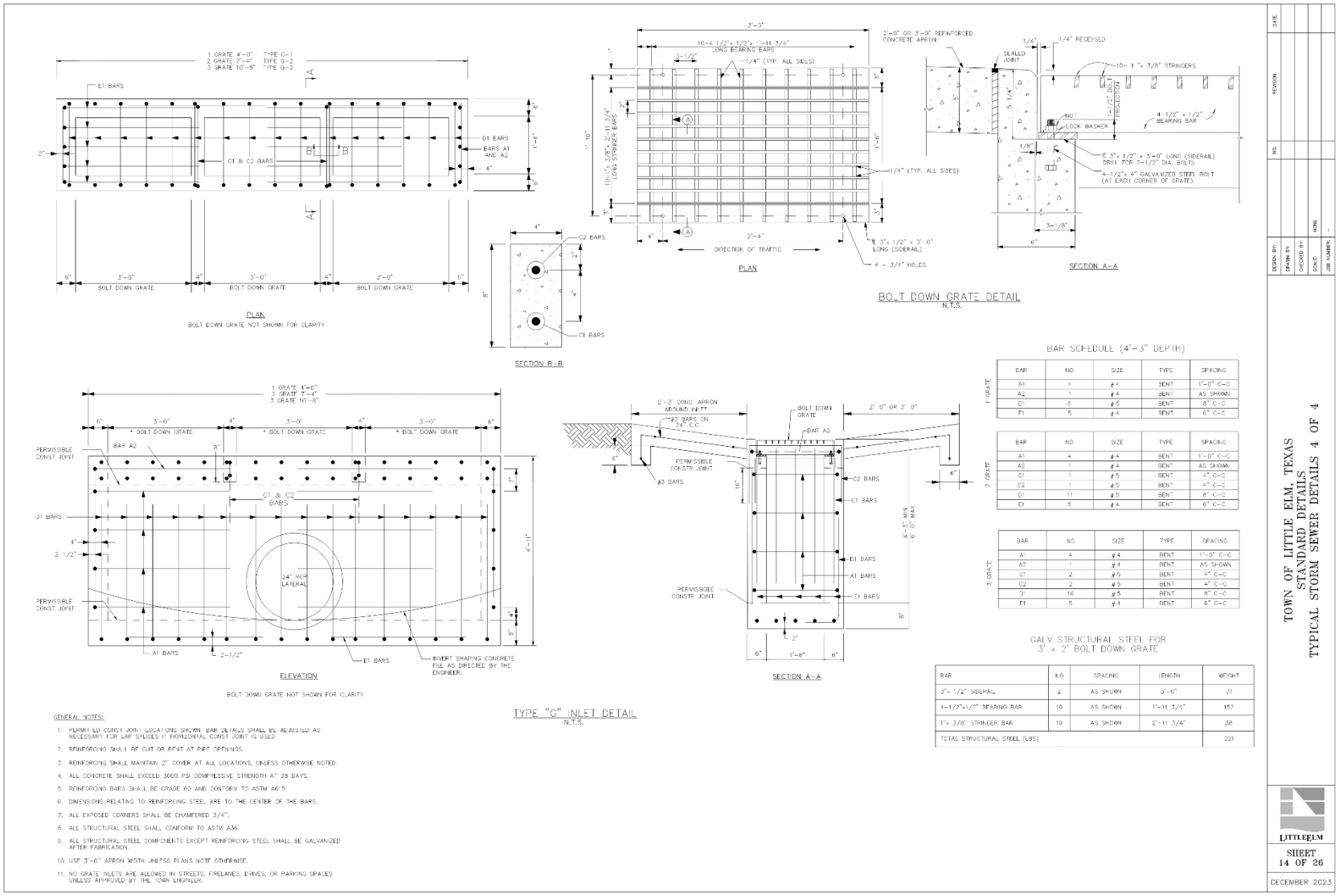


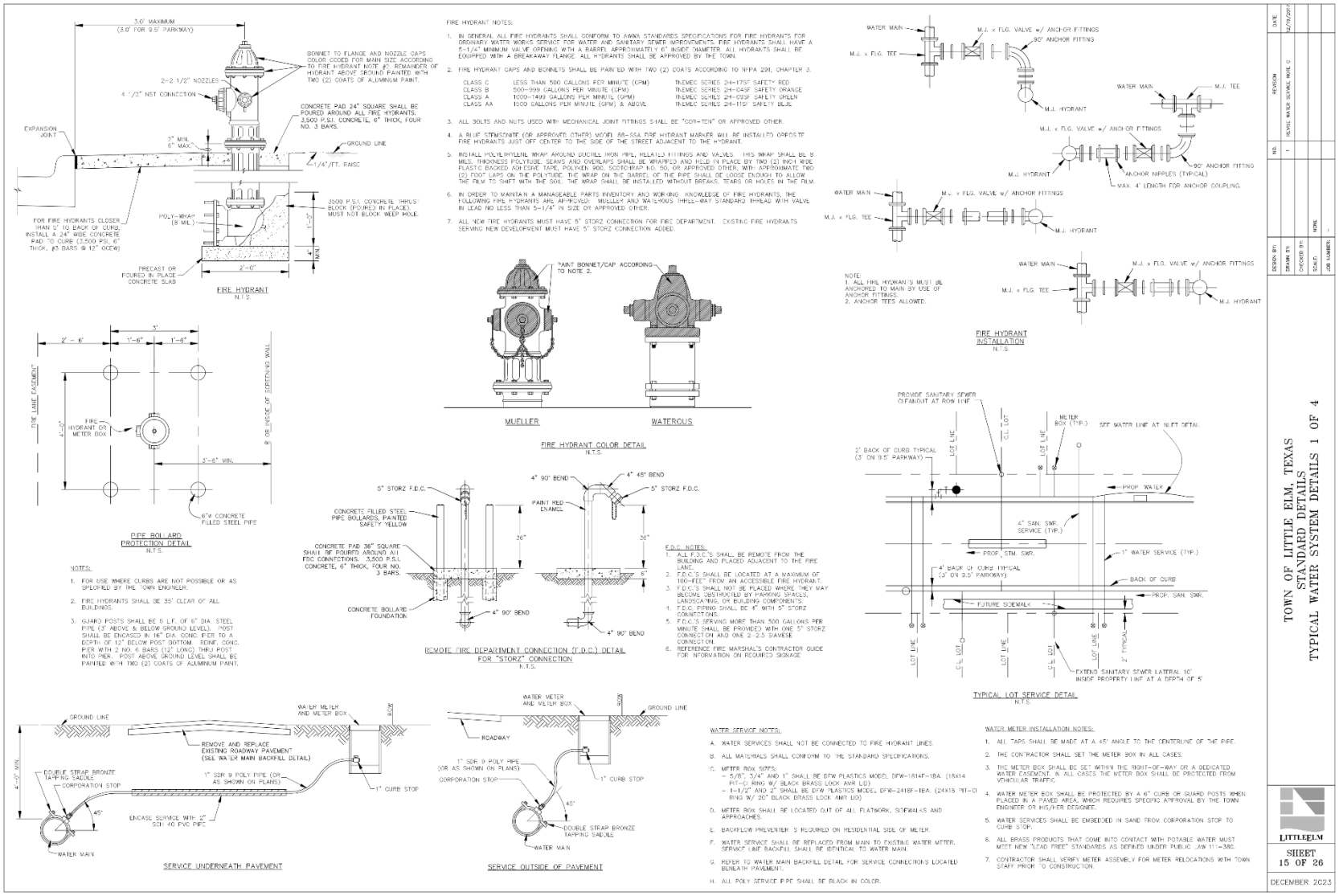
INLET LENGTH	BAR TYPE	BAR DIA (1/8")	NO. REQ'D	BAR DIMENSIONS A	B	C
8	A	3	12	3'-2"	0'-3"	–
	B	3	1	6'-10"	–	–
	C	4	15	8'-8"	0'-6"	–
	D	4	5	4'-8"	–	–
	F	4	1	3'-2"	–	–
	G	3	5	2'-0"	1'-3"	–
	H	3	*	*	*	*
	N	3	3	3'-2"	3'-2"	3'-2"
10	A	3	10	3'-2"	0'-3"	–
	B	3	2	8'-10"	–	–
	C	4	16	10'-8"	0'-6"	–
	D	4	4	4'-8"	–	–
	E	5	6	10'-8"	–	–
	G	3	5	2'-0"	1'-3"	–
	H	3	*	*	*	*
	I	4	8	4'-8"	3'-2"	3'-2"
	J	5	9	3'-2"	1'-3"	–
	K	4	5	2'-3"	–	–
	L	4	5	4'-3"	–	–
	M	5	9	4'-3"	3'-2"	3'-9"
12	A	3	12	3'-2"	0'-3"	–
	B	3	2	10'-10"	–	–
	C	4	16	12'-8"	0'-6"	–
	D	4	4	4'-8"	–	–
	E	5	6	12'-8"	–	–
	G	3	5	2'-0"	1'-3"	–
	H	3	18	*	*	*
	I	4	10	4'-8"	3'-2"	3'-2"
	J	5	9	3'-2"	1'-3"	–
	K	4	5	2'-3"	–	–
	L	4	5	4'-3"	–	–
	M	5	9	4'-3"	3'-2"	3'-9"

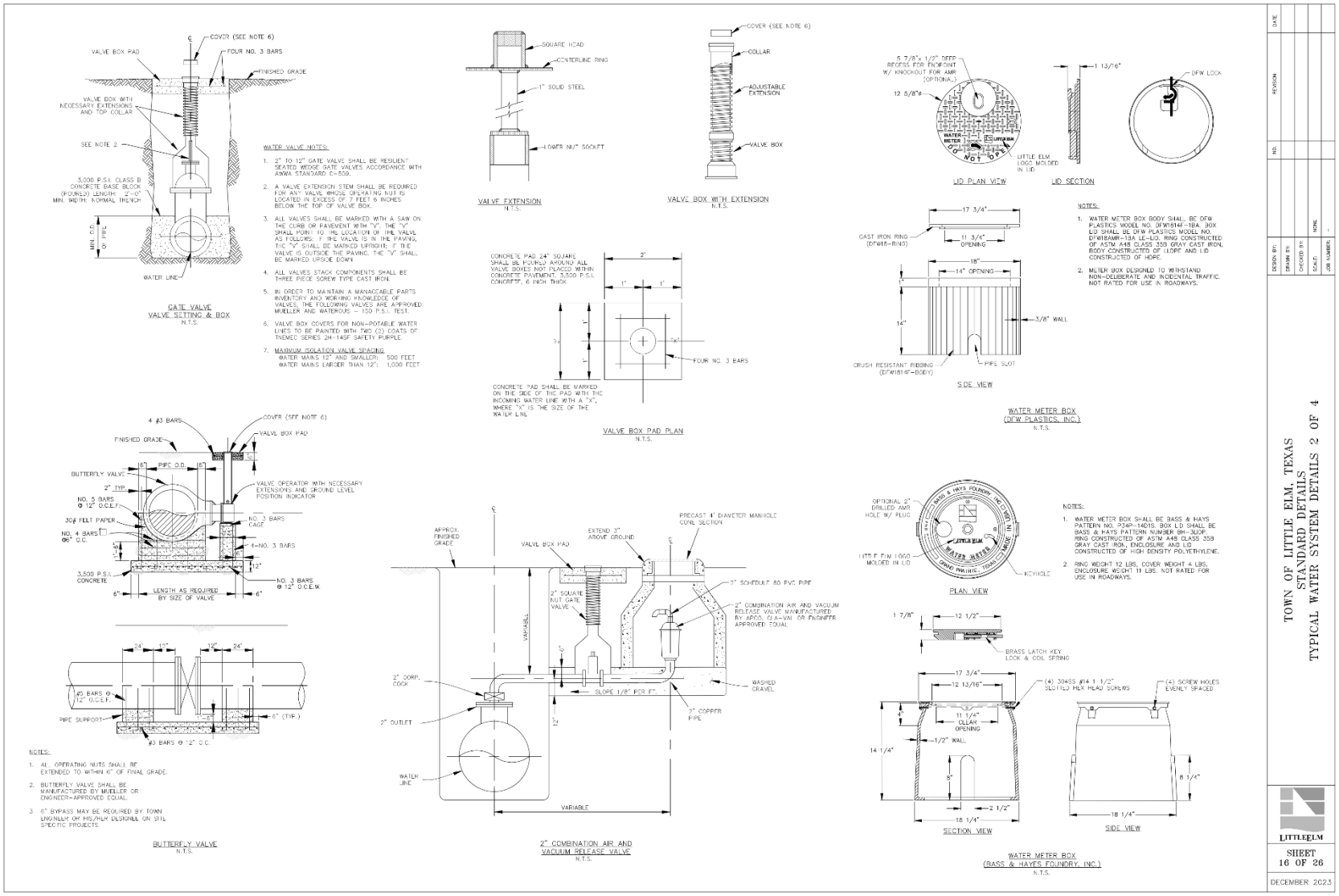
* SEE DIAGRAM FOR DIMENSIONS

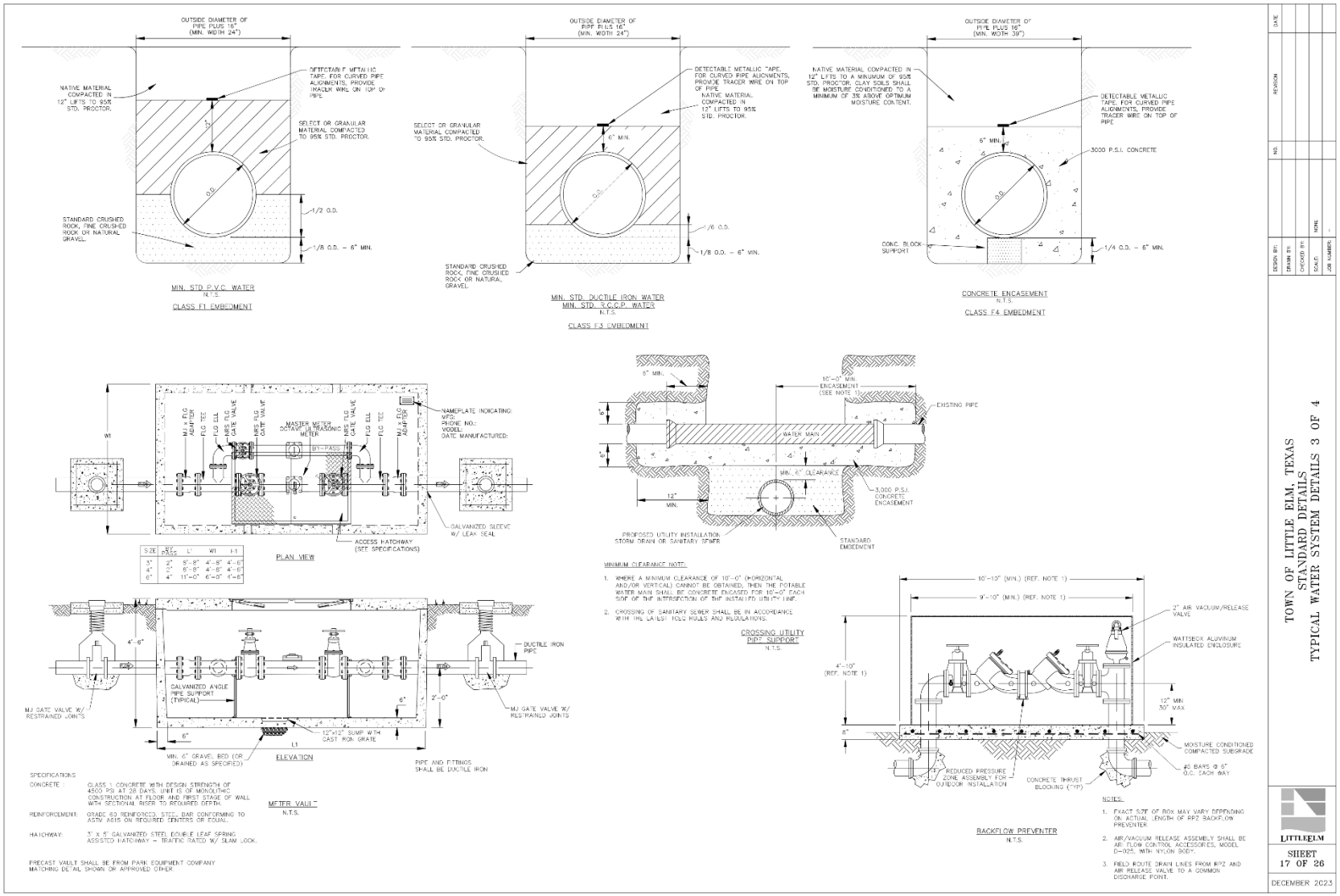

DETAIL OF CONCRETE COLLAR FOR PIPE CONNECTIONS
N.T.S.
ALL STORM SEWER PIPE PLUGS SHALL BE CONCRETE
#4 WIRE MESH TO BE WRAPPED AROUND JOINT
STORM SEWER ACCESS MANHOLE
N.T.S.
STORM SEWER FRAME AND COVER
REINFORCED CONCRETE TRANSITION RING
24"ø TEE BRANCH
STORM SEWER MAIN
MIN. STD. R.C.P. STORM
N.T.S.
NATIVE MATERIAL COMPACTED IN 6" LIFTS TO A MINIMUM OF 95% STD. PROCTOR. CLAY SOILS SHALL BE MOISTURE CONDITIONED TO A MINIMUM OF 3% ABOVE OPTIMUM MOISTURE CONTENT.
SELECT OR GRANULAR MATERIAL COMPACTED TO 95% STD. PROCTOR
STANDARD CRUSHED ROCK, FINE CRUSHED ROCK OR NATURAL GRAVEL
CONCRETE ENCASEMENT
N.T.S.
3000 P.S.I. CONCRETE
CONC. BLOCK SUPPORT
MIN. STD. POLYPROPYLENE STORM
N.T.S.
NATIVE MATERIAL COMPACTED IN 6" LIFTS TO A MINIMUM OF 95% S.P. PROCTOR. CLAY SOILS SHALL BE MOISTURE CONDITIONED TO A MINIMUM OF 3% ABOVE OPTIMUM MOISTURE CONTENT.
STANDARD CRUSHED ROCK, FINE CRUSHED ROCK OR NATURAL GRAVEL
4" FOR 12"-24" PIPE
6" FOR 30"-60" PIPE
NOTES:
1. PIPE MUST CONFORM TO ASTM F2881 STANDARD SPECIFICATION FOR POLYPROPYLENE DUAL WALL PIPE AND FITTINGS FOR NON-PRESSURE STORM SEWER APPLICATIONS.
2. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS."
3. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. DESIGN ENGINEER TO PERFORM BUOYANCY CALCULATIONS TO DETERMINE REQUIRED COVER. MIN 12" COVER FOR NON TRAFFIC APPLICATIONS.
PP PIPE I.D. | MIN. TRENCH WIDTH
12" 30"
15" 34"
18" 39"
24" 48"
30" 56"
36" 64"
42" 72"
48" 80"
60" 96"
1" SQ. STEEL PICKETS
2" SQ. SCH 40 STL GATE FRAME
3" SQ SCH 40 STL GATE POST
BOX CULVERT OR CIRCULAR CULVERT OUTFALL
HEIGHT VARIES (MAX. 6'-0")
LOCKABLE GATE LATCH
12" D.A. CONCRETE FOOTING
GATE NOTES:
1. ALL STEEL GATE COMPONENTS SHALL BE POWDER COATED BLACK AFTER FABRICATION.
2. HARDWARE NUTS SHALL BE ON INSIDE OR REAR OF GATE TO PREVENT TAMPERING.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF GATE PRIOR TO FABRICATION.
4. GATES ONLY REQUIRED FOR STORM SEWER OUTFALLS 36" AND LARGER.
OUTFALL GATE DETAIL
N.T.S.
NO DUMPING
LITTLE ELM
DRAINS TO LAKE
INLET MARKER DETAIL
N.T.S.
NOTES:
1. SIGN MANUFACTURED BY: DAS MANUFACTURING INC. 3610 CINNAMON TRACE DR. VALRICO, FL 33596. (800)549-6024 OR (813) 681-6024. WWW.DASMANUFACTURING.COM.
2. COLORING:
BUTTON - BACKGROUND IS WHITE
NO DUMPING - BACKGROUND IS BLUE
DRAINS TO LAKE - BACKGROUND IS GREEN
LOGO - UPPER RIGHT 2 BARS ARE BLUE, LEFT & LOWER BARS ARE GREEN
LITTLE ELM LETTERING IS BLUE
SEPARATOR - TOP WAVE IS BLUE, BOTTOM WAVE IS GREEN
3. ADHESIVE IS CURE MARKER ADHESIVE MS-222
31" FRAME O.D.
24" LID O.D.
3/4" SHARP FACE GOTHIC LETTERING
TOWN OF LITTLE ELM
DRAINS TO LAKE
STORM SEWER
MADE IN USA
SPECIAL FISH LOGO INSERT (35106109)
PICKBAR LIFTING LUG (TYP. 2)
1" LIFTING HOLE
1/2" SHARP FACE GOTHIC LETTERING
1 1/4" SHARP FACE GOTHIC LETTERING
PLAN
NOTES:
1. STORM SEWER FRAME AND COVER SHALL BE EJ GROUP, INC. PRODUCT NUMBER NPR17-528BL CONSTRUCTED OF ASTM A48 CLASS 35B GRAY CAST IRON.
2. ASSEMBLY SHALL BE HEAVY DUTY TRAFFIC RATED FOR H-20 LOADING IN ACCORDANCE WITH AASHTO M306-10.
STORM SEWER FRAME AND COVER (TRAFFIC RATED)
N.T.S.
LID SECTION
FRAME SECTION
BOTTOM VIEW
1" DIA. SS LIFTING BAR
PICKBAR LIFTING LUG
22" FRAME O.D.
18 7/8" LID O.D.
U.S.A.
TOWN OF LITTLE ELM
DRAINS TO LAKE
SPECIAL FISH LOGO INSERT (35106109)
KEYHOLE
1" SHARP FACE GOTHIC LETTERING
PLAN
NOTES:
1. INLET FRAME AND LOCKING COVER SHALL BE EJ GROUP, INC. PRODUCT NUMBER NPR17-528A, CONSTRUCTED OF ASTM A48 CLASS 35 GRAY CAST IRON.
2. MING WEIGHT 50 LBS. COVER WEIGHT 50 LBS. NOT RATED FOR USE IN TRAFFIC.
INLET FRAME AND COVER (NOT TRAFFIC RATED)
N.T.S.
LID SECTION
LOCK & SPRING ASSEMBLY
FRAME SECTION
KEYED LOCK ASSEMBLY
BOTTOM VIEW
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
JOB NUMBER:
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL STORM SEWER DETAILS 2 OF 4
LITTLE ELM
SHEET 12 OF 26
DECEMBER 2023


SECTION A–A
N.T.S.
SECTION B–B
N.T.S.
SECTION C C
N.T.S.
BAR DIAGRAMS
REINFORCING STEEL SCHEDULE
DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS
* SEE DIAGRAM FOR DIMENSIONS
PLAN
SECTION D–D
LARGE DEBRIS SEPARATOR DETAIL
N.T.S.
PLAN
FRONT
SIDE
30F SNOUT OIL & DEBRIS STOP
N.T.S.
CURB INLET DEBRIS SEPARATOR DETAIL
N.T.S.
GENERAL NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" CONCRETE.
2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING BARS OF DIAMETER AND LENGTH AS SHOWN.
3. CHAMFER ALL EXPOSED CORNERS ¾" EXCEPT WHERE OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
6. KIND AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.
7. DEBRIS SEPARATOR SHALL BE 30F SNOUT OIL & DEBRIS STOP MANUFACTURED BY: BMP, INC. 53 MT ARCHER ROAD, LYME, CT. 06371 (800) 504-8008 OR APPROVED EQUAL.
8. CURB INLET DEBRIS SEPARATORS ARE ONLY TO BE USED FOR SINGLE INLET STORM SYSTEMS UNLESS APPROVED BY TOWN ENGINEER. SYSTEMS WITH MULTIPLE INLETS SHALL USE A LARGE DEBRIS SEPARATOR.
NOTE:
1. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. INLET SHALL HAVE "DRAIN TO LAKE" MARKER.
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL STORM SEWER DETAILS 3 OF 4
LITTLE ELM
SHEET
13 OF 26
DECEMBER 2023


1 GRATE 4'-0" TYPE G-1
2 GRATE 7'-4" TYPE G-2
3 GRATE 10'-8" TYPE G-3
E1 BARS
D1 BARS
BARS A1 AND A2
C1 & C2 BARS
6" BOLT DOWN GRATE
4" BOLT DOWN GRATE
PLAN
BOLT DOWN GRATE NOT SHOWN FOR CLARITY
SECTION B-B
C2 BARS
C1 BARS
10-4 1/2"x 1/2"x 1'-11 3/4" LONG BEARING BARS
10-1" x 3/8" x 2'-11 3/4" LONG STRINGER BARS
1/4" (TYP. ALL SIDES)
DIRECTION OF TRAFFIC
4 - 3/4" HOLES
PLAN
2'-0" OR 3'-0" REINFORCED CONCRETE APRON
SEALED JOINT
1/4" RECESSED
10- 1 "x 3/8" STRINGERS
1-1/2" BOLT PROJECTION
NUT
LOCK WASHER
4 1/2" x 1/2" BEARING BAR
PL 3"x 1/2" x 3'-0" LONG (SIDERAIL) DRILL FOR 2-1/2" DIA. BOLTS
4-1/2"x 4" GALVANIZED STEEL BOLT (AT EACH CORNER OF GRATE)
SECTION A-A
BOLT DOWN GRATE DETAIL
N.T.S.
1 GRATE 4'-0"
2 GRATE 7'-4"
3 GRATE 10'-8"
* BOLT DOWN GRATE
PERMISSIBLE CONST JOINT
BAR A2
C1 & C2 BARS
D1 BARS
24" RCP LATERAL
A1 BARS
E1 BARS
2-1/2"
INVERT SHAPING CONCRETE FILL AS DIRECTED BY THE ENGINEER.
ELEVATION
BOLT DOWN GRATE NOT SHOWN FOR CLARITY
2'-3" CONC. APRON AROUND INLET
#3 BARS ON 24" C.C.
#3 BARS
BOLT DOWN GRATE
2' 0" OR 3' 0"
C2 BARS
C1 BARS
D1 BARS
A1 BARS
E1 BARS
4'-3" MIN. 6' 0" MAX.
SECTION A-A
TYPE "G" INLET DETAIL
N.T.S.
BAR SCHEDULE (4'-3" DEPTH)
1 GRATE
BAR NO SIZE TYPE SPACING
A1 4 # 4 BENT 1'-0" C-C
A2 1 # 4 BENT AS SHOWN
D1 6 # 5 BENT 8" C-C
E1 5 # 4 BENT 6" C-C
2 GRATE
BAR NO SIZE TYPE SPACING
A1 4 # 4 BENT 1'-0" C-C
A2 1 # 4 BENT AS SHOWN
C1 1 # 5 BENT 4" C-C
C2 1 # 5 BENT 4" C-C
D1 11 # 5 BENT 8" C-C
E1 5 # 4 BENT 6" C-C
3 GRATE
BAR NO SIZE TYPE SPACING
A1 4 # 4 BENT 1'-0" C-C
A2 1 # 4 BENT AS SHOWN
C1 2 # 5 BENT 4" C-C
C2 2 # 5 BENT 4" C-C
D1 16 # 5 BENT 8" C-C
E1 5 # 4 BENT 6" C-C
GALV STRUCTURAL STEEL FOR 3' x 2' BOLT DOWN GRATE
BAR NO SPACING LENGTH WEIGHT
3"x 1/2" SIDERAIL 2 AS SHOWN 3'-0" 31
4-1/2"x1/2" BEARING BAR 10 AS SHOWN 1'-11 3/4" 153
1"x 3/8" STRINGER BAR 10 AS SHOWN 2'-11 3/4" 38
TOTAL STRUCTURAL STEEL (LBS) 221
GENERAL NOTES:
1. PERMITTED CONST JOINT LOCATIONS SHOWN. BAR DETAILS SHALL BE ADJUSTED AS NECESSARY FOR LAP SPLICES IF HORIZONTAL CONST JOINT IS USED.
2. REINFORCING SHALL BE CUT OR BENT AT PIPE OPENINGS.
3. REINFORCING SHALL MAINTAIN 2" COVER AT ALL LOCATIONS, UNLESS OTHERWISE NOTED.
4. ALL CONCRETE SHALL EXCEED 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
5. REINFORCING BARS SHALL BE GRADE 60 AND CONFORM TO ASTM A615.
6. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO THE CENTER OF THE BARS.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
8. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36.
9. ALL STRUCTURAL STEEL COMPONENTS EXCEPT REINFORCING STEEL SHALL BE GALVANIZED AFTER FABRICATION.
10. USE 3'-0" APRON WIDTH UNLESS PLANS NOTE OTHERWISE.
11. NO GRATE INLETS ARE ALLOWED IN STREETS, FIRELANES, DRIVES, OR PARKING SPACES UNLESS APPROVED BY THE TOWN ENGINEER.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL STORM SEWER DETAILS 4 OF 4
LITTLE ELM
SHEET 14 OF 26
DECEMBER 2023


FIRE HYDRANT NOTES:
1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARDS SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE FOR WATER AND SANITARY SEWER IMPROVEMENTS. FIRE HYDRANTS SHALL HAVE A 5-1/4" MINIMUM VALVE OPENING WITH A BARREL APPROXIMATELY 6" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE. ALL HYDRANTS SHALL BE APPROVED BY THE TOWN.
2. FIRE HYDRANT CAPS AND BONNETS SHALL BE PAINTED WITH TWO (2) COATS ACCORDING TO NFPA 291, CHAPTER 3.
CLASS C LESS THAN 500 GALLONS PER MINUTE (GPM) TNEMEC SERIES 1H-1375" SAFETY RED
CLASS B 500~999 GALLONS PER MINUTE (GPM) TNEMEC SERIES 1H-04SF SAFETY ORANGE
CLASS A 1000~1499 GALLONS PER MINUTE (GPM) TNEMEC SERIES 1H-05SF SAFETY GREEN
CLASS AA 1500 GALLONS PER MINUTE (GPM) & ABOVE TNEMEC SERIES 1H-115F SAFETY BLUE
3. ALL BOLTS AND NUTS USED WITH MECHANICAL JOINT FITTINGS SHALL BE "COR-TEN" OR APPROVED OTHER.
4. A BLUE STEMSONITE (OR APPROVED OTHER) MODEL 88-SSA PVC HYDRANT MARKER WILL BE INSTALLED OPPOSITE FIRE HYDRANTS JUST OFF CENTER TO THE SIDE OF THE STREET ADJACENT TO THE HYDRANT.
5. INSTALL POLYETHYLENE WRAP AROUND DUCTILE IRON PIPE, RELATED FITTINGS AND VALVES. THIS WRAP SHALL BE 8 MILS THICKNESS POLYTUBE. SEAMS AND OVERLAPS SHALL BE WRAPPED AND HELD IN PLACE BY TWO (2) INCH WIDE PLASTIC BACKED ADHESIVE TAPE, POLYKEN 900, SCOTCHWRAP NO. 50, OR APPROVED OTHER, WITH APPROXIMATE TWO (2) FOOT LAPS ON THE POLYTUBE. THE WRAP ON THE BARREL OF THE PIPE SHALL BE LOOSE ENOUGH TO ALLOW THE FILM TO SHIFT WITH THE SOIL. THE WRAP SHALL BE INSTALLED WITHOUT BREAKS, TEARS OR HOLES IN THE FILM.
6. IN ORDER TO MAINTAIN A MANAGEABLE PARTS INVENTORY AND WORKING KNOWLEDGE OF FIRE HYDRANTS, THE FOLLOWING FIRE HYDRANTS ARE APPROVED: MUELLER AND WATEROUS THREE-WAY STANDARD THREAD WITH VALVE IN LEAD NO LESS THAN 5-1/4" IN SIZE OR APPROVED OTHER.
7. ALL NEW FIRE HYDRANTS MUST HAVE 5" STORZ CONNECTION FOR FIRE DEPARTMENT. EXISTING FIRE HYDRANTS SERVING NEW DEVELOPMENT MUST HAVE 5" STORZ CONNECTION ADDED.
3.0' MAXIMUM (3.0' FOR 9.5' PARKWAY)
BONNET TO FLANGE AND NOZZLE CAPS COLOR CODED FOR MAIN SIZE ACCORDING TO FIRE HYDRANT NOTE #2. REMAINDER OF HYDRANT ABOVE GROUND PAINTED WITH TWO (2) COATS OF ALUMINUM PAINT.
2-2 1/2" NOZZLES
4 1/2" NST CONNECTION
CONCRETE PAD 24" SQUARE SHALL BE POURED AROUND ALL FIRE HYDRANTS, 3,500 P.S.I. CONCRETE, 6" THICK, FOUR NO. 3 BARS.
EXPANSION JOINT
3" MIN. 6" MAX.
GROUND LINE
1/4"/FT. RAISE
3500 P.S.I. CONCRETE THRUST BLOCK (POURED IN PLACE). MUST NOT BLOCK WEEP HOLE.
POLY-WRAP (8 MIL.)
FOR FIRE HYDRANTS CLOSER THAN 5' TO BACK OF CURB, INSTALL A 24" WIDE CONCRETE PAD TO CURB (3,500 PSI, 6" THICK, @3 BARS @ 12" OCEW)
PRECAST OR POURED IN PLACE CONCRETE SLAB
FIRE HYDRANT
N.T.S.
"PAINT BONNET/CAP ACCORDING TO NOTE 2.
MUELLER
WATEROUS
FIRE HYDRANT COLOR DETAIL
N.T.S.
WATER MAIN
M.J. x FLG. VALVE w/ ANCHOR FITTINGS
90° ANCHOR FITTING
M.J. x FLG. TEE
M.J. HYDRANT
M.J. TEE
ANCHOR NIPPLES (TYPICAL)
90° ANCHOR FITTING
MAX. 4' LENGTH FOR ANCHOR COUPLING.
NOTE:
1. ALL FIRE HYDRANTS MUST BE ANCHORED TO MAIN BY USE OF ANCHOR FITTINGS.
2. ANCHOR TEES ALLOWED.
FIRE HYDRANT INSTALLATION
N.T.S.
FIRE LANE EASEMENT
FIRE HYDRANT OR METER BOX
6"ø CONCRETE FILLED STEEL PIPE
PIPE BOLLARD PROTECTION DETAIL
N.T.S.
NOTES:
1. FOR USE WHERE CURBS ARE NOT POSSIBLE OR AS SPECIFIED BY THE TOWN ENGINEER.
2. FIRE HYDRANTS SHALL BE 35' CLEAR OF ALL BUILDINGS.
3. GUARD POSTS SHALL BE 6 L.F. OF 6" DIA. STEEL PIPE (3' ABOVE & BELOW GROUND LEVEL). POST SHALL BE ENCASED IN 16" DIA. CONC. PIER TO A DEPTH OF 12" BELOW POST BOTTOM. REINF. CONC. PIER WITH 2 NO. 6 BARS (12' LONG) THRU POST INTO PIER. POST ABOVE GROUND LEVEL SHALL BE PAINTED WITH TWO (2) COATS OF ALUMINUM PAINT.
5" STORZ F.D.C.
4" 90° BEND
4" 45° BEND
PAINT RED ENAMEL
CONCRETE FILLED STEEL PIPE BOLLARDS, PAINTED SAFETY YELLOW
CONCRETE PAD 36" SQUARE SHALL BE POURED AROUND ALL FDC CONNECTIONS. 3,500 P.S.I. CONCRETE, 6" THICK, FOUR NO. 3 BARS.
CONCRETE BOLLARD FOUNDATION
REMOTE FIRE DEPARTMENT CONNECTION (F.D.C.) DETAIL FOR "STORZ" CONNECTION
N.T.S.
F.D.C. NOTES:
1. ALL F.D.C.'S SHALL BE REMOTE FROM THE BUILDING AND PLACED ADJACENT TO THE FIRE LANE.
2. F.D.C.'S SHALL BE LOCATED AT A MAXIMUM OF 100-FEET FROM AN ACCESSIBLE FIRE HYDRANT.
3. F.D.C.'S SHALL NOT BE PLACED WHERE THEY MAY BECOME OBSTRUCTED BY PARKING SPACES, LANDSCAPING, OR BUILDING COMPONENTS.
4. F.D.C. PIPING SHALL BE 4" WITH 5" STORZ CONNECTIONS.
5. F.D.C.'S SERVING MORE THAN 500 GALLONS PER MINUTE SHALL BE PROVIDED WITH ONE 5" STORZ CONNECTION AND ONE 2-2.5 SIAMESE CONNECTION.
6. REFERENCE FIRE MARSHAL'S CONTRACTOR GUIDE FOR INFORMATION ON REQUIRED SIGNAGE
PROVIDE SANITARY SEWER CLEANOUT AT ROW LINE
METER BOX (TYP.)
SEE WATER LINE AT MJET DETAIL
2' BACK OF CURB TYPICAL (3' ON 9.5' PARKWAY)
LOT LINE
C.L. LOT
PROP. WATER
4" SAN. SWR. SERVICE (TYP.)
PROP. STM. SWR.
1" WATER SERVICE (TYP.)
4' BACK OF CURB TYPICAL (3' ON 9.5' PARKWAY)
BACK OF CURB
FUTURE SIDEWALK
PROP. SAN. SWR.
2' TYPICAL
EXTEND SANITARY SEWER LATERAL 10' INSIDE PROPERTY LINE AT A DEPTH OF 5'
TYPICAL LOT SERVICE DETAIL
N.T.S.
GROUND LINE
WATER METER AND METER BOX
REMOVE AND REPLACE EXISTING ROADWAY PAVEMENT (SEE WATER MAIN BACKFILL DETAIL)
DOUBLE STRAP BRONZE TAPPING SADDLE
CORPORATION STOP
1" SDR 9 POLY PIPE (OR AS SHOWN ON PLANS)
1" CURB STOP
45°
ENCASE SERVICE WITH 2" SCH 40 PVC PIPE
WATER MAIN
SERVICE UNDERNEATH PAVEMENT
ROADWAY
SERVICE OUTSIDE OF PAVEMENT
WATER SERVICE NOTES:
A. WATER SERVICES SHALL NOT BE CONNECTED TO FIRE HYDRANT LINES.
B. ALL MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATIONS.
C. METER BOX SIZES:
– 5/8", 3/4" AND 1" SHALL BE DFW PLASTICS MODEL DFW-1814F-1BA. (18X14 PIT-O RING W/ BLACK BRASS LOCK AMR LID)
– 1-1/2" AND 2" SHALL BE DFW PLASTICS MODEL DFW-2418F-1BA. (24X18 PIT-O RING W/ 20" BLACK BRASS LOCK AMR LID)
D. METER BOX SHALL BE LOCATED OUT OF ALL FLATWORK, SIDEWALKS AND APPROACHES.
E. BACKFLOW PREVENTER IS REQUIRED ON RESIDENTIAL SIDE OF METER.
F. WATER SERVICE SHALL BE REPLACED FROM MAIN TO EXISTING WATER METER. SERVICE LINE BACKFILL SHALL BE IDENTICAL TO WATER MAIN.
G. REFER TO WATER MAIN BACKFILL DETAIL FOR SERVICE CONNECTIONS LOCATED BENEATH PAVEMENT.
H. ALL POLY SERVICE PIPE SHALL BE BLACK IN COLOR.
WATER METER INSTALLATION NOTES:
1. ALL TAPS SHALL BE MADE AT A 45° ANGLE TO THE CENTERLINE OF THE PIPE.
2. THE CONTRACTOR SHALL SET THE METER BOX IN ALL CASES.
3. THE METER BOX SHALL BE SET WITHIN THE RIGHT-OF-WAY OR A DEDICATED WATER EASEMENT, IN ALL CASES THE METER BOX SHALL BE PROTECTED FROM VEHICULAR TRAFFIC.
4. WATER METER BOX SHALL BE PROTECTED BY A 6" CURB OR GUARD POSTS WHEN PLACED IN A PAVED AREA, WHICH REQUIRES SPECIFIC APPROVAL BY THE TOWN ENGINEER OR HIS/HER DESIGNEE.
5. WATER SERVICES SHALL BE EMBEDDED IN SAND FROM CORPORATION STOP TO CURB STOP.
6. ALL BRASS PRODUCTS THAT COME INTO CONTACT WITH POTABLE WATER MUST MEET NEW "LEAD FREE" STANDARDS AS DEFINED UNDER PUBLIC LAW 111-380.
7. CONTRACTOR SHALL VERIFY METER ASSEMBLY FOR METER RELOCATIONS WITH TOWN STAFF PRIOR TO CONSTRUCTION.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL WATER SYSTEM DETAILS 1 OF 4
LITTLE ELM
SHEET 15 OF 26
DECEMBER 2023


