ALTERNATIVE ENVIRONMENTALLY SENSITIVE AREA REPORT

IDI Logistics

Spencer Road Industrial Project Site

June 2025

For compliance with:

City of Denton Environmentally Sensitive Areas Assessment
(ESA# 25-0001)

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INTRODUCTION AND AUTHORITY/ PURPOSE AND NEED FOR ACTION

Integrated Environmental Solutions, LLC (IES) was retained by IDI Logistics for environmental services for the Spencer Road Industrial project site. This Alternative Environmentally Sensitive Area (AESA) Report is being submitted to the City of Denton under the Denton Development Code (DDC) Section 2.8.4 to request approval for impacts to Environmentally Sensitive Areas (ESA). This AESA Report proposes mitigation measures for two impact areas within the Riparian Buffer and Undeveloped Floodplain ESA which are required to construct an internal roadway and detention outfall for the proposed industrial development. The report also details that a region of the Cross Timbers ESA identified on site will be retained, meeting the preservation percentage requirements.

DESCRIPTION OF OVERALL DEVELOPMENT

The proposed Spencer Road Industrial project site is approximately 53.5 acres located at 2201 and 2203 Spencer Road in the City of Denton, Denton County, Texas (**Appendix A, Figure 1**).

The proposed development will consist of four industrial buildings and all associated infrastructure including sidewalks, interior roads, detention, and necessary utilities. The development impact area is approximately 42.9 acres. The current zoning for the tract is General Office (GO), which allows for the proposed development.

EXISTING SITE DESCRIPTION

The survey area was characterized by three distinct vegetation communities, **grassland**, **forested upland**, and **forested riparian corridor**. The **grassland** community dominated the site and consisted of grasses and forbs such as Johnsongrass (*Sorghum halepense*), spreading hedge parsley (*Torilis arvensis*), pinkladies (*Oenothera speciosa*), common sunflower (*Helianthus annuus*), white tridens (*Tridens albescens*), sumpweed (*Iva annua*), Indian blanket (*Gaillardia pulchella*), Illinois bundleflower (*Desmanthus illinoensis*), red seed plantain (*Plantago rhodosperma*), perennial ryegrass (*Lolium perenne*), white clover (*Trifolium repens*), Bermudagrass (*Cynodon dactylon*), silver leaf nightshade (*Solanum elaeagnifolium*), western ragweed (*Ambrosia psilostachya*), field brome (*Bromus arvensis*), and tall goldenrod (*Solidago gigantea*). The **forested upland** was identified scattered along fence lines and in patches across the site. It was comprised of post oak (*Quercus stellata*), eastern red cedar (*Juniperus virginiana*), and pecan (*Carya illinoinensis*), with an understory of Chinese privet (*Ligustrum sinense*) and sawbriar (*Smilax bona-nox*). The **forested riparian corridor** was identified along the central drainage and consisted of woody species such as Osage-orange (*Maclura pomifera*), American elm (*Ulmus americana*), sycamore (*Platanus occidentalis*), and pecan, with an understory comprised of Chinese privet and sawbriar.

IES Environmental staff conducted a site visit on 09 May 2024 to confirm ESAs mapped by the City of Denton. Prior to the site visit, IES reviewed the previously mapped and assessed ESAs as depicted on the Official ESA Map of the City of Denton Online Map Viewer. The ESAs, as depicted on the Online Map Viewer, are shown on **Appendix A**, **Figure 2**. ESAs associated with an assessment completed in 2025 were depicted as follows:

> ESA25-0001: The assessment reviewed the status of a section of an unnamed tributary to Pecan Creek bisecting the project site centrally. The assessment confirmed the Undeveloped Floodplain, Zone AE and Floodway, and most of the Riparian Buffer-50 Habitat associated with the unnamed tributary of Pecan Creek. The field investigation identified Cross Timbers Upland Habitat along the eastern boundary within a contiguous tract that extended east, outside of the boundary. The assessment was unable to confirm the Cross Timbers Upland Habitat along the northern and western boundaries, the Riparian Buffer-50 Habitat along the southern boundary, and the Water Related Habitat along the northern boundary as the areas lacked the basic characteristics of each ESA habitat.

During the site visit, an intermittent stream was identified within the project site, entering via a culvert under Spencer Road and meandering through the site before exiting to the north. A 50-foot Riparian Buffer ESA and Floodplain ESA were identified along the stream. The ESAs identified during the site visit are shown in **Appendix A, Figure 3**. The habitats within the ESAs are as follows:

Stream

An intermittent stream meanders through the central region of the ESA before exiting the site to the north. The intermittent stream was, on average, 7-feet wide and incised 1 to 3 feet. Overall, the stream was in *Good* condition based on the Rapid Stream Assessment Technique (RSAT) performed during the ESA assessment.

Riparian Buffer ESA

A 50-foot Riparian Buffer was identified along the intermittent stream meandering through the central region. The Riparian Buffer ESA along the southern boundary was removed through the ESA assessment completed in May 2024 due to a lack of canopy cover. The Riparian Buffer was dominated by American elm and pecan trees with common greenbrier (*Smilax glauca*), eastern red cedar, Chinese privet, and poison ivy observed in the understory. **Table 1** below summarizes the trees measured and identified within the Riparian Buffer and Undeveloped Floodplain ESA. A full ESA tree inventory completed in June 2024 is included as **Appendix B**. Trees were recorded on a Juniper Systems Geode GNS3S Global Positioning System (GPS) unit capable of sub-meter accuracy.

Table 1. Summary of Trees Identified Within the Riparian Buffer and Undeveloped Floodplain ESA Area.

Tree Species	No. Healthy Trees (total caliper inches)	No. Declining/ Hazard Trees (total caliper inches)
American elm	59 (663.3)	2 (43.9)
Black walnut	1 (19.8)	1 (21.9)
Black willow	1 (18.6)	---
Blackjack oak	32 (342.3)	---
Boxelder	4(36.9)	---
Bradford pear	---	1 (7.9)
Cedar elm	19 (171.1)	---
Chinaberry	7 (65.7)	---
Common persimmon	5 (38.3)	---
Eastern red cedar	29 (309.3)	---
Green ash	18 (173.2)	1 (12.3)
Gum bumelia	2 (20.7)	---
Osage-orange	6 (50.3)	1 (8.3)
Pecan	51 (517.1)	---
Post oak	65 (732.4)	2 (33.1)
Sugarberry	2 (13.3)	---
Sycamore	4 (54.9)	1 (11.8)
Total Trees	305 (3,227.2)	9 (139.2)

Undeveloped Floodplain ESA

Undeveloped Floodplain ESA was mapped around the stream channel and associated buffer. The ESA is associated with Federal Emergency Management Agency (FEMA) 100-year floodplain Zone AE. **Table 1** above summarizes the trees measured and tagged within the Undeveloped Floodplain and Riparian Buffer ESA.

