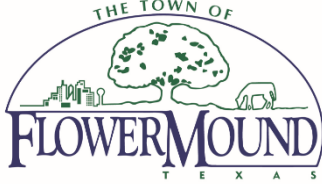


Environmental Conservation Commission



April 2, 2024
Town Hall
2121 Cross Timbers Road
Flower Mound, TX 75028

6:30 p.m.

AGENDA

A. CALL TO ORDER

B. INVOCATION

C. PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG

D. PUBLIC COMMENT

The purpose of this item is to allow the public an opportunity to address the Board/Commission regarding any item on this agenda that is not a "Public Hearing." Issues regarding daily operational or administrative matters should first be dealt with by calling Town Hall at 972- 874-6000 during business hours. To speak to the Board/Commission during public comment, please fill out a comment form, which is located in the lobby of Town Hall.

In accordance with the Texas Open Meetings Act, the Board/Commission is restricted from discussing or acting on items not listed on the agenda.

- Speakers are limited to 3 minutes; a tone will sound at 30 seconds left and when time has expired, and times may be adjusted by the Chair depending on the number of speakers.
- Speakers must address their comments to the Board/Commission.
- Please state your name and address when speaking.

E. STAFF/DIRECTOR REPORT

F. CONSENT ITEM(S)

This part of the agenda consists of non-controversial, or "housekeeping" items required by law. Items may be removed from Consent by any Commissioner by making such request prior to a motion and vote.

1. Minutes Approval - Consider approval of the minutes from the regular meeting of the Environmental Conservation Commission on March 6, 2024.

G. REGULAR ITEM(S)

1. Smith Tract Conservation Development - Consider a recommendation to the Planning and Zoning Commission and Town Council of an Open Space Management Plan for the proposed Smith Conservation Development. The

property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive.

2. TRP23-0022 - Smith Conservation - Consider an application for a tree removal permit (TRP23-0022) for one hundred and twenty-seven (127) specimen trees on property proposed for development as Smith Conservation. The property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive.

H. SUBCOMMITTEE REPORT

I. COORDINATION OF FUTURE AGENDAS/MEETINGS

J. ADJOURN

I do hereby certify that the Notice of Meeting was posted on the bulletin board at the Town Hall for the Town of Flower Mound, Texas, in a place convenient and readily accessible to the general public at all times and said Notice was also posted on the Town's website in accordance with GC Section 551.056 on the following date and time: March 28, 2024, at 3:48 p.m., at least 72 hours prior to the scheduled time of said meeting.

Hannah Perez, Administrative Assistant

The Flower Mound Town Hall and Jody Smith Hall are wheelchair accessible. Requests for accommodation or interpretive services must be made 48 hours prior to this meeting by contacting Town Hall at 972.874.6000. Additional time limits will be provided for members of the public that need to address the Town Council through a translator.

Environmental Conservation Commission



March 6, 2024
Town Hall
2121 Cross Timbers Road
Flower Mound, TX 75028

6:30 p.m.

DRAFT MINUTES

A. CALL TO ORDER

The Environmental Conservation Commission met in a regular meeting with the following members present:

Marilyn Lawson, Chair, Place 4
Anurag Sharma, Place 1
James Seastrom, Vice Chair, Place 2
Laura Spurlock, Place 3
Alton Bowman, Place 5
Anna Athappan, Place 6
Clare Harris, Place 7
Emily Strittmatter, Place 8 Alternate
Juli Greenberg, Place 9 Alternate
Danielle Workman, Place 10 Alternate

with the following member(s) absent:

constituting a quorum with the following members of the Town Staff participating:

Matthew Woods, Director of Environmental Services
Joe Whiteley, Environmental Review Analyst
Tyler Leverenz, Environmental, Programs Coordinator
Hannah Perez, Administrative Assistant
Kayla Lipinski, Tree Preservation Tech

B. INVOCATION

Vice-chair James Seastrom gave the invocation and led the pledges.

C. PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG

D. PUBLIC COMMENT

The purpose of this item is to allow the public an opportunity to address the Board/Commission regarding any item on this agenda that is not a "Public Hearing." Issues regarding daily operational or administrative matters should first be dealt with by calling Town Hall at 972- 874-6000 during business hours. To speak to the Board/Commission during public comment, please fill out a comment form, which is located in the lobby of Town Hall.

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- Speakers must address their comments to the Board/Commission.
- Please state your name and address when speaking.

Names listed below don't necessarily reflect the order in which each person spoke and all addresses are located in Flower Mound unless otherwise indicated.

	Speaker name and address	Subject (as written on the form)
1.	Fred Vincent 3933 Bordeaux Cir	Environmental Health

** Indicates person did not wish to speak*

E. STAFF/DIRECTOR REPORT

Update and status report related to environmental issues and events, regulatory activities, and projects.

F. CONSENT ITEM(S)

This part of the agenda consists of non-controversial, or "housekeeping" items required by law. Items may be removed from Consent by any Commissioner by making such request prior to a motion and vote.

1. Minutes Approval - Consider approval of the minutes from the regular meeting of the Environmental Conservation Commission on February 6, 2024

ACTION: Commission Member Seastrom moved to approve F.1. as presented in the agenda caption. Commission Member Harris seconded the motion.

AYES: Alton Bowman, Annaprabha Athappan, James Seastrom, Anurag Sharma, Laura Spurlock, Clare Harris

NAYS: None

ABSTAIN: None

RESULT: 6 : 0

G. REGULAR ITEM(S)

1. TRP23-0017 - Box Investment Group - Consider an application for a tree removal permit (TRP24-0002) for one (1) specimen tree on property proposed

for development as Box Investment Group. The property is generally located south of Lakeside Parkway and east of Silveron Boulevard.

Staff Presenter

Joseph Whiteley, Environmental Review Analyst, gave a presentation with the following items included and answered questions:

- Project Information
 - General Location
 - Detailed Location
 - Tree Survey
 - Specimen Trees Requested for Removal – 1 slide
 - Motion/Recommendation
- Tom Marchesani, Partner, with Box Investment gave a presentation and answered questions on the proposed specimen tree removal request.

Names listed below don't necessarily reflect the order in which each person spoke and all addresses are located in Flower Mound unless otherwise indicated.

	Speaker name and address	Subject (as written on the form)
1.	Fred Vincent 3933 Bordeaux Cir	G.1 Commercial Deveoplment East Fm

** Indicates person did not wish to speak*

ACTION: Commission Member Seastrom moved to approve G.1. as presented in the agenda caption. Commission Member Athappan seconded the motion.

AYES: Alton Bowman, Annaprabha Athappan, James Seastrom, Anurag Sharma, Laura Spurlock

NAYS: Clare Harris

ABSTAIN: None

RESULT: 5 : 1

H. ADJOURNMENT- REGULAR SESSION

Chair Lawson adjourned the regular session at 6:57 PM

I. CALL WORK SESSION TO ORDER

Chair Lawson called the work session to order at 6:57 PM.

J. WORK SESSION ITEM

1. Environmental Conservation Commission Sustainability Initiatives Update.

Staff Presenter

Tyler Leverenz, Environmental Programs Coordinator, gave a presentation with the following items included and answered questions:

- ECC Sustainability Initiatives
- 2022/2023 ECC Sustainability Initiatives
- 2022/2023 Action Items
- 2024/2025 ECC Sustainability Initiatives Discussion

K. SUBCOMMITTEE REPORT

Receive updates and status reports related to subcommittee activities and establish subcommittees as necessary.

L. COORDINATION OF FUTURE AGENDAS/MEETINGS

ECC members and staff discussed possible future agenda items.

M. ADJOURNMENT - WORK SESSION

Chair Lawson adjourned the work session meeting at 7:55 PM on March 6 and all were in favor.



ENVIRONMENTAL CONSERVATION COMMISSION AGENDA G.1. REGULAR ITEM(S)

DATE: April 2, 2024
FROM: Joseph Whiteley, Environmental Review Analyst
ITEM: **Consider a recommendation to the Planning and Zoning Commission and Town Council of an Open Space Management Plan for the proposed Smith Conservation Development. The property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive.**

BACKGROUND: The applicant will present the conceptual plan and Open Space Management Plan for the proposed Smith Conservation development project. The site is currently zoned for Agricultural uses and master planned for Cross Timbers Conservation Development District. The applicant is requesting to rezone the property to Planned Development District No.197 (PD-197) for a conservation development. The Smith Conservation development consists of approximately 447 acres.

The property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive. The project site is located in the Cross Timbers Conservation Development District, as designated within the Town's Master Plan. This site contains some characteristics of the Eastern Cross Timbers Forest that are found in this part of Texas, throughout eastern Oklahoma, and into Kansas. The current zoning for the property is agricultural with a minimum two acre lot size. The Town's conservation development option provides standards for residential development projects in which dwelling units are located on smaller lots than would otherwise be allowed for the purpose of preserving open or natural lands.

For projects within the Cross Timbers Conservation Development District, the preservation of 45% of the gross land as open space is established within the Town's conservation development standards. The proposed Smith conservation development designates a minimum of 45% of the gross land as open space. The portion of the site that is left undeveloped may be placed in a conservation easement that is held by a third-party land trust or other qualified entity, or through other approved methods established within the conservation development standards, such as a Homeowners' Association. All the open space areas within the proposed subdivision would be maintained by the Homeowners' Association.

Some of the Environmentally Sensitive Areas (ESAs) defined in the Town's SMARTGrowth Program are located on this property, and the predominant tree species on the property include: post oak, black jack oak, and cedar elm trees. ESAs located on the property include: upland habitat, Waters of the State, floodplain, and topographical slope protection. The applicant has submitted their Environmental Protection Plan (EPP) as part of the development application. The applicant is required to comply with applicable U.S. Army Corps of Engineers requirements and permitting relative to any impacts to regulated wetlands or other jurisdictional Waters of the U.S. The applicant is proposing to re-establish native prairie habitat within portions of the designated open space. The applicant is requesting an exception from Town Council to the slope protection requirements as outlined in the Town's SMARTGrowth requirements due to proposed impacts to protected

topographical slopes as well as an exception for proposed impacts to the FEMA 100-year flood plain.

BOARD REVIEW/CITIZEN FEEDBACK: As of March 27, 2024, staff has not received feedback on this item. Staff has received general inquiries about the project.

ALTERNATIVES: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Letter of Intent
2. Open Space Management Plan
3. Environmental Protection Plan

DRAFT MOTION: Move to approve as presented in the agenda caption.

March 4, 2024

Chuck Russell, AICP
Planning Manager
Town Of Flower Mound
2121 Cross Timbers Road
Flower Mound, TX 75028

RE: Smith Tract (No. 70254-00)
LOI for Zoning Planned Development

Dear Mr. Russell,

On behalf of our client, Toll Brothers, please accept this letter as our Letter of Intent to describe and explain the requested Zoning Planned Development.

The intent of this zoning request is to create a Planned Development District for a Conservation District with Agricultural District uses. The Property is located within the CTCDD Area Plan and is master planned for Rural Density residential uses.

The Smith Tract is a 447-acre tract located within the Cross Timbers Conservation Development District (CTCDD). The property was amended to the Town's Master Plan in December 2013 in the Cross Timbers Conservation Development District Area Plan, Paragraphs 8(a-e) in Section 2.0, Area Plans, of the Master Plan; Ordinance No. 64-13. The tract is identified on the Town's Master Land Use Plan for Agriculture in the Cross Timbers Conservation Development District. The existing zoning is AG, and the use is consistent with the existing zoning.

The attached Concept Plan proposes 223 residential lots and a minimum of 45% open space, based off of the gross area, comprised of multiple common area lots across the site's 447 acres and conforms to the corresponding Zoning Concept Plan under review. The plan closely follows the Town's Development Code, but we are asking for a Topographical Slope Exception request. We have provided landscape buffers, future right-of-way dedications and multiple points of access for safety considerations.

The concept has been designed to preserve the 100-year flood plain. Significant stands of trees have been preserved. There shall be a minimum of 45% of the site dedicated to open space. Much of the open space will be held within a conservation easement by a qualified nonprofit entity or organization that manages open space. HOA land will be platted into an X-lot and maintained by the HOA.

The subject property has numerous protected trees, both specimen and non-specimen, as indicated on the tree survey included with our application. Any potential specimen trees identified on the site for a removal permit request to the Flower Mound Town ECC Board shall accompany the Concept Plan review process. We view the trees as an asset and we have worked extensively to preserve them, where possible, through creative planning and engineering.

We are requesting an exception that the powerlines along 1171 remain above ground. These lines are major transmission lines and are not feasible to be relocated underground. We are also requesting a side yard of 15' (fifteen feet).

This project will meet the standards within Section 98-277(c) (1). The flood plain will be preserved but will be understood with a detailed flood study. Many of the existing trees, wildlife corridors, and other natural features will remain due to the fact that we are preserving a minimum of 45% open space. A portion of this land will be held within a conservation easement by a qualified nonprofit entity or organization that manages open space, such as a land trust, or other qualified entity. Land will also be preserved and maintained within an HOA X-lot. Land proposed to be used as parkland must be approved and accepted by the town. Open space areas that will be created against the 45% minimum shall be a minimum of 4.47 acres or 10% of gross area and no dimension shall be less than 40' wide. Utility easements shall be counted toward open space if a trail and/or appropriate amenity is proposed, or if vegetation within the utility easement is native and not required to be manicured. Open spaces must be linked to any existing and planned public open space and conserved areas to provide an overall open space system within the CTCDD. Eco-fringe buffers that are 40' in width may count toward the open space requirement. Open spaces divided by necessary roadways, as determined by the town manager or their designee, shall be considered linked for the purpose of this subsection. Open spaces shall be arranged to maximize reasonable access, equity, and utilization for all residential lots within the proposed development.

Trees planted within open space areas associated within this development must only include trees denoted as appropriate from section 94-68.

Parks are proposed as part of this development. If an active park is developed onsite the park must be limited to an area no greater than the minimum parkland area required. Examples of appropriate active parks include fishing piers and neighborhood playgrounds. Restricted parks such as playing fields, motorized vehicle trails, and campgrounds are not permitted. Passive parks such as walking, running, and equestrian trails shall be permitted throughout the development as appropriate. Such trails should be planned to minimize disturbances to environmentally sensitive areas. An eco-fringe buffer extending at least 20' from all exterior side and rear residential property lines adjacent to open spaces is required. Maintenance for eco-fringe buffers must be documented within the required open space management plan.

We had our 1st Enhanced Notification Meeting on April 4, 2023 and our 2nd Enhanced Notification Meeting on October 18, 2023, at 6:30 PM at the Flower Mound Community Activity Center. Numerous Flower Mound residents were in attendance.

Please contact me should you have any questions regarding this request.

Sincerely,



Aaron Hunsaker



SMITH TRACT

OPEN SPACE MANAGEMENT PLAN

SITE DESCRIPTION

The Smith Tract spans a total land area of 446.95 acres, with about 14.12 acres allocated as right-of-way for Rocky Point Road, Cardinal Drive, Shiloh Road, and Scenic Drive along the perimeter, and an additional 23.70 acres designated as right-of-way internal to the development. Excluding the right-of-way dedication, the net land acreage stands at 409.13 acres.

Credited Open Space makes up roughly 201.48 acres, slightly surpassing the Town's minimum requirement of a 45% open space dedication. Additionally, there are seven (7) parcels totaling approximately +/- 2.79 acres dedicated as open space. However, these parcels are not credited towards the required open space area due to their size, as they fall below 1% of the project's gross area (4.31 acres).

Finally, Pedestrian and Public Utility Easements within the Open Space contribute an additional +/- 9.47 acres of uncredited open space. The combined area of credited and uncredited open space totals approximately +/- 213.74 acres, representing 47.8% of the total land area. For more detailed information, please refer to Exhibit A – Lot Summary.

OBJECTIVE

The objective of the open space management plan is to provide a structured and comprehensive framework for the effective, and balanced management of open spaces specifically targeting the following goals:

Preservation of Natural Resources

Protect and preserve the ecological integrity of open spaces by managing flora, fauna, water resources, and soil health. This involves maintaining biodiversity, preventing soil erosion, and safeguarding the overall health of natural ecosystems.

Recreation and Public Access

Provide opportunities for recreational activities and public access to open spaces. This includes the development and maintenance of trails, picnic areas, playgrounds, and other facilities that encourage community engagement and physical activity.

Aesthetic

Enhance the aesthetic quality of open spaces. This involves maintaining hardscape and landscape improvements to contribute to the overall visual appeal of the area.

Wildlife Habitat Protection

Manage open spaces to support wildlife habitats and contribute to the conservation of local flora and fauna. This includes implementing practices that encourage the nesting, feeding, and migration patterns of wildlife.

Educational Opportunities

Provide educational programs and interpretive signage within open spaces to inform the public about the natural environment, cultural history, and the importance of conservation. Open spaces can serve as outdoor classrooms for environmental education.

Maintenance and Infrastructure:

Develop a plan for regular maintenance of open spaces, including the upkeep of infrastructure, facilities, and landscape features. This ensures that the open spaces remain safe, accessible, and enjoyable for the community.

An effective open space management plan considers the balance between conservation, recreation, and community needs, aiming to create resilient, and vibrant open spaces that contribute positively to the overall quality of life.

MAINTENANCE OF COMMON AREAS

The open space is divided into classifications according to their present state or intended future uses. All Open Space Common Areas (Open Spaces) are to be conveyed to the Homeowners Association (HOA) by the Developer. The HOA will be established by the Developer as a Nonprofit Corporation. The Members will be the Smith Tract Lot owners with one (1) vote for each Lot owner in all matters. A Board of Directors will be elected by the homeowners to manage and oversee the business and all other matters of the HOA.

The structure and guidelines for the HOA will be defined by the Dedications and Restrictions (Deed Restrictions), which will be recorded by the Developer after the Final Plat is approved, as required by the Town. The Covenants Conditions and Restrictions shall set forth all enforcement guidelines, and reporting standard for the HOA and/or Land Trust to provide an annual open space management report annually to the Town/EEC.

Developer initially, and then HOA after conveyance will engage the services of an ISA certified arborist or certified forester to provide professional guidance and supervision concerning the maintenance of preserved, specimen and protected trees within the open spaces of the community.

MAINTENANCE LEVELS

Level 1: Highly Maintained Landscape

These areas typically include irrigated turfgrass and planted beds in locations of high visibility to the community as a whole. Expect weekly mowing of turf during the growing season, less frequent mowing when grass is dormant. Irrigation frequency targeted toward a "green" appearance throughout the growing season. Annual tree pruning and semi-annual shrub pruning are required. Plant beds receive full maintenance with mulch applications, fertilization, and color changes. All areas include herbicide and pesticide treatments.

Level 2: Lesser Maintained Landscape

These areas typically include turfgrass that may or may not be irrigated and planted beds in locations less visible to the community. Expect an average of twelve mowing annually, more frequent during the growing season, less frequent when dormant. All trails, concrete walks, and roads not located in a Level 1 maintenance zone are to be maintained at a Level 2. Trails and walks to include a 5' wide mowed strip. Roadways to include 10' wide strip when adjacent to open space. Supplemental watering may be used to ensure survival of turf and plantings, but not to achieve a "green" appearance. Annual tree maintenance & semi-annual ground plant maintenance are required.

Level 3: Cultivated Texas Landscape

These areas typically include non-irrigated areas where revegetation with native grasses and/or wildflowers has occurred. These areas are to be cleaned of debris and "park cleared" to a mowable height of eight inches. Expect seasonal mowing of native areas (refer to Native Prairie Open Space for timing and frequency). Tree canopy heights will be raised to 6' above ground surface elevation. Annual tree maintenance will apply.

Level 4: Native Texas Landscapes

These areas will be, for the most part left in their natural condition. These areas will not be irrigated. Tree maintenance to be performed for safety to remove hazardous conditions. These areas include wildlife habitats where no on-going maintenance and no disturbance will occur. These areas will require little to no maintenance.

OPEN SPACE CLASSIFICATIONS

The maintenance and management of the Open Spaces will be the responsibility of the HOA Board of Directors. Refer to *Exhibit B – Open Space Management Plan Map*. The Open Spaces and their care will be as follows:

Entry Open Space

Areas with this designation are situated at highly visible corners and entrances to the community. The entry open spaces feature an enhanced, manicured native landscape, as well as entry monuments, stone monument features, and entry fencing.

Maintenance:

1. Maintenance Level 1 Highly Maintained
2. Service and repairs of all entry monuments, stone monument features, and entry fencing.

Uses:

1. At the most basic level, these locations serve as the ingress and egress point for all residents, guests, and visitors; however, their highest function is to serve as the first impression/ front door into community.
2. Wayfinding and sense of arrival.
3. Visual representation of the community's identity. Landscaping, and signage create a distinct and recognizable image, contributing to the community's character and branding.

Street Buffer Open Space

Areas with this designation are situated at the outer edges of the community. The vision for landscape improvements within this zone aims to transition introduced manicured landscapes and hard edges of entries and infrastructure back to existing vegetation. This process includes screening and directing views to preserved scenic vistas. The Street Buffer Open Space incorporates hardscape elements like stone monument features, fencing, trails, and walks. These spaces also feature enhanced landscaping transitioning to the existing landscape, required street trees, preserved existing trees, preserved natural features, and preserved existing vegetation.

Maintenance:

1. Maintenance Levels 1-4
2. Maintenance of the Street Buffer Open Space follows a gradient that corresponds to the designed transition from manicured landscapes at the Entry Open Spaces to the natural existing vegetation.
3. Service and repairs of all stone monument features, and fencing.
4. Limited grading may be performed to install passive amenities, including but not limited to decomposed granite trails, concrete trails, concrete sidewalks, equestrian trails, infrastructure, or seating areas.

Uses:

1. Similar to traditional development, the Street Buffer Open Space functions as a transitional zone between the roads and the community, bridging the gap between existing and new elements, and connecting new construction with preserved existing landscapes. In addition to its conventional purpose, the Street Buffer Open Spaces will also play a crucial role in preserving, protecting, and enhancing existing natural lands and environmental features, as well as safeguarding scenic views.
2. The areas may also be used for hiking, wildlife observation, and other passive recreation.

Prairie Open Space

Designated areas internal to the community, situated away from the edges, lack significant tree cover and have been disturbed by prior activities on the site, such as over-grazing, gas wells, and gas easements. As they are not part of the ancient Cross Timbers Habitat, preservation in their current state is not necessary. However, native existing tree stands and existing natural features will be preserved. These areas will be re-vegetated with native grasses and wildflowers.

Maintenance:

1. Maintenance Level 3- Cultivated Texas Landscape
2. Limited grading may be performed to install passive amenities, including but not limited to concrete trails, concrete sidewalks, decomposed granite trails, equestrian trails, infrastructure, or seating areas.
3. Vegetation Management:
 - o Restoration Phase
 - Over-seed existing vegetation with native grasses and wildflowers seasonally. The developer and HOA to create a schedule to coincide with appropriate seasonal timing. Developer and HOA to seek consultant supervision and information regarding appropriate seeding measures and specifications. As a general rule, perennial forbs seed is planted during the fall (October-November), while native grass seed should be planted in late winter/ early spring (January – April).
 - In the early stages of establishing the native prairie, it may be necessary to mow more frequently to control invasive species and encourage the establishment of native vegetation. Adjust the mowing height to favor the growth of native species. Mow native prairies two (2) to three (3) times per year during the first few years.
 - Monitor prairie monthly for presence of invasive/ undesirable species and treat any that are found.
 - o Established Native Prairie
 - Once the native prairie is well-established, the frequency of mowing should decrease. In some cases, it might be sufficient to mow every 2-3 years or even less frequently. Mow established native prairies a maximum of three (3) times per year.
 - The timing of mowing is crucial. Mowing during the growing season (spring to early summer) can help control aggressive non-native species and promote native plant growth. Avoid mowing during the flowering and seed-setting periods to allow for natural seed dispersal.
 - Consider mowing paths for active engagement with the prairie landscape.
 - Continue to over-seed until native prairie restoration goals have been achieved.
 - Consider the needs of wildlife when planning mowing activities. Leaving some areas uncut can provide habitat and food sources for wildlife.
 - Monitor prairie for presence of invasive and undesirable species and treat any that are found.
 - In some cases, prescribed burns may be used instead of or in conjunction with mowing. Both methods can help maintain the health of a native prairie, and the frequency of prescribed burns may influence the need for mowing. Town of Flower Mound's Fire Department must be included in any discussions of potential prescribed burns
4. Eco-fringe (40' max) buffer within this zone may be maintained regularly to a maximum depth of 20' from a residential lot line.

Uses:

1. In combination with the Buffer Open Space areas and Native Open Space areas, the Wooded Natural Open Space areas contribute to the preservation of rural vistas.
2. The areas may also be used for hiking, outdoor learning, wildlife observation, and other passive recreation.

Wooded Natural Open Space

Areas with this designation have been identified either as Upland Habitat or as having a minimum 20% tree canopy coverage on the lot, featuring a predominant matrix of tree species listed in the Town's protected tree list. The densely wooded areas of the site are dominated by post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*), cedar elm (*Ulmus crassifolia*), and eastern red cedar (*Juniperus virginiana*). As you move from the uplands down to the unnamed tributary to Denton Creek, other notable species such as American Elm (*Ulmus americana*) and Green Ash (*Fraxinus pennsylvanica*) become more prevalent. These open spaces may include steep slopes, riparian habitat, and upland wooded habitat.

Maintenance:

1. Maintenance Level 4--Native Texas Landscape
2. To the greatest extent possible, these open spaces will remain primarily in their natural state with all wildlife habitats virtually undisturbed.
3. Limited grading may be performed to install passive amenities, including but not limited to concrete trails, trail water crossings, concrete sidewalks, decomposed granite trails, equestrian trails, infrastructure, or seating areas.
4. Limited clearing shall be performed to accommodate improvements within this open space.
5. Maintenance in these areas will be focused on the management of vegetation to prevent overgrowth and/or debris from impeding roadways, trail corridors, and natural drainage ways.
6. Densely forested areas will be under the supervision of an ISA certified arborist or certified forester retained by the Developer and/ or the HOA.
7. Tree maintenance to be performed for safety and to remove hazardous conditions.
8. These areas will not be irrigated.
9. Eco-fringe (40' max) buffer within this zone may be maintained regularly to a maximum depth of 20' from a residential lot line.

Uses:

1. In combination with the Buffer Open Space areas and Native Open Space areas, the Wooded Natural Open Space areas will contribute to the preservation of rural vistas.
2. The areas may also be used for hiking, horseback riding, outdoor learning, wildlife observation, and other passive recreation.

Eco-Fringe

Areas with this designation occur where residential lots abut Prairie Open Space and/ or Wooded Natural Open Space. The Eco-Fringe serves as a twenty-foot transitional buffer between HOA maintenance and private maintenance of individual lots. The Eco-Fringe designation was created as a mechanism to grant homeowners directly adjacent to the open space limited maintenance rights.

Maintenance:

1. Maintenance Level - As defined by the open space classification adjacent to the defined Eco-Fringe.
2. Initial restoration may be done by the developer. The conservation, restoration, and maintenance will be overseen by the HOA.

Private maintenance of the Eco-Fringe is expressly limited to the following:

1. Removal of debris, downed limbs, and trash
2. removal of vines such as poison ivy, green briar, Carolina snailseed, and virginia creeper. All vines managed by homeowners should be managed by mechanical means.
3. Removal of invasive and non-native brush
4. Eco-fringe areas may be seeded with native species.
5. Contact the Town of Flower Mound Environmental Services before any work is done within the Native Prairie Open Space or Wooded Natural Open Space.
6. For removal of invasive or non-native trees, Homeowner must obtain approval from HOA for any tree larger than 2" Diameter at Breast Height (DBH). All applicable permits and regulations shall be considered and executed.

Ponds

Areas with this designation are located adjacent to the existing pond edges. The ponds are to be preserved, protected, and enhanced. Improvements will be properly permitted and constructed to minimize impacts to the existing surrounding habitat.

Maintenance:

1. Maintenance Level - As defined by the open space classification pond is located within.
2. The HOA is permitted to improve and maintain existing ponds in accordance with Chapter 299 of the Texas Administrative Code.
3. In order to maintain the structure as an aesthetic resource for the community with a healthy abundance of aquatic life, HOA is permitted to perform work as required, however, work is subject to inspection and approval by all appropriate governmental authorities.
4. HOA is permitted to use biological, chemical and mechanical means of preserving the aquatic health of ponds.
5. A (20) foot width maintenance buffer at the perimeter of the water edge will be maintained.

PDUE

Open Space located adjacent to the street ROW and identified on the plat. Located along streets abutting open spaces 17'-0" width offset from the ROW. These are areas that occur in all the open space classifications.

Maintenance:

1. Maintenance Level - As defined by the open space classification adjacent to the defined PDUE.
2. Option 1 Sodded with Buffalo Grass or Bermuda Grass
3. Option 2 Reference Native Prairie Open Space above with the addition of Curlex erosion control blanket.
4. Supervision and maintenance of culverts or other natural drainage structures.

Uses:

1. Pedestrian access throughout the open spaces for the residents and guests
2. Drainage and utilities

SMITH TRACT TOTAL AREA

446.9 acres

Lot Table

Lot		Square Feet	Acreage
Residential Lot Area Total		8,463,708	194.3
HOA Amenity Center Lot 1X		43,662	1.0
Total		8,507,370	195.3

RESIDENTIAL AND AMENITY CENTER LOT AREA TOTAL

195.3 acres

SMITH TRACT TOTAL AREA - DEDICATED ROW - COMBINED OPEN SPACE AREA

REQUIRED OPEN SPACE AREA

201.1 acres

GROSS LAND AREA X 0.45

Perimeter Dedicated Right of Way per Town Masterplan

Street Name	Block		Acreage
Rocky Point & Cardinal	ROW		0.7
Scenic Drive	ROW		9.4
Shiloh Road	ROW		4.1
Total			14.1

PERIMETER DEDICATED RIGHT OF WAY

14.1 acres

PER TOWN MASTERPLAN

Internal Dedicated Right of Way

Street Name	Block	Square Feet	Acreage
Internal ROW Dedication	ROW	439,323	23.7
Total		439,323	23.7

INTERNAL DEDICATED RIGHT OF WAY

23.7 acres

INTERNAL TO THE DEVELOPMENT

Open Space Lot Area Table - CREDITED

Lot	Block	Square Feet	Acreage
1X	D	1,512,252	34.7
1X	E	187,028	4.3
1X	B	4,077,068	93.6
1X	G	1,049,222	24.1
1X	F	363,108	8.3
3X	B	216,754	5.0
5X	A	1,110,382	25.5
Total		8,515,814	195.5

Dedicated Park Land Area Table - CREDITED

Lot		Square Feet	Acreage
Public Park - Minor Trailhead		108,900	2.5
Public Park - Major Trailhead		151,414	3.5
Total		260,314	6.0

OPEN SPACE AREA CREDITED

201.5 acres

OPEN SPACE AREA CREDITED TOWARDS MINIMUM OPEN SPACE AREA REQUIREMENT

Open Space Lot Area Table - UNCREDITED

Lot	Block	Square Feet	Acreage
1X	J	5,259	0.1
1X	A	23,124	0.5
2X	B	27,478	0.6
2X	A	20,159	0.5
3X	A	27,999	0.6
4X	B	16,079	0.4
4X	A	1,632	0.0
P.D.U.E @ Open Space		412,543	9.5
Total		534,273	12.3

OPEN SPACE AREA UNCREDITED

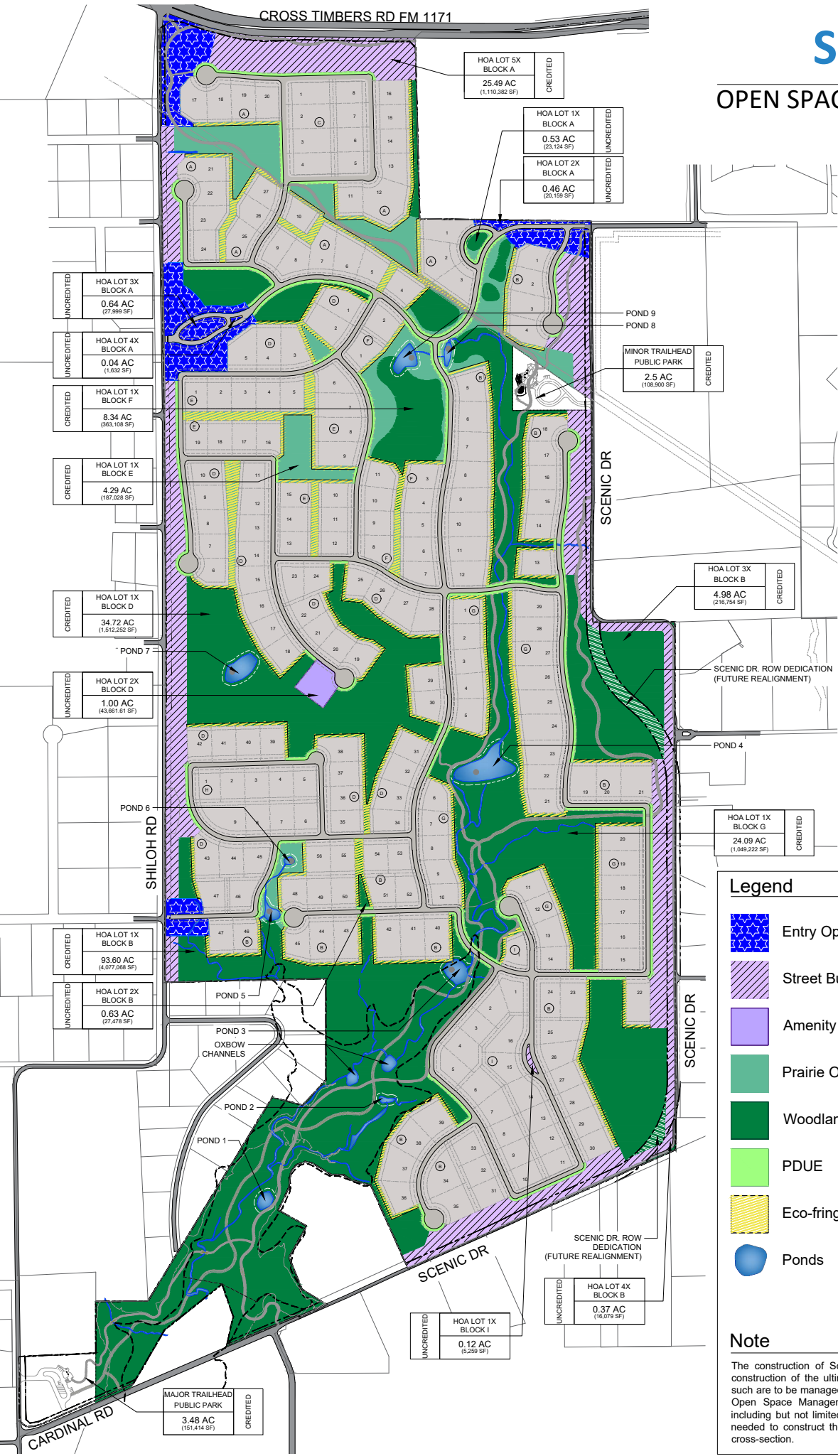
12.3 acres

OPEN SPACE AREA NOT CREDITED TOWARDS MINIMUM OPEN SPACE AREA REQUIREMENT

COMBINED OPEN SPACE AREA

213.7 acres

OPEN SPACE AREA CREDITED + OPEN SPACE AREA UNCREDITED



Legend

- Entry Open Space
- Street Buffer Open Space
- Amenity Center Open Space
- Prairie Open Space
- Woodland Natural Open Space
- PDUE
- Eco-fringe
- Ponds

Note

The construction of Scenic Drive is not part of this Project. Until the construction of the ultimate Scenic Drive roadway, the areas labeled as such are to be managed and maintained as open space. Furthermore, the Open Space Management Plan Map is subject to Town ordinances, including but not limited to, the required dedication of and improvements needed to construct the ultimate Scenic Drive right-of-way and roadway cross-section.

Seed Mixes

Native grasses and wildflower seed mixes shall come from species within the Native American Seed company mixes – “Blackland Prairie Mix”, “Shade-Friendly Grass Mix”, and “Native Texas Mix” are all potential options. Grasslands are the enjoyment of use by residents.

Toll Brothers, Inc. Preliminary Environmental Sensitive Area Assessment 438-Acre +/- Site Town of Flower Mound, Denton County, Texas

Date: March 22, 2024

Prepared For: Toll Brothers, Inc.

Prepared By: Topographic Co. (Topographic) – Grahme Borchardt and Jason Voight, PWS

The following presents observations from desktop and on-site investigations for a proposed single-family housing development to be located on an approximately 438-acre +/- tract of land located in the Town of Flower Mound (Town), Denton County, Texas. Topographic, Co. environmental staff performed an on-site investigation of the subject property on August 1-5, 2022 and November 7-8, 2023 to collect requisite data to delineate the Town's Environmentally Sensitive Areas (ESA) pursuant to the Town's environmental quality criteria, which will eventually be used to complete an Environmental Protection Plan. The data presented herein will assist with the development of Best Management Practices (BMPs) to either avoid or minimize impacts on terrestrial and aquatic habitats and certain topographical features. The data was collected and processed in accordance with the Town's SMARTGrowth Program, Category E(6) Environmental Quality.

TOWN OF FLOWER MOUND ENVIRONMENTALLY SENSITIVE AREA CRITERIA

The eight ESA categories are as follows:

1. **Upland Habitat** – defined as “Areas, a minimum of ten acres in size, equal to or exceeding 50 trees per acre, which contain a predominant matrix of tree species identified in the Town's protected tree list (**Attachment A**). Any tree species that makes up over 30 percent of the population within a complex is considered to be the predominant species.”
2. **Riparian Habitat** – defined as “Areas designated within the FEMA FIRM 100-year floodplain or interconnected and adjacent to wetland, tree and understory vegetation and including significant stands of predominantly native water-related habitat – these areas include wetlands.”
3. **Prairie Habitat** – defined as “Areas designated as containing onsite predominant distributions of climax or mid-successional native grass species underlain by intact (non-eroded prairie and savannah soil types.”
4. **Waters of the State** – defined as “Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all watercourses and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.” It is implied from the definition of wetlands

that the U.S. Army Corps of Engineers delineation methods for delineating aquatic resources will be used to define the limits of aquatic resources.

5. **Floodplain** – defined as “Areas to include the developed or undeveloped Federal Emergency Management Agency (FEMA) 100-year floodplain. Developed floodplain is defined as a floodplain within the FEMA 100-year floodplain and which has been channelized or the land within these areas have been graded, filled, or otherwise disturbed. Undeveloped floodplain is defined as a floodplain within the FEMA 100-year floodplain, or other floodplain that are undeveloped and in their natural state.”
6. **Wetlands** – defined as “Jurisdictional wetlands as defined by the federal Clean Water Act and the standards and guidelines in use by the U.S. Army Corps of Engineers, including the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.”
7. **Water Impoundment Protection** – The Town’s SMARTGrowth Program requires preservation and enhancement of impoundments greater than 0.5-acre identified at proposed developments.
8. **Topographical Slope Protection** – the Town’s SMARTGrowth Program contains topographical slope protection criteria that does not allow development on any existing topographical slopes of 12% or greater, or alteration of any existing topographical slopes that are less than 12% but equal to or greater than 5% (other than within five feet of the footprint of the proposed structure or structures) unless an exception is granted by the Town. These criteria apply when the stated topographical slopes exist for a total horizontal distance over 50-feet or if the total vertical rise is over 6-feet.

SITE DESCRIPTION AND GENERAL BACKGROUND INFORMATION

As shown on **Figures 1 and 2** in **Attachment A**, the subject property is located to the southeast of the intersection of Farm to Market Road 1171 and Shiloh Road. It is a mostly rectangular shaped tract oriented in a north/south direction with centroid coordinates of 33.035064° N, -97.124607° W (State Plane NAD 83 2011 North Central Texas). The subject property is in the “Denton (Creek)” watershed, which corresponds to the U.S. Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC) 12030104. More specifically, most of the subject property is in the “Marshall Branch-Grapevine Lake” drainage, which corresponds to the USGS 12-digit HUC 120301040306. The easternmost portions of the subject property, along Scenic Drive, overlap into the “Dove Creek-Grapevine Lake” drainage (12-digit HUC 120301040306). **Figure 3** in **Attachment A** shows the subject property relative to the aforementioned 12-digit HUCs.

Based on review of current and historic aerial photography (1995-2022), the land uses around the subject property have remained relatively unchanged for the past 25+ years. Some development activities increased overtime to include single-family residential, road improvements, and oil/gas activities. The primary land use within this region is agriculture, predominantly pastureland for livestock rearing, and single-family residential homes. **Figure 4** in **Attachment A** shows the subject property superimposed onto a 2022 aerial photograph.

Based on the on-site investigation, the subject property is primarily used as pastureland for livestock rearing – specifically cattle; however, two single-family residences were also observed. Oil and gas activities, consisting of three well pads, were present within the subject property. A natural gas pipeline and associated right of way as well as overhead electric power line easements were also observed.

The vegetation observed within the subject property consisted of woodlots and grassed (herbaceous) areas. The dense wooded areas were dominated by post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*),

cedar elm (*Ulmus crassifolia*), and eastern red cedar (*Juniperus virginiana*). In fallow fields, mesquite (*Prosopis glandulosa*) and eastern red cedar were the predominant woody species. Along the Unnamed Tributary to Denton Creek, the aforementioned dense wooded species were observed as well as American elm (*Ulmus americana*), hackberry (*Celtis laevigata*), honey locust (*Gleditsia triacanthos*), and green ash (*Fraxinus pennsylvanica*). Limited to no understory vegetation was observed on-site. The herbaceous areas were dominated by improved pasture grasses specifically bermudagrass (*Cynodon dactylon*). It should be noted that trees classified as specimen trees¹ were observed within the subject property but are not a component of this evaluation.

Using current and historic aerial photography coupled with the onsite investigation, a land cover type map was prepared. The land cover type map, included as **Figure 5** in **Attachment A**, delineates forested tree cover, improved pastureland, open water areas not obscured by tree canopy, natural gas pipeline right of way, and urban areas (developed areas to include roads, oil/gas well pads, and single-family homes).

LiDAR DATA AND U.S. GEOLOGICAL SURVEY (USGS) TOPOGRAPHIC MAP

LiDAR data, obtained from the Texas Natural Resources Information Systems (TNRIS), was reviewed to determine topographical slopes ranging from 5 to 12 percent slopes, and slopes greater than 12 percent within the subject property. The LiDAR data was assessed using ESRI's ArcGIS Pro Spatial and 3D analyst extensions. **Figure 6** in **Attachment A** identifies areas within the subject property that contain slopes between 5 to 12 percent and slopes greater than 12 percent.²

As shown on **Figure 7** in **Attachment A**, the USGS topographic maps (Argyle and Lewisville West, Texas Quadrangles) were reviewed to assess the surface topography and known topographical features within the general vicinity of the subject property. A review of the topographical data indicates that the subject property is undulating and generally sloping down toward the south-central portion of the site toward an Unnamed Tributary to Denton Creek (Grapevine Lake). The subject property has a topographic high of around 690 feet mean sea level (msl) near the central portion of the subject property, and a topographic low of approximately 550 feet msl located along the southern property boundary. The USGS topographic map identified two streams within the subject property – an Unnamed Tributary to Denton Creek (Grapevine Lake) and an Unnamed Tributary to Sharps Branch. The USGS topographic map also identified four ponds, utility easements, structures (homes or barns), and access (unimproved) roads.