COVER (SEE NOTE 6)
VALVE BOX PAD
FOUR NO. 3 BARS
FINISHED GRADE
VALVE BOX WITH NECESSARY EXTENSIONS AND TOP COLLAR
SEE NOTE 2
3,500 P.S.I. CLASS B CONCRETE BASE BLOCK (POURED) LENGTH: 2'-0" MIN. WIDTH: NORMAL TRENCH
MIN. O.D. OF PIPE
WATER LINE
GATE VALVE VALVE SETTING & BOX
N.T.S.
WATER VALVE NOTES:
1. 2" TO 12" GATE VALVE SHALL BE RESILIENT SEATED WEDGE GATE VALVES ACCORDANCE WITH AWWA STANDARD C-509.
2. A VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 7 FEET 6 INCHES BELOW THE TOP OF VALVE BOX.
3. ALL VALVES SHALL BE MARKED WITH A SAW ON THE CURB OR PAVEMENT WITH "V". THE "V" SHALL POINT TO THE LOCATION OF THE VALVE AS FOLLOWS: IF THE VALVE IS IN THE PAVING, THE "V" SHALL BE MARKED UPRIGHT; IF THE VALVE IS OUTSIDE THE PAVING, THE "V" SHALL BE MARKED UPSIDE DOWN.
4. ALL VALVES STACK COMPONENTS SHALL BE THREE PIECE SCREW TYPE CAST IRON.
5. IN ORDER TO MAINTAIN A MANAGEABLE PARTS INVENTORY AND WORKING KNOWLEDGE OF VALVES, THE FOLLOWING VALVES ARE APPROVED: MUELLER AND WATEROUS – 150 P.S.I. TEST.
6. VALVE BOX COVERS FOR NON-POTABLE WATER LINES TO BE PAINTED WITH TWO (2) COATS OF TNEMEC SERIES 2H-1439 SAFETY PURPLE.
7. MAXIMUM ISOLATION VALVE SPACING
WATER MAINS 12" AND SMALLER: 500 FEET
WATER MAINS LARGER THAN 12": 1,000 FEET
SQUARE HEAD
CENTERLINE RING
1" SOLID STEEL
LOWER NUT SOCKET
VALVE EXTENSION
N.T.S.
COVER (SEE NOTE 6)
COLLAR
ADJUSTABLE EXTENSION
VALVE BOX
VALVE BOX WITH EXTENSION
N.T.S.
CONCRETE PAD 24" SQUARE SHALL BE POURED AROUND ALL VALVE BOXES NOT PLACED WITHIN CONCRETE PAVEMENT, 3,500 P.S.I. CONCRETE, 6 INCH THICK
FOUR NO. 3 BARS
CONCRETE PAD SHALL BE MARKED ON THE SIDE OF THE PAD WITH THE INCOMING WATER LINE WITH A "X", WHERE "X" IS THE SIZE OF THE WATER LINE
VALVE BOX PAD PLAN
N.T.S.
2 7/8"x 1/2" DEEP RECESS FOR PADLOCK W/ KNOCKOUT FOR AMR (OPTIONAL)
12 5/8"ø
LID PLAN VIEW
1 13/16"
LITTLE ELM LOGO MOLDED IN LID
LID SECTION
DFW LOCK
17 3/4"
CAST IRON RING (DFW18-RING)
11 3/4" OPENING
18"
14" OPENING
14"
3/8" WALL
CRUSH RESISTANT RIBBING (DFW1814F-BODY)
PIPE SLOT
SIDE VIEW
WATER METER BOX (DFW PLASTICS, INC.)
N.T.S.
NOTES:
1. WATER METER BOX BODY SHALL BE DFW PLASTICS MODEL NO. DFW1814F-1BA. BOX LID SHALL BE DFW PLASTICS MODEL NO. DFW18AMR-13A LE-LID. RING CONSTRUCTED OF ASTM A48 CLASS 35B GRAY CAST IRON. BODY CONSTRUCTED OF ULDPE AND LID CONSTRUCTED OF HDPE.
2. METER BOX DESIGNED TO WITHSTAND NON-DELIBERATE AND INCIDENTAL TRAFFIC. NOT RATED FOR USE IN ROADWAYS.
4 #3 BARS
COVER (SEE NOTE 6)
FINISHED GRADE
VALVE BOX PAD
8" PIPE O.D.
6"
BUTTERFLY VALVE
2" TYP.
VALVE OPERATOR WITH NECESSARY EXTENSIONS AND GROUND LEVEL POSITION INDICATOR
NO. 5 BARS @ 12" O.C.E.F.
NO. 3 BARS CAGE
30# FELT PAPER
NO. 4 BARS @6" O.C.
4-NO. 3 BARS
3,500 P.S.I. CONCRETE
NO. 3 BARS @ 12" O.C.E.W.
LENGTH AS REQUIRED BY SIZE OF VALVE
24"
12"
12"
24"
#5 BARS @ 12" O.C.E.F.
PIPE SUPPORT
6" (TYP.)
#3 BARS @ 12" O.C.
NOTES:
1. ALL OPERATING NUTS SHALL BE EXTENDED TO WITHIN 6" OF FINAL GRADE.
2. BUTTERFLY VALVE SHALL BE MANUFACTURED BY MUELLER OR ENGINEER-APPROVED EQUAL.
3. 6" BYPASS MAY BE REQUIRED BY TOWN UNIVERSITY OR MS/MH DESIGNAL ON SPIL SPECIFIC PROJECTS.
BUTTERFLY VALVE
N.T.S.
APPROX. FINISHED GRADE
VALVE BOX PAD
EXTEND 3" ABOVE GROUND
PRECAST 4' DIAMETER MANHOLE CORE SECTION
3" SCHEDULE 80 PVC PIPE
2" SQUARE NUT GATE VALVE
2" COMBINATION AIR AND VACUUM RELEASE VALVE MANUFACTURED BY APCO, CLA-VAL OR ENGINEER APPROVED EQUAL
VARIABLE
2" CORP. COCK
WASHED GRAVEL
SLOPE 1/8" PER FT.
2" OUTLET
3" COPPER PIPE
WATER LINE
VARIABLE
2" COMBINATION AIR AND VACUUM RELEASE VALVE
N.T.S.
OPTIONAL 2" DRILLED AMR HOLE W/ PLUG
LITTLE ELM LOGO MOLDED IN LID
KEYHOLE
PLAN VIEW
NOTES:
1. WATER METER BOX SHALL BE BASS & HAYS PATTERN NO. P34P-1402IS. BOX LID SHALL BE BASS & HAYS PATTERN NUMBER BH-3LIDP. RING CONSTRUCTED OF ASTM A48 CLASS 35B GRAY CAST IRON. ENCLOSURE AND LID CONSTRUCTED OF HIGH DENSITY POLYETHYLENE.
2. RING WEIGHT 12 LBS, COVER WEIGHT 4 LBS, ENCLOSURE WEIGHT 11 LBS. NOT RATED FOR USE IN ROADWAYS.
1 7/8"
12 1/2"
BRASS LATCH KEY LOCK & COIL SPRING
17 3/4"
12 13/16"
(4) 304SS #14 1 1/2" SLOTTED HEX HEAD SCREWS
(4) SCREW HOLES EVENLY SPACED
11 1/4" COLLAR OPENING
1/2" WALL
14 1/4"
5"
2 1/2"
18 1/4"
SECTION VIEW
8 1/4"
18 1/4"
SIDE VIEW
WATER METER BOX (BASS & HAYS FOUNDRY, INC.)
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
KHNG
JOB NUMBER:
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL WATER SYSTEM DETAILS 2 OF 4
LITTLE ELM
SHEET 16 OF 26
DECEMBER 2023


OUTSIDE DIAMETER OF PIPE PLUS 16" (MIN. WIDTH 24")
NATIVE MATERIAL COMPACTED IN 12" LIFTS TO 95% STD. PROCTOR.
DETECTABLE METALLIC TAPE, FOR CURVED PIPE ALIGNMENTS, PROVIDE TRACER WIRE ON TOP OF PIPE
SELECT OR GRANULAR MATERIAL COMPACTED TO 95% STD. PROCTOR.
STANDARD CRUSHED ROCK, FINE CRUSHED ROCK OR NATURAL GRAVEL.
1/2 O.D.
1/8 O.D. – 6" MIN.
MIN. STD P.V.C. WATER
N.T.S.
CLASS F1 EMBEDMENT
OUTSIDE DIAMETER OF PIPE PLUS 16" (MIN. WIDTH 24")
DETECTABLE METALLIC TAPE, FOR CURVED PIPE ALIGNMENTS, PROVIDE TRACER WIRE ON TOP OF PIPE
NATIVE MATERIAL COMPACTED IN 12" LIFTS TO 95% STD. PROCTOR.
SELECT OR GRANULAR MATERIAL COMPACTED TO 95% STD. PROCTOR.
6" MIN.
1/6 O.D.
1/8 O.D. – 6" MIN.
STANDARD CRUSHED ROCK, FINE CRUSHED ROCK OR NATURAL GRAVEL.
MIN. STD. DUCTILE IRON WATER
MIN. STD. C.C.C.P. WATER
N.T.S.
CLASS F3 EMBEDMENT
OUTSIDE DIAMETER OF PIPE PLUS 16" (MIN. WIDTH 39")
NATIVE MATERIAL COMPACTED IN 12" LIFTS TO A MINIMUM OF 95% STD. PROCTOR. CLAY SOILS SHALL BE MOISTURE CONDITIONED TO A MINIMUM OF 3% ABOVE OPTIMUM MOISTURE CONTENT.
DETECTABLE METALLIC TAPE, FOR CURVED PIPE ALIGNMENTS, PROVIDE TRACER WIRE ON TOP OF PIPE
6" MIN.
3000 P.S.I. CONCRETE
CONC. BLOCK SUPPORT
1/4 O.D. – 6" MIN.
CONCRETE ENCASEMENT
N.T.S.
CLASS F4 EMBEDMENT
NAMEPLATE INDICATING: MFR: PHONE NO.: MODEL: DATE MANUFACTURED:
MASTER METER OCTAVE/TRASONIC METER
BY-PASS
GALVANIZED SLEEVE W/ LEAK SEAL
ACCESS HATCHWAY (SEE SPECIFICATIONS)
PLAN VIEW
8" MIN.
10'-0" MIN. ENCASEMENT (SEE NOTE 1)
EXISTING PIPE
WATER MAIN
MIN. 6" CLEARANCE
3,000 P.S.I. CONCRETE ENCASEMENT
PROPOSED UTILITY INSTALLATION STORM DRAIN OR SANITARY SEWER
STANDARD EMBEDMENT
MINIMUM CLEARANCE NOTE:
1. WHERE A MINIMUM CLEARANCE OF 10'-0" (HORIZONTAL AND/OR VERTICAL) CANNOT BE OBTAINED, THEN THE POTABLE WATER MAIN SHALL BE CONCRETE ENCASED FOR 10'-0" EACH SIDE OF THE INTERSECTION OF THE INSTALLED UTILITY LINE.
2. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH THE LATEST TCEQ RULES AND REGULATIONS.
CROSSING UTILITY PIPE SUPPORT
N.T.S.
DUCTILE IRON PIPE
GALVANIZED ANGLE PIPE SUPPORT (TYPICAL)
MJ GATE VALVE W/ RESTRAINED JOINTS
12"x12" SUMP WITH CAST IRON GRATE
MIN. 6" GRAVEL BED (OR DRAINED AS SPECIFIED)
ELEVATION
PIPE AND FITTINGS SHALL BE DUCTILE IRON
SPECIFICATIONS:
CONCRETE: CLASS 1 CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.
REINFORCEMENT: GRADE 60 REINFORCED STEEL BAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.
HATCHWAY: 3' X 5' GALVANIZED STEEL DOUBLE LEAF SPRING ASSISTED HATCHWAY – TRAFFIC RATED W/ SLAM LOCK.
PRECAST VAULT SHALL BE FROM PARK EQUIPMENT COMPANY MATCHING DETAIL SHOWN OR APPROVED OTHER.
METER VAULT
N.T.S.
10'-10" (MIN.) (REF. NOTE 1)
9'-10" (MIN.) (REF. NOTE 1)
2" AIR VACUUM/RELEASE VALVE
WATTSBOX ALUMINUM INSULATED ENCLOSURE
4'-10" (REF. NOTE 1)
12" MIN 30" MAX
MOISTURE CONDITIONED COMPACTED SUBGRADE
#5 BARS @ 6" O.C. EACH WAY
REDUCED PRESSURE ZONE ASSEMBLY FOR OUTDOOR INSTALLATION
CONCRETE THRUST BLOCKING (TYP)
NOTES:
1. EXACT SIZE OF BOX MAY VARY DEPENDING ON ACTUAL LENGTH OF RPZ BACKFLOW PREVENTER
2. AIR/VACUUM RELEASE ASSEMBLY SHALL BE AIR FLOW CONTROL ACCESSORIES, MODEL D-025, WITH NYLON BODY.
3. FIELD ROUTE DRAIN LINES FROM RPZ AND AIR RELEASE VALVE TO A COMMON DISCHARGE POINT.
BACKFLOW PREVENTER
N.T.S.
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL WATER SYSTEM DETAILS 3 OF 4
LITTLEELM
SHEET 17 OF 26
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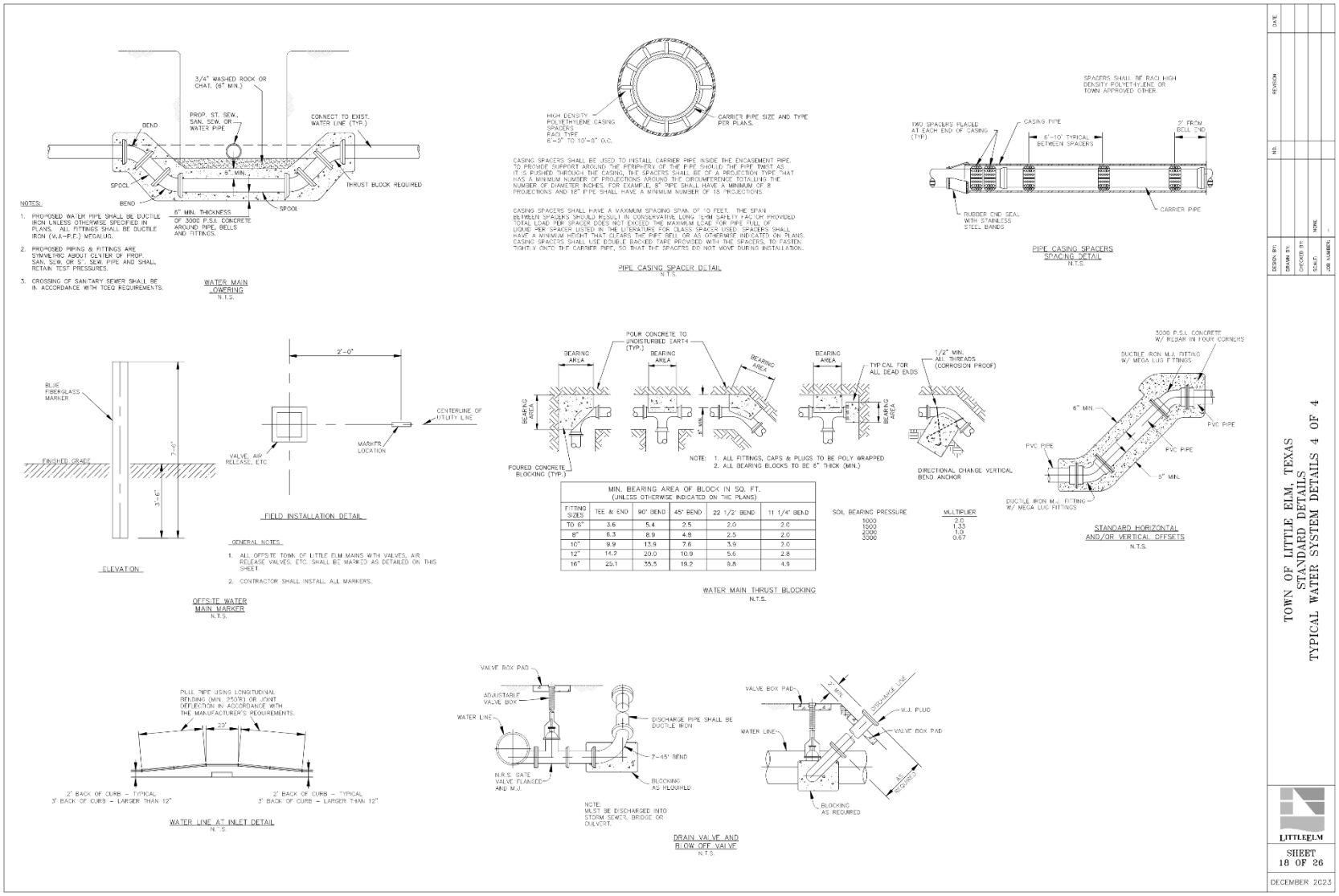
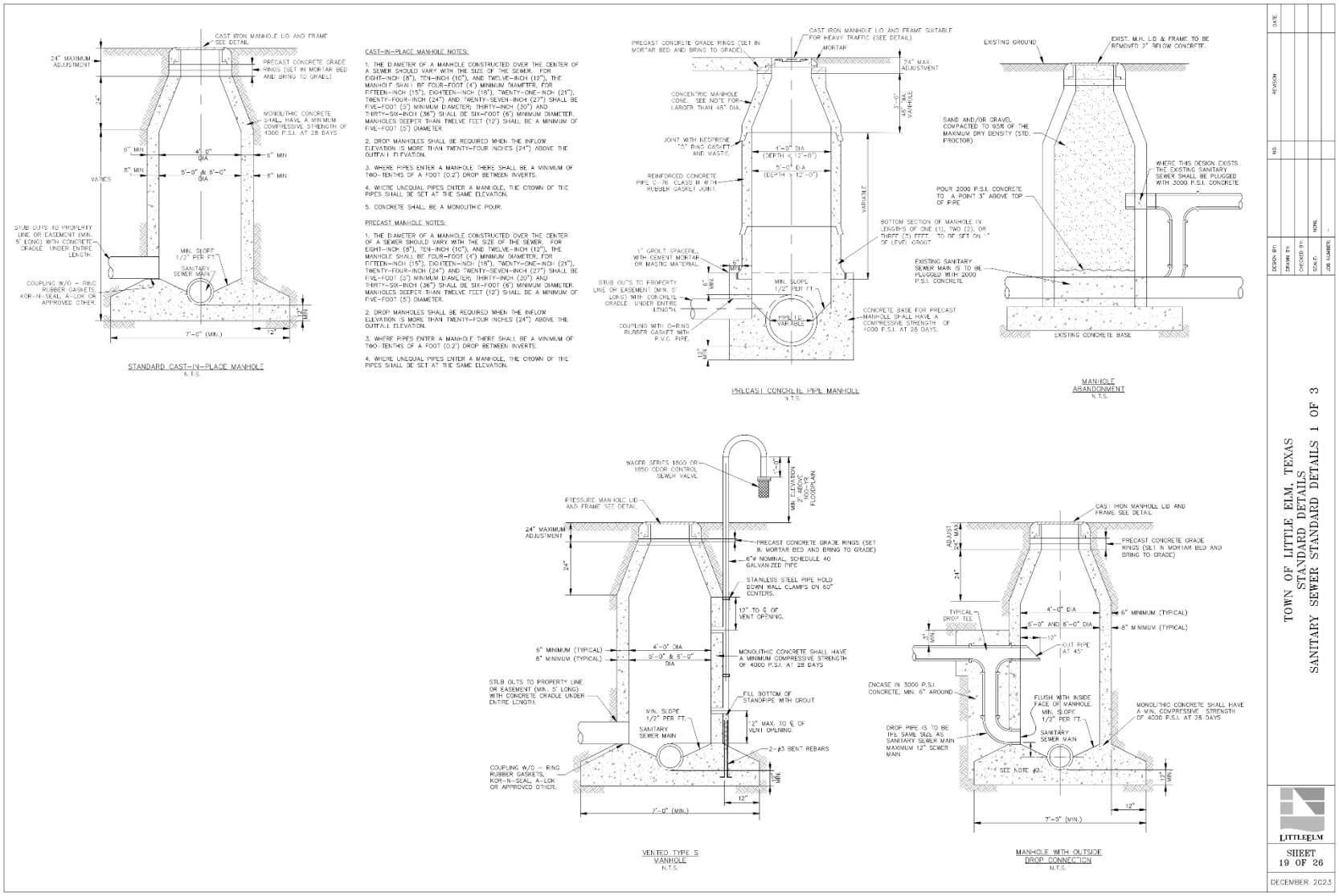
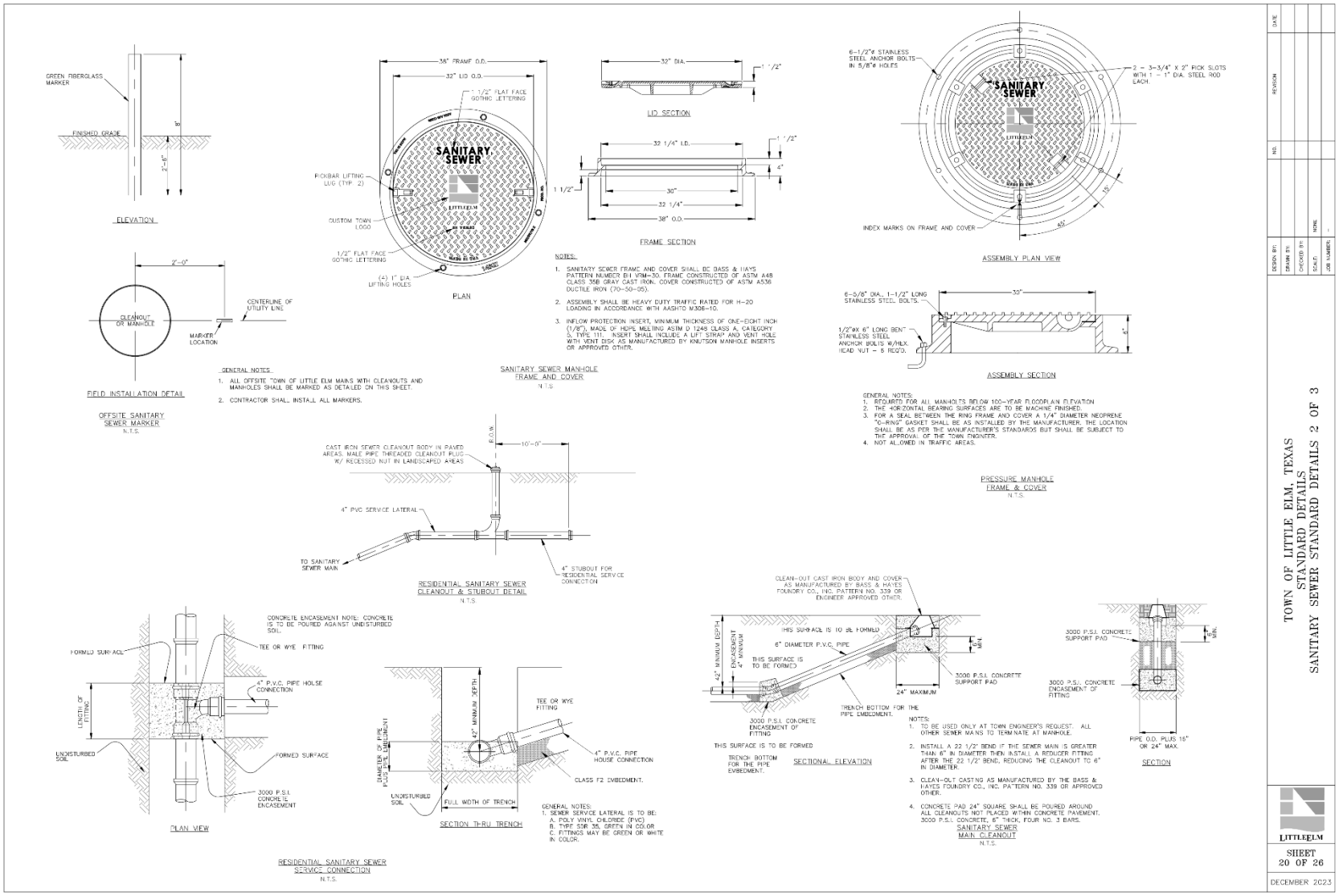
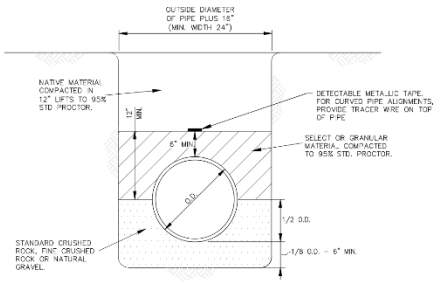
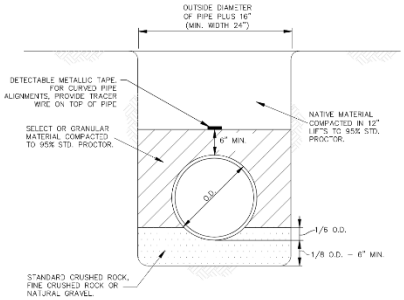

3/4" WASHED ROCK OR CHAT, (6" MIN.)
PROP. ST. SEW., SAN. SEW. OR WATER PIPE
CONNECT TO EXIST. WATER LINE (TYP.)
BEND
SPOOL
6" MIN.
THRUST BLOCK REQUIRED
BEND
SPOOL
6" MIN. THICKNESS OF 3000 P.S.I. CONCRETE AROUND PIPE, BELLS AND FITTINGS.
NOTES:
1. PROPOSED WATER PIPE SHALL BE DUCTILE IRON UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.-P.E.) MEGALUG.
2. PROPOSED PIPING & FITTINGS ARE SWIVELING ABOUT CENTER OF PROP. SAN. SEW. OR S". SEW. PIPE AND SHALL RETAIN TEST PRESSURES.
3. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH TCEQ REQUIREMENTS.
WATER MAIN CROSSING
N.T.S.
HIGH DENSITY POLYETHYLENE CASING SPACERS RADI TYPE 6'-0" TO 10'-0" O.C.
CARRIER PIPE SIZE AND TYPE PER PLANS.
CASING SPACERS SHALL BE USED TO INSTALL CARRIER PIPE INSIDE THE ENCASEMENT PIPE. TO PROVIDE SUPPORT AROUND THE PERIPHERY OF THE PIPE SHOULD THE PIPE TWIST AS IT IS PUSHED THROUGH THE CASING. THE SPACERS SHALL BE OF A PROJECTION TYPE THAT HAS A MINIMUM NUMBER OF PROJECTIONS AROUND THE CIRCUMFERENCE TOTALLING THE NUMBER OF DIAMETER INCHES. FOR EXAMPLE, 8" PIPE SHALL HAVE A MINIMUM OF 8 PROJECTIONS AND 18" PIPE SHALL HAVE A MINIMUM NUMBER OF 18 PROJECTIONS.
CASING SPACERS SHALL HAVE A MAXIMUM SPACING SPAN OF 10 FEET. THE SPAN BETWEEN SPACERS SHOULD RESULT IN CONSERVATIVE LONG TERM SAFETY FACTOR PROVIDED TOTAL LOAD PER SPACER DOES NOT EXCEED THE MAXIMUM LOAD FOR PIPE FULL OF LIQUID PER SPACER LISTED IN THE LITERATURE FOR CLASS SPACER USED. SPACERS SHALL HAVE A MINIMUM HEIGHT THAT CLEARS THE PIPE BELL OR AS OTHERWISE INDICATED ON PLANS. CASING SPACERS SHALL USE DOUBLE BACKED TAPE PROVIDED WITH THE SPACERS, TO FASTEN TIGHTLY ONTO THE CARRIER PIPE, SO THAT THE SPACERS DO NOT MOVE DURING INSTALLATION.
PIPE CASING SPACER DETAIL
N.T.S.
SPACERS SHALL BE RADI HIGH DENSITY POLYETHYLENE OR TOWN APPROVED OTHER.
TWO SPACERS PLACED AT EACH END OF CASING (TYP.)
CASING PIPE
6'-10" TYPICAL BETWEEN SPACERS
2' FROM BELL END
RUBBER END SEAL WITH STAINLESS STEEL BANDS
CARRIER PIPE
PIPE CASING SPACERS SPACING DETAIL
N.T.S.
BLUE FIBERGLASS MARKER
FINISHED GRADE
7'-6"
3'-6"
2'-0"
CENTERLINE OF UTILITY LINE
VALVE, AIR RELEASE, ETC.
MARKER LOCATION
ELEVATION
FIELD INSTALLATION DETAIL
GENERAL NOTES
1. ALL OFFSITE TOWN OF LITTLE ELM MAINS WITH VALVES, AIR RELEASE VALVES, ETC. SHALL BE MARKED AS DETAILED ON THIS SHEET.
2. CONTRACTOR SHALL INSTALL ALL MARKERS.
OFFSITE WATER MAIN MARKER
N.T.S.
POUR CONCRETE TO UNDISTURBED EARTH (TYP.)
BEARING AREA
POURED CONCRETE BLOCKING (TYP.)
NOTE: 1. ALL FITTINGS, CAPS & PLUGS TO BE POLY WRAPPED
2. ALL BEARING BLOCKS TO BE 6" THICK (MIN.)
TYPICAL FOR ALL DEAD ENDS
1/2" MIN. ALL THREADS (CORROSION PROOF)
DIRECTIONAL CHANGE VERTICAL BEND ANCHOR
MIN. BEARING AREA OF BLOCK IN SQ. FT. (UNLESS OTHERWISE INDICATED ON THE PLANS)
FITTING SIZES | TEE & END | 90° BEND | 45° BEND | 22 1/2° BEND | 11 1/4° BEND
TO 6" | 3.6 | 5.4 | 2.5 | 2.0 | 2.0
8" | 6.3 | 8.9 | 4.8 | 2.5 | 2.0
10" | 9.9 | 13.9 | 7.6 | 3.9 | 2.0
12" | 14.2 | 20.0 | 10.9 | 5.6 | 2.8
16" | 25.1 | 35.5 | 19.2 | 9.8 | 4.9
SOIL BEARING PRESSURE | MULTIPLIER
1000 | 2.0
1500 | 1.33
2000 | 1.0
3000 | 0.67
WATER MAIN THRUST BLOCKING
N.T.S.
3000 P.S.I. CONCRETE W/ REBAR IN FOUR CORNERS
DUCTILE IRON M.J. FITTING W/ MEGA LUG FITTINGS
6" MIN.
PVC PIPE
PVC PIPE
PVC PIPE
8" MIN.
DUCTILE IRON M.J. FITTING W/ MEGA LUG FITTINGS
STANDARD HORIZONTAL AND/OR VERTICAL OFFSETS
N.T.S.
PULL PIPE USING LONGITUDINAL BENDING (MIN. 250'R) OR JOINT DEFLECTION IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
2'-0"
2' BACK OF CURB – TYPICAL
3' BACK OF CURB – LARGER THAN 12"
2' BACK OF CURB – TYPICAL
3' BACK OF CURB – LARGER THAN 12"
WATER LINE AT INLET DETAIL
N.T.S.
VALVE BOX PAD
ADJUSTABLE VALVE BOX
WATER LINE
DISCHARGE PIPE SHALL BE DUCTILE IRON
7-45° BEND
N.R.S. GATE VALVE FLANGED AND M.J.
BLOCKING AS REQUIRED
NOTE: MUST BE DISCHARGED INTO STORM SEWER, BRIDGE OR CULVERT.
VALVE BOX PAD
2' MIN.
DISCHARGE LINE
M.J. PLUG
VALVE BOX PAD
WATER LINE
45° REQUIRED
BLOCKING AS REQUIRED
DRAIN VALVE AND BLOW OFF VALVE
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
KDMG
SCALE:
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
TYPICAL WATER SYSTEM DETAILS 4 OF 4
LITTLE ELM
SHEET 18 OF 26
DECEMBER 2023


CAST IRON MANHOLE LID AND FRAME SEE DETAIL
24" MAXIMUM ADJUSTMENT
PRECAST CONCRETE GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE)
MONOLITHIC CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS
VARIES
4'-0" DIA
5'-0" & 6'-0" DIA
6" MIN
8" MIN
STUB OUTS TO PROPERTY LINE OR EASEMENT (MIN. 5' LONG) WITH CONCRETE CRADLE UNDER ENTIRE LENGTH.
MIN. SLOPE 1/2" PER FT.
SANITARY SEWER MAIN
COUPLING W/O - RING RUBBER GASKETS, KOR-N-SEAL, A-LOK OR APPROVED OTHER.
7'-0" (MIN.)
STANDARD CAST-IN-PLACE MANHOLE
N.T.S.
CAST-IN-PLACE MANHOLE NOTES:
1. THE DIAMETER OF A MANHOLE CONSTRUCTED OVER THE CENTER OF A SEWER SHOULD VARY WITH THE SIZE OF THE SEWER. FOR EIGHT-INCH (8"), TEN-INCH (10"), AND TWELVE-INCH (12"), THE MANHOLE SHALL BE FOUR-FOOT (4') MINIMUM DIAMETER. FOR FIFTEEN-INCH (15"), EIGHTEEN-INCH (18"), TWENTY-ONE-INCH (21"), TWENTY-FOUR-INCH (24") AND TWENTY-SEVEN-INCH (27") SHALL BE FIVE-FOOT (5') MINIMUM DIAMETER; THIRTY-INCH (30") AND THIRTY-SIX-INCH (36") SHALL BE SIX-FOOT (6') MINIMUM DIAMETER. MANHOLES DEEPER THAN TWELVE FEET (12') SHALL BE A MINIMUM OF FIVE-FOOT (5') DIAMETER.
2. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN TWENTY-FOUR INCHES (24") ABOVE THE OUTFALL ELEVATION.
3. WHERE PIPES ENTER A MANHOLE THERE SHALL BE A MINIMUM OF TWO-TENTHS OF A FOOT (0.2') DROP BETWEEN INVERTS.
4. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.
5. CONCRETE SHALL BE A MONOLITHIC POUR.
PRECAST MANHOLE NOTES:
1. THE DIAMETER OF A MANHOLE CONSTRUCTED OVER THE CENTER OF A SEWER SHOULD VARY WITH THE SIZE OF THE SEWER. FOR EIGHT-INCH (8"), TEN-INCH (10"), AND TWELVE-INCH (12"), THE MANHOLE SHALL BE FOUR-FOOT (4') MINIMUM DIAMETER. FOR FIFTEEN-INCH (15"), EIGHTEEN-INCH (18"), TWENTY-ONE-INCH (21"), TWENTY-FOUR-INCH (24") AND TWENTY-SEVEN-INCH (27") SHALL BE FIVE-FOOT (5') MINIMUM DIAMETER; THIRTY-INCH (30") AND THIRTY-SIX-INCH (36") SHALL BE SIX-FOOT (6') MINIMUM DIAMETER. MANHOLES DEEPER THAN TWELVE FEET (12') SHALL BE A MINIMUM OF FIVE-FOOT (5') DIAMETER.
2. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN TWENTY-FOUR INCHES (24") ABOVE THE OUTFALL ELEVATION.
3. WHERE PIPES ENTER A MANHOLE THERE SHALL BE A MINIMUM OF TWO-TENTHS OF A FOOT (0.2') DROP BETWEEN INVERTS.
4. WHERE UNEQUAL PIPES ENTER A MANHOLE, THE CROWN OF THE PIPES SHALL BE SET AT THE SAME ELEVATION.
PRECAST CONCRETE GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE)
CAST IRON MANHOLE LID AND FRAME SUITABLE FOR HEAVY TRAFFIC (SEE DETAIL)
MORTAR
24" MAX ADJUSTMENT
CONCENTRIC MANHOLE CONE. SEE NOTE FOR LARGER THAN 48" DIA.
3'-0" MIN. 48" MANHOLE
JOINT WITH NEOPRENE "O" RING GASKET AND MASTIC.
4'-0" DIA (DEPTH < 12'-0")
5'-0" DIA (DEPTH > 12'-0")
REINFORCED CONCRETE PIPE C-76 CLASS III WITH RUBBER GASKET JOINT.
VARIABLE
BOTTOM SECTION OF MANHOLE IN LENGTHS OF ONE (1), TWO (2), OR THREE (3) FEET. TO BE SET ON 1" OF LEVEL GROUT
1" GROUT SPACEFILL WITH CEMENT MORTAR OR MASTIC MATERIAL
6" MIN
STUB OUTS TO PROPERTY LINE OR EASEMENT (MIN. 5' LONG) WITH CONCRETE CRADLE UNDER ENTIRE LENGTH.
MIN. SLOPE 1/2" PER FT.
PIPE I.D. VARIABLE
COUPLING WITH O-RING RUBBER GASKET WITH P.V.C. PIPE.
CONCRETE BASE FOR PRECAST MANHOLE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS.
PRECAST CONCRETE PIPE MANHOLE
N.T.S.
EXISTING GROUND
EXIST. M.H. LID & FRAME TO BE REMOVED 2" BELOW CONCRETE.
SAND AND/OR GRAVEL COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY (STD. PROCTOR)
WHERE THIS DESIGN EXISTS THE EXISTING SANITARY SEWER SHALL BE PLUGGED WITH 3000 P.S.I. CONCRETE
POUR 2000 P.S.I. CONCRETE TO A POINT 3" ABOVE TOP OF PIPE
EXISTING SANITARY SEWER MAIN IS TO BE PLUGGED WITH 2000 P.S.I. CONCRETE
EXISTING CONCRETE BASE
MANHOLE ABANDONMENT
N.T.S.
WADER SERIES 1800 OR 1950 ODOR CONTROL SEWER VALVE
MIN. ELEVATION 2' ABOVE 100 YR FLOODPLAIN
PRESSURE MANHOLE LID AND FRAME SEE DETAIL
24" MAXIMUM ADJUSTMENT
PRECAST CONCRETE GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE)
6"ø NOMINAL, SCHEDULE 40 GALVANIZED PIPE
STAINLESS STEEL PIPE HOLD DOWN WALL CLAMPS ON 60" CENTERS.
12" TO 6" OF VENT OPENING.
6" MINIMUM (TYPICAL)
8" MINIMUM (TYPICAL)
4'-0" DIA
5'-0" & 6'-0" DIA
MONOLITHIC CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS
STUB OUTS TO PROPERTY LINE OR EASEMENT (MIN. 5' LONG) WITH CONCRETE CRADLE UNDER ENTIRE LENGTH.
FILL BOTTOM OF STANDPIPE WITH GROUT
MIN. SLOPE 1/2" PER FT.
SANITARY SEWER MAIN
12" MAX. TO 6" OF VENT OPENING.
2-#3 BENT REBARS
COUPLING W/O - RING RUBBER GASKETS, KOR-N-SEAL, A-LOK OR APPROVED OTHER.
12" MIN
12"
7'-0" (MIN.)
VENTED TYPE S MANHOLE
N.T.S.
CAST IRON MANHOLE LID AND FRAME SEE DETAIL
ADJUST 24" MAX
PRECAST CONCRETE GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE)
TYPICAL DROP TEE
4'-0" DIA
5'-0" AND 6'-0" DIA
6" MINIMUM (TYPICAL)
8" MINIMUM (TYPICAL)
12"
CUT PIPE AT 45°
ENCASE IN 3000 P.S.I. CONCRETE, MIN. 6" AROUND
FLUSH WITH INSIDE FACE OF MANHOLE
MONOLITHIC CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS
MIN. SLOPE 1/2" PER FT.
DROP PIPE IS TO BE THE SAME SIZE AS SANITARY SEWER MAIN MAXIMUM 12" SEWER MAIN
SANITARY SEWER MAIN
SEE NOTE #2
12" MIN
12"
7'-0" (MIN.)
MANHOLE WITH OUTSIDE DROP CONNECTION
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
SANITARY SEWER STANDARD DETAILS 1 OF 3
LITTLEELM
SHEET 19 OF 26
DECEMBER 2023

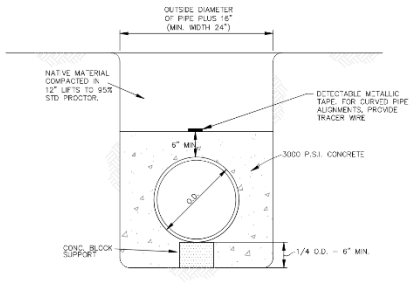

GREEN FIBERGLASS MARKER
FINISHED GRADE
ELEVATION
OFFSITE SANITARY SEWER MARKER
N.T.S.
36" FRAME O.D.
32" LID O.D.
1 1/2" FLAT FACE GOTHIC LETTERING
SANITARY SEWER
PICKBAR LIFTING LUG (TYP. 2)
CUSTOM TOWN LOGO
1/2" FLAT FACE GOTHIC LETTERING
(4) 1" DIA LIFTING HOLES
PLAN
32" DIA.
1 1/2"
LID SECTION
32 1/4" I.D.
30"
38" O.D.
4"
FRAME SECTION
NOTES:
1. SANITARY SEWER FRAME AND COVER SHALL BE BASS & HAYS PATTERN NUMBER BH VRM-30. FRAME CONSTRUCTED OF ASTM A48 CLASS 35B GRAY CAST IRON. COVER CONSTRUCTED OF ASTM A536 DUCTILE IRON (70-50-05).
2. ASSEMBLY SHALL BE HEAVY DUTY TRAFFIC RATED FOR H-20 LOADING IN ACCORDANCE WITH AASHTO M306-10.
3. INFLOW PROTECTION INSERT, MINIMUM THICKNESS OF ONE-EIGHT INCH (1/8"), MADE OF HDPE MELTING ASTM D 1248 CLASS A, CATEGORY 5, TYPE III. INSERT SHALL INCLUDE A LIFT STRAP AND VENT HOLE WITH VENT DISK AS MANUFACTURED BY KNUTSON MANHOLE INSERTS OR APPROVED OTHER.
SANITARY SEWER MANHOLE FRAME AND COVER
N.T.S.
6-1/2"ø STAINLESS STEEL ANCHOR BOLTS IN 5/8"ø HOLES
2 - 3-3/4" X 2" PICK SLOTS WITH 1 - 1" DIA. STEEL ROD EACH.
INDEX MARKS ON FRAME AND COVER
ASSEMBLY PLAN VIEW
6-5/8" DIA., 1-1/2" LONG STAINLESS STEEL BOLTS.
1/2"ø X 6" LONG BENT STAINLESS STEEL ANCHOR BOLTS W/HEX. HEAD NUT - 8 REQ'D.
30"
ASSEMBLY SECTION
GENERAL NOTES:
1. REQUIRED FOR ALL MANHOLES BELOW 100-YEAR FLOODPLAIN ELEVATION
2. THE HORIZONTAL BEARING SURFACES ARE TO BE MACHINE FINISHED.
3. FOR A SEAL BETWEEN THE RING FRAME AND COVER A 1/4" DIAMETER NEOPRENE "O-RING" GASKET SHALL BE AS INSTALLED BY THE MANUFACTURER. THE LOCATION SHALL BE AS PER THE MANUFACTURER'S STANDARDS BUT SHALL BE SUBJECT TO THE APPROVAL OF THE TOWN ENGINEER.
4. NOT ALLOWED IN TRAFFIC AREAS.
PRESSURE MANHOLE FRAME & COVER
N.T.S.
2'-0"
CLEANOUT OR MANHOLE
CENTERLINE OF UTILITY LINE
MARKER LOCATION
FIELD INSTALLATION DETAIL
GENERAL NOTES:
1. ALL OFFSITE TOWN OF LITTLE ELM MAINS WITH CLEANOUTS AND MANHOLES SHALL BE MARKED AS DETAILED ON THIS SHEET.
2. CONTRACTOR SHALL INSTALL ALL MARKERS.
CAST IRON SEWER CLEANOUT BODY IN PAVED AREAS. MALE PIPE THREADED CLEANOUT PLUG W/ RECESSED NUT IN LANDSCAPED AREAS
R.O.W.
10'-0"
4" PVC SERVICE LATERAL
TO SANITARY SEWER MAIN
4" STUBOUT FOR RESIDENTIAL SERVICE CONNECTION
RESIDENTIAL SANITARY SEWER CLEANOUT & STUBOUT DETAIL
N.T.S.
CLEAN-OUT CAST IRON BODY AND COVER AS MANUFACTURED BY BASS & HAYES FOUNDRY CO., INC. PATTERN NO. 339 OR ENGINEER APPROVED OTHER.
THIS SURFACE IS TO BE FORMED
6" DIAMETER P.V.C. PIPE
THIS SURFACE IS TO BE FORMED
42" MINIMUM DEPTH
ENCASEMENT MINIMUM
6" MIN
3000 P.S.I. CONCRETE SUPPORT PAD
24" MAXIMUM
TRENCH BOTTOM FOR THE PIPE EMBEDMENT.
3000 P.S.I. CONCRETE ENCASEMENT OF FITTING
THIS SURFACE IS TO BE FORMED
TRENCH BOTTOM FOR THE PIPE EMBEDMENT.
SECTIONAL ELEVATION
NOTES:
1. TO BE USED ONLY AT TOWN ENGINEER'S REQUEST. ALL OTHER SEWER MAINS TO TERMINATE AT MANHOLE.
2. INSTALL A 22 1/2° BEND IF THE SEWER MAIN IS GREATER THAN 8" IN DIAMETER THEN INSTALL A REDUCER FITTING AFTER THE 22 1/2° BEND, REDUCING THE CLEANOUT TO 6" IN DIAMETER.
3. CLEAN-OUT CASTING AS MANUFACTURED BY THE BASS & HAYES FOUNDRY CO., INC. PATTERN NO. 339 OR APPROVED OTHER.
4. CONCRETE PAD 24" SQUARE SHALL BE POURED AROUND ALL CLEANOUTS NOT PLACED WITHIN CONCRETE PAVEMENT. 3000 P.S.I. CONCRETE, 6" THICK, FOUR NO. 3 BARS.
SANITARY SEWER MAIN CLEANOUT
N.T.S.
3000 P.S.I. CONCRETE SUPPORT PAD
6" MIN.
3000 P.S.I. CONCRETE ENCASEMENT OF FITTING
PIPE O.D. PLUS 16" OR 24" MAX.
SECTION
CONCRETE ENCASEMENT NOTE: CONCRETE IS TO BE POURED AGAINST UNDISTURBED SOIL.
FORMED SURFACE
TEE OR WYE FITTING
4" P.V.C. PIPE HOUSE CONNECTION
LENGTH OF FITTING
UNDISTURBED SOIL
FORMED SURFACE
3000 P.S.I. CONCRETE ENCASEMENT
PLAN VIEW
TEE OR WYE FITTING
42" MINIMUM DEPTH
DIAMETER OF PIPE PLUS 6" EMBEDMENT
4" P.V.C. PIPE HOUSE CONNECTION
CLASS F2 EMBEDMENT.
UNDISTURBED SOIL
FULL WIDTH OF TRENCH
SECTION THRU TRENCH
GENERAL NOTES:
1. SEWER SERVICE LATERAL IS TO BE:
A. POLY VINYL CHLORIDE (PVC)
B. TYPE SDR 35, GREEN IN COLOR
C. FITTINGS MAY BE GREEN OR WHITE IN COLOR.
RESIDENTIAL SANITARY SEWER SERVICE CONNECTION
N.T.S.
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
SANITARY SEWER STANDARD DETAILS 2 OF 3
LITTLE ELM
SHEET
20 OF 26
DECEMBER 2023



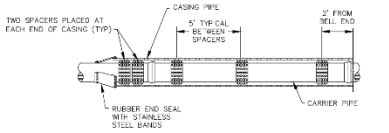
MIN. STD. P.V.C. SEWER
CLASS 1F2 EMBEDMENT
N.T.S.