Cross Timbers Upland ESA

The site survey was unable to confirm the Cross Timbers Upland habitat along the northern and western boundaries. The region was previously cleared for a utility line between 2022 and 2023, and no canopy cover was present. Therefore, the northern and western boundary regions did not meet the requirements to be verified as an ESA. A post oak overstory with scattered eastern red cedar trees and saplings was identified along the eastern boundary with Chinese privet overgrown in understory. Recent aerial photography indicates that the forested area has remained forested for several decades. The area was previously part of a larger, contiguous forest but a portion was removed between 2007 and 2008 for

development to the east. Based on aerial photography in Google Earth, the current contiguous canopy cover is 12.9 acres. Therefore, the eastern region met the minimum 10-acre requirement to be verified as an ESA.

AESA PURPOSE

The AESA purpose is to propose mitigation for the impacts to the Riparian Buffer and Undeveloped Floodplain ESAs due to the proposed industrial development construction. The proposed project would involve constructing a connecting road, and detention outfall within the limits of the Riparian Buffer and Undeveloped Floodplain ESAs. The road crossing was placed over the northern section of the intermittent stream due to engineering constraints and transportation requirements, resulting in unavoidable impacts to the ESA. Grading required for the construction would be limited to the minimum necessary for the roadway and detention outfall totaling approximately 0.23 acre (7 percent of 3.13-acre total) within the Riparian Buffer ESA and 0.16 acre (6 percent of 2.75-acre total) within the Undeveloped Floodplain ESA. **Appendix A**, **Figure 4** shows the proposed impacts to the ESA.

The Cross Timbers ESA to the east will also be impacted for the construction of a warehouse building, parking, internal roadways and grading. Per Section 4.2.4.2.1 of the Denton ESA Primer, the proposed development will retain over 30 percent of the Cross Timbers ESA area within the site, which meets the preservation requirements. The industrial complex construction will impact 2.10 acres (65.8 percent) of the total 3.19 acres of Cross Timbers ESA within the site. As 34.2 percent of the total Cross Timbers ESA identified on site will be retained, the development meets the preservation requirements, and no additional mitigation is required or proposed for the Cross Timbers ESA.

Site Access & Interior Design Layout

The Spencer Road Industrial site was designed to maximize building size while limiting impacts to the ESAs and complying with tree preservation requirements. The current design provides 554,552 square feet of warehouse space, internal roadways, detention, and utilities (**Appendix A, Figure 5)**. The easternmost building was shifted north and the size was reduced to limit impacts to the Cross Timbers Upland ESA. To provide two access points to the easternmost building, an internal connection road was necessary in the northern region to ensure access requirements were met. The access road could not be shifted north along the boundary due to the utility line easement, which is present along the western and northern boundaries. Multiple utility lines will be installed across the central and southern Riparian Buffer and Undeveloped Floodplain reaches; however, the segments below the ESA will be bored, resulting in no additional ESA impacts (**Appendix A, Figure 6**). Fire lanes were required around each building for emergency vehicle access, which resulted in additional Cross Timbers Upland ESA impacts; however, walls were strategically placed throughout the project site to minimize the removal of trees and impacts to the ESA. Given the design and environmental constraints, the project design only impacts 0.23 acre of Riparian Buffer ESA, 0.16 acre of Undeveloped Floodplain ESA, and 2.10 acres of Cross Timbers Upland ESA.

NOTIFICATION AND REVIEW

This AESA Report explains the mitigation measures for ESA impacts that will be provided to the City of Denton for formal notification of the activity and review of the proposed restoration activity.

AFFECTED ENVIRONMENT AND SUMMARY OF IMPACTS

Appendix A, Figure 5 shows the observed Riparian Buffer and Undeveloped Floodplain associated with the stream channel through the central region. The total Riparian Buffer ESA covers 3.13 acres, and the Undeveloped Floodplain ESA covers 2.75 acre within the property boundary.

The project is proposing to construct a roadway and detention outfall within the on-site Riparian Buffer and Undeveloped Floodplain ESAs. All vegetation within the impact areas will be permanently removed during the initial construction; however, the impacts will be limited to the extent necessary to fulfill the needs of the industrial development. The proposed impacts from the construction of the roadway and detention outfall are limited to 0.23 acre within the Riparian Buffer ESA and 0.16 acre within the Undeveloped Floodplain ESA. The total impacts and site plan are shown on **Appendix A, Figure 5**.

Based on the tree inventory completed in June 2024 by IES, tree species within the Riparian Buffer and Undeveloped Floodplain impact areas include American elm, blackjack oak (*Quercus marilandica*), black walnut (*Juglans nigra*), cedar elm, eastern red cedar, Osage-orange, and pecan. The understory within the riparian buffer was overgrown with Chinese privet. The trees to be removed are described in **Table 2**. The proposed trees to be removed within the Riparian Buffer and Undeveloped Floodplain ESAs total 316.5-caliper inches from 28 trees, 26 of which were all identified as healthy. The 26 healthy trees make up approximately 8.5 percent of the total healthy trees within the on-site Riparian Buffer and Undeveloped Floodplain ESAs.

Table 2. Identified Trees Within the Proposed Riparian Buffer and Undeveloped Floodplain ESA Impact Area.

ID #	DBH (caliper inches)	Common Name	Scientific Name	Condition	Multi-Trunk
206	12.9	eastern red cedar	*Juniperus virginiana*	Healthy	No
207	10.6	eastern red cedar	*Juniperus virginiana*	Healthy	No
208	7.3	eastern red cedar	*Juniperus virginiana*	Healthy	No
209	14.1	pecan	*Carya illinoinensis*	Healthy	No
210	7.9	eastern red cedar	*Juniperus virginiana*	Healthy	No
211	13.3	eastern red cedar	*Juniperus virginiana*	Healthy	No
212	16	eastern red cedar	*Juniperus virginiana*	Healthy	No
6864	13.9	American elm	*Ulmus americana*	Healthy	No
6865	17.4	American elm	*Ulmus americana*	Healthy	No
6866	8.3	Osage-orange	*Maclura pomifera*	Damaged	No
6867	7.1	American elm	*Ulmus americana*	Healthy	No
6868	19.8	black walnut	*Juglans nigra*	Healthy	No
6869	21.9	black walnut	*Juglans nigra*	Damaged	No
6870	12.8	American elm	*Ulmus americana*	Healthy	No
6871	6.3	cedar elm	*Ulmus crassifolia*	Healthy	No
7334	7.8	eastern red cedar	*Juniperus virginiana*	Healthy	No
7335	16.6	American elm	*Ulmus americana*	Healthy	No
7336	16	American elm	*Ulmus americana*	Healthy	No
7337	7.8	American elm	*Ulmus americana*	Healthy	No
7338	11.5	American elm	*Ulmus americana*	Healthy	No
7961	11.1	eastern red cedar	*Juniperus virginiana*	Healthy	No
7962	6.4	blackjack oak	*Quercus marilandica*	Healthy	No
7963	7.4	post oak	*Quercus stellata*	Healthy	No
7964	6.5	blackjack oak	*Quercus marilandica*	Healthy	No
7965	13.9	eastern red cedar	*Juniperus virginiana*	Healthy	No
7966	8.1	blackjack oak	*Quercus marilandica*	Healthy	No
7967	6.8	American elm	*Ulmus americana*	Healthy	No
7968	7.0	pecan	*Carya illinoinensis*	Healthy	No
Total	316.5				