NATIONAL WETLAND INVENTORY AND NATIONAL HYDROGRAPHY DATASET

The National Wetland Inventory dataset was reviewed to identify potential aquatic features within the subject property prior to the on-site investigation. As shown on **Figure 8** in **Attachment A**, the NWI identified two

¹ Trees included on the protected tree list but have a qualifying diameter at breast height to be considered a “specimen tree” – see tree ordinance in Attachment A.

² Topographic, Co. recommends site specific topographical data be obtained to accurately determine areas that fit the Topographical Slope Protection parameters as defined by the Town. Figure 6 in Attachment A does not account for excluding slopes 50-feet or less in a horizontal distance or less than 6-feet of rise.

Riverine habitats associated with the Unnamed Tributary to Denton Creek and the Unnamed Tributary to Sharps Branch within the subject property. These NWI features are defined as riverine, intermittent, streambed, seasonally flooded (R4SBC Cowardin Classification) and riverine, unknown perennial, unconsolidated bottom, permanently flooded (R5UBH). A Forested Wetland feature was also identified along the Unnamed Tributary to Denton Creek. This Forested Wetland feature was identified as palustrine, forested, broad-leaved deciduous, temporary flooded (PFO1A). Finally, three Freshwater Pond habitats were identified to the west of the Unnamed Tributary to Denton Creek. Two of these Freshwater Pond NWI features are identified as palustrine, unconsolidated bottom, permanently flooded, diked/impounded (PUBHh) and the remaining Freshwater Pond was identified as palustrine, unconsolidated bottom, permanently flooded, excavated (PUBHx).

The USGS manages the National Hydrography Dataset (NHD), which delineates the surface water drainage network of the US with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gauges through geospatial data. The NHD was reviewed to identify potential aquatic resources within the subject property prior to the on-site investigation. A review of the NHD also identified the Unnamed Tributary to Denton Creek and the Unnamed Tributary to Sharps Branch, which corresponds to the NWI data and is included on **Figure 8 in Attachment A**.

SOILS DATA

Ten soil types, as mapped by the Soil Survey of Denton County, Texas (NRCS Web Soil Survey) and listed in the following table, are located within the subject property. The *National Hydric Soil List* was also reviewed for Denton County, Texas. No soils were listed as hydric soils, or soils more prone to supporting saturation, flooding, or ponding for sufficient duration to develop hydric soil conditions in Denton County. The mapped soils units within the subject property are illustrated on **Figure 9 in Attachment A**.

Soil Symbol	Soil Name	Hydric Soil	Acres in Subject Property	Percent in Subject Property
11	<i>Birome fine sandy loam, 1 to 3 percent slopes</i>	No	21.6	5
12	<i>Birome fine sandy loam, 3 to 5 percent slopes</i>	No	36.5	8
13	<i>Birome-Rayex-Aubrey complex, 2 to 15 percent slopes</i>	No	115.1	26
20	<i>Bunyan fine sandy loam, frequently flooded</i>	No	8.0	2
23	<i>Callisburg fine sandy loam, 1 to 3 percent slopes</i>	No	36.4	8
35	<i>Gasil fine sandy loam, 1 to 3 percent slopes</i>	No	82.4	19
36	<i>Gasil fine sandy loam, 3 to 8 percent slopes</i>	No	59.2	14
50	<i>Konsil fine sandy loam, 1 to 3 percent slopes</i>	No	20.7	5
51	<i>Konsil fine sandy loam, 3 to 8 percent slopes</i>	No	23.6	5

Soil Symbol	Soil Name	Hydric Soil	Acres in Subject Property	Percent in Subject Property
71	<i>Silawa loamy fine sand, 2 to 5 percent slopes</i>	No	33.2	8

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOODPLAIN DATA

The FEMA Flood Insurance Rate Map dataset was reviewed to determine the type and limits of mapped floodways and/or floodplains within the subject property. As shown on **Figure 10** in **Attachment A**, the 100-year floodplain (Zone A) associated with the Unnamed Tributary to Denton Creek is located along the southern portion of the subject property.

AQUATIC RESOURCES DETERMINATION

The subject property was assessed using protocols employed by the U.S. Army Corps of Engineers to delineate aquatic resources. The delineated aquatic resources are included in **Figure 11** in **Attachment A**. The following tables detail the length of stream channel and acres of open waters delineated within the subject property.

STREAMS

Stream Number	Aquatic Feature I.D.	Aquatic Feature Name	Aquatic Feature Type	Linear Length (Feet)
1	DC-UT	<i>Unnamed Tributary to Denton Creek</i>	Intermittent to Ephemeral Stream	7917.8
2	DC-UT1	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	521.9
3	DC-UT2	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	726.8
4	DC-UT2A	<i>Unnamed Tributary to DC-UT2</i>	Ephemeral Stream	377.7
5	DC-UT3	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	164.5
6	DC-UT4	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	1247.4
7	DC-UT4-SC	<i>Unnamed Tributary to DC-UT4-Parallel Side Channel</i>	Ephemeral Stream	404.7
8	DC-UT4A	<i>Unnamed Tributary to DC-UT4</i>	Ephemeral Stream	384.4
9	DC-UT4B	<i>Unnamed Tributary to DC-UT4</i>	Ephemeral Stream	179.9
10	DC-UT5	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	511.9
11	DC-UT5A	<i>Unnamed Tributary to DC-UT5</i>	Ephemeral Stream	1027.0

Stream Number	Aquatic Feature I.D.	Aquatic Feature Name	Aquatic Feature Type	Linear Length (Feet)
12	DC-UT5A1	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	153.6
13	DC-UT6	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	687.5
14	DC-UT7	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	224.4
15	DC-UT8	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	999.9
16	DC-UT9	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	508.2
17	DC-UT10	<i>Unnamed Tributary to DC-UT</i>	Ephemeral Stream	566.6
18	SB-UT	<i>Unnamed Tributary to Sharps Branch</i>	Ephemeral Stream	172.8
19	Oxbow Channels	<i>2 Oxbow Channels along DC-UT</i>	Ephemeral Stream	442.6
20	Spillway Channels	<i>2 Spillway Channels discharging from Onsite On-channel Ponds</i>	Ephemeral Stream	643.7

In total, 17,863.3 linear feet of streams were delineated within the subject property.

OPEN WATERS

Open Water Number	Aquatic Feature I.D.	Aquatic Feature Name	Area (Acres)
1	Pond 1	<i>Off-channel but within the floodplain for DC-UT</i>	0.17
2	Pond 2	<i>On-channel impoundment of DC-UT4</i>	0.05
3	Pond 3	<i>On-channel impoundment of DC-UT</i>	0.36
4	Pond 4	<i>On-channel impoundment of DC-UT</i>	0.99
5	Pond 5	<i>On-channel impoundment of DC-UT5</i>	0.16
6	Pond 6	<i>On-channel impoundment of DC-UT5</i>	0.05
7	Pond 7	<i>Off-channel isolated impoundment</i>	0.46
8	Pond 8	<i>On-channel impoundment of DC-UT10</i>	0.09
9	Pond 9	<i>On-channel impoundment of DC-UT10</i>	0.30

In total, 2.63 acres of open waters were delineated within the subject property.

FEDERAL AND STATE LISTED THREATENED, ENDANGERED, CANDIDATE, OR RARE SPECIES

The U.S. Fish and Wildlife Service's Information Planning and Consultation (IPaC) service was accessed (November 7, 2023) to determine federally listed endangered, threatened, or candidate species for the project vicinity. A Biological Evaluation was prepared for the Assessment Area and is included in **Attachment B**. As indicated in the Biological Evaluation, the Assessment Area may contain any suitable habitat for the candidate Monarch Butterfly and the proposed endangered Tri-colored Bat. As concluded in the Biological Evaluation, there may be impacts to habitat associated with the Monarch Butterfly resulting from development activities, but those impacts are not likely to jeopardize the species. The Assessment Area contains preferred trees for the Tri-colored Bat, which would be used for roosting, hibernation, and pup rearing. The remaining federally listed species should have a "no effect" and a "no impact" determination from development activities.

A review of the Texas Parks and Wildlife Department *Annotated County Lists for Rare Species – Denton County* lists several state rare, threatened, and endangered species (**included in the Biological Evaluation in Attachment B**). Topographic concluded that the following species "may be impacted from development activities but is not likely to cause a trend towards federal listing or loss of viability within the planning area."

- Strecker's Chorus Frog (*Pseudacris streckeri*)
- Eastern Spotted Skunk (*Spilogale putorius*)
- Hoary Bat (*Lasiurus cinereus*)
- Eastern Box Turtle (*Terrapene carolina*)
- Texas Gartersnake (*Thamnophis sirtalis annectens*)
- Texas Horned Lizard (*Phrynosoma cornutum*)
- Western Box Turtle (*Terrapene ornata*)
- Glen Rose Yucca (*Yucca necopina*)
- Sutherland Hawthorn (*Crataegus viridis* var. *glabriuscula*)

The remaining state listed species for Denton County should have a "no impact" determination.

Finally, Topographic scientists concluded that the proposed development would have a "no effect" determination on Bald and Golden Eagles with the potential to occur in the Assessment Area. Additionally, it is Topographic's professional opinion that the proposed development would have a "no effect" determination on migratory birds with the potential to occur in the Assessment Area.

ENVIRONMENTALLY SENSITIVE AREAS: CONCLUSIONS AND MITIGATION MEASURES

As mentioned previously, the Town has eight criteria that define an Environmentally Sensitive Area (ESA). The following provides an assessment of the eight ESA criteria. The applicable ESAs are shown on **Figure 12** in **Attachment A**. Proposed impacts to applicable ESAs are shown on **Figures 13-15** in **Attachment A**.

1. **Upland Habitat** – defined as “Areas, a minimum of ten acres in size, equal to or exceeding 50 trees per acre, which contain a predominant matrix of tree species identified in the Town’s protected tree list (Attachment A). Any tree species that makes up over 30 percent of the population within a complex is considered to be the predominant species.”

Several areas were identified within the subject property that contained Upland Habitat that met the Upland Habitat criterion. These upland habitats occupy approximately 141.4 acres of the 438-acre subject property and are shown on **Figure 12**. Impacts to qualifying upland habitat total 46.2 acres, as shown on **Figure 13**. Encroachments to qualifying upland habitat from a proposed trail system are shown on **Figure 15**. The trail system encroachments to upland habitat are 0.98-acre for the equestrian trail system and 1.32 acres from the concrete trail system.

2. **Riparian Habitat** – defined as “Areas designated within the FEMA FIRM 100-year floodplain or interconnected and adjacent to wetland, tree and understory vegetation and including significant stands of predominantly native water-related habitat – these areas include wetlands.”

The FEMA FIRM 100-year floodplain associated with the Unnamed Tributary to Denton Creek occupies the southwestern corner of the subject property. The majority of the 100-year floodplain is within the ESA identified as Upland Habitat, as shown on **Figure 12**, and occupies approximately 28.6 acres. Beyond the 100-year floodplain, most of the riparian areas along delineated streams will remain intact, as shown on **Figure 13**.

3. **Prairie Habitat** – defined as “Areas designated as containing onsite predominant distributions of climax or mid-successional native grass species underlain by intact (non-eroded prairie and savannah soil types.”

No prairie habitat was identified within the subject property. No climax or mid-successional native grass species were observed onsite. Herbaceous areas within the subject property were comprised primarily of improved pasture grasses specifically bermudagrass.

4. **Waters of the State** – defined as “Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all watercourses and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.” It is implied from the definition of wetlands that the U.S. Army Corps of Engineers delineation methods for delineating aquatic resources will be used to define the limits of aquatic resources.

All surface waters observed and summarized herein should be considered waters of the state. Accordingly, those features are shown on **Figure 12**. In total, there are approximately 2.62 acres of open waters, as shown on **Figure 13**. No open waters will be impacted from proposed development activities; however, Pond 4 may be incorporated into the overall design for detention/retention. Approximately 17,863.3 linear feet (2.23 acres) of streams were identified and delineated within the subject property. Approximately 228.9 linear feet (0.02-acre) of streams will be impacted from the development plan primarily associated with road crossings, as shown on **Figure 13**. The proposed trail system, as shown

on **Figure 15**, will have 14 stream crossings (6 crossings from an equestrian trail system (92.0 linear feet (0.016-acre)) and 8 crossings from a concrete trail system (122.1 linear feet (0.013-acre))).

5. **Floodplain** – defined as “Areas to include the developed or undeveloped Federal Emergency Management Agency (FEMA) 100-year floodplain. Developed floodplain is defined as a floodplain within the FEMA 100-year floodplain and which has been channelized or the land within these areas have been graded, filled, or otherwise disturbed. Undeveloped floodplain is defined as a floodplain within the FEMA 100-year floodplain, or other floodplain that are undeveloped and in their natural state.”

Similar to the Riparian Habitat ESA, the FEMA FIRM 100-year floodplain associated with the Unnamed Tributary to Denton Creek occupies the southwestern corner of the subject property. The majority of the 100-year floodplain is within the ESA identified as Upland Habitat, as shown on **Figure 12**. One encroachment into the 100-year floodplain was identified with a proposed road crossing. This encroachment, as shown in **Figure 13**, occupies approximately 0.05-acre. Encroachments to the 100-year floodplain from a proposed trail system are shown on **Figure 15**. The trail system encroachments to the 100-year floodplain are 0.67-acre for the equestrian trail system and 0.61-acre from the concrete trail system. A floodplain exception may be required from the Town of Flower Mound for the floodplain encroachment. Please contact blake.hummel@flower-mound.com to coordinate floodplain encroachments.

6. **Wetlands** – defined as “Jurisdictional wetlands as defined by the federal Clean Water Act and the standards and guidelines in use by the U.S. Army Corps of Engineers, including the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.”

No wetlands were identified within the subject property.

7. **Water Impoundment Protection** – The Town’s SMARTGrowth Program requires preservation and enhancement of impoundments greater than 0.5-acre identified at proposed developments.

Only one impoundment, Pond 4, within the subject property exceeds 0.5-acre in area. Pond 4 may be used as a retention pond accepting additional runoff from the proposed development.



Pond 4 – an impoundment of the Unnamed Tributary to Denton Creek

8. **Topographical Slope Protection** – the Town’s SMARTGrowth analysis contains topographical slope protection criteria that does not allow development on any existing topographical slopes of 12% or greater, or alteration of any existing topographical slopes that are less than 12% but equal to or greater than 5% (other than within five feet of the footprint of the proposed structure or structures) unless an exception is granted by the Town. These criteria apply when the stated topographical slopes exist for a total horizontal distance over 50-feet or if the total vertical rise is over 6-feet.

LiDAR analysis was performed using ESRI’s ArcGIS Pro 3D and Spatial Analyst tools for the subject property to perform the existing slope analysis. Data used for the analysis was the 2019 Pecos Dallas Lidar Dataset³ obtained from the Texas Natural Resources Information Systems. The outputs from the slope analysis are shown on **Figure 6** in **Attachment B**. Based on the preliminary analysis, the subject property contains slopes that fall within the 5-12 percent slope parameter (as shown in yellow on **Figure 6**). Areas exceeding 12 percent slopes are shown in red on **Figure 6**. In total, slopes ranging from 5-11.9% totaled 154.0 acres and slopes >12% totaled 10.9 acres within the project area. **Figure 14** details the proposed impacts to qualifying slopes.

Impact and preservation acreages (as quantified on **Figure 14**) to qualifying slopes are as follows:

Slope Impact Acreages (Totals 72.9 acres)

- 5-11.9% Slopes Impacted by Proposed Lots – 62.9 acres
- >12% Slopes Impacted by Proposed Lots – 0.9-acre
- 5-11.9% Slopes Impacted by Proposed Street ROW – 8.6 acres
- >12% Slopes Impacted by Proposed Street ROW – 0.5-acre

Slope Preservation Acreages (Totals 92.0 acres)

³ United States Geological Survey (USGS). Pecos Dallas Lidar, 2019-07-12. Web. 2022-09-02 – 1 meter resolution.

- 5-11.9% Slopes Preserved – 82.5 acres
- >12% Slopes Preserved – 9.5 acres

Proposed Development Plan

The proposed site plan calls for the property to be developed as a residential development with associated amenities (i.e., pedestrian and equestrian trail systems). To preserve the natural habitats in the proposed residential development, tree and vegetation removal will be limited to only those trees and natural vegetation that would be affected by the proposed construction of the onsite roads, utilities, and structures. Several mitigation strategies are proposed to compensate for any permanent impacts to environmentally sensitive areas. Best Management Practices (BMPs) will also be employed to retain sediments and other pollutants onsite during construction activities. Figures showing the overall development plan and impacts superimposed onto to Town-defined ESAs are included as **Figure 13 for impacts to environmentally sensitive areas, Figure 14 for impacts to qualifying slopes, and Figure 15 for encroachments to environmentally sensitive areas from the proposed equestrian and concrete trail systems.**

Mitigation Measures During Project Planning and Construction

The following mitigation measures will be employed throughout the planning and construction of the project:

- The development plan has been designed to preserve as many trees and natural vegetation as possible while still allowing economically viable development.
- The development plan has been designed to preserve all open waters (2.62 acres) and 17,634.4 linear feet (2.20 acres) of streams.
 - Pond 4 may be used for retention of stormwater from the site development. The following mitigation measures will be incorporated into the development plan to protect Pond 4 should it be used as a retention pond.
 - Any outfall from a stormwater discharge shall be reinforced with grouted stone or loose stone riprap to prevent mechanical erosion of the pond banks and located to minimize impacts to viewsheds to the extent practicable.
 - A spray fountain, bubblers, or similar will be installed in Pond 4 to maintain sufficient aeration to support aquatic life.
 - A water elevation, to be determined, will be established and maintained through the use of a groundwater well or similar to discourage algal growth and undesirable aquatic vegetation.
 - Side slopes along the pond edge shall not exceed 4:1.
 - Native aquatic vegetation will be planted along the pond's perimeter to provide a wave-action buffer, filter pollutants, and provide a visual amenity. Vegetation to be considered includes, but is not limited to, the following:
 - Spikerush (*Eleocharis spp.*)
 - Bulrush (*Schenoplectus spp.*)
 - Softrush (*Juncus spp.*)
 - Arrowhead (*Sagittaria spp.*)
 - Pickerelweed (*Pontederia cordata*)
 - Spiderlily (*Hymenocallis liriosme*)
 - Smartweed (*Polygonum spp.*)
 - Sedges (*Carex spp.*)

- Flatsedges (*Cyperus spp.*)
- Bushy Bluestem (*Andropogon glomeratus*)
- Switchgrass (*Panicum virgatum*)
- Although every attempt has been made to minimize the number of trees damaged or removed during development, some impacts to trees will occur. The removal of trees will be limited to stressed or dead trees, trees within the footprint of proposed structures and roads, and trees needed to be removed to level the building lots. To reduce impacts, roads will be constructed to minimize the number of trees needing to be removed. Mitigation for the impact to trees that must be removed will include tree preservation (where possible), additional tree and other native vegetation plantings, habitat improvement projects, and green space preservation.
- An exception to the Town of Flower Mound's SmartGrowth Implementation manual topographical slope protection criterion is being requested for the proposed impacted areas of land with slopes between 5% and 12% that are not located within 5 ft. of any proposed residential structure, and for the impacts to slopes greater than or equal to 12%.
 - Most slope protection areas (slopes >5%) have been avoided and will remain as open space dedication areas.
 - Where encroachments to slope protection areas occur, detailed plans will work to minimize encroachments to the maximum extent practicable during final grading and employ retaining walls where necessary to balance tree preservation and slope protection. Slope protection areas impacted by grading will be revegetated immediately upon construction completion.
- Silt fencing will be installed and maintained in compliance with TCEQ Construction General Permit requirements. These best management practices will minimize sediments from entering the Town's storm sewer system.
 - Silt fencing will be installed perpendicular to the direction of flow, especially along roadways, trail systems, and drainage/low elevation areas.
- Stabilized construction entrances will be installed at appropriate locations onsite. These structural features will reduce the risk of transporting mud or sediment onto the adjacent roads and other nearby roadways.
- Native vegetation outside of construction zones will remain intact during construction to filter storm water during rain events prior to reaching streams.
- Major soil disturbing activities will be sequenced to preserve existing vegetation.
- Storm water control devices will be installed to promote sedimentation onsite, limit runoff, and reduce the velocity of concentrated flows to reduce erosion and scouring to onsite and adjacent drainages.
- Storm water control devices will be maintained until disturbed areas have achieved final stabilization.
- Active migratory bird nesting areas will not be disturbed during site development.
 - Although not anticipated, if threatened or endangered species or signs of active nesting sites for migratory birds are observed/encountered during site development, a stoppage of work would occur and the appropriate authorities, the Town of Flower Mound staff, the USFWS, and TPWD, would be contacted immediately for consultation.

Based on the site visits, the Biological Evaluation performed by Topographic scientists, proposed zoning for the site, and the site development plan, Topographic concludes the following:

- The project site contains potentially suitable habitat for the candidate Monarch Butterfly (*Danaus plexippus*). This species was not observed onsite due to the season. Potential habitat for this species does exist on site; however, the habitat on the project site is not unique and surrounding, undeveloped properties will provide adequate habitat to prevent negative impacts to this species.

- The project site contains potentially suitable habitat for the proposed endangered Tricolored Bat (*Perimyotis subflavus*). This species was not observed onsite; however, potential roosting habitat may exist within the subject property. Impacts to hibernacula and rearing trees should be avoided during the hibernation and pup seasons.
- Town-defined Environmentally Sensitive Areas exist on the project site. Waters of the State – streams and open waters, water impoundment protection qualifying pond, riparian areas, 100-year floodplain, and topographical slope protection areas have been identified on site. No other environmentally sensitive areas were observed on the site. Although some impacts to these areas are anticipated, mitigation measures that compensate for these impacts will be conducted.
- The project will strictly adhere to the Town's tree ordinance and other environmental mandates.
- The proposed residential development will be designed to allow for the partial preservation of existing natural habitat. The preserved trees will provide an aesthetic value to the site and continue to provide habitat for a variety of biota including songbirds, mammals, reptiles, and insects.

My signature certifies to the best of my knowledge the responses provided herein accurately reflect the requisite information pertaining to the Environmental Resource Investigation for the project area.

Jason Voight, PWS

817-744-7512

Print Name

Telephone

Jason Voight

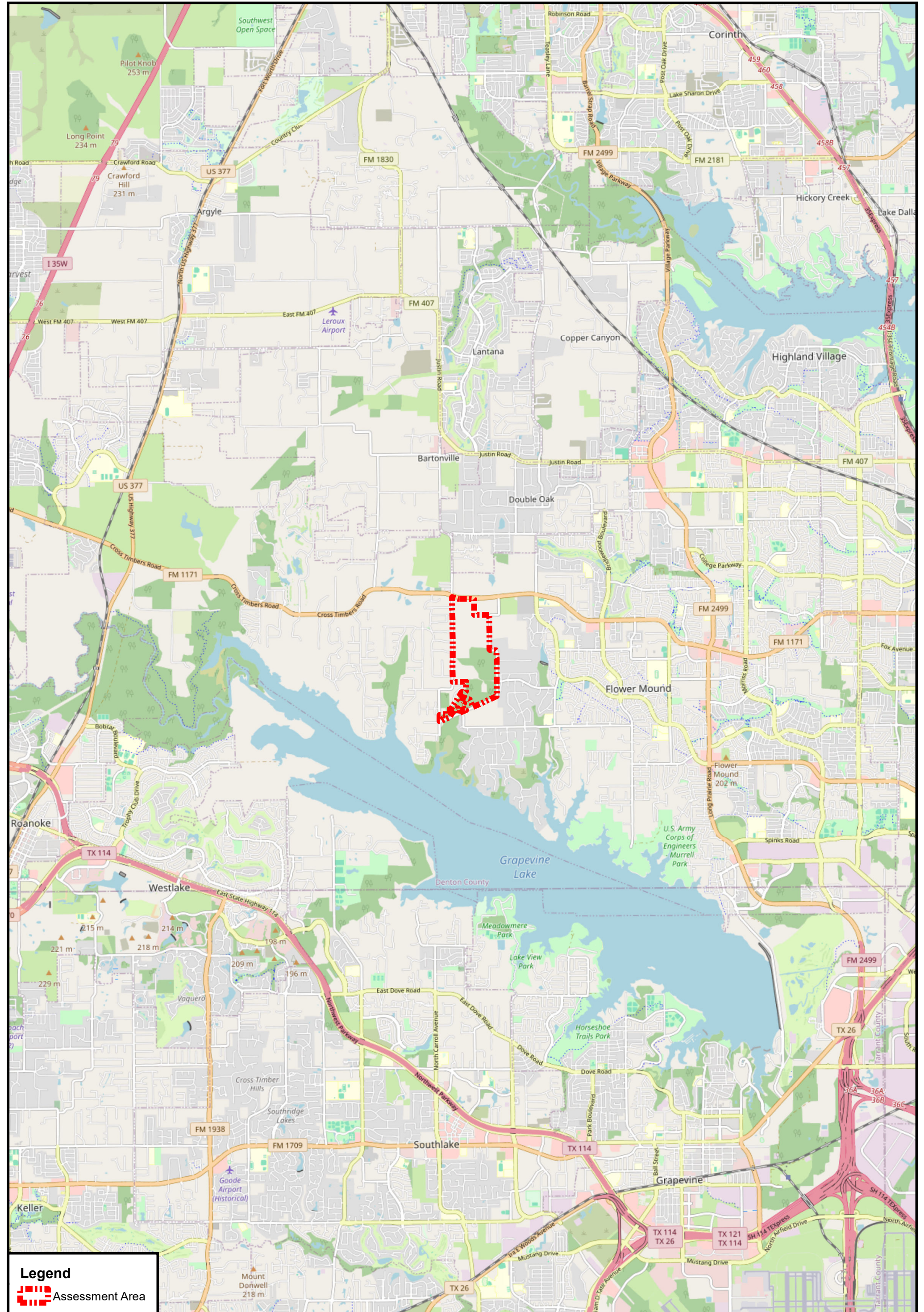
Jason.Voight@Topographic.Com

Signature

Email Address

ATTACHMENT A

FIGURES



Legend
Assessment Area

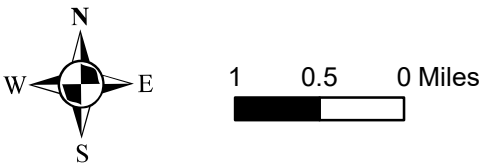
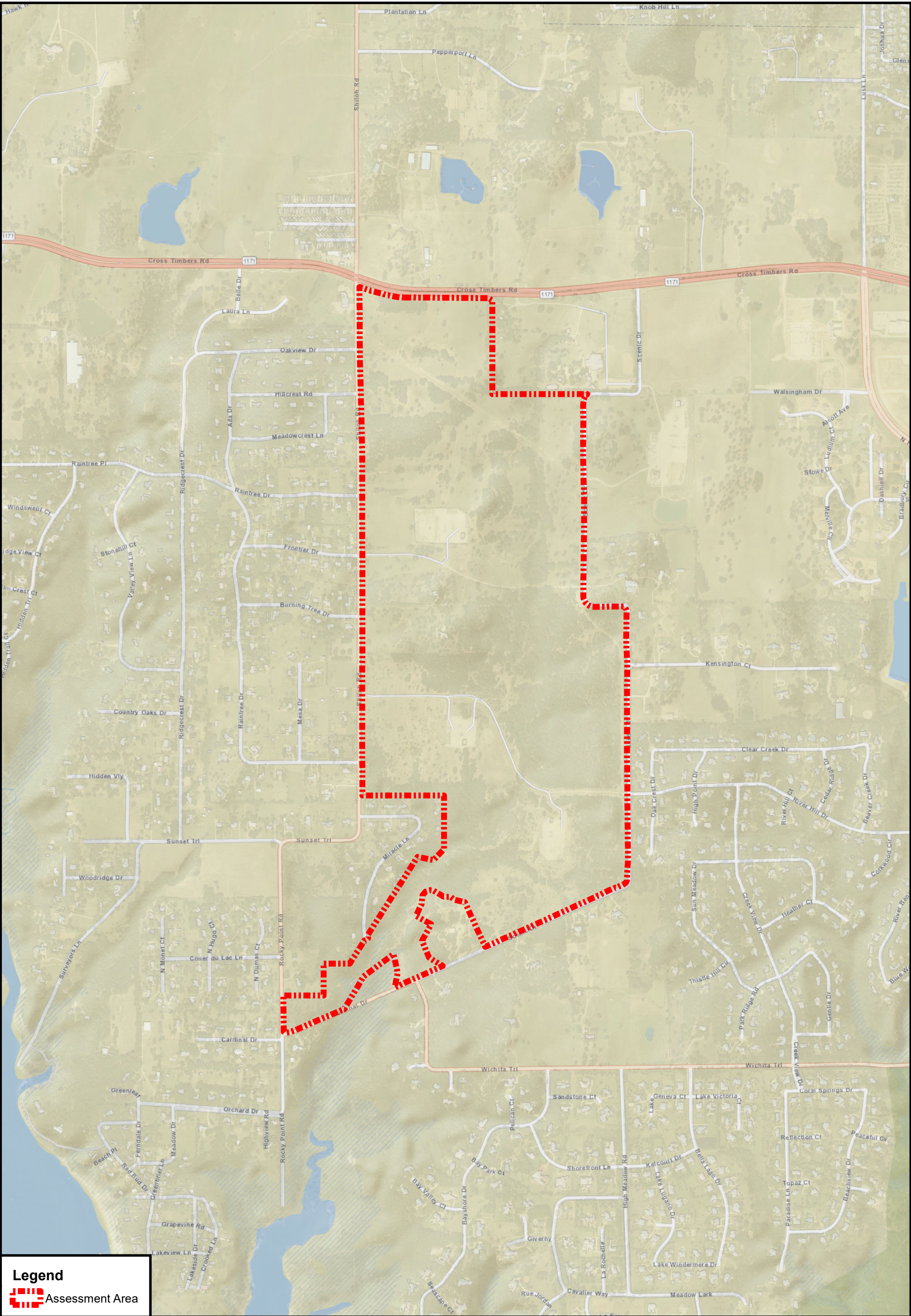


FIGURE 1 OF 15

FIGURE 1
GENERAL LOCATION MAP
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
DENTON COUNTY, TEXAS

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Legend
 Assessment Area

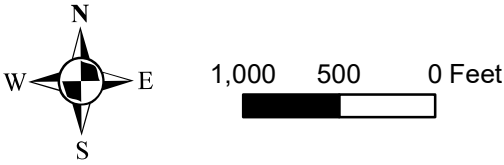
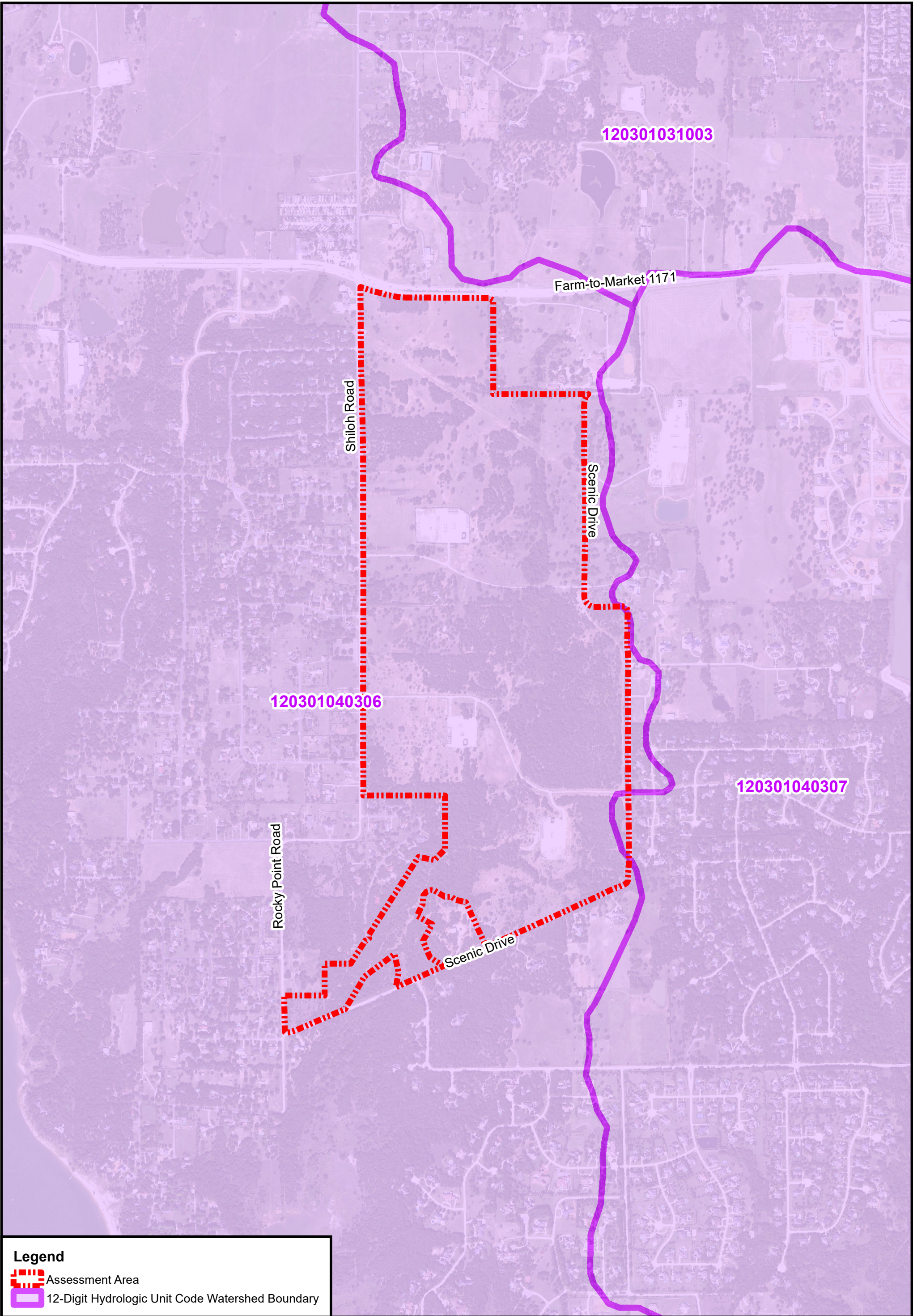


FIGURE 2 OF 15

FIGURE 2
GENERAL VICINITY MAP
438-ACRE +/- ASSESSMENT AREA
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Legend

-  Assessment Area
-  12-Digit Hydrologic Unit Code Watershed Boundary

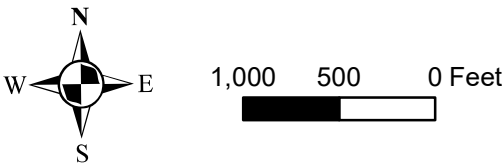
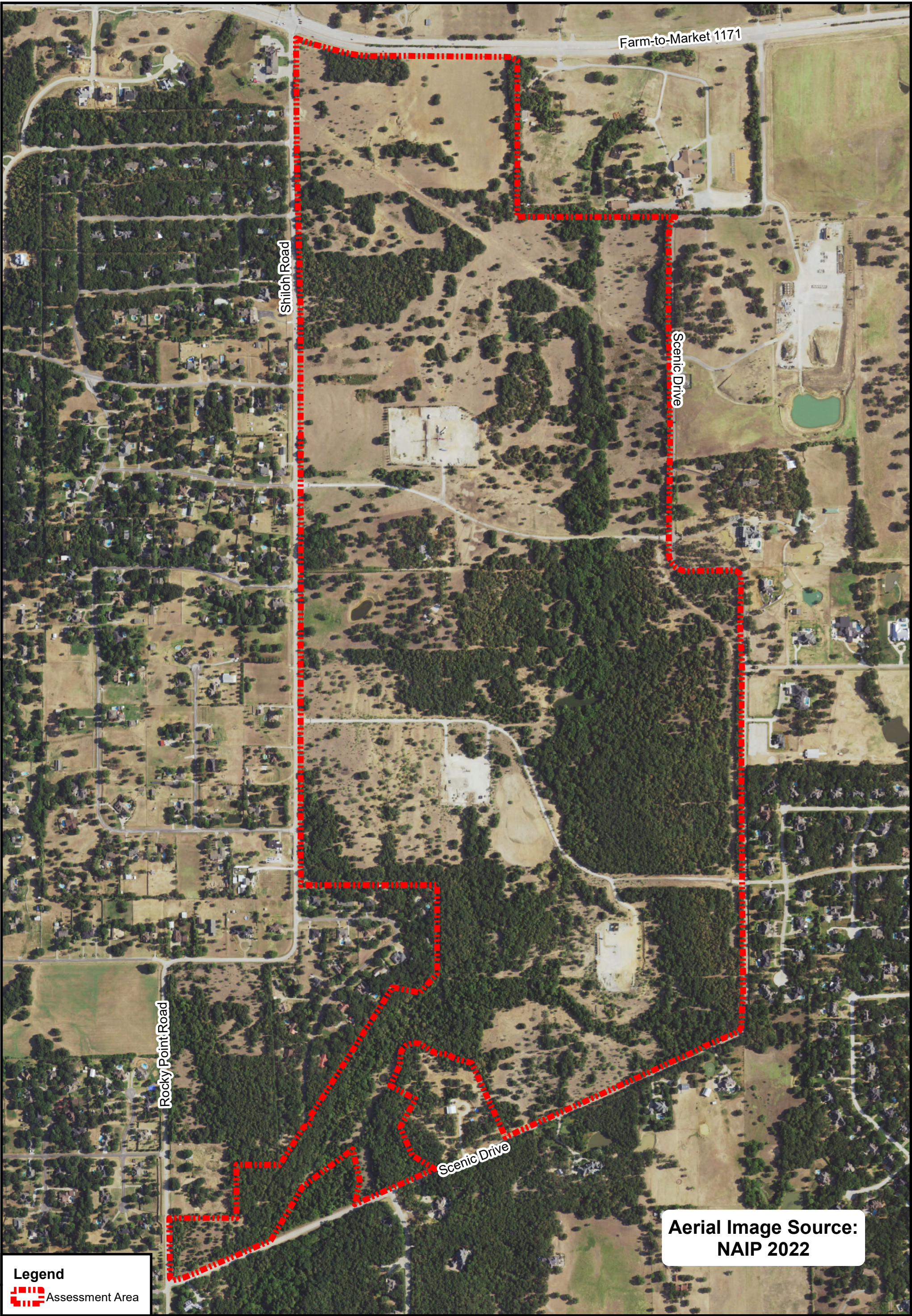


FIGURE 3 OF 15

FIGURE 3
HYDROLOGIC UNIT CODE WATERSHED BOUNDARY
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
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Legend
Assessment Area

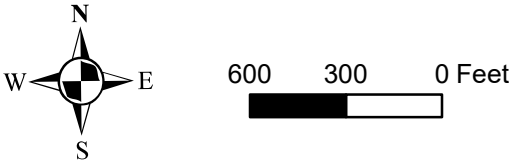
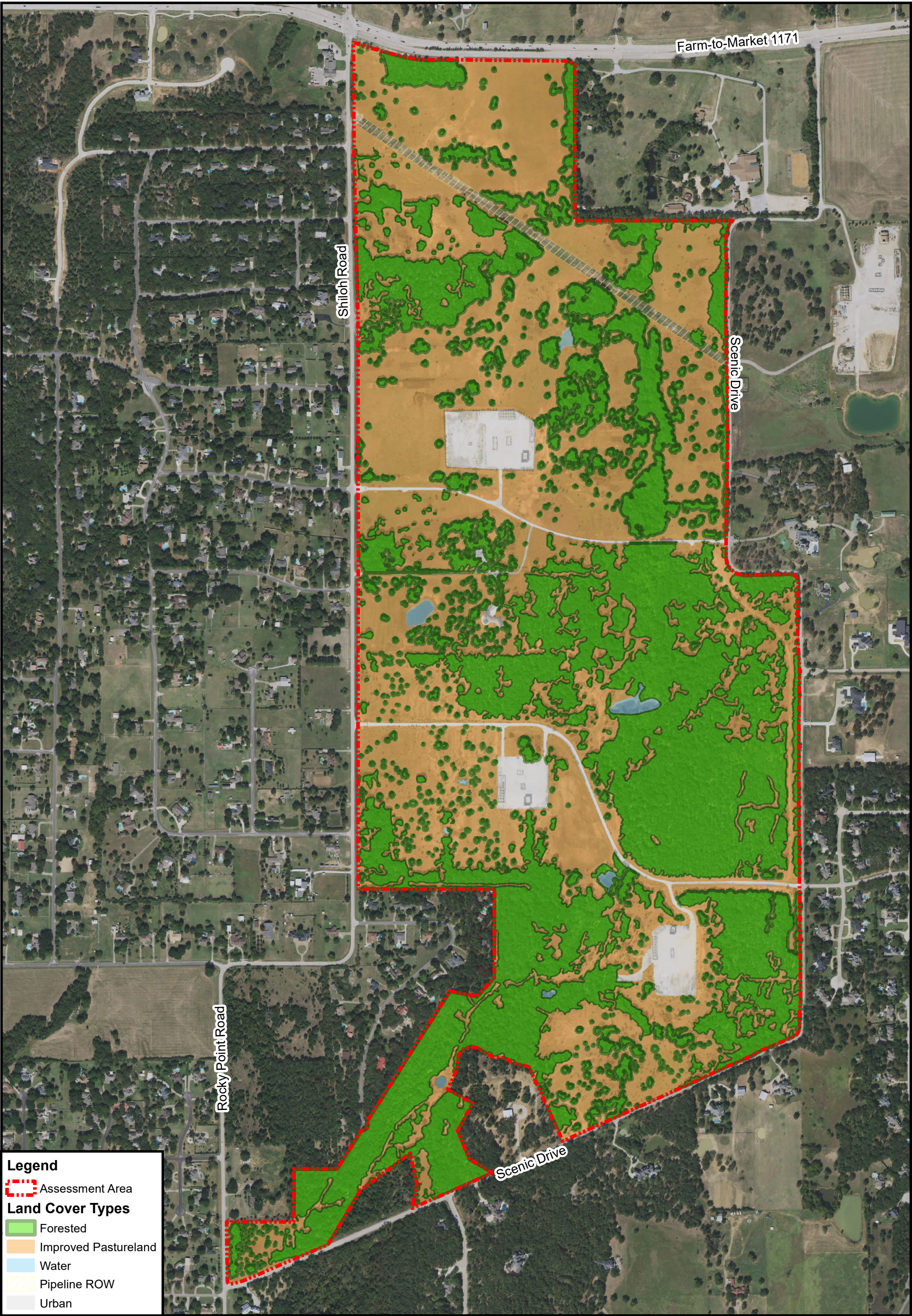