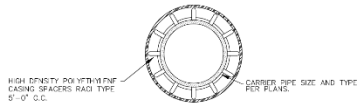
MIN. STD. DUCTILE IRON SEWER
CLASS 1E3 EMBEDMENT
N.T.S.



CONCRETE ENCASEMENT
CLASS 1F4 EMBEDMENT
N.T.S.



PIPE CASING SPACER
SPACING DETAILS

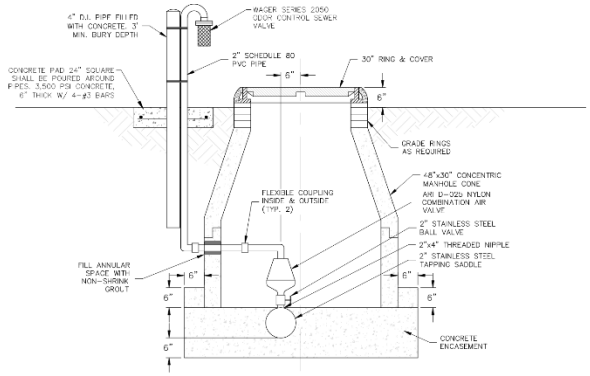


NOTES:

CASING SPACERS SHALL BE USED TO INSTALL CARRIER PIPE INSIDE THE ENCASEMENT PIPE. TO PROVIDE SUPPORT AROUND THE PERIMETRY OF THE PIPE SHOULD THE PIPE TWIST AS IT IS PUSHED THROUGH THE CASING. THE SPACERS SHALL BE OF A PROJECTION TYPE THAT HAS A MINIMUM NUMBER OF PROJECTIONS AROUND THE CIRCUMFERENCE TOTALLING THE NUMBER OF DIAMETER INCHES. FOR EXAMPLE, 8" PIPE SHALL HAVE A MINIMUM OF 8 PROJECTIONS AND 18" PIPE SHALL HAVE A MINIMUM NUMBER OF 18 PROJECTIONS.

CASING SPACERS SHALL HAVE A MAXIMUM SPACING SPAN OF 5 FEET. THE SPAN BETWEEN SPACERS SHOULD RESULT IN CONSERVATIVE LONG TERM SAFETY FACTOR PROVIDED TOTAL LOAD PER SPACER DOES NOT EXCEED THE MAXIMUM LOAD FOR PIPE FULL OF LIQUID PER SPACER LISTED IN THE LITERATURE FOR CLASS SPACER USED. SPACERS SHALL HAVE A MINIMUM HEIGHT THAT CLEARS THE PIPE BELL OR AS OTHERWISE INDICATED ON PLANS. CASING SPACERS SHALL USE DOUBLE BACKED TAPE PROVIDED WITH THE SPACERS, TO FASTEN TOP-TLY ONTO THE CARRIER PIPE, SO THAT THE SPACERS DO NOT MOVE DURING INSTALLATION.

PIPE CASING SPACER DETAIL
N.T.S.



2" AIR RELEASE VALVE
FOR FORCE MAIN
N.T.S.

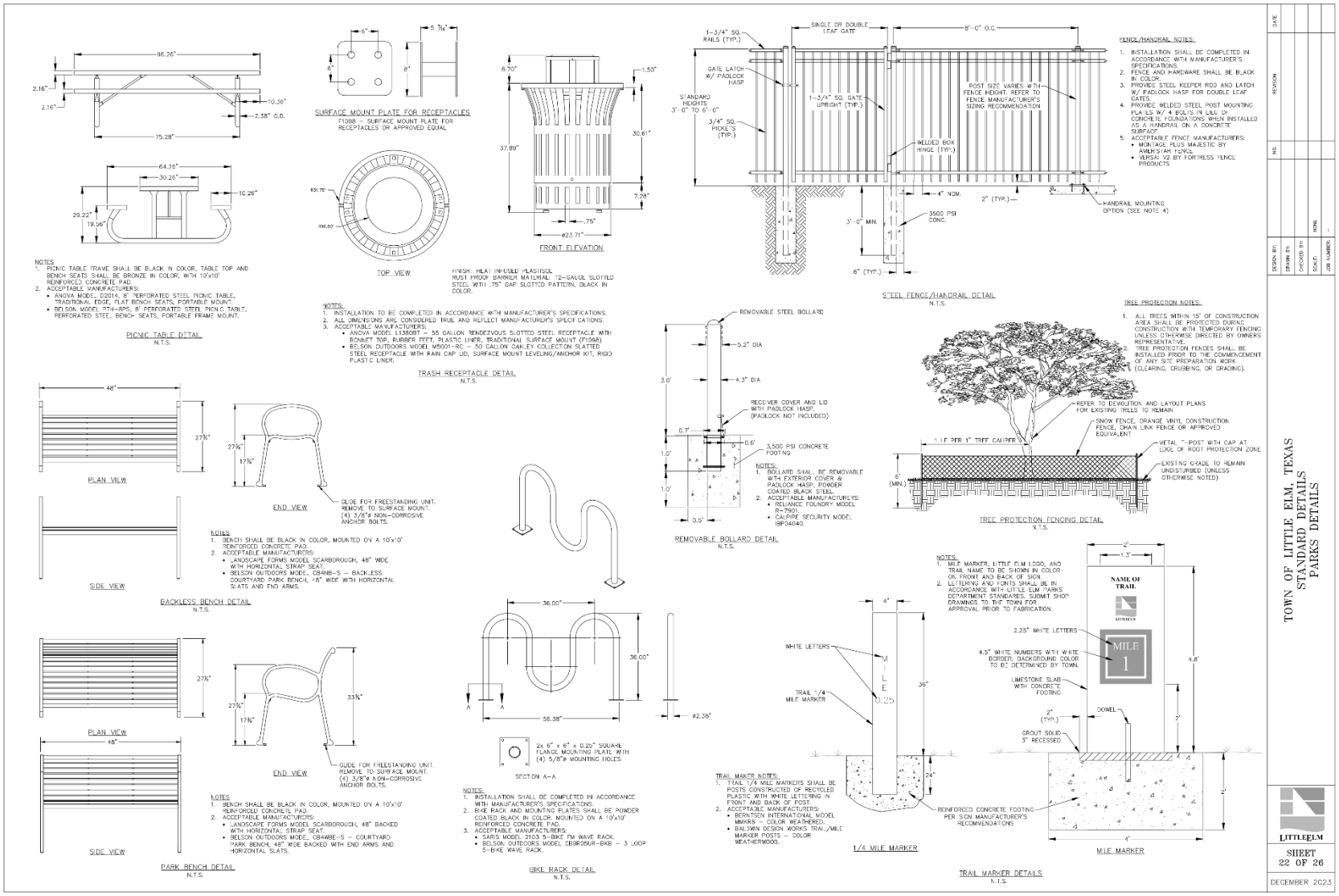
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER:
-

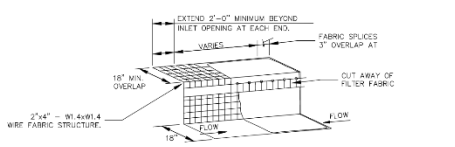
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
SANITARY SEWER STANDARD DETAILS 3 OF 3

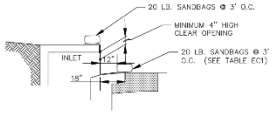
LITTLEELM

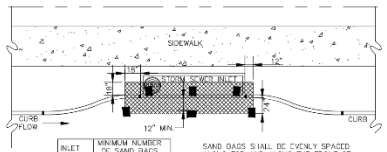
SHEET
21 OF 26

DECEMBER 2023


TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
PARKS DETAILS
LITTLE ELM
SHEET
22 OF 26
DECEMBER 2023
PICNIC TABLE DETAIL
N.T.S.
SURFACE MOUNT PLATE FOR RECEPTACLES
TOP VIEW
FRONT ELEVATION
TRASH RECEPTACLE DETAIL
N.T.S.
STEEL FENCE/HANDRAIL DETAIL
N.T.S.
FENCE/HANDRAIL NOTES:
TREE PROTECTION NOTES:
TREE PROTECTION FENCING DETAIL
N.T.S.
REMOVABLE BOLLARD DETAIL
N.T.S.
PLAN VIEW
END VIEW
SIDE VIEW
BACKLESS BENCH DETAIL
N.T.S.
PARK BENCH DETAIL
N.T.S.
SECTION A-A
BIKE RACK DETAIL
N.T.S.
1/4 MILE MARKER
MILE MARKER
TRAIL MARKER DETAILS
N.T.S.



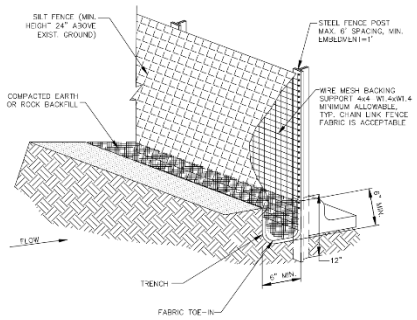




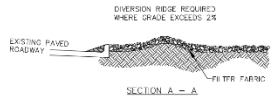
INLET OPENING	MINIMUM NUMBER OF SAND BAGS	
	TOP	FRONT
5'	2	3
10'	3	3
15'	3	4
20'	4	4

SAND BAGS SHALL BE EVENLY SPACED ALONG TOP AND ALONG THE FRONT OF INLET.

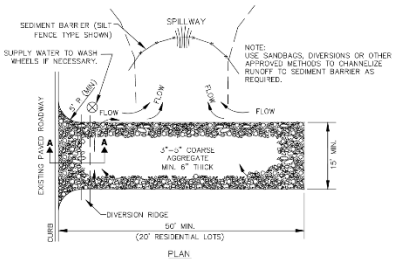
CURB INLET ON GRADE PROTECTION DETAIL
N.T.S.



SILT FENCE ISOMETRIC PLAN VIEW
N.T.S.

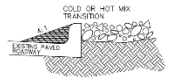


SECTION A – A



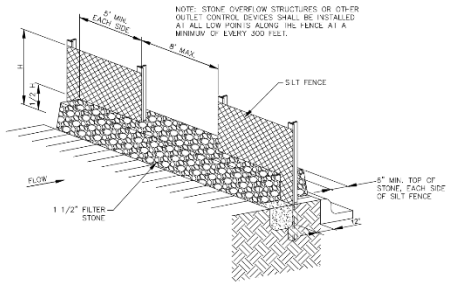
PLAN

WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE-GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE FROM DIMINISHING.

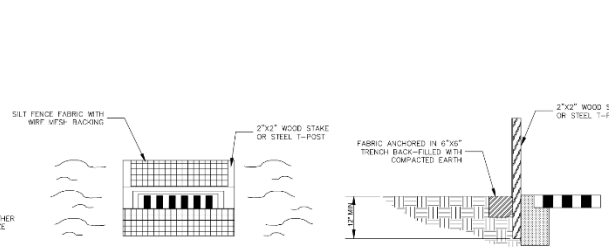


TRANSITION

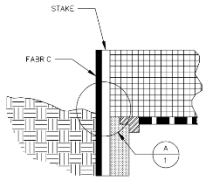
TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIST
N.T.S.



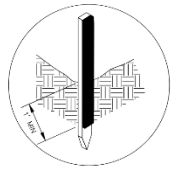
SILT FENCE STONE OVERFLOW STRUCTURE
N.T.S.



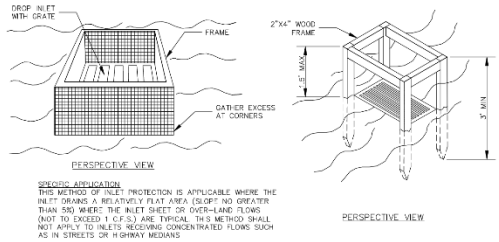
I. STANDARD FILTER BARRIER INSTALLATION
N.T.S.



ELEVATION OF STAKE AND FABRIC ORIENTATION



DETAIL A



SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVER-LAND FLOWS (NOT TO EXCEED 1 C.F.S.) ARE TYPICAL. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREETS OR HIGHWAY MEDIANS

II. ALTERNATE FILTER BARRIER INSTALLATION
N.T.S.

DATE | NO. | REVISION

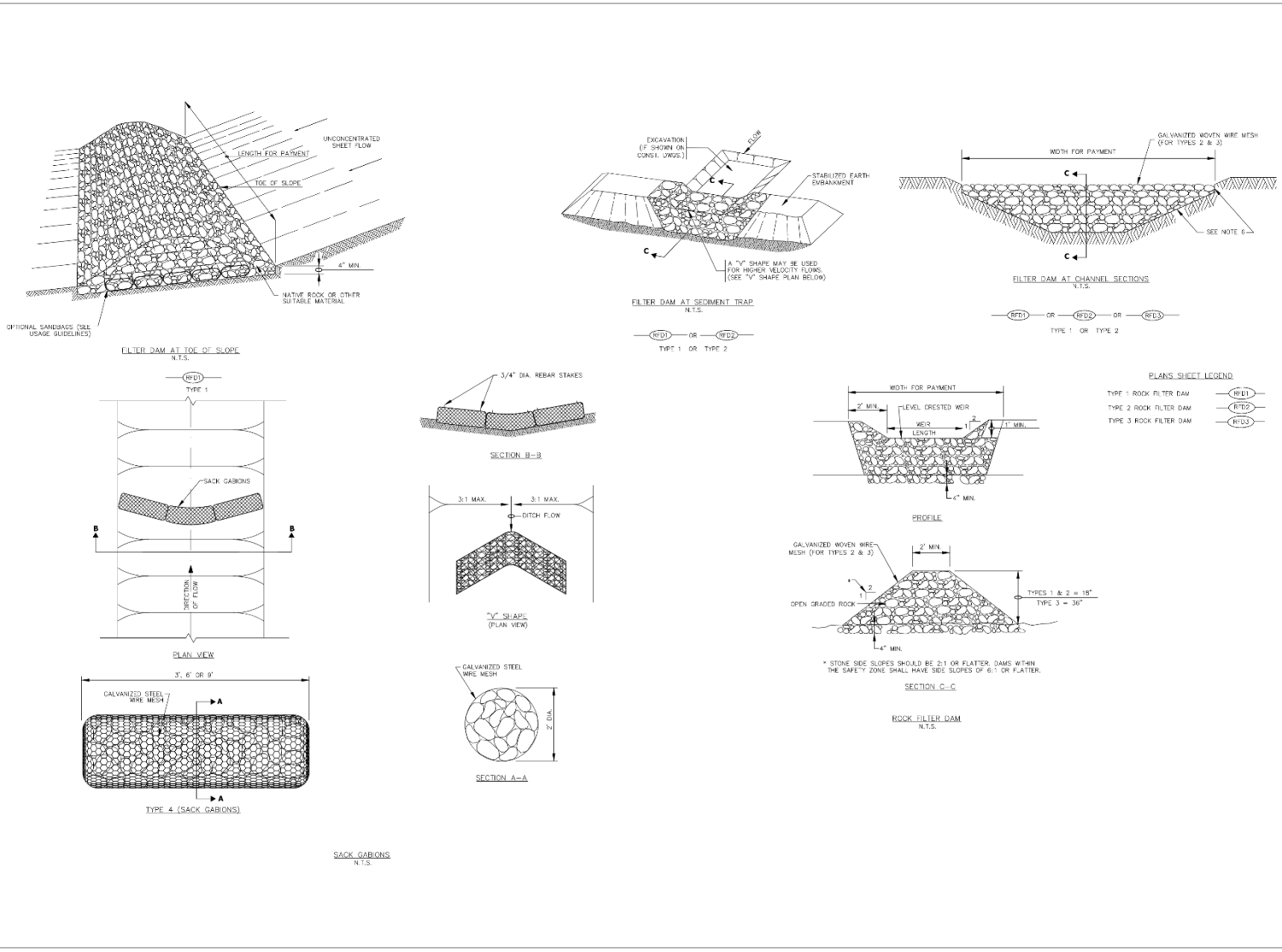
DESIGN BY: | DRAWN BY: | CHECKED BY: | SCALE: NONE | JOB NUMBER: -

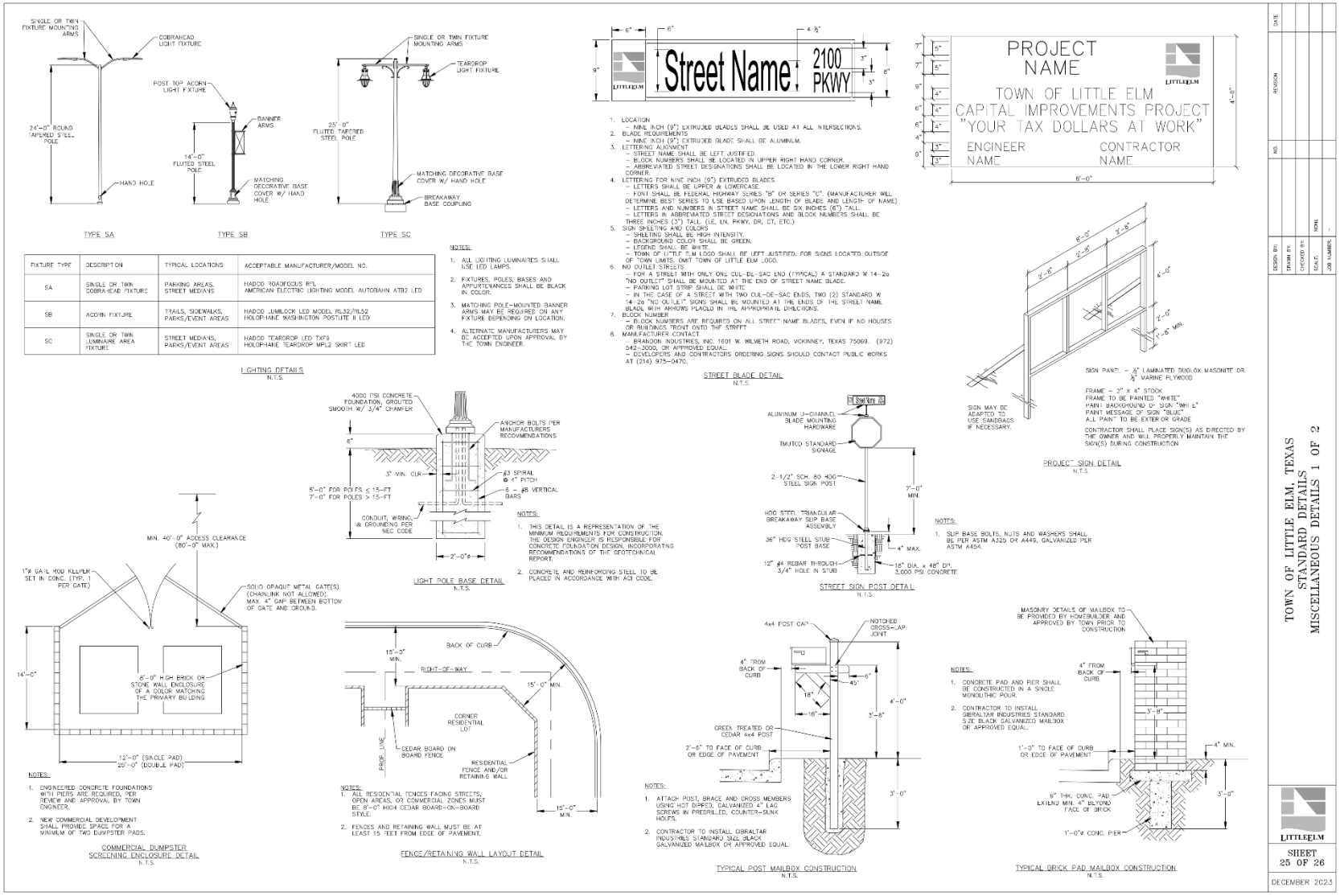
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
EROSION CONTROL DETAILS 1 OF 2

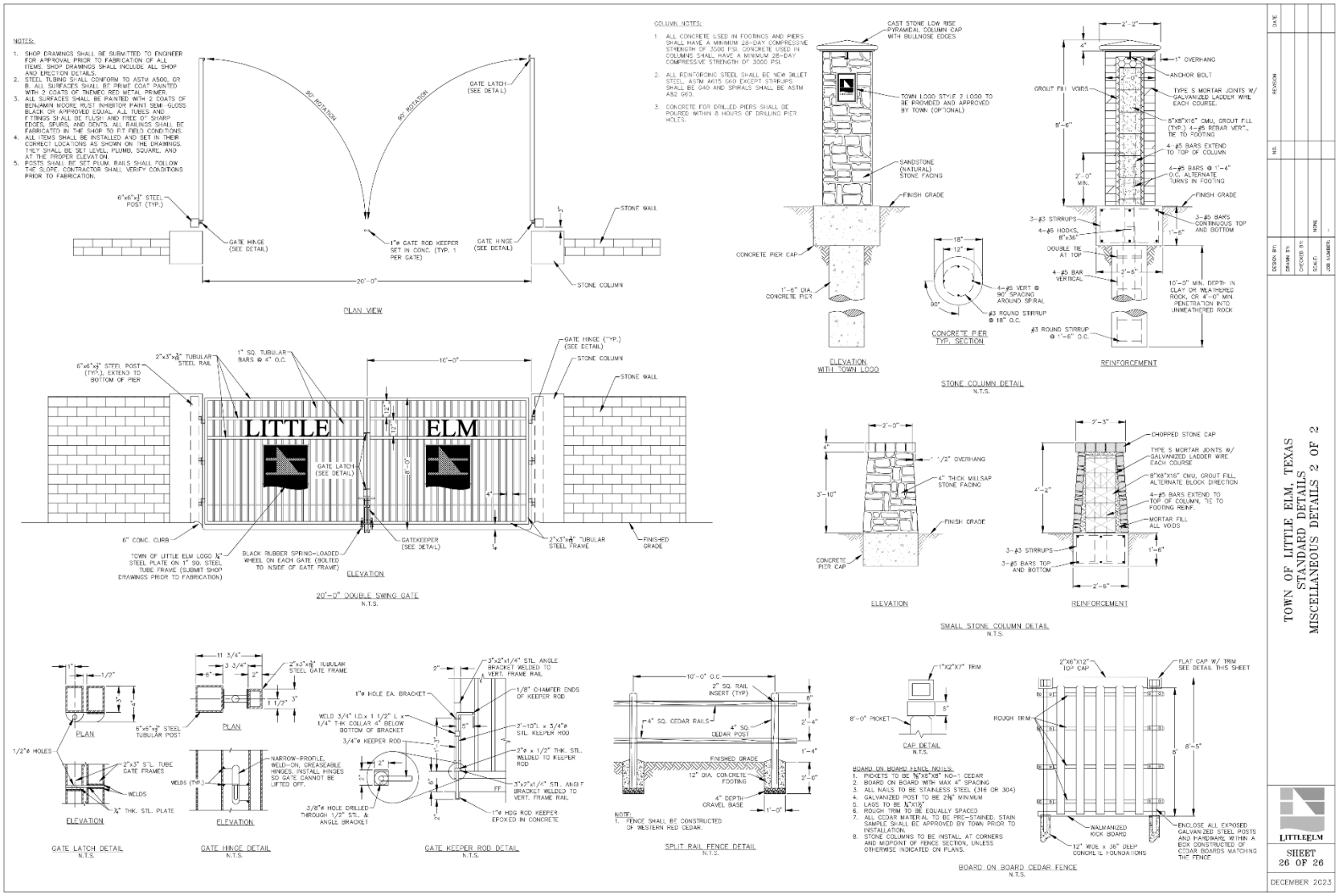
LITTLE ELM

SHEET 23 OF 26

DECEMBER 2023


UNCONCENTRATED SHEET FLOW
LENGTH FOR PAYMENT
TOE OF SLOPE
4" MIN.
NATIVE ROCK OR OTHER SUITABLE MATERIAL
OPTIONAL SANDBAGS (SEE USAGE GUIDELINES)
FILTER DAM AT TOE OF SLOPE
N.T.S.
EXCAVATION (IF SHOWN ON CONST. DWGS.)
FLOW
STABILIZED EARTH EMBANKMENT
A "V" SHAPE MAY BE USED FOR HIGHER VELOCITY FLOWS. (SEE "V" SHAPE PLAN BELOW)
FILTER DAM AT SEDIMENT TRAP
N.T.S.
RFD1 OR RFD2
TYPE 1 OR TYPE 2
GALVANIZED WOVEN WIRE MESH (FOR TYPES 2 & 3)
WIDTH FOR PAYMENT
SEE NOTE 6
FILTER DAM AT CHANNEL SECTIONS
N.T.S.
RFD1 OR RFD2 OR RFD3
TYPE 1 OR TYPE 2
RFD1
TYPE 1
SACK GABIONS
DIRECTION OF FLOW
PLAN VIEW
3/4" DIA. REBAR STAKES
SECTION B-B
3:1 MAX.
3:1 MAX.
DITCH FLOW
"V" SHAPE
(PLAN VIEW)
3', 6' OR 9'
GALVANIZED STEEL WIRE MESH
TYPE 4 (SACK GABIONS)
GALVANIZED STEEL WIRE MESH
2' DIA.
SECTION A-A
SACK GABIONS
N.T.S.
WIDTH FOR PAYMENT
2' MIN.
LEVEL CRESTED WEIR
WEIR LENGTH
1' MIN.
4" MIN.
PROFILE
GALVANIZED WOVEN WIRE MESH (FOR TYPES 2 & 3)
2' MIN.
OPEN GRADED ROCK
TYPES 1 & 2 = 18"
TYPE 3 = 36"
4" MIN.
* STONE SIDE SLOPES SHOULD BE 2:1 OR FLATTER; DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6:1 OR FLATTER.
SECTION C-C
ROCK FILTER DAM
N.T.S.
PLANS SHEET LEGEND
TYPE 1 ROCK FILTER DAM RFD1
TYPE 2 ROCK FILTER DAM RFD2
TYPE 3 ROCK FILTER DAM RFD3
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
EROSION CONTROL DETAILS 2 OF 2
LITTLEELM
SHEET
24 OF 26
DECEMBER 2023


SINGLE OR TWIN FIXTURE MOUNTING ARMS
COBRAHEAD LIGHT FIXTURE
24'-0" ROUND TAPERED STEEL POLE
HAND HOLE
TYPE SA
POST TOP ACORN LIGHT FIXTURE
BANNER ARMS
14'-0" FLUTED STEEL POLE
MATCHING DECORATIVE BASE COVER W/ HAND HOLE
TYPE SB
SINGLE OR TWIN FIXTURE MOUNTING ARMS
TEARDROP LIGHT FIXTURE
25'-0" FLUTED TAPERED STEEL POLE
MATCHING DECORATIVE BASE COVER W/ HAND HOLE
BREAKAWAY BASE COUPLING
TYPE SC
FIXTURE TYPE | DESCRIPTION | TYPICAL LOCATIONS | ACCEPTABLE MANUFACTURER/MODEL NO.
SA | SINGLE OR TWIN COBRA-HEAD FIXTURE | PARKING AREAS, STREET MEDIANS | HADCO ROADFOCUS RFL AMERICAN ELECTRIC LIGHTING MODEL AUTOBAHN ATB2 LED
SB | ACORN FIXTURE | TRAILS, SIDEWALKS, PARKS/EVENT AREAS | HADCO JUMBLOCK LED MODEL RLS2/RLS2 HOLOPHANE WASHINGTON POSTLITE II LED
SC | SINGLE OR TWIN LUMINAIRE AREA FIXTURE | STREET MEDIANS, PARKS/EVENT AREAS | HADCO TEARDROP LED TXF9 HOLOPHANE TEARDROP MPL2 SKIRT LED
NOTES:
1. ALL LIGHTING LUMINAIRES SHALL USE LED LAMPS.
2. FIXTURES, POLES, BASES AND APPURTENANCES SHALL BE BLACK IN COLOR.
3. MATCHING POLE-MOUNTED BANNER ARMS MAY BE REQUIRED ON ANY FIXTURE DEPENDING ON LOCATION.
4. ALTERNATE MANUFACTURERS MAY BE ACCEPTED UPON APPROVAL BY THE TOWN ENGINEER.
LIGHTING DETAILS
N.T.S.
6"
6"
4 ½"
9"
Street Name
2100
PKWY
3"
6"
3"
LITTLEELM
1. LOCATION
– NINE INCH (9") EXTRUDED BLADES SHALL BE USED AT ALL INTERSECTIONS.
2. BLADE REQUIREMENTS
– NINE INCH (9") EXTRUDED BLADE SHALL BE ALUMINUM.
3. LETTERING ALIGNMENT
– STREET NAME SHALL BE LEFT JUSTIFIED.
– BLOCK NUMBERS SHALL BE LOCATED IN UPPER RIGHT HAND CORNER.
– ABBREVIATED STREET DESIGNATIONS SHALL BE LOCATED IN THE LOWER RIGHT HAND CORNER.
4. LETTERING FOR NINE INCH (9") EXTRUDED BLADES
– LETTERS SHALL BE UPPER & LOWERCASE.
– FONT SHALL BE FEDERAL HIGHWAY SERIES "B" OR SERIES "C" (MANUFACTURER WILL DETERMINE BEST SERIES TO USE BASED UPON LENGTH OF BLADE AND LENGTH OF NAME)
– LETTERS AND NUMBERS IN STREET NAME SHALL BE SIX INCHES (6") TALL.
– LETTERS IN ABBREVIATED STREET DESIGNATIONS AND BLOCK NUMBERS SHALL BE THREE INCHES (3") TALL (I.E. LN, PKWY, DR, CT, ETC.)
5. SIGN SHEETING AND COLORS
– SHEETING SHALL BE HIGH INTENSITY.
– BACKGROUND COLOR SHALL BE GREEN.
– LEGEND SHALL BE WHITE.
– TOWN OF LITTLE ELM LOGO SHALL BE LEFT JUSTIFIED. FOR SIGNS LOCATED OUTSIDE OF TOWN LIMITS, OMIT TOWN OF LITTLE ELM LOGO.
6. NO OUTLET STREETS
– FOR A STREET WITH ONLY ONE CUL-DE-SAC END (TYPICAL) A STANDARD W 14-2a "NO OUTLET" SHALL BE MOUNTED AT THE END OF STREET NAME BLADE.
– PARKING LOT STRIP SHALL BE WHITE
– IN THE CASE OF A STREET WITH TWO CUL-DE-SAC ENDS, TWO (2) STANDARD W 14-2a "NO OUTLET" SIGNS SHALL BE MOUNTED AT THE ENDS OF THE STREET NAME BLADE WITH ARROWS PLACED IN THE APPROPRIATE DIRECTIONS.
7. BLOCK NUMBER
– BLOCK NUMBERS ARE REQUIRED ON ALL STREET NAME BLADES, EVEN IF NO HOUSES OR BUILDINGS FRONT ONTO THE STREET
8. MANUFACTURER CONTACT
– BRANDON INDUSTRIES, INC. 1601 W. WILMETH ROAD, VICKINNEY, TEXAS 75069. (972) 542-3000, OR APPROVED EQUAL.
– DEVELOPERS AND CONTRACTORS ORDERING SIGNS SHOULD CONTACT PUBLIC WORKS AT (214) 975-0470.
STREET BLADE DETAIL
N.T.S.
PROJECT NAME
LITTLEELM
TOWN OF LITTLE ELM
CAPITAL IMPROVEMENTS PROJECT
"YOUR TAX DOLLARS AT WORK"
ENGINEER NAME
CONTRACTOR NAME
7"
7"
5"
5"
9"
4"
6"
4"
6"
4"
4"
3"
3"
9"
4'-0"
6'-0"
6'-0"
2'-6"
2'-6"
2'-6"
2'-0"
2'-0" MIN.
SIGN MAY BE ADAPTED TO USE SANDBAGS IF NECESSARY.
SIGN PANEL – ¾" LAMINATED DUOLOX MASONITE OR ½" MARINE PLYWOOD
FRAME – 2" X 4" STOCK
FRAME TO BE PAINTED "WHITE"
PAINT BACKGROUND OF SIGN "WHITE"
PAINT MESSAGE OF SIGN "BLUE"
ALL PAINT TO BE EXTERIOR GRADE
CONTRACTOR SHALL PLACE SIGN(S) AS DIRECTED BY THE OWNER AND WILL PROPERLY MAINTAIN THE SIGN(S) DURING CONSTRUCTION
PROJECT SIGN DETAIL
N.T.S.
4000 PSI CONCRETE FOUNDATION, GROUTED SMOOTH W/ 3/4" CHAMFER
ANCHOR BOLTS PER MANUFACTURERS RECOMMENDATIONS
6"
3" MIN. CLR.
#3 SPIRAL @ 4" PITCH
5'-0" FOR POLES ≤ 15-FT
7'-0" FOR POLES > 15-FT
6 – #8 VERTICAL BARS
CONDUIT, WIRING & GROUNDING PER NEC CODE
2'-0"ø
NOTES:
1. THIS DETAIL IS A REPRESENTATION OF THE MINIMUM REQUIREMENTS FOR CONSTRUCTION. THE DESIGN ENGINEER IS RESPONSIBLE FOR CONCRETE FOUNDATION DESIGN, INCORPORATING RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
2. CONCRETE AND REINFORCING STEEL TO BE PLACED IN ACCORDANCE WITH ACI CODE.
LIGHT POLE BASE DETAIL
N.T.S.
ALUMINUM U-CHANNEL BLADE MOUNTING HARDWARE
TWITCO STANDARD SIGNAGE
2-1/2" SCH. 80 HDG STEEL SIGN POST
7'-0" MIN.
HDG STEEL TRIANGULAR BREAKAWAY SLIP BASE ASSEMBLY
36" HDG STEEL STUB POST BASE
4" MAX.
12" #4 REBAR THROUGH 3/4" HOLE IN STUB
18" DIA. x 48" DP. 3,000 PSI CONCRETE
NOTES:
1. SLIP BASE BOLTS, NUTS AND WASHERS SHALL BE PER ASTM A325 OR A449, GALVANIZED PER ASTM A454.
STREET SIGN POST DETAIL
N.T.S.
MIN. 40'-0" ACCESS CLEARANCE (80'-0" MAX.)
1"ø GATE HOD KEEPER SET IN CONC. (TYP. 1 PER GATE)
SOLID OPAQUE METAL GATE(S) (CHAINLINK NOT ALLOWED) MAX. 4" GAP BETWEEN BOTTOM OF GATE AND GROUND.
14'-0"
8'-0" HIGH BRICK OR STONE WALL ENCLOSURE OF A COLOR MATCHING THE PRIMARY BUILDING
12'-0" (SINGLE PAD)
29'-0" (DOUBLE PAD)
NOTES:
1. ENGINEERED CONCRETE FOUNDATIONS WITH PIERS ARE REQUIRED, PER REVIEW AND APPROVAL BY TOWN ENGINEER.
2. NEW COMMERCIAL DEVELOPMENT SHALL PROVIDE SPACE FOR A MINIMUM OF TWO DUMPSTER PADS.
COMMERCIAL DUMPSTER SCREENING ENCLOSURE DETAIL
N.T.S.
BACK OF CURB
15'-0" MIN.
RIGHT-OF-WAY
15'-0" MIN.
CORNER RESIDENTIAL LOT
PROP. LINE
CEDAR BOARD ON BOARD FENCE
RESIDENTIAL FENCE AND/OR RETAINING WALL
15'-0" MIN.
NOTES:
1. ALL RESIDENTIAL FENCES FACING STREETS, OPEN AREAS, OR COMMERCIAL ZONES MUST BE 8'-0" HIGH CEDAR BOARD-ON-BOARD STYLE.
2. FENCES AND RETAINING WALL MUST BE AT LEAST 15 FEET FROM EDGE OF PAVEMENT.
FENCE/RETAINING WALL LAYOUT DETAIL
N.T.S.
4x4 POST CAP
NOTCHED CROSS-LAP JOINT
4" FROM BACK OF CURB
6"
4'-0"
18"
18"
3'-8"
GREEN TREATED OR CEDAR 4x4 POST
2'-6" TO FACE OF CURB OR EDGE OF PAVEMENT
3'-0"
NOTES:
1. ATTACH POST, BRACE AND CROSS MEMBERS USING HOT DIPPED, GALVANIZED 4" LAG SCREWS IN PREDRILLED, COUNTER-SUNK HOLES.
2. CONTRACTOR TO INSTALL GIBRALTAR INDUSTRIES STANDARD SIZE BLACK GALVANIZED MAILBOX OR APPROVED EQUAL.
TYPICAL POST MAILBOX CONSTRUCTION
N.T.S.
MASONRY DETAILS OF MAILBOX TO BE PROVIDED BY HOMEBUILDER AND APPROVED BY TOWN PRIOR TO CONSTRUCTION
4" FROM BACK OF CURB
3'-8"
1'-0" TO FACE OF CURB OR EDGE OF PAVEMENT
4" MIN.
6" THK. CONC. PAD EXTEND MIN. 4" BEYOND FACE OF BRICK
3'-0"
1'-0"ø CONC. PIER
NOTES:
1. CONCRETE PAD AND PIER SHALL BE CONSTRUCTED IN A SINGLE MONOLITHIC POUR.
2. CONTRACTOR TO INSTALL GIBRALTAR INDUSTRIES STANDARD SIZE BLACK GALVANIZED MAILBOX OR APPROVED EQUAL.
TYPICAL BRICK PAD MAILBOX CONSTRUCTION
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE: NONE
JOB NUMBER: -
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
MISCELLANEOUS DETAILS 1 OF 2
LITTLEELM
SHEET
25 OF 26
DECEMBER 2023


NOTES:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF ALL ITEMS. SHOP DRAWINGS SHALL INCLUDE ALL SHOP AND ERECTION DETAILS.
2. STEEL TUBING SHALL CONFORM TO ASTM A500, GR B. ALL SURFACES SHALL BE PRIME COAT PAINTED WITH 2 COATS OF TNEMEC RED METAL PRIMER.
3. ALL SURFACES SHALL BE PAINTED WITH 2 COATS OF BENJAMIN MOORE RUST INHIBITOR PAINT SEMI-GLOSS BLACK OR APPROVED EQUAL. ALL TUBES AND FITTINGS SHALL BE FLUSH AND FREE OF SHARP EDGES, SPURS, AND DENTS. ALL RAILINGS SHALL BE FABRICATED IN THE SHOP TO FIT FIELD CONDITIONS.
4. ALL ITEMS SHALL BE INSTALLED AND SET IN THEIR CORRECT LOCATIONS AS SHOWN ON THE DRAWINGS. THEY SHALL BE SET LEVEL, PLUMB, SQUARE, AND AT THE PROPER ELEVATION.
5. POSTS SHALL BE SET PLUM. RAILS SHALL FOLLOW THE SLOPE. CONTRACTOR SHALL VERIFY CONDITIONS PRIOR TO FABRICATION.
90° ROTATION
90° ROTATION
GATE LATCH (SEE DETAIL)
6"x6"x¼" STEEL POST (TYP.)
GATE HINGE (SEE DETAIL)
1"ø GATE ROD KEEPER SET IN CONC. (TYP. 1 PER GATE)
GATE HINGE (SEE DETAIL)
STONE WALL
STONE COLUMN
20'-0"
PLAN VIEW
COLUMN NOTES:
1. ALL CONCRETE USED IN FOOTINGS AND PIERS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI. CONCRETE USED IN COLUMNS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI.
2. ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, ASTM A615 GR60 EXCEPT STIRRUPS SHALL BE GR40 AND SPIRALS SHALL BE ASTM A82 GR60.
3. CONCRETE FOR DRILLED PIERS SHALL BE POURED WITHIN 8 HOURS OF DRILLING PIER HOLES.
CAST STONE LOW RISE PYRAMIDAL COLUMN CAP WITH BULLNOSE EDGES
TOWN LOGO STYLE 2 LOGO TO BE PROVIDED AND APPROVED BY TOWN (OPTIONAL)
SANDSTONE (NATURAL) STONE FACING
FINISH GRADE
CONCRETE PIER CAP
1'-6" DIA. CONCRETE PIER
ELEVATION WITH TOWN LOGO
18"
12"
90°
4-#5 VERT @ 90° SPACING AROUND SPIRAL
#3 ROUND STIRRUP @ 18" O.C.
CONCRETE PIER TYP. SECTION
2'-2"
4"
1" OVERHANG
ANCHOR BOLT
GROUT FILL VOIDS
TYPE S MORTAR JOINTS W/ GALVANIZED LADDER WIRE EACH COURSE.
8"x8"x16" CMU, GROUT FILL (TYP.) 4-#5 REBAR VERT., TIE TO FOOTING
8'-6"
4-#5 BARS EXTEND TO TOP OF COLUMN
2'-0" MIN.
4-#5 BARS @ 1'-6" O.C. ALTERNATE TURNS IN FOOTING
FINISH GRADE
3-#3 STIRRUPS
4-#5 HOOKS, 8"x36"
3-#5 BARS CONTINUOUS TOP AND BOTTOM
1'-6"
DOUBLE TIE AT TOP
4-#5 BAR VERTICAL
2'-8"
10'-0" MIN. DEPTH IN CLAY OR WEATHERED ROCK, OR 4'-0" MIN. PENETRATION INTO UNWEATHERED ROCK
#3 ROUND STIRRUP @ 1'-6" O.C.
REINFORCEMENT
STONE COLUMN DETAIL
N.T.S.
2'-0"
4"
1/2" OVERHANG
4" THICK MILLSAP STONE FACING
3'-10"
FINISH GRADE
CONCRETE PIER CAP
ELEVATION
2'-3"
CHOPPED STONE CAP
TYPE S MORTAR JOINTS W/ GALVANIZED LADDER WIRE EACH COURSE
8"X8"X16" CMU, GROUT FILL, ALTERNATE BLOCK DIRECTION
4'-2"
4-#5 BARS EXTEND TO TOP OF COLUMN, TIE TO FOOTING REINF.
MORTAR FILL ALL VOIDS
3-#3 STIRRUPS
3-#5 BARS TOP AND BOTTOM
1'-6"
2'-6"
REINFORCEMENT
SMALL STONE COLUMN DETAIL
N.T.S.
2"x3"x¼" TUBULAR STEEL RAIL
1" SQ. TUBULAR BARS @ 4" O.C.
6"x6"x¼" STEEL POST (TYP.), EXTEND TO BOTTOM OF PIER
10'-0"
GATE HINGE (TYP.) (SEE DETAIL)
STONE COLUMN
STONE WALL
LITTLE ELM
GATE LATCH (SEE DETAIL)
6" CONC. CURB
TOWN OF LITTLE ELM LOGO ¼" STEEL PLATE ON 1" SQ. STEEL TUBE FRAME (SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION)
BLACK RUBBER SPRING-LOADED WHEEL ON EACH GATE (BOLTED TO INSIDE OF GATE FRAME)
GATEKEEPER (SEE DETAIL)
2"x3"x¼" TUBULAR STEEL FRAME
FINISHED GRADE
ELEVATION
20'-0" DOUBLE SWING GATE
N.T.S.
1"
1/2"
PLAN
6"x6"x¼" STEEL TUBULAR POST
1/2"ø HOLES
2"x3" STL. TUBE GATE FRAMES
WELDS
¼" THK. STL. PLATE
ELEVATION
GATE LATCH DETAIL
N.T.S.
11 3/4"
3 3/4"
6"
2"
2"x3"x¼" TUBULAR STEEL GATE FRAME
1 1/2"
3"
PLAN
WELDS (TYP.)
NARROW-PROFILE, WELD-ON, GREASEABLE HINGES. INSTALL HINGES SO GATE CANNOT BE LIFTED OFF.
ELEVATION
GATE HINGE DETAIL
N.T.S.
3"x2"x1/4" STL. ANGLE BRACKET WELDED TO VERT. FRAME RAIL
1"ø HOLE EA. BRACKET
1/8" CHAMFER ENDS OF KEEPER ROD
WELD 3/4" I.D.x 1 1/2" L x 1/4" THK COLLAR 4" BELOW BOTTOM OF BRACKET
3/4"ø KEEPER ROD
2'-10"L x 3/4"ø STL. KEEPER ROD
2"ø x 1/2" THK. STL. WELDED TO KEEPER ROD
3"x2"x1/4" STL. ANGLE BRACKET WELDED TO VERT. FRAME RAIL
3/8"ø HOLE DRILLED THROUGH 1/2" STL. & ANGLE BRACKET
1"ø HDG ROD KEEPER EPOXIED IN CONCRETE
GATE KEEPER ROD DETAIL
N.T.S.
10'-0" O.C.
2" SQ. RAIL INSERT (TYP.)
4" SQ. CEDAR RAILS
4" SQ. CEDAR POST
FINISHED GRADE
12" DIA. CONCRETE FOOTING
4" DEPTH GRAVEL BASE
1'-0"
NOTE:
1. FENCE SHALL BE CONSTRUCTED OF WESTERN RED CEDAR.
SPLIT RAIL FENCE DETAIL
N.T.S.
1"X2"X7" TRIM
8'-0" PICKET
5"
CAP DETAIL
N.T.S.
BOARD ON BOARD FENCE NOTES:
1. PICKETS TO BE ¾"x5"x8" NO.1 CEDAR
2. BOARD ON BOARD WITH MAX 4" SPACING
3. ALL NAILS TO BE STAINLESS STEEL (316 OR 304)
4. GALVANIZED POST TO BE 2½" MINIMUM
5. LAGS TO BE ¾"x1½"
6. ROUGH TRIM TO BE EQUALLY SPACED
7. ALL CEDAR MATERIAL TO BE PRE-STAINED. STAIN SAMPLE SHALL BE APPROVED BY TOWN PRIOR TO INSTALLATION.
8. STONE COLUMNS TO BE INSTALL AT CORNERS AND MIDPOINT OF FENCE SECTION, UNLESS OTHERWISE INDICATED ON PLANS.
2"X6"X12" TOP CAP
FLAT CAP W/ TRIM SEE DETAIL THIS SHEET
ROUGH TRIM
8'-5"
8'
WALVANIZED KICK BOARD
12" WIDE x 36" DEEP CONCRETE FOUNDATIONS
ENCLOSE ALL EXPOSED GALVANIZED STEEL POSTS AND HARDWARE WITHIN A BOX CONSTRUCTED OF CEDAR BOARDS MATCHING THE FENCE
BOARD ON BOARD CEDAR FENCE
N.T.S.
DATE
REVISION
NO.
DESIGN BY:
DRAWN BY:
CHECKED BY:
SCALE:
NONE
JOB NUMBER:
TOWN OF LITTLE ELM, TEXAS
STANDARD DETAILS
MISCELLANEOUS DETAILS 2 OF 2
LITTLEELM
SHEET
26 OF 26
DECEMBER 2023

Date:	01/16/2024
Agenda Item #:	6. E.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Present, Discuss, and Consider Action on a **Development Agreement between the Town of Little Elm and Happy Tails of Texas LLC.**

DESCRIPTION:

The attached agreement is to solidify the Planned Development and the intended design of the proposed development as outlined in the associated development documents and plans for The Dog Stop Planned Development.