MITIGATION ACTIVITIES

The impacts to the Riparian Buffer and Undeveloped Floodplain ESA shown in **Appendix A**, **Figure 5** are primarily limited to the northern reach where impacts are required to construct a roadway to provide a second access point for the easternmost building. A relatively small, additional impact is necessary in the southern region for a detention pond outfall to convey flow downslope. Vegetation will be removed during the initial grading for the development. Retaining walls were strategically placed throughout the project to minimize the removal of trees and impacts to the ESA. A pre-construction meeting will be held to notify contractors of ESA mitigation area limits and a visual barrier such as a temporary chain link fence will be installed to ensure construction remains within the development impact area (DIA) boundary. No additional adverse impacts to the stream or the remainder of the ESAs are expected from the construction.

Concurrent or following the industrial development construction, a contractor will be instructed by IDI Logistics to remove invasive, understory Chinese privet growth from the unimpacted Riparian Buffer and Undeveloped Floodplain ESA regions. Once the Chinese privet has been removed, the resulting AESA will provide additional native habitat while also aiding in stormwater management for the industrial development. In addition, all appropriate best management practices (BMPs) will be in place as required by the General Construction Permit and site-specific Stormwater Pollution Prevention Plan, which may include the installation of silt fencing or a rock check dam prior to construction activity discharges to the ESA.

PROPOSED IMPROVEMENT OF UNAFFECTED AREAS

A mitigation plan executed over a year-long period is proposed to effectively restore and improve the unimpacted Riparian Buffer and Undeveloped Floodplain ESAs. A contractor, such as IES, will be contracted to complete the privet removal and monitoring. The developer is proposing to mechanically remove Chinese privet, an invasive species, from the understory of the unimpacted Riparian Buffer and Undeveloped Floodplain ESAs as well as from non-graded areas immediately surrounding the ESA to help prevent the reintroduction of Chinese privet. The removal approach is a targeted mechanism to eliminate invasive species and will result in no ground disturbing activities that could harm overstory trees. The initial privet removal will occur the first winter after construction has commenced to reduce sprouting.

Figure 1 illustrates that invasive Chinese privet currently dominates the canopy understory within the ESA. Mechanical removal will consist of the use of a hydro-axe for most of the area, supplemented with hand clearing to remove Chinese privet immediately surrounding existing trees. The hydro-axe will remove the aboveground portion of the Chinese privet plant but does not remove the root system and sprouting will occur. The regrowth will be spot treated with triclopyr, a pesticide from the City's Integrated Pest Management list, the following spring at the recommended label rate. An additional spot treatment of seedlings will be conducted, if necessary. Debris from the privet removal will be mulched and spread within the mitigation area. The eradication of Chinese privet will open the understory and improve opportunities for diverse native species to thrive with limited invasive competition. A successful eradication will allow for no more than 5 percent of remaining Chinese privet understory cover. Seedlings and regrowth will be monitored and removed seasonally during the 3-year monitoring period within the mitigation area as needed to ensure Chinese privet remains eradicated.

Figure 1. The photographs illustrated above depict the understory of invasive Chinese Privet throughout the mitigation area.

A seed mixture will be seeded throughout the unimpacted Riparian Buffer and Undeveloped Floodplain ESA regions once the understory has been cleared of Chinese privet to provide a protective ground cover and functional understory strata. The seed mix is intended to aid in rebuilding the stream bank buffer zone. The seed mix will include native species such as Virginia wildrye (*Elymus virginicus*), Canada wildrye (*Elymus canadensis*), inland sea oats (*Chasmanthium latifolium*), purpletop tridens (*Tridens flavus*), purple coneflower (*Echinacea purpurea*), bergamont (*Monarda fistulosa*), red columbine (*Aquilegia canadensis*), black-eyed Susan (*Rudbeckia hirta*), swamp sunflower (*Helianthus angustifolius*), American beautyberry (*Callicarpa americana*), butterfly weed (*Asclepias tuberosa*), frostweed (*Verbesina virginica*), and blue mistflower (*Conoclinium coelestinum*). The native seed mix will contain no more than 20 percent of a single species. The proposed seeding goal is to develop an AESA with a quality, diverse, functioning habitat that will not need additional maintenance beyond the initial seeding.

The seed mix will be sown at the recommended amount of 9 pounds per acre in the spring following the Chinese privet management. As the mitigation area is within a forested riparian buffer, shade tolerant species have been selected for planting. The initial seeding will be implemented in conjunction with the hydromulching and involves applying a mixture of water, wood fiber mulch, soil stabilizer, and seed to prevent erosion and provide an optimal environment conducive to plant growth. The seeding will be conducted once and due to the forested overstory and minimal impacts within the Riparian Buffer ESA on site, a specified final coverage rate will not be required.

The unimpacted Riparian Buffer ESA (approximately 2.90 acre) and Undeveloped Floodplain ESA (approximately 2.59 acre) areas encompass a combined total of 3.48 acre as a result of overlap. No tree planting is proposed within the mitigation area as only 8.5 percent of the existing trees within the Riparian Buffer and Undeveloped Floodplain ESAs will be removed because of the development, resulting in 80 stems per acre (with a DBH of 6 inches or greater) within the mitigation area. Most of the recorded trees within the mitigation area are mature and will naturally propagate within regions where Chinese privet has been cleared.

Data to determine Chinese privet coverage rates during site visits will be manually collected using appropriate vegetation monitoring and classification techniques, such as total count and point-intercept methods. A site visit by IES staff will be performed following the completion of the initial privet removal and prior to the first annual reporting event. IES will perform additional site visits as necessary during the first annual monitoring period.

COMPLIANCE WITH AUTHORITIES

The City of Denton is the authority over compliance with this AESA mitigation plan. Once the Spencer Road Industrial development has been constructed and the AESA mitigation activities have been completed, the City of Denton will be notified that the mitigation activities have been completed.