FIGURE 4 OF 15

FIGURE 4
2022 AERIAL PHOTOGRAPH
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
DENTON COUNTY, TEXAS

Aerial Image Source:
NAIP 2022

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Legend

Assessment Area

Land Cover Types

Forested

Improved Pastureland

Water

Pipeline ROW

Urban

600 300 0 Feet

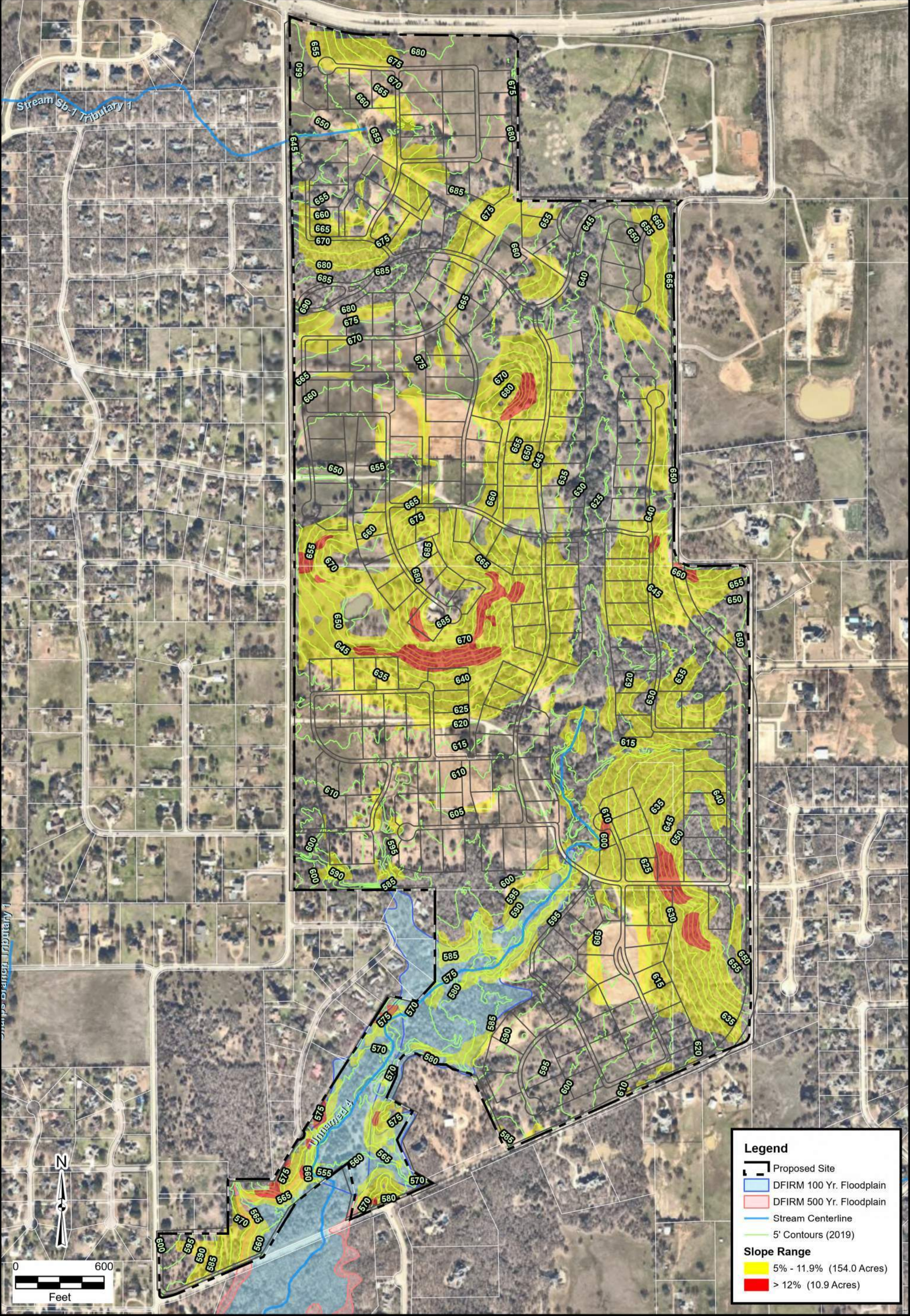
FIGURE 5 OF 15

FIGURE 5
LAND COVER TYPES
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
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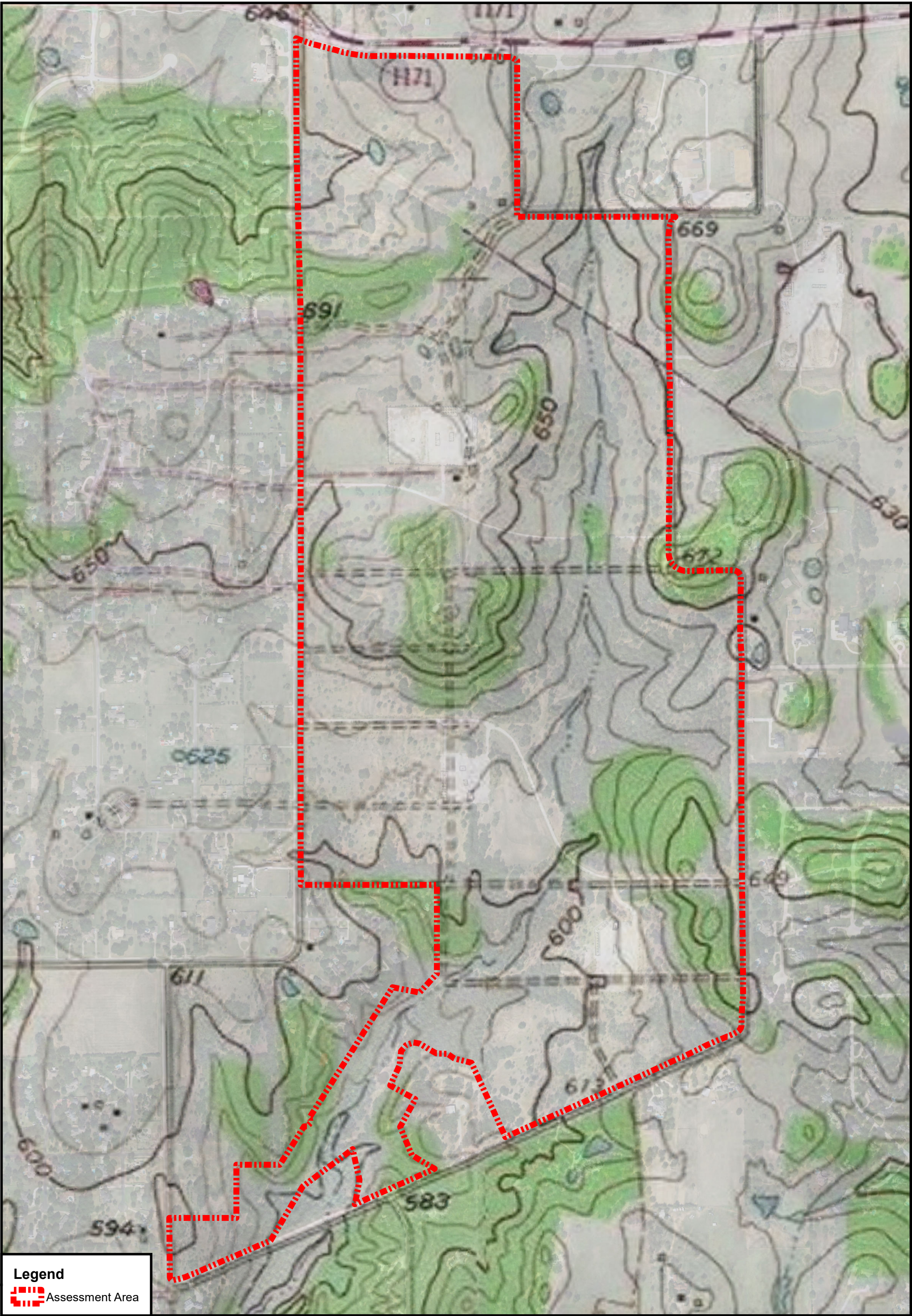
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CHECKED	AH
DRAWN	EH
SHEET	1.0

FIGURE 6

SMITH TRACT
TOWN OF FLOWER MOUND
SLOPE ANALYSIS IMPACT MAP

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Legend

 Assessment Area



600 300 0 Feet


FIGURE 7 OF 15

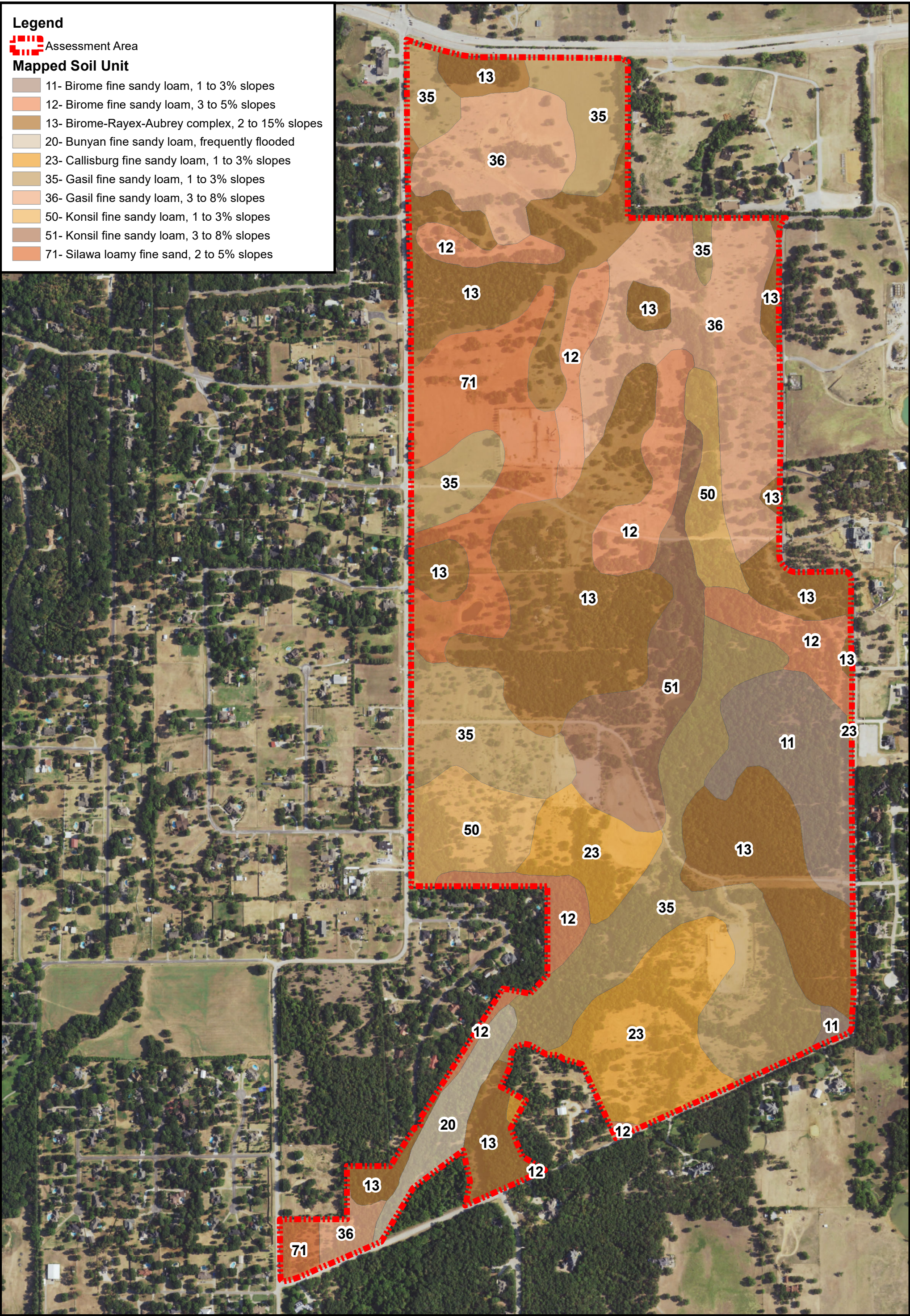
FIGURE 7
USGS TOPOGRAPHIC MAP - ARGYLE & LEWISVILLE WEST
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
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DATE: 3/4/2024 Page 41 of 144

Legend
Mapped Soil Unit

-  Assessment Area
- 11- Birome fine sandy loam, 1 to 3% slopes
 - 12- Birome fine sandy loam, 3 to 5% slopes
 - 13- Birome-Rayex-Aubrey complex, 2 to 15% slopes
 - 20- Bunyan fine sandy loam, frequently flooded
 - 23- Callisburg fine sandy loam, 1 to 3% slopes
 - 35- Gasil fine sandy loam, 1 to 3% slopes
 - 36- Gasil fine sandy loam, 3 to 8% slopes
 - 50- Konsil fine sandy loam, 1 to 3% slopes
 - 51- Konsil fine sandy loam, 3 to 8% slopes
 - 71- Silawa loamy fine sand, 2 to 5% slopes



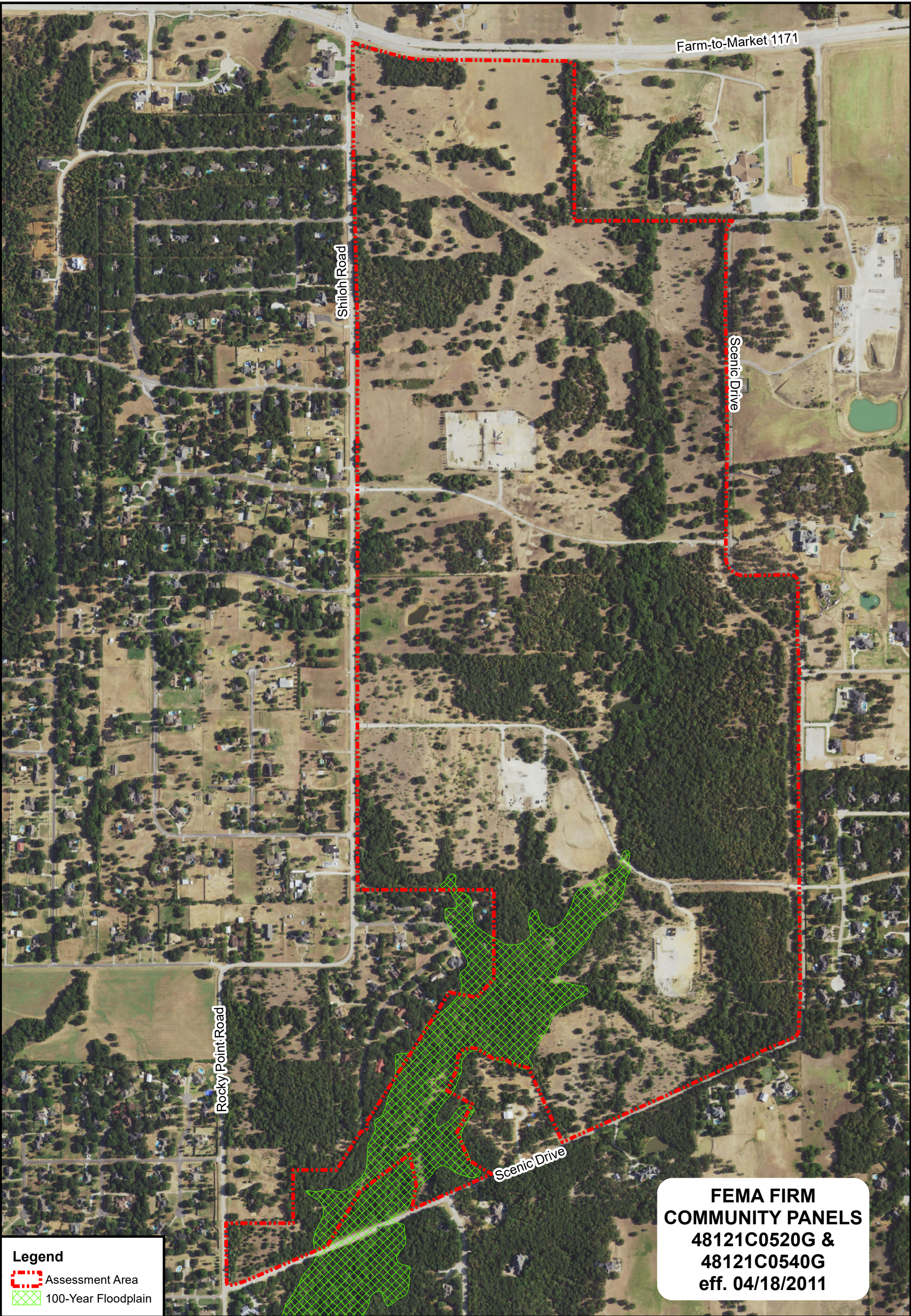
600 300 0 Feet

FIGURE 9 OF 15

FIGURE 9
MAPPED SOIL UNITS
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
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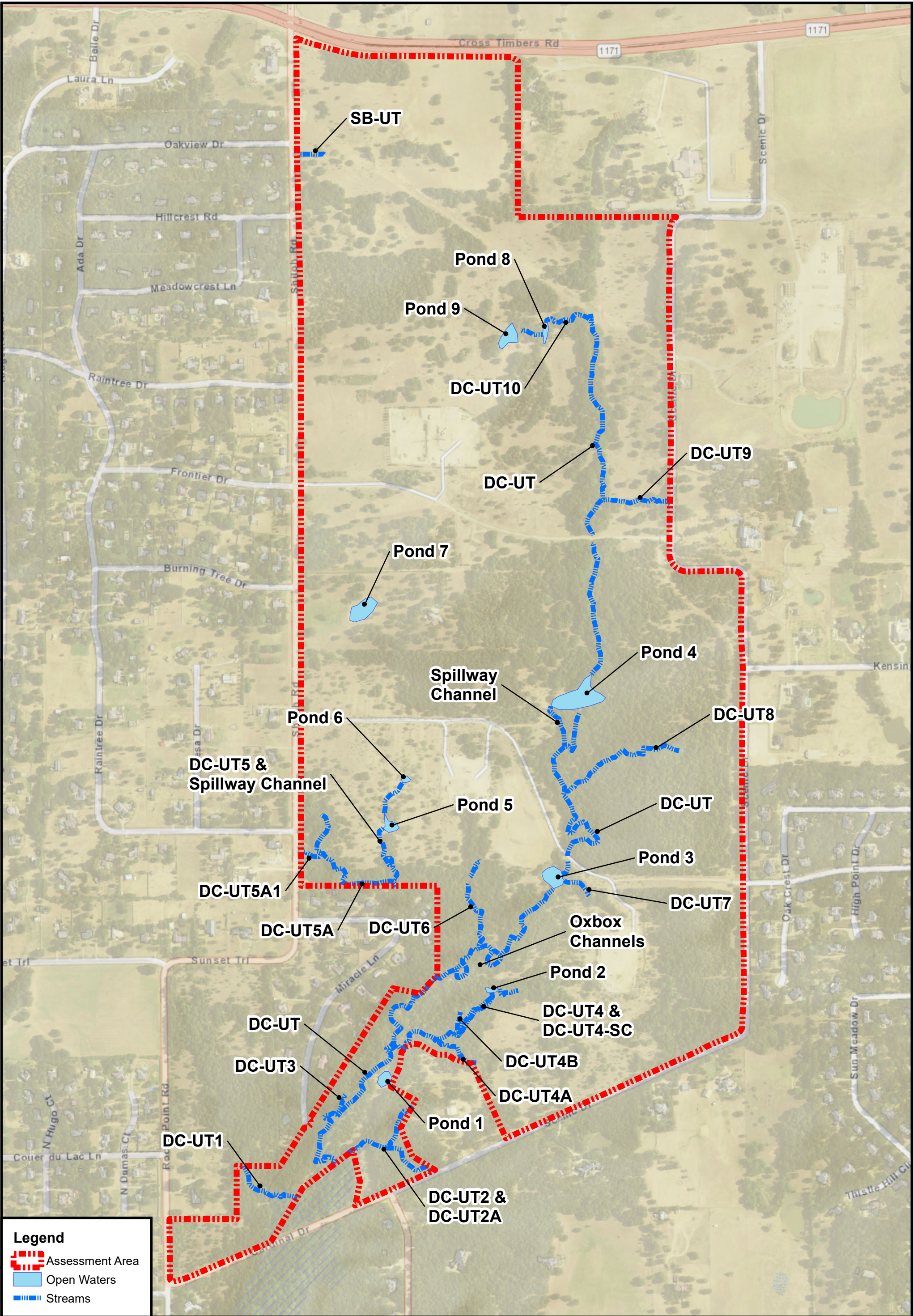


600 300 0 Feet

FIGURE 10 OF 15

FIGURE 10
FEMA DFIRM 100-YEAR FLOODPLAIN
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
DENTON COUNTY, TEXAS

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Legend

- Assessment Area
- Open Waters
- Streams

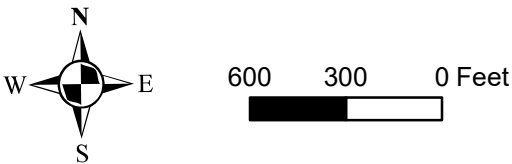
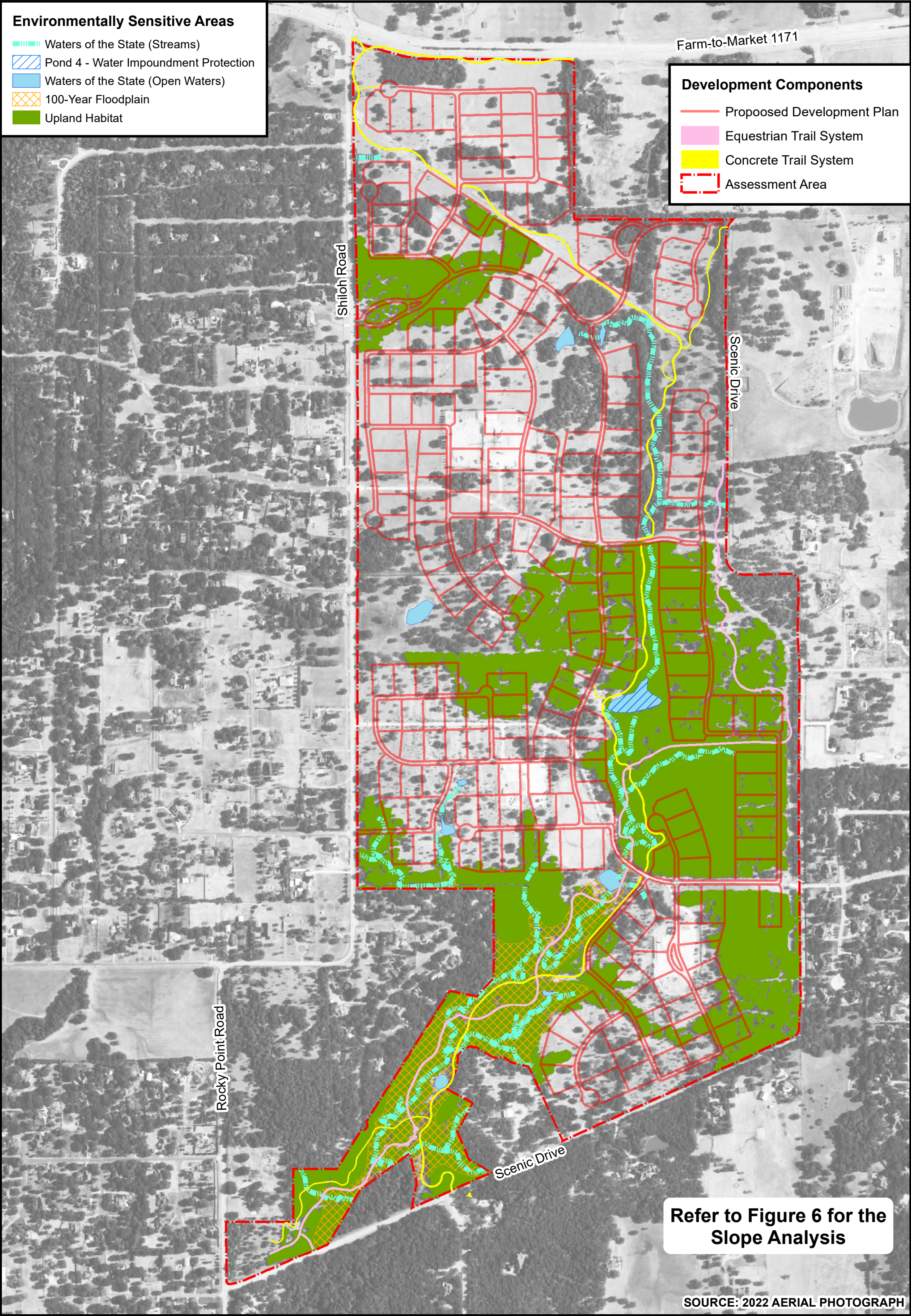


FIGURE 11 OF 15

FIGURE 11
DELINEATED AQUATIC RESOURCES
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
TOWN OF FLOWER MOUND
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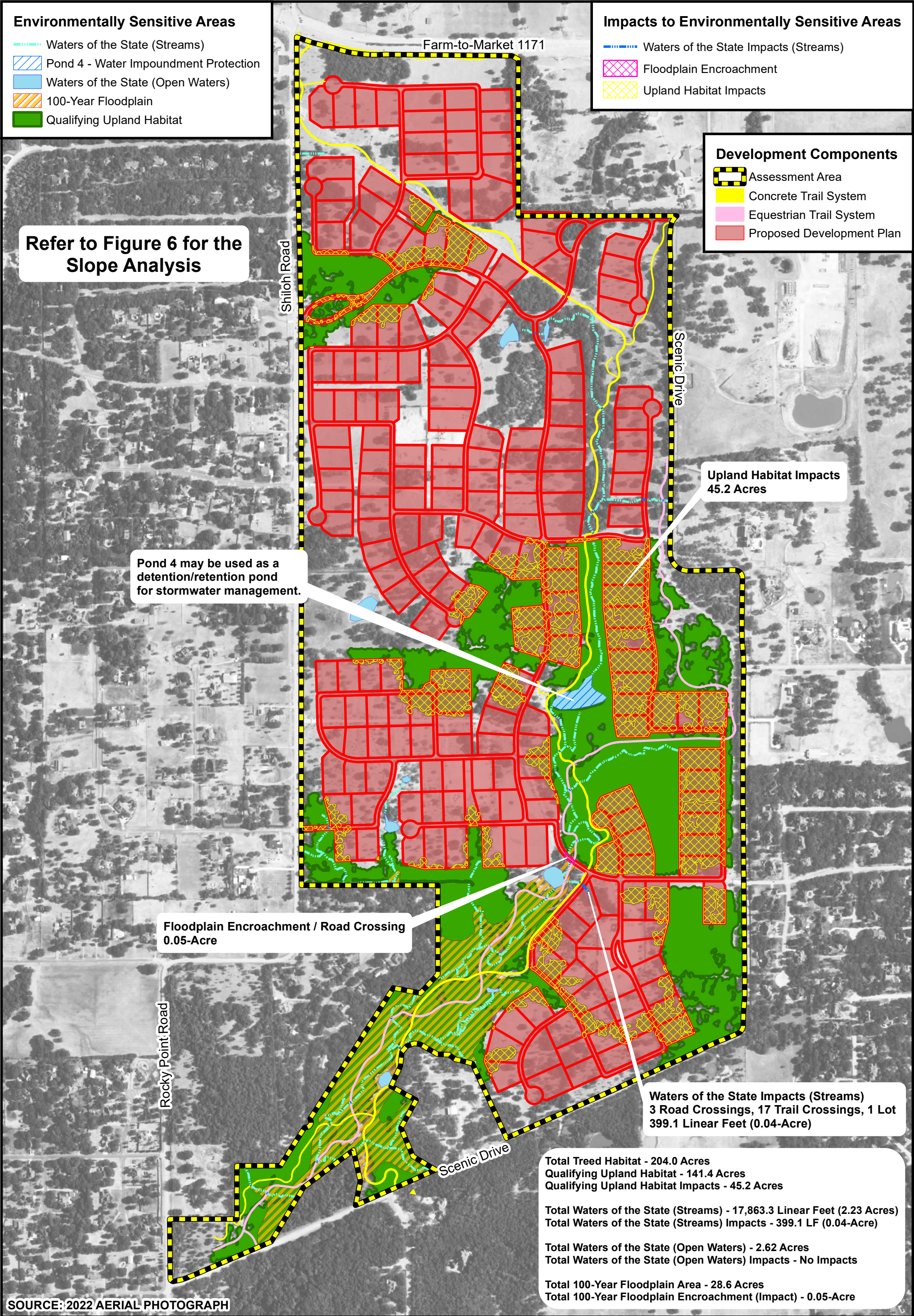


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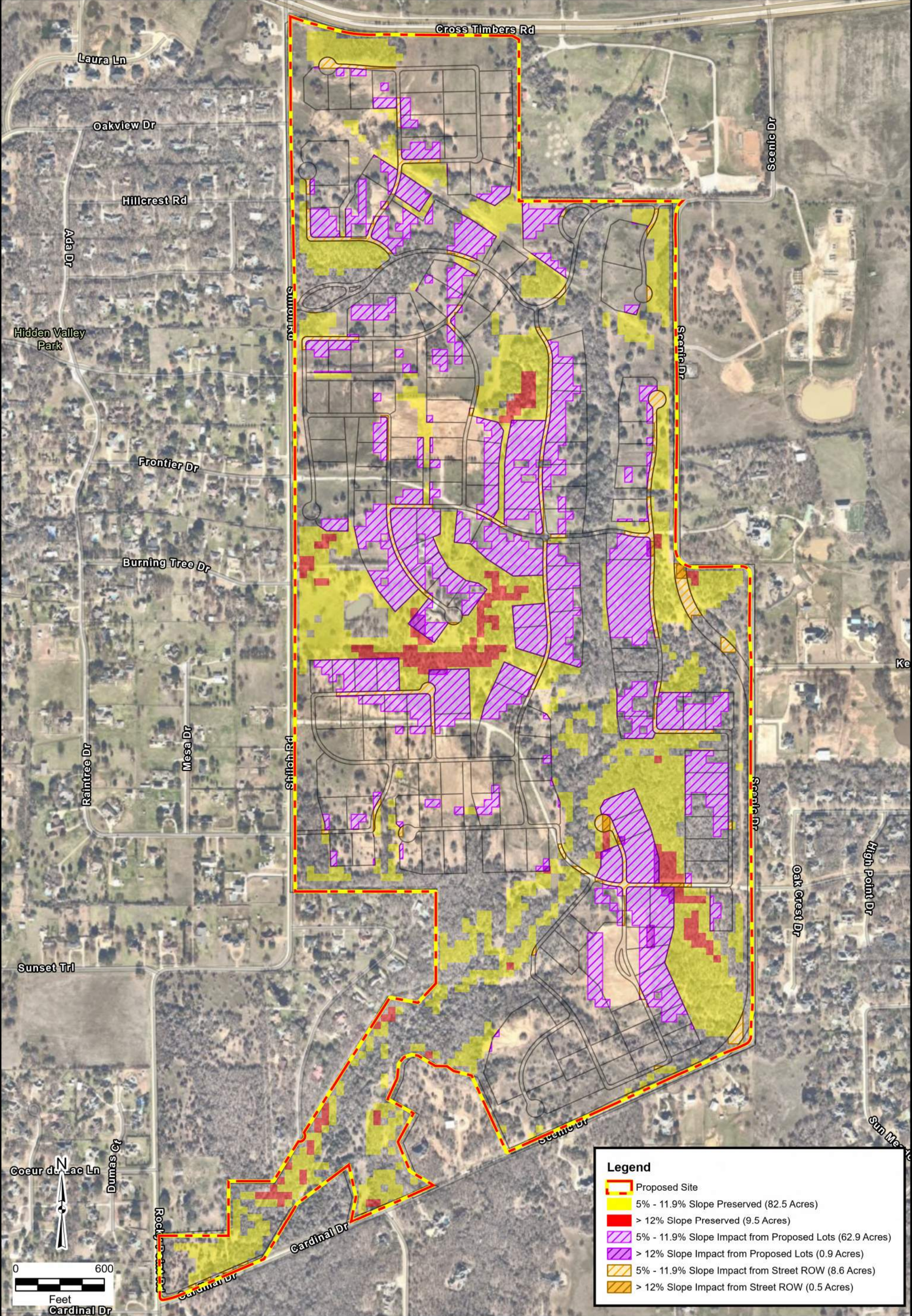
FIGURE 12 OF 15

FIGURE 12
ENVIRONMENTALLY SENSITIVE AREAS
438-ACRE +/- ASSESSMENT AREA
FM 1171 & SHILOH ROAD
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DENTON COUNTY, TEXAS

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FIGURE 14

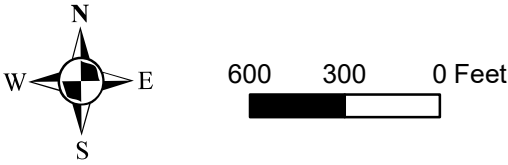
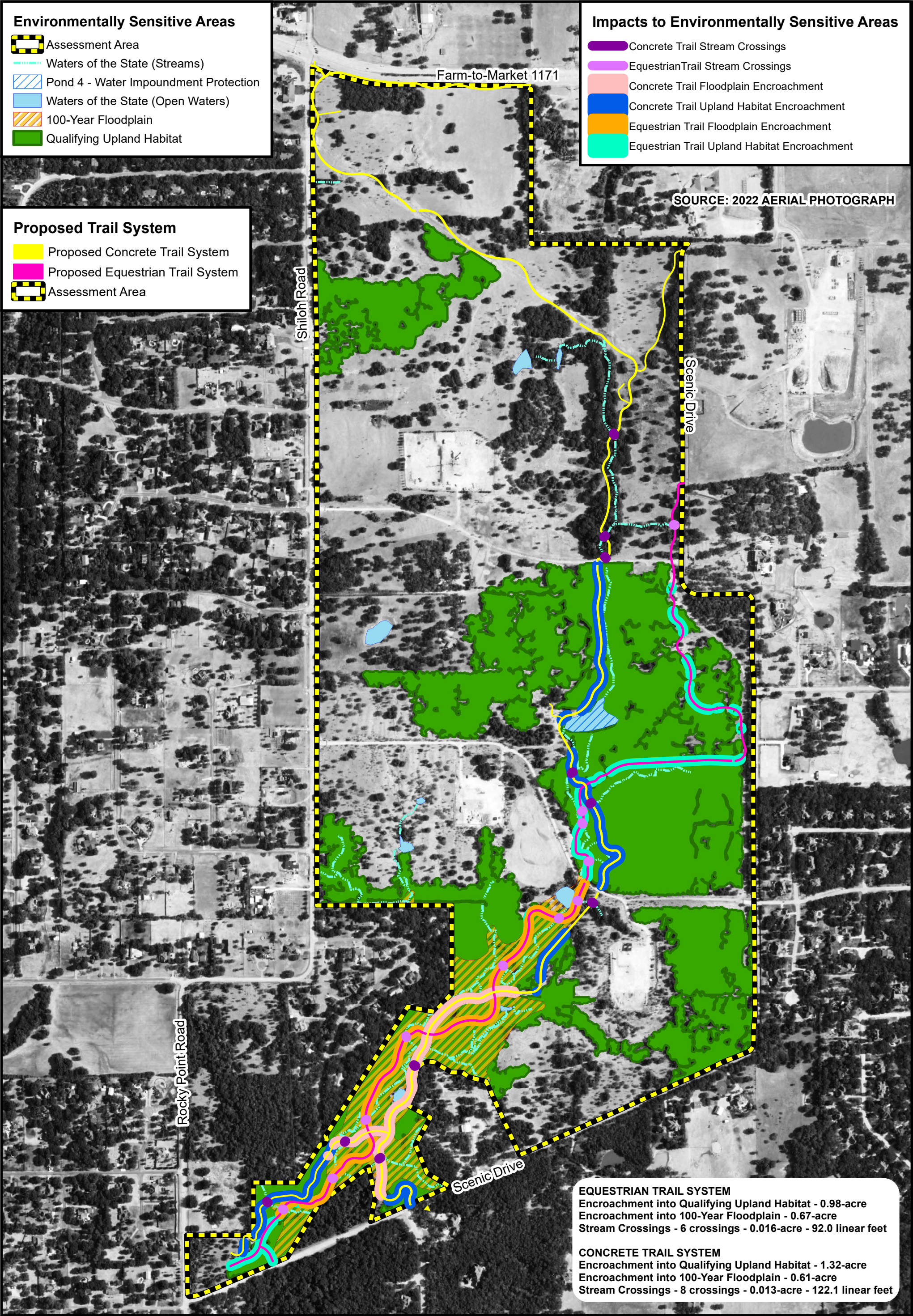
SMITH TRACT

TOWN OF FLOWER MOUND

SLOPE ANALYSIS IMPACT MAP

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ATTACHMENT B
BIOLOGICAL EVALUATION TECHNICAL MEMORANDUM

438-Acre Assessment Area Toll Brothers – Flower Mound Development Site Denton County, Texas

Biological Evaluation Technical Memorandum

Date: November 29, 2023

Prepared For: Toll Brothers c/o Rone Engineering, Inc.

Prepared By: Topographic Co. – Lead author: Chris Seiden
Assisted by: Alliah Hardin

Executive Summary

Topographic Co. (Topographic) conducted a Biological Evaluation which included a desktop review and a field investigation for the proposed Flower Mound Development Site located in Denton County, Texas. Toll Brothers plans to develop an approximately 438-acre Assessment Area for the purpose of constructing a single-family housing development and associated infrastructure. Topographic completed an on-site evaluation on November 7 and 8, 2023, to determine if potential habitat for federally listed threatened, endangered, or candidate species and state listed species of concern occur within the 438-acre Assessment Area. The on-site evaluation also consisted of a Bald and Golden Eagle Nest Survey as well as a Raptor Nest Survey to determine species occurrence and potential nest activity within the Assessment Area. The following determinations are provided for the listed species of concern. These determinations are Topographic's professional opinion.

Federally Listed Threatened, Endangered, or Candidate Species Determination:

It is Topographic's professional opinion that the proposed project would have a **"May Impact, not likely to jeopardize species"** determination for the following candidate species with the potential to occur within the Assessment Area:

- Monarch Butterfly (*Danaus plexippus*)

It is Topographic's professional opinion that the proposed project would have a **"No Effect"** and a **"No Impact"** determination on the remaining federally listed T&E species and proposed species with the potential to occur within the Assessment Area. These species include:

- Tricolored Bat (*Perimyotis sublavus*)
- Piping Plover (*Charadrius melodus*)
- Rufa Red Knot (*Calidris canutus rufa*)

- Whooping Crane (*Grus americana*)
- Alligator Snapping Turtle (*Macrochelys temminckii*)
- Texas Heelsplitter (*Potamilus amphichaenus*)

Texas Parks & Wildlife Department State Listed Species of Concern Determination:

It is Topographic's professional opinion that the proposed project would have a **"May Impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"** determination for the following state listed species for Denton County, Texas:

- Strecker's Chorus Frog (*Pseudacris streckeri*)
- Eastern Spotted Skunk (*Spilogale putorius*)
- Hoary Bat (*Lasiurus cinereus*)
- Eastern Box Turtle (*Terrapene carolina*)
- Texas Gartersnake (*Thamnophis sirtalis annectens*)
- Texas Horned Lizard (*Phrynosoma cornutum*)
- Western Box Turtle (*Terrapene ornata*)
- Glen Rose Yucca (*Yucca necopina*)
- Sutherland Hawthorn (*Crataegus viridis* var. *glabriuscula*)

It is Topographic's professional opinion that the proposed project would have a **"No Impact"** determination on the remaining state listed species for Denton County, Texas.

Bald and Golden Eagle Protection Act Determination:

It is Topographic's professional opinion that the proposed project would have a **"No Effect"** determination on Bald and Golden Eagles with the potential to occur within the Assessment Area.

Migratory Bird Treaty Act Determination:

It is Topographic's professional opinion that the proposed project would have a **"No Effect"** determination on migratory birds with the potential to occur within the Assessment Area.

Biological Evaluation

1. **Site/Project Name:** 438-acre Assessment Area on Flower Mound Development Site
2. **Project Location Approximate Centroid:** 33.036297 N, -97.124267 W (State Plane NAD 83 Texas North Central 4202)
3. **List of Attachments:**
 - **Attachment A: Figures**
 - Project Vicinity Map – Figure A-1
 - 2022 Aerial Map – Figure A-2
 - USGS Topographic Map – Figure A-3
 - National Wetland Inventory Map – Figure A-4
 - National Hydrography Dataset Map – Figure A-5
 - SSUGRO Soil Map – Figure A-6
 - 2019 National Land Cover Database Map – Figure A-7
 - Survey Observation Points Map - Figure A-8
 - **Attachment B: Site Photographs**
 - Site Photograph Location Map – Figure B-1
 - Site Photograph Log
 - **Attachment C: U.S. Fish and Wildlife Service Official Threatened and Endangered Species List**
 - **Attachment D: Texas Parks & Wildlife Department (TPWD) Annotated County Lists of Rare Species**
4. **Observed Features and Vegetation Communities:**

General Description and Land Uses: The approximately 438-acre Assessment Area is located within heavily grazed pastureland used for livestock rearing with interspersed woodlands consisting of several aquatic features, primary residences, unimproved ranch roads, and reclaimed well pads. Current land use practices are consistent with livestock grazing and rangeland management practices. Bare ground also accounts for approximately seventy percent of the Assessment Area. Adjoining land uses consist of ranchland and suburban housing development expansion. A general vicinity map is included as **Figure A-1** in **Attachment A**. **Figure A-2** in **Attachment A** shows the Assessment Area superimposed onto a 2022 aerial photograph. **Figure A-3** in **Attachment A** shows the Assessment Area superimposed onto the USGS topographic map – Aryle and Lewisville West, Texas quadrangle. As shown on the USGS topographic map, the Assessment Area gently slopes south from the northwest corner of the northern boundary towards Grapevine Lake located immediately south of the Assessment Area.

- **U.S. Environmental Protection Agency (EPA) Level III & IV Ecoregion:** The Assessment Area is located within EPA's Cross Timbers Level III ecoregion, and more specifically the Eastern Cross Timbers Level IV ecoregion. The Cross Timbers ecoregion is a transitional area between the once prairie, now winter wheat growing regions to the west, and the forested low mountains or hills of eastern Oklahoma and Texas. The region stretches from southern Kansas into central Texas and contains irregular plains

with some low hills and tablelands. It is a mosaic of forest, woodland, savanna, and prairie. The transitional natural vegetation of Little Bluestem (*Schizachyrium scoparium*) grassland with scattered Blackjack Oak (*Quercus marilandica*) and Post Oak (*Quercus stellata*) trees is used mostly for rangeland and pastureland, with some areas of woody plant invasion and closed forest. Oil production has been a major activity in this region for over eighty years.

The Eastern Cross Timbers ecoregion occurs on sandy substrates (Woodbine Sand) lying between the Grand Prairie and Texas Blackland Prairies. The soils are mainly red and yellow sands that have been leached of nutrients. Post oaks and blackjack oaks have adapted to life in sandy soils and dominate the overstory, with scattered honey mesquite (*Prosopis glandulosa*) and grasses, such as little bluestem (*Schizachyrium scoparium*) and threeawn (*Aristida purpurea*), growing beneath them. The rural land use is predominantly cattle grazing with extensive urban development throughout.