BUDGET IMPACT:

This item has no budget impact.

RECOMMENDED ACTION:

Staff recommends Council to consider the attached agreement.

Attachments

Development Agreement - The Dog Stop PD

STATE OF TEXAS §
§
COUNTY OF DENTON §

DEVELOPMENT AGREEMENT FOR _The Dog Stop (PD-23-03342)_

This Development Agreement for The Dog Stop ("**Agreement**") is entered into between Happy Tails of Texas, LLC ("**Developer**"), whose address for purposes of this Agreement is 16101 Madison Square Way, Prosper, TX 75078, and the Town of Little Elm, Texas ("**Town**"), whose address for purposes of this Agreement is 100 W. Eldorado Parkway, Little Elm, TX 75068. Developer and the Town are sometimes referred herein together as the "**Parties**" and individually as a "**Party**."

Recitals:

1. Developer is the owner of approximately 2.476 acres located at 802 and 804 East Eldorado Parkway in the Town of Little Elm, Texas (the "**Property**"), which Property is more particularly described in **Exhibit A** attached hereto.

2. In furtherance of the development of the Property, the Parties have negotiated certain matters regarding the Property as set forth in this Agreement.

3. The Parties seek to memorialize these negotiated matters and to include them in this contractually-binding Agreement.

NOW, THEREFORE, for and in consideration of the above and foregoing premises, the benefits to each of the Parties from this Agreement, and other good and valuable consideration, the sufficiency of which is hereby acknowledged and agreed, the Parties do hereby agree as follows:

Section 1. Incorporation of Premises. The above and foregoing Recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

Section 2. Term. This Agreement shall be effective as of the date of execution of this Agreement by the last of the Parties to do so ("**Effective Date**"). This Agreement shall remain in full force and effect from the Effective Date until terminated by the mutual agreement of all of the Parties in writing, or until all obligations in the Agreement have been fulfilled ("**Term**").

Section 3. Agreements. The Parties agree as follows:

A. The negotiated and agreed upon zoning and development standards contained in the Dog Stop PD Ordinance, No. 1744, attached hereto as **Exhibit B**, which incorporate by reference the general zoning regulations of the Town's zoning ordinance, are hereby adopted and incorporated into this agreement as contractually-binding obligations of the Developer.

B. Hammerhead paving shall be removed at the time the adjacent property to the west develops and provides Fire and Access easements. Upon hammerhead removal, tree and shrub planting shall be provided in compliance with landscaping requirements per Town Ordinance, at the time of planting.

C. Future publicly accessible dog park areas must follow the minimum standards of maintenance and operation attached as part of **Exhibit C**.

D. Dog splash pad examples shall serve as reference of minimal standard and are included as part of **Exhibit C**.

Section 4. Miscellaneous.

A. Applicability of Town Ordinances. When the Property is developed, Developer shall construct all structures on the Property, in accordance with all applicable Town ordinances and building/construction codes, whether now existing or arising prior to such construction in the future.

B. Default/Mediation. No Party shall be in default under this Agreement until notice of the alleged failure of such Party to perform has been given (which notice shall set forth in reasonable detail the nature of the alleged failure) and until such Party has been given a reasonable time to cure the alleged failure (such reasonable time determined based on the nature of the alleged failure, but in no event less than thirty (30) days after written notice of the alleged failure has been given). In addition, no Party shall be in default under this Agreement if, within the applicable cure period, the Party to whom the notice was given begins performance and thereafter diligently and continuously pursues performance until the alleged failure has been cured. If either Party is in default under this Agreement, the other Party shall have the right to enforce the Agreement in accordance with applicable law, provided, however, in no event shall any Party be liable for consequential or punitive damages. In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

C. Venue. This Agreement and any dispute arising out of or relating to this Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without reference to its conflict of law rules. In the event of any dispute or action under this Agreement, venue for any and all disputes or actions shall be instituted and maintained in Denton County, Texas.

D. Relationship of Parties. It is acknowledged and agreed by the Parties that the terms hereof are not intended to and shall not be deemed to create a partnership, joint venture, joint enterprise, or other relationship between or among the Parties.

E. Severability. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect other provisions, and it is the intention of the Parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision shall be added to this Agreement which is legal, valid and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

F. **Cumulative Rights and Remedies**. The rights and remedies provided by this Agreement are cumulative and the use of any one right or remedy by either Party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the Parties may have by law statute, ordinance, or otherwise. The failure by any Party to exercise any right, power, or option given to it by this Agreement, or to insist upon strict compliance with the terms of this Agreement, shall not constitute a waiver of the terms and conditions of this Agreement with respect to any other or subsequent breach thereof, nor a waiver by such Party of its rights at any time thereafter to require exact and strict compliance with all the terms hereof. Any rights and remedies any Party may have with respect to the other arising out of this Agreement shall survive the cancellation, expiration or termination of this Agreement, except as otherwise expressly set forth herein.

G. **Exhibits**. All exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

H. **Surviving Rights**. Any of the representations, warranties, covenants, and obligations of the Parties, as well as any rights and benefits of the parties, pertaining to a period of time following the termination or expiration of this Agreement shall survive termination or expiration.

I. **Applicable Laws**. This Agreement is made subject to the existing provisions of the Charter of the Town of Little Elm, its present rules, regulations, procedures and ordinances, and all applicable laws, rules, and regulations of the State of Texas and the United States.

J. **Authority to Execute**. The undersigned officers and/or agents of the Parties hereto are the properly authorized persons and have the necessary authority to execute this Agreement on behalf of the Parties hereto.

K. **Amendments**. This Agreement may be only amended or altered by written instrument signed by the Parties.

L. **Headings**. The headings and captions used in this Agreement are for the convenience of the Parties only and shall not in any way define, limit or describe the scope or intent of any provisions of this Agreement.

M. **Entire Agreement**. This Agreement is the entire agreement between the Parties with respect to the subject matters covered in this Agreement. There are no other collateral oral or written agreements between the Parties that in any manner relates to the subject matter of this Agreement, except as provided or referenced in this Agreement.

N. **Filing in Deed Records**. This Agreement shall be recorded in the real property records of Denton County, Texas. This Agreement and all of its terms, conditions, and provisions is and shall constitute a restriction and condition upon the development of the Property and all portions thereof and a covenant running with the Property and all portions thereof, and is and shall be binding upon Developer and all of Developer's heirs, successors, and assigns and the future owners of the Property and any portion thereof;

provided, however, this Agreement shall not constitute an obligation of or be deemed a restriction or encumbrance with respect to any final platted residential lot upon which a completed home has been constructed.

O. **Notification of Sale or Transfer; Assignment of Agreement**. Developer shall notify the Town in writing of any sale or transfer of all or any portion of the Property, within ten (10) business days of such sale or transfer. Developer has the right (from time to time without the consent of the Town, but upon written notice to the Town) to assign this Agreement, in whole or in part, and including any obligation, right, title, or interest of Developer under this Agreement, to any person or entity (an "**Assignee**") that is or will become an owner of any portion of the Property or that is an entity that is controlled by or under common control with Developer. Each assignment shall be in writing executed by Developer and the Assignee and shall obligate the Assignee to be bound by this Agreement with respect to the portion of the Property transferred to Assignee. If the Property is transferred or owned by multiple parties, this Agreement shall only apply to, and be binding on, such parties to the extent of the Property owned by such successor owner, and if the Developer or any Assignee is in default under this Agreement, such default shall not be an event of default for any non-defaulting Assignee which owns any portion of the Property separate from the defaulting Developer or Assignee. A copy of each assignment shall be provided to the Town within ten (10) business days after execution. Provided that the successor developer assumes the liabilities, responsibilities, and obligations of the assignor under this Agreement with respect to the Property transferred to the successor developer, the assigning party will be released from any rights and obligations under this Agreement as to the Property that is the subject of such assignment, effective upon receipt of the assignment by the Town. No assignment by Developer shall release Developer from any liability that resulted from an act or omission by Developer that occurred prior to the effective date of the assignment. Developer shall maintain true and correct copies of all assignments made by Developer to Assignees, including a copy of each executed assignment and the Assignee's Notice information.

P. **Sovereign Immunity**. The Parties agree that the Town has not waived its sovereign immunity from suit by entering into and performing its obligations under this Agreement.

Q. **Exactions/Infrastructure Costs**. Developer has been represented by legal counsel, or has had an opportunity to do so, in the negotiation of this Agreement, and been advised, or has had the opportunity to have legal counsel review this Agreement and advise Developer, regarding Developer's rights under Texas and federal law. Developer hereby waives any requirement that the Town retain a professional engineer, licensed pursuant to Chapter 1001 of the Texas Occupations Code, to review and determine that the exactions required by the Town in this Agreement are roughly proportional or roughly proportionate to the proposed development's anticipated impact. Developer specifically reserves its right to appeal the apportionment of municipal infrastructure costs in accordance with § 212.904 of the Texas Local Government Code; however, notwithstanding the foregoing, Developer hereby releases the Town from any and all liability under § 212.904 of the Texas Local Government Code, as amended, regarding or related to the cost of those municipal infrastructure requirements imposed by this Agreement.

R. **Waiver of Texas Government Code § 3000.001 et seq**. With respect to the improvements constructed on the Property pursuant to this Agreement, Developer hereby waives any right, requirement or enforcement of Texas Government Code §§ 3000.001-3000.005.

S. **Rough Proportionality**. Developer hereby waives any federal constitutional claims and any statutory or state constitutional takings claims under the Texas Constitution with respect to infrastructure requirements imposed by this Agreement. Developer and the Town further agree to waive and release all claims one may have against the other related to any and all rough proportionality and individual determination requirements mandated by the United States Supreme Court in *Dolan v. City of Tigard*, 512 U.S. 374 (1994), and its progeny, as well as any other requirements of a nexus between development conditions and the projected impact of the terms of this Agreement, with respect to infrastructure requirements imposed by this Agreement.

T. **Form 1295 Certificate.** The Developer agrees to comply with Texas Government Code, Section 2252.908 and in connection therewith, the Developer agrees to go online with the Texas Ethics Commission to complete a Form 1295 Certificate and further agrees to print the completed certificate and execute the completed certificate in such form as is required by Texas Government Code, Section 2252.908 and the rules of the Texas Ethics Commission and provide to the Town, at the time of delivery of an executed counterpart of this Agreement, a duly executed completed Form 1295 Certificate.

U. **Undocumented Workers Provision.** The Developer certifies that Developer does not and will not knowingly employ an undocumented worker in accordance with Chapter 2264 of the Texas Government Code, as amended. If during the Term of this Agreement, Developer is convicted of a violation under 8 U.S.C. § 1324a(f), Developer shall repay the amount of any public subsidy provided under this Agreement to Developer plus six percent (6.0%), not later than the 120th day after the date the Town notifies Developer of the violation.

V. **Non-Boycott of Israel Provision.** In accordance with Chapter 2270 of the Texas Government Code, a Texas governmental entity may not enter into an agreement with a business entity for the provision of goods or services unless the agreement contains a written verification from the business entity that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the agreement. Chapter 2270 of the Texas Government Code does not apply to a (1) a company that is a sole proprietorship; (2) a company that has fewer than ten (10) full-time employees; or (3) the contract has a value of less than One Hundred Thousand Dollars ($100,000.00). Unless Developer is not subject to Chapter 2270 of the Texas Government Code for the reasons stated herein, the signatory executing this Agreement on behalf of Developer verifies that Developer does not boycott Israel and will not boycott Israel during the Term of this Agreement.

W. **Prohibition on Contracts with Certain Companies Provision.** In accordance with Section 2252.152 of the Texas Government Code, the Parties covenant and agree that Developer is not on a list maintained by the State Comptroller's office prepared and maintained pursuant to Section 2252.153 of the Texas Government Code.

X. Report Agreement to Comptroller's Office. Town covenants and agrees to report this Agreement to the State Comptroller's office within fourteen (14) days of the Effective Date of this Agreement, in accordance with Section 380.004 of the Texas Government Code, as added by Texas House Bill 2404, 87th Tex. Reg. Session (2021) (effective September 1, 2021). [For Chapter 380 Agreements]

Y. Verification Against Discrimination of Firearm or Ammunition Industries. Pursuant to Texas Government Code Chapter 2274, (as added by Texas Senate Bill 19, 87th Tex. Reg. Session (2021) (effective September 1, 2021)) unless otherwise exempt, if the Developer employs at least ten (10) fulltime employees and this Agreement has a value of at least $100,000 that is paid wholly or partly from public funds of the Town, the Developer represents that: (1) the Developer does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) the Developer will not discriminate during the Term of the Agreement against a firearm entity or firearm trade association.

Z. Verification Against Discrimination Developer Does Not Boycott Energy Companies. Pursuant to Texas Government Code Chapter 2274, (as added by Texas Senate Bill 13, 87th Tex. Reg. Session (2021) (effective September 1, 2021)) unless otherwise exempt, if the Developer employs at least ten (10) fulltime employees and this Agreement has a value of at least $100,000 that is paid wholly or partly from public funds of the Town, the Developer represents that: (1) the Developer does not boycott energy companies; and (2) the Developer will not boycott energy companies during the Term of this Agreement.

EXECUTED by the Parties on the dates set forth below, to be effective as of the date first written above.

DEVELOPER
a _____ company

By: _____

Date:_____

TOWN OF LITTLE ELM, TEXAS

By:_____
Matt Mueller
Town Manager

Date:_____

ATTEST:

By:_____
Caitlan Biggs
Town Secretary

STATE OF TEXAS §
§
COUNTY OF DENTON §

Before me, the undersigned authority, on this _____ day of _____, 2024, personally appeared MATT MUELLER, Town Manager of the Town of Little Elm, Texas, 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 consideration therein expressed.

[Seal]

By:_____
Notary Public, State of Texas

My Commission Expires:_____

STATE OF TEXAS §
§
COUNTY OF _____ §

Before me, the undersigned authority, on this _____ day of _____, 2024, personally appeared _____, 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 consideration therein expressed and in the capacity of a duly authorized representative of _____.

[Seal]

By:_____
Notary Public, State of Texas

My Commission Expires:_____

EXHIBIT A

Property Description

METES AND BOUNDS DESCRIPTION
2.476 ACRES
OUT OF LOT 1 AND LOT 2, BLOCK A, CARTER ESTATES
IN THE MATTHEW JONES SURVEY, A-667
TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS

All that certain 2.476 acres of land, which is out of the property described in the deeds to Eduardo Chaparro and Manuel Alonzo, recorded in Document Number 2016-18030 and 2017-1405 in the Deed Records of Denton County, Texas (D.R.D.C.T.), which is the remainder of Lot 1 and Lot 2, Block A, Carter Estates, recorded in Cabinet P, Slide 347 in the Plat Records of Denton County, Texa (P.R.D.C.T.), in the Matthew Jones Survey, A-667, Town of Little Elm, Denton County, Texas and more particularly described by metes and bounds as follows: (All bearings shown hereon are based on the Texas Coordinate System of 1983, North Central Zone)

BEGINNING at a 1/2" iron rod found for the southwest corner of the 37 square foot right-of-way dedication to the State of Texas, recorded in Document Number 2009-14727 D.R.D.C.T., common to the northeast corner of Tract 2 – 0.418 acres, described in the deed to Premier Family Limited Partnership, recorded in Document Number 2013-128480 D.R.D.C.T., in the south right-of-way line of East Eldorado Parkway (R.O.W. Varies) and in the west line of said Lot 1, Block A, Carter Estates, and from which a found 1/2" iron rod bears South 73° 28’ West - 0.27', which is a point of a curve to the right, having a central angle of 05° 40' 49”, a radius of 1086.00', and a chord bearing and distance of North 56° 50' 07” East – 107.62’;

THENCE along said curve to the left, along the south right-of-way line of said East Eldorado Parkway, an arc distance of 107.66’ to a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most northerly northeast corner of the herein described tract, common to the northwest corner of the 0.328 acre tract described in the deed to the Town of Little Elm, recorded in Document Number 2008-5764 D.R.D.C.T.

THENCE South 29° 34' 28" East - 110.27' to a 1/2" iron rod with a cap found for the southwest corner of said 0.328 acre tract;

THENCE North 83° 15' 13" East - 76.74' to the most easterly northeast corner of the herein described tract, in the west line of Lot 1R, Block 1, One Elm Place Addition, recorded in Document Number 2016-205 P.R.T.C.T., from which a 1/2" iron rod with a cap stamped “LS 3047” found for the northwest corner of said Lot 1R, Block 1, One Elm Place Addition bears North 00° 34' 29" East – 145.54', and from which a found 1/2" iron rod with a cap bears North 83° 15' 13" East – 0.94’;

THENCE South 00° 34' 29" West - 126.97' to a Corp of Engineers brass monument found for the most easterly southeast corner of the herein described tract, in the north line of Lake Lewisville;

THENCE South 29° 03' 18" West - 106.57' (plat called 107.06’) along the north line of said Lake Lewisville, to a Corp of Engineers brass monument found for corner;

THENCE South 03° 21' 22" West - 305.63' continuing along the north line of said Lake Lewisville, a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most southerly southeast corner of the herein described tract,

THENCE South 61° 00' 31" West - 170.93' continuing along the north line of said Lake Lewisville, a 1/2" iron rod found for the southwest corner of the herein described tract, common to the southeast corner Tract 1 -1.591 acres described in said deed to Premier Family Limited Partnership;

THENCE North 00° 10' 54" West - 333.61' (plat called 334.02’) to a P.K. Nail in concrete found for a point for corner, common to the most easterly northeast corner of said Tract 1, common to the southeast corner of said Tract 2;

THENCE North 00° 08' 43" East - 302.49' to the POINT OF BEGINNING and containing 2.476 acres of land.

EXHIBIT B

The Dog Stop PD Ordinance, No. 1744

TOWN OF LITTLE ELM

ORDINANCE NO. 1744

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE, BY ESTABLISHING A NEW PLANNED DEVELOPMENT – LIGHT COMMERCIAL (PD-LC) DISTRICT IN ORDER TO ALLOW A NEW COMMERCIAL DEVELOPMENT WITH MODIFIED USES AND DEVELOPMENT STANDARDS ON APPROXIMATELY 2.476 ACRES OF LAND LOCATED AT 802 AND 804 EAST ELDORADO PARKWAY, GENERALLY SOUTH OF THE INTERSECTION OF LAKE TRAIL DRIVE AND EAST ELDORADO PARKWAY; PROVIDING A SAVINGS CLAUSE; CORRECTING THE OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, the Town possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate land uses under Chapter 211 of the Texas Local Government Code; and

WHEREAS, a request for Planned Development-Light Commercial (PD-LC) with modified development standards on approximately 2.476 acres of land, more specifically described in the exhibits, attached hereto; and

WHEREAS, this zoning change is in accordance with the most current adopted Comprehensive Plan of the Town of Little Elm; and

WHEREAS, the Town Council and the Planning & Zoning Commission of the Town of Little Elm, in compliance with the laws of the State of Texas and the ordinances of the Town of Little Elm, have given the required notices and held the required public hearings and afforded a full and fair hearing to all property owners generally and to all persons interested in and situated in the affected area and in the vicinity thereof regarding the requested zoning change described herein; and

WHEREAS, at its regular meeting held on December 7, 2023 the Planning & Zoning Commission considered and made recommendations on Case No. PD-23-03342; and

WHEREAS, after due deliberations and consideration of the recommendation of the Planning & Zoning Commission and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determined that the request is in the interest of public health, safety and welfare of the citizens of the Town of Little Elm.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. ZONING AMENDMENT. That Ordinance No. 226 of the Town of Little Elm, Texas, the same being the Comprehensive Zoning Ordinance of the Town, is hereby amended by establishing a new Planned Development-Light Commercial (PD-LC) based on Light Commercial (LC) district requirements with modified uses and development standards, on property located at 802 and 804 East Eldorado, within Little Elm's town limits, on approximately 2.476 acres of land more particularly described in **Exhibit A**, and attached hereto, subject to all of the terms and conditions set forth herein, the terms and conditions of the Comprehensive Zoning Ordinance, and all other applicable ordinances, laws, rules, regulations, and standards.

SECTION 3. CONDITIONS AND REGULATIONS. The permitted standards shall be in accordance with the Light Commercial (LC) District, and all applicable provisions of Chapter 106 – Zoning Ordinance in general, plus as specified herein:

a. The Zoning and Land Use Regulations, and all conditions set forth in **Exhibit B** attached hereto and made a part hereof for all purposes shall be adhered to in their entirety for the purposes of this Planned Development. In the event of conflict between the provisions of **Exhibit B** and provisions of any other exhibit, the provisions of **Exhibit B** control.

b. Dog Kennel with outside runs, dog splash pad, and future publicly accessible dog parks shall be allowed as shown in **Exhibit C**.

c. Hammerhead paving shall be removed at the time the adjacent property to the west develops and provides Fire and Access easements. Upon hammerhead removal, tree and shrub planting shall be provided in compliance with

landscaping requirements per Town Ordinance, at the time of planting.

SECTION 4. PLANNED DEVELOPMENT MASTER PLAN. The Concept Plan and related plans, images, and documents approved and described as **Exhibit C** attached hereto and made a part hereof are approved. The subject property shall be improved in accordance with the plans set forth in **Exhibit C**.

a) If, after two years from the date of approval of the Planned Development Master Plan, no substantial development progress has been made within the PD, then the Planned Development Master Plan shall expire. If the Planned Development Master Plan expires, a new Planned Development Master Plan must be submitted and approved according to the procedures within the Zoning Ordinance, Planned Development Districts. An extension of the two year expiration shall be granted if a development application for the PD has been submitted and is undergoing the development review process or if the Director of Development Services determines development progress is occurring.

b) The Planned Development Master Plan shall control the use and development of the property, and all building permits and development requests shall be in accordance with the plan until it is amended by the City Council.

c) If a change to the Concept Plan, if any, is requested, the request shall be processed in accordance with the development standards in effect at the time the change is requested for the proposed development.

SECTION 5. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are indirect conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. ZONING MAP. The official zoning map of the Town shall be amended to reflect the changes in zoning made by this ordinance.

SECTION 6. PENALTY. Any person, firm, or corporation violating any of the provision of this ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars ($2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

SECTION 7. SEVERABILITY. The sections, paragraphs, sentences , phrases, and words of this Ordinance are severable, and if any section or provision of this ordinance or the

application of that section or provision to any person, firm, corporation, situation or circumstance is for any reason judged invalid or unconstitutional, the adjudication shall not affect any other section or provision of this ordinance or the application of any other section or provision to any person, firm, corporation, situation or circumstance, nor shall adjudication affect any other section or provision of the Comprehensive Zoning Ordinance of the Town of Little Elm, Texas, and the Town Council hereby declares that it would have adopted the valid portions and applications of the ordinance without the valid parts and to this end the provisions of this ordinance shall remain in full force and effect.

SECTION 8. REPEALER. That all ordinances of the Town of Little Elm in conflict with the provisions of this ordinance be and the same are hereby repealed to the extent of that conflict.

SECTION 9. EFFECTIVE DATE. That this Ordinance shall take effect immediately upon its adoption and publication in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

Town of Little Elm, Texas

_____

Curtis Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

Exhibit A

Metes and Bounds

METES AND BOUNDS DESCRIPTION
2.476 ACRES
OUT OF LOT 1 AND LOT 2, BLOCK A, CARTER ESTATES
IN THE MATTHEW JONES SURVEY, A-667
TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS

All that certain 2.476 acres of land, which is out of the property described in the deeds to Eduardo Chaparro and Manuel Alonzo, recorded in Document Number 2016-18030 and 2017-1405 in the Deed Records of Denton County, Texas (D.R.D.C.T.), which is the remainder of Lot 1 and Lot 2, Block A, Carter Estates, recorded in Cabinet P, Slide 347 in the Plat Records of Denton County, Texa (P.R.D.C.T.), in the Matthew Jones Survey, A-667, Town of Little Elm, Denton County, Texas and more particularly described by metes and bounds as follows: (All bearings shown hereon are based on the Texas Coordinate System of 1983, North Central Zone)

BEGINNING at a 1/2" iron rod found for the southwest corner of the 37 square foot right-of-way dedication to the State of Texas, recorded in Document Number 2009-14727 D.R.D.C.T., common to the northeast corner of Tract 2 – 0.418 acres, described in the deed to Premier Family Limited Partnership, recorded in Document Number 2013-128480 D.R.D.C.T., in the south right-of-way line of East Eldorado Parkway (R.O.W. Varies) and in the west line of said Lot 1, Block A, Carter Estates, and from which a found 1/2" iron rod bears South 73° 28’ West - 0.27', which is a point of a curve to the right, having a central angle of 05° 40' 49”, a radius of 1086.00', and a chord bearing and distance of North 56° 50' 07” East – 107.62’;

THENCE along said curve to the left, along the south right-of-way line of said East Eldorado Parkway, an arc distance of 107.66’ to a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most northerly northeast corner of the herein described tract, common to the northwest corner of the 0.328 acre tract described in the deed to the Town of Little Elm, recorded in Document Number 2008-5764 D.R.D.C.T.

THENCE South 29° 34' 28" East - 110.27' to a 1/2" iron rod with a cap found for the southwest corner of said 0.328 acre tract;

THENCE North 83° 15' 13" East - 76.74' to the most easterly northeast corner of the herein described tract, in the west line of Lot 1R, Block 1, One Elm Place Addition, recorded in Document Number 2016-205 P.R.T.C.T., from which a 1/2" iron rod with a cap stamped “LS 3047” found for the northwest corner of said Lot 1R, Block 1, One Elm Place Addition bears North 00° 34' 29" East – 145.54', and from which a found 1/2" iron rod with a cap bears North 83° 15' 13" East – 0.94’;

THENCE South 00° 34' 29" West - 126.97' to a Corp of Engineers brass monument found for the most easterly southeast corner of the herein described tract, in the north line of Lake Lewisville;

THENCE South 29° 03' 18" West - 106.57' (plat called 107.06’) along the north line of said Lake Lewisville, to a Corp of Engineers brass monument found for corner;

THENCE South 03° 21' 22" West - 305.63' continuing along the north line of said Lake Lewisville, a 1/2" iron rod with a cap stamped “SPRY 5647” set for the most southerly southeast corner of the herein described tract,

THENCE South 61° 00' 31" West - 170.93' continuing along the north line of said Lake Lewisville, a 1/2" iron rod found for the southwest corner of the herein described tract, common to the southeast corner Tract 1 -1.591 acres described in said deed to Premier Family Limited Partnership;

THENCE North 00° 10' 54" West - 333.61' (plat called 334.02’) to a P.K. Nail in concrete found for a point for corner, common to the most easterly northeast corner of said Tract 1, common to the southeast corner of said Tract 2;

THENCE North 00° 08' 43" East - 302.49' to the POINT OF BEGINNING and containing 2.476 acres of land.

Exhibit B
PD Standards

Exhibit B

Planned Development District Standards

Except as otherwise set forth in these development standards, the development of this area shall follow the regulation of the Town of Little Elm's Zoning Ordinance and the Subdivision Ordinance, as they exist, or may be amended, at the time of development.

General Conditions for PD:

1. Purpose:

   The purpose of this Planned Development is to allow for a commercial retail building, housing a dog boarding, daycare, grooming facility with outdoor dog play areas and publicly accessible dog park areas as provided in Exhibit C. This PD will allow for alternative standards to building design, signage, and an alternative to the foundation planting requirement.

2. Project Location:

   The proposed PD site is commonly known as 802 East Eldorado Parkway, Little Elm, Texas 75068. A legal description is set forth in Exhibit A, and a site plan is set forth in Exhibit C. The Property is zoned Light Commercial and under the Future Land Use map approved by Little Elm, is surrounded by Light Commercial. Currently, the adjacent parcel to the west of the Property (currently used as a church) is zoned single family, the adjacent land south of the property is the Lake Lewisville Floodplain, the land on the north across East Eldorado Parkway is Light Commercial, and the adjacent land to the east is Light Commercial. No land adjacent to the PD site is used as residential.

3. Use Regulations:

   All permitted uses in the Light Commercial (LC) district shall be allowed with the same provisions and restrictions, including uses permitted by a Specific Use Permit (SUP) and Conditional Use Permit (C), except as noted below may be allowed by right as shown in Exhibit C:

   Light Commercial to allow for the following waivers and amendments:

   a. Two outdoor publicly accessible dog parks located on the south side of the property as depicted in Exhibit C;

   b. Outdoor play areas adjacent to the south side of the building as depicted in Exhibit C;

c. One small outdoor play area adjacent to the west side of the building as depicted in Exhibit C;

d. One outdoor splash pad adjacent to the southeast side of the building as depicted in Exhibit C;

4. Base Zoning District:

The permitted uses and standards will be in accordance with the (LC) Light Commercial zoning as defined in the Zoning Ordinance, unless otherwise specified in the PD regulations.

5. Height and Area Regulations:

This PD shall follow and conform to all Landscape Requirements set forth for Light Commercial zoning as defined in Zoning Ordinance section 106.06.08 – Special area and height regulations.

6. Conceptual Site Plan:

Exhibit C identifies and locates the waivers and amendments of this PD. The proposed development will have design elements as currently included in the design requirements of the Light Commercial Zoning except as otherwise specified in Exhibit C.

7. Landscape Requirements:

All provisions within Article VI. Division 4. Landscaping and Tree Preservation shall be met, as it exists or may be amended in accordance with the standards in effect at the time of development, or requested change, unless otherwise described below and shown on the Landscape Plans attached hereto.

a. The outdoor play areas adjacent to the building will utilize artificial turf instead of grass;

b. The Foundation Planting Requirements will be met through provision of a shaded outdoor seating structure.

c. Due to lot size constraints, in lieu of placing a landscape buffer and vehicular screening along the west side of the hammer head, if and when the adjacent parcel to the west of the subject property is developed and attaches a fire lane to the location of the hammer head as depicted on Exhibit C, the portion of the hammer head south of the southern fire lane boundary (that runs parallel to east/west) shall be removed and replaced with planting.

Landscape Point System for less than three acres equals 25 points.

Points applicable to PD design:

5 pts	Buffer Berms
5 pts	Open space provision
5 pts	Shaded or decorative outdoor seating areas
5 pts	Public art small
5 pts	Public dog parks (one for small dogs and one for large dogs)
5 pts	Enhanced hardscape (meandering walking trails in and near the public dog parks)

8. Screening Standards:
   Subject property is surrounded by commercial uses and will therefore not require a masonry perimeter wall. The PD shall follow all applicable requirements within DIVISION 3. –SCREENING WALLS AND FENCES with the following exceptions:

   a. Outdoor Dog Play Areas shall have at least 8 foot white vinyl screening fence, or better. Splash Pad are shall have a black vinyl coated chain-link fence, or better. Dog Park Areas shall have at least 6 foot black vinyl coated chain-link fence, or better.

9. Architectural Standards:
   This PD shall follow and conform to all architectural guidelines set forth for Light Commercial zoning as defined in Zoning Ordinance section 106.06.05 – Architectural standards for commercial structures, except as otherwise depicted on the plans as part of Exhibit C.

10. Parking Standards:
    All parking requirements in section 106.06.41 will be followed. This PD shall require 1 parking space per 500 square feet of kennel/boarding/daycare floor area, per section 106.06.45. The site plan depicted in Exhibit C exceeds the parking space required by section 106.06.45.

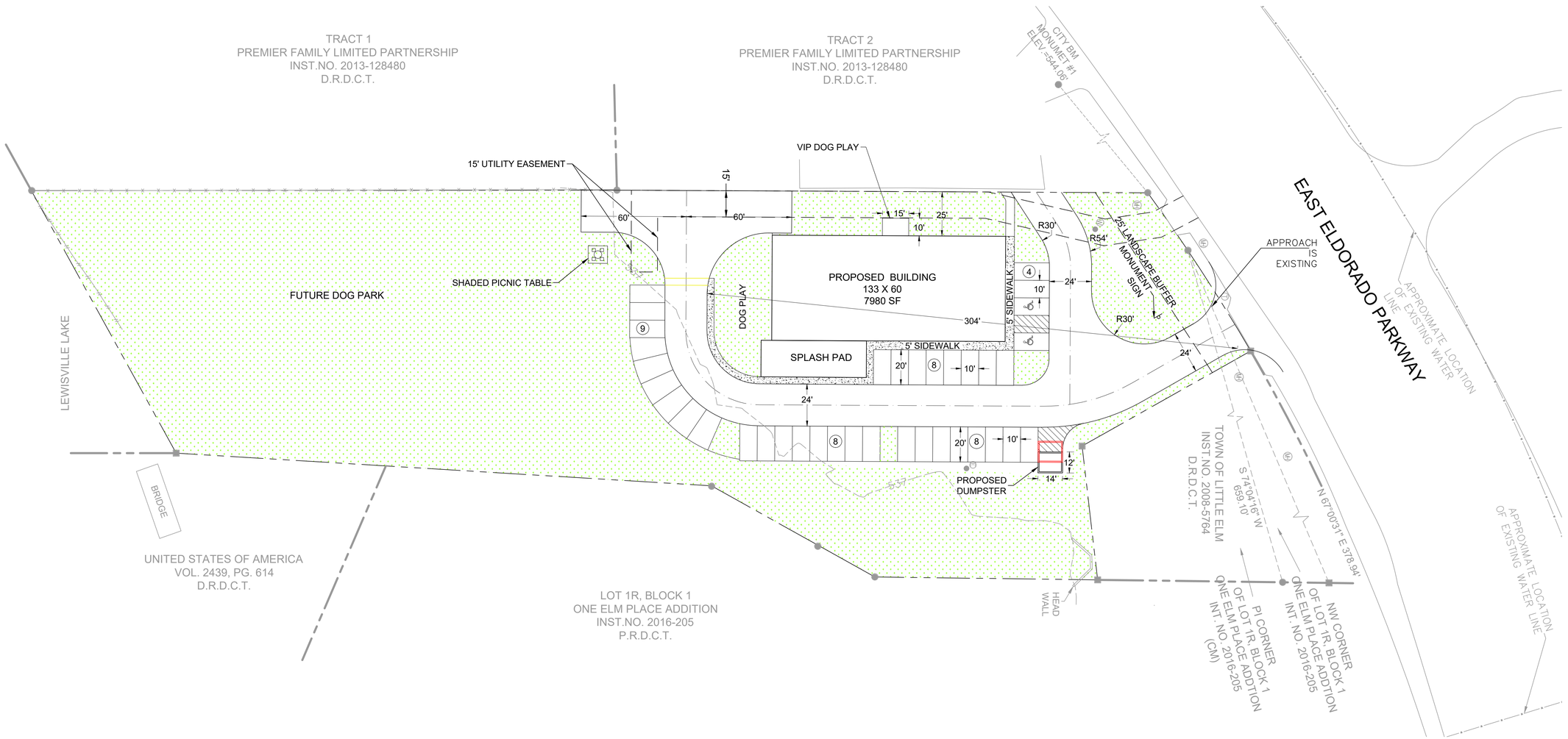
11. Signs:
    All provisions within Chapter 86 – Sign Ordinance shall be met except as specified below:

    a. North Facade is allowed an additional 304 sq ft perforated metal sign in the form of a dog, as shown within Exhibit C.
    b. East Façade is allowed an additional three perforated metal paw prints 4 foot x 4 foot, each.

Requested waivers and other amendments contained herein:

1. Dog parks located on the south side of the property as depicted in Exhibit C (approximately one acre);
2. Outdoor play areas adjacent to the south side of the building as depicted in Exhibit C;
3. One outdoor play area adjacent to the west side of the building as depicted in Exhibit C;
4. One outdoor splash pad adjacent to the southeast side of the building as depicted in Exhibit C;
5. Artwork and signage on the building and sign monument as depicted in Exhibit C (approximately 304 square feet on the north elevation of the building; approximately 48 square feet on the east elevation of the building; and approximately 60 square feet on the sign monument near Eldorado Parkway pursuant to Little Elm's sign ordinance Section 86-13(b)(7)c);
6. Varying materials in percentages as stated and depicted in Exhibit C (North Elevation: 30% Glazing, 35% Metal Cladding, & 57% Masonry, 8% Stucco; East Elevation: 30% Glazing, 4% Metal Cladding, 80% Masonry, & 16% Stucco; West Elevation: 22% Glazing, 90% Masonry, 10% Stucco; South Elevation 100% Masonry). Due to building function Glazing requirements were not able to be met on the West Elevation.
7. A single dumpster enclosure approximately 12 ft. X 14 ft. due to lot size restrictions.
8. Regarding the publicly accessible dog parks, six-foot black vinyl coated chain link fencing.
9. Regarding the outdoor dog play areas adjacent to the building, eight-foot solid white vinyl fencing.
10. Regarding the outdoor dog water park play area, transparent fencing such as thick glass, plexiglass, wrought iron, or similar.

Exhibit C
Development Plans



NOTE:

PROPOSED ENTRANCE UTILIZE EXISTING CURB CUT.

SITE DATA:

SITE AREA = 2.47 AC
EXISTING ZONING = LIGHT COMMERCIAL
PROPOSED ZONING = PLANNED DEVELOPMENT - LIGHT COMMERCIAL
PARKING SIZE = 20' (L) X 10' (W)
PARKING REQUIRED = KENNEL SPACE: 1 PER 500SF = 15 SPACES
RETAIL: 1 PER 200SF = 3 SPACES
TOTAL NO. OF PARKING REQUIRED = 18 SPACES
TOTAL NO. OF PARKING PROVIDED= 37 SPACES
TOTAL ADA PARKING PROVIDED = 2 SPACES
FIRE LANE WIDTH = 24'

3_PROPOSED SITE PLAN.dwg

PROPOSED SITE PLAN

TURNKEY TRACT

PRELIMINARY
FOR INTERIM REVIEW ONLY

THESE DOCUMENTS ARE FOR INTERIM REVIEW AND ARE NOT INTENDED FOR REGULATORY APPROVAL PERMIT, BIDDING OR CONSTRUCTION PURPOSES, THEY WERE PREPARED BY, OR UNDER THE SUPERVISION OF:

NAVEEN KHAMMAMPATI 123697
NAME P.E. NO.