ANNUAL REPORTING

The applicant will prepare an annual report each year for three consecutive years, beginning 12 months following the mitigation activities implementation to report on the effectiveness of the Chinese privet removal. These annual reports will be submitted to the City for review and comment.

The first two annual reports will contain action items that may include, removing weeds and invasive species from within the mitigation area, or removal of construction debris within the Riparian Buffer and Undeveloped Floodplain ESA.

Upon completion of the 3-year monitoring and reporting period, the City of Denton Environmental Services shall inspect the mitigation area and determine whether the Chinese privet understory cover eradication goal of no more than 5 percent Chinese privet understory cover has been met. After city inspection, if invasive plants have been reestablished, the applicant shall be notified to clear the problematic areas. If the applicant does not take remedial steps to bring the property into compliance, the City may use all legal remedies to enforce this provision. If it is determined that the eradication goal has been met, the City will issue the final project acceptance.

If changes need to be made to the mitigation plan during the 3-year monitoring period, the City of Denton will be notified prior to making the plan modifications.

MAINTENANCE PLAN

The remaining Riparian Buffer ESA will be maintained differently than all other common area lots. The following specifications will be used for future maintenance contractors that are contracted by the current and future owners and managers of the site. This approach is specified separately due to the environmentally sensitive nature of the riparian corridor.

- Mowing – No mowing will be allowed within the Riparian Buffer mitigation area.
- Leaf Removal – There will be no leaf removal within the Riparian Buffer mitigation area.
- Fertilizer and Pesticide – There will be no fertilizer or pesticide within the Riparian Buffer mitigation area.
- Tree Removal – No trees will be cut, trimmed, thinned, raised, or altered without the approval of the City of Dentons specific written permission.
- Any ground disturbing activity, such as erosion control or maintenance associated with infrastructure surrounding the Riparian Buffer mitigation area will only occur after designs have been approved by the City of Denton.

In the event that the property is sold in the future, the new owners must adhere to the maintenance plan to retain the natural state and integrity of the ecosystem.

Regions between the mitigation area and DIA will remain vegetated and Chinese privet may be removed to further prevent re-establishment within the mitigation area. Mowing, fertilizer application, and ground disturbing activities will be minimized within the region between the mitigation area and DIA to serve as a protective buffer.

CRITERIA FOR APPROVAL

The following lists the criteria for approval of an AESA Plan and the project aspects that meet each criterion.

1. Create, expand, and/ or improve non-impacted areas.

   The proposed AESA plans to mitigate the impacts to the Riparian Buffer and Undeveloped Floodplain ESAs by removing Chinese privet, an invasive species, which improves opportunities for diverse, native vegetation to thrive throughout the existing buffer.

2. Improve encroached habitat and the surrounding environment.

   The impacted areas will be mitigated by removing Chinese privet throughout the remainder of the on-site Riparian Buffer and Undeveloped Floodplain ESAs as well as from non-graded areas surrounding the ESA to prevent reseeding. A seed mixture will be seeded throughout the unimpacted Riparian Buffer and Undeveloped Floodplain ESA regions once the understory has been cleared of Chinese privet to provide a protective ground cover and functional understory strata.

3. Create continuity.

   The impacted area and proposed AESA mitigation area are located within a larger mapped Undeveloped Floodplain ESA which extends north along the continuation of the drainage. The impact area is a fraction of the overall ESA on site, and the undisturbed Riparian Buffer and Undeveloped Floodplain ESAs on site will be improved.

4. Maximize access and utilization.

   Sidewalks will be constructed along the industrial buildings to improve access. The mitigation area will be visible from Spencer Road as well as the internal roadway and parking areas.

5. Create a conservation easement.

As most of the ESA will remain intact and improvements will be made to remove invasive species, the ESA designation will remain and therefore be subject to use restrictions set forth in the DDC.

6. High quality development.

   The AESA has been designed to minimize the impacts to the ESA necessary to meet the design standards and infrastructure necessary for the overall development. The AESA proposes to mitigate for the impacts by removing invasive understory growth from within and surrounding the remaining Riparian Buffer and Undeveloped Floodplain ESA. As Chinese privet currently dominates the ESA understory, the proposed improvements in the unimpacted regions will allow native species to reestablish and enrich the overall quality of the region. As such, the proposed development meets the criteria for approval for an AESA.

SUMMARY

The proposed impact areas include 0.23 acre within the Riparian Buffer ESA, 0.16 acre within the Undeveloped Floodplain ESA, and 2.10 acre within the Cross Timbers ESA resulting from the construction of roadways, sidewalks, lots, parking, and utilities necessary for the industrial development. The 2.90-acre Riparian Buffer and 2.59-acre Floodplain ESA mitigation areas to offset the impact areas will consist of removing invasive Chinese privet from the remaining on-site ESA understory to improve opportunities for diverse, native vegetation to thrive throughout the remaining ESAs. As 34.2 percent of the total Cross Timbers Upland ESA identified on site will be retained, the development meets the preservation requirements, and no additional mitigation is required or proposed for the Cross Timbers Upland ESA.

ANNUAL REPORTING CONTACTS

Developer/Owner:
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Phone: 972-562-7672
Email: rreinecke@intenvsol.com