- **Observed Vegetation Communities:** During the on-site investigation, vegetation observed within the Assessment Area consisted primarily of bare ground with dense interspersed woodlands and sparse herbaceous vegetation in areas overgrazed by cattle. Woodland areas are dominated by tree strata such as Cedar Elm (*Ulmus crassifolia*), Post Oak (*Quercus stellata*), Blackjack Oak (*Quercus marilandica*), and Boxelder Maple (*Acer negundo*) with herbaceous patches of Broomweed (*Amphiachyris dracunculoides*) in open areas of the Assessment Area. Along the unnamed tributary, the aforementioned dense woody species were observed as well as American Elm (*Ulmus americana*), Hackberry (*Celtis laevigata*), Honey Locust (*Gleditsia triacanthos*), and Green Ash (*Fraxinus pennsylvanica*). Woody vine strata within the Assessment Area consisted of Greenbriar (*Smilax spp.*) and Grapevine (*Vitis spp.*). Invasive species such as Honey Mesquite (*Prosopis glandulosa*) were also found scattered throughout the Assessment Area. Bare ground accounts for seventy percent of the Assessment Area, due to a limited herbaceous layer in forested areas and livestock overgrazing. **Figure A-2 in Attachment A**, a 2022 aerial photograph, shows the general vegetation cover within the Assessment Area, and **Figure A-4 in Attachment A** details land cover associations as delineated by the National Land Cover Database. Photographs recorded during the on-site investigation showing vegetative communities observed within the Assessment Area are included in **Attachment B** with a photograph location map included as **Figure B-1**.

5. **Survey and Determination Methods:** The Assessment Area was surveyed for potential habitat for federally listed threatened, endangered, or candidate species utilizing a meander search methodology and desktop analysis by consulting the USFWS IPaC list. The Texas Natural Diversity Database (TXNDD) was also utilized to identify potential species of concern to occur within or in the vicinity of the Assessment Area. In addition, specific habitat types/features utilized by potential special status species were surveyed. Surveys consist of searching for potential habitat preferred by the listed species and observing individuals at selected observation points. Twenty-five (25) observation points were systematically placed with a 200-meter (m) detection radius to cover the entire area of effort. No less than 10 minutes was spent at each observation point for detecting target species. **Figure A-8 in Attachment A**, a Survey Observation Point Map, shows the general extent and placement of the

observation points within the Assessment Area. The Assessment Area was also surveyed for Bald and Golden Eagle occurrence as well as potentially active nests of raptor species. The analysis is to assess possible effects to species identified as known or expected to occur within the Assessment Area. Effects to species include anticipated effects from implementation of the proposed action.

- **Threatened, Endangered, or Candidate Species:** The U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) service was accessed on November 7, 2023, to determine federally listed threatened, endangered, or candidate species for the Assessment Area. Consultation with IPaC returned seven (7) federally listed species with the potential to occur within the Assessment Area; however, no Critical Habitats were identified in the vicinity of the Assessment Area. **Table 1** summarizes the USFWS IPaC of federally listed threatened, endangered, or candidate species for the Assessment Area and their respective determination of effects. The IPaC report is included in **Attachment C**. Species habitat descriptions were obtained from Nature Serve Explorer and the USFWS Environmental Conservation Online System (ECOS).
- **State Listed Species of Concern:** The Texas Natural Diversity Database (TXNDD) was referenced to identify potential state listed species of concern or candidate species occurring within the Argyle and Lewisville West, Texas quadrangle, where the Assessment Area is located. A review of the TXNDD returned negative results of state listed species of concern or candidate species occurring within the Assessment Area or the vicinity. A review of the TPWD Annotated County Lists of Rare Species for Denton County returned twenty-eight (28) species of statewide concern. **Table 2** summarizes the categorical state ranks, S1, S2, and S3 which reflect an assessment of the condition of a species across its statewide range, respectively. Species exhibiting a state rank of S4, S5, unranked, or stable species have been omitted. The state ranks are associated with the following descriptions:
 - **S1:** Critically Imperiled – At a very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
 - **S2:** Imperiled – At a high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, very steep declines, severe threats, or other factors.
 - **S3:** Vulnerable – At moderate risk of extirpation in the jurisdiction due to fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

Species habitat descriptions were obtained from Nature Serve Explorer and the USFWS Environmental Conservation Online System. No known critical habitats for the listed species were located within the Assessment Area; however preferred habitat has been identified. The TPWD report is included in **Attachment D**.

Table 1 - UFWS IPaC List of Threatened, Endangered and Species of Concern Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed Endangered (Federal)	The Tricolored Bat is associated with forested landscapes, along waterways in riparian areas. During the fall, the species typically roost in hollow trees, among dead leaves of oaks in mature forests and caves but will also utilize human-made structures during hibernation. Maternity and other summer roosts are mainly in dead or live tree foliage; caves, mines, and rock crevices may be used as night roosts between foraging forays.	Potential roosting habitat may exist within the Assessment Area; therefore, potential for occurrence is likely.	No further analysis will be required for this species.	"May Impact, not likely to jeopardize species"
Piping Plover (<i>Charadrius melodus</i>)	Threatened (Federal)	Piping Plovers migrate south in the fall to spend the winter along the Gulf of Mexico and southern Atlantic Coast. Inland breeding populations migrate to the Gulf of Mexico while the Atlantic coast populations move south along the coast to Mexico, Central America, and the Caribbean. Stopover sites for the species include inland and coastal habitats to include sand spits, small islands, tidal flats, shoals, and sandbars with inlets.	No preferred layover habitat exists for this species within the Assessment Area; however, due to the proximity to Grapevine Lake, individual sightings of the species would be passing through. Therefore, potential for occurrence is likely.	No further analysis will be required for this species.	"No Effect"
Red Knot (<i>Calidris canutus rufa</i>)	Threatened (Federal)	The Red Knot's wintering range include the Atlantic coasts of Argentina and Chile; the northern coast of South America; the western Gulf of Mexico from the Tamaulipas through Texas (particularly at Laguna Madre) to Mississippi and extending south along both coasts of Central America; and the Southeast United States from Alabama to North Carolina. This species is strictly coastal outside the breeding season and usually occurs on tidal mudflats or sandflats, sandy beaches of sheltered coasts, rocky shelves, bays, lagoons, and harbours, as well as oceanic beaches and salt marshes.	No preferred habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Effect"

Table 1 - UFWS IPaC List of Threatened, Endangered and Species of Concern Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Whooping Crane (<i>Grus americana</i>)	Endangered (Federal)	The Whooping Crane now migrates mainly through the Great Plains from southern Canada and Dakotas south to Texas. The species migration habitat includes freshwater marshes, shallow lakes, lagoons, salt flats, grain and stubble fields, and barrier islands.	No preferred layover habitat exists for this species within the Assessment Area; however, due to the proximity of Grapevine Lake, individual sightings of the species would be passing through. Therefore, potential for occurrence is likely.	No further analysis will be required for this species.	"No Effect"
Alligator Snapping Turtle (<i>Macrochelys temminckii</i>)	Proposed Threatened (Federal)	Alligator Snapping Turtle habitat consists of slow moving, deep water of rivers, sloughs, oxbows, and canals or lakes associated with rivers, also swamps, bayous, and ponds near rivers, and shallow creeks that are tributary to occupied rivers, sometimes including swift upland streams. This species is highly aquatic and usually occurs in water with a mud bottom and some aquatic vegetation.	No preferred habitat exists for this species within the Assessment Area, therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Effect"
Texas Fawnsfoot (<i>Truncilla macrodon</i>)	Proposed Threatened (Federal)	Although little is known about habitat requirements for the Texas Fawnsfoot , this species occurs in large rivers but may also be found in medium-sized streams. The Texas Fawnsfoot can be found in protected, near shore areas such as banks and backwaters as well as riffles and point bar habitats with low to moderate water velocities. This species is considered intolerant of reservoirs and typically occur in substrates of mud, sandy mud, gravel, and cobble.	No habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Effect"
Monarch Butterfly (<i>Danaus plexippus</i>)	Candidate (Federal)	Monarch Butterfly habitat is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high altitude Mexican conifer forests or coastal California conifer, or Eucalyptus groves as identified in literature.	Potential habitat may exist within the Assessment Area due to the presence of nectar bearing herbaceous vegetation preferred by the Monarch Butterfly (food source) and milkweed (<i>Asclepias spp.</i>) (larval food source); therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May Impact, not likely to jeopardize species"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Strecker's Chorus Frog (<i>Pseudacris streckeri</i>)	S3 (State)	The Strecker's Chorus Frog is a terrestrial and aquatic species. This species can be found in wooded floodplains and flats, prairies, cultivated fields, marshes, and sandy substrates. Primarily a terrestrial amphibian. Moist woods, sand prairies, ravines, along streams and swamps, around ponds, and cultivated areas. During the non-breeding season, the frogs burrow into the soil and remain underground.	Potential habitat may exist for this species within the Assessment Area, therefore potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Black Rail (<i>Laterallus jamaicensis</i>)	S2 (State)	The Black Rail's range is large, but its distribution is disjunct and highly localized. Non-breeding habitat is similar to its breeding habitat, which consists of salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy "swamps". Other significant habitat factors may include vegetation density, density to open water, and water regime stability.	No preferred habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Chestnut-collared Longspur (<i>Calcarius ornatus</i>)	S3 (State)	The Chestnut-collared Longspur uses level to rolling mixed-grass and shortgrass uplands, and moist lowlands. This species depends on open native prairie habitat and avoids excessively shrubby areas. Areas with dense litter accumulations are also avoided. The primary threat to this species is degradation and fragmentation of native grasslands, especially through conversion to agriculture. Long term population decline is likely to continue as native rangeland is converted to cropland.	No preferred habitat exists for this species within the Assessment Area due to active disturbance regimes (cattle grazing, oil/gas operations); therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Franklin's Gull (<i>Leucophaeus pipixcan</i>)	S2 (State)	During migration, Franklin's Gulls have been detected in almost every corner and habitat of North America, including very high elevations (over 14,000 feet) in the Rocky Mountains. For feeding, they seek out agricultural areas, pastures, and many sorts of wetlands, including sewage ponds, lakes, lagoons, estuaries, and bays. They readily follow tractors during plowing, eating grubs and worms turned up from the soil, and they sometimes visit landfills with other gulls.	Potential foraging habitat may exist within the Assessment Area; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"No Impact"
Mountain Plover (<i>Charadrius melodus</i>)	S2 (State)	During the nonbreeding season, Mountain Plovers range from central California, southern Arizona, central and near-coastal Texas south to southern Baja California and the northern mainland of Mexico. Preferred winter habitat consists of short-grass plains and fields, plowed fields, and sandy deserts, and commercial sod farms.	No preferred habitat exists for this species within the Assessment Area; due to the Assessment Area being outside of the species known range therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Sprague's Pipit (<i>Anthus spragueii</i>)	S3 (State)	During migration, the Sprague's Pipit gather in large flocks with Horned Larks and Longspurs and slowly drift southward. Preferred foraging habitat during migration and in winter consists of pastures and weedy fields, including grasslands with dense herbaceous vegetation or grassy agricultural fields. This species feeds on seeds during the fall and winter and forages on the ground.	No preferred wintering habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Western Burrowing Owl (<i>Athene cunicularia hypugaea</i>)	S2 (State)	The Western Burrowing Owl prefers habitats within deserts, grasslands, and shrub-steppe, and utilizes well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground such as moderately or heavily grazed pasture. Nesting Western Burrowing Owls tend to use areas with a high density of surrounding burrows, previously dug by prairie dogs, ground squirrels, badgers, marmots, skunks, armadillos, kangaroo rats, and tortoises.	No preferred nesting habitat exists within the Assessment Area due to the lack of mammal burrows; therefore, potential for occurrence within the Assessment Area is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Big free-tailed Bat (<i>Nyctinomops macrotis</i>)	S3 (State)	Big free-tailed Bat habitat in the southwestern United States and Mexico includes rocky areas in rugged or hilly country in both lowland and highland areas, including evergreen forest, woodlands, desert scrub, river floodplain-arroyo associations, and stream courses in areas of mixed tropical deciduous forest and thorn forest. These bats roost primarily in vertical or horizontal crevices near the tops of cliffs, but sometimes they are found in buildings, caves, or occasionally tree cavities.	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"No Impact"
Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>)	S3 (State)	Black-tailed Prairie Dog habitat consists of dry, flat, or gently sloping, open grasslands with low, relatively sparse vegetation, including all major grassland types short, tall, and mixed) and areas overgrazed by cattle. The species occurs in open vacant lots at town edges in some areas. Colonies commonly are found on silty clay loams, sandy clay loams, and loams. Young are born in underground burrows.	No preferred habitat exists within the Assessment Area due to the lack of mammal burrows; therefore, potential for occurrence within the Assessment Area is unlikely.	No further analysis will be required for this species.	"No Impact"
Eastern Spotted Skunk (<i>Spilogale putorius</i>)	S1 (State)	The Eastern Spotted Skunk is a generalist, occupying open fields prairies, croplands, fence rows, farmyards, forest edges, and woodlands. The species prefer forested areas or habitats with significant cover as well as open and brushy areas, rocky canyons and outcrops in woodlands and prairies when sites are available. When inactive or bearing young, the species den in burrows abandoned by other mammals, under brush piles, in hollow logs or trees, in rock crevices, under buildings, or in similar protected sites.	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Hoary Bat (<i>Lasiurus cinereus</i>)	S3 (State)	Hoary Bat habitat includes primarily deciduous and coniferous forests and woodlands, including areas altered by humans. Foraging habitat includes various open areas, including spaces over water and along riparian corridors. Hibernating individuals have been found in various situations, such as on tree trunks, in a tree cavity, in a squirrel's nest, and in a clump of Spanish-moss. Roosting preferences include dense vegetation above, unobstructed space below, no potential perches beneath, dark-colored ground cover, sufficient surrounding vegetation, and areas where vegetation is the most dense, and heat gain is the greatest.	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Mountain Lion (<i>Puma concolor</i>)	S2 (State)	The Mountain Lion is now associated generally with mountainous or remote undisturbed areas. This species may occupy a wide variety of habitats such as swamps, riparian woodlands, broken country with good cover of brush or woodland. Habitat areas of at least 2200 sq km are needed to ensure long-term population persistence; protection of corridors for immigration is highly desirable. Mountain Lions are carnivores that prey on a variety of animals, including deer, wild hogs, rabbits, jackrabbits, javelinas, rodents, and livestock where available.	Potential foraging habitat may exist within the Assessment Area. Potential for occurrence within the Assessment Area is likely; however, any individual sightings of the species would be passing through.	No further analysis will be required for this species.	"No Impact"
Louisiana Pigtoe (<i>Pleurobema riddellii</i>)	Proposed Threatened (Federal)	The Louisiana Pigtoe is freshwater mussel that occurs in small streams and moderately sized rivers; usually in flowing water and not generally known from impoundments. This species also occurs on substrates of mud, sand, and gravel, to depths of 20 feet but usually less. This species has a parasitic stage in which the glochidia (larvae) attach to the gills or fins of certain types of fish. The host fish for this species is the Red Shiner and the Bullhead Minnow.	No habitat exists for this species within the Assessment Area due to the lack of continual water flow within ephemeral streams and the absence of host fish to complete life cycle, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Sandbank Pocketbook (<i>Lampsilis satura</i>)	Endangered (Federal)	The Sandbank Pocketbook occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. This species can also occur in a variety of habitats but most common in littoral habitats with coarse woody debris, snags, gravel or sand substrata, and currents of slow to moderate velocities such as banks or backwaters or in protected areas along point bars.	No habitat exists for this species within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Effect"
Texas Heelsplitter (<i>Potamilus amphichaenus</i>)	Proposed Endangered (Federal)	The Texas Heelsplitter occurs in small streams to large rivers in standing to slow-flowing water. This species is most common in banks, backwaters, and quiet pools and has adapted to some reservoirs. The Texas Heelsplitter is often found in soft substrates such as mud, silt or sand.	No habitat exists for this species within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Eastern Box Turtle (<i>Terrapene carolina</i>)	S3 (State)	Eastern Box Turtles inhabit forests, fields, forest-brush, and forest-field ecotones. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. Eastern Box Turtles are generally inactive during the cold winter weather and can successfully hibernate in sites that may experience subfreezing temperatures.	Potential habitat may exist within the Assessment Area; however, due to the species' low mobility and population being highly localized, potential for occurrence within the Assessment Area is unlikely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Prairie Skink (<i>Plestiodon septentrionalis</i>)	S2 (State)	The Prairie Skink can occur in any native grassland habitat across the Rolling Plains, Blackland Prairie, Post Oak Savanna and Pineywoods ecoregions including open sandy areas of pine barrens and bracken grassland, grassy dunes, sandy banks of creeks and rivers, along roadsides, open grass-covered rocky hillsides near streams, forest edges and woodland. This species also seeks cover underground.	No preferred habitat exists for this species within the Assessment Area due to a low-quality grassland ecosystem within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Slender Glass Lizard (<i>Ophisaurus attenuatus</i>)	S3 (State)	Slender Glass Lizard habitat includes open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil. This species often appears on roads in spring. During inactivity, it occurs in underground burrows.	No preferred habitat exists for this species within the Assessment Area due to a low-quality grassland ecosystem within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Smooth Softshell Turtle (<i>Apalone mutica</i>)	S3 (State)	The Smooth Softshell Turtle range extends to the Gulf Coast from western Florida to eastern Texas, north to eastern New Mexico, southern South Dakota, Wisconsin, and northwestern Pennsylvania. This species inhabits large rivers and streams; in some areas also found in lakes, impoundments, and shallow bogs. This species usually occurs in water with sandy or mud bottoms and few aquatic plants. Often basks on sand bars and mudflats at the edge of water.	No preferred habitat exists for this species within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Texas Gartersnake (<i>Thamnophis sirtalis annectens</i>)	S1 (State)	The Texas Garter snake is fairly abundant in some suburban areas in Dallas, inhabiting marshy, flooded pastureland or meadows, particularly in spring when frogs are present in numbers, at other times, grassy or brushy terrain near hill country streams and ponds. This species seems to prefer vicinity of permanent sources of water or soil damp enough to support earthworm populations.	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Texas Horned Lizard (<i>Phrynosoma cornutum</i>)	S3 (State)	The Texas Horned Lizard can be found in open arid and semiarid habitats with sparse vegetation, including grass, prairie, cactus, scattered brush, or scrubby trees. The Texas Horned Lizard will dig or burrow under rocks for hibernation and insulation as well as utilize rodent burrows. This species is commonly found in loose sand or loamy soils.	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Western Box Turtle (<i>Terrapene ornata</i>)	S3 (State)	The Western Box Turtle inhabits prairie grassland, pasture, fields, sandhills, and open woodland. The species is essentially terrestrial and may be found far from a water body. This species, however, are most active after rain in drier habitats and will enter slow, shallow streams, and creek pools. For shelter, the species burrow into soil (e.g., under plants such as yucca).	Potential habitat may exist within the Assessment Area due to the presence of preferred resources; therefore, potential for occurrence within the Assessment Area is likely..	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Western Chicken Turtle (<i>Deirochelys reticularia miaria</i>)	S2 (State)	In Texas, the Western Chicken Turtles historical range once comprised the entire eastern third of the state. The Western Chicken Turtle can be found in semi-aquatic areas that contain slow-moving and shallow water, such as ponds, lakes, streams, and swamps. The species will migrate between aquatic habitats to seek soil to burrow into to escape dry conditions. Soft mud and aquatic vegetation will often be used during hibernation.	No preferred habitat exists for this species within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Glandular Gay-feather (<i>Liatris glandulosa</i>)	S2 (State)	The Glandular Gay-feather occurs on limestone outcrops and shallow gravelly soils over limestone on gentle slopes and flats. This species can usually be found growing with juniper and yucca.	No preferred habitat exists for this species within the Assessment Area, therefore potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 2 – TPWD Annotated County Lists of Rare Species Flower Mound Development Site, Denton County, Texas

Species	Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Glen Rose Yucca (<i>Yucca necopina</i>)	S3 (State)	The Glen Rose Yucca is known only from a few locations in north-central Texas and occurs in sandy soils on rolling grasslands, usually shrub-invaded, in the Brazos River drainage.	Potential habitat may exist within the Assessment Area; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Sutherland Hawthorn (<i>Crataegus viridis</i> var. <i>glabriuscula</i>)	S3 (State)	The Sutherland Hawthorn inhabits in mesic soils of woods or on edge of woods, tree line/fence line, or thicket, above or near creeks and draws, and in river bottoms. This species flowers March through April.	Potential habitat may exist within the Assessment Area; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"May impact individuals but is not likely to cause a trend towards federal listing or loss of viability within the planning area"
Topeka Purple-Coneflower (<i>Echinacea atrorubens</i>)	S3 (State)	The Topeka Purple-Coneflower is a perennial plant occurring mostly in tallgrass prairie of the southern Great Plains, and in Blackland prairies, as well as in a variety of other sites like limestone hillsides. This species can also be found in rocky prairies, tall grass hay fields, and prairie remnants along roadsides. Requires full sun.	No preferred habitat exists within the Assessment Area; due to active disturbance regimes, therefore, potential for occurrence within the Assessment Area is unlikely.	No further analysis will be required for this species.	"No Impact"

6. Bald and Golden Eagle Nest Survey

Golden Eagle (*Aquila chrysaetos*)

Environmental Baseline: Golden Eagles generally inhabit open and semi-open country such as prairies, sagebrush, arctic and alpine tundra, savannah or sparse woodland, and barren areas, especially in hilly or mountainous regions, in areas with sufficient mammalian prey base and near suitable nesting sites. In Texas, Golden Eagles are most common in the panhandle, Trans-Pecos, and Davis Mountains regions where mountains, canyons, and cliffs are present. Additionally, the area known as the Palo Duro – Caprock Canyon Complex of the Caprock Escarpment is where most nesting pairs and individuals have been observed within Texas. Historically, nesting sites have been reported in the Rolling Plains and the Edwards Plateau Ecological Region. However, intensive agriculture discouraged suitable nesting habitat for this species. Nests are most often on rock ledges of cliffs but sometimes in large trees, on steep hillsides, some nests have been reported on the ground. Nesting cliffs may face any direction and may be close to or distant from water. Egg dates in the southern portions of North America range from mid-February to the end of March. Chicks will fledge in approximately 77 days and can remain in the nesting tree/cliff for another 30 days till disbursement.

Available Surveys: A Bald and Golden Eagle Nest Survey was conducted to determine species occurrence and potential nest activity within the Assessment Area in accordance with the Bald and Golden Eagle Protection Act. Observation points were selected to follow a meander search method with a 200-meter detection radius. At each observation point, data was collected on the time, weather conditions, visibility and any other factors that may affect the survey. Survey efforts concluded negative results for Golden Eagle presence and potentially active nests within the Assessment Area. **Table 3** summarizes the results from the Bald and Golden Eagle Nest Survey.

Determination: Based on the combined on-site investigations and subsequent desktop analysis, implementation of the proposed project within the Assessment Area will not impede preferred habitat favored by the Golden Eagle. The Golden Eagle may fly over the Assessment Area due to the proximity from Grapevine Lake (0.75-miles) immediately south of the Assessment Area; however, the Assessment Area does not contain preferred habitat conducive to Golden Eagles due to intensive agriculture and extensive urban development. Therefore, the impact of the proposed project on the Golden Eagle is considered insignificant to the species population trend. A determination of “**No Effect**” has been issued for this species within the Assessment Area.

Bald Eagle (*Haliaeetus leucocephalus*)

Environmental Baseline: Bald Eagles are found throughout North America, more common in the northern US and Canada. Texas lists this species as a Species of Conservation Concern. However, there are several strong populations found throughout the state.

Nests are typically in large trees that are close to water, within 4km. The same nest is used year after year slowly building in height and width. Egg dates in the southern range start in mid- February, incubation lasts approximately 5 weeks and most young fledge within 13 weeks. Young will stay within the vicinity up to the first year and may return during nesting season for several years after.

During the non-breeding season, individuals typically remain close to open water but can travel great distances. Home ranges can increase by several hundred square miles, based on available resources.

Eagles are a common sight on wide rivers, lakes and reservoirs averaging about 800 – 2,000 eagles across Texas. Lakes and their spillways have historically served as reliable Texas bald eagle viewing areas. Lakes with the highest concentration of eagles are Texoma, Livingston, Corpus Christi, Acre and Elm, Sheldon Lake, Oyster Creek, Lake Lewisville, Benbrook, Buchanan, and Victor Braunig.

Available Surveys: A Bald and Golden Eagle Nest Survey was conducted to determine species occurrence and potential nest activity within the Assessment Area in accordance with the Bald and Golden Eagle Protection Act. Observation points were selected to follow a meander search method with a 200-meter detection radius. At each observation point, data was collected on the time, weather conditions, visibility and any other factors that may affect the survey. Survey efforts concluded negative results for Bald Eagle presence and potentially active nests within the Assessment Area. **Table 3** summarizes the results from the Bald and Golden Eagle Nest Survey.

Determination: Based on the combined on-site investigations and subsequent desktop analysis, implementation of the proposed project within the Assessment Area will not impede preferred habitat favored by the Bald Eagle. The Bald Eagle may fly over the Assessment Area due to the proximity from Grapevine Lake (0.75-miles) immediately south of the Assessment Area; however, the Assessment Area does not contain preferred habitat conducive to Bald Eagles due to intensive agriculture and extensive urban development. Therefore, the impact of the proposed project on the Bald Eagle is considered insignificant to the species population trend. A determination of **“No Effect”** has been issued for this species within the Assessment Area.

7. Raptor Nest and Migratory Bird Survey

A Raptor Nest and Migratory Bird Survey was conducted on November 7 and 8, 2023 to determine species occurrence and potentially active nests within the Assessment Area in accordance with the Migratory Bird Treaty Act. Observation points were selected to follow a meander search method with a 200-meter detection radius. The survey concluded positive results for raptor presence; however, no nests were found nor to be active for these species within the Assessment Area. Therefore, the impact of the proposed project on raptors and migratory birds is considered insignificant to the species population trend. A determination of **“No Effect”** has been issued for these species within the Assessment Area. **Table 3** summarizes the results from the Raptor Nest and Migratory Bird Survey and their occurrence. **Table 4** summarizes migratory birds with the potential to occur within the Assessment Area and their respective determination of effects.

Table 3 – Bald and Golden Eagle Nest Survey and Raptor and Migratory Bird Survey Results Flower Mound Development Site, Denton County, Texas

Observation Point	Date	Time	Number of Individuals	Common Name	Scientific Name	Nest Number	Active Nest
OP-1	11/7/2023	2:15 PM	1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
			1	Turkey Vulture	(<i>Cathartes aura</i>)	0	N/A
			1	Blue Jay	(<i>Cyanocitta cristata</i>)	0	N/A
OP-2	11/7/2023	2:03 PM	4	Turkey Vulture	(<i>Cathartes aura</i>)	0	N/A
			1	Scissor-tailed Flycatcher	(<i>Tyrannus forficatus</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
			1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
OP-3	11/7/2023	2:35 PM	No individuals reported			0	N/A
OP-4	11/7/2023	1:50 PM	No individuals reported			0	N/A
OP-5	11/7/2023	1:40 PM	No individuals reported			0	N/A
OP-6	11/7/2023	2:51 PM	2	Franklin's Gull	(<i>Leucophaeus pipixcan</i>)	0	N/A
OP-7	11/7/2023	3:07 PM	1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
OP-8	11/7/2023	1:23 PM	1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
OP-9	11/7/2023	3:40 PM	4	House Finch	(<i>Haemorhous mexicanus</i>)	0	N/A
			1	Northern Mockingbird	(<i>Mimus polyglottos</i>)	0	N/A
			1	Meadow Lark	(<i>Sturnella spp.</i>)	0	N/A
			1	Mourning Dove	(<i>Zenaida macroura</i>)	0	N/A
			1	Brown Thrasher	(<i>Toxostoma rufum</i>)	0	N/A
OP-10	11/7/2023	3:24 PM	1	Blue Jay	(<i>Cyanocitta cristata</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
OP-11	11/7/2023	1:03 PM	1	Red-bellied Woodpecker	(<i>Melanerpes carolinus</i>)	0	N/A
OP-12	11/7/2023	12:46 PM	1	Tufted Titmouse	(<i>Baeolophus bicolor</i>)	0	N/A
			1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
			1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	Turkey Vulture	(<i>Cathartes aura</i>)	0	N/A
			1	Red-tailed Hawk	(<i>Buteo jamaicensis</i>)	0	N/A
			1	Black Vulture	(<i>Coragyps atratus</i>)	0	N/A
OP-13	11/8/2023	8:43 AM	1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
			1	Blue Jay	(<i>Cyanocitta cristata</i>)	0	N/A
			1	Red-tailed Hawk	(<i>Buteo jamaicensis</i>)	0	N/A
			1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	White-throated Sparrow	(<i>Zonotrichia albicollis</i>)	0	N/A

Table 3 – Bald and Golden Eagle Nest Survey and Raptor and Migratory Bird Survey Results Flower Mound Development Site, Denton County, Texas

Observation Point	Date	Time	Number of Individuals	Common Name	Scientific Name	Nest Number	Active Nest
OP-14	11/8/2023	8:28 AM	1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
			1	Turkey Vulture	(<i>Cathartes aura</i>)	0	N/A
			1	Black Vulture	(<i>Coragyps atratus</i>)	0	N/A
OP-15	11/8/2023	8:10 AM	No individuals reported			0	N/A
OP-16	11/7/2023	12:16 PM	1	Red-shouldered Hawk	(<i>Buteo lineatus</i>)	1	No
OP-17	11/8/2023	8:59 AM	1	Cooper's Hawk	(<i>Accipiter cooperii</i>)	0	N/A
			1	European Starling	(<i>Sturnus vulgaris</i>)	0	N/A
			1	Mourning Dove	(<i>Zenaida macroura</i>)	0	N/A
			1	unidentified sparrow	(<i>Passer spp.</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
OP-18	11/8/2023	9:16 AM	No individuals reported			1	No
OP-19	11/8/2023	9:34 AM	No individuals reported			0	N/A
OP-20	11/8/2023	9:45 AM	1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	Red-headed Woodpecker	(<i>Melanerpes erythrocephalus</i>)	0	N/A
			1	Carolina Wren	(<i>Thryothorus ludovicianus</i>)	0	N/A
			1	Tufted Titmouse	(<i>Baeolophus bicolor</i>)	0	N/A
			1	White-throated Sparrow	(<i>Zonotrichia albicollis</i>)	0	N/A
			1	Blue Jay	(<i>Cyanocitta cristata</i>)	0	N/A
			1	Ruby-crowned Kinglet	(<i>Corthylio calendula</i>)	0	N/A
			1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
OP-21	11/8/2023	10:17 AM	1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
OP-22	11/8/2023	10:03 AM	1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
			1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	Ruby-crowned Kinglet	(<i>Corthylio calendula</i>)	0	N/A
OP-23	11/8/2023	10:36 AM	1	Red-bellied Woodpecker	(<i>Melanerpes carolinus</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
OP-24	11/8/2023	10:44 AM	1	Carolina Chickadee	(<i>Poecile carolinensis</i>)	0	N/A
			1	Northern Cardinal	(<i>Cardinalis cardinalis</i>)	0	N/A
			1	American Crow	(<i>Corvus brachyrhynchos</i>)	0	N/A
			1	Carolina Wren	(<i>Thryothorus ludovicianus</i>)	0	N/A
OP-25	11/8/2023	11:05 AM	1	Red-shouldered Hawk	(<i>Buteo lineatus</i>)	0	N/A
			1	Blue Jay	(<i>Cyanocitta cristata</i>)	0	N/A
			1	Mourning Dove	(<i>Zenaida macroura</i>)	0	N/A

Table 4 – USFWS IPaC List - Migratory Bird Summary Flower Mound Development Site, Denton County, Texas

Species	Federal Listing Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
American Golden Plover (<i>Pluvialis dominica</i>)	Birds of Conservation Concern	During migration, American Golden Plovers feed in lagoons and estuaries and flock in native prairie, pastures, sod farms, farmland, mudflats, and shorelines, both on major coastlines and in the interior.	No preferred layover habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Chimney Swift (<i>Chaetura pelagica</i>)	Birds of Conservation Concern	Chimney Swifts breed in urban and suburban habitats across the eastern half of the United States and southern Canada. Nesting sites consist of a variety of anthropogenic structures such as silos, barns, outhouses, wells and cisterns; however, natural nests sites include the interior of hollow tree trunks and branches, previous cavities and rock shelters.	Potential nesting habitat may exist within the Assessment Area; therefore, potential for occurrence within the Assessment Area is likely.	No further analysis will be required for this species.	"No Impact"
Lesser Yellowlegs (<i>Tringa flavipes</i>)	Birds of Conservation Concern	During migration and throughout the winter, Lesser Yellowlegs use a wide variety of fresh and brackish wetlands, including mudflats, marshes, lake and pond edges, wet meadows, sewage ponds, and flooded agricultural fields such as rice paddies. They tend to be found in vegetated wetlands rather than in bare habitats.	No preferred layover habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Little Blue Heron (<i>Egretta caerulea</i>)	Birds of Conservation Concern	Little Blue Herons are typically year-round residents, generally inhabiting calm/shallow water features including wetlands, swamps, marshes, ponds, streams, lagoons, tidal flats, canals, ditches, fish hatcheries, and flooded fields. This species nests in trees or shrubs above 4 meters high in standing water or upland sites on islands.	No preferred nesting habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"
Pectoral Sandpiper (<i>Calidris melanotos</i>)	Birds of Conservation Concern	Pectoral Sandpiper migrants within North America use wet, grassy environments, from sewage ponds, plowed farm fields, sod farms, rice fields, and flooded golf courses to natural freshwater and saltwater marshes with low, grassy cover. In Central and South America, migrants turn up in an even greater variety of habitats, including riverbanks, ditches, salt lagoons, beaches, estuaries, and even above tree lines.	No preferred layover habitat exists for this species within the Assessment Area; therefore, potential for occurrence is unlikely.	No further analysis will be required for this species.	"No Impact"

Table 4 – USFWS IPaC List - Migratory Bird Summary Flower Mound Development Site, Denton County, Texas

Species	Federal Listing Status	Environmental Baseline for Potential Habitat	Potential Habitat Presence/Species Potential for Occurrence within the Assessment Area	Species Analysis Required	Determination of Effect
Prothonotary Warbler (<i>Protonotaria citrea</i>)	Birds of Conservation Concern	Prothonotary Warblers breed within mature deciduous floodplains, rivers, swamp forests, and wet lowland forests. Primary habitats are almost always near standing water; however, swamps that are somewhat open with scattered dead stumps are preferred. Bottomland forests and extensive willow thickets near lakes or ponds are also quite suitable. Prothonotary Warblers require dense underbrush along streambanks and tend to avoid forest patches smaller than about 250 acres or forest borders less than 100 feet wide.	Potential nesting habitat may exist for this species within the Assessment Area; therefore, potential for occurrence is likely.	No further analysis will be required for this species.	<i>“May Impact, not likely to jeopardize species”</i>
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	Birds of Conservation Concern	In the northern part of the Red-headed Woodpecker winter range, the species live in mature stands of forest, especially oak, oak-hickory, maple, ash, and beech. In the southern part, the species live in pine and pine-oak. Red-headed Woodpeckers are somewhat nomadic; in a given location they can be common one year and absent the next.	Potential wintering habitat may exist for this species within the Assessment Area; therefore, potential for occurrence is likely.	No further analysis will be required for this species.	<i>“May Impact, not likely to jeopardize species”</i>

Summary:

Based on the location, existing vegetation, and land uses, federally listed threatened, endangered or species of concern or their critical habitats should not be affected by the proposed project. Accordingly, a formal consultation with the U.S. Fish and Wildlife Service is unwarranted. As proposed, the 438-acre Assessment Area should not require additional field assessments for the presence/absence of threatened, endangered, or candidate species nor Bald and Golden Eagles or raptor species. My signature certifies to the best of my knowledge the responses provided herein accurately reflect the requisite information pertaining to the Biological Evaluation for the Assessment Area.

Chris Seiden**(405) 593-9851**

Print Name

Telephone

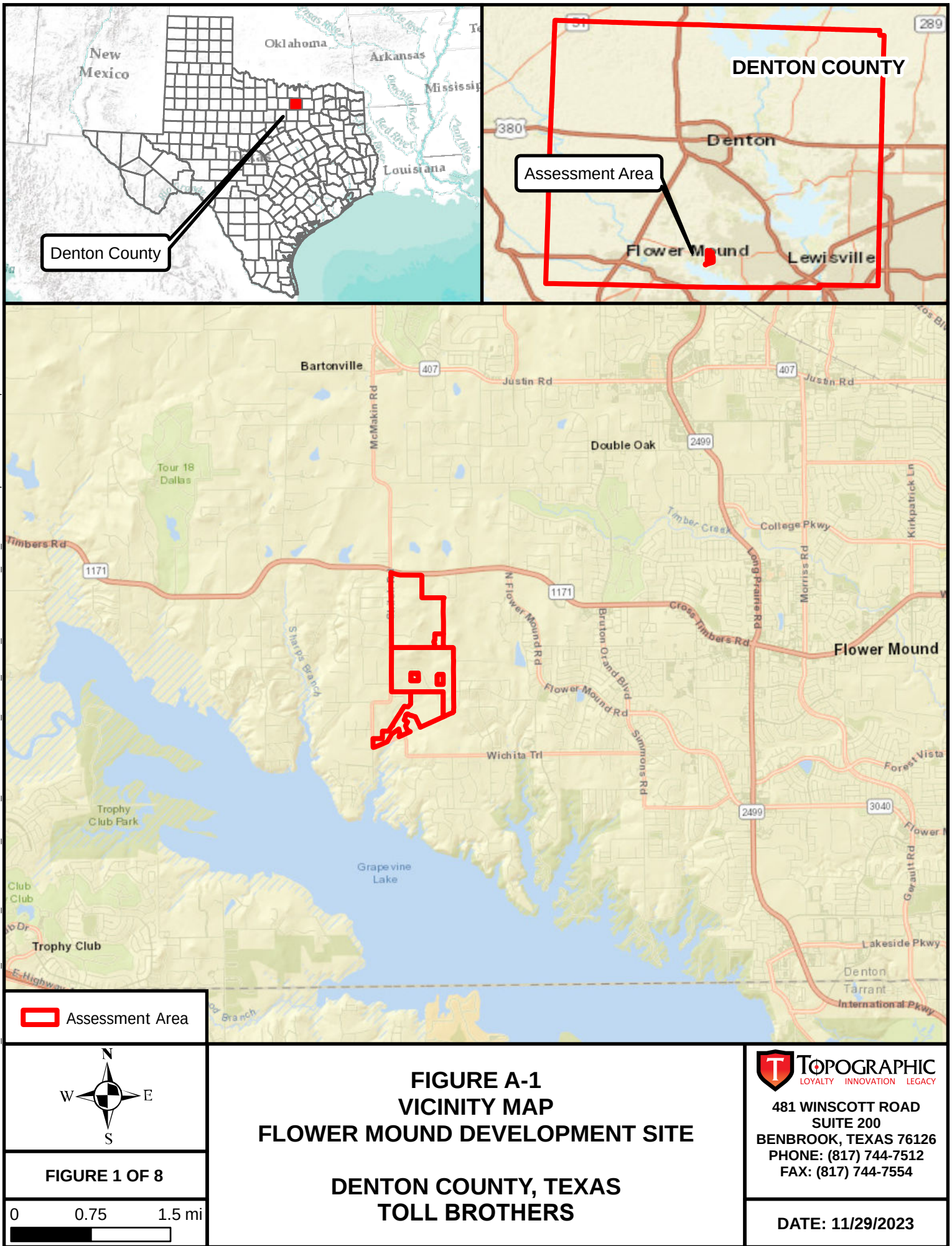
*Chris Seiden***chris.seiden@topographic.com**