DATE 12/21/2023
TBPE FIRM #F22283

NOT FOR CONSTRUCTION

No.	Revision/Issue	Date

Firm Name and Address

TURNKEY TRACT
2770 MAIN ST #171
FRISCO, TX 75033
F-22283
nkcivilengineer4@gmail.com
214-483-1599

Project Name and Address

THE DOG STOP

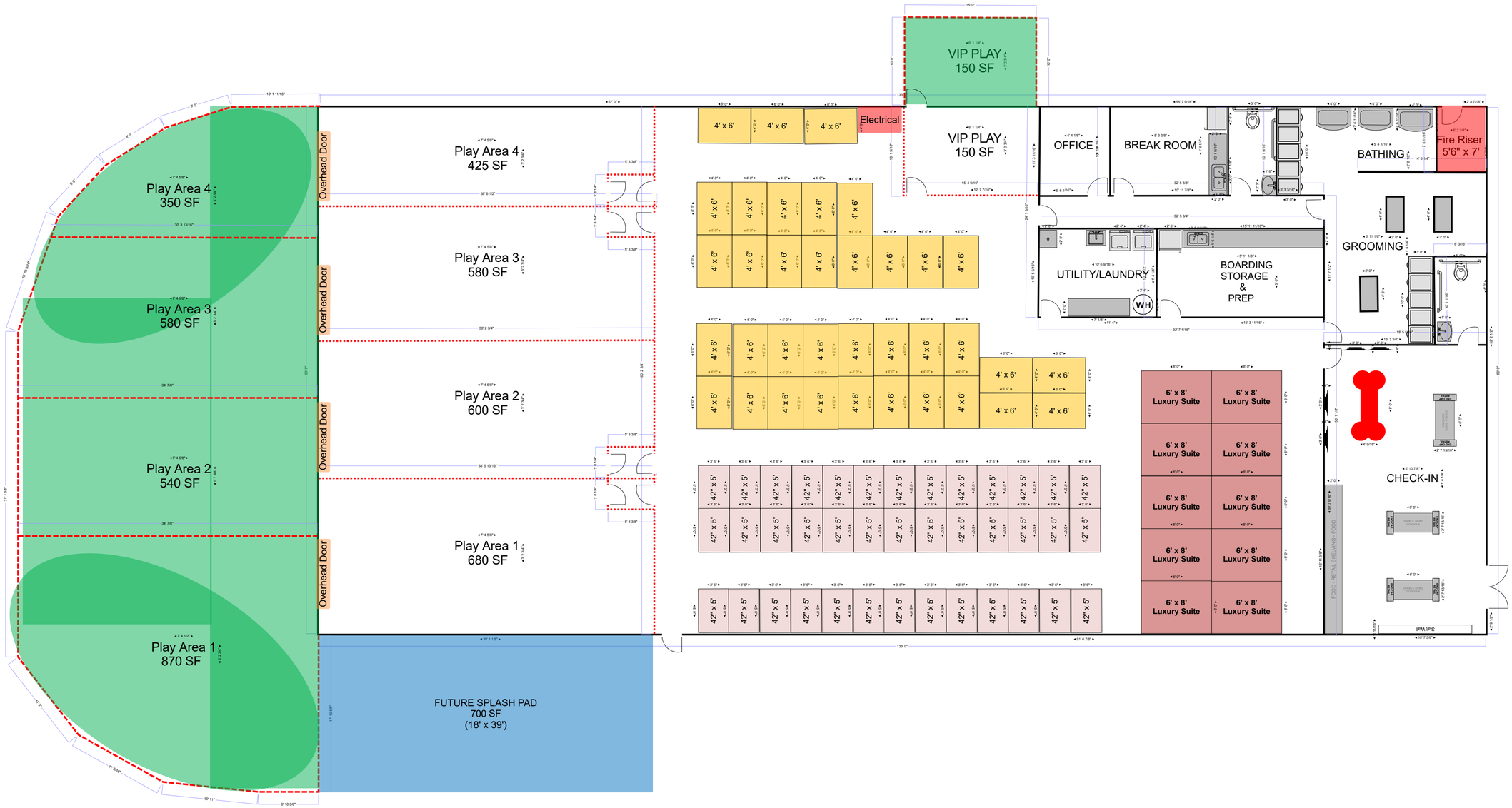
802 E ELDORADO PKWY
LITTLE ELM, TEXAS 75068

Project	Sheet
Date 12 / 21 / 2023	03 / 09
Scale	

LAYOUT: PROPOSED SITE PLAN

PATH: C:\TJT\OneDrive\200_2000_DogStop\DRAWINGS\

10 [6' x 8'] (Luxury), 39 [3.5' x 5'] and 36 [4' x 6']
TOTAL 85 Kennels
Building Total 7980 SF



ELEMENT ARCHITECTS + interiors

CONCEPTUAL RENDERING

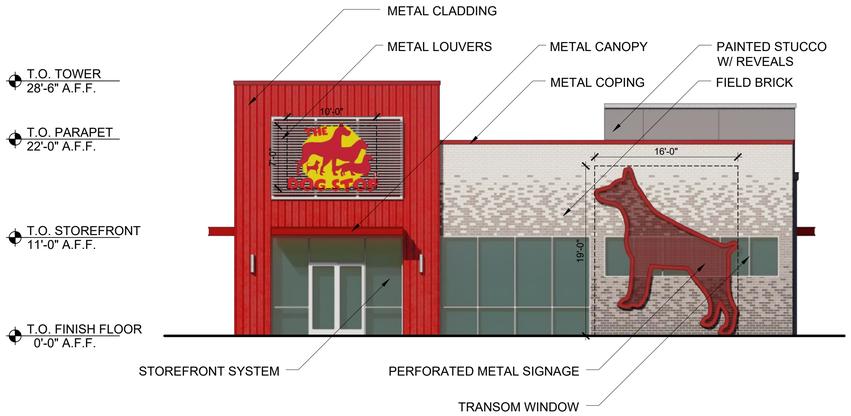
THE DOG STOP

NOV 13
2023

802 EAST ELDORADO PKWY.
LITTLE ELM, TX

23053_dog Stop_elevations_231113.dwg 4:48 PM

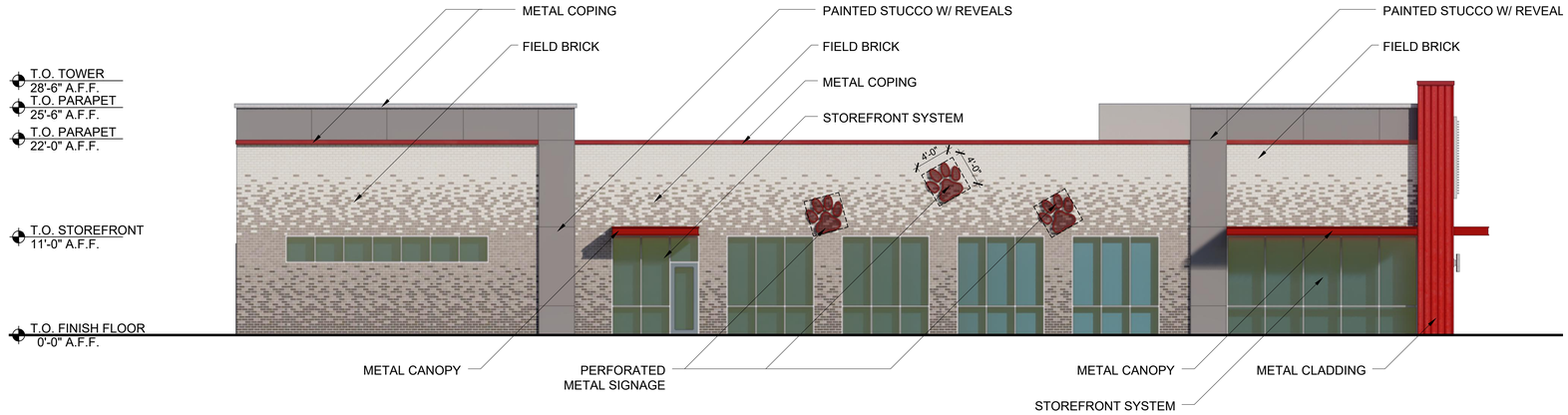
THIS DRAWING IS FOR PRESENTATION PURPOSES ONLY. ANY AND ALL FEATURES, MATTERS AND OTHER INFORMATION DEPICTED HEREON OR CONTAINED HEREIN ARE FOR ILLUSTRATIVE MARKETING PURPOSES ONLY, ARE SUBJECT TO MODIFICATION WITHOUT NOTICE, ARE NOT INTENDED TO BE RELIED UPON BY ANY PARTY AND ARE NOT INTENDED TO CONSTITUTE REPRESENTATIONS AND WARRANTIES AS TO THE SIZE AND NATURE OF IMPROVEMENTS TO BE CONSTRUCTED (OR THAT ANY IMPROVEMENTS WILL BE CONSTRUCTED) OR AS TO THE IDENTITY OR NATURE OF ANY OCCUPANTS THEREOF.



01 NORTH ELEVATION

SCALE: 1/8" = 1'-0"

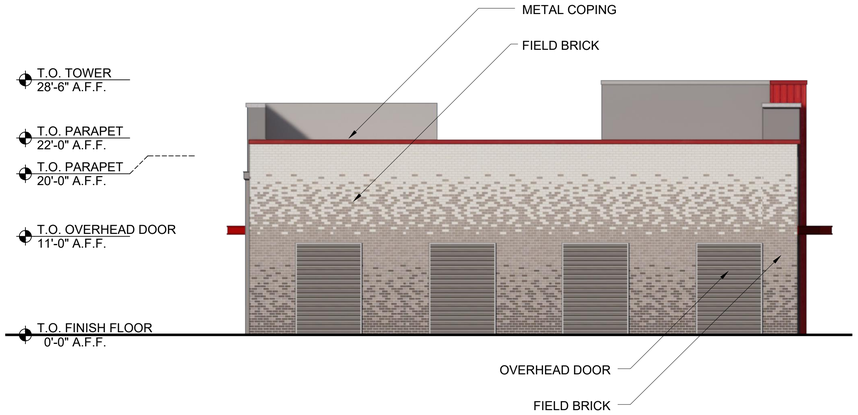
DATA TABLE:	
GLAZING	30%
METAL CLADDING	35%
MASONRY	57%
STUCCO	8 %
SIGNAGE	370 SF



02 EAST ELEVATION

SCALE: 1/8" = 1'-0"

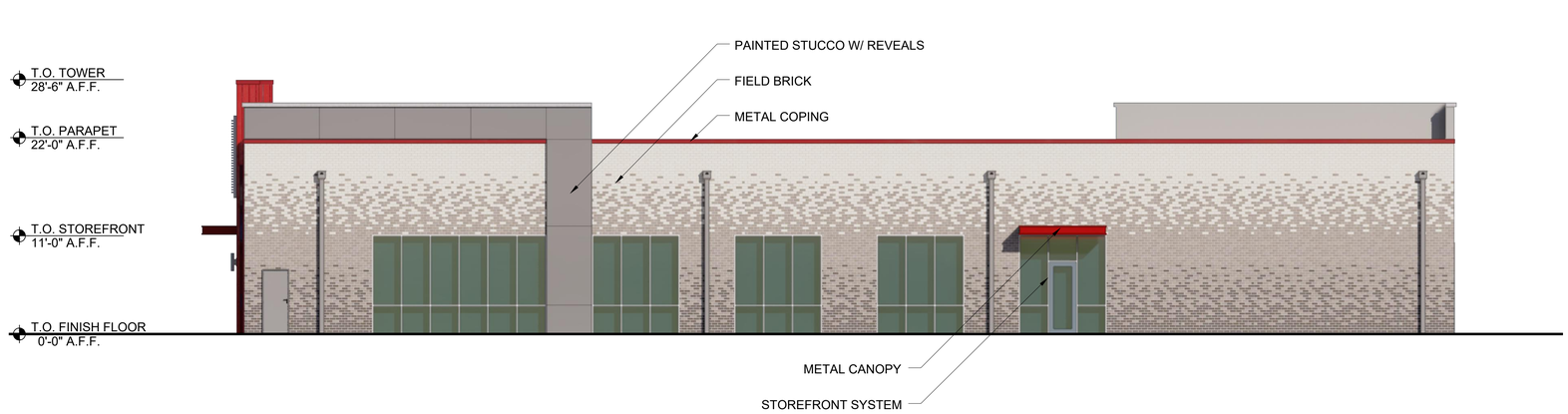
DATA TABLE:	
GLAZING	30%
METAL CLADDING	4%
MASONRY	80%
STUCCO	16%
SIGNAGE	48 SF



03 SOUTH ELEVATION

SCALE: 1/8" = 1'-0"

DATA TABLE:	
GLAZING	0%
MASONRY	100%



01 WEST ELEVATION

SCALE: 1/8" = 1'-0"

DATA TABLE:	
GLAZING	22%
MASONRY	90%
STUCCO	10%

MATERIAL LEGEND :	
METAL CLADDING:	PAC-CLAD - HIGHLINE C1 CARDINAL RED
MASONRY :	BRICK - CLOUD CERAMIC CLOUD GREY & ASH GREY & BLACK DIAMOND
STUCCO :	PAINT - SHERWIN WILLIAMS SW 7024 FUNCTIONAL GRAY

GENERAL NOTES:

-PRELIMINARY SITE PLAN, ALL LINEWORK IS APPROXIMATE AND PENDING RECEIPT OF SURVEY / CAD LINEWORK. NOT FOR CONSTRUCTION

ELEMENT ARCHITECTS + interiors

PRELIMINARY ELEVATIONS

THE DOG STOP

NOV 13
2023

802 EAST ELDORADO PKWY.
LITTLE ELM, TX

23053_dog Stop_elevations_231113.dwg 4:48 PM

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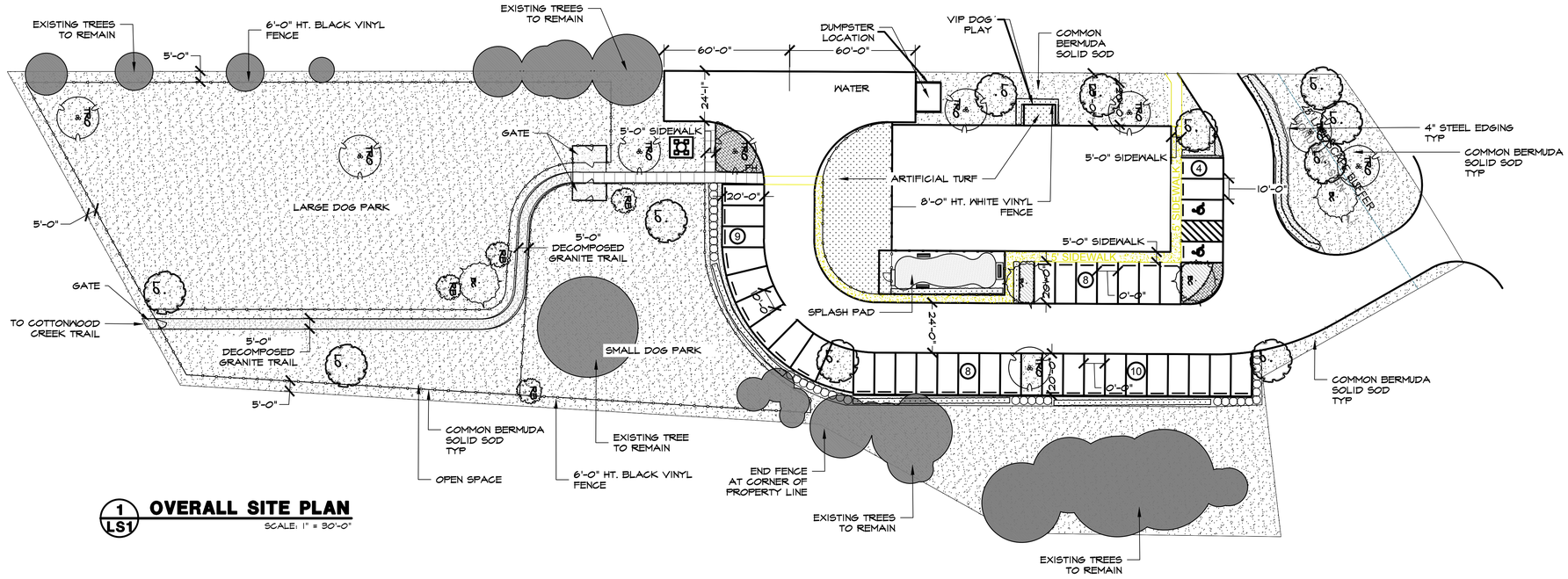
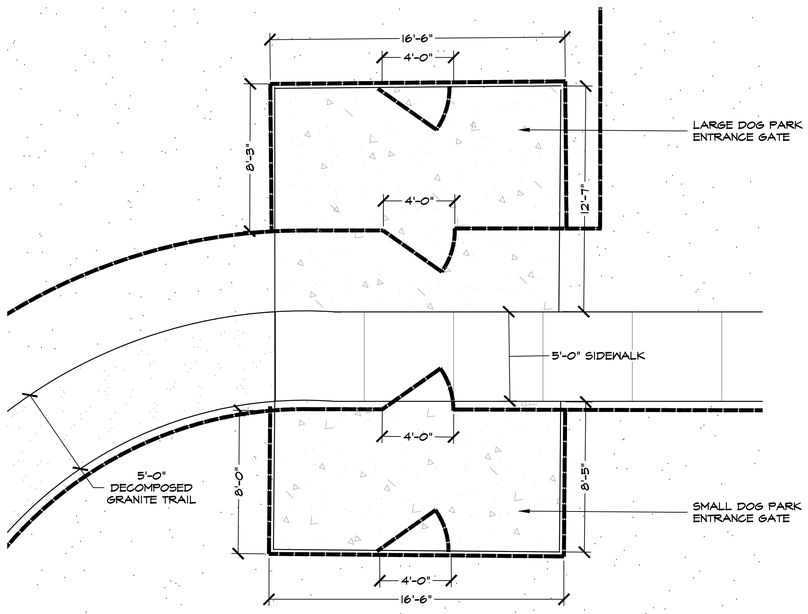


1 LS1 OVERALL SITE PLAN

SCALE: 1" = 30'-0"

PLANT LIST

- EXISTING TREES TO REMAIN
- BC — BALD CYPRESS / TAXODIUM DISTICHUM (4" CALIPER)
- TRO — TEXAS RED OAK / QUERCUS BUCKLEYI (4" CALIPER)
- LO — LIVE OAK / QUERCUS VIRIGINANA (4" CALIPER)
- RB — FOREST PANSY RED BUD / CERCIS CANADENSIS 'FOREST PANSY' (3" CALIPER)
- DWARF BUFORD HOLLY / BUFORDII NANA
- LITTLE BLUE STEM / SCHIZACHYRIUM SCOPARIUM
- BLUE RUG JUNIPER / JUNIPERUS HORIZONTALIS 'WILTONII'
- UPRIGHT ROSEMARY / ROSMARINUS OFFICINALIS 'UPRIGHT'
- ARTIFICIAL TURF
- SOLID COMMON BERMUDA SOD
- DECOMPOSED GRANITE



2 LS1 DOG PARK GATE DETAIL

SCALE: 1/4" = 1'-0"

STUDIO 13 DESIGN GROUP

Studio 13 Design Group, PLLC.
386 W. Main Street
Lewisville, Texas 75057
469-635-1900

TBAE Firm #BR643

REGISTERED LANDSCAPE ARCHITECT — LEONARD W. REEVES — 1977 — STATE OF TEXAS

November 14, 2023

NORTH

30 15 0 30

1" = 30' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Landscape Plan

The Dog Stop

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
	PER CITY COMMENTS		10/17/2023
1	Plans Revised per City Comments	CA	11-7-2023
2	Plans Revised per City Comments	CA	11-14-2023
3			

PROJECT SGC001

PLATE 1

SHEET LS1

Plotted by: Station11 Plot Date: 11/14/2023 4:11 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 – The Dog Stop\DWG\SGC001 – LS.dwg Saved By: Station11 Save Time: 11/14/2023 4:04 PM

LANDSCAPE NOTES:

1. A TREE PERMIT IS REQUIRED FOR ALL REMOVAL OF ALL TREES, PROTECTED AND UNPROTECTED.
2. PLANT MATERIAL SHALL BE MEASURED AND SIZED ACCORDING TO THE LATEST EDITION OF THE TEXAS NURSERY & LANDSCAPE ASSOCIATION (TNLA) SPECIFICATIONS, GRADES AND STANDARDS.
3. ALL PLANT SUBSTITUTIONS ARE SUBJECT TO **TOWN OF LITTLE ELM** APPROVAL AND MUST BE SPECIFIED ON THE APPROVED LANDSCAPE PLAN.
4. GROUND COVERS USED IN LIEU OF TURF GRASS MUST PROVIDE COMPLETE COVERAGE WITHIN ONE (1) YEAR OF PLANTING AND MAINTAIN ADEQUATE COVERAGE AS APPROVED BY THE **TOWN OF LITTLE ELM.**
5. TREES MUST BE PLANTED FOUR FEET (4') OR GREATER FROM CURBS, SIDEWALKS, UTILITY LINES, SCREENING WALLS AND/OR OTHER STRUCTURES. THE **TOWN OF LITTLE ELM** HAS FINAL APPROVAL FOR ALL TREE PLACEMENTS.
6. TREE PITS SHALL HAVE ROUGHENED SIDES AND BE TWO TO THREE TIMES WIDER THAN THE ROOT BALL OF THE TREE IN ORDER TO FACILITATE HEALTHY ROOT GROWTH.
7. TREES SHALL NOT BE PLANTED DEEPER THAN THE BASE OF THE "TRUNK FLARE".
8. THE TREE PIT SHALL BE BACKFILLED WITH NATIVE TOPSOIL FREE OF ROCK AND OTHER DEBRIS.
9. BURLAP, TWINE AND WIRE BASKETS SHALL BE LOOSENED AND PULLED BACK FROM THE TRUNK OF TREE AS MUCH AS POSSIBLE.
10. TREES SHALL NOT BE WATERED TO EXCESS THAT RESULTS IN SOIL SATURATION. IF SOIL BECOMES SATURATED, THE WATERING SCHEDULE SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE AND ABSORPTION OF THE EXCESS WATER.
11. A 3" LAYER OF MULCH SHALL BE PROVIDED AROUND THE BASE OF THE PLANTED TREE. THE MULCH SHALL BE PULLED BACK 4" FROM THE TRUNK OF THE TREE.
12. NO PERSON(S) OR ENTITY MAY USE IMPROPER OR MALICIOUS MAINTENANCE OR PRUNING TECHNIQUES WHICH WOULD LIKELY LEAD TO THE DEATH OF THE TREE. IMPROPER OR MALICIOUS TECHNIQUES INCLUDE, BUT ARE NOT LIMITED TO, TOPPING OR OTHER UNSYMMETRICAL TRIMMING OF TREES, TRIMMING TREES WITH A BACKHOE, OR USE OF FIRE OR POISON TO CAUSE THE DEATH OF A TREE.
13. ALL BEDS TO HAVE 3" OF COMPOSTED SOIL, LIVING EARTH TECHNOLOGY, OR APPROVED EQUAL TO A DEPTH OF 8" MINIMUM.
14. ALL PLANT BEDS SHALL BE TOP-DRESSED WITH A MINIMUM OF 3 INCHES OF HARDWOOD OR OTHER MULCH.
15. TREES OVERHANGING WALKS AND PARKING SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 7 FEET. TREES OVERHANGING PUBLIC STREET PAVEMENT DRIVE AISLES AND FIRE LANES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 14 FEET.
16. A VISIBILITY TRIANGLE MUST BE PROVIDED AT ALL INTERSECTIONS. SHRUBS ARE NOT TO EXCEED 30 INCHES IN HEIGHT. TREES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 7 FEET AT TIME OF PLANTING.
17. TREES PLANTED ON A SLOPE SHALL HAVE THE SOIL STAIN AT THE AVERAGE GRADE OF SLOPE.
18. NO SHRUBS SHALL BE PERMITTED WITHIN AREAS LESS THAN 3 FEET IN WIDTH. ALL BEDS LESS THAN 3 FEET IN WIDTH SHALL BE GRASS, GROUNDCOVER OR SOME TYPE OF FIXED PAVING.
19. THE OWNER, TENANT, AND/OR THEIR AGENTS, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE, ESTABLISHMENT, AND PERMANENCE OF PLANT MATERIAL. ALL LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE, BUT NOT LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, AND OTHER ACTIVITIES NECESSARY FOR THE MAINTENANCE OF LANDSCAPED AREAS.
20. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT IS DAMAGED, DESTROYED, OR REMOVED SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR SIZE AND VARIETY WITHIN 30 DAYS UNLESS OTHERWISE APPROVED IN WRITING BY THE **TOWN OF LITTLE ELM.**
21. LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OFF TRASH, LITTER AND WEEDS.
22. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO IRRIGATE ALL LANDSCAPE AREAS. OVERSPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM.
23. NO PLANT MATERIAL SHALL BE ALLOWED TO ENCROACH ON RIGHT-OF-WAY, SIDEWALKS OR EASEMENTS TO THE EXTENT THAT THE VISION OR ROUTE OF TRAVEL FOR VEHICULAR, PEDESTRIAN, OR BICYCLE TRAFFIC IS IMPEDED.
24. NO PLANTING AREAS SHALL EXCEED 3:1 SLOPE. 3' HORIZONTAL TO 1' VERTICAL.
25. EARTHEN BERMS SHALL NOT INCLUDE CONSTRUCTION DEBRIS. CONTRACTOR MUST CORRECT SLIPPAGE OR DAMAGE TO THE SMOOTH FINISH GRADE OF THE BERM PRIOR TO ACCEPTANCE.
26. ALL WALKWAYS SHALL MEET A.D.A. AND T.A.S. REQUIREMENTS.
27. CONTACT **TOWN OF LITTLE ELM'S** PLANNING DEPARTMENT AT FOR LANDSCAPE INSPECTION. NOTE LANDSCAPE INSTALLATION MUST COMPLY WITH APPROVED LANDSCAPE PLANS PRIOR FINAL ACCEPTANCE BY THE **TOWN OF LITTLE ELM** AND/OR OBTAINING A CERTIFICATE OF OCCUPANCY.
28. FINAL INSPECTION AND APPROVAL OF SCREENING WALLS, IRRIGATION AND LANDSCAPE IS SUBJECT TO ALL PUBLIC UTILITIES, INCLUDING BUT NOT LIMITED TO MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER APPURTENANCES, TO BE ACCESSIBLE, ADJUSTED TO GRADE AND TO THE **TOWN OF LITTLE ELM'S** PUBLIC WORKS DEPARTMENT STANDARDS.
29. PRIOR TO CALLING FOR A LANDSCAPE INSPECTION, CONTRACTOR IS RESPONSIBLE FOR MARKING ALL MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER UTILITY APPURTENANCES WITH FLAGGING FOR FIELD VERIFICATION BY THE PUBLIC WORKS DEPARTMENT.

PLANT LIST

SYMBOL	COMMON/BOTANICAL NAME	SIZE	SPACING	QUANTITY	REMARKS
LO	LIVE OAK / QUERCUS VIRGINIANA	4" CALIPER	AS SHOWN	10	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN,
TRO	TEXAS RED OAK / QUERCUS BUCKLEYI	4" CALIPER	AS SHOWN	9	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN
BC	BALD CYPRESS / TAXODIUM DISTICHUM	4" CALIPER	AS SHOWN	3	6' MINIMUM SPREAD; MINIMUM 12' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN,
RB	FOREST PANSY REDBUD / CERCIS CANADENSIS 'FOREST PANSY'	3" CALIPER	AS SHOWN	4	5' MINIMUM SPREAD; MINIMUM 8' HEIGHT; 2" MIN. CAL.; FULL HEAD NURSERY GROWN
	DWARF BUFORD HOLLY / BUFORD11 NANA	36" HEIGHT	AS SHOWN	287	FULL PLANTS
	LITTLE BLUESTEM GRASS / SCHIZACHYRIUM SCOPARIUM	1 GALLON	12" O.C.	479	FULL PLANTS
	BLUE RUG JUNIPER / JUNIPERUS HORIZONTALIS 'WILTON11'	1 GALLON	12" O.C.	584	FULL PLANTS
	UPRIGHT ROSEMARY / ROSMARINUS OFFICINALIS 'UPRIGHT'	3 GALLON	AS SHOWN	36	FULL PLANTS
	DECOMPOSED GRANITE	4" DEPTH	SQUARE FEET	1,783	MINIMUM 100% COVERAGE
	ARTIFICIAL TURF	SOLID SOD	SQUARE FEET	2,462	MINIMUM 100% COVERAGE
	COMMON BERMUDA SOLID SOD	SOLID SOD	SQUARE FEET	64,315	MINIMUM 100% COVERAGE

LANDSCAPE PROVIDED

SITE TREE REQUIREMENTS

A. 10 % OF GROSS VEHICULAR AREA TO BE LANDSCAPED.
ONE (1) TREE PER 400 SQ. FT. OF REQUIRED LANDSCAPED AREA.
VEHICULAR AREA: 27,386 SQ. FT.
PROVIDED:
LANDSCAPED AREA: 2,773 SQ. FT. (10%)
TREES: 22 SHADE TREES, 4 (3") ORNAMENTAL TREES

PARKING LOTS

B. PROVIDED:
ALL PARKING SPACES MUST BE LOCATED WITHIN 70 FT OF LARGE CANOPY TREE.
ONE TREE PER ISLAND AND ONE ISLAND FOR EVERY TEN (10) SPACES.

PERIMETER LANDSCAPE REQUIREMENTS

C. 1-4" CAL. CANOPY TREE / 40 LF OF LANDSCAPE EDGE
253 LF OF FRONTAGE / 40 LF = 7 - 4" CAL. TREES REQUIRED.
3-3" ORNAMENTAL TREES / 5 SHADE TREES
7 SHADE TREES / 5 ORNAMENTAL TREES = 2- 3" ORNAMENTAL TREES REQUIRED.
PROVIDED: 7 - 4" CALIPER CANOPY TREES PROVIDED
4 - 3" CALIPER ORNAMENTAL TREES PROVIDED.

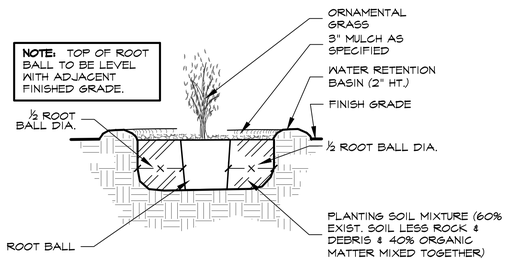
D. 36" HEIGHT EVERGREEN SHRUBS PROVIDED AS VEHICULAR SCREENING.

E. FOUNDATION PLANTING AND ORNAMENTAL TREES PROVIDED ON NORTH SIDE OF BUILDING.

E. SOUTH PERIMETER:
REQUIRED 8 FT. MASONRY WALL ALONG ENTIRE LENGTH OF PERIMETER AND A TWENTY (20) FOOT LANDSCAPE BUFFER W/ TREES FIFTEEN (15) FT ON CENTER.
PROVIDED:
43 - 4" CALIPER TREES
8' MASONRY WALL
20 FT LANDSCAPE BUFFER

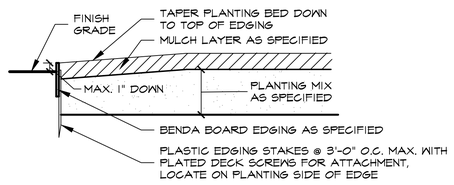
DETENTION POND REQUIREMENTS

C. 1-4" CAL. CANOPY TREE / 30 LF OF LANDSCAPE EDGE
351 LF OF FRONTAGE / 30 LF = 11 - 4" CAL. TREES REQUIRED.
PROVIDED: 12 - 4" CALIPER CANOPY TREES PROVIDED



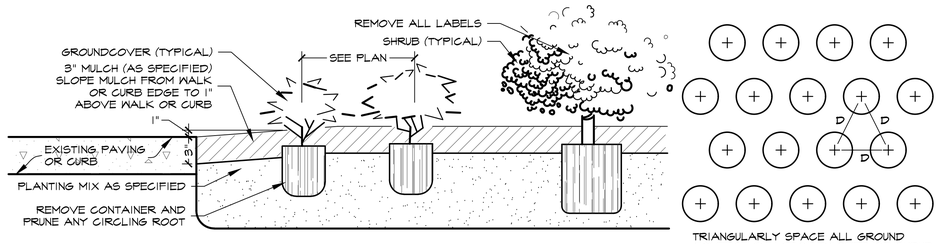
1 L2 **POCKET PLANTING ORNAMENTAL GRASS DETAIL**

NOT TO SCALE



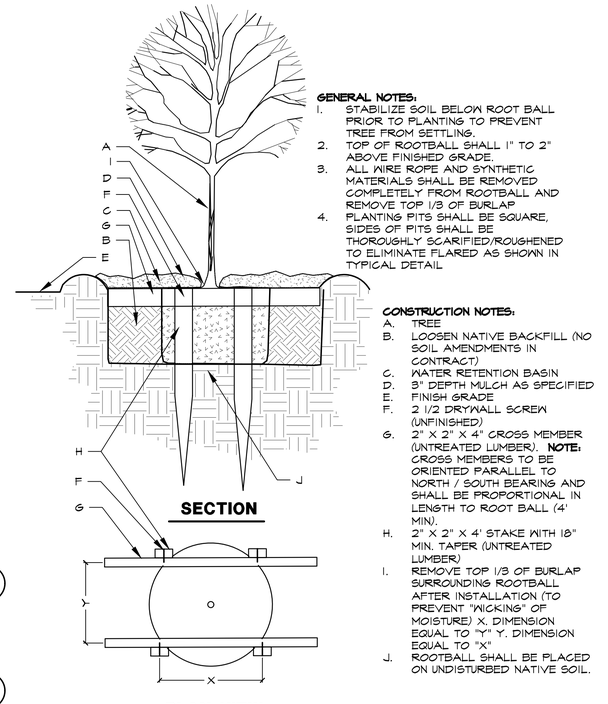
3 L2 **TYPICAL BED EDGING DETAIL**

NOT TO SCALE



2 L2 **SHRUB AND GROUNDCOVER PLANTING DETAIL**

NOT TO SCALE



GENERAL NOTES:
1. STABILIZE SOIL BELOW ROOT BALL PRIOR TO PLANTING TO PREVENT TREE FROM SETTLING.
2. TOP OF ROOTBALL SHALL 1" TO 2" ABOVE FINISHED GRADE.
3. ALL WIRE ROPE AND SYNTHETIC MATERIALS SHALL BE REMOVED COMPLETELY FROM ROOTBALL AND REMOVE TOP 1/3 OF BURLAP
4. PLANTING PITS SHALL BE SQUARE, SIDES OF PITS SHALL BE THOROUGHLY SCARIFIED/ROUGHENED TO ELIMINATE FLARED AS SHOWN IN TYPICAL DETAIL

CONSTRUCTION NOTES:
A. TREE
B. LOOSEN NATIVE BACKFILL (NO SOIL AMENDMENTS IN CONTRACT)
C. WATER RETENTION BASIN
D. 3" DEPTH MULCH AS SPECIFIED
E. FINISH GRADE
F. 2 1/2 DRYWALL SCREW (UNFINISHED)
G. 2" X 2" X 4" CROSS MEMBER (UNTREATED LUMBER). **NOTE:** CROSS MEMBERS TO BE ORIENTED PARALLEL TO NORTH / SOUTH BEARING AND SHALL BE PROPORTIONAL IN LENGTH TO ROOT BALL (4' MIN).
H. 2" X 2" X 4' STAKE WITH 18" MIN. TAPER (UNTREATED LUMBER)
I. REMOVE TOP 1/3 OF BURLAP SURROUNDING ROOTBALL AFTER INSTALLATION (TO PREVENT "WICKING" OF MOISTURE) X. DIMENSION EQUAL TO "Y" Y. DIMENSION EQUAL TO "X"
J. ROOTBALL SHALL BE PLACED ON UNDISTURBED NATIVE SOIL.

4 L2 **TREE PLANTING**

NOT TO SCALE

STUDIO 13 DESIGN GROUP

Studio 13 Design Group, PLLC.
386 W. Main Street
Lewisville, Texas 75057
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TBAE Firm #BR643

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Submittal 11-14-2023

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Landscape Plan

The Dog Stop

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
1	PER CITY COMMENTS		10/17/2023
2	Plans Revised per City Comments	CA	11-7-2023
2	Plans Revised per City Comments	CA	11-14-2023

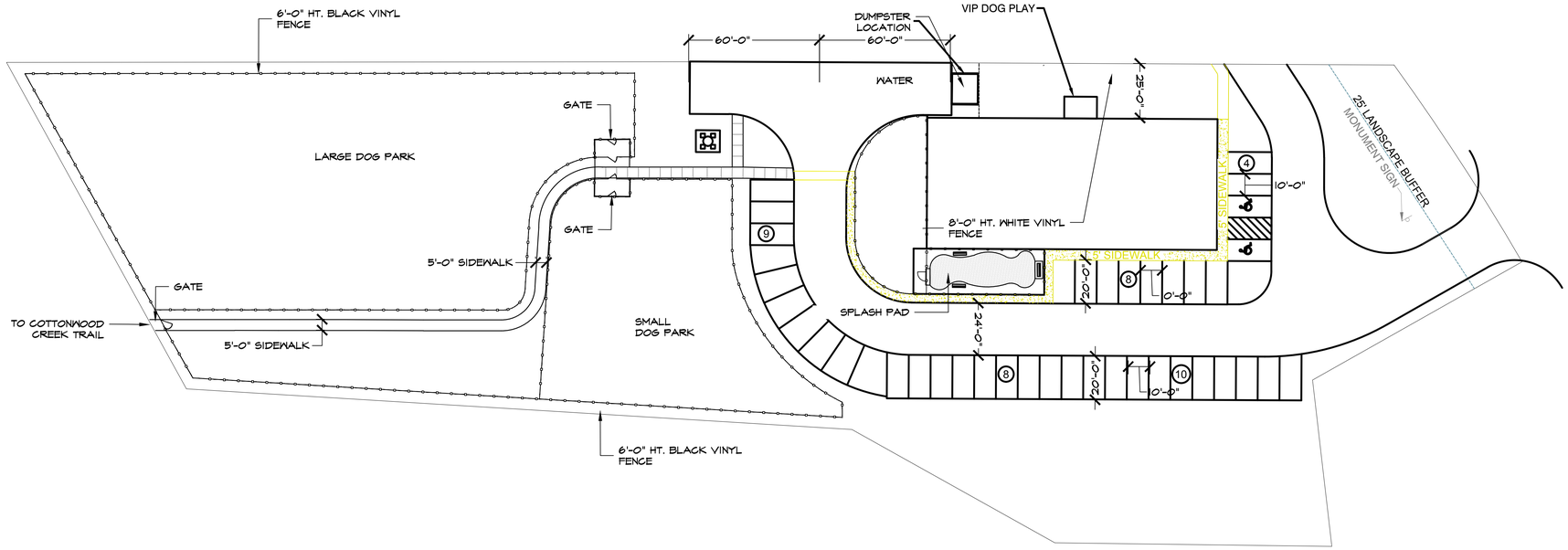
PROJECT
SGC001

PLATE
2

SHEET
LS2

Plotted by: Station11 Plot Date: 11/14/2023 4:13 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 - The Dog Stop\DWG\SGC001 - LS.dwg Saved By: Station11 Save Time: 11/14/2023 4:04 PM



WARNING
EXISTING UNDERGROUND UTILITIES. FIELD VERIFY LOCATION PRIOR TO CONSTRUCTION OR EXCAVATION.

ACCESSIBILITY GENERAL NOTES

1. ALL ACCESSIBLE ROUTES AND RAMPS SHALL CONFORM TO THE TEXAS ACCESSIBILITY STANDARDS (T.A.S.)
2. PUBLIC ACCESSIBLE ROUTES SHALL NOT HAVE A RUNNING SLOPE GREATER THAN 1:20 AND CROSS SLOPE GREATER THAN 1:50.
3. RAMPS SHALL NOT HAVE A RUNNING SLOPER GREATER THAN 1:12 AND A CROSS SLOPE GREATER THAN 1:50.
4. HANDRAILS WILL BE REQUIRED IF RAMP IS LONGER THAN 72 INCHES WITH A MAXIMUM RUNNING SLOPE OF 1:12.

STUDIO 13 DESIGN GROUP

Studio 13 Design Group, PLLC.
386 W. Main Street
Lewisville, Texas 75057
469-635-1900

TBAE Firm #BR643

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Submittal 11-14-2023

NORTH

30 15 0 30

1" = 30' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Hardscape Layout

The Dog Spot

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
2	Plans Revised per City Comments	CA	11-7-2023
3	Plans Revised per City Comments	CA	11-14-2023

STUDIO 13 PROJECT #
SGC001

PLATE 1

SHEET HS1

Plotted by: Station11 Plot Date: 11/14/2023 4:31 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 – The Dog Stop\DWG\SGC001 HS.dwg Saved By: Station11 Save Time: 11/14/2023 12:19 PM

WALL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES.
2. ALL CONCRETE USED IN FOOTINGS AND PIERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS. CONCRETE USED IN COLUMNS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS
3. ALL REINFORCING SHALL BE NEW BILLET STEEL, ASTM A615, GRADE 60 EXCEPT STIRRUPS SHALL BE GRADE 40 AND SPIRALS SHALL BE ASTM A82, GRADE 60.
4. CONCRETE FOR DRILLED PIERS SHALL BE POURED WITHIN 8 HOURS OF DRILLING PIER HOLES.
5. REFER TO DETAILS FOR TYPE AND SIZE OF BRICK AND STONE WALL REINFORCING.
6. ALL MORTAR TO BE TYPE S. MORTAR COLOR SHALL BE APPROVED BY OWNER PRIOR TO ORDERING MATERIAL. MASONRY CEMENT WILL NOT BE ALLOWED.
7. ALL MORTAR JOINTS ARE TO BE 3/8" CONCAVE TOOLED JOINTS.
8. BRICK CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BRICK INSTITUTE OF AMERICA.
9. BRICK MATERIAL, IF NOT SPECIFIED ON PLANS OR DETAILS, SHALL BE SELECTED BY THE OWNER PRIOR TO CONSTRUCTION.
10. VERIFY ALL DIMENSIONS IN THE FIELD BEFORE MANUFACTURING CAST-STONE.
11. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS, APPLICABLE FEES, AND CITY INSPECTIONS.
12. LAYOUT OF THE PROPOSED SCREENING WALL SHALL BE PERFORMED IN THE FIELD BY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.
13. THE STONE MATERIAL AND PATTERN, IF NOT SPECIFIED ON PLANS OR DETAILS, SHALL BE SELECTED BY THE OWNER PRIOR TO CONSTRUCTION.
14. LAY STONE COURSES LEVEL AND PLUMB. DO NOT EXCEED 1/4" VARIATION FROM LEVEL IN 20 FEET MAXIMUM.
15. CLEAN STONEWORK PROMPTLY AFTER COMPLETION WITH FIBER BRUSHES, CLEAN WATER OR APPROVED CLEANING AGENT. DO NOT USE WIRE BRUSHES OR ACID TYPE CLEANING AGENTS.
16. THE CONTRACTOR SHALL PROVIDE A 4' X 4' MOCKUP OF THE STONE AND BRICK SCREEN WALL FOR THE OWNERS REVIEW PRIOR TO BEGINNING THE STONE WORK. THE APPROVED "MOCKUP" SHALL SERVE AS THE STANDARD FOR THE STONE WORK ON THE PROJECT.