Engineer:
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Appendix A

Figures

Figure 1.
General Location Map

Spencer Road Industrial
City of Denton
Denton County, Texas

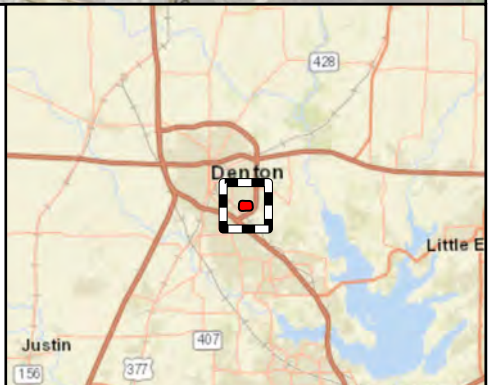
Survey Area

1 in = 1,500 ft

Feet
0 1,500

N
W E
S

File Ref. 04.110.165
Date: 3/27/2025



Area of Detail **Scale: 1 inch equals 10 miles**

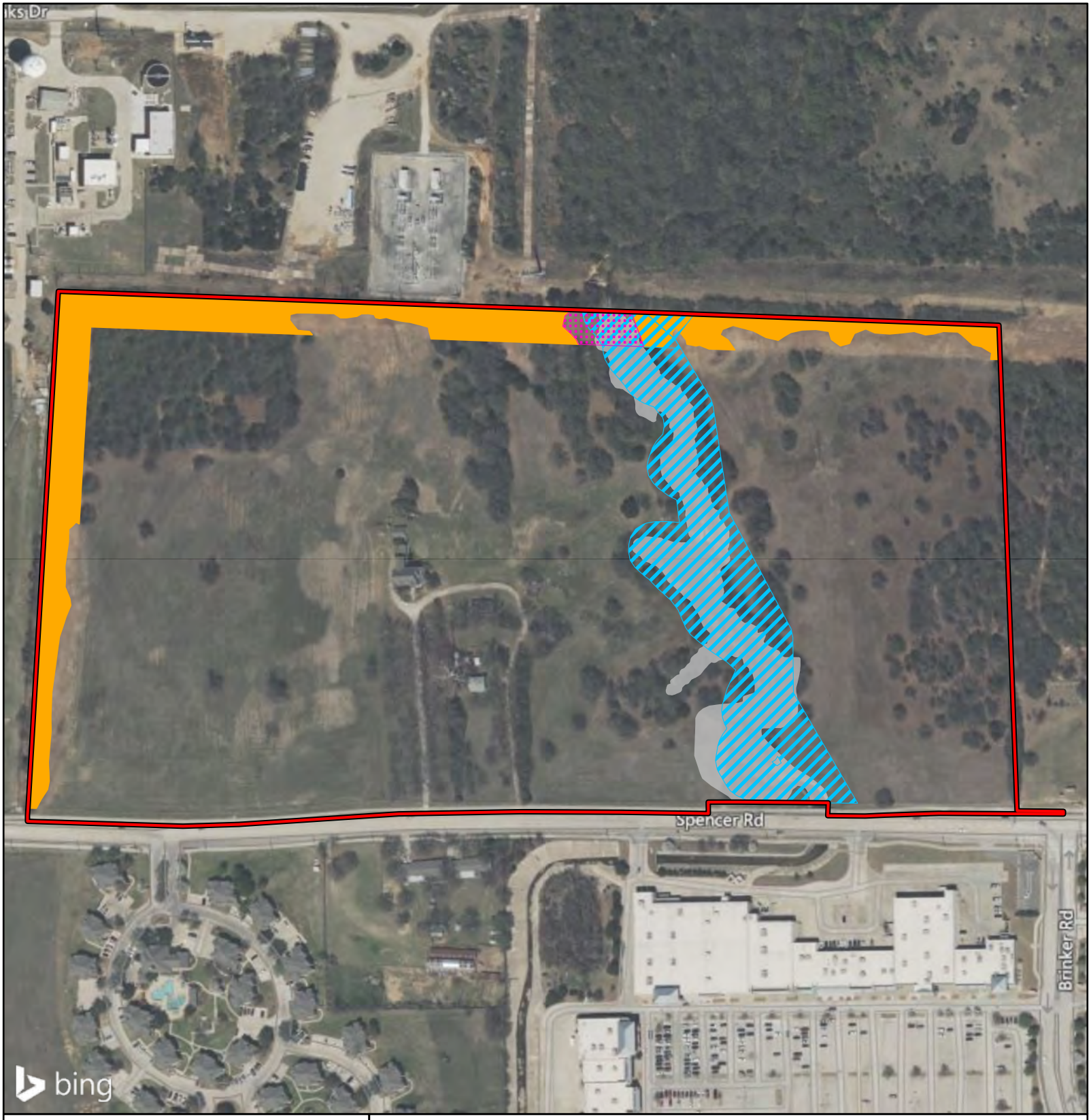


Figure 2.
City of Denton Environmentally Sensitive Areas (ESA)