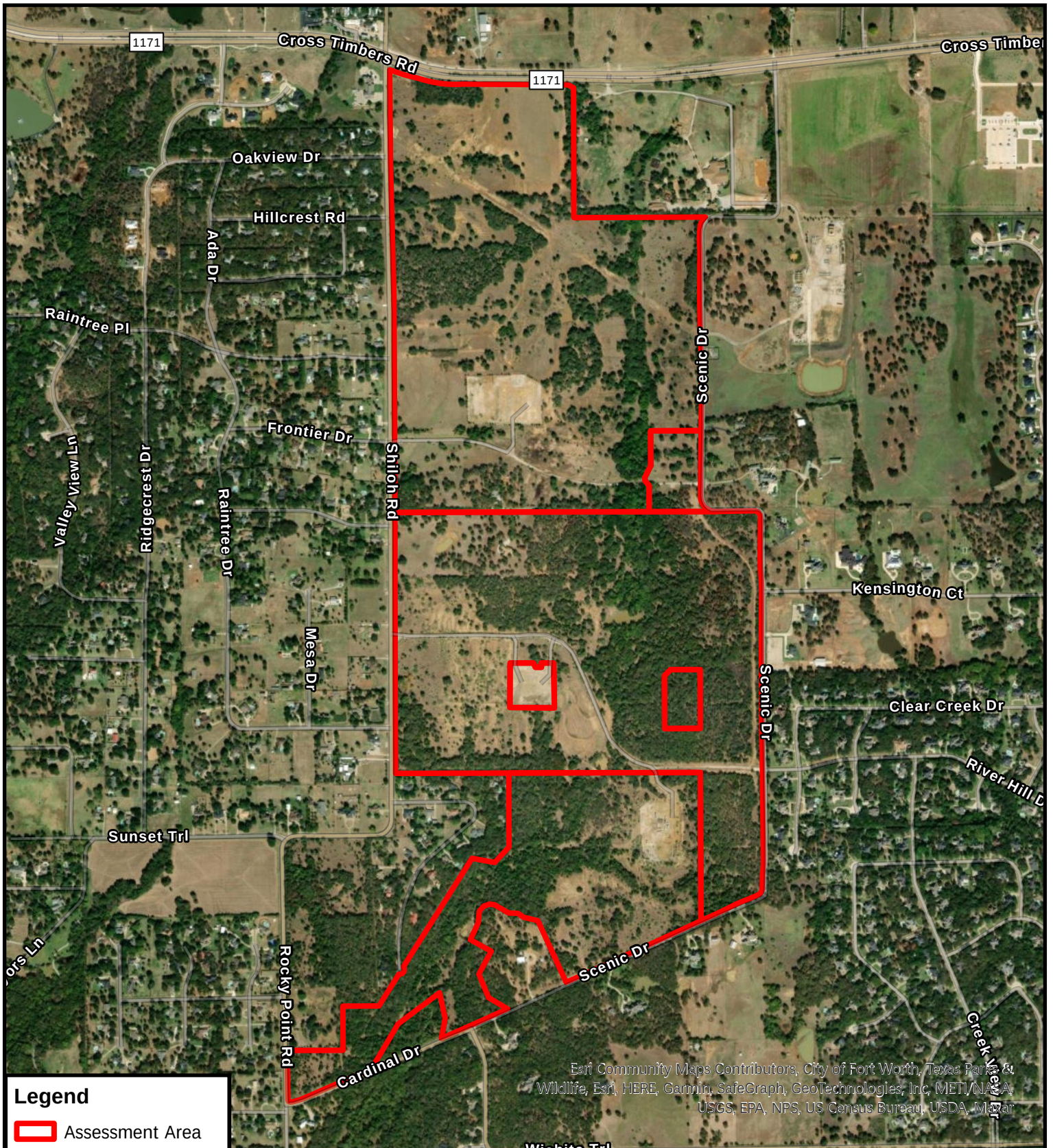
Signature

Email Address

ATTACHMENT A

FIGURES





Legend

Assessment Area

FIGURE 2 OF 8

1,500 750 0 ft

FIGURE A-2

2022 AERIAL PHOTOGRAPH

FLOWER MOUND DEVELOPMENT SITE

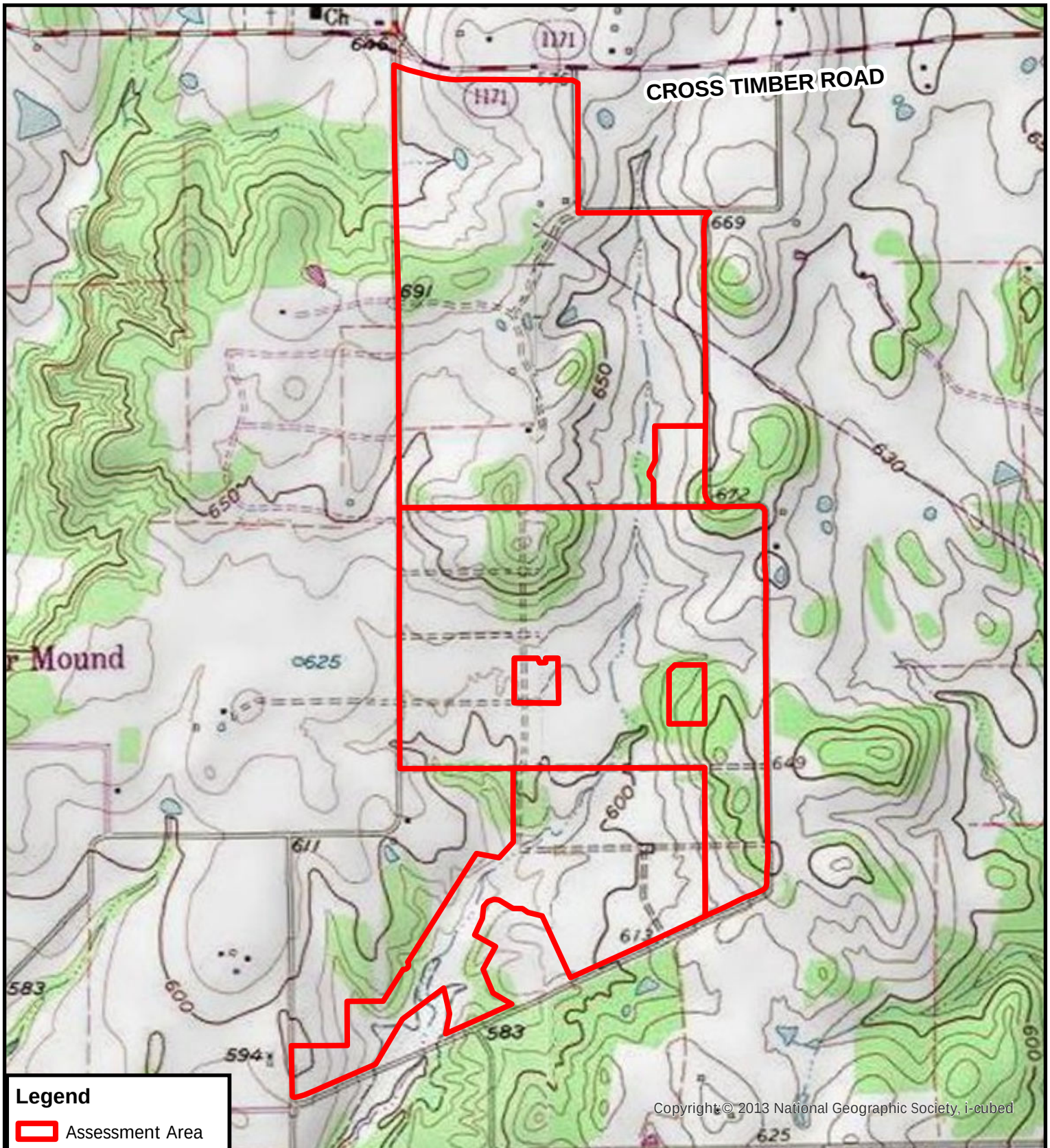
DENTON COUNTY, TEXAS

TOLL BROTHERS

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
SUITE 200
BENBROOK, TEXAS 76126
PHONE: (817) 744-7512
FAX: (817) 744-7554

DATE: 11/29/2023



Legend Assessment Area	FIGURE A-3 U.S. GEOLOGICAL SURVEY TOPOGRAPHIC MAP ARGYLE AND LEWISVILLE WEST, TEXAS QUADRANGLE FLOWER MOUND DEVELOPMENT SITE		TOPOGRAPHIC LOYALTY INNOVATION LEGACY 481 WINSOTT ROAD SUITE 200 BENBROOK, TEXAS 76126 PHONE: (817) 744-7512 FAX: (817) 744-7554
FIGURE 3 OF 8 1,500 750 0 ft	DENTON COUNTY, TEXAS TOLL BROTHERS		DATE: 11/29/2023

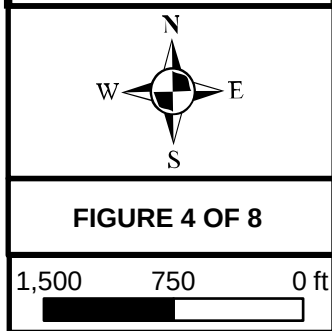
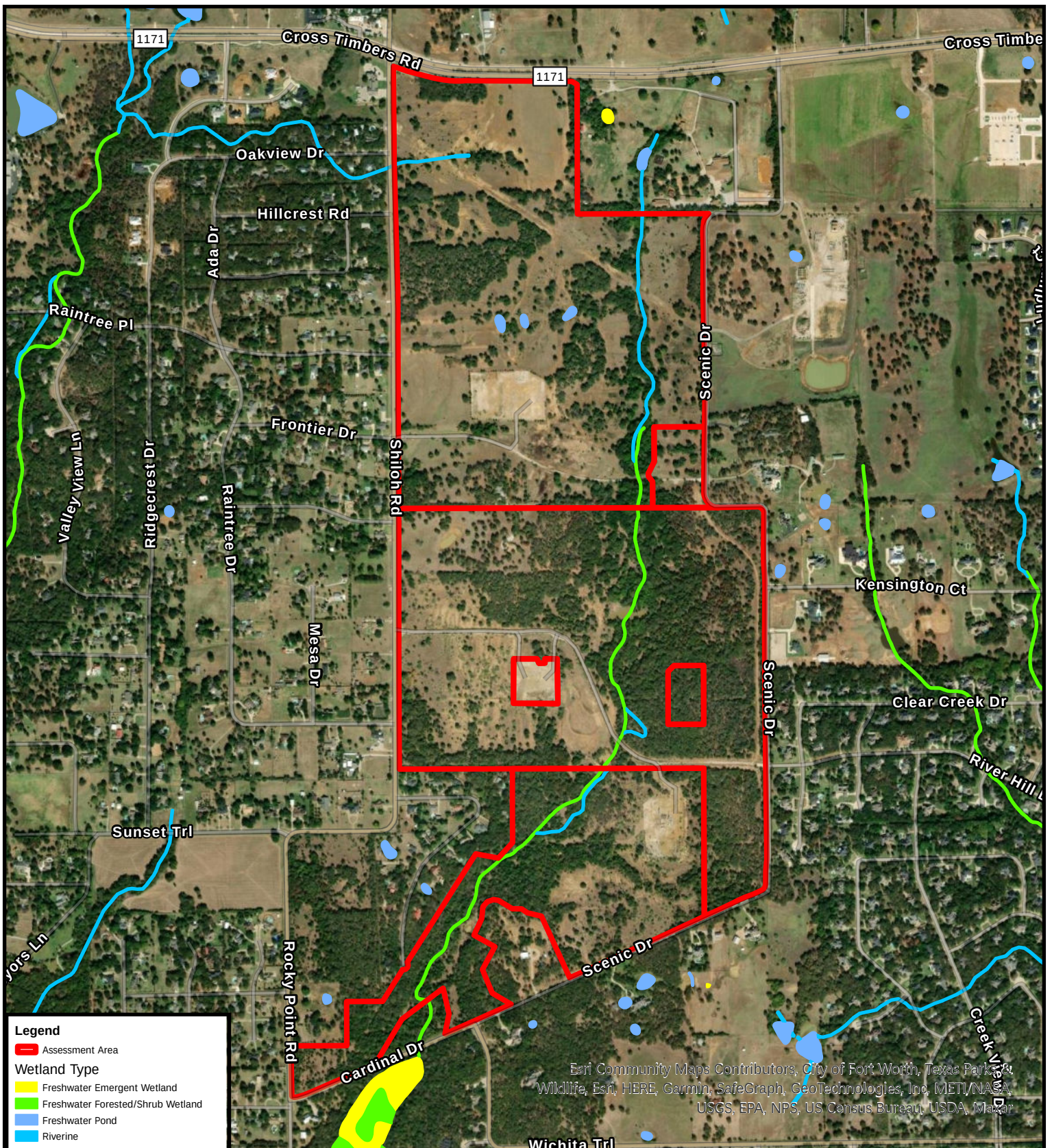


FIGURE A-4
NATIONAL WETLAND INVENTORY MAP
FLOWER MOUND DEVELOPMENT SITE

DENTON COUNTY, TEXAS
TOLL BROTHERS

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
 SUITE 200
 BENBROOK, TEXAS 76126
 PHONE: (817) 744-7512
 FAX: (817) 744-7554

DATE: 11/29/2023

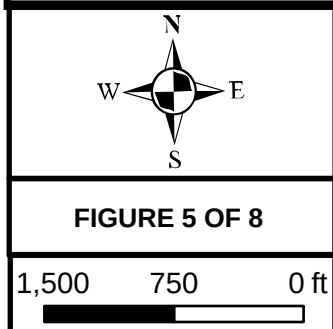
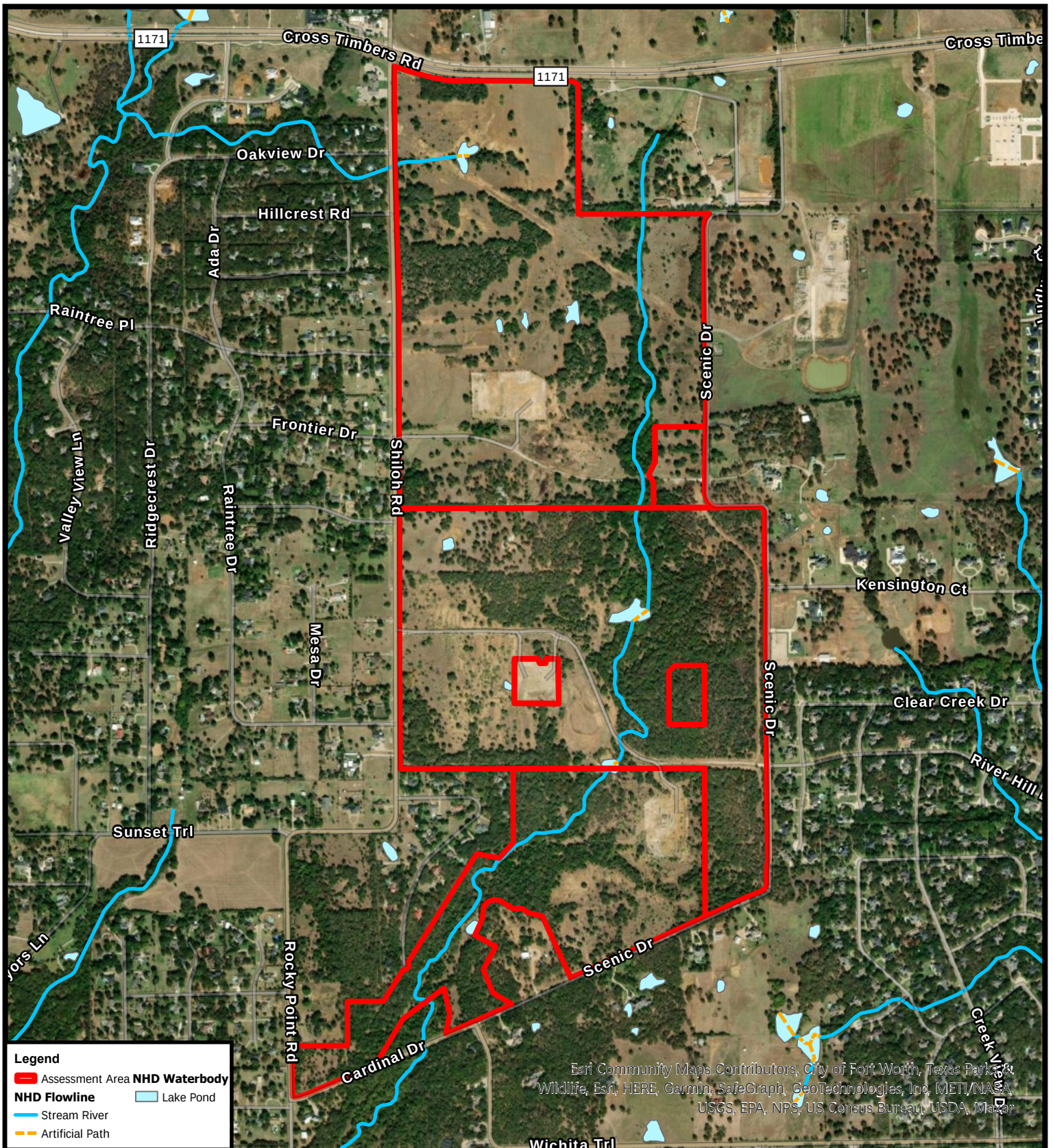


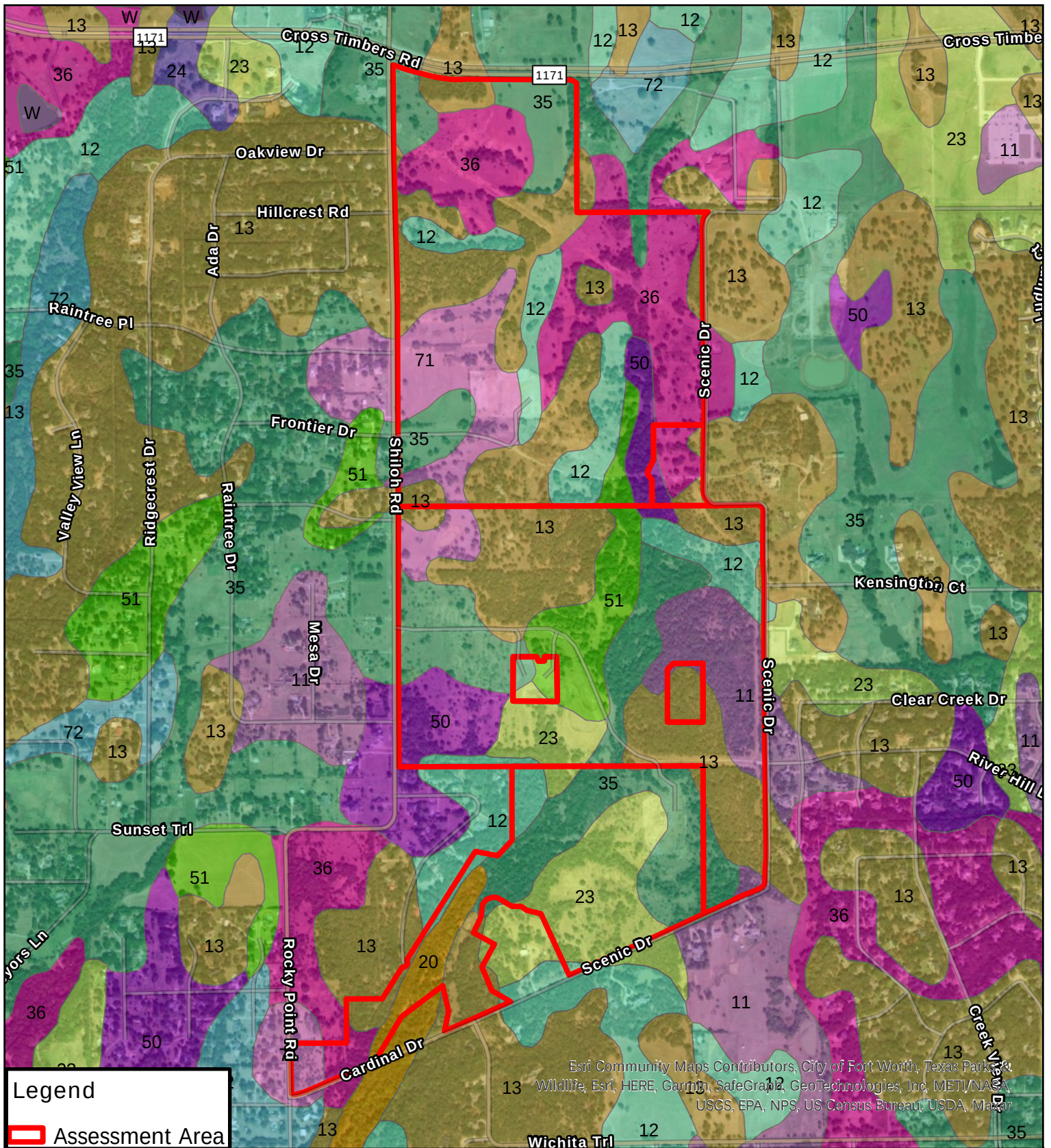
FIGURE A-5
NATIONAL HYDROGRAPHY DATASET MAP
FLOWER MOUND DEVELOPMENT SITE

DENTON COUNTY, TEXAS
TOLL BROTHERS

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
 SUITE 200
 BENBROOK, TEXAS 76126
 PHONE: (817) 744-7512
 FAX: (817) 744-7554

DATE: 11/29/2023



Legend

Assessment Area

FIGURE 6 OF 8

1,500 750 0 ft

FIGURE A-6

SSUGRO SOIL MAP

FLOWER MOUND DEVELOPMENT SITE

DENTON COUNTY, TEXAS

TOLL BROTHERS

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
SUITE 200
BENBROOK, TEXAS 76126
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DATE: 11/29/2023

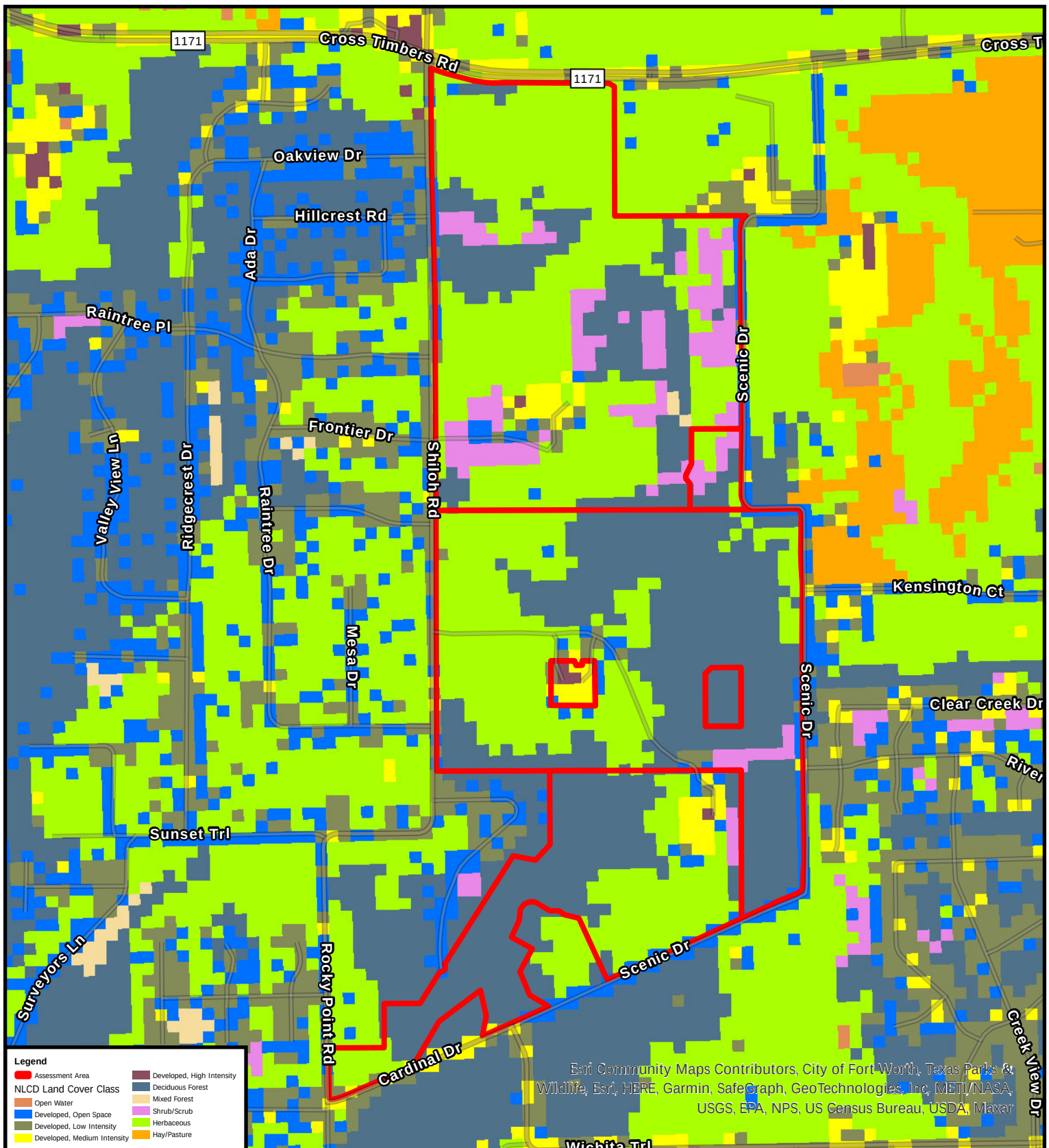


FIGURE A-7
NATIONAL LAND COVER DATABASE
438-ACRE ASSESSMENT AREA
FLOWER MOUND DEVELOPMENT SITE

DENTON COUNTY, TEXAS
TOLL BROTHERS

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
 SUITE 200
 BENBROOK, TEXAS 76126
 PHONE: (817) 744-7512
 FAX: (817) 744-7554

DATE: 11/29/2023

FIGURE 7 OF 8

1,500 750 0 ft

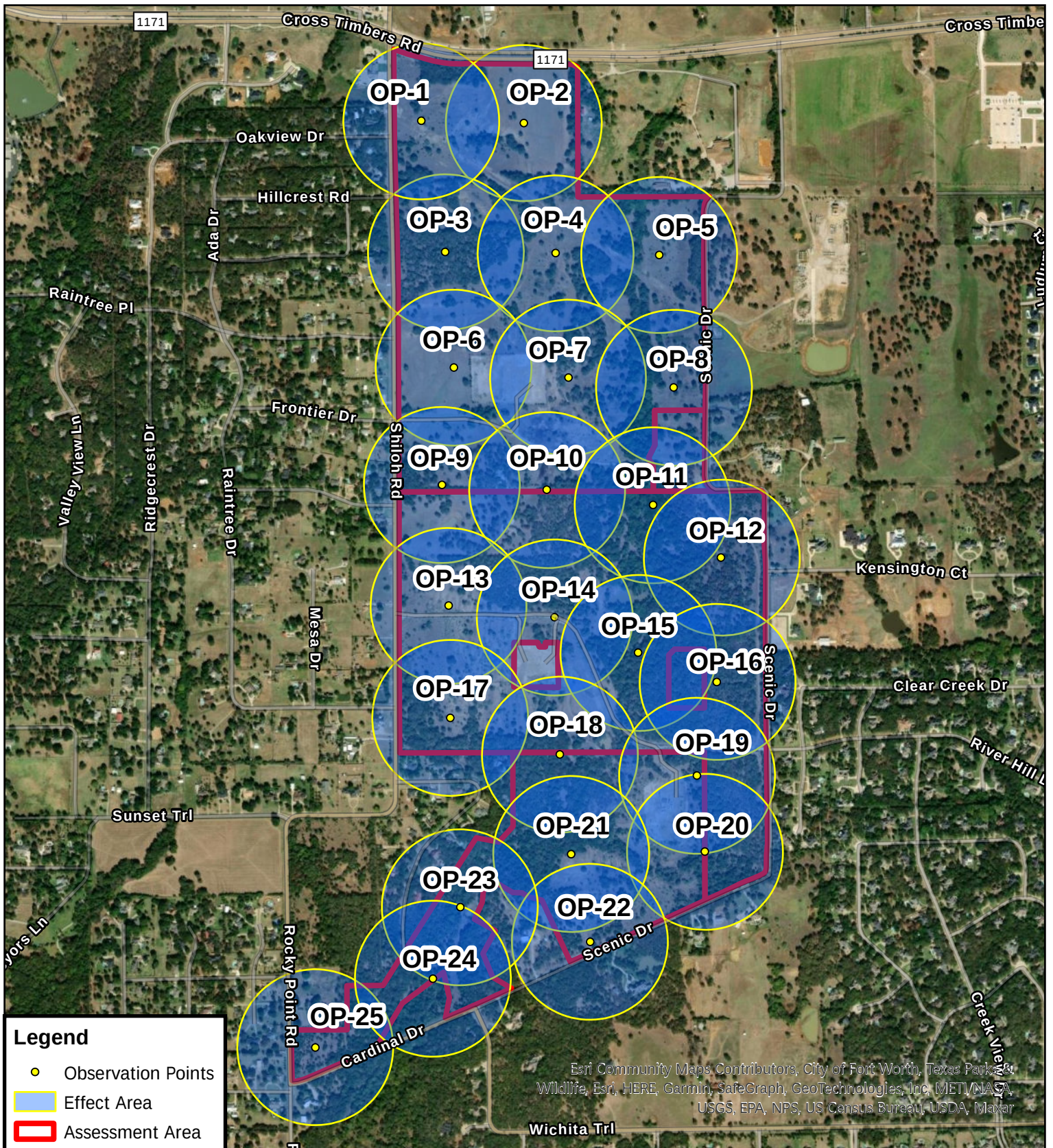


FIGURE 8 OF 8

1,500 750 0 ft

FIGURE A-8

SURVEY OBSERVATION POINTS

FLOWER MOUND DEVELOPMENT SITE

DENTON COUNTY, TEXAS

TOLL BROTHERS

TOPOGRAPHIC

LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD

SUITE 200

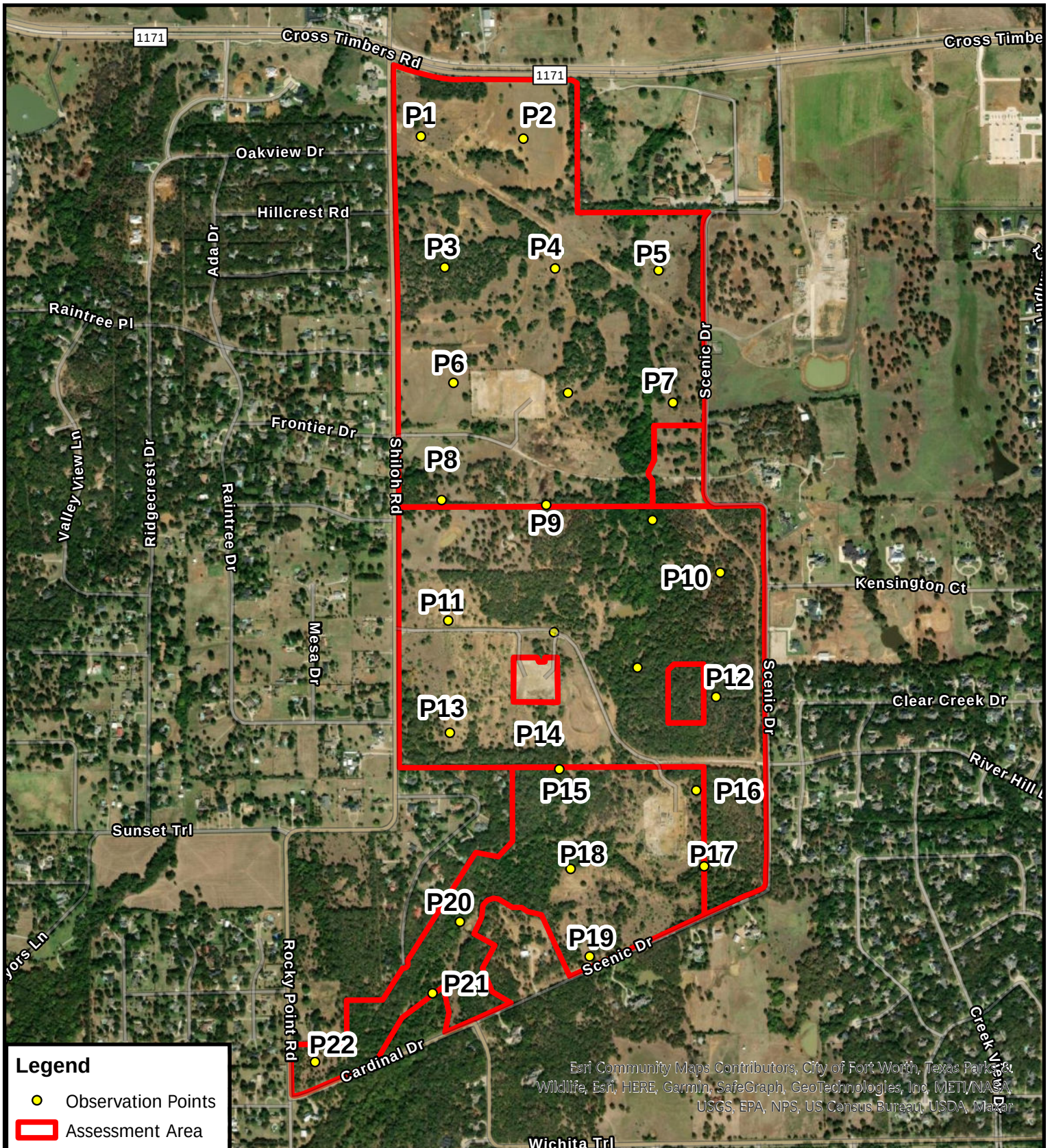
BENBROOK, TEXAS 76126

PHONE: (817) 744-7512

FAX: (817) 744-7554

DATE: 11/29/2023

ATTACHMENT B
REPRESENTATIVE PHOTOGRAPHS



**FIGURE B-1
PHOTOGRAPH LOCATION MAP
FLOWER MOUND DEVELOPMENT SITE**

**DENTON COUNTY, TEXAS
TOLL BROTHERS**

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

481 WINSOTT ROAD
SUITE 200
BENBROOK, TEXAS 76126
PHONE: (817) 744-7512
FAX: (817) 744-7554

DATE: 11/29/2023

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P1 – View of Assessment Area at observation point (OP) 1, showing overgrazed pastureland with interspersed patches of Broomweed (*Amphiachyris spp.*).



P2 – View of Assessment Area at OP 3, showing overgrazed pastureland and woodland edge.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P3 – View of Assessment Area at OP 3, showing typical woodland vegetation.



P4 – View of Assessment Area at OP 4, showing bare ground and typical rill erosion.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P5 – View of Assessment Area at OP 5, showing Greenbriar (*Smilax spp.*) undergrowth along woodland edge.



P6 – View of Assessment Area at OP 6, showing layer of Broomweed vegetation.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P7 – View of Assessment Area at OP 8, showing transitional zone between Broomweed layer and bare ground.



P8 – View of Assessment Area near OP 9, showing typical vegetation.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P9 – View of Assessment Area at OP 10, showing riparian corridor along an unimproved ranch road Right-of Way (ROW).



P10 - View of Assessment Area at OP 12, showing an overgrazed pastureland and woodland edge.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P10 – View of Assessment Area at OP 12, showing typical vegetation within the woodland area.



P11 – View of Assessment Area near OP 13, showing bare ground and typical rill erosion.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P11 – View of Assessment Area at OP 13, showing interspersed scrub/shrub vegetation.



P12 – View of Assessment Area at OP 16, showing avian nest observed within woodland area.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P12 - View of Assessment Area at OP 16, showing the unoccupied avian nest.



P13 – View of Assessment Area at OP 17, showing transitional zone between woodland area and bare ground.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P14 – View of Assessment Area near the center, showing open canopy woodland with typical leaf litter.



P15 – View of Assessment Area at OP 18, showing an unoccupied avian cup nest within woodland area.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P15 - View of Assessment Area at OP 18, showing an unoccupied avian cup nest.



P16 – View of Assessment Area at OP 19, showing upland woodland edge.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P17 – View of Assessment Area at OP 20, showing typical vegetation.



P18 – View of Assessment Area at OP 21, showing transitional zone between woodland area and overgrazed pastureland.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P19 – View of Assessment Area at OP 22, showing typical scrub/shrub vegetation.



P20 – View of Assessment Area at OP 23, showing man-made impoundment used by livestock watering.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P20 - View of Assessment Area at OP 23, from an upland swale showing a cleared unimproved ranch road.



P21 - View of Assessment Area at OP 24, showing woodland edge.

PHOTOGRAPHS TAKEN DURING ON-SITE INVESTIGATION



P22 – View of Assessment Area at OP 25, showing transitional zone between woodland area and overgrazed pastureland.

ATTACHMENT C
U.S. FISH AND WILDLIFE SPECIES
OFFICIAL THREATENED AND
ENDANGERED SPECIES LIST



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
501 West Felix Street
Suite 1105
Fort Worth, TX 76115-3410
Phone: (817) 277-1100 Fax: (817) 277-1129
Email Address: arles@fws.gov

In Reply Refer To:

November 07, 2023

Project Code: 2024-0013309

Project Name: Flower Mound Development

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action's anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at: <https://www.fws.gov/service/section-7-consultations>

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>). Additionally, wind energy projects should follow the wind energy guidelines (<https://www.fws.gov/media/land-based-wind-energy-guidelines>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation>. The Federal Aviation Administration (FAA) released specifications for and made mandatory flashing L-810 lights on new towers 150-350 feet AGL, and the elimination of L-810 steady-burning side lights on towers above 350 feet AGL. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

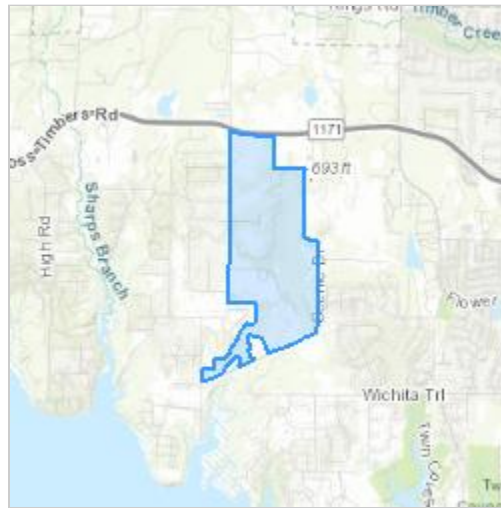
This species list is provided by:

Arlington Ecological Services Field Office
501 West Felix Street
Suite 1105
Fort Worth, TX 76115-3410
(817) 277-1100

PROJECT SUMMARY

Project Code: 2024-0013309
Project Name: Flower Mound Development
Project Type: Commercial Development
Project Description: Housing development project
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.0344958,-97.12405090409752,14z>



Counties: Denton County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

CLAMS

NAME	STATUS
Texas Heelsplitter <i>Potamilus amphichaenus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/299	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Bald and Golden Eagle Protection Act](#) of 1940.

2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read the supplemental information and specifically the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Bald Eagle
Non-BCC
Vulnerable



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover <i>Pluvialis dominica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	Breeds elsewhere
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Little Blue Heron <i>Egretta caerulea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9477	Breeds Mar 10 to Oct 15
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read the supplemental information and specifically the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (-)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R5UBH
- R4SBC

FRESHWATER POND

- PUBHh
- PUBHx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Chris Seiden
Address: 1900 NW Expressway
Address Line 2: Suite 1500
City: Oklahoma City
State: OK
Zip: 73118
Email: chris.seiden@topographic.com
Phone: 4058306647

ATTACHMENT D
TEXAS PARKS & WILDLIFE
DEPARTMENT (TPWD)
ANNOTATED COUNTY LISTS OF
RARE SPECIES

Last Update: 9/1/2023

DENTON COUNTY

AMPHIBIANS

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: T	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Franklin's gull *Leucophaeus pipixcan*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

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DENTON COUNTY

BIRDS

mountain plover

Charadrius montanus

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

pipin plover

Charadrius melodus

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

rufa red knot

Calidris canutus rufa

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

Sprague's pipit

Anthus spragueii

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

western burrowing owl

Athene cunicularia hypugaea

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

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DENTON COUNTY

BIRDS

white-faced ibis

Plegadis chihi

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane

Grus americana

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

INSECTS

American bumblebee

Bombus pensylvanicus

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

No accepted common name

Arethaea ambulator

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: SNR

MAMMALS

big brown bat

Eptesicus fuscus

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

big free-tailed bat

Nyctinomops macrotis

Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

DISCLAIMER

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DENTON COUNTY

MAMMALS

black-tailed prairie dog *Cynomys ludovicianus*

Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

eastern red bat *Lasiurus borealis*

Red bats are migratory bats that are common across Texas. They are most common in the eastern and central parts of the state, due to their requirement of forests for foliage roosting. West Texas specimens are associated with forested areas (cottonwoods). Also common along the coastline. These bats are highly mobile, seasonally migratory, and practice a type of "wandering migration". Associations with specific habitat is difficult unless specific migratory stopover sites or wintering grounds are found. Likely associated with any forested area in East, Central, and North Texas but can occur statewide.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

long-tailed weasel *Mustela frenata*

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

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DENTON COUNTY

MAMMALS

muskkrat

Ondatra zibethicus

Found in fresh or brackish marshes, lakes, ponds, swamps, and other bodies of slow-moving water. Most abundant in areas with cattail. Dens in bank burrow or conical house of vegetation in shallow vegetated water. It is primarily found in the Rio Grande near El Paso and in SE Texas in the Houston area.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

swamp rabbit

Sylvilagus aquaticus

Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

tricolored bat

Perimyotis subflavus

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

western hog-nosed skunk

Conepatus leuconotus

Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the spp. telmalestes

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

MOLLUSKS

Louisiana pigtoe

Pleurobema riddellii

Occurs in small streams to large rivers in slow to moderate currents in substrates of clay, mud, sand, and gravel. Not known from impoundments (Howells 2010f; Randklev et al. 2013b; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status: PT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G2	State Rank: S1

sandbank pocketbook

Lampsilis satura

Occurs in small streams to large rivers in slow to moderate current in sandy mud to sand and gravel substrate. Can occur in a variety of habitats but most common in littoral habitats such as banks or backwaters or in protected areas along point bars (Randklev et al. 2013b; Randklev et al. 2014a; Troia et al. 2015). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic:	Global Rank: G2?	State Rank: S1

DISCLAIMER

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DENTON COUNTY

MOLLUSKS

Texas heelsplitter *Potamilus amphichaenus*

Occurs in small streams to large rivers in standing to slow-flowing water; most common in banks, backwaters and quiet pools; adapts to some reservoirs. Often found in soft substrates such as mud, silt or sand (Howells et al. 1996; Randklev et al. 2017a). [Mussels of Texas 2019]

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G1G3	State Rank: S1

REPTILES

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

prairie skink *Plestiodon septentrionalis*

The prairie skink can occur in any native grassland habitat across the Rolling Plains, Blackland Prairie, Post Oak Savanna and Pineywoods ecoregions.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

smooth softshell *Apalone mutica*

Aquatic: Large rivers and streams; in some areas also found in lakes and impoundments (Ernst and Barbour 1972). Usually in water with sandy or mud bottom and few aquatic plants. Often basks on sand bars and mudflats at edge of water. Eggs are laid in nests dug in high open sandbars and banks close to water, usually within 90 m of water (Fitch and Plummer 1975).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas garter snake *Thamnophis sirtalis annectens*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T4	State Rank: S1

DISCLAIMER

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DENTON COUNTY

REPTILES

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

timber (canebrake) rattlesnake *Crotalus horridus*

Terrestrial: Swamps, floodplains, upland pine and deciduous woodland, riparian zones, abandoned farmland. Limestone bluffs, sandy soil or black clay. Prefers dense ground cover, i.e. grapevines, palmetto.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box turtles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

western chicken turtle *Deirochelys reticularia miaria*

Aquatic and terrestrial: This species uses aquatic habitats in the late winter, spring and early summer and then terrestrial habitats the remainder of the year. Preferred aquatic habitats seem to be highly vegetated shallow wetlands with gentle slopes. Specific terrestrial habitats are not well known.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5T5	State Rank: S2S3

western rattlesnake *Crotalus viridis*

Terrestrial: Dry desert and prairie grasslands, shrub desert rocky hillsides; edges of arid and semi-arid river breaks.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

PLANTS

glandular gay-feather *Liatris glandulosa*

Occurs in herbaceous vegetation on limestone outcrops (Carr 2015). Flowering: July-Oct.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S2

DISCLAIMER

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DENTON COUNTY

PLANTS

Glen Rose yucca

Yucca necopina

Grasslands on sandy soils and limestone outcrops; flowering April-June

Federal Status:

State Status:

SGCN: Y

Endemic: Y

Global Rank: G1G2

State Rank: S3

Sutherland hawthorn

Crataegus viridis var. *glabriuscula*

In mesic soils of woods or on edge of woods, treeline/fenceline, or thicket. Above\near creeks and draws, in river bottoms. Flowering Mar-Apr; fruiting May-Oct.

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G5T3T4

State Rank: S3

Topeka purple-coneflower

Echinacea atrorubens

Occurring mostly in tallgrass prairie of the southern Great Plains, in blackland prairies but also in a variety of other sites like limestone hillsides; Perennial; Flowering Apr-June

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G3

State Rank: S3

DISCLAIMER

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ENVIRONMENTAL CONSERVATION COMMISSION AGENDA G.2. REGULAR ITEM(S)

DATE: April 2, 2024
FROM: Matthew Woods, Director of Environmental Services
ITEM: **Consider an application for a tree removal permit (TRP23-0022) for one hundred and twenty-seven (127) specimen trees on property proposed for development as Smith Conservation. The property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive.**

BACKGROUND: The proposed Smith Conservation development is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive. The site is approximately 447 acres in size. The site is currently zoned for Agricultural uses and master planned for Cross Timbers Conservation Development District. The applicant is requesting to rezone the property to Planned Development District No.197 (PD-197) for a conservation development.