FENCE LAYOUT NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPE AND STRUCTURES WHETHER OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL UNDERGROUND UTILITIES AND WILL BE RESPONSIBLE FOR COSTS INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES OR STRUCTURES CAUSED BY HIS FORCES.
2. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION, AS DESIGNED, WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS OR CONFLICTS EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF THE PROPOSED WALLS AND COLUMNS. THE OWNER'S ENGINEER SHALL STAKE THE LOCATIONS OF THE PROPERTY, R.O.W. LINES AND EASEMENTS.
4. THE CONTRACTOR SHALL STAKE ALL OF THE FENCE AND COLUMN LOCATIONS FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION. THE OWNER'S REPRESENTATIVE MAY MAKE MINOR ALTERATIONS TO THE LAYOUT AFTER STAKING AND BEFORE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
5. ALL "STEPS" IN THE WALL MADE NECESSARY BY GRADE CHANGES OR EXISTING SLOPE SHALL OCCURR ONLY AT MINOR OR MAJOR COLUMNS. THE MINIMUM "STEP" AT A COLUMN SHALL BE 3" AND THE MAXIMUM "STEP" AT A COLUMN SHALL BE 6".
6. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS.
7. THE ELECTRICAL WORK SHALL INCLUDE ALL NECESSARY CONDUITS, WIRE, FITTINGS, FIXTURES TRENCHING AND OTHE MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE WORK.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND CITY ACCEPTANCE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING AS NEEDED FOR FENCE AND COLUMN INSTALLATION. THE CONTRACTOR SHALL RETURN THE SITE TO PRE-CONSTRUCTION CONDITION.

BRICK THIN-WALL NOTES

1. MORTAR SHALL BE TYPE S WITH WELL GRADED SAND
2. BRICK PANEL REINFORCING WIRE SHALL BE 1/4 INCH CENTER TO CENTER 9 GAGE HOT DIPPED GALVANIZED JOINT REINFORCING AT SPECIFIED JOINT SPACING.
3. GROUT FILL SHALL BE PEA-GRAVEL AND PORTLAND CEMENT MIX. GROUT SHALL BE VIBRATED TO ASSURE ALL VOIDS ARE FILLED.
4. BRICK SHALL BE GRADE SW (SEVERE WEATHERING) RATED BRICK.
5. CONCRETE FOR PIERS AND MON STRIP SHALL BE 3000 PSI COMPRESSIVE STRENGTH NORMAL WEIGHT PORTLAND MIX CONCRETE.
6. WIRE TIES AT COLUMNS SHALL BE HOT DIPPED GALVANIZED JOINT REINFORCING AT SPECIFIED JOINT SPACING.
7. SPACING BETWEEN COLUMNS SHALL NOT EXCEED 10 FEET.

WOOD FENCE NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES VERIFY LOCATION OF ALL UTILITIES WITH THE TOWN AND VARIOUS UTILITY COMPANIES BEFORE DRILLING PIERS.
2. ALL CONCRETE USED IN FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY AND REQUIRED PERMITS AND INSPECTIONS. CONSTRUCTION SHALL BE IN ACCORDANCE WITH **CITY OF XX** CODES AND REQUIREMENTS.
4. WOOD MATERIAL FOR FENCE
   - 4.1. STRINGERS-CEDAR, #2 GRADE OR BETTER.
   - 4.2. PICKETS-CEDAR, #2 GRADE OR BETTER.
   - 4.3. CAPS- CEDAR, #2 GRADE OR BETTER
5. ALL FENCE POST TO BE SCHEDULE 40 - GALVANIZED.
6. ALL FASTENERS, NAILS, BRACKETS, STEEL POSTS, ETC.. ARE TO BE HOT DIPPED GALVANIZED.
7. ALL PICKETS ARE TO BE FASTENED TO THE RAILS USING GALVANIZED SCREWS. STAPLES AND/OR NAILS WILL NOT BE ALLOWED. SCREW WITHOUT SPLITTING MEMBERS, DRILL PILOT HOLES IF NECESSARY. ALL SPLIT MEMBERS WILL BE REQUIRED TO BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. ACCURATELY CUT, FIT FASTEN MEMBERS, MAKE PLUMB, LEVEL, TRUE, AND RIGID. DO NOT SPLICE INDIVIDUAL FRAMING MEMBERS BETWEEN SUPPORTS. ERECT FACES OF FRAMING MEMBERS IN STRAIGHT EVEN PLANES TO RECEIVE FINISH MATERIALS. INSTALL STRINGERS WITH BOTTOM EDGES FREE OF DEFECTS. MITER ALL EXPOSED FINISHED JOINTS.
9. REMOVE ALL MARKS, STAMPS, DIRT, LOOSE FIBERS FROM ALL WOOD SURFACES.
10. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.

ORNAMENTAL METAL FENCE NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES EITHER SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED DUE TO DAMAGE OR REPLACEMENT OF SAID UTILITIES AND STRUCTURES CAUSED BY HIS FORCES.
2. ALL CONCRETE USED IN FOOTING AND PIERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS AND CITY INSPECTIONS.
4. ALL ORNAMENTAL METAL TUBES, POSTS, RAILS AND PICKETS SHALL BE FLUSH AND FREE OF ALL DENTS, SPURS, AND SHARP EDGES AND SHALL BE INSTALLED LEVEL, PLUMB, AND SQUARE.
5. PROVIDE CONTINUOUS WELDS ALONG ALL EDGES OF FENCE MEMBERS.
6. GRIND SMOOTH ALL WELDS.
7. ALL METAL SURFACES SHALL BE PRIMED AND PAINTED WITH TWO COATS OF RUSTPROOF PAINT, COLOR TO BE FLAT BLACK. CONTRACTOR TO SUBMIT SAMPLES AS REQUIRED.
8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS BEFORE MANUFACTURING GATES AND FENCE.
9. ALL ORNAMENTAL METAL FENCE MEMBERS ARE TO BE TUBULAR MEMBERS IN ACCORDANCE WITH ASTM 513 HOT ROLLED STRUCTURAL STEEL 50,000 PSI TENSILE STRENGTH, 60,000 PSI YIELD STRENGTH.
10. FENCE MEMBER SIZES TO BE AS FOLLOWS:
    - 10.1. PICKETS, 3/4" SQUARE 16 GA.
    - 10.2. RAILS, 1-1/2" X 1-1/2" SOLID FLAT 16 GA.
    - 10.3. POSTS, 2" SQUARE 11 GA. ; SEE DETAILS
11. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL FENCE GATES AND OPENERS. SHOP DRAWINGS SHALL INCLUDE ALL PRODUCT CUT SHEETS AS WELL AS INSTALLATION AND MANUFACTURING DETAILS. CONTRACTOR TO BE RESPONSIBLE FOR STRUCTURAL DESIGN OF GATES.
12. CONCRETE FOOTING FOR POSTS SHALL BE 4X POST.
13. POSTS SHALL BE PLACED AT A MINIMUM DISTANCE OF 6'-0" O.C AND A MAXIMUM DISTANCE OF 7'-0" O.C.

GENERAL PAVING NOTES

1. THE LAYOUT OF ALL PROPOSED PAVING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
2. ALL PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DETAILS SHOWN HEREIN.
3. THE SUB GRADE BENEATH ALL PAVING SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
4. THE EDGES OF ALL FINISHED PAVING AND PLAYGROUND EDGES SHALL BE SMOOTH, GRACEFUL CURVILINEAR OR STRAIGHTFORMS WITH NO INTERRUPTIONS SUCH AS CHORDS, WAVES, JOGS, OR MISSED TANGENTS. ANY PAVEMENT WITH SUCH INTERRUPTIONS SHALL BE SUBJECT TO REPLACEMENT AT NO COST TO THE OWNER.
5. CONCRETE SHALL NOT BE POURED UNTIL THE OWNER'S REPRESENTATIVE HAS INSPECTED THE FORMS AND REINFORCING. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST 48 HOURS IN ADVANCE OF ALL CONCRETE POURS.
6. PROVIDE AN UNDERCUT HEADER WHEREVER PROPOSED CONCRETE PAVING IS TO ABUT EXISTING CONCRETE PAVING.
7. ALL EXPOSED VERTICAL CONCRETE SURFACES SHALL HAVE A HAND RUBBED FINISH WITH NO HONEYCOMBS OR VOIDS.
8. ALL CONSTRUCTION SHALL CONFORM WITH THE **CITY OF XX** CONSTRUCTION STANDARDS AND DETAILS.

GENERAL MASONRY NOTES

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE SHALL BE 3000 PSI, NORMAL WEIGHT, 28 DAY STRENGTH WITH A 4 TO 6 INCH SLUMP. THE CEMENT SHALL BE TYPE I AND SHALL CONFORM TO ASTM C150. AGGREGATES SHALL CONFORM TO ASTM C33.
2. ALL MIXING, TRANSPORTING, PLACING, AND CURING OF CONCRETE SHALL COMPLY WITH ACI 318.
3. CONCRETE SHALL NOT BE PLACED IN RAINING OR FREEZING WEATHER.
4. CHLORIDES SHALL NOT BE USED.
5. MAXIMUM AGGREGATE SIZE = 1".

CONCRETE REINFORCING STEEL

1. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615 60 GRADE AND DEFORMED PER ASTM A305. PROVIDE 38 BAR DIAMETER LAP SPLICES FOR ALL CONTINUOUS BARS UNLESS NOTED OTHERWISE.
2. PROVIDE THE FOLLOWING CLEAR COVER FOR CAST-IN-PLACE REINFORCEMENT:
   - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO THE EARTH. 3"
   - CONCRETE EXPOSED TO EARTH OR WEATHER, NO.5 BAR AND SMALLER. 1½"
   - CONCRETE EXPOSED TO EARTH OR WEATHER, NO.6 THROUGH NO.18 BARS. 2"
   - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND. ¾"
3. ALL REINFORCING STEEL SHALL BE CLEAN AND FREE OF GREASE.

DRILLED PIERS

1. PIERS NOT SPECIFICALLY LOCATED ON THE PLAN SHALL BE CENTERED ON WALL OR BEAM.
2. PIER REINFORCING AND CONCRETE SHALL BE PLACED IMMEDIATELY OR TO WITHIN A MAXIMUM OF 8 HOURS AFTER DRILLING IS COMPLETE.
3. STEEL CASING IS REQUIRED WHEN MORE THAN 2 INCHES OF STANDING WATER IS PRESENT AT THE BOTTOM OF THE SHAFTS PRIOR TO PLACEMENT OF STEEL AND CONCRETE.
4. PROVIDE #4 BAR DIAMETER LAP SPLICES IN ALL VERTICAL PIER REINFORCING AS REQUIRED
5. PROVIDE PIER TO GRADE BEAM DOWELS TO MATCH SIZE, QUANTITY, AND LOCATION OF LONGITUDINAL PIER REINFORCING. MIN DOWEL PROJECTION INTO PIER = 30 BAR DIA. MIN DOWEL PROJECTION INTO BEAM = TOP LONGITUDINAL GRADE BEAM REINFORCING. PROVIDE STANDARD HOOK AT TERMINAL END OF DOWEL IN GRADE BEAM.

STRUCTURAL CONCRETE MASONRY UNIT

1. CONCRETE MASONRY UNITS SHALL BE HOLLOW LOAD-BEARING TYPE N-I CONFORMING TO ASTM C90 AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI.
2. CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM PRISM STRENGTH OF 1500 PSI AT 28 DAYS.
3. MORTAR SHALL BE ASTM C270, TYPE S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI IN ACCORDANCE WITH ASTM C780. MASONRY CEMENT IS PROHIBITED.
4. COARSE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AND A MAXIMUM AGGREGATE SIZE OF ½" IN ACCORDANCE WITH ASTM C476.REFER TO DETAILS FOR WALL REINFORCING BAR SIZE AND SPACING.
5. REINFORCE HORIZONTAL JOINTS WITH GALVANIZED LADDER-TYPE STEEL IN ACCORDANCE WITH ANSI/ASTM A82. SIDE AND CROSS RODS SHALL BE 9 GA MINIMUM.
6. HORIZONTAL REINFORCEMENT SHALL BE SPACED AT 16" MAXIMUM. PROVIDE A 16" LAP AT SPLICES.
7. JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL AND EXPANSION JOINTS.
8. LAP VERITCAL REINFORCING BARS AT 72 BAR DIAMETERS.
9. LAP HORIZONTAL REINFORCING BARS AT 48 BAR DIAMETERS.
10. PLACE GROUT USING LOW-LIFT METHOD, 6'-8" MAXIMUM LIFTS.

STUDIO 13 DESIGN GROUP

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JORDAN CONSULTING ENGINEERS, INC.
TBPE FIRM #4430

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Submittal 11-14-2023

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Hardscape Notes

The Dog Spot

Town of Little Elm, Denton County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
2	Plans Revised per City Comments	CA	11-7-2023
3	Plans Revised per City Comments	CA	11-14-2023

STUDIO 13 PROJECT #
SGC001

PLATE 2

SHEET NOTES

Plotted by: Station11 Plot Date: 11/14/2023 4:25 PM

Drawing: W:\Shared With Me\shared\Projects\SGC001 - The Dog Stop\DWG\SGC001 HS.dwg Saved By: Station11 Save Time: 11/14/2023 12:19 PM

Spectra® Color Chain-Link... made to perform

Spectra® is the latest generation of Master Halco's residential, commercial and industrial chain-link fence systems. It provides the corrosion protection of zinc, with the durability and attractive appearance of a colored polyester framework and extruded PVC fabric, to ensure years of attractive and reliable performance that blends in beautifully with the environment.

Our Spectra Fencing System

Premium quality frame and fabric is guaranteed for 15 years.

15 Year Warranty

Features and Benefits:

- Zinc-coated steel framework is thoroughly cleaned during the pre-treatment process, then color coated with a 3 mil minimum polyester layer for protection from corrosion.
- All galvanized wire has a 15 mil minimum extruded polyvinyl chloride coating for dual protection from corrosion and the elements.
- Fittings are made of galvanized steel with a 3 mil minimum of polymer layer for protection from corrosion.

Available Colors

Choose from 3 serene colors that blend in perfectly with the environment. Spectra® defines property lines, and will add value to any residential or commercial property.

Midnight Black

Forest Green

Available Wire Gauges (Finish and Core)

Use the finish gauge number when ordering.

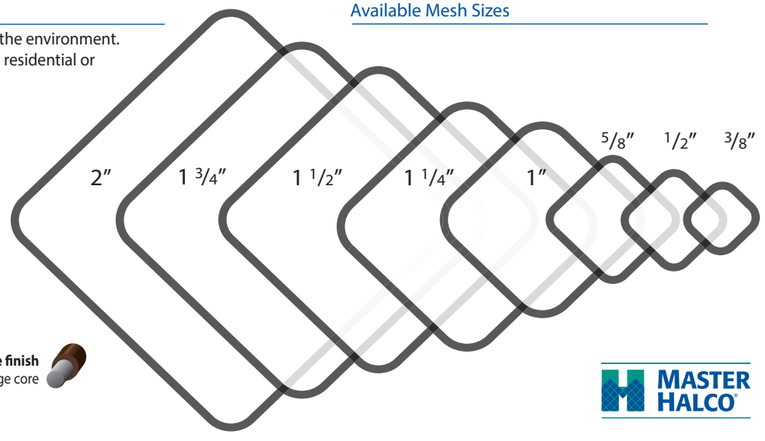
6 gauge finish
9 gauge core

8 gauge finish
11 gauge core

9 gauge finish
13 gauge core

11 gauge finish
14 gauge core

Available Mesh Sizes



MASTER HALCO®

Spectra Bond® Color Chain Link... made to withstand

Spectra Bond® is a step above for Master Halco's color commercial and industrial chain link fence systems. It is extruded bonded wire, which is a better alternative to simple extruded wire. The adhesive added before the wire is extruded seals the vinyl to the wire. This ensures years of attractive and reliable performance with a better protection against nature.

Ball Parks

Perimeter Fence

Tennis Courts

Schools

Government Facilities

High-Security Facilities

Our Spectra Bond® Fencing System

Premium quality fabric and framework is guaranteed for 15 years.

15 Year Warranty

Meets and Exceeds all ASTM Standards

Features and Benefits:

- Zinc-coated steel framework is thoroughly cleaned during the pre-treatment process, then color coated with a 3 mil minimum polyester layer for protection from corrosion.
- All galvanized wire has a 15 mil minimum extruded and adhered polyvinyl chloride coating for dual protection from corrosion and the elements.
- Fittings are made of galvanized steel with a 3 mil minimum of polyester coating for added protection.

Available Colors

Choose from 3 Spectra Bond® colors that will enhance any installation and blend in beautifully with any environment.

Midnight Black | Forest Green | Sierra Brown

Available Wire Gauges (Finish and Core)

Use the core gauge number when ordering.

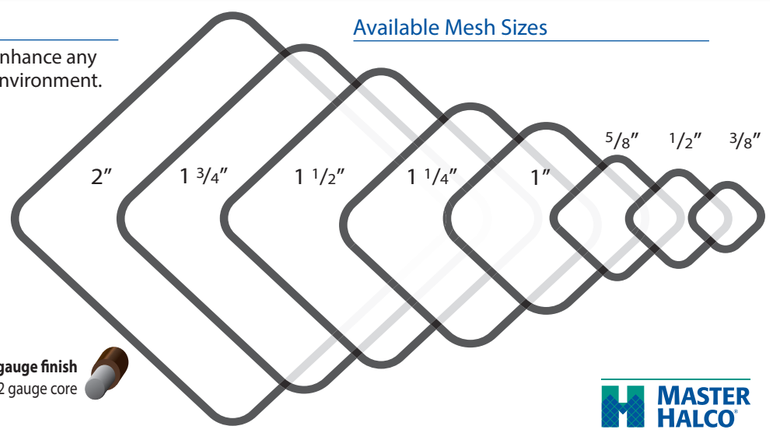
6 gauge finish
9 gauge core

8 gauge finish
11 gauge core

9 gauge finish
12 gauge core

11 gauge finish
14 gauge core

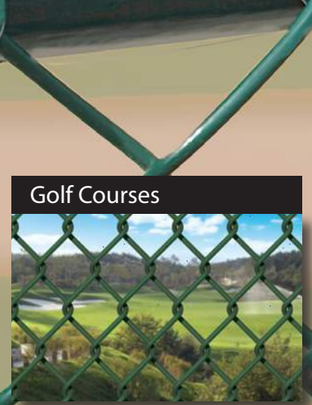
Available Mesh Sizes



MASTER HALCO®

Permafused® Color Chain-Link... made to be durable

Permafused, the next generation in color chain-link fence systems, offers unparalleled performance over ordinary systems, featuring a heavy mill coating that offers superior protection. Its outstanding resistance to ultra violet light and corrosive environments prevents premature fading and decay. It is an ideal choice for commercial applications that need the security of a chain-link fence system and an appearance that blends in beautifully with the environment.


Golf Courses

Perimeter Fence

Tennis Courts

Schools

Government Facilities

High-Security Facilities

Our Permafused Fencing System

Master Halco offers the highest quality products with unmatched reliability.

15 Year Warranty

Meets and Exceeds all ASTM Standards

Features and Benefits:

- Outstanding performance in highly corrosive environments provides years of protection.
- High impact resistance reduces the chance of damage during product handling and installation.
- Exceptional resistance to ultra violet light prevents premature fading.
- Extreme flexibility reduces susceptibility to cracking and chipping, even in changing weather conditions.
- 15 year limited warranty provides confidence and assurance that you've selected one of the best color chain-link fence systems available.

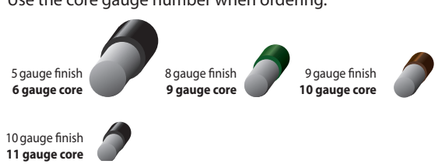
Available Colors

Choose from 3 Permafused colors that will enhance any installation and blend in beautifully with any environment.

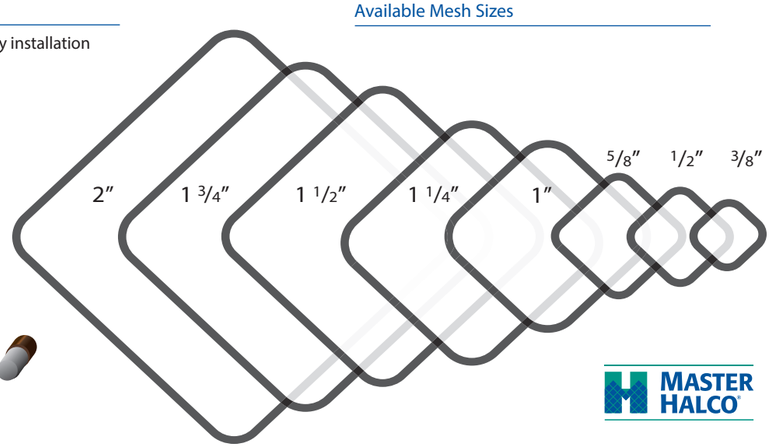
Midnight Black **Forest Green** **Sierra Brown**

Available Wire Gauges (Finish and Core)

Use the core gauge number when ordering.



Available Mesh Sizes



MASTER HALCO®

Galvanized Chain Link Recommendations

	Residential	Commercial
Fabric Type	Galvanized After Weaving and Galvanized Before Weaving	Galvanized After Weaving
Fabric Gauge	9, 11, 11.5, and 12.5 gauge	6, 9, and 11 gauge
Fabric Mesh	1-1/4", 2", 2-1/4", 2-1/2", and 2-3/8"	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"
Fabric Height	3', 42", 4', 5', and 6'	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6'.	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.
Top Rail		**Top Rail**
3' to 5' High	1-3/8" O.D. 17 Gauge 1-3/8" O.D. 16 Gauge	1-5/8" O.D. Deluxe Quality (DQ) 1-5/8" O.D. Full Weight Pipe
6' High and over	1-3/8" O.D. 17 Gauge 1-3/8" O.D. 16 Gauge 1-5/8" O.D. 16 Gauge	1-5/8" O.D. Deluxe Quality (DQ) 1-5/8" O.D. Full Weight Pipe
Line Posts		**Line Posts**
3' to 5' High	1-5/8" O.D. 16 Gauge	1-7/8" O.D. Deluxe Quality (DQ) 1-7/8" O.D. Full Weight Pipe 2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe
6' High and over	1-7/8" O.D. 16 Gauge	2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe
Terminal Posts		**Terminal Posts**
3' to 5' High	1-7/8" O.D. 16 Gauge 2-3/8" O.D. 16 Gauge	2-3/8" O.D. Commercial Quality (CQ) 2-3/8" O.D. Deluxe Quality (DQ) 2-3/8" O.D. Full Weight Pipe 4" O.D. Commercial Quality (CQ) 4" O.D. Deluxe Quality (DQ) 4" O.D. Full Weight Pipe
6' High and over	2-3/8" O.D. 16 Gauge	
For Heavy Gates		6-5/8" O.D. Full Weight Pipe 8-5/8" O.D. Full Weight Pipe

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Malleable, Cast Iron Steel, Pressed Steel, or Die Cast Aluminum
Tie Wires	Aluminum or Galvanized Steel

Slats - Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, White, Redwood, Blue, Desert Sand

Spectra® and Spectra Bond® Color Chain Link Recommendations

FABRIC

Spectra® polymer coating extruded over zinc-coated steel core wire. Polymer coating is a minimum of 15 mil per ASTM F 668 Class 1.

Fabric Gauge	9 gauge and 11 gauge finish	6 gauge, 8 gauge, and 9 gauge finish 6 gauge is not available for 3/8" mesh or 1/2" mesh
Fabric Mesh	1-1/4", 1-1/2", 1-3/4", and 2"	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"
Fabric Height	3', 42", 4', 5', and 6'	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6'.	Knuckle - Knuckle (KK) for 5' and under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.
Top Rail	1-3/8" O.D. Spectra® 17 Gauge or 16 Gauge	1-5/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
Line Posts	1-5/8" O.D. Spectra® 17 Gauge or 16 Gauge	1-7/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
		2-3/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
Terminal Posts	1-7/8" O.D. Spectra® 16 Gauge	2-3/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
	2-3/8" O.D. Spectra® 16 Gauge	2-7/8" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe
		4" O.D. Spectra® Deluxe Quality (DQ) or Spectra® Full Weight Pipe

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum
Sleeves	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel
Tie Wires	Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire

Slats Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, Redwood, Blue, Desert Sand

FRAMEWORK - TYPE 2

Spectra® polyester resin, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM 1043, external coating Type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film.

FABRIC

Spectra Bond® polymer coating extruded and adhered to zinc-coated steel core wire. Polymer coating is a minimum 15 mils thick per ASTM F668 Class 2a.1.

Fabric Gauge	6 gauge, 9 gauge, 10 gauge, and 11 gauge core	
Fabric Mesh	3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"	
Fabric Height	3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'	
Fabric Selvage	Knuckle - Knuckle (KK) for 5' and Under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.	
Top Rail	1-5/8" O.D. Polyester Standard Weight Pipe (0.140" wall thickness, 2.27 lb./ft.)	1-5/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.111" wall thickness, 1.83 lb./ft.)
Line Posts	2-3/8" O.D. Polyester Standard Weight Pipe (0.154" wall thickness, 3.65 lb./ft.)	2-3/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.130" wall thickness, 3.12 lb./ft.)
Terminal Posts	2-7/8" O.D. Polyester Standard Weight Pipe (0.203" wall thickness, 5.79 lb./ft.)	2-7/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.160" wall thickness, 4.64 lb./ft.)

Gates

Fabric	Same Gauge and Mesh as Chain Link Selected
Frame	Same as Top Rail Selected

Fittings

Tension and Brace Bands	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel
Caps, Eye Tops, Rail Ends	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum
Sleeves	Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel
Tie Wires	Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire

Slats Privacy

Material Composition	Polyethylene Thermoplastic
Colors	Green, Black, Brown, Gray, Redwood, Blue, Desert Sand

FRAMEWORK - TYPE 1

Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1a, standard weight pipe, schedule 40. Hot-dipped galvanized with a minimum average 1.8 ounces per square foot of zinc-coated surface area. Note: Heavy Mil Schedule 40 available upon request.

FRAMEWORK - TYPE 2

Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1c, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film. Note: Heavy Mil Schedule 40 available upon request.

Permafused® Color Chain Link Recommendations

FABRIC

Permafused® Polyolefin Coating Fused and Adhered to Zinc-Coated Steel Core Wire per ASTM F Class 2b.

Fabric Gauge	**6 gauge, 9 gauge, 10 gauge, and 11 gauge core**
Fabric Mesh	**3/8", 1/2", 5/8", 1", 1-1/4", 1-1/2", 1-3/4", and 2"**
Fabric Height	**3', 42", 4', 5', 6', 7', 8', 9', 10', and 12'**
Fabric Selvage	**Knuckle - Knuckle (KK) for 5' and Under; for mesh sizes 1" and smaller. Knuckle - Knuckle (KK) or Knuckle - Twist (KT) for 6' and over.**

	FRAMEWORK - TYPE 1	FRAMEWORK - TYPE 2
	Spectra® Polyester, 3 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM 1043, external coating Type B, zinc with organiz overcoat, 0.9 ounces per square foot with chromate conversion and verifiable polymer film.	Permafused® Heavy Mil, 15 mils minimum, over galvanized steel ASTM F 1043, Group 1C, with a minimum yield strength of 50,000 PSI. Protective coating per ASTM F 1043, external coating type B, zinc with organic overcoat, 0.9 ounces per square foot minimum zinc coating with chromate conversion coating and verifiable polymer film. Note: Heavy Mil Schedule 40 available upon request.
Top Rail	**1-5/8" O.D. Polyester Standard Weight Pipe (0.140" wall thickness, 2.27 lb./ft.)**	**1-5/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.111" wall thickness, 1.83 lb./ft.)**
Line Posts	**2-3/8" O.D. Polyester Standard Weight Pipe (0.154" wall thickness, 3.65 lb./ft.)**	**2-3/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.130" wall thickness, 3.12 lb./ft.)**
Terminal Posts	**2-7/8" O.D. Polyester Standard Weight Pipe (0.203" wall thickness, 5.79 lb./ft.)**	**2-7/8" O.D. Polyester Deluxe Quality (DQ) Pipe (0.160" wall thickness, 4.64 lb./ft.)**

Gates

Fabric	**Same Gauge and Mesh as Chain Link Selected**
Frame	**Same as Top Rail Selected**

Fittings

Tension and Brace Bands	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel**
Caps, Eye Tops, Rail Ends	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Pressed Steel or Aluminum**
Sleeves	**Polyester Coating, 3 Mils Minimum, Over Hot-Dipped Galvanized Steel**
Tie Wires	**Polyester Coating, 3 Mils Minimum, Over Zinc-Coated Steel Wire**

Slats - Privacy

Material Composition	**Polyethylene Thermoplastic**
Colors	**Green, Black, Brown, Gray, White, Redwood, Blue, Desert Sand**

Accessories, Framework & Fittings...

for a complete fencing solution

Master Halco® is dedicated to providing a complete range of products for every fencing application. From temporary fencing to high security accessories, and automated gate systems to privacy screening, you'll find a solution that will fit any specific requirement for commercial or residential jobs. All products are constructed to the highest quality standards to deliver optimum performance and ensure efficient installation.

As the leader in the chain-link fencing market, you can look to Master Halco with confidence as your one-stop-shop for all high-quality, chain-link fencing products.

Kennels

High Security

Accessories

Temporary Panels

Gates

Privacy Slats

Framework & Fittings

The proper framework and fittings is a must for every job. Master Halco stocks the largest selection of imported and domestic pipe, tube and fittings in the nation to coordinate with our Chain-Link fabric styles, offering a complete fencing solution.

Whether you are looking to complete a small residential job or a large commercial one, Master Halco offers the perfect combination of products. Below are just a few examples of coordinating pipes, tubes and fittings available.

Pipe & Tube

- CQ20
- Structural
- Dura-Tube 16 Gauge
- RQ 15
- DQ 40
- HQ 30
- Dura-Lite 18 and 17 Gauge
- Schedule 40 Full Weight

Fittings

- Pressed Steel
- Malleable
- Aluminum
- Heavy Mil Color
- Die Cast
- Polyester Coated Color

EXHIBIT C

Additional Documents

EXAMPLE OF SPLASH PAD
H2O Fido

EXAMPLE OF SPLASH PAD

H2O
Fido
EXAMPLE OF SPLASH PAD

EXAMPLE OF SPLASH PAD

EXAMPLE OF SPLASH PAD

EXAMPLE OF SPLASH PAD

Date:	01/16/2024
Agenda Item #:	6. F.
Department:	Development Services
Strategic Goal:	Promote and expand Little Elm's identity
Staff Contact:	Olga Chernomorets, Planning Manager

AGENDA ITEM:

Present, Discuss, and Consider Action on a **Development Agreement between the Town of Little Elm and Twin Lakes Vet LLC.**

DESCRIPTION:

The attached agreement is to solidify the Planned Development and the overall concept plan, architectural design, and development standards as outlined in the associated documents and development plans for Twin Lakes Planned Development.

BUDGET IMPACT:

This item has no budget.

RECOMMENDED ACTION:

Staff recommends Council to consider the attached agreement.

Attachments

Development Agreement - Twin Lakes PD

STATE OF TEXAS §
§
COUNTY OF DENTON §

DEVELOPMENT AGREEMENT FOR _Twin Lakes (PD-22-06012)_

This Development Agreement for Twin Lakes PD ("**Agreement**") is entered into between Twin Lakes Vet LLC ("**Developer**"), whose address for purposes of this Agreement is 26810 US Highway 380 E, Aubrey, TX 76227-7655, and the Town of Little Elm, Texas ("**Town**"), whose address for purposes of this Agreement is 100 W. Eldorado Parkway, Little Elm, TX 75068. Developer and the Town are sometimes referred herein together as the "**Parties**" and individually as a "**Party**."

Recitals:

1. Developer is the owner of approximately 4.478 acres located at 26810 US Highway 380 E in the Town of Little Elm, Texas (the "**Property")**, which Property is more particularly described in **Exhibit A** attached hereto.

2. In furtherance of the development of the Property, the Parties have negotiated certain matters regarding the Property as set forth in this Agreement.

3. The Parties seek to memorialize these negotiated matters and to include them in this contractually-binding Agreement.

NOW, THEREFORE, for and in consideration of the above and foregoing premises, the benefits to each of the Parties from this Agreement, and other good and valuable consideration, the sufficiency of which is hereby acknowledged and agreed, the Parties do hereby agree as follows:

Section 1. Incorporation of Premises. The above and foregoing Recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

Section 2. Term. This Agreement shall be effective as of the date of execution of this Agreement by the last of the Parties to do so ("**Effective Date**"). This Agreement shall remain in full force and effect from the Effective Date until terminated by the mutual agreement of all of the Parties in writing, or until all obligations in the Agreement have been fulfilled ("**Term**").

Section 3. Agreements. The Parties agree as follows:

A. The negotiated and agreed upon zoning and development standards contained in the Twin Lakes PD Ordinance, No. 1747, attached hereto as **Exhibit B**, which incorporate by reference the general zoning regulations of the Town's zoning ordinance, are hereby adopted and incorporated into this agreement as contractually-binding obligations of the Developer.

Section 4. Miscellaneous.

A. Applicability of Town Ordinances. When the Property is developed, Developer shall construct all structures on the Property, in accordance with all applicable Town

ordinances and building/construction codes, whether now existing or arising prior to such construction in the future.

B. **Default/Mediation**. No Party shall be in default under this Agreement until notice of the alleged failure of such Party to perform has been given (which notice shall set forth in reasonable detail the nature of the alleged failure) and until such Party has been given a reasonable time to cure the alleged failure (such reasonable time determined based on the nature of the alleged failure, but in no event less than thirty (30) days after written notice of the alleged failure has been given). In addition, no Party shall be in default under this Agreement if, within the applicable cure period, the Party to whom the notice was given begins performance and thereafter diligently and continuously pursues performance until the alleged failure has been cured. If either Party is in default under this Agreement, the other Party shall have the right to enforce the Agreement in accordance with applicable law, provided, however, in no event shall any Party be liable for consequential or punitive damages. In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

C. **Venue**. This Agreement and any dispute arising out of or relating to this Agreement shall be governed by and construed in accordance with the laws of the State of Texas, without reference to its conflict of law rules. In the event of any dispute or action under this Agreement, venue for any and all disputes or actions shall be instituted and maintained in Denton County, Texas.

D. **Relationship of Parties**. It is acknowledged and agreed by the Parties that the terms hereof are not intended to and shall not be deemed to create a partnership, joint venture, joint enterprise, or other relationship between or among the Parties.

E. **Severability**. In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect other provisions, and it is the intention of the Parties to this Agreement that in lieu of each provision that is found to be illegal, invalid, or unenforceable, a provision shall be added to this Agreement which is legal, valid and enforceable and is as similar in terms as possible to the provision found to be illegal, invalid or unenforceable.

F. **Cumulative Rights and Remedies**. The rights and remedies provided by this Agreement are cumulative and the use of any one right or remedy by either Party shall not preclude or waive its right to use any or all other remedies. Said rights and remedies are given in addition to any other rights the Parties may have by law statute, ordinance, or otherwise. The failure by any Party to exercise any right, power, or option given to it by this Agreement, or to insist upon strict compliance with the terms of this Agreement, shall not constitute a waiver of the terms and conditions of this Agreement with respect to any other or subsequent breach thereof, nor a waiver by such Party of its rights at any time thereafter to require exact and strict compliance with all the terms hereof. Any rights and remedies any Party may have with respect to the other arising out of this

Agreement shall survive the cancellation, expiration or termination of this Agreement, except as otherwise expressly set forth herein.

G. **Exhibits**. All exhibits to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

H. **Surviving Rights**. Any of the representations, warranties, covenants, and obligations of the Parties, as well as any rights and benefits of the parties, pertaining to a period of time following the termination or expiration of this Agreement shall survive termination or expiration.

I. **Applicable Laws**. This Agreement is made subject to the existing provisions of the Charter of the Town of Little Elm, its present rules, regulations, procedures and ordinances, and all applicable laws, rules, and regulations of the State of Texas and the United States.

J. **Authority to Execute**. The undersigned officers and/or agents of the Parties hereto are the properly authorized persons and have the necessary authority to execute this Agreement on behalf of the Parties hereto.

K. **Amendments**. This Agreement may be only amended or altered by written instrument signed by the Parties.

L. **Headings**. The headings and captions used in this Agreement are for the convenience of the Parties only and shall not in any way define, limit or describe the scope or intent of any provisions of this Agreement.

M. **Entire Agreement**. This Agreement is the entire agreement between the Parties with respect to the subject matters covered in this Agreement. There are no other collateral oral or written agreements between the Parties that in any manner relates to the subject matter of this Agreement, except as provided or referenced in this Agreement.

N. **Filing in Deed Records**. This Agreement shall be recorded in the real property records of Denton County, Texas. This Agreement and all of its terms, conditions, and provisions is and shall constitute a restriction and condition upon the development of the Property and all portions thereof and a covenant running with the Property and all portions thereof, and is and shall be binding upon Developer and all of Developer's heirs, successors, and assigns and the future owners of the Property and any portion thereof; provided, however, this Agreement shall not constitute an obligation of or be deemed a restriction or encumbrance with respect to any final platted residential lot upon which a completed home has been constructed.

O. **Notification of Sale or Transfer; Assignment of Agreement**. Developer shall notify the Town in writing of any sale or transfer of all or any portion of the Property, within ten (10) business days of such sale or transfer. Developer has the right (from time to time without the consent of the Town, but upon written notice to the Town) to assign this Agreement, in whole or in part, and including any obligation, right, title, or interest of Developer under this Agreement, to any person or entity (an "**Assignee**") that is or will

become an owner of any portion of the Property or that is an entity that is controlled by or under common control with Developer. Each assignment shall be in writing executed by Developer and the Assignee and shall obligate the Assignee to be bound by this Agreement with respect to the portion of the Property transferred to Assignee. If the Property is transferred or owned by multiple parties, this Agreement shall only apply to, and be binding on, such parties to the extent of the Property owned by such successor owner, and if the Developer or any Assignee is in default under this Agreement, such default shall not be an event of default for any non-defaulting Assignee which owns any portion of the Property separate from the defaulting Developer or Assignee. A copy of each assignment shall be provided to the Town within ten (10) business days after execution. Provided that the successor developer assumes the liabilities, responsibilities, and obligations of the assignor under this Agreement with respect to the Property transferred to the successor developer, the assigning party will be released from any rights and obligations under this Agreement as to the Property that is the subject of such assignment, effective upon receipt of the assignment by the Town. No assignment by Developer shall release Developer from any liability that resulted from an act or omission by Developer that occurred prior to the effective date of the assignment. Developer shall maintain true and correct copies of all assignments made by Developer to Assignees, including a copy of each executed assignment and the Assignee's Notice information.

P. **Sovereign Immunity**. The Parties agree that the Town has not waived its sovereign immunity from suit by entering into and performing its obligations under this Agreement.

Q. **Exactions/Infrastructure Costs**. Developer has been represented by legal counsel, or has had an opportunity to do so, in the negotiation of this Agreement, and been advised, or has had the opportunity to have legal counsel review this Agreement and advise Developer, regarding Developer's rights under Texas and federal law. Developer hereby waives any requirement that the Town retain a professional engineer, licensed pursuant to Chapter 1001 of the Texas Occupations Code, to review and determine that the exactions required by the Town in this Agreement are roughly proportional or roughly proportionate to the proposed development's anticipated impact. Developer specifically reserves its right to appeal the apportionment of municipal infrastructure costs in accordance with § 212.904 of the Texas Local Government Code; however, notwithstanding the foregoing, Developer hereby releases the Town from any and all liability under § 212.904 of the Texas Local Government Code, as amended, regarding or related to the cost of those municipal infrastructure requirements imposed by this Agreement.

R. **Waiver of Texas Government Code § 3000.001 et seq**. With respect to the improvements constructed on the Property pursuant to this Agreement, Developer hereby waives any right, requirement or enforcement of Texas Government Code §§ 3000.001-3000.005.

S. **Rough Proportionality**. Developer hereby waives any federal constitutional claims and any statutory or state constitutional takings claims under the Texas Constitution with respect to infrastructure requirements imposed by this Agreement. Developer and the Town further agree to waive and release all claims one may have against the other related to any and all rough proportionality and individual determination

requirements mandated by the United States Supreme Court in *Dolan v. City of Tigard*, 512 U.S. 374 (1994), and its progeny, as well as any other requirements of a nexus between development conditions and the projected impact of the terms of this Agreement, with respect to infrastructure requirements imposed by this Agreement.

T. Form 1295 Certificate. The Developer agrees to comply with Texas Government Code, Section 2252.908 and in connection therewith, the Developer agrees to go online with the Texas Ethics Commission to complete a Form 1295 Certificate and further agrees to print the completed certificate and execute the completed certificate in such form as is required by Texas Government Code, Section 2252.908 and the rules of the Texas Ethics Commission and provide to the Town, at the time of delivery of an executed counterpart of this Agreement, a duly executed completed Form 1295 Certificate.

U. Undocumented Workers Provision. The Developer certifies that Developer does not and will not knowingly employ an undocumented worker in accordance with Chapter 2264 of the Texas Government Code, as amended. If during the Term of this Agreement, Developer is convicted of a violation under 8 U.S.C. § 1324a(f), Developer shall repay the amount of any public subsidy provided under this Agreement to Developer plus six percent (6.0%), not later than the 120th day after the date the Town notifies Developer of the violation.

V. Non-Boycott of Israel Provision. In accordance with Chapter 2270 of the Texas Government Code, a Texas governmental entity may not enter into an agreement with a business entity for the provision of goods or services unless the agreement contains a written verification from the business entity that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the agreement. Chapter 2270 of the Texas Government Code does not apply to a (1) a company that is a sole proprietorship; (2) a company that has fewer than ten (10) full-time employees; or (3) the contract has a value of less than One Hundred Thousand Dollars ($100,000.00). Unless Developer is not subject to Chapter 2270 of the Texas Government Code for the reasons stated herein, the signatory executing this Agreement on behalf of Developer verifies that Developer does not boycott Israel and will not boycott Israel during the Term of this Agreement.

W. Prohibition on Contracts with Certain Companies Provision. In accordance with Section 2252.152 of the Texas Government Code, the Parties covenant and agree that Developer is not on a list maintained by the State Comptroller's office prepared and maintained pursuant to Section 2252.153 of the Texas Government Code.

X. Report Agreement to Comptroller's Office. Town covenants and agrees to report this Agreement to the State Comptroller's office within fourteen (14) days of the Effective Date of this Agreement, in accordance with Section 380.004 of the Texas Government Code, as added by Texas House Bill 2404, 87th Tex. Reg. Session (2021) (effective September 1, 2021). [For Chapter 380 Agreements]

Y. Verification Against Discrimination of Firearm or Ammunition Industries. Pursuant to Texas Government Code Chapter 2274, (as added by Texas Senate Bill 19, 87th Tex. Reg. Session (2021) (effective September 1, 2021)) unless otherwise exempt, if the Developer employs at least ten (10) fulltime employees and this Agreement has a

value of at least $100,000 that is paid wholly or partly from public funds of the Town, the Developer represents that: (1) the Developer does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and (2) the Developer will not discriminate during the Term of the Agreement against a firearm entity or firearm trade association.

Z. Verification Against Discrimination Developer Does Not Boycott Energy Companies. Pursuant to Texas Government Code Chapter 2274, (as added by Texas Senate Bill 13, 87th Tex. Reg. Session (2021) (effective September 1, 2021)) unless otherwise exempt, if the Developer employs at least ten (10) fulltime employees and this Agreement has a value of at least $100,000 that is paid wholly or partly from public funds of the Town, the Developer represents that: (1) the Developer does not boycott energy companies; and (2) the Developer will not boycott energy companies during the Term of this Agreement.