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 285 ft

Feet
0 285

N
W E
S

File Ref. 04.110.165
Date: 3/27/2025

Survey Area

Riparian Buffer ESA
Not Assessed

Cross Timbers ESA
Not Assessed

Undeveloped Floodplain ESA
Not Assessed

Water Related Habitat ESA
Not Assessed

Figure 3.
Onsite ESA Determinations

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 220 ft

Feet
0
220

N
W
E
S

File Ref. 04.110.165
Date: 3/27/2025

Survey Area

Data Form

Cross Timbers Upland ESA

Confirmed

Removed

Undeveloped Floodplain ESA

Zone AE/ Floodway, Confirmed

Water Related Habitat ESA

Removed

Riparian Buffer ESA

50, Confirmed

50, Removed

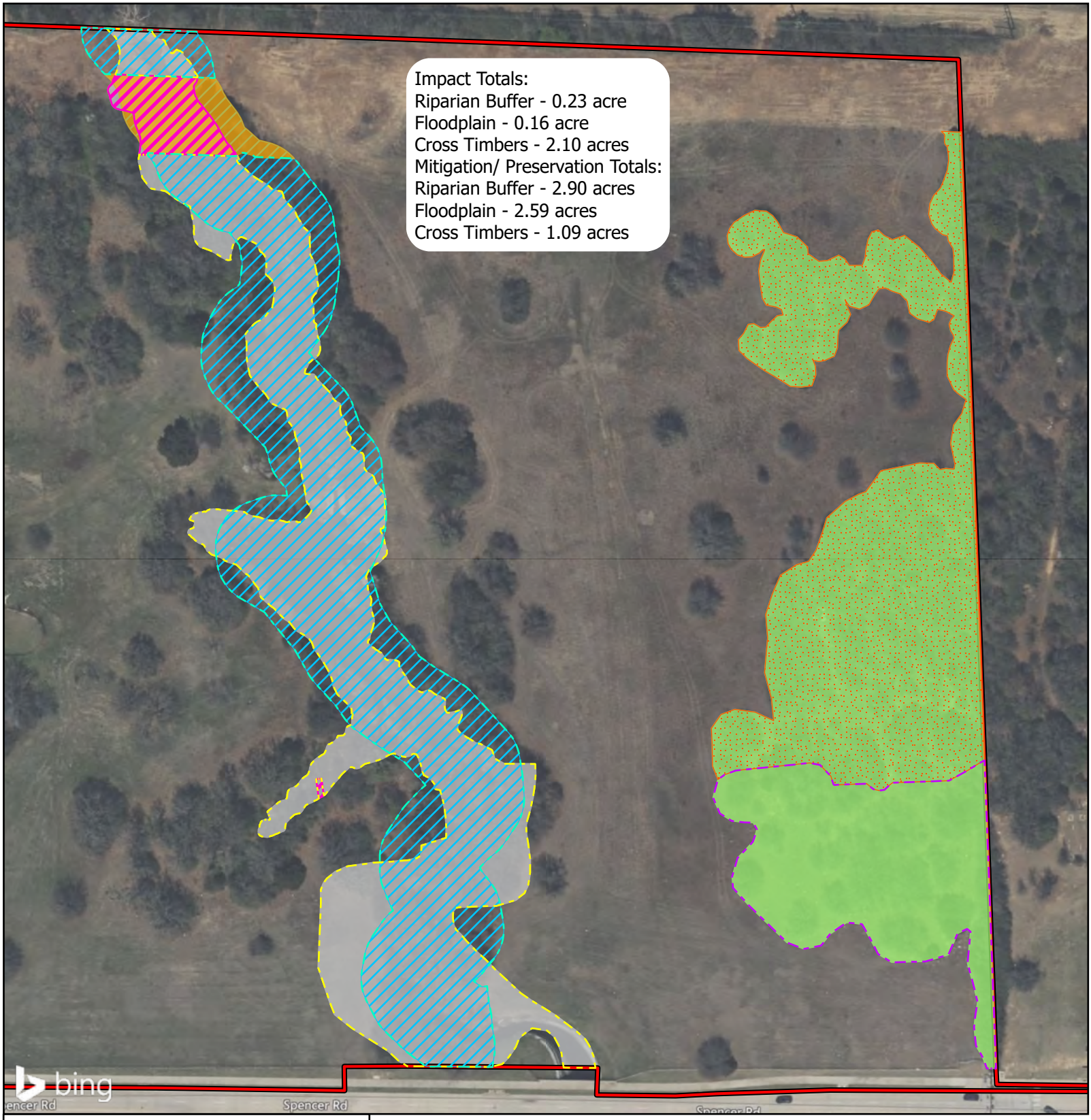


Figure 4.
Proposed ESA Impacts

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 135 ft

Feet
0 135

N
W E
S

File Ref. 04.110.165
Date: 5/23/2025

- Survey Area
- Cross Timbers Upland ESA
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Direct/ Permanent Impacts

- Cross Timbers
- Floodplain
- Riparian Buffer

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain
- Cross Timbers Preservation

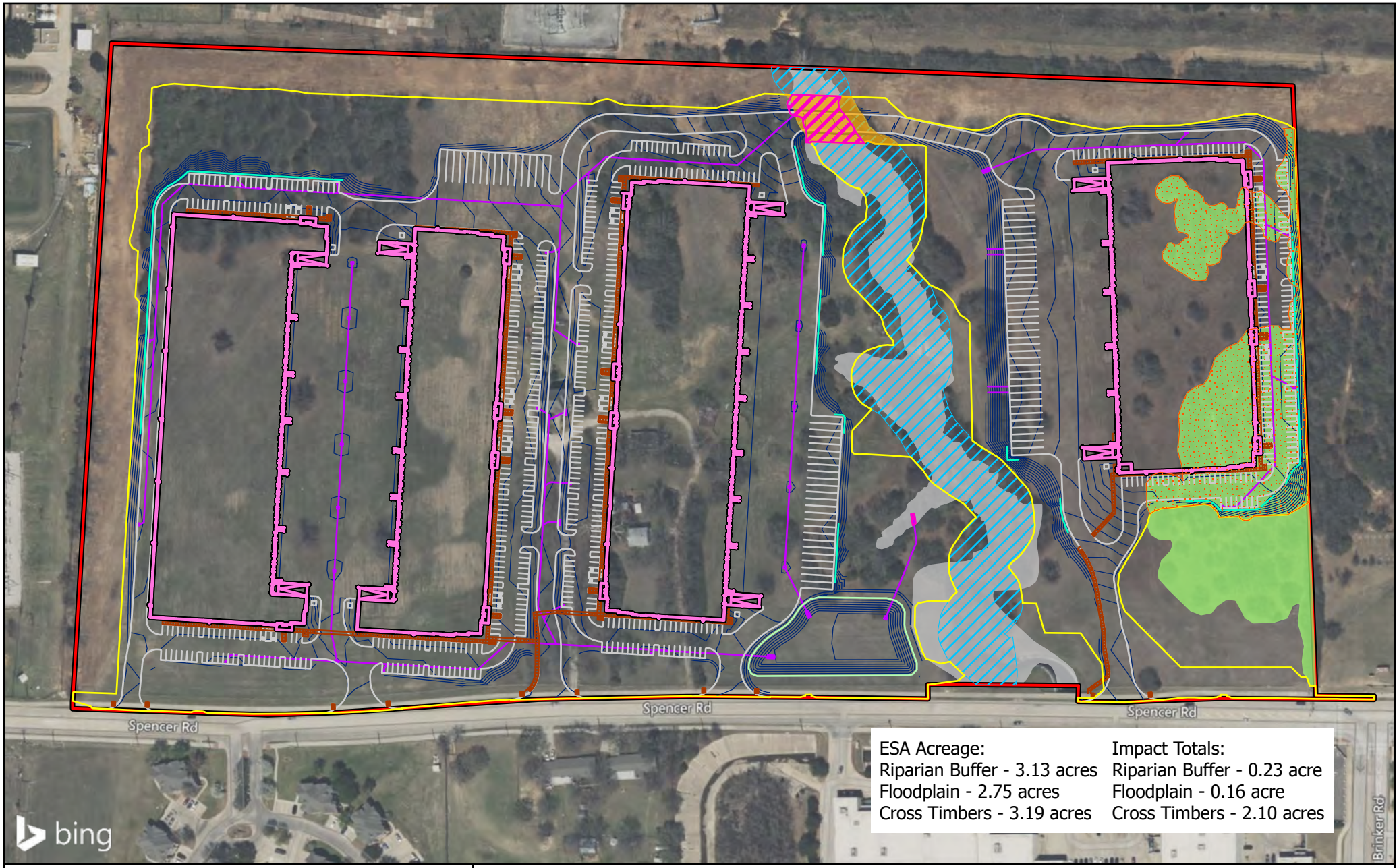


Figure 5.
Site Plan and Impacts Map

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 225 ft

Feet
0 225

File Ref. 04.022.037
Date: 5/23/2025

N
W E
S

- Survey Area
- Undeveloped Floodplain ESA
- Riparian Buffer ESA
- Cross Timbers Upland ESA

Direct/ Permanent Impacts

- Cross Timbers
- Floodplain
- Riparian Buffer

Site Plan

- Building
- Development Impact Area
- Grading
- Pavement
- Retaining Wall
- Stormwater
- Sidewalk
- Detention Pond