According to the tree survey for the project, the site contains six hundred and forty-eight (648) specimen trees. The applicant is requesting to remove one hundred and twenty-seven (127) specimen trees from the site to build a residential subdivision. The specimen trees proposed for removal are in good, fair, or poor condition and are located within the proposed buildable area.

The Town's tree ordinance requires that specimen trees removed from the site be replaced at a rate of two times their caliper inches. Based on their size, 6,520" of replacement trees, equaling 2,174 three-inch caliper trees, is the required mitigation for the removal of one hundred and twenty-seven (127) specimen trees on this site. In addition, protected trees removed from the buildable area will also require replacement at a tree-for-tree rate. Protected tree mitigation / replacement will be determined with the record plat application – once final engineering has been completed for the project. The developer is proposing to preserve a significant number of existing protected trees, specimen trees, and upland habitat on the site, so there will be mitigation credits available for the preservation of those trees.

BOARD REVIEW/CITIZEN FEEDBACK: As of March 27, 2024, staff has not received feedback related to this item. Staff has received general inquiries about the project.

ALTERNATIVES: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. Letter of Intent
2. Specimen tree removal permit application
3. Photographs of approved signage onsite
4. Tree Survey

DRAFT MOTION: Move to recommend approval, approval with conditions, or denial of the requested permit for the removal of one hundred and twenty-seven (127) specimen trees on property proposed for development as Smith Conservation. The property is generally located south of Cross Timbers Road, east of Shiloh Road, and west of Scenic Drive.

memo

Project Name: Smith Tract

To: James Hoefert ISA# TX-4565A
Environmental Review Analyst
Town of Flower Mound, Texas
From: Paul Cozzolino
Date: November 10, 2023
Re: Letter of Intent

Mr. Hoefert,

Please accept this as our Letter of Intent (LOI) for the removal of specimen trees on the Smith Tract Development Site. These trees are being removed due to their location within the buildable area of the development.



Paul Cozzolino, PLA
Green Door Studio, Principal



Town of Flower Mound Environmental Services
Mailing Address: 2121 Cross Timbers Road, Flower Mound, TX 75028
Telephone: 972-874-6340 Website: www.flower-mound.com

TREE REMOVAL PERMIT

(Effective for Developments submitted 10/6/08 - present)

Check one: ☐ Protected Tree ☐ Specimen Tree ☐ Historic Tree

This application is required to be submitted 30 days prior to the next available ECC hearing.

1. Applicant- Note: Must be an ISA certified arborist, certified forester, or a registered landscape architect.

Name:

Paul Cozzolino

Address:

P.O. Box 38415

Dallas, TX 75238

Phone:

972-855-8705

Applicant's Legal Interest in the Property:

Design Professional

2. Property Owner(s)

Name(s): Bob Smith Management Company, LTD

Address: 3811 Turtle Creek Blvd, Suite 750

Dallas, TX 75219

3. Location and Legal Description of Property:

Located at the southeast corner of 1171 & Shiloh Road

Legal Description attached

4. Owner's Authorization of Representation

I, _____, the owner of the above described real property, do hereby authorize _____ to represent my interests and to file an Application for Tree Removal Permit for said real property, pursuant to the terms and provisions of Chapter 94 (Trees), of the Land Development Regulations of the Town of Flower Mound, Texas Code of Ordinances.

Please see included Letter of Authorization. Per Jimmy Hoefert at the Town of Flower Mound, he said that this could be included in lieu of having the application signed.

Signature of Owner

Given Under My Hand and Seal of Office
This the ___ Day of _____, 20__

Notary Public
In and For _____ County, Texas.

5. Applicants Affidavit- Note: Applicant must be an ISA certified arborist, certified forester, or a registered landscape architect.

Subject to criminal penalties contained in Subpart B, the Land Development Regulations of the Town of Flower Mound, Texas Code of Ordinances, I _____, do hereby swear or affirm that all of the Information contained herein and submitted herein is, to the best of my knowledge, true, correct and complete and that no false, misleading or incomplete information has been intentionally provided or submitted with this Application for a Tree Removal Permit.

Signature of Applicant

Landscape Architect License No. _____
State of Licensure _____
Or ISA Certified Arborist No. _____
Or Certified Forester No. _____

Given Under My Hand and Seal of Office
This the ___ Day of _____, 20__

Notary Public
In and For _____ County, Texas

6. Received by Town of Flower Mound on (Date) 11/13/2023 by (initials) JRH.

BEING all that certain 447.238 acre tract or parcel of land, lying and being situated in the County of Denton, State of Texas, and being all of the land that was conveyed to Bob Smith Management Company, Ltd., as Tract 1 and Tract 2, a called 290.31 acre and a called 193.230 acre tract, by deed recorded in County Clerk's File No. (CCFN) 97-0089454, Official Public Records, Denton County, Texas, of out of the N.A. Thompson Survey, Abstract No. 1307, the L. K. Heath Survey, Abstract No. 1597, the M.E.P. & P.R.R. Company Survey, Abstract 935, SAVE AND EXCEPT that portion deeded to the Town of Flower Mound recorded in Volume 5232, Page 3334 and Volume 5232, Page 3340, Real Property Records, Denton County, Texas, and filed 05/07/2009, recorded under CCFN 2009-55119 and CCFN 2009-55118, Real Property Records, Denton County, Texas, and that property conveyed to Lewisville Independent School District by Special Warranty Deed filed 06/04/2008, recorded under CCFN 2008-61156, said Real Property Records, and that property conveyed to the County of Denton in Special Warranty Deed filed 10/26/2007, recorded in CCFN 2007-126808, said Real Property Records, and that certain 10 acre tract conveyed to CNIK LLC by Special Warranty Deed filed 12/29/2017, recorded in CC#2017-159457, Real Property Records, Denton County, Texas, and said 447.238 acre tract of land being more particularly described as follows:

BEGINNING at an 'X' cut found for the southwest corner of said right-of-way dedication to the County of Denton (Part One), same being in the approximate centerline of Shiloh Road (a prescriptive right-of-way), same being the south end of a corner clip at the intersection of said Shiloh Road with the south right-of-way line of F.M. 1171 (a variable width public right-of-way), same being the most westerly northwest corner of the herein described tract;

THENCE along the south right-of-way line of said F.M. 1171, and along the north line of the herein described tract, as follows:

North 55 deg. 11 min. 34 sec. East, 73.80 feet to the north end of said corner clip;

South 88 deg. 52 min. 37 sec. East, 73.87 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found;

South 69 deg. 55 min. 38 sec. East, 59.76 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for the beginning of a non-tangent curve to the left having a radius of 1508.57 feet, and a delta angle of 07 deg. 18 min. 28 sec.;

In a southeasterly direction, and along said non-tangent curve to the left, an arc distance of 192.41 feet, and a chord bearing and distance of South 73 deg. 37 min. 51 sec. East, 192.28 feet to angle point;

South 74 deg. 25 min. 13 sec. East, 68.81 feet to a disturbed 1/2 inch iron rod found;

South 77 deg. 02 min. 33 sec. East, 69.10 feet to a TXDOT Monument found for the beginning of a non-tangent curve to the left having a radius of 1518.57 feet, and a delta angle of 05 deg. 12 min. 39 sec.;

In a southeasterly direction, and along said non-tangent curve to the left, an arc distance of 138.11 feet, and a chord bearing and distance of South 85 deg. 05 min. 52 sec. East, 138.06 feet to a TXDOT Monument found;

North 86 deg. 58 min. 56 sec. East, 67.90 feet to a TXDOT Monument found;

South 89 deg. 17 min. 32 sec. East, 65.63 feet to an 'X' cut found in concrete;

North 86 deg. 20 min. 47 sec. East, 65.75 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found;

South 89 deg. 17 min. 32 sec. East, 699.07 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for the southeast corner of said County of Denton tract, Part Two, same being in an east line of said Bob Smith Management Company tract;

South 43 deg. 54 min. 55 sec. East, 49.98 feet to an X cut found for the most westerly northwest corner of that certain tract of land to JAHR Ranch, LLC, by deed recorded in CCFN 2017-79179, aforesaid Official Public Records;

THENCE along the common line of said Bob Smith Management Company tract, said JAHR Ranch tract as follows:

South 01 deg. 21 min. 29 sec. East, 1055.88 feet to a 1/2 inch iron rod found for an internal corner of said Bob Smith Management Company tract, same being the southwest corner of said JAHR Ranch tract;

South 89 deg. 08 min. 43 sec. East, 1056.55 feet to a 1/2 inch iron rod found for a northeast corner of said Bob Smith Management Company tract, same being on the northwest side of an easterly bend in Scenic Drive (a prescriptive right-of-way);

THENCE South 00 deg. 16 min. 13 sec. East, along the east line of said Bob Smith Management Company tract, and generally along Scenic Drive, a distance of 2473.07 feet to a 5/8 inch iron rod found for the southeast corner of said Bob Smith Management Company Tract 2, same being in the north line of said Bob Smith Management Company Tract 1, same being on the southwest side of an easterly bend in said Scenic Drive;

THENCE North 89 deg. 44 min. 07 sec. East, continuing along the common line of said Bob Smith Management Company tract, and generally along Scenic Drive, a distance 504.34 feet to a 5/8 inch iron rod found with "GSFC INC." cap found from which a 5/8 inch iron rod with "RPLS 4804" cap found bears South 31 deg. 02 min. West, 3.32 feet for a northeast corner of said Bob Smith Management Company tract, same being on the northeast side of a southerly bend in said Scenic Drive, same being the northeast corner of said Bob Smith Management Company Tract 1;

THENCE South 00 deg. 04 min. 51 sec. East, continuing along the common line of said Bob Smith Management Company tract, and generally along Scenic Drive, a distance of 3251.84 feet to a 1/2 inch iron rod found for the southeast corner of said Bob Smith Management Company tract, same being on the south side of a southwesterly bend in said Scenic Drive;

THENCE South 65 deg. 55 min. 13 sec. West, continuing along the common line of said Bob Smith Management Company tract, and generally along Scenic Drive, a distance of 1804.72 feet to the southeast corner of a right-of-way dedication recorded in CCFN 2018-323, said Official Public Records;

THENCE North 24 deg. 37 min. 29 sec. West, along the common line of said Bob Smith Management Company tract, said Scenic Drive, and said right-of-way dedication (CCFN 2018-323), passing a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for the northeast corner of said right-of-way dedication (CCFN 2018-323), same being the southeast corner of Block A, CNIK Addition, an Addition to the Town of Flower Mound, Denton County, Texas, according to the plat thereof recorded in CCFN 2023-332, aforesaid Official Public Records, and continuing along the common line of said Bob Smith Management Company tract and said Block A, a total distance of 549.84 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

THENCE continuing through the interior of said Bob Smith Management Company tract and along said Block A as follows:

North 75 deg. 54 min. 44 sec. West, 125.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

North 54 deg. 51 min. 44 sec. West, 55.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

North 88 deg. 02 min. 04 sec. West, 80.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

North 59 deg. 24 min. 24 sec. West, 137.00 feet to an angle point;

North 80 deg. 39 min. 54 sec. West, 42.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 70 deg. 29 min. 16 sec. West, 55.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 40 deg. 22 min. 56 sec. West, 55.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 05 deg. 57 min. 16 sec. West, 100.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 24 deg. 49 min. 06 sec. West, 155.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 61 deg. 12 min. 54 sec. East, 200.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 28 deg. 47 min. 06 sec. West, 220.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 22 deg. 35 min. 04 sec. East, 215.00 feet to a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for angle point;

South 58 deg. 59 min. 14 sec. East, passing a 1/2 inch iron rod with orange plastic cap stamped "G&A" found for the southwest corner of said Block A, same being the northwest corner of aforesaid right-of-way dedication (CCFN 2018-323), same being in the northwesterly right-of-way line of aforesaid Scenic Drive, and continuing along the common line of said Bob Smith Management Company tract, said right-of-way dedication (CCFN 2018-323), and said Scenic Drive, a total distance of 157.74 feet to the southeasterly line of said Bob Smith Management Company tract, same being in said Scenic Drive;

THENCE South 65 deg. 55 min. 13 sec. West, along the common line of said Bob Smith Management Company tract and generally along Scenic Drive, a distance of 174.33 feet to a nail found in asphalt for the southeast corner of aforesaid right-of-way dedication to the Town of Flower Mound (CCFN 2008-55119);

THENCE North 24 deg. 04 min. 48 sec. West, along said Town of Flower Mound tract, a distance of 16.77 feet to the northeast corner of said Town of Flower Mound tract, same being in the north right-of-way line of Cardinal Drive (a variable width right-of-way);

THENCE South 67 deg. 27 min. 08 sec. West, continuing along said Town of Flower Mound tract, and along the north right-of-way line of said Cardinal Drive, a distance of 478.37 feet to the northwest corner of said Town of Flower Mound tract, same being in the east line of that certain tract of land to USA Corps of Engineers, Tract D-304, Grapevine Reservoir;

THENCE along the common line of said Bob Smith Management Company tract, and said USA Corp of Engineers tract as follows:

North 12 deg. 54 min. 05 sec. East, 178.40 feet to a Corps of Engineers Monument found for an angle point;

North 18 deg. 34 min. 14 sec. West, 212.98 feet to a Corps of Engineers Monument found for the north corner of said USA Corp of Engineers tract;

South 51 deg. 27 min. 40 sec. West, 455.81 feet to a Corps of Engineers Monument found for an angle point;

South 30 deg. 06 min. 00 sec. West, 380.91 feet to the northeast corner of a right-of-way dedication to the Town of Flower Mound (CCFN 2008-55118);

THENCE along the south line of the herein described tract, and along the north line of said Town of Flower Mound tract, and the north right-of-way line of said Cardinal Drive as follows:

South 66 deg. 13 min. 47 sec. West, 626.74 feet to the beginning of a non-tangent curve to the right having a radius of 270.00 feet, and a delta angle of 17 deg. 57 min. 22 sec.;

In a southwesterly direction, and along said non-tangent curve to the right, an arc distance of 84.62 feet, and a chord bearing and distance of South 80 deg. 21 min. 42 sec. West, 84.27 feet to a 1/2 inch iron rod found for the south end of a corner clip at the intersection of said Cardinal Drive with Rocky Point Road (a prescriptive right-of-way);

North 52 deg. 14 min. 46 sec. West, 57.41 feet along said corner clip to the north end of said corner clip, same being in the west line of said Bob Smith Management Company tract, same being in the approximate center of said Rocky Point Drive, from which an 'X' cut found bears South 85 deg. 45 min. East, 3.63 feet;

THENCE North 00 deg. 34 min. 01 sec. West, along said Rocky Point Road, a distance of 397.83 feet to a northwest corner of said Bob Smith Management Company tract;

THENCE North 87 deg. 23 min. 12 sec. East, passing at a distance of 33.76 feet a 1/2 inch iron rod found for the southwest corner of that certain tract of land to Mark Friedlander, by deed recorded in Volume 4597, Page 869, said Deed Records, and continuing a total distance of 475.41 feet to a 5/8 inch iron rod found for the southeast corner of said Friedlander tract;

THENCE North 00 deg. 06 min. 12 sec. East, continuing along the common line of said Bob Smith Management Company tract, and said Friedlander tract, a distance of 319.02 feet to the most southerly southwest corner of aforesaid Lewisville Independent School District tract;

THENCE North 89 deg. 49 min. 06 sec. East, along the south line of said Lewisville Independent School District tract, a distance of 320.26 feet to a 5/8 inch iron rod found for the southeast corner of said Lewisville Independent School District tract, same being the south corner of North Shores Estates, an addition to the Town of Flower Mound, Denton County, Texas, according to the plat thereof recorded in Cabinet N, Page 188, Plat Records, Denton County, Texas;

THENCE along the common line of said Bob Smith Management Company tract, and said North Shores Estates as follows:

North 31 deg. 23 min. 21 sec. East, 1470.57 feet to an angle point;

South 76 deg. 03 min. 10 sec. East, 194.70 feet to an angle point;

North 42 deg. 26 min. 50 sec. East, 209.20 feet to an angle point;

North 00 deg. 01 min. 10 sec. West, 625.30 feet to a 1/2 inch iron rod found for an internal angle of said Bob Smith Management Company tract;

South 88 deg. 40 min. 40 sec. West, passing a 5/8 inch iron rod found at a distance of 942.00 feet, and continuing a total distance of 990.86 feet to an 'X' cut found for a southwest corner of said Bob Smith Management Company tract, same being in the approximate center of aforesaid Shiloh Road;

THENCE North 00 deg. 12 min. 08 sec. East, along the west line of said Bob Smith Management Company tract, and generally along Shiloh Road, a distance of 2207.76 feet to the common west corner of said Bob Smith Management Company Tract 1 and 2;

THENCE North 00 deg. 39 min. 42 sec. West, continuing along the west line of said Bob Smith Management Company tract, and generally along said Shiloh Road, a distance of 3672.16 feet to the POINT OF BEGINNING and containing 447.238 acres of computed land, more or less.

Letter of Authorization

Smith Tract ~ 446.9 Acres

Sally Smith Mashburn, acting as President, do hereby authorize the following individuals and organizations to act on behalf of Bob Smith Management Company, LTD. and specifically to seek variances from the Oil and Gas Board of Appeals, cluster development zoning, planned development, development plan, platting and engineering plans of said 446.9-acre tract of land located within the Thompson Survey, Abstract No. 1307, the L. K. Heath Survey, Abstract No. 1597 and the M.E.P & P.R.R. Company Survey, Abstract No. 935, in the Town of Flower Mound, Denton County, Texas.

Pape-Dawson Consulting Engineers, LLC.
6105 Tennyson Parkway, Suite 210
Plano, Texas 75024
(214) 420-8494

Toll Brothers, Inc.
2555 SW Grapevine Pkwy. Ste. 100
Grapevine, Texas 76051
(817) 329-8770

Michael Dowdey, P.E.
Aaron Hunsaker
Thomas Moss, P.E.

Mike Boswell, Toll Brothers
Rebecca Mayorga, Toll Brothers
Ron Robbins, Toll Brothers

AUTHORIZED BY:

Bob Smith Management Company, LTD.,
a Texas limited partnership

By: Bob Smith Management Company, LTD.,
its General Partner

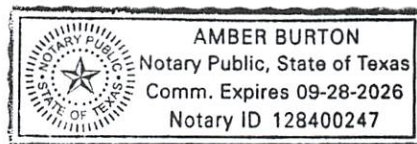
By: 
Name: Sally Smith Mashburn
Title: President