EXECUTED by the Parties on the dates set forth below, to be effective as of the date first written above.

DEVELOPER
a _____ company

By: _____

Date:_____

TOWN OF LITTLE ELM, TEXAS

By:_____
Matt Mueller
Town Manager

Date:_____

ATTEST:

By:_____
Caitlan Biggs
Town Secretary

STATE OF TEXAS §
§
COUNTY OF DENTON §

Before me, the undersigned authority, on this _____ day of _____, 2024, personally appeared MATT MUELLER, Town Manager of the Town of Little Elm, Texas, 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 consideration therein expressed.

[Seal]

By:_____
Notary Public, State of Texas

My Commission Expires:_____

STATE OF TEXAS §
§
COUNTY OF _____ §

Before me, the undersigned authority, on this _____ day of _____, 2024, personally appeared _____, 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 consideration therein expressed and in the capacity of a duly authorized representative of _____.

[Seal]

By:_____
Notary Public, State of Texas

My Commission Expires:_____

EXHIBIT A

Property Description

EXHIBIT "A"
LEGAL DESCRIPTION

This document represents an accurate on the ground survey of 26810 US-380 in the City of Aubrey, Denton County, Texas, on December 30, 2016.

A tract of land situated in the JOSE GONZALEZ SURVEY, ABSTRACT NUMBER 447, Denton County, Texas and being all of a tract of land described in the deed to Twin Lakes Vet, LLC under Document Number 2007-17942 of the Real Property Records, Denton County, Texas.
The exterior boundary of said tract of land is described as follows:
BEGINNING at a 1/2-inch iron rod found on the South right-of-way of U.S. Highway 380 at the Northeast corner of the said Twin Lakes Vet, LLC tract;
THENCE South 01°26'50"West with the common line between the East line of the said Twin Lakes Vet, LLC tract and the West line of a tract of land described in the deed to future benefits, LLC recorded under County Clerk's file Number 2010-8961 of the said Real Property Records a distance of 667.03 feet to a 3/8-inch iron rod found at the Southwest corner thereof;
THENCE South 89°41'44"West the common line between the North line of a tract of land described in the deed to Western Rim Investors 2015-5. L.P. recorded under County Clerk's File Number 2014-73393 of the aid Real Property Records and the South line of the said Twin Lakes Vet, LLC tract a distance of 298.58 feet to a capped 1/2-inch iron rod stamped "EAGLE SURVEYING" set at the Southwest corner thereof;
THENCE North 01°34'19"East a distance of 581.59 feet to a capped 1/2-inch iron rod stamped "EAGLE SURVEYING" set on the said South right-of-way of U.S. Highway 380;
THENCE North 46°04'20"East along said South right-of-way of U.S. Highway 380 a distance of 131.15 feet to a capped 1/2-inch iron rod found at the beginning of a curve, to the right, having a radius of 11539.16 feet
THENCE along said South right-of-way of U.S. Highway 380 with said curve arc length of 15.32 feet, a chord bearing of South 88°58'32"East a chord length of 15.32 feet to a right-of-way monument with an aluminum cap found for a corner;
THENCE South 88°53'12"East along said South right-of-way of U.S. Highway 380 a distance of 189.73 feet to the POINT OF BEGINNING and enclosing 4.49 of an acre of land more or less.

EXHIBIT B

PD Ordinance

TOWN OF LITTLE ELM

ORDINANCE NO. 1747

AN ORDINANCE OF THE TOWN OF LITTLE ELM, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE, BY ESTABLISHING A NEW PLANNED DEVELOPMENT – LIGHT COMMERCIAL (PD-LC) DISTRICT IN ORDER TO ALLOW A NEW COMMERCIAL DEVELOPMENT WITH MODIFIED USES AND DEVELOPMENT STANDARDS ON APPROXIMATELY 4.478 ACRES OF LAND LOCATED AT 26810 US HIGHWAY 380; PROVIDING A SAVINGS CLAUSE; CORRECTING THE OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A REPEALER CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Little Elm ("Town") is a home rule municipal corporation organized and existing by virtue of the Constitution and laws of the State of Texas and by its Charter adopted on May 1, 2001; and

WHEREAS, the Town possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate land uses under Chapter 211 of the Texas Local Government Code; and

WHEREAS, a request for Planned Development-Light Commercial (PD-LC) with modified development standards on approximately 4.478 acres of land, more specifically described in the exhibits, attached hereto; and

WHEREAS, this zoning change is in accordance with the most current adopted Comprehensive Plan of the Town of Little Elm; and

WHEREAS, the Town Council and the Planning & Zoning Commission of the Town of Little Elm, in compliance with the laws of the State of Texas and the ordinances of the Town of Little Elm, have given the required notices and held the required public hearings and afforded a full and fair hearing to all property owners generally and to all persons interested in and situated in the affected area and in the vicinity thereof regarding the requested zoning change described herein; and

WHEREAS, at its regular meeting held on December 7, 2023 the Planning & Zoning Commission considered and made recommendations on Case No. PD-22-06012; and

WHEREAS, after due deliberations and consideration of the recommendation of the Planning & Zoning Commission and any other information and materials received at the public hearing, the Town Council of the Town of Little Elm, Texas, has determined that the request is in the interest of public health, safety and welfare of the citizens of the Town of Little Elm.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF LITTLE ELM, TEXAS:

SECTION 1. INCORPORATION OF PREMISES. The above and foregoing premises are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2. ZONING AMENDMENT. That Ordinance No. 226 of the Town of Little Elm, Texas, the same being the Comprehensive Zoning Ordinance of the Town, is hereby amended by establishing a new Planned Development-Light Commercial (PD-LC) based on Light Commercial (LC) district requirements with modified uses and development standards, on property located at 26810 US Highway 380, within Little Elm's town limits, on approximately 4.478 acres of land more particularly described in **Exhibit A**, and attached hereto, subject to all of the terms and conditions set forth herein, the terms and conditions of the Comprehensive Zoning Ordinance, and all other applicable ordinances, laws, rules, regulations, and standards.

SECTION 3. CONDITIONS AND REGULATIONS. The permitted standards shall be in accordance with the Light Commercial (LC) District, and all applicable provisions of Chapter 106 – Zoning Ordinance in general, plus as specified herein:

a. The Zoning and Land Use Regulations, and all conditions set forth in **Exhibit B** attached hereto and made a part hereof for all purposes shall be adhered to in their entirety for the purposes of this Planned Development. In the event of conflict between the provisions of **Exhibit B** and provisions of any other exhibit, the provisions of **Exhibit B** control.

SECTION 4. PLANNED DEVELOPMENT MASTER PLAN. The Concept Plan and related plans, images, and documents approved and described as **Exhibit C** attached hereto and made a part hereof are approved. The subject property shall be improved in accordance with the plans set forth in **Exhibit C**.

a) If, after two years from the date of approval of the Planned Development Master Plan, no substantial development progress has been made within the PD, then the Planned Development Master Plan shall expire. If the Planned Development Master Plan expires, a new Planned Development Master Plan must be submitted and approved according to the procedures within the Zoning

Ordinance, Planned Development Districts. An extension of the two year expiration shall be granted if a development application for the PD has been submitted and is undergoing the development review process or if the Director of Development Services determines development progress is occurring.

b) The Planned Development Master Plan shall control the use and development of the property, and all building permits and development requests shall be in accordance with the plan until it is amended by the City Council.

c) If a change to the Concept Plan, if any, is requested, the request shall be processed in accordance with the development standards in effect at the time the change is requested for the proposed development.

SECTION 5. SAVINGS. This Ordinance shall be cumulative of all other ordinances of the Town, and shall not repeal any of the provisions of those ordinances except in those instances where the provisions of those ordinances are indirect conflict with the provisions of this Ordinance; provided, however, that any complaint, notice, action, cause of action, or claim which prior to the effective date of this Ordinance has been initiated or has arisen under or pursuant to such other ordinance(s) shall continue to be governed by the provisions of that ordinance or those ordinances, and for that purpose that ordinance or those ordinances shall be deemed to remain and shall continue in full force and effect.

SECTION 5. ZONING MAP. The official zoning map of the Town shall be amended to reflect the changes in zoning made by this ordinance.

SECTION 6. PENALTY. Any person, firm, or corporation violating any of the provision of this ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars ($2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

SECTION 7. SEVERABILITY. The sections, paragraphs, sentences , phrases, and words of this Ordinance are severable, and if any section or provision of this ordinance or the application of that section or provision to any person, firm, corporation, situation or circumstance is for any reason judged invalid or unconstitutional, the adjudication shall not affect any other section or provision of this ordinance or the application of any other section or provision to any person, firm, corporation, situation or circumstance, nor shall adjudication affect any other section or provision of the Comprehensive Zoning Ordinance of the Town of Little Elm, Texas, and the Town Council hereby declares that it would have adopted the valid portions and applications of the ordinance without the valid parts and to this end the provisions of this ordinance shall remain in full force and effect.

SECTION 8. REPEALER. That all ordinances of the Town of Little Elm in conflict with the provisions of this ordinance be and the same are hereby repealed to the extent of that

conflict.

SECTION 9. EFFECTIVE DATE. That this Ordinance shall take effect immediately upon its adoption and publication in accordance with and as provided by law and the Town Charter.

PASSED AND APPROVED by the Town Council of the Town of Little Elm, Texas on the 16th day of January, 2024.

Town of Little Elm, Texas

_____

Curtis Cornelious, Mayor

ATTEST:

_____

Caitlan Biggs, Town Secretary

Exhibit A

Metes and Bounds

EXHIBIT "A"
LEGAL DESCRIPTION

This document represents an accurate on the ground survey of 26810 US-380 in the City of Aubrey, Denton County, Texas, on December 30, 2016.

A tract of land situated in the JOSE GONZALEZ SURVEY, ABSTRACT NUMBER 447, Denton County, Texas and being all of a tract of land described in the deed to Twin Lakes Vet, LLC under Document Number 2007-17942 of the Real Property Records, Denton County, Texas.
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THENCE North 01°34'19"East a distance of 581.59 feet to a capped 1/2-inch iron rod stamped "EAGLE SURVEYING" set on the said South right-of-way of U.S. Highway 380;
THENCE North 46°04'20"East along said South right-of-way of U.S. Highway 380 a distance of 131.15 feet to a capped 1/2-inch iron rod found at the beginning of a curve, to the right, having a radius of 11539.16 feet
THENCE along said South right-of-way of U.S. Highway 380 with said curve arc length of 15.32 feet, a chord bearing of South 88°58'32"East a chord length of 15.32 feet to a right-of-way monument with an aluminum cap found for a corner;
THENCE South 88°53'12"East along said South right-of-way of U.S. Highway 380 a distance of 189.73 feet to the POINT OF BEGINNING and enclosing 4.49 of an acre of land more or less.

Exhibit B
PD Standards

26810 Us Highway 380 E

PLANNED DEVELOPMENT REGULATIONS

August 2023

PREPARED BY:

TRIANGLE ENGINEERING LLC

1782 W. MCDERMOTT DRIVE
ALLEN, TX 75013
469.331.8566
TBPE FIRM #11525

26810 US HIGHWAY 380 E
PLANNED DEVELOPMENT DISTRICT
STATEMENT OF INTENT AND PURPOSE

This zoning submittal encompasses approximately 4.49 acres of land within the Town of Little Elm more fully described on the legal description attached as Exhibit A (the "Property"). The planned development ("PD") will allow for the development of an animal clinic with an outdoor run, an animal clinic without an outdoor run and a retail building. This planned development will provide the zoning regulations, as depicted in Exhibit B, necessary to develop the property and the final layout must generally conform to the concept plan, as depicted in Exhibit C.

It is the intent of this PD to primarily follow the Light Commercial (LC) zoning regulations as the base district, with modified development standards as outlined within this PD ordinance, therefore amending the existing Town of Little Elm, Texas zoning map. Any conflict between this PD and the Town of Little Elm Zoning Ordinance shall be resolved in favor of those regulations set forth in this PD, or as may be ascertained through the intent of this PD. As used herein "Zoning Ordinance" means the comprehensive zoning of the Town of Little Elm, Texas, in effect on the effective date of this Agreement, except otherwise defined in this Agreement. Uses and development regulations specifically modified, designated, or included in this PD shall not be subject to amendment of this PD. Uses and development regulations which otherwise are not specifically modified, designated or included in this PD shall be controlled by the "Zoning Ordinance", unless the context provides to the contrary.

As used herein, "Director" means the Director of Development Services.

Project Location

The proposed PD is located at the intersection of 6810 US Highway 380 E. and Elm Ridge Road. The Legal Description (Exhibit A), Development Standards (Exhibit B), and the concept plan (Exhibit C) have been provided.

The property is surrounded by light commercial uses to the east and west, and multi-family residential use to the south. This PD will provide the opportunity to develop the following:

1. Two (2) single-story shopping center retail buildings; and
2. A two-story animal clinic building with an outdoor run.

EXHIBIT B

PLANNED DEVELOPMENT DISTRICT STANDARDS

GENERAL REGULATIONS

Purpose. The purpose of this Planned Development district is to allow for the development of 2 retail buildings and a two-story animal clinic with an outdoor run. All buildings are to be located on two platted lots while cohesively tying into the surrounding light commercial zoning areas.

Use Regulations. No building, structure, land or premises will be used, and no building or structure shall hereafter be erected, constructed, reconstructed, or altered, except for one or more of the uses specified in Section 106.05.01(b), "Schedule of Uses – Nonresidential".

Base Zoning District. The permitted uses and standards shall be in accordance with Light Commercial (LC) zoning district, unless otherwise specified herein.

Prohibited Uses. Per this PD, the following uses are prohibited on the subject property:

1. Alternative financial Services;
2. Sexually-oriented businesses;
3. Body art facilities;
4. Smoke shops;
5. Vice paraphernalia;
6. Gaming or slot machines (excluding arcades);
7. Lewd merchandise sales;
8. Pawn shops; and
9. Outdoor storage/display.

Permitted Uses. The permitted uses and standards outlined within the Light Commercial (LC) base zoning district shall be permitted within this PD, with the following additional uses:

1. Animal clinic with an outdoor run;
2. Animal clinic without an outdoor run; and
3. Retail (Store, Shopping Center).

All not defined by this PD shall default to the Little Elm Code of Ordinances as set forth at time of adoption, and as amended.

Height and Area Regulations. All building height and lot area requirements shall be defined by Section 106.03.03 “Zoning Districts – Non-residential/commercial/industrial”.

Architectural Standards. All applicable provisions of Section 106.06.05 “Architectural Standards for Commercial Structures (Includes Office, Retail, Commercial, Mixed Use, Etc.), shall be followed.

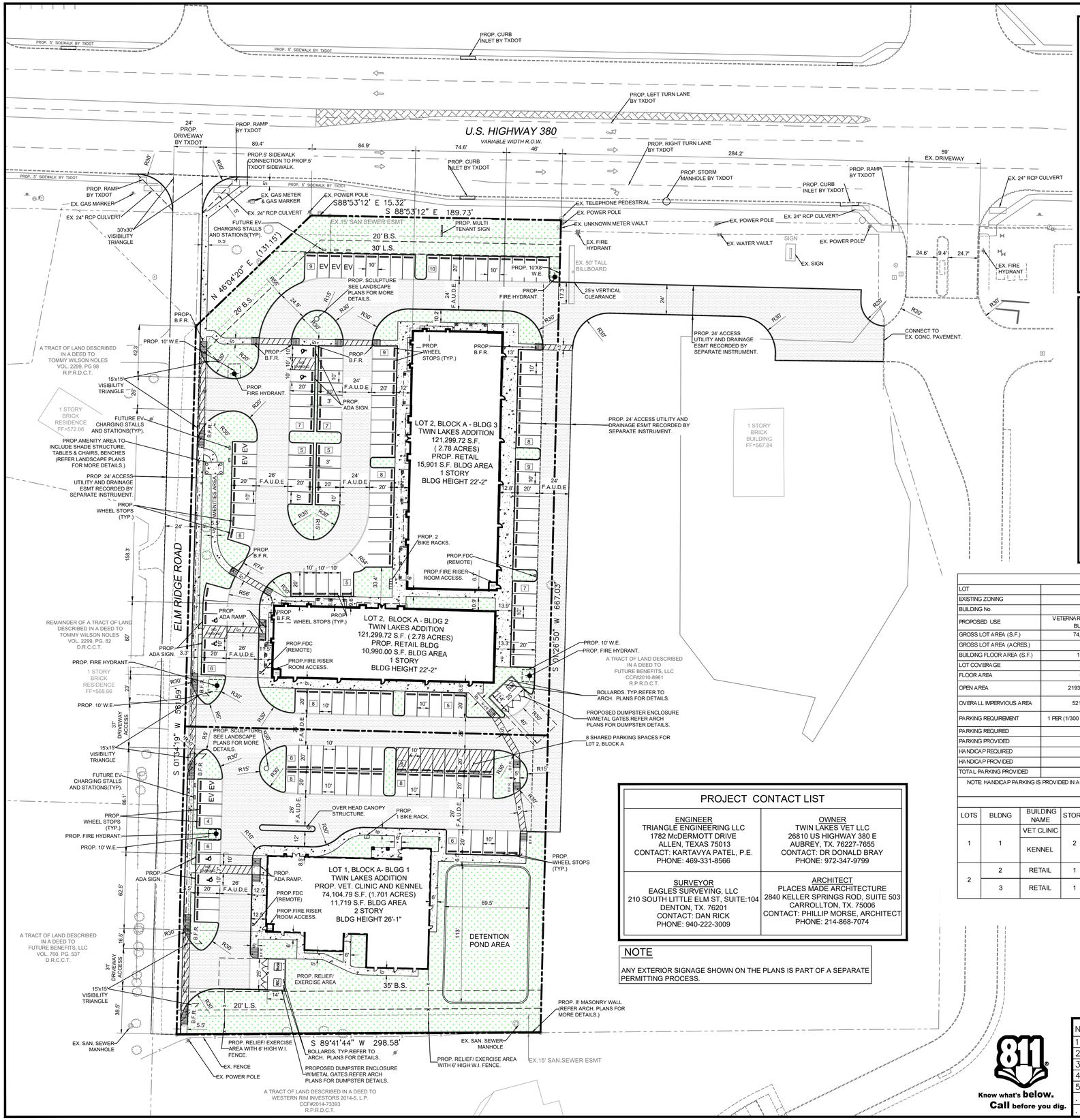
Parking Standards. All applicable provision of Division 4 “Parking, Stacking, and Loading Standards.” Shall be followed.

Commercial Landscape and Screening Requirements. All applicable provisions of Section 106.06.18 “Commercial Landscape Requirements” and Section 106.06.31 “Screening” shall be followed.

Signage. All applicable provisions of chapter 86 “Sign Ordinance”, shall be met unless otherwise stated herein:

1. Per this PD, a single mult-tenant monument sign shall be permitted along the US Highway 380 street frontage.

Exhibit C
Development Plans

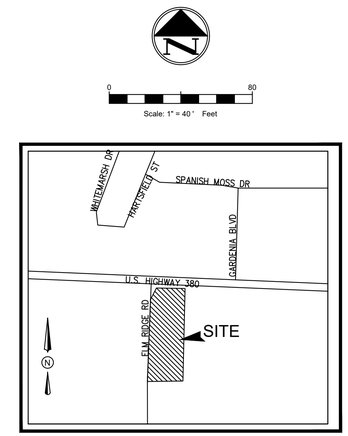


EXISTING LEGEND

1/2" IR FOUND	IRRIGATION VALVE	NO PARKING
1/2" IR SET	WATER VALVE	CONCRETE
5/8" IR FOUND	FIRE HYDRANT	GRAVEL
3/8" IR FOUND	IR. VALVE	BRICK
60-D NAIL FOUND	UTILITY POLE	STONE
PK NAIL SET	WATER METER	WOOD DECK
1/2" IP FOUND	GAS METER	BUILDING WALL
X-FOUND	A.C. PAD	TILE
X-SET	TRANS. BOX	BUILDING LINE
1" IR FOUND	GAS MARKER	EASEMENT
1" IP FOUND	OVERHEAD UTILITY LINE	BOUNDARY
POINT FOR CORNER	GUY WIRE ANCHOR	HIGHBANK LINE
CON. MONUMENT	BARBED WIRE FENCE	PARKING STRIPE
3/4" IP FOUND	IRON FENCE	HANDICAP SPACE
TELE. BOX	CHAINLINK FENCE	POWER POLE
CABLE BOX	WOOD FENCE	TREE
ELECTRIC BOX	PIPE RAIL FENCE	TELEPHONE PEDESTAL
BRICK COLUMN	COVERED AREA	GAS LINE MARKER
STONE COLUMN	ASPHALT	GAS TEST STATION
STORM DRAIN MH.	FIRE LANE STRIPE	BURIED CABLE MARKER
SAN. SEW. CO.	BRICK RET. WALL	IRRIGATION CONTROL VALVE
BOLLARD POST	STONE RET. WALL	UNKNOWN METER VAULT
LIGHT POLE	CON. RET. WALL	ELECTRIC BOX/VAULT
SAN. SEW. MH.		SIGN

SITE LEGEND

CONCRETE CURB
SAW-CUT LINE
FENCE (x x x)
FIRE LANE
STRIPING
FIRE LANE HATCH
SIDE WALK HATCH
LANDSCAPE AREA
PARKING SPACES (X)
MONUMENT/PYLON SIGN
WHEEL STOPS
HANDICAP LOGO
HANDICAP SIGN
RAMP
BOLLARD
TRAFFIC ARROW
FIRE HYDRANT
DUMPSTER (DE / EN)



VICINITY MAP
N.T.S.

SITE GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OR LOCAL JURISDICTION STANDARDS.
2. THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.
3. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.
4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.
5. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.
6. ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.
7. THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.
8. ALL CURB RADIUS TO BE 10' OR 2' UNLESS OTHERWISE NOTED ON THE SITE PLAN.

EASEMENT/SETBACK LEGEND

BUILDING SETBACK	B.S.
LANDSCAPE SETBACK	L.S.
FIRE LANE, ACCESS, UTILITY& DRAINAGE EASEMENT	F.A.U.D.E.
BARRIER FREE RAMP	B.F.R.
ELECTRIC VEHICLE	EV

SITE DATA SUMMARY TABLE

LOT	1	2		TOTAL
EXISTING ZONING	LC-LIGHT COMMERCIAL			
BUILDING No.	1	2	3	MIXED
PROPOSED USE	VETERNARY AND KENNEL BUILDING	RETAIL	RETAIL	MIXED
GROSS LOT AREA (S.F.)	74,104.79	121,299.72		195,404.51
GROSS LOT AREA (ACRES.)	1.70	2.78		4.49
BUILDING FLOOR AREA (S.F.)	11,719	10,990	15,901	38,609
LOT COVERAGE	22%	9%	13%	44%
FLOOR AREA	0.13	0.09	0.13	0.35
OPEN AREA	21932.79 S.F.	21144.12 S.F.		43,076.91 SF (0.981 AC)
OVERALL IMPERVIOUS AREA	52172 S.F.	100535 S.F.		1,52,327.60 SF (3.50 AC)
PARKING REQUIREMENT	1 PER (1/300 GFA+1/500 GFA)	1 PER (1/300 GFA + 1/200 GFA)	1 PER 200 GFA	MIXED
PARKING REQUIRED	35	45	80	160
PARKING PROVIDED	40	41	77	158
HANDICAP REQUIRED	2	2	2	6
HANDICAP PROVIDED	2	2	2	6
TOTAL PARKING PROVIDED	42	43	79	164

NOTE: HANDICAP PARKING IS PROVIDED IN A CCORDANCE WITH ADA STANDARDS & HYDRODYNAMIC SEPARATORS AND BMPS WILL BE PROPOSED FOR WATER QUALITY AS PER ENGINEERING STANDARDS

BUILDING DATA SUMMARY TABLE

LOTS	BLDNG	BUILDING NAME	STORY	HEIGHT	USE	AREA (S.F.)	SUB-TOTAL	TOTAL
1	1	VET CLINIC	2	26'-1"	VETERNARY CLINIC	8338		
		KENNEL			VETERNARY CLINIC WITH 29% KENNEL	3,381	11,719	**11,719**
2	2	RETAIL	1	22'-2"	RETAIL	10,990		**10,990**
	3	RETAIL	1	22'-2"	RETAIL	15,901		**38,610**

PROJECT CONTACT LIST

ENGINEER TRIANGLE ENGINEERING LLC 1782 McDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: KARTAVYA PATEL, P.E. PHONE: 469-331-8566	OWNER TWIN LAKES VET LLC 26810 US HIGHWAY 380 E AUBREY, TX. 76227-7655 CONTACT; DR DONALD BRAY PHONE: 972-347-9799
SURVEYOR EAGLES SURVEYING, LLC 210 SOUTH LITTLE ELM ST, SUITE:104 DENTON, TX. 76201 CONTACT: DAN RICK PHONE: 940-222-3009	ARCHITECT PLACES MADE ARCHITECTURE 2840 KELLER SPRINGS ROD, SUITE 503 CARROLLTON, TX. 75006 CONTACT: PHILLIP MORSE, ARCHITECT PHONE: 214-868-7074

NOTE

ANY EXTERIOR SIGNAGE SHOWN ON THE PLANS IS PART OF A SEPARATE PERMITTING PROCESS.

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

NO.	DATE	DESCRIPTION	BY
1	08/24/22	1st CITY SUBMITTAL	KP
2	03/28/23	2 nd CITY SUBMITTAL	KP
3	08/24/23	3 rd CITY SUBMITTAL	KP
4	10/13/23	4 th CITY SUBMITTAL	KP
5	11/10/23	5 th CITY SUBMITTAL	KP
.	.	.	.
.	.	.	.

STATE OF TEXAS
KARTAVYA S. PATEL
97534
LICENSED PROFESSIONAL ENGINEER
11/10/23

SITE PLAN

LC DEVELOPMENT AT US 380 & ELM RIDGE RD

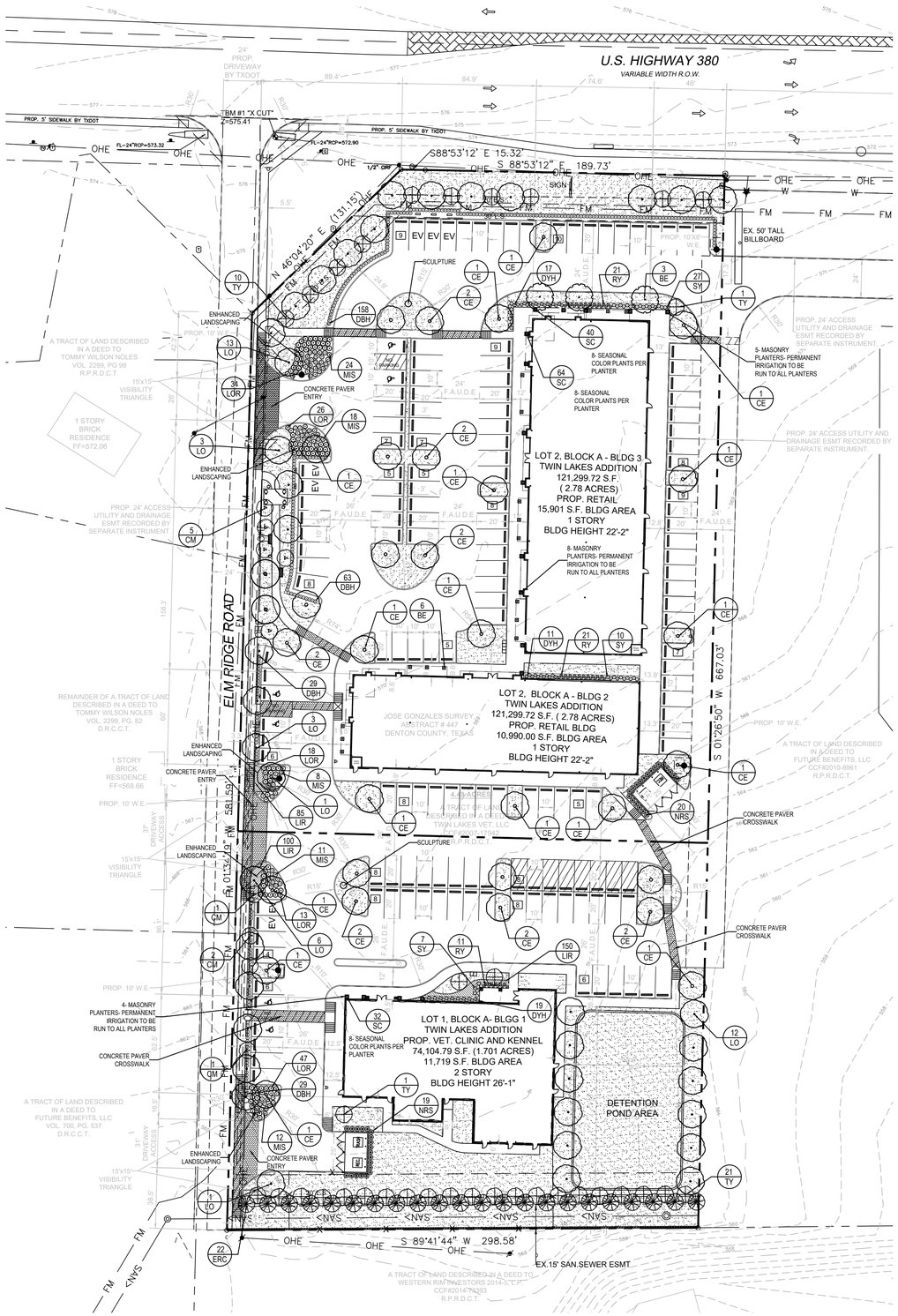
26810 US 380
CITY OF LITTLE ELM
DENTON COUNTY, TX
LOTS 1 & 2 BLOCK A, TWIN LAKES ADDITION

TRIANGLE ENGINEERING LLC
T: 469.331.8566 I F: 469.213.7145 I E: info@triangle-engr.com
W: triangle-engr.com I O: 1782 McDermott Drive, Allen, TX 75013

Planning | Civil Engineering | Construction Management

P.E.	DES.	DATE	SCALE	PROJECT NO.	SHEET NO.
KP	MK	08-24-22	SEE SCALE BAR	089-22	C-3.0

TX. P.E. FIRM #11525



LANDSCAPE TABULATIONS- LOT 2

SITE TREE REQUIREMENTS

Requirements: 10% of gross vehicular area to be landscaped.
(1) tree per 400 s.f. of required landscaped area.
Vehicular Area: (53,005 s.f.)

Required	Provided
5,300.5 s.f. (10%)	7,087.14 s.f. (13%)
Required	Provided
(13) trees	(44) trees (16) 3" cal. ornamental trees

PARKING LOT

Requirement: All parking spaces must be located within 70' of large canopy tree. One (1) tree per island and One island for every (10) spots.

Provided

PERIMETER LANDSCAPE REQUIREMENTS

Requirements- Vehicular screening is required from public R.O.W and abutting properties.

Provided

US Highway 380- (336 l.f.) 1 large tree per 30 l.f. of street frontage and 3 ornamentals for every 5 large trees of perimeter

Required	Provided
11 trees	11 proposed trees- 4" cal.
6 ornamentals	10 ornamentals

West Perimeter- (328 l.f.) 1 large tree per 40 l.f. and 3 ornamental trees for every 5 large trees of perimeter

Required	Provided
8 trees	8 proposed trees- 4" cal
5 ornamental trees	5 ornamental trees 2 existing trees

Perimeter vehicular screening provided with 36" ht. evergreen shrubs

Provided

Foundation planting and amenity area provided- Amenity area to include plaza, shade structure, benches, table and chairs and trash receptacles.

LANDSCAPE DESIGN OPTIONS
25 POINTS REQUIRED

Enhanced hardscape (crosswalks are concrete pavers) - 5 points
Enhanced landscaping - 5 points
Enhanced entry ways paving - 5 points
Masonry planters- 4 min. - 5 points
Small sculpture- 5 points

Total points = 25.00

LANDSCAPE TABULATIONS- LOT 1

SITE TREE REQUIREMENTS

Requirements: 10% of gross vehicular area to be landscaped.
(1) tree per 400 s.f. of required landscaped area.
Vehicular Area: (27,386 s.f.)

Required	Provided
2,783.6 s.f. (10%)	2,773.19 s.f. (10%)
Required	Provided
(7) trees	(27) trees (4) 3" cal. ornamental trees

PARKING LOT

Requirement: All parking spaces must be located within 70' of large canopy tree. One (1) tree per island and One island for every (10) spots.

Provided

PERIMETER LANDSCAPE REQUIREMENTS

West Perimeter- (253 l.f.) 1 large tree per 40 l.f. and 3 ornamental trees for every (5) large trees of perimeter

Required	Provided
7 trees	7 proposed trees- 4" cal.
4 ornamental trees	4 ornamental trees

Perimeter vehicular screening provided with 36" ht. evergreen shrubs
Provided

Foundation planting and ornamental trees provided on the north side of the building.

South Perimeter (Residential Adjacency) - (299 l.f.) Required 8 ft. masonry wall along the entire length of perimeter and a 20' landscape buffer w/ a double row of tree planting
15 ft. on center.

Required	Provided
40 trees	43 proposed trees
8' masonry wall	8' masonry wall
20' landscape buffer	20' landscape buffer

DETENTION POND REQUIREMENTS

Perimeter- (351 l.f.) 1 large tree per 30 l.f. of perimeter

Required	Provided
12 trees	12 trees

LANDSCAPE DESIGN OPTIONS
25 POINTS REQUIRED

Enhanced hardscape (crosswalks are concrete pavers) - 5 points
Enhanced landscaping - 5 points
Enhanced entry ways paving - 5 points
Masonry planters- 4 min. - 5 points
Small sculpture- 5 points

Total points = 25.00

RELIEF / EXERCISE AREA NOTES

1. The area will be screened by the residential adjacency buffer trees and 8' masonry screen wall that will help reduce noise. The dog waste will be cleaned up daily and the turf soil neutralized as needed to eliminate smell.

PLANT MATERIAL SCHEDULE- LOT 2

TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
TREES					
CE	22	Cedar Elm	*Ulmus crassifolia*	4" cal.	B&B, 12' ht., 5' spread, 6' clear straight trunk
CM	5	Crepe Myrtle	*Lagerstroemia indica*	3" cal.	container 6' ht., 3 or 5 cane, tree form
BE	3	Bosque Elm	*Ulmus parvifolia*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
LO	19	Live Oak	*Quercus virginiana*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
TY	11	Tree Yaupon	*Ilex vomitoria*	3" cal.	container, 6' ht., 3 or 5 cane, tree form
SHRUBS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
DBH	250	Dwarf Burford Holly	*Ilex comuta burfordii 'nana'*	5 gal.	container grown, 36" ht., 24" spread
DYH	28	Dwarf Yaupon Holly	*Ilex vomitoria 'Nana'*	3 gal.	container grown, 20" spread
RY	42	Red Yucca	*Hesperaloe parvifolia*	3 gal.	container grown, 12" spread
LOR	75	Loropetalum	*Lorapetalum chinensis*	5 gal.	container grown, 24" ht., 20" spread
MIS	50	Miscanthus	*Miscanthus sinensis*	5 gal.	container full, 24" spread
SY	37	Softleaf Yucca	*Yucca recurvifolia*	3 gal.	container grown, 20" spread
NRS	20	Nellie R. Stevens	*Ilex x 'Nellie R. Stevens'*	7 gal.	container, 36" ht., 30" spread
GROUNDCOVERS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
LIR	85	Liriope	*Liriope Muscari*	4" pots	container full, well rooted
SC	104	Seasonal Color '419' Bermudagrass	*Cynodon dactylon '419'*	4" pots	selection by owner solid sod refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

PLANT LEGEND:

BOSQUE ELM, 4" CAL.
CEDAR ELM, 4" CAL.
LIVE OAK, 4" CAL.
BOSQUE ELM, 4" CAL.
TREE YAUPON, 3" CAL.
CREPE MYRTLE, 3" CAL.
EASTERN RED CEDAR, 3" CAL.
DWARF BURFORD HOLLY, 5 GAL.
SOFT LEAF YUCCA, 3 GAL.
DWARF YAUPON HOLLY, 3 GAL.
RED YUCCA, 3 GAL.
LOROPETALUM, 5 GAL.
MISCANTHUS, 5 GAL.

PLANT MATERIAL SCHEDULE- LOT 1

TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
TREES					
CE	10	Cedar Elm	*Ulmus crassifolia*	4" cal.	B&B, 12' ht., 5' spread, 6' clear straight trunk
CM	4	Crepe Myrtle	*Lagerstroemia indica*	3" cal.	container 6' ht., 3 or 5 cane, tree form
LO	19	Live Oak	*Quercus virginiana*	4" cal.	container, 12' ht., 5' spread, 6' clear straight trunk
TY	24	Yaupon Holly	*Ilex vomitoria*	3" cal.	container 6' ht., 3 or 5 cane, tree form
ERC	22	Eastern Red Cedar	*Juniperus virginiana*	3" cal.	B&B, full to base, 3' spread
SHRUBS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
DBH	47	Dwarf Burford Holly	*Ilex comuta burfordii 'nana'*	5 gal.	container grown, 36" ht., 24" spread
DYH	19	Dwarf Yaupon Holly	*Ilex vomitoria 'Nana'*	3 gal.	container grown, 20" spread
RY	11	Red Yucca	*Hesperaloe parvifolia*	3 gal.	container grown, 12" spread
LOR	32	Loropetalum	*Lorapetalum chinensis*	5 gal.	container grown, 24" ht., 20" spread
MIS	23	Miscanthus	*Miscanthus sinensis*	5 gal.	container full, 24" spread
SY	7	Softleaf Yucca	*Yucca recurvifolia*	3 gal.	container grown, 20" spread
NRS	19	Nellie R. Stevens	*Ilex x 'Nellie R. Stevens'*	7 gal.	container, 36" ht., 30" spread
GROUNDCOVERS					
TYPE	QTY	COMMON NAME	*BOTANICAL NAME*	SIZE	REMARKS
LIR	250	Liriope	*Liriope Muscari*	4" pots	container full, well rooted
SC	32	Seasonal Color '419' Bermudagrass	*Cynodon dactylon '419'*	4" pots	selection by owner solid sod refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

TOWN OF LITTLE ELM LANDSCAPE NOTES

1. THE OWNER, TENANT AND THEIR AGENT, IF ANY SHALL BE JOINTLY AND SEVERELY RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPING. ALL REQUIRED SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE MOWING, EDGING, PRUNING, AND FERTILIZING, WATERING, WEEDING AND SUCH ACTIVITIES COMMON TO THE MAINTENANCE OF LANDSCAPING.
2. LANDSCAPE AREAS SHALL BE KEPT FREE OF TRASH, LITTER, WEEDS AND OTHER SUCH ACTIVITIES COMMON TO MAINTENANCE OF LANDSCAPING.
3. NO SUBSTITUTIONS FOR PLANT MATERIALS ARE ALLOWED WITHOUT WRITTEN APPROVAL BY THE DIRECTOR AND ACKNOWLEDGED BY AN APPROVAL STAMP ON THE LANDSCAPE PLAN.
4. THE RIGHT-OF-WAY ADJACENT TO REQUIRED LANDSCAPE AREAS SHALL BE MAINTAINED BY THE ADJACENT PROPERTY OWNER IN HE SAME MANNER AS THE REQUIRED LANDSCAPE AREA. ALL DRIVEWAYS WILL MAINTAIN VISIBILITY AS APPROVED BY THE DIRECTOR. ALL PLANTINGS INTENDED FOR EROSION CONTROL WILL BE MAINTAINED THE TOWN MAY REQUIRE RELEGATION TO PREVENT EROSION OR SLIPPAGE.
5. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIALS WHICH DIE SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR VARIETY AND SIZE, WITHIN 30 DAYS OR A DATE APPROVED BY THE DIRECTOR, BASED ON CURRENT SEASONS AND WEATHER CONDITIONS (E.G. DROUGHT OR FREEZE).
6. WHEN POWER LINES ARE PRESENT, TREES SHALL NOT BE PLANTED UNDERNEATH AND SHOULD BE ORIENTED IN A MANNER TO AVOID CONFLICT. SUBSTITUTION OF PLANT MATERIAL IS NOT ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE DIRECTOR.
7. ALL REQUIRED LANDSCAPE AREAS SHALL BE PROVIDED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM WITH RAIN AND FREEZE SENSORS AND EVAPOTRANSPIRATION (ET) WEATHER-BASED CONTROLLER AND SAID IRRIGATION SYSTEM SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL AND INSTALLED BY A LICENSED IRRIGATOR.
8. ALL TREES ARE TO BE EQUIPPED WITH A BUBBLER IRRIGATION SYSTEM.
9. REQUIRED LANDSCAPED OPEN AREA AND DISTURBED AREAS SHALL BE COMPLETELY COVERED WITH LIVING PLANT MATERIAL, PER THE LANDSCAPE ORDINANCE.
10. ALL LANDSCAPING SHALL BE PLANNED AREAS THAT IS DEFINED BY EDGING, MULCH OR ANOTHER PRACTICE APPROVED BY THE TOWN.
11. ALL STREETSCAPE FURNITURE (BENCHES, BOLLARDS, LAMPPOST, TRASH RECEPTACLES, PATIO FURNITURE, BIKE RACKS, ETC.) SHALL BE A CHIP AND FLAKE RESISTANT METAL, DECORATIVE, AND GENERALLY BLACK "STORM CLOUD" IN COLOR.

LANDSCAPE NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES. SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.
4. CONTRACTOR TO PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
5. ALL PLANTING BEDS AND LAWN AREAS TO BE SEPARATED BY STEEL EDGING. NO STEEL TO BE INSTALLED ADJACENT TO SIDEWALKS OR CURBS.
6. ALL LANDSCAPE AREAS TO BE 100% IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM AND SHALL INCLUDE RAIN AND FREEZE SENSORS.
7. ALL LAWN AREAS TO BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

GENERAL LAWN NOTES

1. FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED ON CIVIL PLANS.
2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION, KNOWN AS BOTTOM AND SOIL, FREE FROM LUMPS, CLAY, TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES, CONTAINING NO SALT AND BLACK TO BROWN IN COLOR.
5. *ALL LAWN AREAS TO BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR ARCHITECT PRIOR TO INSTALLATION.*
6. *ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL AND ANY LAWN INSTALLATION*
7. CONTRACTOR SHALL PROVIDE (1") ONE INCH OF IMPORTED TOPSOIL ON ALL AREAS TO RECEIVE LAWN.

SOLID SOD NOTES

1 FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED. LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL DESIRED GRADE IN PLANTING AREAS AND 1" BELOW FINAL GRADE IN TURF AREAS.

2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
4. CONTRACTOR TO COORDINATE WITH ON-SITE CONSTRUCTION MANAGER FOR AVAILABILITY OF EXISTING TOPSOIL.
5. PLANT SOD BY HAND TO COVER INDICATED AREA COMPLETELY. INSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
6. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
7. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
8. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
9. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.