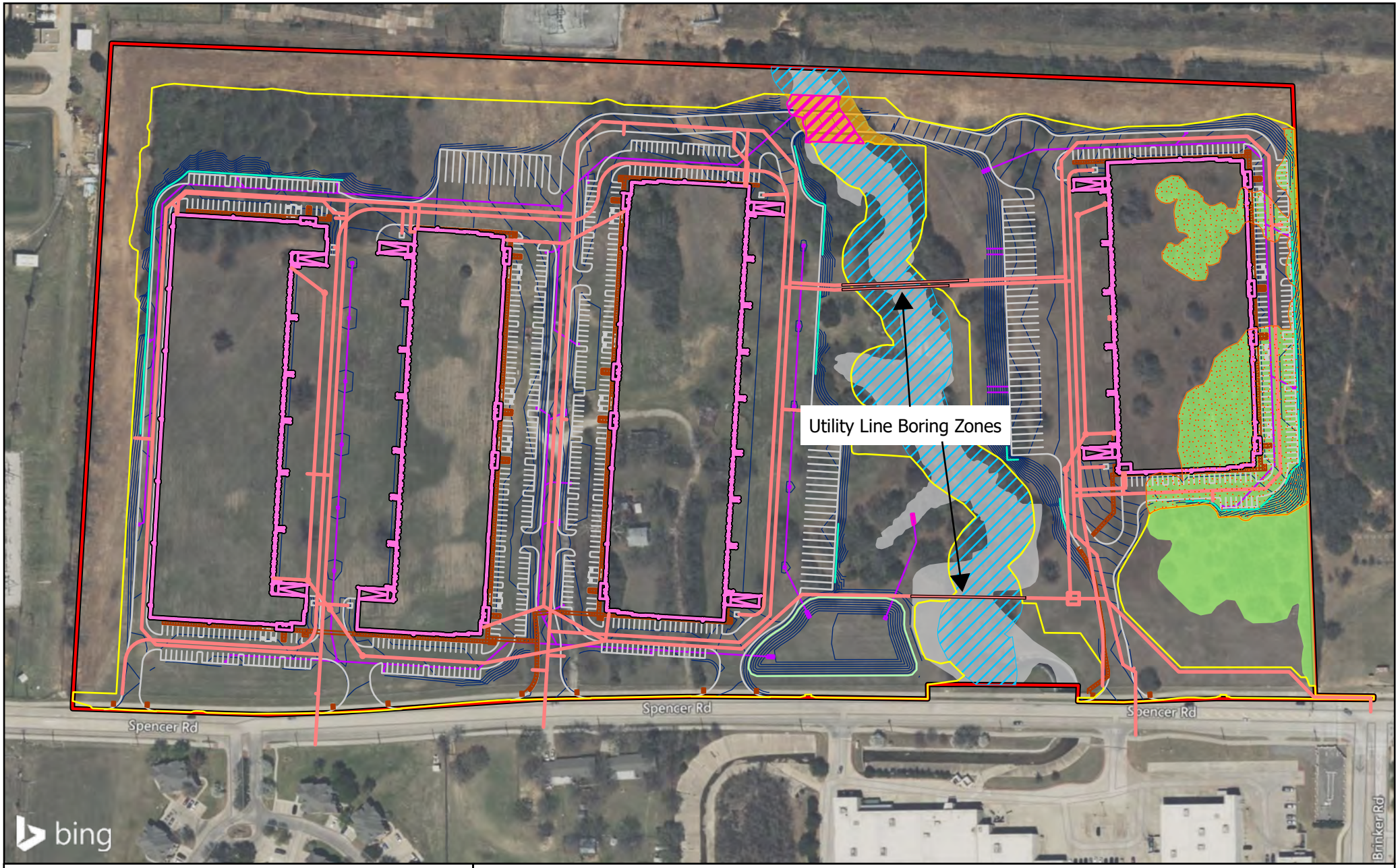


Figure 6.
Sewer Line Location and Boring Zones

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 225 ft

Feet
0 225

File Ref. 04.022.037
Date: 5/23/2025

N
W E
S

- Survey Area
- Undeveloped Floodplain ESA
- Riparian Buffer ESA
- Cross Timbers Upland ESA

Direct/ Permanent Impacts

- Cross Timbers
- Floodplain
- Riparian Buffer

Site Plan

- Building
- Development Impact Area
- Grading
- Pavement
- Retaining Wall
- Stormwater
- Sidewalk
- Detention Pond
- Boring Zone
- Utility Line

Appendix B

ESA Assessment Forms

Project Number: ESA

Floodplain ESA Assessment Form

Environmental Services and Sustainability

A Floodplain ESA Assessment Form is to be completed for each feature identified as potentially to exist on the Official ESA Map. Features of substantially similar characteristics and location may be grouped together on one form. More information about Undeveloped Floodplains and assessing this feature may be found on the City of Denton webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID(s):**	Data Form 1

Property ID can be found through Denton Central Appraisal District *Provide a unique ID for each feature when multiple features are assessed*

Hydrologic Segment Information:

Name:	Unnamed tributary of Pecan Creek	**Width**	7	**Order**	1
When available, stream segment name.		*Approximate stream width.*		*Stream order.*	

Assessment Conclusion:

Select one of the following.

☑ IS an ESA. Based upon this assessment the area is an Undeveloped Floodplain ESA. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.

☐ NOT an ESA. Based upon this assessment the floodplain is developed. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:

Provide a summary of details found in the field to support the conclusion selected above.

The riparian vegetation in the floodplain contained hardwood trees, eastern red cedar, and an understory of poison ivy and sawbriar. Based on a review of aerial photography, the floodplain is in its natural state and has not been previously modified aside from a utility ROW along the northern boundary which was cleared between 2022 and 2023, and a portion of the channel immediately north of Spencer Road which was stabilized between 2001 and 2005. The ROW has partially re-vegetated and there did not appear to be significant cut or fill in the region to install the utility line. The southern portion of the tributary has also re-vegetated and it appears only minor adjustments were made to the topography. As such, the ROW

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA

Field Assessor:

Name of Field Assessor: Tyler Frohlich

Affiliation of Field Assessor (Organization): Integrated Environmental Solutions

Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.	Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:08:10 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.	

Section 1. General Information

General Land Use:

Provide description of land hydrologically influencing feature. Select all that apply and provide more details as appropriate.

☑ Forest	Briefly describe: Hardwoods/ scattered Eastern red cedar
☑ Agricultural:	☐ Pasture ☐ Fallow ☑ Crop, crop type:
☑ Residential:	☑ Low Intensity ☐ High Intensity
☑ Commercial/Industrial	
☐ Recreational	
☐ Other:	

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Section 2. Floodplain Conditions

Are there modifications (cut/fill) of the floodplain?	☐ yes *(answer question below)* ☑ no
Describe:	
Are there structures in the floodplain?	☐ yes *(answer question below)* ☑ no
Describe:	Utility Line, bank reinforcements (gabion structures)

Waterway present: ☑ yes *(complete the table below and Riparian Buffer ESA form)* ☐ no

Waterway	☑ natural ☐ channelized ☐ impounded
Sinuosity	☑ meandering ☐ braided ☐ straight

Section 3. Soil Erosion and Deposition

Is there evidence of sheet flow across the floodplain?	☐ yes (answer question below) ☑ no
Active sheet flow erosion is:	☐ slight ☐ moderate ☐ severe
Is there evidence of concentrated flow?	☑ yes (answer question below) ☐ no
Active concentrated flow erosion is:	☐ slight ☑ moderate ☐ severe

Does the floodplain slope to the waterway or is a natural levee present?