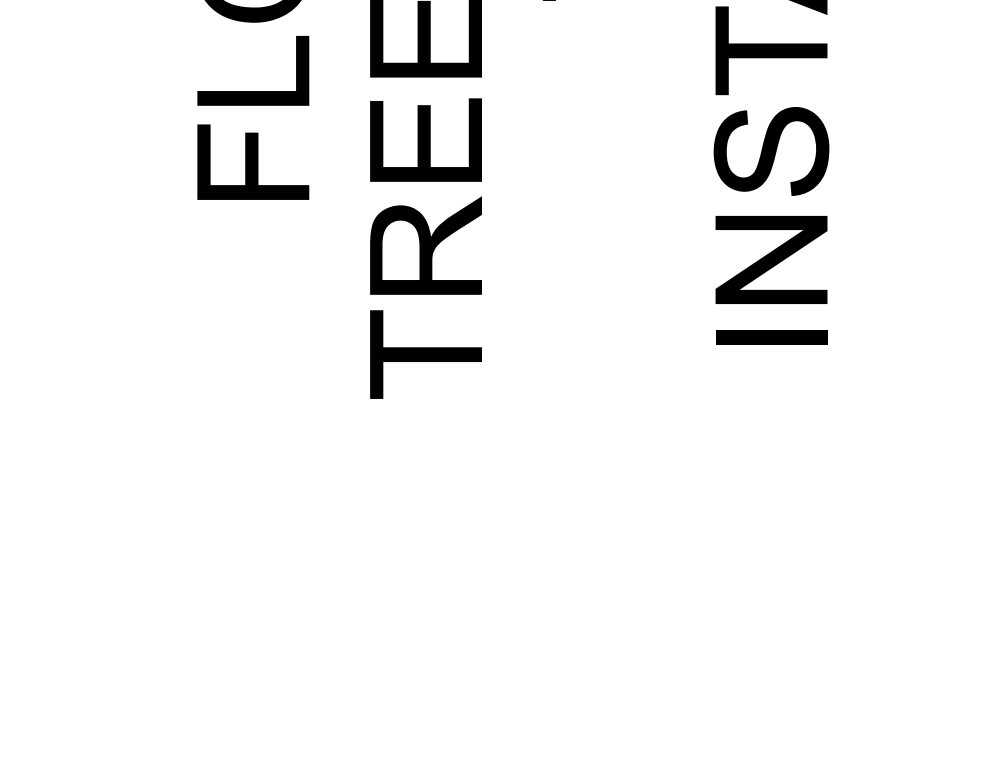
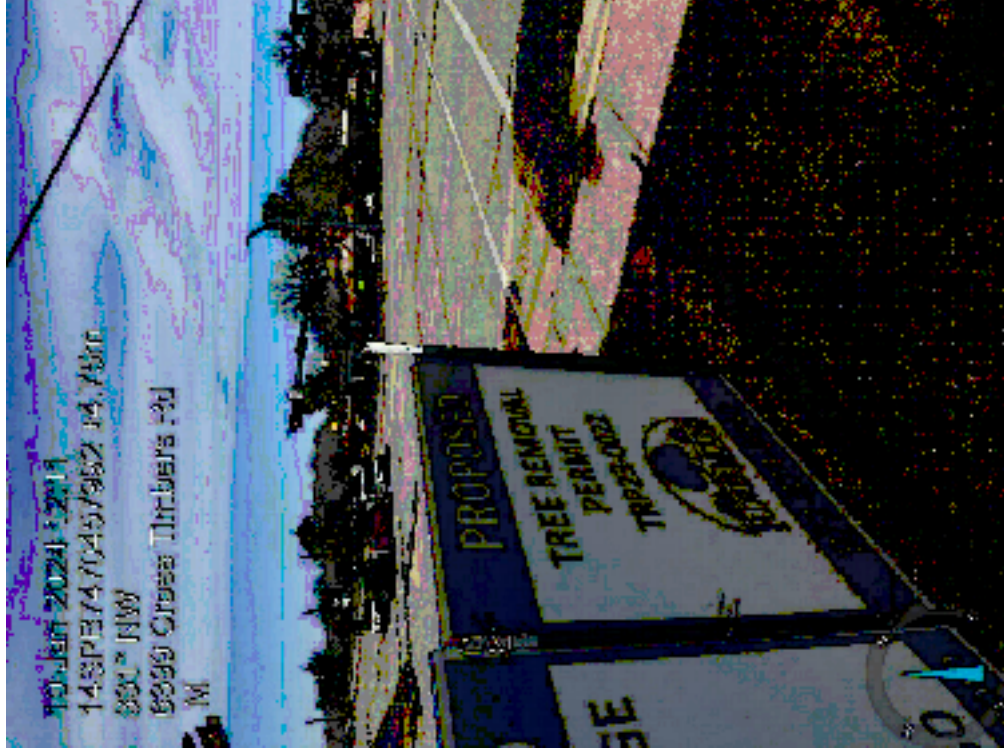
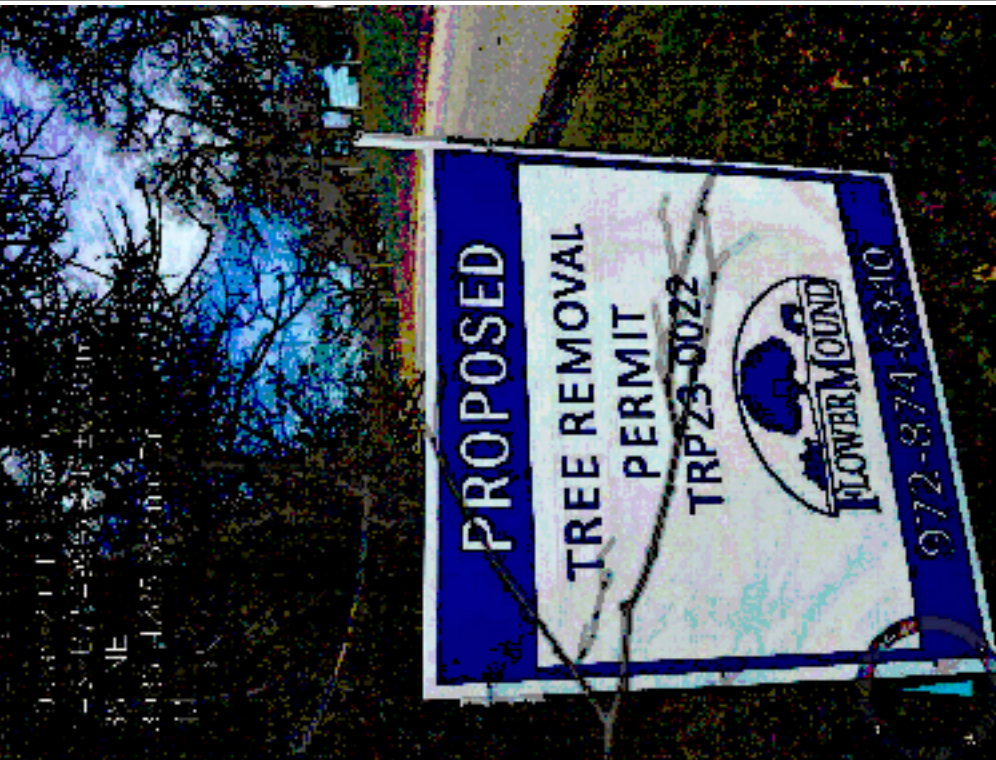
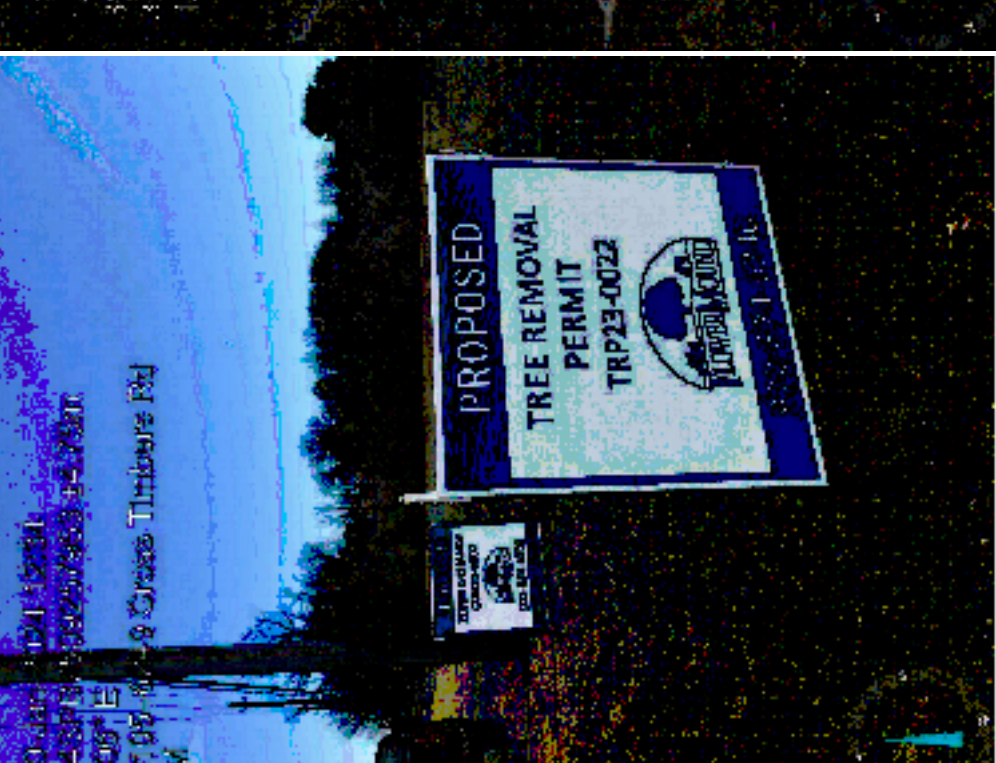
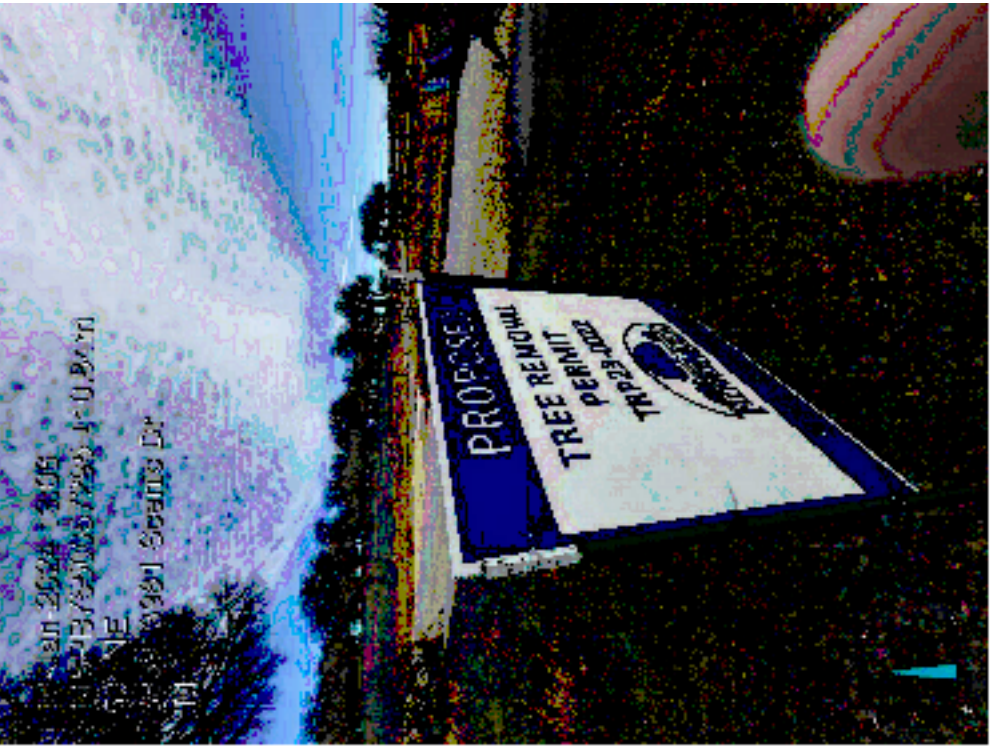
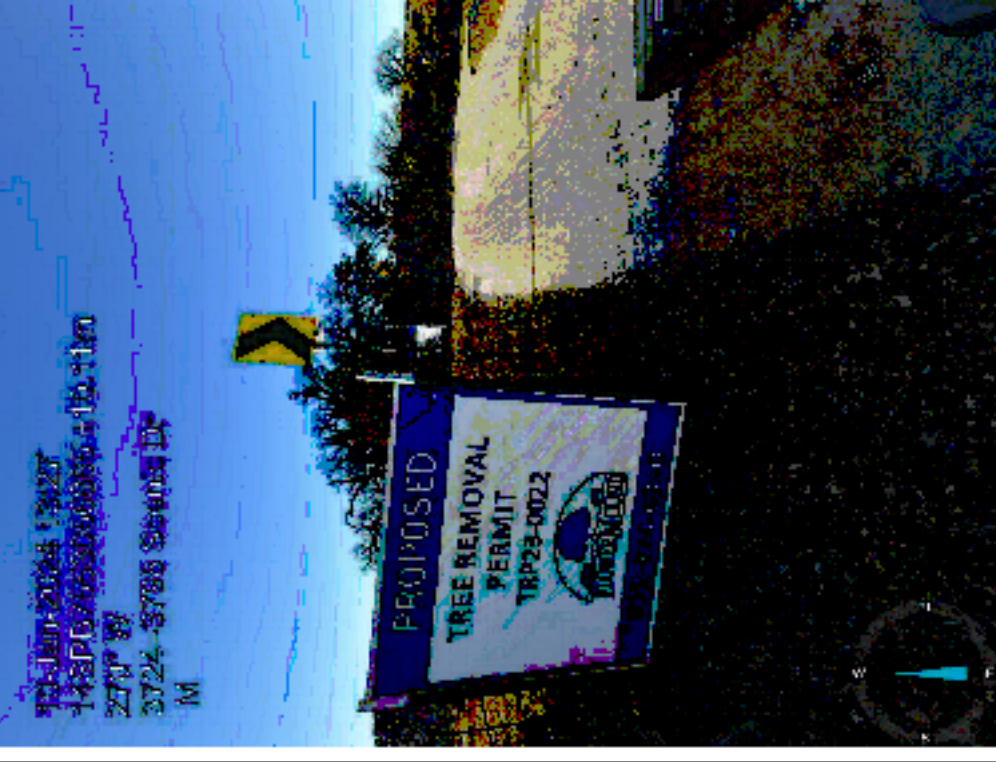
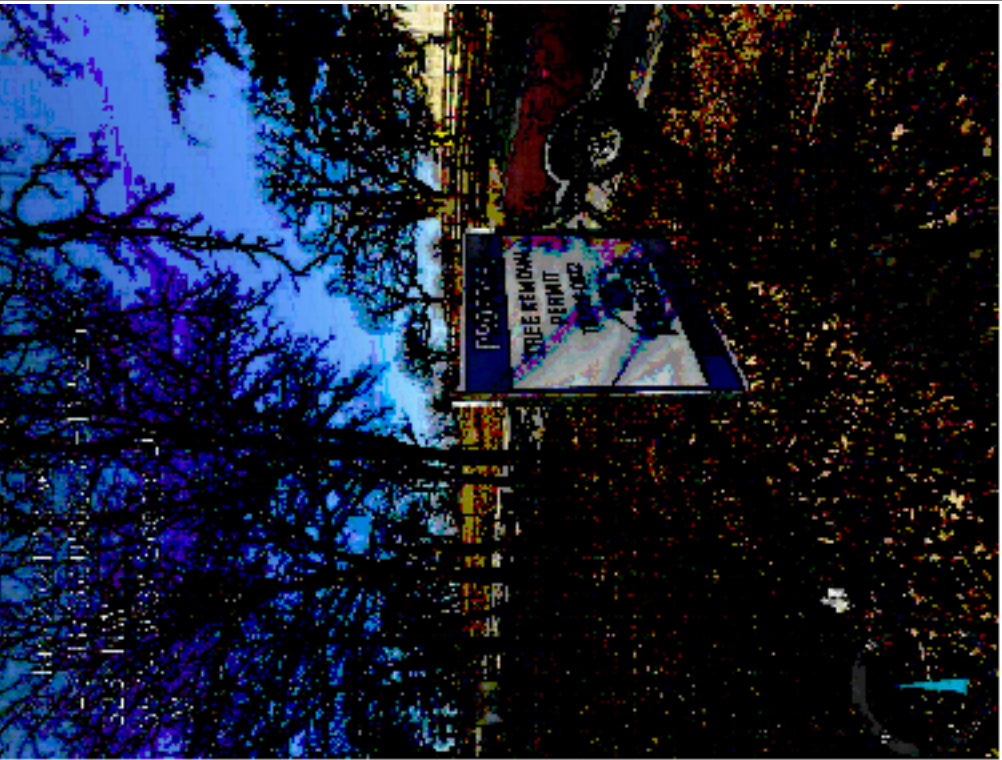
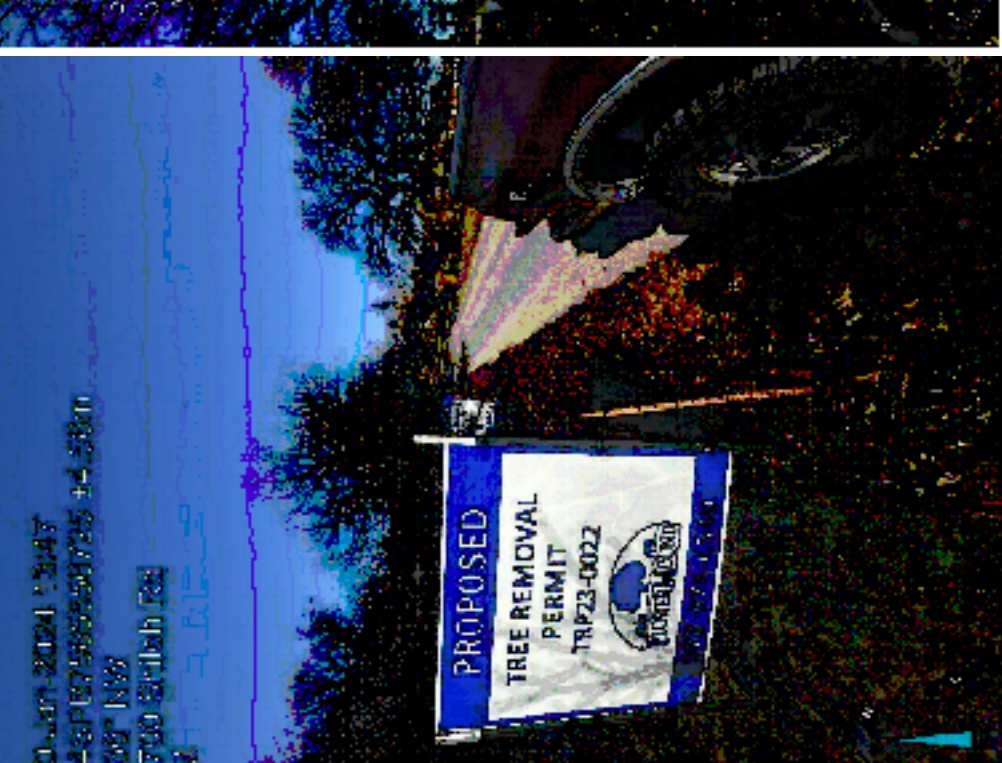
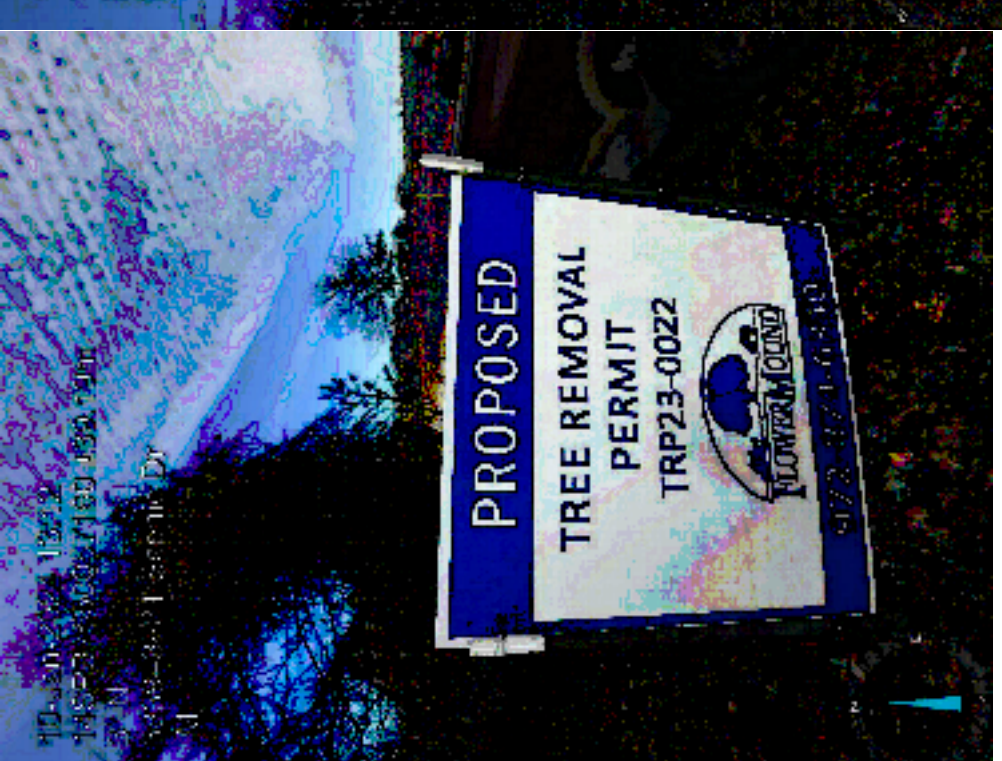
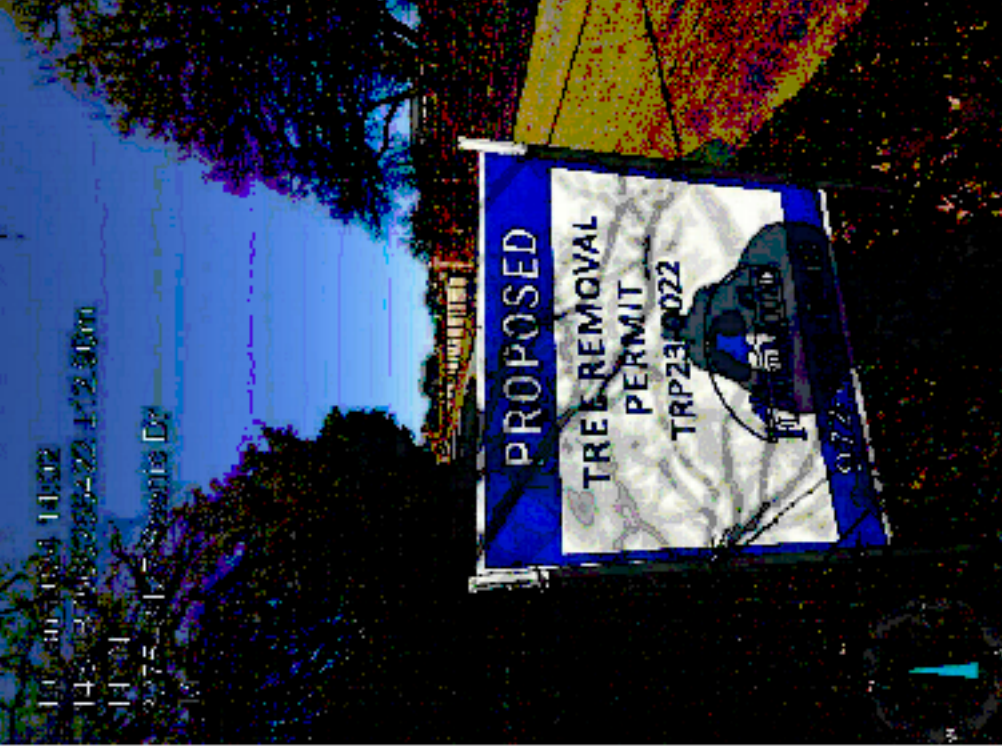
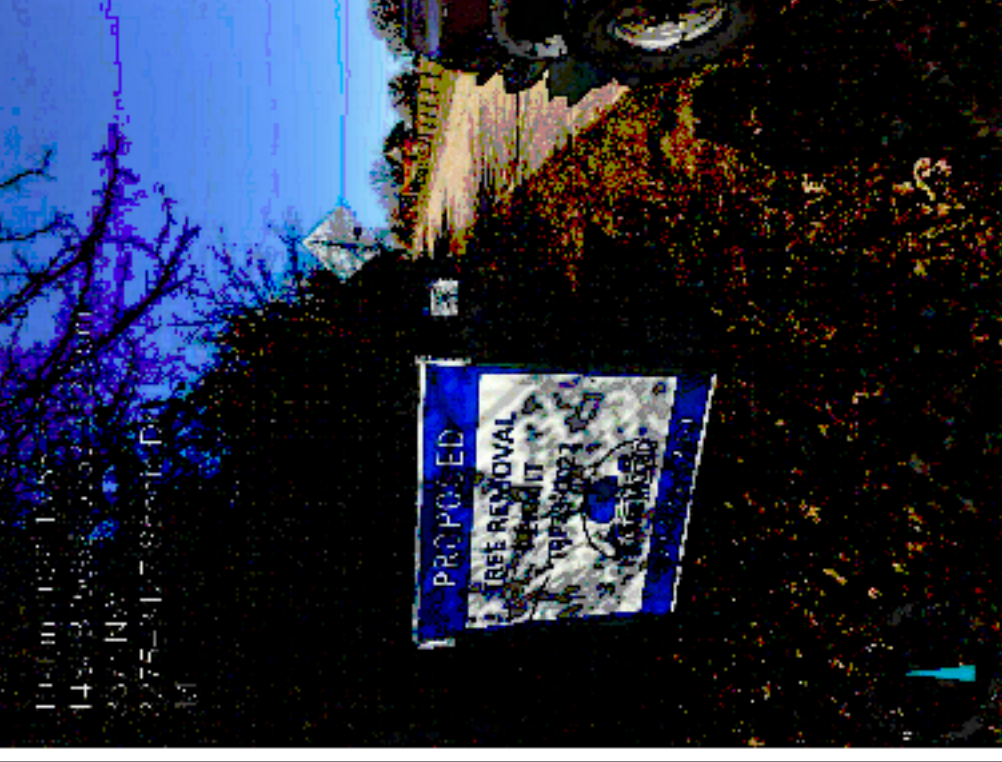
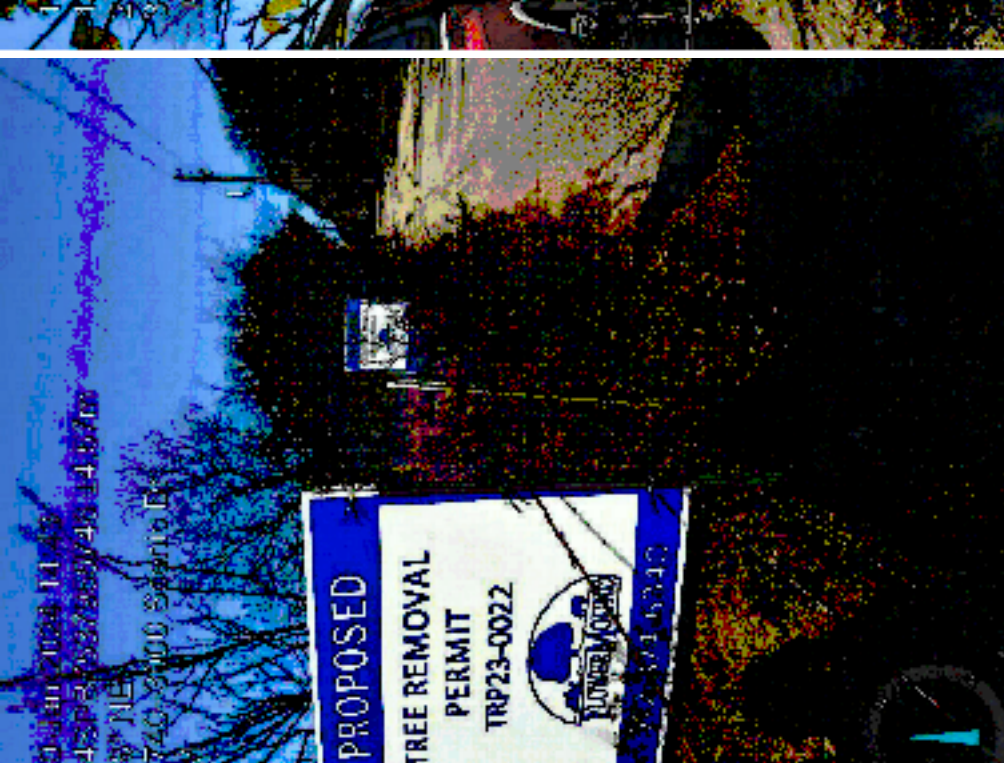
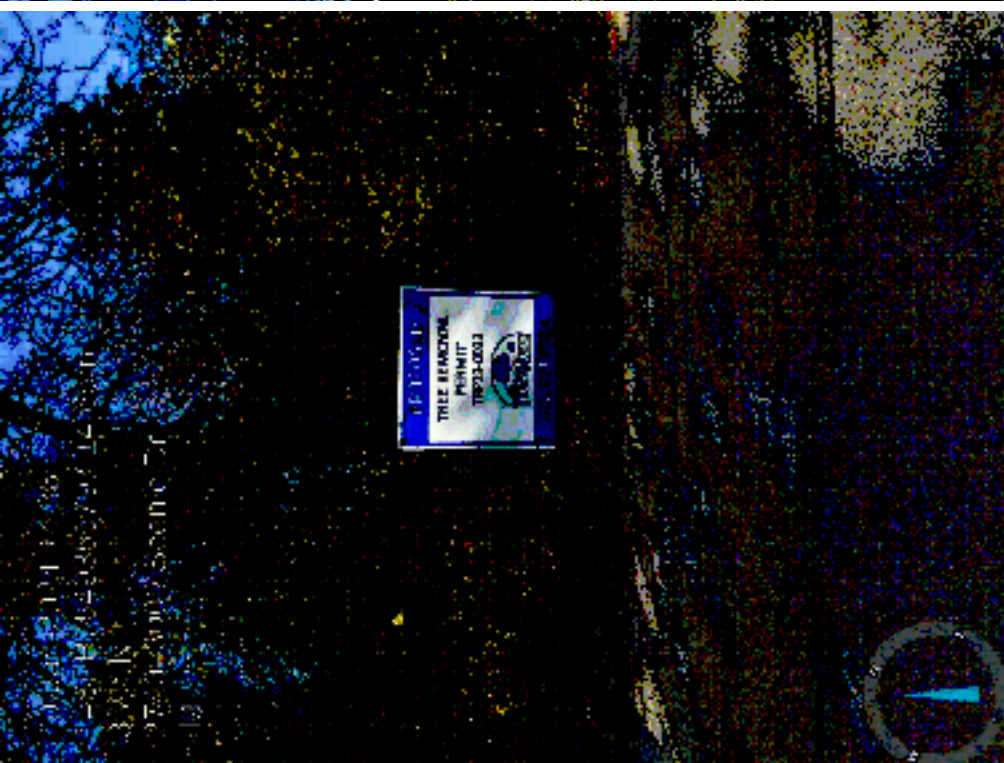
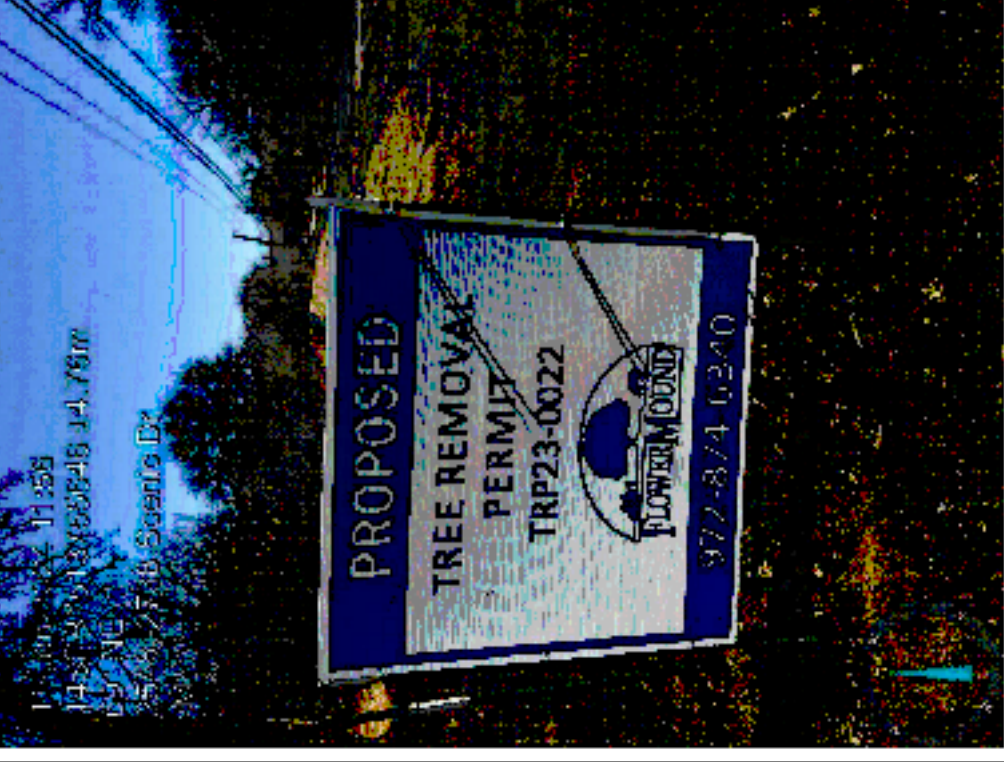
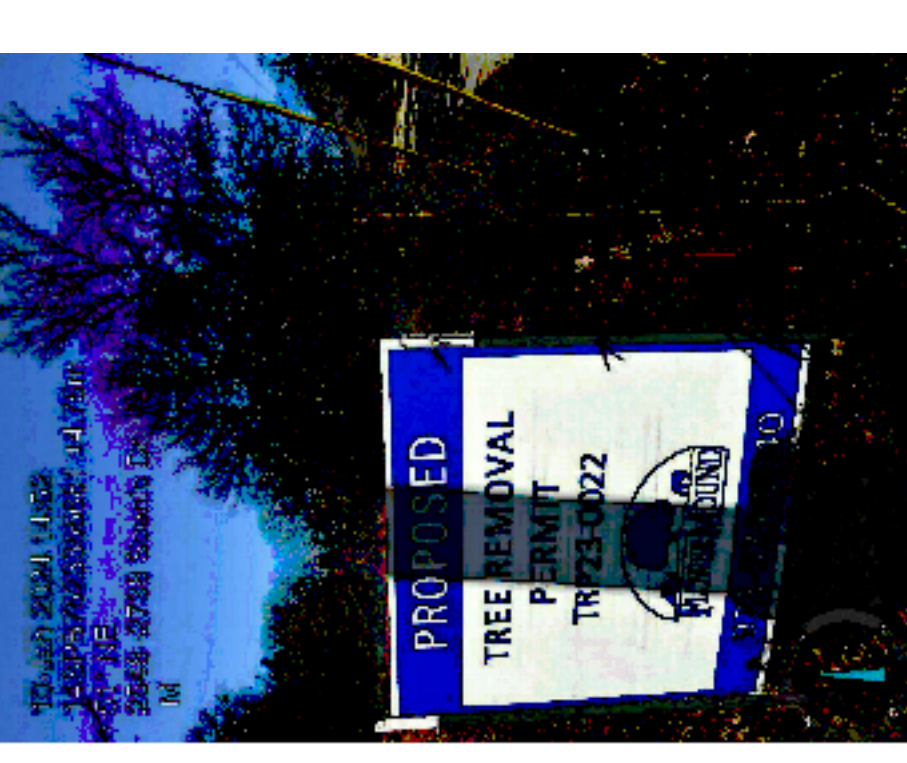
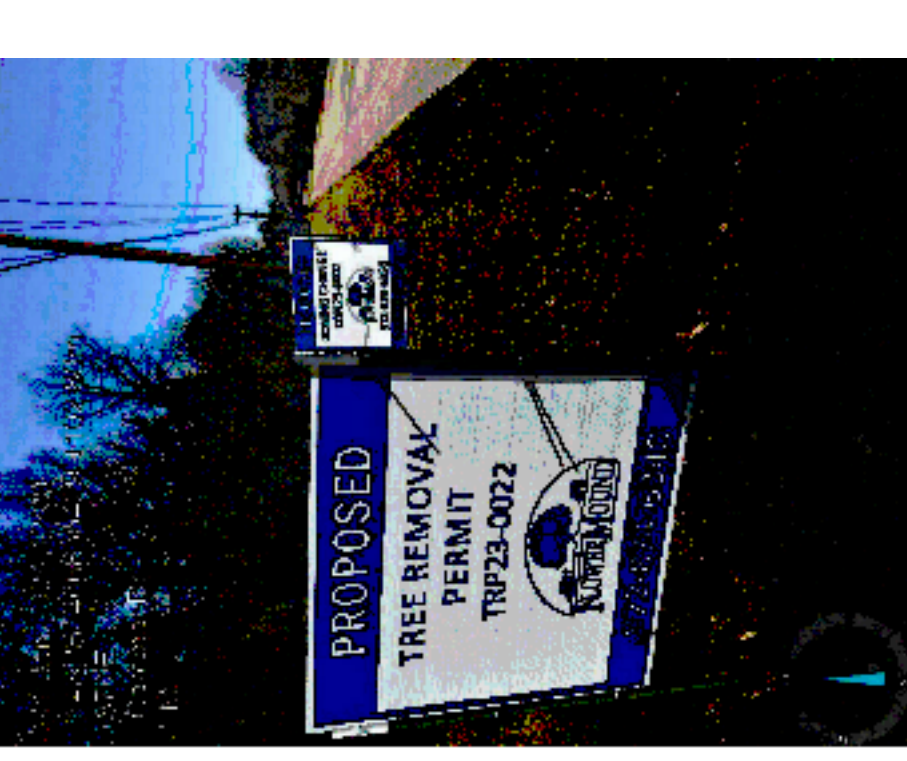
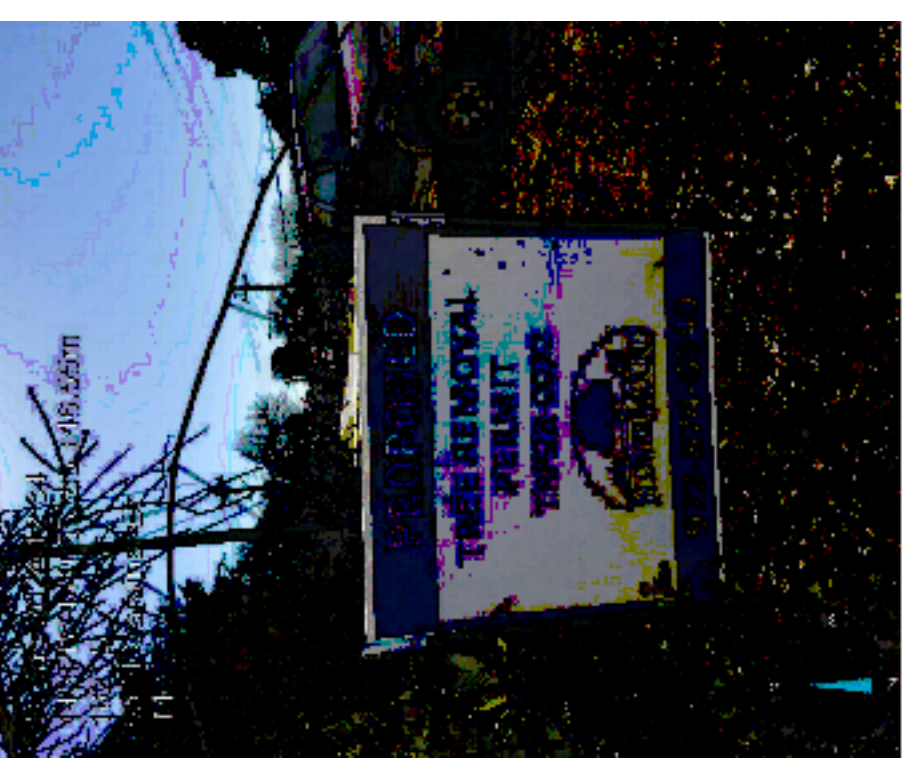
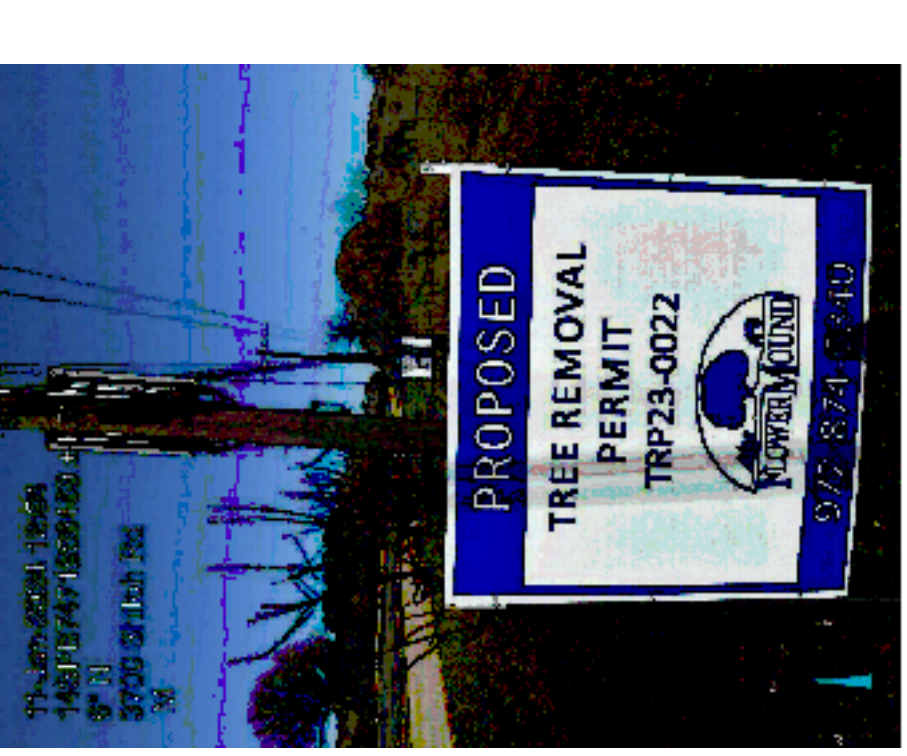
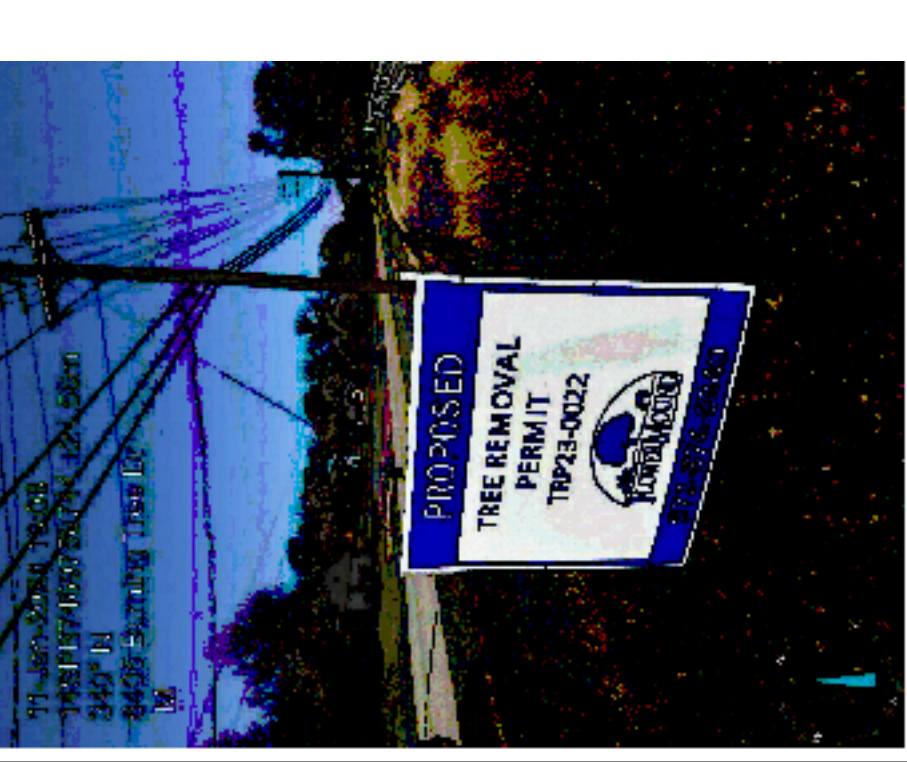
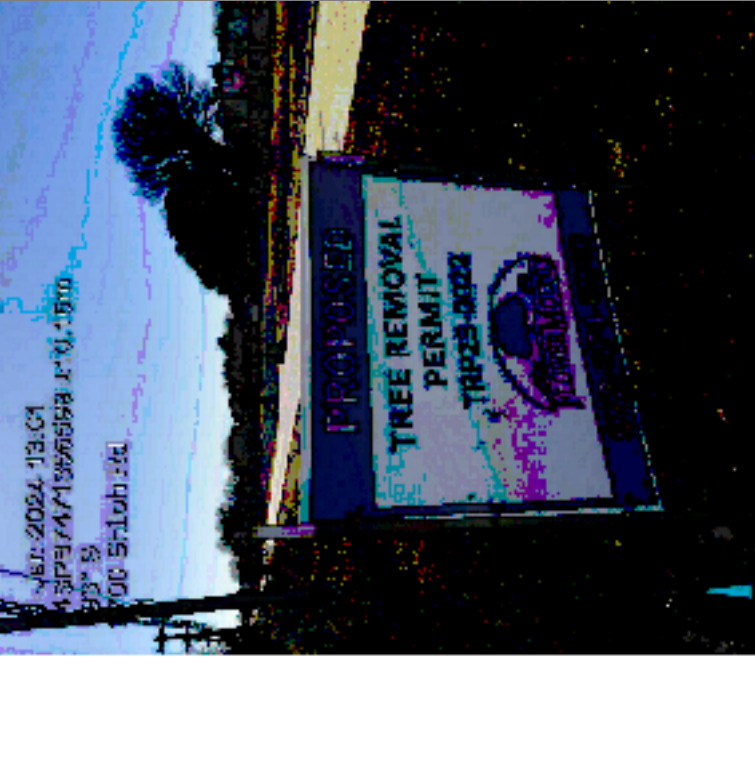
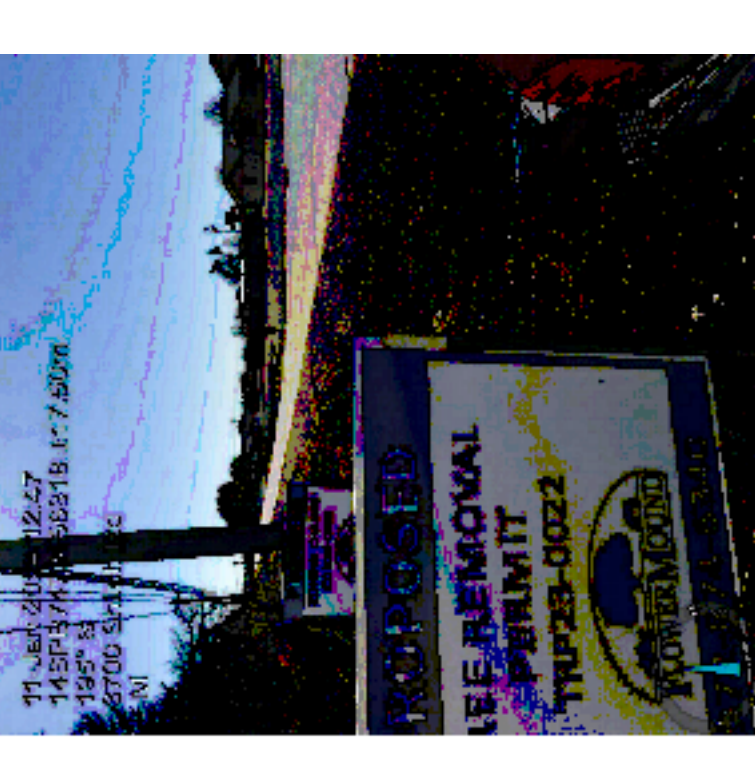
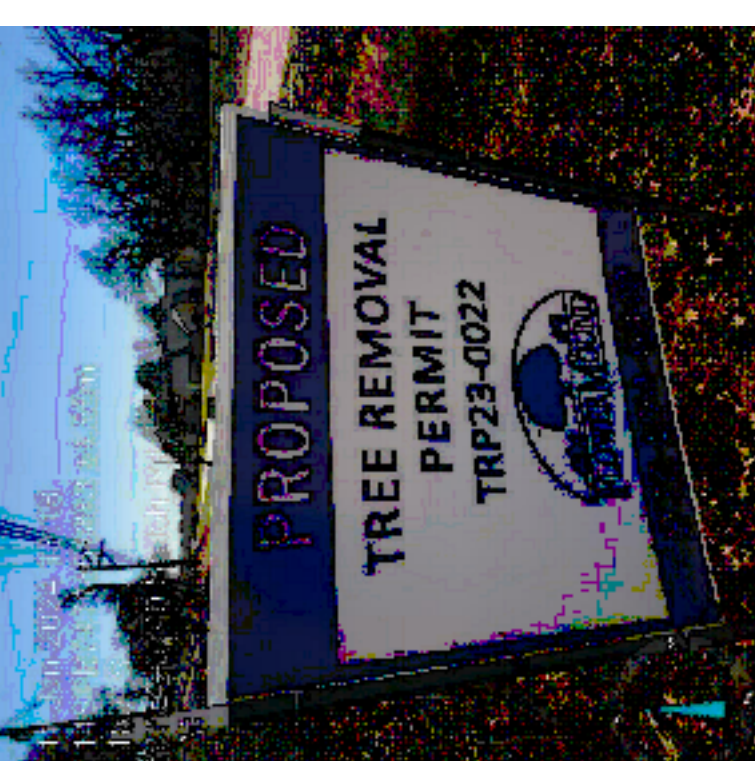
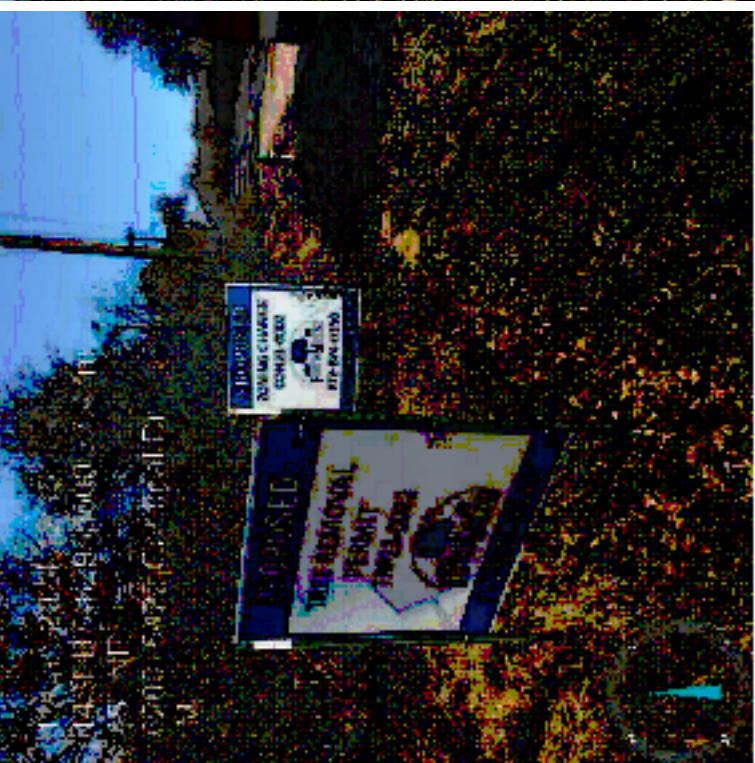
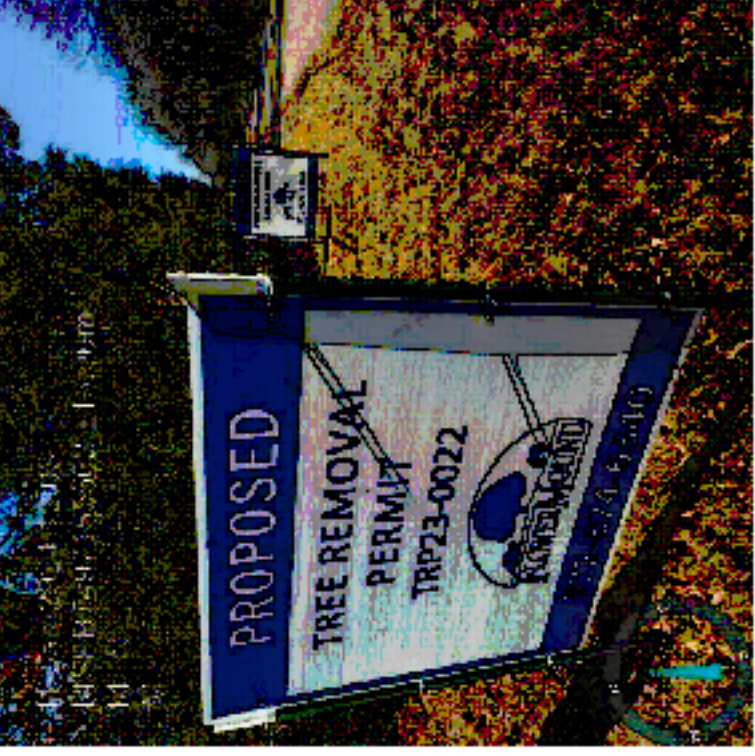
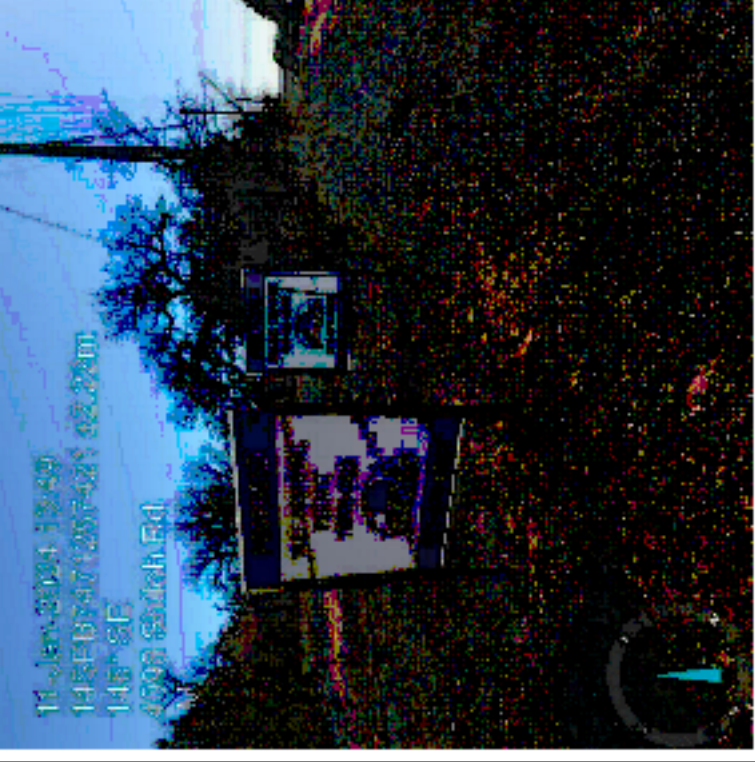
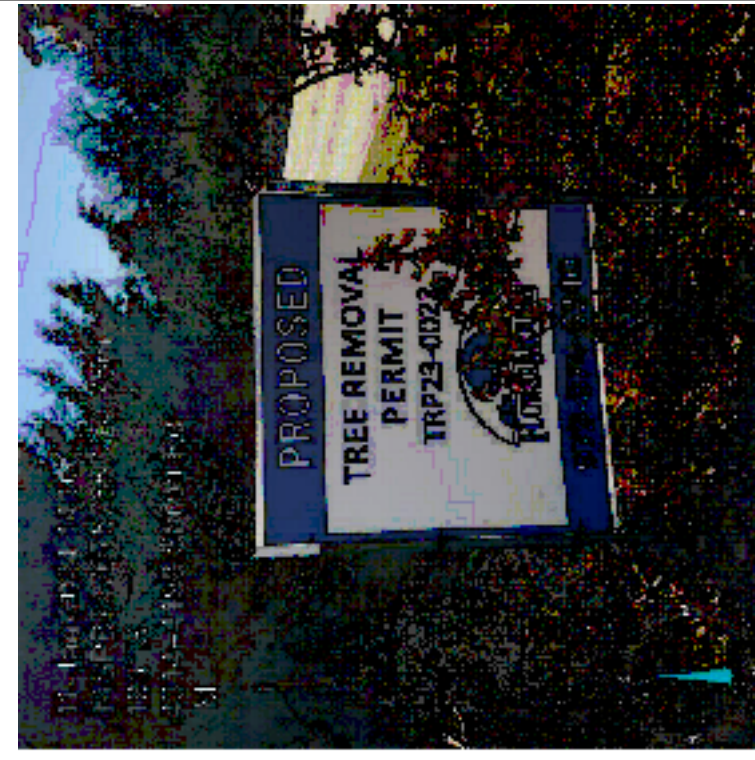
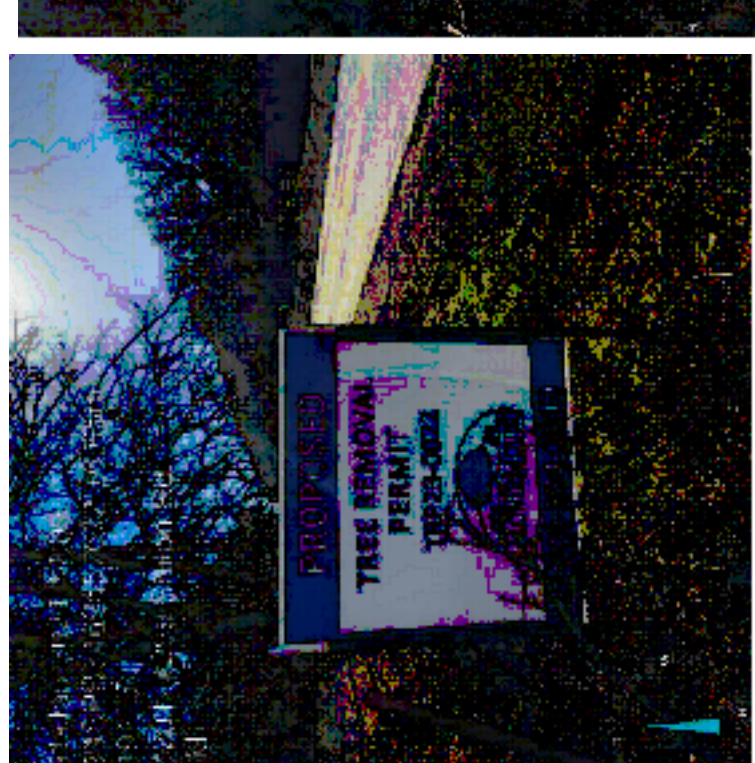
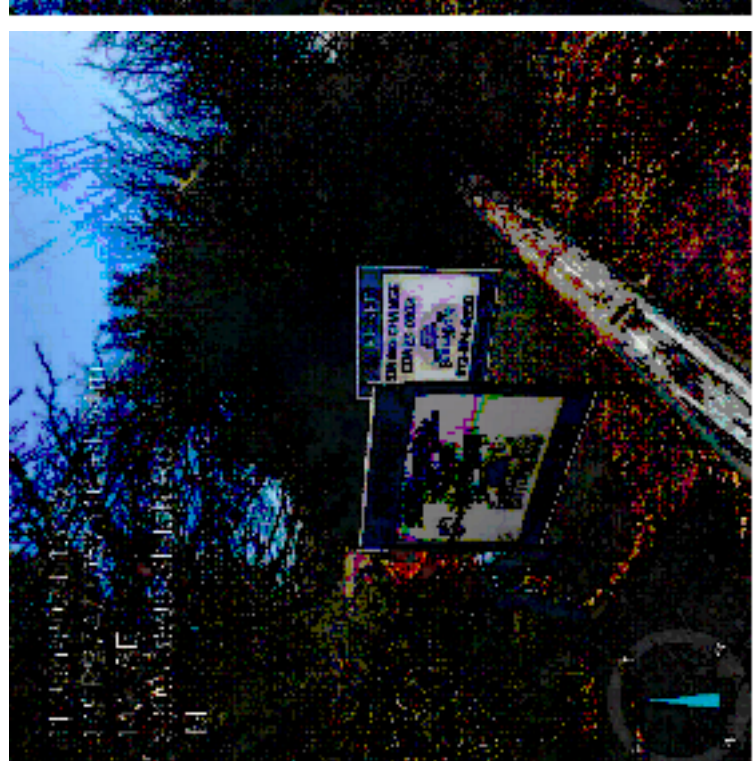
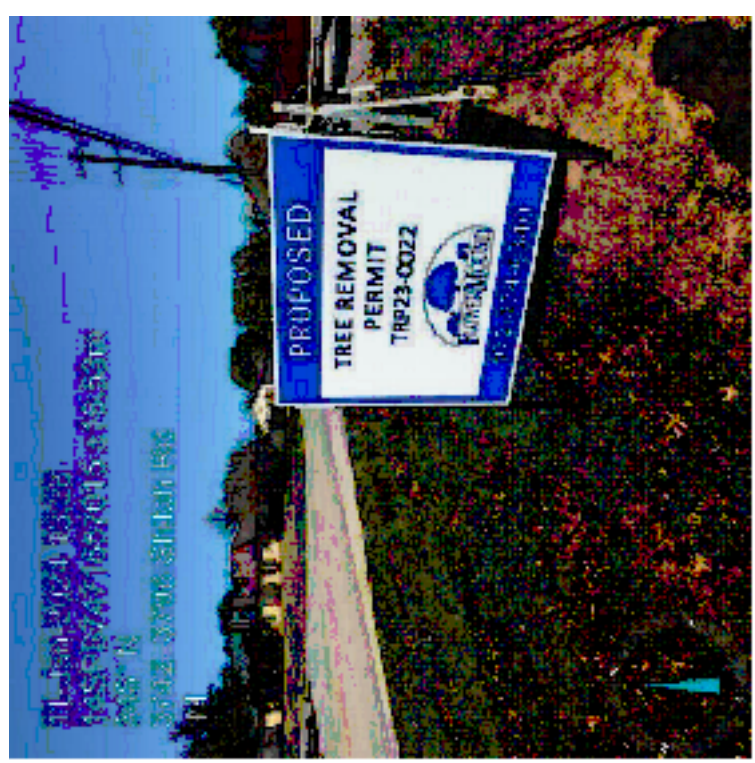
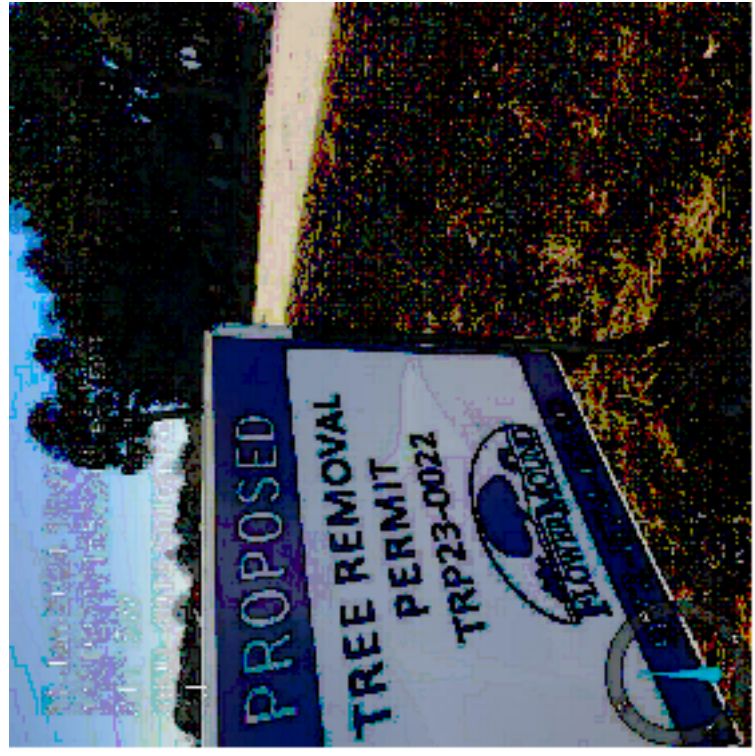
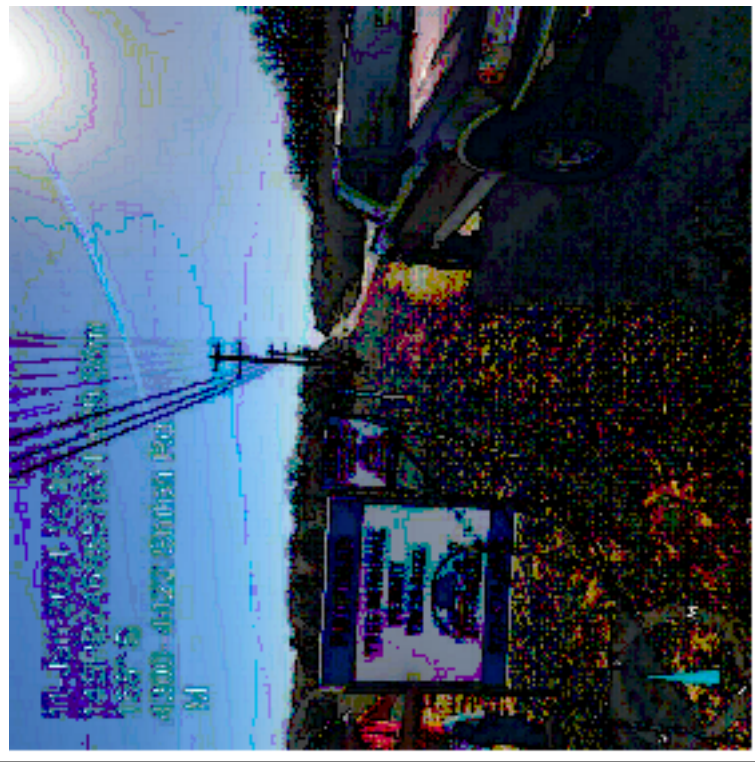
STATE OF TEXAS §
 §
COUNTY OF DENTON §

BEFORE me the undersigned, a Notary Public, on this day personally appeared Sally Smith Mashburn, acting as President of Bob Smith Management Company, LTD., known to me to be the persons whose names are subscribed to the foregoing instrument, and both acknowledged to me that they executed the same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 21st day of April, 2023.