01 LANDSCAPE PLAN
SCALE 1"=40'-0"
0 20 40 80

LANDSCAPE ARCHITECT
STUDIO GREEN SPOT, INC.
1782 W. McDERMOTT DR.
ALLEN, TEXAS 75013
(469) 369-4448
CHRIS@STUDIOGREENSPOT.COM

REGISTERED LANDSCAPE ARCHITECT CHRIS TRONCALE 2042 STATE OF TEXAS

11.09.2023

LC DEVELOPMENT
US HWY. 380/ELM RIDGE RD.
LITTLE ELM, TEXAS

ISSUE:
CITY COMMENTS 03.30.2023
CITY COMMENTS 08.01.2023
CITY COMMENTS 08.26.2023
CITY COMMENTS 11.09.2023

DATE:
11.09.2023

SHEET NAME:
LANDSCAPE PLAN

SHEET NUMBER:
L.2

SECTION 02900 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

Refer to bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

1. Planting (trees, shrubs, and grass)
2. Bed preparation and fertilization
3. Notification of sources
4. Water and Maintenance until final acceptance
5. Guarantee

1.3 REFERENCE STANDARDS

A. American Standard for Nursery Stock published by American Association of Nurserymen: 27 October 1980, Edition; by American National Standards Institute, Inc. (Z60.1) – plant material.

B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized Plant Names.

C. Texas Association of Nurserymen, Grades and Standards.

D. Hortis Third, 1976 - Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

A. The Contractor shall, within ten (10) days following acceptance of bid, notify the Architect/Owner of the sources of plant materials and bed preparation required for the project.

B. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, and crushed stone. Samples shall be approved by Architect before use on project.

C. Product Data: Submit complete product data and specifications on all other specified materials.

D. Submit three representative samples of each variety of ornamental trees, shrubs, and groundcover plants for Architect's approval. When approved, tag, install, and maintain as representative samples for final installed plant materials.

E. File Certificates of Inspection of plant material by state, county, and federal authorities with Architect, if required.

F. Soil Analysis: Provide sandy loam soil analysis if requested by the Architect.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

A. Landscape Contractor to inspect all existing conditions and report any deficiencies to the Owner.

B. All planting areas shall be conditioned as follows:

1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per manufacturers recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
2. All planting areas shall receive a two (2") inch layer of specified mulch.
3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:

1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint, (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.
2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4' x 8' batter board against the bed areas.

3.2 INSTALLATION

A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.

B. Plant materials shall be delivered to the site only after the beds are prepared and area ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.

C. Position the trees and shrubs in their intended location as per plan.

D. Notify the Landscape Architect for inspection and approval of all positioning of plant materials.

E. Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

JOB CONDITIONS

A. General Contractor to complete the following punch list. Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the finish grade of sidewalks, drives, and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.

B. General Contractor shall provide topsoil as described in Section 02200 - Earthwork.

C. Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

1. The Landscape Contractor will be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show a healthy growth and satisfactory foliage conditions.
2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by Owner and Landscape Contractor will be completed prior to written acceptance.
4. After final acceptance of installation, the Landscape Contractor will not be required to do any of the above listed work.

B. Guarantee:

1. Trees shall be guaranteed for a twelve (12) month period after acceptance. Shrubs and groundcover shall be guaranteed for twelve (12) months. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
   a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately repaired.
   b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
   c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and reinspected for full compliance with Contract requirements. All replacements are to be included under "Work" of this section.

F. Shrub and tree pits shall be no less than two (2) feet, twenty-four (24") inches, wider than the lateral dimension of earth ball and six (6") inches deeper than it's vertical dimension. Remove and haul from site all rocks and stones over one (1") inch in diameter. Plants should be thoroughly moist before removing containers.

G. Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at the surface of the ground. The sides of the hole should be rough and jagged, never slick or glazed.

H. Percolation Test: Fill the hole with water. If the water level does not percolate within 24 hours, the tree needs to move to another location or have drainage added. Install a PVC stand pipe per tree planting detail as approved by the Landscape Architect.

I. Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When the hole is dug in solid rock, topsoil from the same area should not be used. Carefully settle by watering to prevent air pockets. Remove the burlap from the top 1/3 of the ball, as well as all nylon, plastic string and wire mesh. Container trees will usually be pot bound, if so follow standard nursery practice of 'root scoring'.

J. Do not wrap trees.

K. Do not over prune.

L. Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the area above the top of the ball and mulch with at least two (2") inches of specified mulch.

M. All plant beds and trees to be mulched with a minimum settled thickness of two (2") inches over the entire bed or pit.

N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this section, alternate locations may be selected by the Owner. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is properly set at the required grade. The work of this section shall include the removal from the site of such rock or underground obstructions encountered at the cost of the Landscape Contractor.

O. Trees and large shrubs shall be staked as site conditions require. Position stakes to secure tree against seasonal prevailing winds.

P. Pruning and Mulching: Pruning shall be directed by the Architect and shall be pruned in accordance with standard horticultural practice following Fine Pruning, Class I pruning standards provided by National Arborist Association.

1. Dead wood or suckers and broken badly bruised branches shall be removed. General tipping of the branched is not permitted. Do not cut terminal branches.
2. Pruning shall be done with clean, sharp tools.
3. Immediately after planting operations are completed, all tree pits shall be covered with a layer of organic material two (2") inches in depth. This limit of the organic material for trees shall be the diameter of the plant pit.

Q. Steel Curbing Installation:

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

3.3 CLEANUP AND ACCEPTANCE

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

END OF SECTION

2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final acceptance.
3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or theft.
4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a completed, undamaged condition, and there is a stand of grass in all lawn areas. At this time, the Owner will assume maintenance on the accepted work.

C. Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting, and in the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense of the Landscape Contractor.

1.7 QUALITY ASSURANCE

A. General: Comply with applicable Federal, State, County and Local regulations governing landscape materials and work

B. Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

C. Selection of Plant Material:

1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will insure the purchased materials will meet and/or exceed project specifications.
2. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
3. Owner and/or Architect shall inspect all plant materials when reasonable at place of growth for compliance with requirements for genus, species, cultivar/variety, size and quality.
4. Owner and/or Architect retains the right to further inspect all plant material upon arrival at the site and during installation for size and condition of root balls, limbs, branching habit, insects, injuries, and latent defects.
5. Owner and/or Architect may reject unsatisfactory or defective material at any time during the process of work. Remove rejected materials from the site immediately. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Preparation:

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

A. Delivery:

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

PART 2 - PRODUCTS

2.1 PLANTS

A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Architect and his decision as to their acceptability shall be final.

B. Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.

C. Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched, and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae and are to be of specimen quality.

D. Approval: All plant materials shall be subject to the approval of the Owner. All plants which are found unsuitable in growth, or in any unhealthy, badly shaped, or undersized condition, will be rejected by the Landscape Architect, either before or after planting, and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plants as specified.

E. Trees shall be healthy, full-branched, well-shaped and shall meet the trunk diameter and height requirements of the plant schedule. Balls shall be firm, neat, slightly tapered, and well wrapped in burlap. Any tree loose in the ball or with broken ball at time of planting will be rejected. Balls shall be ten (10") inched in diameter for each one (1") inch of trunk diameter, Measured six (6") inched above ball.
Nomenclature conforms to the customary nursery usage: for clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.

F. Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect, shall be executed by the Landscape Contractor at no additional cost to the Owner.

2.2 SOIL PREPARATION MATERIALS

A. Sandy Loam:

1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam containing Dallasgrass or Nutgrass shall be rejected.
2. Physical properties as follows:
   Clay – between 7-27 percent
   Silt – between 15-25 percent
   Sand – less than 52 percent
3. Organic matter shall be 3%-10% of total dry weight.
4. If requested, provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.

B. Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.

C. Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

D. Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.

E. Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.

F. Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.

A. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulphur and 4% iron, plus micronutrients.

B. Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

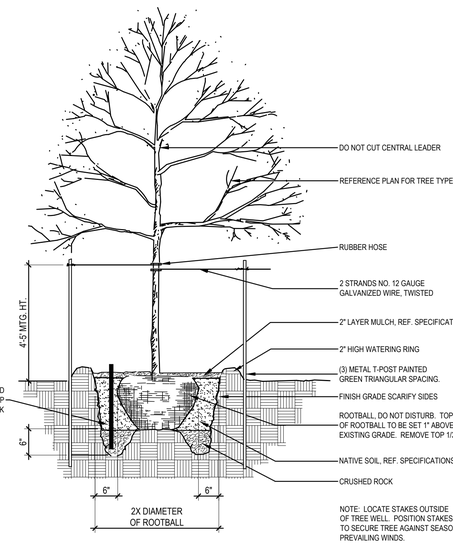
A. Steel Edging: Shall be Ryerson "Estate Curbing", 1/8" x 4" with stakes 4' on center.

B. Staking Material for Shade Trees:

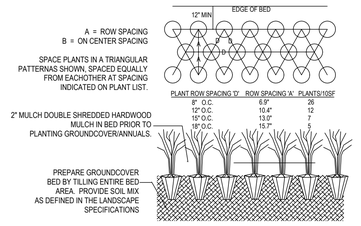
1. Post: Studded T-Post, #1 Armco with anchor plate; 6'-0" length; paint green.
2. Wire: 12 gauge, single strand, galvanized wire.
3. Rubber hose: 2 ply, fiber reinforced hose, minimum ½ inch inside diameter. Color: Black.

C. Gravel: Washed native pea gravel, graded 1 in. to 1-1/2 in.

D. Filter Fabric: Mirafi 140N by Celanese Fibers Marketing Company, available at Loftland Co., (214) 631-5250 or approved equal.



01 TREE PLANTING DETAIL
NOT TO SCALE



02 GROUNDCOVER PLANTING DETAIL
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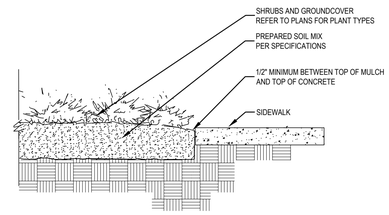
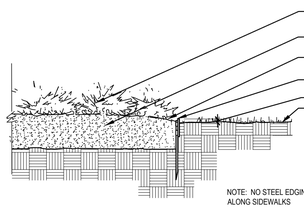


03 SIDEWALK / MULCH DETAIL
no steel along sidewalks
NOT TO SCALE



04 STEEL EDGING DETAIL
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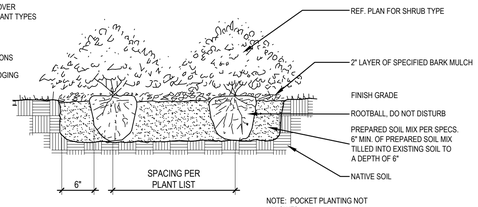

05 SHRUB PLANTING DETAIL
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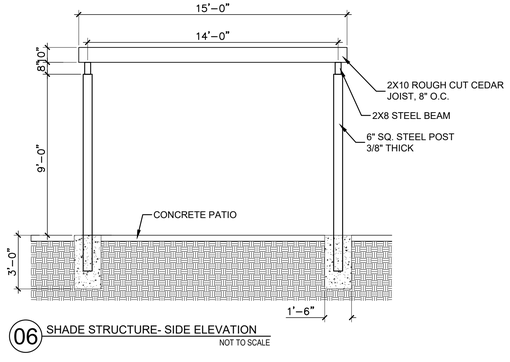
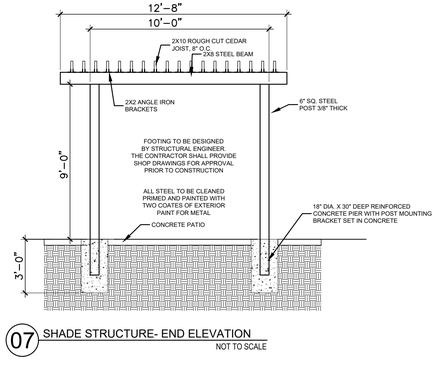


06 SHADE STRUCTURE- SIDE ELEVATION
NOT TO SCALE



07 SHADE STRUCTURE- END ELEVATION
NOT TO SCALE

SITE FURNISHINGS

1. Tables and chairs shall be:

DuMor- 30" Dia. Steel Table
Model: 485-30
Color to be be determined
Quantity- 4

DuMor- Steel Chair- no arms
Model: 483-20HSNA
Color to be be determined
Quantity- 8

2. Benches shall be"

DuMor 6' Backless Perforated Steel Bench
Model: 104-60
Color to be determined
Quantity- 2

3. Trash Receptacles to be:

DuMor Trash Receptacles-107-32-DM
Rain Bonnet Lid
Surface mounted
Color to be determined
Quantity- 3

Available from:
DuMor Site Furnishings
1-800-323-5664
www.dumor.com

4. Sculpture to be:

Tempest
Surface mounted
Color to be determined
Quantity- 2

Available from:
Terra Sculpture, LLC
800-652-2934
www.terrasculpture.com

5. Contractor shall provide turn-key installation of all site furnishings, but not limited to, shipment, handling, placement, anchoring, etc.

SCULPTURE

TRASH RECEPTACLE

TABLE AND CHAIRS

BENCH

LANDSCAPE ARCHITECT
STUDIO GREEN SPOT, INC.
1782 W. McDERMOTT DR.
ALLEN, TEXAS 75013
(469) 369-4448
CHRIS@STUDIOGREENSPOT.COM

REGISTERED LANDSCAPE ARCHITECT
CHRIS TRONCALE
2042
STATE OF TEXAS

11.10.2023

LC DEVELOPMENT

US HWY. 380/ELM RIDGE RD.
LITTLE ELM, TEXAS

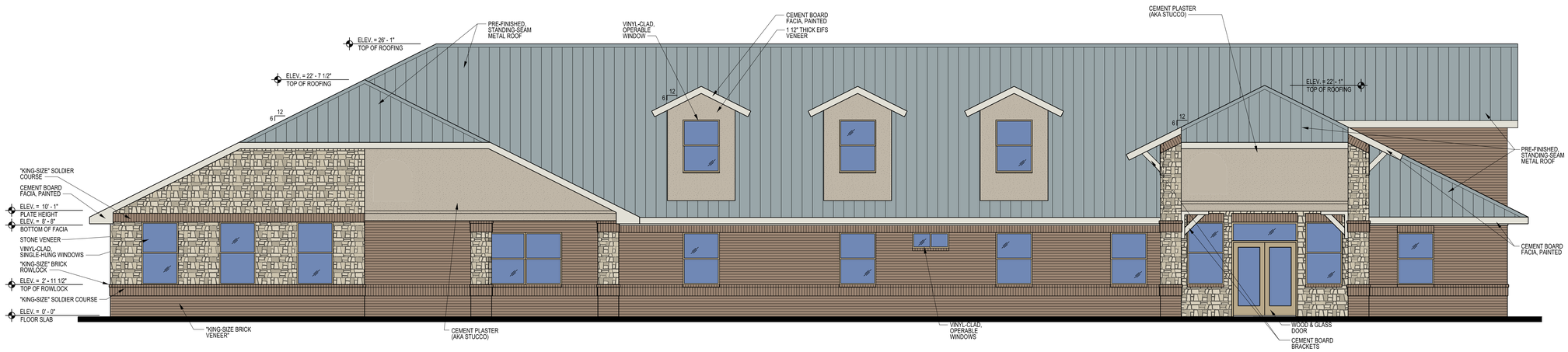
ISSUE:
FOR APPROVAL 08.30.2022
CITY COMMENTS 08.01.2023
CITY COMMENTS 08.25.2023
CITY COMMENTS 11.10.2023

DATE:
11.10.2023

SHEET NAME:
LANDSCAPE SPECIFICATIONS

SHEET NUMBER:

L.3



01 North Elevation - Veterinary Building

3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - NORTH ELEVATION		
BRICK	836 S.F.	55%
STONE	310 S.F.	21%
CEMENT PLASTER	357 S.F.	24%
SUBTOTAL	1503 S.F.	100%
DOORS/ WINDOWS	369 S.F.	20%
TOTAL	1872 S.F	

Notes:

1. All mechanical units shall be screened from public view as required by the
2. All signage areas and locations are subject to approval of Development Services Director
3. When permitted, exposed utility boxes and conduits shall be painted to match the building
4. Roof access shall be provided internally, unless otherwise permitted by the Chief Building Official

Exterior Materials
Twin Lakes Veterinary
Little Elm, Texas

Brick Veneer
Acme Brick
King Size
Sable Oak

LUEDERS
Stone Veneer
Rock Materials
Gray to Tan Lueders

SW 7051
Analytical Gray
Interior / Exterior
Location Number: 246-C2

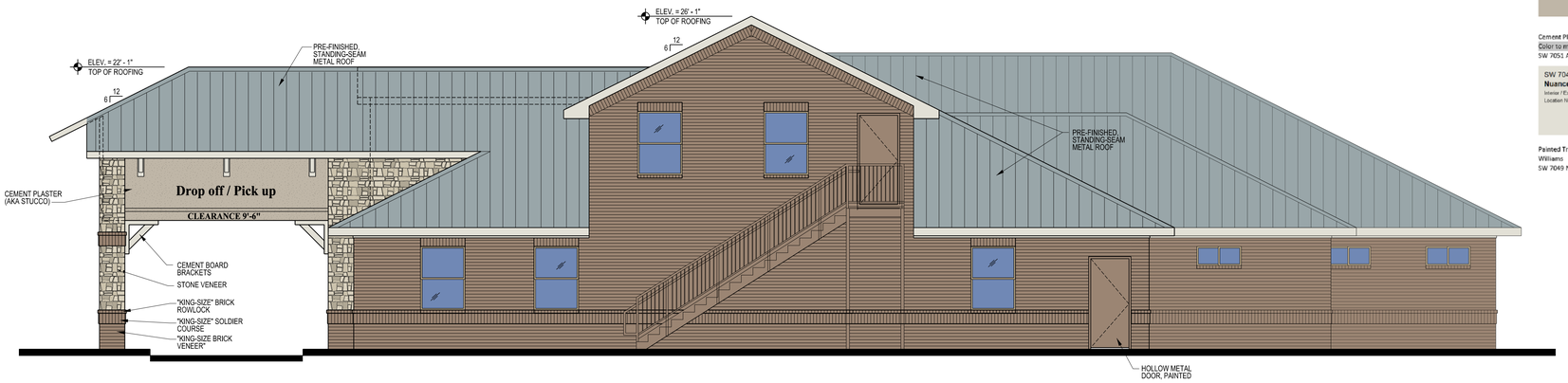
Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

SW 7049
Nuance
Interior / Exterior
Location Number: 258-C7

Painted Trim (Cement board eaves and facia)
Williams
SW 7049 Nuance

Windows
Ply Gem
Beige

Cityscape
Standing seam Metal Roofing
Pac-Clad Cityscape

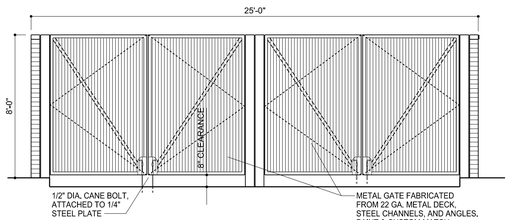


02 West Elevation - Veterinary Building

3/16"=1'-0"

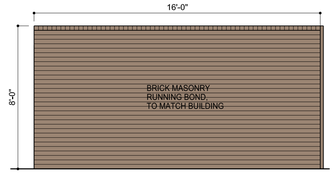
0 1 2 3 4 5 10 20

MATERIAL COVERAGE - WEST ELEVATION		
BRICK	1002 S.F.	88%
STONE	63 S.F.	6%
CEMENT PLASTER	76 S.F.	6%
SUBTOTAL	1141 S.F.	100%
DOORS/ WINDOWS	152 S.F.	12%
TOTAL	1293 S.F	



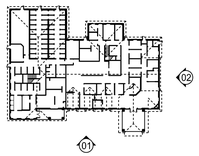
Dumpster Elevation

1/4"=1'-0"



Dumpster Elevation

1/4"=1'-0"



Key Plan

Not to scale

Phillip Morse, Architect
PlacesMade architecture
2940 Keller Springs Road
Suite 503
Carrollton, Texas 75006
214 868 7074
www.placesmadereal.com

places Made architecture
"made up places made real"

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TRI-STAR CONSTRUCTION, INC.
GENERAL CONTRACTORS
3601 Yucca Drive Building #2
Flower Mound, Texas 75028
972-221-5558
www.tristarcorp.org

Twin Lakes Veterinary and Boarding

Little Elm, Texas

Project No.	15031
Date	

Revisions

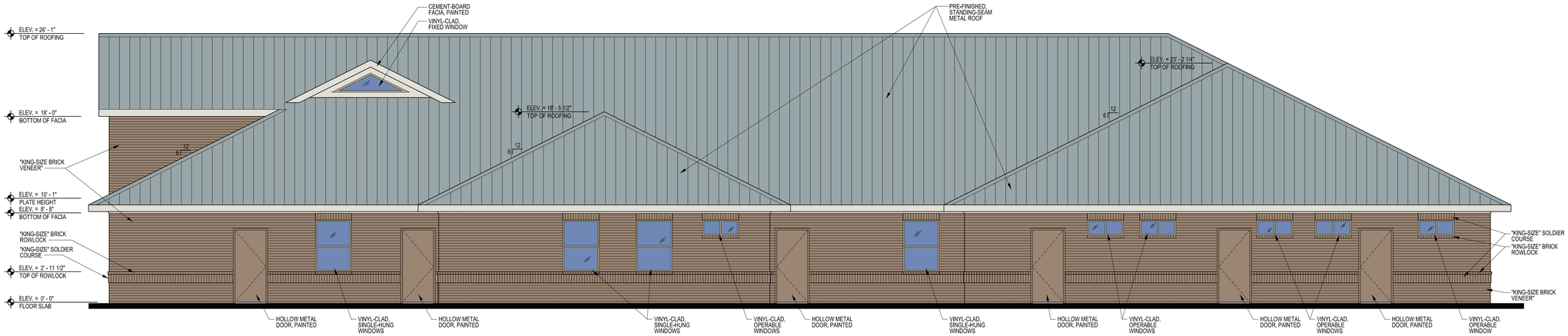
No.	Date
	9-5-22
	3-31-23
	3-31-23

scale verification 1"

Sheet

A2.1C

Color Elevations



01 South Elevation - Veterinary Building

3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	989 S.F.	100%
STONE	0 S.F.	0%
CEMENT PLASTER	0 S.F.	0%
SUBTOTAL	989 S.F.	100%
DOORS/ WINDOWS	246 S.F.	20%
TOTAL	1235 S.F	

Notes:

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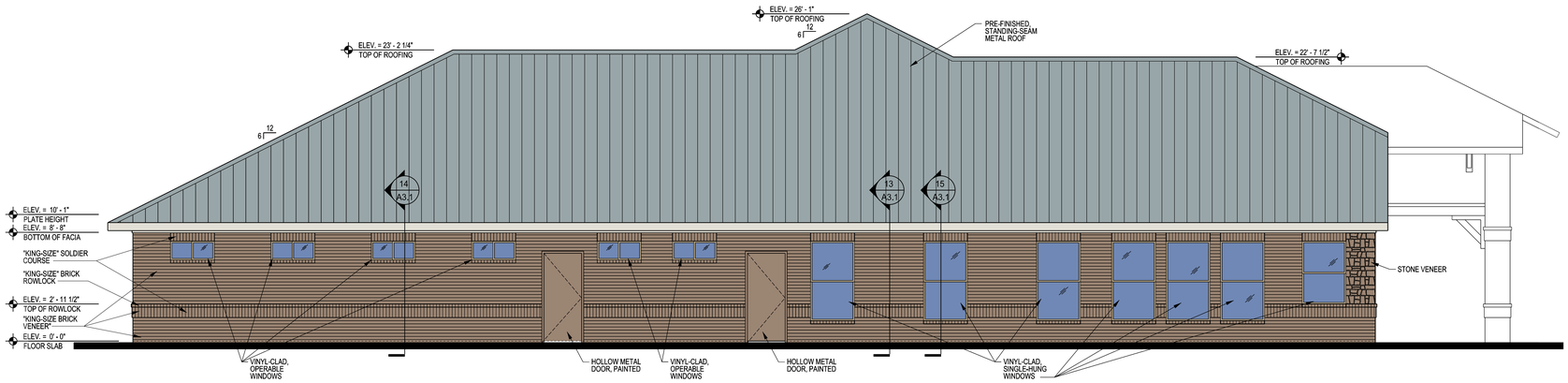
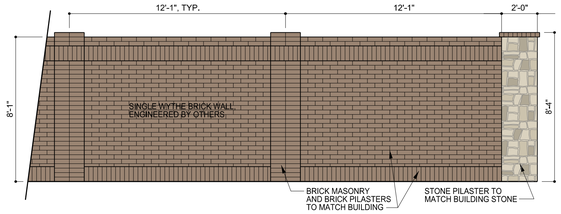


02 East Elevation - Veterinary Building

3/16"=1'-0"

0 1 2 3 4 5 10 20

MATERIAL COVERAGE - EAST ELEVATION		
BRICK	623 S.F.	98%
STONE	13 S.F.	2%
CEMENT PLASTER	0 S.F.	0%
SUBTOTAL	636 S.F.	100%
DOORS/ WINDOWS	251 S.F.	28%
TOTAL	887 S.F	



Masonry Screenwall Elevation

1/4"=1'-0"

Exterior Materials
Twin Lakes Veterinary
Little Elm, Texas

Brick Veneer
Acme Brick
King Size
Sable Oak

LUEDERS
Stone Veneer
Rock Materials
Gray to Tan Lueders

SW 7051
Analytical Gray
Interior / Exterior
Location Number: 246-C2

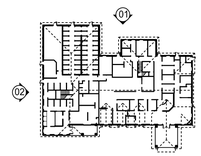
Windows
Ply Gem
Beige

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

SW 7049
Nuance
Interior / Exterior
Location Number: 258-C7

Painted Trim (Cement board eaves and facia)
Williams
SW 7049 Nuance

Cityscape
Standing seam Metal Roofing
Pac-Clad Cityscape



Key Plan

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Little Elm, Texas

Project No. 15031

Date

Revisions

No.	Date
	9-5-22
	3-31-23
	7-19-23

scale verification 1"

Sheet
A2.2C

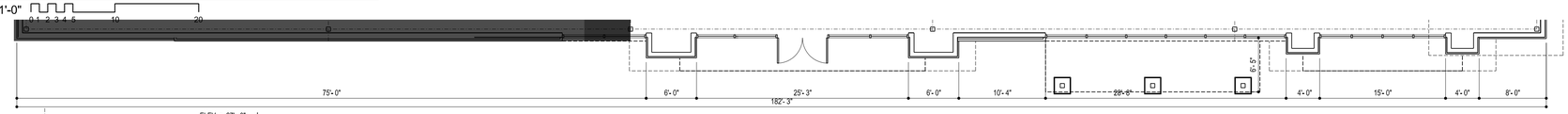
Color Elevations

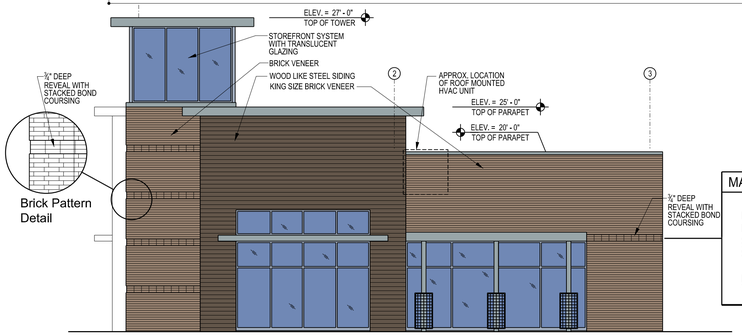
MAT. COVERAGE - NORTH ELEVATION		
BRICK	1674 S.F.	53%
STUCCO	482 S.F.	15%
PAINTED STEEL	216 S.F.	6%
STEEL SIDING	850 S.F.	26%
SUBTOTAL	3222 S.F.	100%
DOORS/ WINDOWS	995 S.F.	24%
TOTAL	4217 S.F.	

MAT. COVERAGE - NORTH ELEV -EXPOSED		
BRICK	662 S.F.	25%
STUCCO	111 S.F.	18%
PAINTED STEEL	191 S.F.	10%
STEEL SIDING	850 S.F.	47%
SUBTOTAL	1814 S.F.	100%
DOORS/ WINDOWS	895 S.F.	33%
TOTAL	2709 S.F.	

01 North Elevation - Building A

1/8"=1'-0"

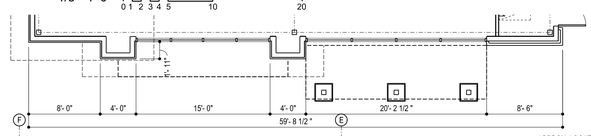




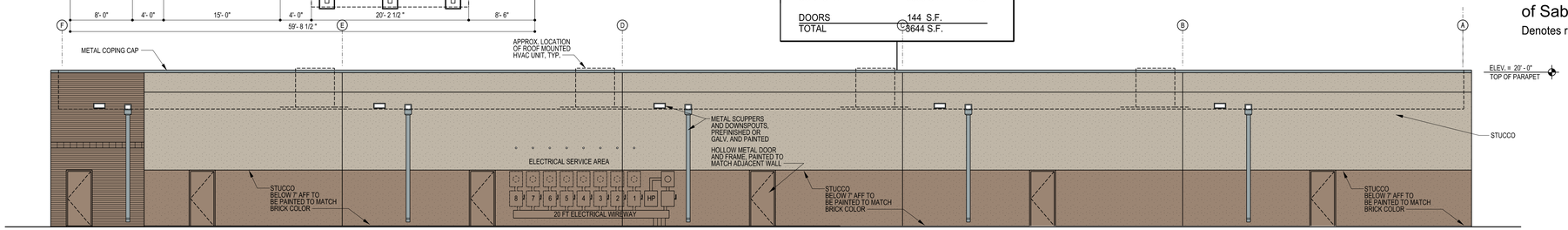
MATERIAL COVERAGE - WEST ELEVATION		
BRICK	550 S.F.	53%
PAINTED STEEL	136 S.F.	13%
STEEL SIDING	348 S.F.	34%
SUBTOTAL	1034 S.F.	100%
DOORS/ WINDOWS	479 S.F.	32%
TOTAL	1513 S.F.	

02 West Elevation - Building A

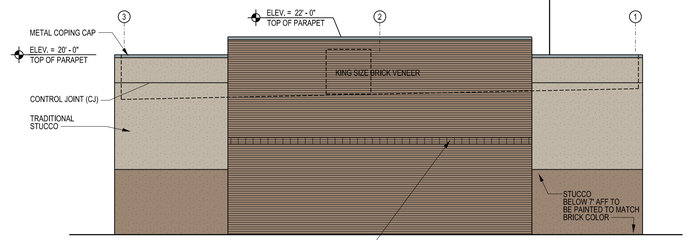
1/8"=1'-0"



MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	216 S.F.	6%
STUCCO	3284 S.F.	94%
SUBTOTAL	3500 S.F.	100%
DOORS	144 S.F.	
TOTAL	3644 S.F.	

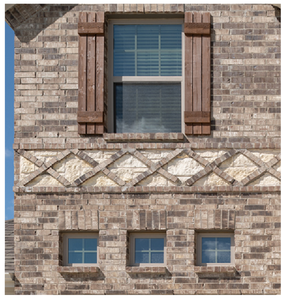


MATERIAL COVERAGE - EAST ELEVATION		
BRICK	752 S.F.	60%
STUCCO	500 S.F.	40%
TOTAL	1252 S.F.	100%



03 East Elevation Building A

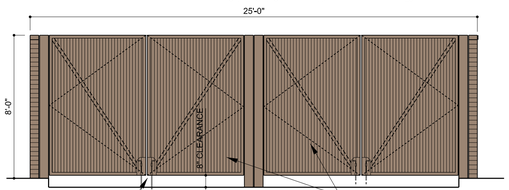
1/8"=1'-0"



Pictorial Example
of Sable Oak Brick Veneer
Denotes range of color, not brick pattern.

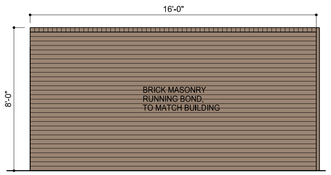
04 South Elevation - Building A

1/8"=1'-0"



Dumpster Elevation

1/4"=1'-0"



Dumpster Elevation

1/4"=1'-0"

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EXTERIOR MATERIALS

Exterior Materials
Twin Lakes Retail
Little Elm, Texas

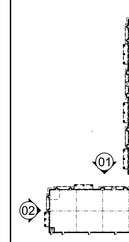
Brick Veneer
Acme Brick
King Size
Sable Oak

Cityscape
Painted Galvanized Metal
Pac-Clad Cityscape

SW 7051
Analytical Gray
Interior / Exterior
Location Number 246-C2

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

Wood-Like Steel Siding
Vesta Steel Siding
5" Plank
Aged Walnut



Key Plan
no scale

Phillip Morse, Architect
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PlacesMade architecture
Phillip Morse, TX Reg No. 17037

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TRI-STAR CONSTRUCTION, INC.
GENERAL CONTRACTORS
3601 Yucca Drive Building #2
Flower Mound, Texas 75028
972.221.5558
www.tristarcorp.org

Shell Building for:
Twin Lakes Retail Center
Little Elm, Texas

Project No.	21015
Date	

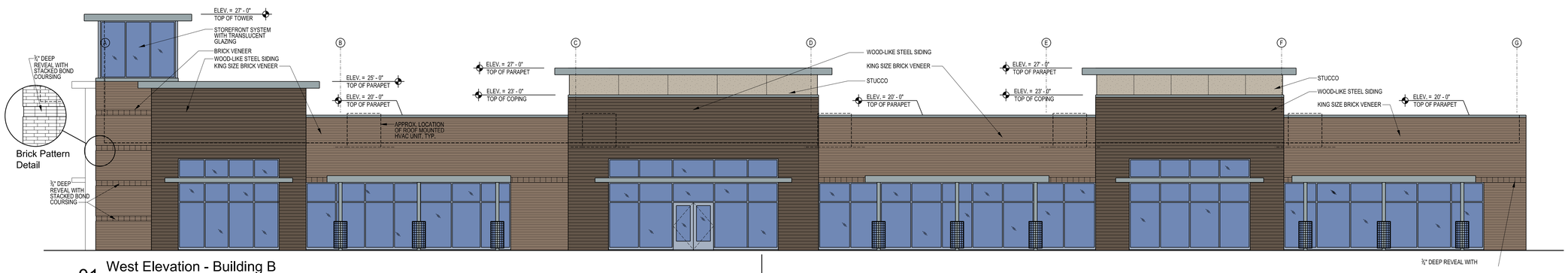
Revisions

No.	Date
	9-5-22
	3-31-23
	7-19-23
	10-16-23
	11-7-23
	11-14-23

scale verification 1"

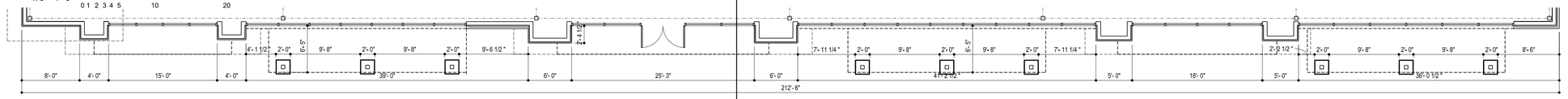
Sheet
A2.1C

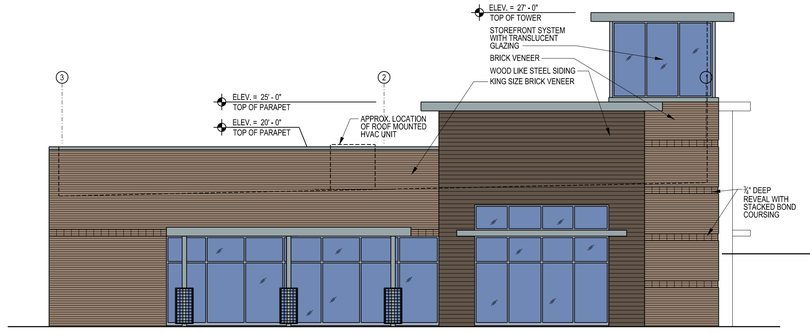
Building A
Color Elevations



01 West Elevation - Building B

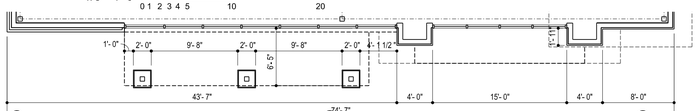
1/8"=1'-0"

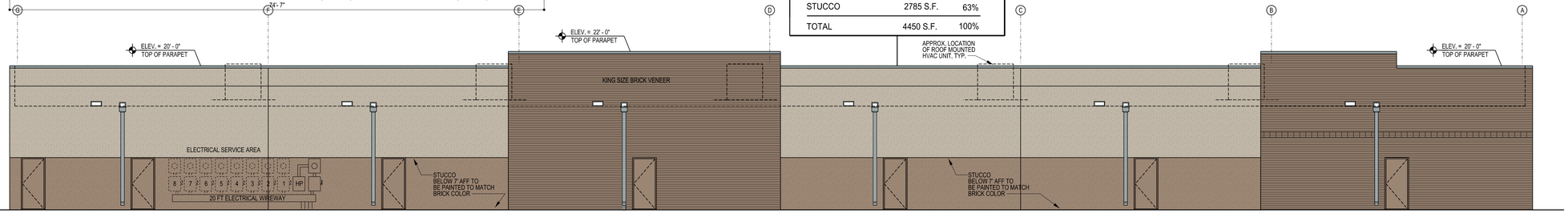




02 North Elevation - Building B

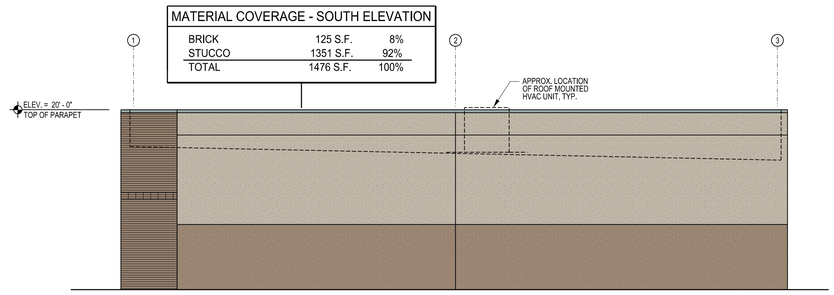
1/8"=1'-0"





03 South Elevation - Building B (Facing Alley)

1/8"=1'-0"



04 East Elevation - Building B

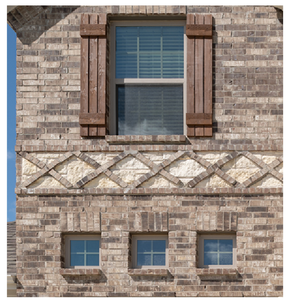
1/8"=1'-0"

MATERIAL COVERAGE - WEST ELEVATION		
BRICK	1398 S.F.	44%
STUCCO	194 S.F.	6%
PAINTED STEEL	366 S.F.	11%
STEEL SIDING	1240 S.F.	39%
SUBTOTAL	3198 S.F.	100%
DOORS/ WINDOWS	1827 S.F.	36%
TOTAL	5025 S.F.	

MATERIAL COVERAGE - NORTH ELEVATION		
BRICK	733 S.F.	61%
PAINTED STEEL	122 S.F.	10%
STEEL SIDING	347 S.F.	29%
SUBTOTAL	1202 S.F.	100%
DOORS/ WINDOWS	593 S.F.	33%
TOTAL	1795 S.F.	

MATERIAL COVERAGE - SOUTH ELEVATION		
BRICK	125 S.F.	8%
STUCCO	1351 S.F.	92%
TOTAL	1476 S.F.	100%

MATERIAL COVERAGE - EAST ELEVATION		
BRICK	1665 S.F.	37%
STUCCO	2785 S.F.	63%
TOTAL	4450 S.F.	100%



Pictorial Example
of Sable Oak Brick Veneer
Denotes range of color, not brick pattern.

Notes:
1. All mechanical units shall be screened from public view as required by the
2. All signage areas and locations are subject to approval of Development Services Director
3. When permitted, exposed utility boxes and conduits shall be painted to match the building
4. Roof access shall be provided internally, unless otherwise permitted by the Chief Building Official

EXTERIOR MATERIALS

Exterior Materials
Twin Lakes Retail
Little Elm, Texas

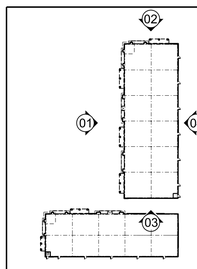
Brick Veneer
Acme Brick
King Size
Sable Oak

Cityscape
Painted Galvanized Metal
Pac-Clad Cityscape

SW 7051
Analytical Gray
Interior / Exterior
Location Number: 746-C2

Cement Plaster (Stucco)
Color to match Sherwin Williams
SW 7051 Analytical Gray

Wood-Like Steel Siding
Vesta Steel Siding
5" Plank
Aged Walnut



Key Plan
no scale

Phillip Morse, Architect
places Made architecture
PlacesMade architecture
2840 Keller Springs Road
Suite 503
Carrollton, Texas 75006
214 868 7074
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"made up places made real"

SEAL:

If the adjacent seal block does not contain the architect's seal, signature, and date; then this document is incomplete and may not be used for regulatory approval, permit, or construction.

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scale verification 1"

Sheet
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Building B
Color Elevations

Date:	01/16/2024
Agenda Item #:	6. G.
Department:	Administrative Services
Strategic Goal:	Ensure strong relationship within the community and region
Staff Contact:	Town Council

AGENDA ITEM:

Present, Discuss, and Consider Action to **Appoint a Planning and Zoning Commission Council Liaison Replacement.**

DESCRIPTION:

Council Member Neil Blais requested this item be placed on the agenda. He will be unable to attend the remainder of the meetings during his term and has requested a replacement be appointed.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Staff requests direction from Town Council.

Date:	01/16/2024
Agenda Item #:	6. H.
Department:	Administrative Services
Strategic Goal:	Maintain operational integrity and viability
Staff Contact:	Caitlan Biggs, Director of Administrative Services/Town Secretary

AGENDA ITEM:

Present, Discuss, and Consider Action on **Recommendations from the Charter Review Committee.**

DESCRIPTION:

According to Section 15.02 of the Town's Charter, a charter review committee shall be established and appointed by Town Council at least every two (2) years from the date that the prior charter review committee concluded its operations. Additionally, this committee shall be composed of not fewer than seven (7) residents of the Town.

At the October 17, 2023, Town Council meeting, Town Council appointed the following individuals to the Charter Review Committee:

- Jeremy Bolden
- Willette Watts
- Michael McClellan
- Jeannie Beal
- Alfonso Rodriguez
- Joselynn Passerelle
- Jennifer Ward

The committee met on Tuesday, December 12, 2023, with five of seven members present. The committee had one recommendation to bring forward for Council consideration:

- Amending Section 3.03 - Limitation on ~~successive~~ terms.
    - No person shall serve as Mayor for more than three (3) ~~successive~~ terms, and no person shall serve as Council Member for more than three (3) ~~successive~~ terms. A term of office shall be for a period of three (3) years or any portion thereof.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Staff requests direction from Town Council.

Date:	01/16/2024
Agenda Item #:	6. I.
Department:	Administrative Services
Strategic Goal:	Ensure excellence in public services while keeping up with the growth in the community
Staff Contact:	Caitlan Biggs, Director of Administrative Services/Town Secretary

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AGENDA ITEM:

Present the **2023 Strategic Report.**

DESCRIPTION:

Staff will present the 2023 Strategic Report to Town Council.

BUDGET IMPACT:

There is no budget impact for this item.

RECOMMENDED ACTION:

Information only, no action required.