Notary Public in and for the State of Texas





FLOWER MOUND TREE REMOVAL CASE TRP20-0022 INSTALLED 1-10-2024

Date: Mar 05, 2024, 6:07pm User ID: mrmcgregor
File: W:\Projects\2023\23-03-02-12\Project\023-130356-TS.dwg

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Tag #	Scientific Name	Common Name	DBH Height (Feet)	DBH (Inches) (1" DBH=1' RADIUS)	Est. Canopy Spread (Feet)	Condition	Specimen Status	Remove	Remain	Thoroughfare ROW Dedication	Street ROW	Landscape Buffer	Open Space	Buildable Area	Preservation Credits	Preservation Credits (x 3 inches)	Mitigation Multiplier	Required Mitigation (inches)	Remarks	Location
611	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originated at 3 ft some dead wooden in the upper can of feet but all in all healthy tree	Lot 1X, Block B
4001	Quercus stellata	Post oak	4.5	35	70	Good	Specimen		X				X		6	18				Lot 1X, Block B
4002	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block B
4003	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block B
4004	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B
4005	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			double trunk originating grade	Lot 1X, Block B
4006	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B
4007	Quercus stellata	Post oak	4.5	26	52	Fair	Specimen		X				X		6	18			recent large limb loss and some decay in the upper canopy	Lot 1X, Block B
4008	Quercus stellata	Post oak	4.5	29	58	Good	Specimen		X				X		6	18				Lot 1X, Block B
4009	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block B
4010	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B
4011	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block B
4012	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			deltron originating about two and a half feet above grade	Lot 1X, Block B
4013	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18				Lot 1X, Block B
4014	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block B
4016	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			Double trunk originating a foot above grade	Lot 1X, Block B
4017	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18				Lot 1X, Block B
4018	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B
4019	Quercus stellata	Post oak	4.5	33	66	Poor	Specimen		X				X		6	18			significant bark large large fruit and bodies on the trunk massive amounts of decay tree probably won't make it through the winter	Lot 1X, Block B
4019	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block B
4021	Quercus stellata	Post oak	4.5	37	74	Good	Specimen		X				X		6	18			double trunk originating a foot above grade	Lot 1X, Block B
4022	Quercus marilandica	Blackjack oak	4.5	20	40	Good	Specimen		X				X		4	12				Lot 1X, Block B
4023	Quercus marilandica	Blackjack oak	4.5	35	70	Good	Specimen		X				X		6	18			it's a large broken lens in the bottom half of the canopy but the tree seems healthy	Lot 1X, Block B
4026	Quercus stellata	Post oak	4.5	42	84	Good	Specimen		X				X		6	18				Lot 1X, Block B
4027	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X	X	6	18				Lot 6, Block B
4028	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B
4029	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B
4030	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18				Lot 1X, Block B
4031	Quercus stellata	Post oak	4.5	31	62	Good	Specimen		X				X		6	18			double trunk originating about two feet above	Lot 1X, Block B
4032	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18				Lot 1X, Block B
4033	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 6, Block B
4034	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			lots of sloughing off bark tree seems to have healed over fine	Lot 7, Block B
4036	Quercus stellata	Post oak	4.5	22	44	Fair	Specimen		X				X		6	18				Lot 1X, Block B
4037	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 16, Block B
4039	Ulmus crassifolia	cedar elm	4.5	29	58	Fair	Specimen		X				X		5	15			tree has old wound in the lower four feet large cavity but has healed over quite well and there's a lean to it	Lot 1X, Block B
4041	Ulmus americana	American elm	4.5	25	50	Good	Specimen		X				X		5	15				Lot 1X, Block B
4042	Ulmus americana	American elm	4.5	34	68	Good	Specimen		X				X		6	18				Lot 1X, Block B
4043	Quercus stellata	Post oak	4.5	40	80	Good	Specimen		X				X		6	18			triple trunk originating just above grade	Lot 1X, Block B
4046	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X	X	6	18				Lot 10, Block B
4047	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 7, Block B
4048	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 8, Block B
4049	Quercus marilandica	Blackjack oak	4.5	21	42	Good	Specimen	X					X		0		2	42		Lot 7, Block B
4050	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B
4051	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B
4052	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block B
4053	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18			double trunk originating about four feet above grade	Lot 1X, Block B
4054	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originating about four feet above grade	Lot 1X, Block B
4055	Quercus stellata	Post oak	4.5	29	58	Good	Specimen		X				X		6	18				Lot 1X, Block B
4056	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			double trunk originating about 4 ft above grade	Lot 1X, Block B
4057	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X			X				0		2	50		Proposed ROW
4058	Quercus stellata	Post oak	4.5	27	54	Good	Specimen	X			X				0		2	54		Proposed ROW
4059	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 5X, Block A
4060	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 5X, Block A
4061	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen		X				X		6	18			tree has some barks left off and lots of dead wood looks like it's struggling	Lot 5X, Block A
4062	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 5X, Block A
4063	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 5X, Block A
4064	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 5X, Block A
4065	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating about five and a half feet above grade	Lot 5X, Block A
4070	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block F
4071	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating about 3 ft above grade	Lot 1X, Block F
4072	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block F
4073	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block F
4074	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block F
4075	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block F
4076	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block F
4077	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18			double trunk originating about 5 ft	Lot 1X, Block F
4079	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X			X				0		2	44		Proposed ROW
4080	Quercus stellata	Post oak	4.5	29	58	Fair	Specimen	X			X				0		2	58	tree has a lean and is a large dead leader about 25 feet up possible for failure very soon. Tree is relatively healthy the rest of the canopy	Proposed ROW
4081	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X			X				0		2	50		Proposed ROW
4082	Quercus stellata	Post oak	4.5	28	56	Good	Specimen	X			X				0		2	56		Proposed ROW
4083	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block F
4085	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block F
4086	Quercus stellata	Post oak	4.5	32	64	Fair	Specimen		X				X		6	18			cold dominant trunk in about 8 feet up some dead wooden and decay on one of the limbs makes it structurally not as sound as the other	Lot 1X, Block F
4087	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block F
4088	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block F
4090	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 9, Block F
4091	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 9, Block F
4092	Quercus stellata	Post oak	4.5	28	56	Good	Specimen	X					X		0		2	56	root zone on the far west side of the tree was probably compacted could use some fertilization in the future	Lot 10, Block F
4093	Quercus stellata	Post oak	4.5	24	48	Good	Specimen	X					X		0		2	48	root zone on the far west side of the tree was probably compacted could use some fertilization in the future	Lot 11, Block F
4094	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			triple trunk originating about 3 ft above grade The Southern and Western side of this trees root zone was severely compacted need some soil invigorator and their soil piled up around the base of the tree that needs to be removed	Lot 1X, Block F
4095	Quercus stellata	Post oak	4.5	35	70	Good	Specimen		X				X		6	18			triple trunk originating about four feet above grade tree is previously tagged from another inventory number 2087	Lot 1X, Block F
4096	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			DBH is an estimation as tree is completely surrounded by vines	Lot 1X, Block F
4097	Quercus stellata	Post oak	4.5	24	48	Good	Specimen	X					X		0		2	48	tree was previously labeled 1996 in previous inventory	Lot 7, Block E
4098	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X					X		0		2	50	tree was previously labeled 1995 in previous inventory	Lot 7, Block E
4099	Quercus stellata	Post oak	4.5	33	66	Good	Specimen	X					X		0		2	66		Lot 6, Block E
4100	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block F
4101	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X											

Date: Mar 05, 2024, 6:52pm User ID: mrmcraige
File: W:\Projects\102133\102133.dwg Plot: 102133.dwg

Tag #	Scientific Name	Common Name	DBH Height (Feet)	DBH (Inches) (1" DBH=1 RADIUS)	Est Canopy Spread (Feet)	Condition	Specimen Status	Remove	Remain	Thoroughfare ROW	Street ROW	Landscape Buffer	Open Space	Buildable Area	Preservation Credits	Preservation Credits (x 3 inches)	Mitigation Multiplier	Required Mitigation (inches)	Remarks	Location
4263	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				Lot 18, Block D
4264	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 18, Block D
4265	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X		0	2	44		Lot 18, Block D
4266	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block D
4267	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block D
4268	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block D
4269	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block D
4270	Quercus stellata	Post oak	4.5	37	74	Good	Specimen		X				X		6	18				Lot 1X, Block D
4271	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X			X			1	3				Lot 1X, Block D
4272	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X			X			1	3				Lot 1X, Block D
4303	Quercus stellata	Post oak	4.5	29	58	Good	Specimen	X			X					0	2	58		Proposed ROW
6006	Quercus stellata	Post oak	4.5	30	60	Fair	Specimen		X											Lot 7, Block D
6009	Quercus marilandica	Black Jack oak	4.5	23	46	Fair	Specimen		X					X	6	18				Lot 14, Block D
6011	Ulmus americana	American elm	4.5	25	50	Good	Specimen	X			X			X	4	12				Proposed ROW
6022	Juglans nigra	Walnut	4.5	25	50	Good	Specimen	X						X		0	2	50		Lot 14, Block E
6027	Quercus marilandica	Black Jack oak	4.5	22	44	Good	Specimen	X						X		0	2	44		Lot 14, Block E
6037	Quercus stellata	Post oak	4.5	40	80	Fair	Specimen	X						X		0	2	80		Lot 38, Block D
6038	Quercus stellata	Post oak	4.5	23	46	Poor	Specimen	X			X					0	2	46		Proposed ROW
6039	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block D
6042	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 40, Block D
6043	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 40, Block D
6044	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X					X	6	18				Lot 41, Block D
6045	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block D
6046	Quercus stellata	Post oak	4.5	22	44	Fair	Specimen		X					X	6	18				Lot 28, Block D
6047	Quercus stellata	Post oak	4.5	46	92	Fair	Specimen		X				X		6	18				Lot 1X, Block D
6048	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block D
6049	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block D
6050	Ulmus americana	American elm	4.5	46	92	Good	Specimen		X				X		6	18				trees and generally good health multi stem covered in weeds and a good amount of dead what he needs to be done DBH IS ESTIMATE TO MUCH DEBRIS TO GET ACCURATE
6051	Ulmus americana	American elm	4.5	26	52	Good	Specimen		X				X		5	15				trees and generally good health multi stem covered in weeds and a good amount of dead what he needs to be done DBH IS ESTIMATE TO MUCH DEBRIS TO GET ACCURATE
6052	Quercus stellata	Post Oak	4.5	28	56	Good	Specimen		X				X		6	18				trees and good health multiple brakes and rot didn't need to be removed but considering placement tree at the middle of the woods that appropriate for tree in its location
6053	Quercus stellata	Post Oak	4.5	28	56	Good	Specimen		X				X		6	18				trees and good health multiple brakes and rot didn't need to be removed but considering placement tree at the middle of the woods that appropriate for tree in its location
6054	Quercus stellata	Post oak	4.5	27	54	Good	Specimen	X			X					0	2	54		Proposed ROW
6055	Quercus marilandica	Blackjack oak	4.5	26	52	Good	Specimen		X			X			1	3				Major deadwitting in the lower canopy all at all pretty standard for a tree and it's location surrounded by a lot of other trees and foliage
6056	Ulmus americana	American elm	4.5	26	52	Fair	Specimen		X				X		5	15				lots of dead wouldn't eat in the tree it is a four stem tree with fair to poor structure
6057	Quercus stellata	Post oak	4.5	26	52	Fair	Specimen		X				X		6	18				large dead limb four feet off the trunk with decay tree is in relatively good shape is on the side of a riverbed held over and erosion has exposed what used to be the root ball tree is not structurally sound in the root zone
6058	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X			X			1	3				The two stem post oak originating at soil grade trees next to roadway and good shape
6059	Quercus stellata	Post oak	4.5	33	66	Good	Specimen		X				X		6	18				The two trunk split at about two feet from ground
6060	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				The two trunk split at 5 ft from the ground
6061	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18				The two trunk split at 2 ft from the ground
6062	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				
6063	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X					X	6	18				double trunk begins at about 6 ft about a foot and a half long inclusion in the double trunk could possibly be a point of failure in the future recommend bracing
6064	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				double trunk beginning at 3 ft 3 good structure some large dead wooden but nothing too major
6065	Quercus stellata	Post oak	4.5	31	62	Good	Specimen		X				X		6	18				double trunk beginning at grade you are
6066	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				
6067	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				
6068	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X		0	2	44		double trunk originating grade
6069	Quercus stellata	Post oak	4.5	49	98	Good	Specimen		X				X		6	18				double trunk originating three feet above grade
6070	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				triple trunk
6071	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				
6072	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				6 stems originating from grade
6073	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				triple trunk originating a grade
6074	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				double trunk
6075	Quercus stellata	Post oak	4.5	39	78	Fair	Specimen		X				X		6	18				for trunks fair amount of decay in a couple of trunks limbs that need to be removed on the lower part might not be a specimen tree after
6076	Ulmus crassifolia	Cedar elm	4.5	20	40	Good	Specimen		X				X		4	12				the trees on the side of a washout causing strange root structure but otherwise in good health
6080	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				dual stem originating 8 in above grade
6082	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				some larger dead wedding be but all in all pretty good shape
6083	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				
6084	Quercus marilandica	Blackjack oak	4.5	19	38	Fair	Specimen		X				X		4	12				a double stem tree originating 6 in above gradethe trees in pretty good shape large and small dead wedding on both stocks
6085	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18				for stem oak originating six inches above grade lowered dead wooden in pretty good shape
6086	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				large dead wedding in the bottom of the tree all in on pretty good health
6087	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				
6088	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18				
6089	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				
6090	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				
6091	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18				
6093	Quercus marilandica	Black Jack oak	4.5	21	42	Good	Specimen		X				X		4	12				Major dead wedding in the lower half the canopy but the top half of the canopy looks pretty healthy
6094	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				some minor dead woodingbut a large leader needs to be removed to prevent further decay
6095	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				
6096	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				
6097	Quercus stellata	Post oak	4.5	29	58	Good	Specimen		X				X		6	18				multiple large deadlins on a lower half of the canopy but the upper half of the canopy is strong
6098	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				
6099	Ulmus americana	American elm	4.5	30	60	Good	Specimen		X				X		6	18				force down tree originating about 6 ft from grade All in all and pretty good health minor dead wooding
6100	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				
6101	Ulmus americana	American elm	4.5	26	52	Poor	Specimen		X				X		5	15				triple trunk American elm originating at grade canopy is struggling higher up one lead is broken halfway up
6102	Quercus stellata	Post oak	4.5	26	52	Fair	Specimen		X				X		6	18				triple trunk some dieback in canopy
6103	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X				X		4	12				double trunk some dieback in canopy
6104	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X				X		4	12				
6105	Quercus stellata	Post oak	4.5	27	54	Fair	Specimen		X				X		6	18				One lead broken off and decay on the back side of the tree The other side of the canopy looks okay
6106	Ulmus crassifolia	Cedar elm	4.5	24	48	Good	Specimen		X				X		4	12				triple trunk originating right above grade canopy seems in pretty good health
6107	Ulmus crassifolia	Cedar elm	4.5	29	58	Good	Specimen		X				X		5	15				multi-stem tree
6108	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				
6109	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				some guy back in the lower canopy
6110	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				ml
6111	Ulmus crassifolia	Cedar elm	4.5	33	66	Good	Specimen		X				X		6	18				
6112	Quercus stellata	Post oak	4.5	37	74	Good	Specimen		X				X		6	18				
6113	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				large dead wouldn't get the base of the tree with the upper canopy looks good
6114	Quercus marilandica	Blackjack oak	4.5	23	46	Good	Specimen		X				X		4	12				
6115	Ulmus crassifolia	Cedar elm	4.5	19	38	Fair	Specimen		X				X		4	12				
6117	Quercus marilandica	Post oak	4.5	27	54	Fair	Specimen		X				X		6	18				triple trunk originating 6 in above grade Deadwood in the upper canopy
6118	Quercus marilandica	Blackjack oak	4.5	25	50	Good	Specimen		X											

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Tag #	Scientific Name	Common Name	DBH Height (Feet)	DBH (Inches) (1" DBH=1' RADIUS)	Est. Canopy Spread (Feet)	Condition	Specimen Status	Remove	Remain	Thoroughfare ROW	Street ROW	Landscape Buffer	Open Space	Buildable Area	Preservation Credits	Preservation Credits (x 3 inches)	Mitigation Multiplier	Required Mitigation (inches)	Remarks	Location	
6137	Quercus stellata	Post oak	4.5	32	64	Fair	Specimen		X				X		6	18			there's lots of dead wooden enlarge lower limb dead in	Lot 1X, Block B	
6138	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6139	Ulmus crassifolia	Cedar elm	4.5	21	42	Good	Specimen		X				X		4	12				Lot 1X, Block B	
6142	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6143	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X			X				0		2	50		Proposed ROW	
6144	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6145	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6146	Quercus marilandica	Blackjack oak	4.5	20	40	Good	Specimen		X				X		4	12				Lot 1X, Block B	
6147	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			double trunk originating six inches above the grade	Lot 1X, Block B	
6148	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			large dead wooden in the lower half of the canopy	Lot 1X, Block B	
6149	Quercus stellata	Post oak	4.5	33	66	Good	Specimen		X				X		6	18			large dead wooden in the lower half of the canopy	Lot 1X, Block B	
6150	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6151	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6153	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			for Sam originating at grade minor dead wooding trees in very good shape	Lot 1X, Block B	
6154	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6155	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating about 10 in above grade	Lot 1X, Block B	
6156	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6157	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk original about 6 in above grade	Lot 1X, Block B	
6158	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			double trunk original about 6 in above grade	Lot 1X, Block B	
6159	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18			large dead wedding in the bottom quarter the canopy otherwise trees very healthy	Lot 1X, Block B	
6160	Ulmus crassifolia	Cedar elm	4.5	30	60	Good	Specimen		X				X		5	15			triple trunk originating at grade and above various dead wooding and poor structure but trees very healthy	Lot 1X, Block B	
6161	Ulmus crassifolia	Cedar elm	4.5	29	58	Good	Specimen		X				X		5	15			triple trunk originating at grade and above various dead wooding and poor structure but trees very healthy	Lot 1X, Block B	
6163	Quercus stellata	Post oak	4.5	32	64	Good	Specimen	X			X				0		2	64		Proposed ROW	
6164	Quercus stellata	Post oak	4.5	33	66	Good	Specimen	X			X				0		2	66		Proposed ROW	
6166	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block B	
6167	Quercus marilandica	Blackjack oak	4.5	22	44	Good	Specimen		X				X		4	12			double trunk originating 14 about grade grade	Lot 1X, Block B	
6168	Quercus marilandica	Blackjack oak	4.5	22	44	Good	Specimen		X				X		4	12				Lot 1X, Block B	
6169	Quercus marilandica	Blackjack oak	4.5	23	46	Good	Specimen		X				X		4	12				Lot 1X, Block B	
6170	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6171	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block B	
6172	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X	X	6	18				Lot 42, Block B	
6173	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen		X						4	12				Lot 42, Block B	
6176	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen		X				X		6	18			triple trunk originating at grade and 6 in above. One Lamb has fair amount of decay	Lot 2X, Block B	
6177	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18			triple trunk originating 12 in from ground some structural issues with the trees relatively healthy	Lot 2X, Block B	
6178	Quercus stellata	Post oak	4.5	31	62	Good	Specimen		X				X		6	18			multi stem tree with some decay in the lower is that need to be pruned out but overall healthy tree	Lot 2X, Block B	
6182	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating at	Lot 1X, Block B	
6183	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			double trunk originating at	Lot 1X, Block B	
6184	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			triple trunk originating at grade	Lot 1X, Block B	
6185	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			double trunk originating 4 in above grade	Lot 1X, Block B	
6186	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6187	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6188	Quercus stellata	Post oak	4.5	32	64	Fair	Specimen		X				X		6	18			lots of decade all the branches in the lower part of the tree poor root structure as it's on the side of a washout	Lot 1X, Block B	
6189	Quercus stellata	Post oak	4.5	40	80	Good	Specimen		X				X		6	18			however it is on the side of a washout kind of unstable root structure	Lot 1X, Block B	
6190	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			however it is on the side of a washout kind of unstable root structure	Lot 1X, Block B	
6191	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen	X						X	0	2	38			Lot 47, Block B	
6192	Quercus marilandica	Blackjack oak	4.5	21	42	Good	Specimen	X						X	0	2	42			triple originating a foot above grade	Lot 47, Block B
6194	Quercus stellata	Post oak	4.5	26	52	Good	Specimen	X						X	0	2	52			double trunk originating 5-ft from grade	Lot 45, Block D
6196A	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X						X	0	2	46			double trunk originating from 2 ft above grade	Lot 43, Block B
6199	Quercus stellata	Post oak	4.5	46	92	Good	Specimen		X					X	6	18			Multi-Stem originating at about 3 feet above grade massive tree previously tagged 1525 from a previous inventory DBH is an estimate as it's completely surrounded by briar, tree may suffer in the future due to its proximity to the land compaction con	Lot 35, Block H	
6200	Quercus stellata	Post oak	4.5	24	48	Fair	Specimen	X						X	0	2	48				Lot 1, Block J
6201	Quercus stellata	Post oak	4.5	34	68	Good	Specimen		X					X	6	18			triple trunk originating from grade Deadwood in the lower half of the tree but otherwise trees very healthy	Lot 7, Block J	
6202	Quercus stellata	Post oak	4.5	34	68	Good	Specimen	X						X	0	2	68			double trunk originating a foot from grade	Lot 7, Block J
6203	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X	0	2	44				Lot 32, Block B
6204	Quercus stellata	Post oak	4.5	28	56	Good	Specimen	X						X	0	2	56				Lot 32, Block B
6205	Quercus stellata	Post oak	4.5	26	52	Good	Specimen	X						X	0	2	52			bottom side of the trunk is decade trees healed over looks pretty healthy in the upper canopy however DBH is an estimation due to being completely surrounded by briar	Lot 32, Block B
6207	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X			X			1	3				Lot 1X, Block B	
6208	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X					X	6	18				Lot 34, Block B	
6209	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X			X				0	2	46				Proposed ROW
6210	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 34, Block B	
6211	Quercus stellata	Post oak	4.5	29	58	Good	Specimen		X					X	6	18				Lot 34, Block B	
6213	Quercus stellata	Post oak	4.5	26	52	Good	Specimen	X			X				0	2	52			triple trunk originating 18 in above grade	Proposed ROW
6214	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			triple trunk originating about 10 in from grade some deadwood in the lower canopy but trees in overall good health	Lot 1X, Block B	
6215	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			double trunk originating about a foot above the ground trees in overall good health	Lot 1X, Block B	
6216	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			double trunk originating about a foot above the ground trees in overall good health	Lot 1X, Block B	
6217	Quercus stellata	Post oak	4.5	37	74	Good	Specimen		X				X		6	18			triple trunk trees and relatively good health minor dead wooding in canopy	Lot 1X, Block B	
6218	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18			multiple trunk tree originating about 8 in above grade	Lot 1X, Block B	
6219	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			multiple trunk tree originating at Grade	Lot 1X, Block B	
6220	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18			double trunk originating a foot above grade	Lot 1X, Block B	
6221	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X			X			1	3			double trunk originating just above	Lot 1X, Block B	
6222	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X			X			1	3			double trunk originating just above	Lot 1X, Block B	
6223	Quercus stellata	Post oak	4.5	37	74	Good	Specimen	X						X	0	2	74			double trunk originating about a foot above the grade	Lot 1X, Block B
6224	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X	0	2	44			b multican originating from about 1 ft above grade	Lot 36, Block B
6226	Quercus marilandica	Blackjack oak	4.5	26	52	Good	Specimen		X	X					5	15			Multi-Stem tree originating from grade canopies and good health lots of dead wedding	Lot 38, Block B	
6227	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen		X			X			1	3			ROW Dedication	Lot 1X, Block B	
6228	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X	X					6	18			large dead wood in the lower half of the canopy but tree is otherwise in good health	ROW Dedication	
6229	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X	X					6	18			Deadwood and canopy minor	ROW Dedication	
6230	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X			X			1	3				Lot 1X, Block B	
6231	Quercus marilandica	Blackjack	4.5	21	42	Good	Specimen		X	X					4	12			deadwitting a lower half of the canopy otherwise trees healthy	ROW Dedication	
6232	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X	X					6	18			Minor deding the lower half of the canopy otherwise trees healthy	ROW Dedication	
6233	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X	X					6	18				ROW Dedication	
6234	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X			X			1	3				Lot 1X, Block B	
6235	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block B	
6236	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			minor dead wedding	Lot 1X, Block B	
6237	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			minor dead wedding	Lot 1X, Block B	
6239	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X												

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Tag #	Scientific Name	Common Name	DBH Height (Feet)	DBH (inches) (1" DBH=1' RADIUS)	Est. Canopy Spread (Feet)	Condition	Specimen Status	Remove	Remain	Thoroughfare ROW Dedication	Street ROW	Landscape Buffer	Open Space	Buildable Area	Preservation Credits	Preservation Credits (x 3 inches)	Mitigation Multiplier	Required Mitigation (inches)	Remarks	Location
6260	Quercus stellata	Post oak	4.5	31	62	Good	Specimen		X					X	6	18				Lot 26, Block B
6261	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 25, Block B
6262	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			large dead wood in the lower half otherwise in good health	Lot 1X, Block B
6263	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating about a foot above grade	Lot 1X, Block B
6265	Quercus marilandica	Blackjack oak	4.5	31	62	Poor	Specimen		X				X		6	18			the trees in severe decline probably won't make it through the winter triple trunk originating at 4 ft	Lot 1X, Block B
6266	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen		X				X		6	18			triple trunk originating about a foot above grade	Lot 1X, Block B
6269	Quercus marilandica	Blackjack oak	4.5	20	40	Good	Specimen		X					X	4	12			tree seems fair health but there's large dead wood all over the canopy	Lot 1X, Block B
6271	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18			double trunk originating at 3 ft lost a deadwood in the lower canopy but rest of the tree seems healthy	Lot 23, Block B
6272	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X				X		4	12			double trunk originating just above grade	Lot 1X, Block I
6273	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X				X		4	12			triple trunk originating 4 ft above grade and at grade	Lot 1X, Block I
6274	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X		0	2	44	deviation estimated as it is completely covered in vine and bush unable to accurately measure	Lot 15, Block G
6275	Quercus stellata	Post oak	4.5	24	48	Good	Specimen	X						X		0	2	48	double trunk originating at 1 ft	Lot 16, Block G
6277	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X			X					0	2	44		Proposed ROW
6279	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X			X					0	2	46		Proposed ROW
6280	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X	X					6	18				ROW Dedication
6281	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X			X			6	18			double trunk originating at 5 ft	Lot 1X, Block B
6282	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X						6	18			double trunk originating at 4.5 ft	ROW Dedication
6283	Ulmus crassifolia	Cedar elm	4.5	42	84	Good	Specimen		X	X					6	18			estimated deviation is completely surrounded by debris and lines tree is most likely in fair shape good to good shape based on appearances unable to tell because of the season for sure	ROW Dedication
6284	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X					X	4	12				Lot 20, Block G
6285	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			large dead wooden on the bottom but otherwise the tree is in good health bark inclusion up to about six feet possible can it for through bracing	Lot 1X, Block G
6286	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block G
6287	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block G
6288	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block G
6289	Ulmus crassifolia	Cedar elm	4.5	22	44	Good	Specimen		X					X	4	12				Lot 20, Block G
6290	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X					X	4	12				Lot 20, Block G
6291	Quercus stellata	Post oak	4.5	36	72	Fair	Specimen		X	X					6	18			lots of dead wood and a little decay the lower part of the trunk but all in all it's in pretty good shape lots of major breaks though	ROW Dedication
6292	Ulmus crassifolia	Cedar Elm	4.5	21	42	Good	Specimen		X				X		4	12			multi trunk originates at grade	Lot 1X, Block G
6293	Quercus stellata	Post oak	4.5	32	64	Good	Specimen		X				X		6	18			double trunk originating about a foot from the ground	Lot 1X, Block G
6294	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block G
6295	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block G
6296	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originating about a foot above grade	Lot 1X, Block G
6297	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			double trunk originating about a foot above grade	Lot 1X, Block G
6298	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block G
6299	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			double trunk originating at	Lot 1X, Block G
6300	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block G
6301	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18			double trunk originating above grade trees on the side of River vene not a root structure but it's in very good health	Lot 1X, Block G
6302	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block G
6303	Quercus stellata	Post oak	4.5	35	70	Fair	Specimen		X				X		6	18			double trunk originating above grade tree is had some large structural failures recently and in the past but it seems to be in good health probably from high winds	Lot 1X, Block G
6304	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			double trunk originate about four feet from grade	Lot 1X, Block G
6305	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block G
6306	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block G
6307	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block G
6308	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6309	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6310	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block G
6311	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18			triple trunk originating and grade	Lot 1X, Block G
6312	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18				Lot 1X, Block G
6313	Quercus stellata	Post oak	4.5	34	68	Poor	Specimen		X				X		4	12	2	68	very large leader on the tree broke off there's massive amount of decay the trunk tree that still exists seems in good health but it's obviously declining	Open Space
6314	Ulmus crassifolia	Cedar elm	4.5	19	38	Good	Specimen		X				X		4	12			triple trunk originating ad 2 ft above grade	Lot 1X, Block G
6315	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18			tree originally tag 610 from PVA survey	Lot 1X, Block I
6316	Quercus stellata	Post oak	4.5	29	58	Fair	Specimen	X			X				0	2	58		double trunk originating about a foot and a half above grade tree looks very healthy however some of the root structure on the far side of the tree was compromise lots of decay probably not a good structural tree	Proposed ROW
6317A	Quercus marilandica	Black jack oak	4.5	25	50	Good	Specimen		X					X	5	15				Lot 10, Block G
6317B	Quercus marilandica	Black jack oak	4.5	27	54	Good	Specimen		X					X	5	15				Lot 10, Block G
6317C	Quercus marilandica	Black jack oak	4.5	29	58	Good	Specimen		X					X	5	15				Lot 10, Block G
6318	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			double trunk originating about a foot and a half above grade tree looks very healthy however some of the root structure on the far side of the tree was compromise lots of decay probably not a good structural tree	Lot 1X, Block G
6319	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block G
6320	Quercus stellata	Post oak	4.5	42	84	Good	Specimen		X					X	6	18				Lot 8, Block G
6321	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block G
6323	Quercus stellata	Post oak	4.5	30	60	Good	Specimen		X				X		6	18			double trunk originating at grade	Lot 1X, Block G
6324	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6325	Quercus stellata	Post oak	4.5	34	68	Poor	Specimen		X				X		6	18			the main lead had a large amount of decay in his failed some time ago tree is still living but it's only got one large branch with healthy growth	Lot 1X, Block G
6326	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18			double trunk post originating at grade	Lot 1X, Block G
6327	Quercus stellata	Post oak	4.5	28	56	Poor	Specimen		X				X		6	18			double trunk post originating two feet above grade large amounts of bark loss and decay and canopy	Lot 1X, Block G
6328	Quercus marilandica	Blackjack oak	4.5	22	44	Fair	Specimen		X				X		4	12			double trunk one lead is rotted and broke off rest of the tree seems healthy	Lot 1X, Block G
6329	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18			double trunk originating two feet from grade	Lot 1X, Block G
6330	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block G
6331	Ulmus crassifolia	Cedar elm	4.5	29	58	Good	Specimen		X				X		5	15			triple trunk originating at 4 ft from grade	Lot 1X, Block G
6332	Ulmus crassifolia	Cedar elm	4.5	23	46	Good	Specimen		X				X		4	12			triple trunk originating at 4 ft from grade	Lot 1X, Block G
6333	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6334	Quercus stellata	Post oak	4.5	48	96	Good	Specimen		X				X		6	18			multi trunk originating at grade	Lot 1X, Block G
6337	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6338	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block G
6339	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen		X					X	4	12				Lot 22, Block G
6340	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen	X			X				0	2	38			Proposed ROW
6341	Quercus marilandica	Blackjack oak	4.5	21	42	Good	Specimen	X			X				0	2	42		double trunk originating at 5 ft	Proposed ROW
6344	Quercus marilandica	Blackjack oak	4.5	23	46	Good	Specimen		X					X	4	12				Lot 23, Block G
6345	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 24, Block G
6346	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X					X	6	18				Lot 24, Block G
6347	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X						X	0	2	50			Lot 24, Block G
6348	Quercus stellata	Post oak	4.5	30	60	Good	Specimen	X						X	0	2	60			Lot 24, Block G
6349	Quercus marilandica	Black Jack oak	4.5	20	40	Good	Specimen		X				X		4	12			double trunk originally about two feet above grade	Lot 1X, Block B
6350	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X						X		0	2	46	double trunk	Lot 19, Block B
6351	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 19, Block B
6352	Quercus stellata	Post oak	4.5	41	82	Good	Specimen	X						X		0	2	82	multi trunk originating at grade	Lot 19, Block B
6353	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X				X		6	18				Lot 1X, Block G
6354	Querc																			

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Tag #	Scientific Name	Common Name	DBH Height (Feet)	DBH (Inches) (1" DBH=1' RADIUS)	Est. Canopy Spread (Feet)	Condition	Specimen Status	Remove	Remain	Thoroughfare ROW Dedication	Street ROW	Landscape Buffer	Open Space	Buildable Area	Preservation Credits	Preservation Credits (x 3 inches)	Mitigation Multiplier	Required Mitigation (inches)	Remarks	Location
6379	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18			triple trunk originating just above grade and higher	Lot 1X, Block B
6380	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X			X			1	3				Lot 1X, Block B
6381	Quercus stellata	Post oak	4.5	37	74	Good	Specimen	X						X		0	2	74	double trunk originating about two feet above grade	Lot 28, Block G
6382	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X						X		0	2	46	Lot 28, Block G	
6383	Quercus stellata	Post oak	4.5	29	58	Good	Specimen	X						X		0	2	58	double trunk originating 3 ft above grade	Lot 28, Block G
6384	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X					X	6	18			Deadwood in the lower canopy with the upper canopy looks healthy	Lot 27, Block G
6385	Quercus marilandica	Black Jack oak	4.5	24	48	Good	Specimen		X					X	4	12			triple trunk originating just above grade	Lot 28, Block G
6386	Quercus stellata	Post oak	4.5	29	58	Good	Specimen		X					X	6	18				Lot 28, Block G
6387	Quercus stellata	Post oak	4.5	39	78	Poor	Specimen		X					X	6	18			multiple stem massive decay on one side of other side is fairly healthy but is in a poor area and is prone to structural failure	Lot 28, Block G
6388	Ulmus crassifolia	Cedar elm	4.5	24	48	Good	Specimen		X				X		4	12				Lot 1X, Block G
6389	Ulmus crassifolia	Cedar elm	4.5	24	48	Good	Specimen		X				X		4	12				Lot 1X, Block G
6390	Ulmus americana	American elm	4.5	28	56	Good	Specimen		X					X	5	15				Lot 2, Block G
6391	Ulmus americana	American elm	4.5	27	54	Good	Specimen		X					X	5	15			triple trunk originating about 3 1/2 ft above grade	Lot 1, Block G
6392	Quercus marilandica	Blackjack oak	4.5	28	56	Good	Specimen		X				X		5	15			triple trunk originating about 3 1/2 ft above grade	Lot 1X, Block G
6393	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block G
6394	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block G
6395	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 26, Block G
6396	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block G
6397	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X				X		6	18				Lot 1X, Block G
6398	Quercus marilandica	Black jack oak	4.5	24	48	Good	Specimen		X				X		4	12				Lot 1X, Block G
6399	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				Lot 23, Block G
6400	Ulmus americana	American elm	4.5	28	56	Good	Specimen		X					X	5	15				Lot 1X, Block G
6401	Ulmus americana	American elm	4.5	32	64	Good	Specimen		X					X	6	18			multicam originating about 4 ft above grade	Lot 1X, Block G
6402	Ulmus americana	American elm	4.5	28	56	Good	Specimen		X				X		5	15			multi trunk originating about 4 ft above grade	Lot 1X, Block G
6403	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X				X		6	18				Lot 1X, Block G
6404	Quercus marilandica	Blackjack oak	4.5	21	42	Good	Specimen	X						X		0	2	42	Lot 5, Block G	
6405	Ulmus crassifolia	Cedar elm	4.5	20	40	Good	Specimen	X			X					0	2	40	Proposed ROW	
6406	Ulmus crassifolia	Cedar elm	4.5	38	76	Good	Specimen	X						X		0	2	76	Lot 8, Block G	
6407	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block G
6408	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block D
6409	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X					X	6	18				Lot 1X, Block D
6410	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X					X	6	18				Lot 1X, Block D
6411	Quercus stellata	Post oak	4.5	25	50	Fair	Specimen		X					X	6	18			the tree has excessive lean and on the leaning side there's a lot of amount of decay tree seems healthy it's recovered but structurally it's not sound. There is very little to no reaction within the bottom six of the tree also it's a double trunk or	Lot 1X, Block D
6412	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen		X					X	6	18			there is trunk damage on the lower 5 ft on the north side of the tree trees healed pretty well but there's a lot of dead in it needs to be dead wooded	Lot 1X, Block D
6413	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block D
6414	Quercus marilandica	Blackjack oak	4.5	19	38	Poor	Specimen	X						X		0	2	38	lots of dead winning the lower heart of the canopy upper canopies partly destroyed but trees still alive	Lot 31, Block D
6415	Quercus stellata	Post oak	4.5	33	66	Good	Specimen	X						X		0	2	66	Lot 5, Block G	
6416	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X					X	6	18				Lot 30, Block D
6417	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block D
6418	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18			double trunk originating just above grade healthy lean but the trees in pretty good shape	Lot 1X, Block D
6419	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18				Lot 1X, Block D
6420	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block D
6421	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				Lot 30, Block D
6422	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X					X	6	18			double trunk originating about a foot and a half above grade lots of dead wooding to lower half of the canopy but the rest is tree looks very healthy	Lot 29, Block D
6423	Quercus stellata	Post oak	4.5	22	44	Fair	Specimen		X					X	6	18			tree looks healthy but in the lower 3 ft on the north side facing there's decay tree sealed over fine overall pretty healthy	Lot 29, Block D
6424	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X				X		6	18				Lot 1X, Block D
6425	Quercus marilandica	Blackjack oak	4.5	19	38	Good	Specimen		X					X	4	12				Lot 1X, Block D
6426	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen		X					X	6	18			on the east side of the tree there is some decay in the bottom two feet trees healed over otherwise pretty healthy	Lot 1X, Block D
6427	Quercus stellata	Post oak	4.5	26	52	Fair	Specimen		X					X	6	18			on the east side of the tree there is some decay in the bottom two feet trees healed over otherwise pretty healthy	Lot 28, Block D
6428	Quercus stellata	Post oak	4.5	26	52	Good	Specimen	X			X					0	2	52	Proposed ROW	
6429	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X			X					0	2	50	Proposed ROW	
6430	Quercus stellata	Post oak	4.5	23	46	Good	Specimen	X			X					0	2	46	previous decay on these inside of the tree tree seems to heal over nicely and he's pretty good shape	Proposed ROW
6432	Quercus stellata	Post oak	4.5	22	44	Good	Specimen	X						X		0	2	44	Lot 37, Block D	
6433	Quercus stellata	Post oak	4.5	22	44	Fair	Specimen	X						X		0	2	44	tree looks like it's in all right health there is some decay in the bottom half of the Eastern facing trunk fruiting boddies present so the case still active	Lot 37, Block D
6434	Quercus stellata	Post oak	4.5	23	46	Fair	Specimen	X						X		0	2	46	any previous damage the trees heal over nicely	Lot 37, Block D
6436	Quercus stellata	Post oak	4.5	24	48	Fair	Specimen	X						X		0	2	48	lot to dead when the canopy some of it's broke off looks like it's still alive but could be in better shape	Lot 5, Block H
6437	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				Lot 38, Block D
6438	Quercus stellata	Post oak	4.5	22	44	Fair	Specimen	X		X						0	2	44	lots of decay in the tree canopy and on the trunk fungal bodies present but tree has healed over fine in areas of stress	Proposed ROW
6440	Quercus stellata	Post oak	4.5	30	60	Good	Specimen	X						X		0	2	60		Lot 39, Block D
6442	Quercus marilandica	Blackjack oak	4.5	36	72	Fair	Specimen	X			X					0	2	72	multi stem originating at grade some bark loss on multiple limbs lots of dead wooding	Proposed ROW
6443	Quercus marilandica	Blackjack oak	4.5	22	44	Poor	Specimen		X					X	4	12			obvious signs of decay in a lower trunk area fruitingbodies present canopy has a lot of die back	Lot 29, Block G
6444	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18			multi stem originating about three and a half feet above	Lot 1X, Block G
6445	Ulmus americana	American elm	4.5	39	78	Fair	Specimen		X				X		6	18			triple trunk originating from grade there is some die back in the canopy massive broken limbs but seems healthy	Lot 1X, Block G
6446	Ulmus americana	American elm	4.5	25	50	Good	Specimen		X				X		5	15				Lot 1X, Block G
6447	Ulmus americana	American elm	4.5	25	50	Good	Specimen	X			X					0	2	50	Proposed ROW	
6448	Quercus stellata	Post oak	4.5	25	50	Good	Specimen	X						X		0	2	50	Lot 1, Block G	
6449	Ulmus americana	American elm	4.5	30	60	Good	Specimen	X		X						0	2	60	Proposed ROW	
6450	Quercus stellata	Post oak	4.5	26	52	Good	Specimen	X						X		0	2	52	Lot 28, Block D	
6451	Quercus stellata	Post oak	4.5	26	52	Good	Specimen		X					X	6	18				Lot 28, Block D
6453	Quercus stellata	Post oak	4.5	24	48	Good	Specimen	X						X		0	2	48	double trunk originating about 3 1/2 ft above grade	Lot 26, Block D
6455	Quercus stellata	Post oak	4.5	28	56	Good	Specimen		X				X		6	18				Lot 1X, Block B
6456	Quercus stellata	Post oak	4.5	27	54	Good	Specimen		X				X		6	18				Lot 1X, Block B
6457	Quercus stellata	Post oak	4.5	25	50	Good	Specimen		X					X	6	18				Lot 13, Block B
6458	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X				X		6	18				Lot 1X, Block B
6459	Quercus stellata	Post oak	4.5	23	46	Good	Specimen		X					X	6	18				Lot 13, Block B
6461	Ulmus americana	American elm	4.5	37	74	Good	Specimen		X				X		6	18			multi trunk originating about three feet above great	Lot 1X, Block B
6462	Ulmus americana	American elm	4.5	25	50	Good	Specimen		X					X	5	15				Lot 11, Block B
6463	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X					X	6	18				Lot 11, Block B
6464	Quercus stellata	Post oak	4.5	36	72	Good	Specimen		X				X		6	18			multitrunk originating at grade	Lot 1X, Block B
6465	Quercus stellata	Post oak	4.5	34	68	Good	Specimen		X				X		6	18				Lot 1X, Block B
6466	Quercus stellata	Post oak	4.5	24	48	Good	Specimen	X						X		0	2	48	double trunk originating about three and a half feet above ground DBH is estimated history is completely surrounded	Lot 14, Block B
6467	Quercus stellata	Post oak	4.5	22	44	Good	Specimen		X					X	6	18			double trunk originatinh at grade	Lot 14, Block B
6468	Quercus marilandica	Blackjack oak	4.5	23	46	Good	Specimen		X				X		4	12			double trunk originating 3 ft of upgrade	Lot 1X, Block B
6470	Quercus stellata	Post oak	4.5	24	48	Good	Specimen		X		X				6	18			ROW Dedication	
6471	Quercus marilandica	Blackjack oak	4.5	20	40	Good	Specimen		X			X			1	3				Lot 1X, Block B
6472	Quercus stellata	Post	4.5	25	50	Good	Specimen		X				X		6	18	</			