☑ toward ☐ natural levee. Complete the table below.

Does natural levee create conditions for water-related habitat?	☐ yes *(complete Water-Related Habitat form)* ☑ no

Section 4. Brief Vegetation Survey

List all vegetative species covering >10% of the feature area.

Scientific name	*Common name*	*% Cover*
Carya illinoensis	Pecan	30
Juniperus virginiana	Eastern red cedar	15
Smilax bona-nox	Sawbrier	15
Ulmus americana	American Elm	30
Toxicodendron radicans	Poison Ivy	15

Project Number: ESA

Riparian Buffer ESA Assessment Form

Environmental Services and Sustainability

A Riparian Buffer ESA Assessment Form is to be completed for each feature identified as potentially to exist on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of a riparian buffer is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about riparian buffers and assessing this feature may be found on the City of Denton webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID:**	Data Form 2
Property ID can be found through Denton Central Appraisal District		*Provide a unique ID when multiple features are assessed*	

Hydrologic Segment Information:

Name:	Unnamed tributary of Pecan Creek	**Width:**	7	**Order:**	1
When available, stream or tributary to segment name		*Approximate stream width*		*Stream order*	

Assessment Conclusion:

Select one of the following.

- ☑ IS an ESA. Based upon this assessment the area is a Riparian Buffer ESA. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.
- ☐ NOT an ESA. Based upon this assessment the area is not a Riparian Buffer ESA. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:

Provide a summary and discussion of details found in the field to support the conclusion selected above. Include a discussion of the Rapid Stream Assessment Techniques and the final verbal score (Section 5).

The unnamed tributary of Pecan Creek was confirmed to be present in the field. The creek held flowing water at the time of evaluation and conditions on site indicated that flow would be intermittent. The riparian vegetation was comprised of an over story of American elm, and sycamore with an under story comprised of Chinese privet shrubs, and greenbrier. The RSAT indicated that the stream was classified as Good with a final verbal score of 32.

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA FIRM

Field Assessor:

Name of Field Assessor: Tyler Frohlich

Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.

Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:08:36 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

General Land Use:

Provide description of land hydrologically influencing feature. Select all that apply and provide more details as appropriate.

☑ Forest	Briefly describe: Forested along creek
☐ Agricultural:	☑ Pasture ☐ Fallow ☑ Crop, crop type:
☑ Residential:	☑ Low Intensity ☐ High Intensity
☑ Commercial/Industrial	
☐ Recreational	
☐ Other:	

Potential pollutants from current drainage area:

☑ urban/suburban landscape maintenance	■ urban/suburban parking lots or roads
☐ intensive agricultural use	☐ grazing animals have access to water feature
■ water feature has steep slopes	☐ plant or animal species of concern present
☐ water feature used for recreation	☐ waterway a drinking water source/adjacent to well
☐ other:	

Proposed construction activity in the drainage area of the water feature:

☐ Low impact potential (parks, low density residential)
■ High impact potential (high density residential, commercial development)
☐ Gas well plat

Benefit(s) current Riparian Buffer offers to the water feature:

■ intercepts sediment	■ provides fish habitat
■ intercepts nutrients	■ improves wildlife habitat
■ intercepts pesticides	■ stabilizes streambank
■ intercepts other pollutants	☐ unique aesthetics / privacy
☐ other:	

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Section 2. System Conditions

Stream Bank:

Evidence of frequent water level changes	☐ yes ☑ no		
Slope of bank	.30 %		
Soil class	☑ clay ☑ sand ☐ loam ☑ gravel ☐ ledge		
Active erosion	☐ slight ☑ moderate ☐ severe		
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☐ grass ☐ shrub ☑ young forest ☑ mature forest		
Large leaning trees	☑ yes ☐ no		
Invasive exotics present	☑ yes ☐ no	If yes, species: Chinese privet	% infestation: 20

Top of Bank:

Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☐ grass ☑ shrub ☑ young forest ☑ mature forest		
Invasive exotics present	☑ yes ☐ no	If yes, species: Chinese privet	% infestation: 50

Above the Bank:

Slope	.30 %
Direction of slope	☑ toward the water feature ☐ away from water feature
Runoff flow	☐ sheet flow across the land ☑ concentrated flow
Active erosion	☐ slight ☑ moderate ☐ severe
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated
Dominant cover	☐ cement ☐ bare ☐ grass ☐ shrub ☑ young forest ☐ mature forest
Invasive exotics present	☑ yes ☐ no If yes, species: Chinese privet % infestation: 50

Section 3. Brief Vegetation Survey

List all vegetative species where feature occurs for species covering >10% of the feature area and provide hydrophytic vegetation indicator of the species.

Bank:

Scientific name	*Common name*	*% Cover*	*Indicator*
Ligustrum sinense	Chinese privet	20	FACU

Bank Hydrophytic Vegetation Indicator: 0 : 1
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Buffer:

Scientific name	*Common name*	*% Cover*	*Indicator*
Ligustrum sinense	Chinese privet	25	FACU
Ulmus americana	American Elm	15	FAC
Platanus occidentalis	Sycamore	10	FAC
Smilax rotundifolia	Common Greenbrier	10	FAC

Buffer Hydrophytic Vegetation Indicator: 3 : 1
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Section 4. Hydrology and Hydric Soils Indicators

Hydrology Indicators:

Primary	*Secondary*
☐ inundated	☐ oxidized root channels in upper 12”
☐ soil saturated in upper 12”	☐ water-stained leaves
☐ water marks	☐ county soil survey
☐ drift lines	☐ fac-neutral test
■ sediment deposits	
■ evidence of drainage pattern	
Comments:	

Hydric Soil Indicators:

☐ histosol	☐ concretions
☐ histic epipendon	☐ high surface organic content
☐ sulfidic odor	☐ organic streaking in sandy soils
☐ aquic moisture regime	☐ listed on local hydric soil list
☑ reducing conditions	☐ listed on national hydric soil list
☐ gleyed or low chroma colors	☐ other:
Comments:	

Section 5. Rapid Stream Assessment Techniques (RSAT)

The Rapid Stream Assessment Techniques is adapted from the Texas Commission on Environmental Quality's Surface Water Quality Monitoring Procedures, Chapter 9. Physical Habitat of Aquatic Systems. To complete the RSAT provide a score for each table, as applicable. Sum Tables 1 – 6 scores and provide the average using a whole number. Complete Table 7 with these scores. Provide a total RSAT score and a verbal score. Please note, the order of tables 4 and 5 were switched at Version 5 of this form.

Table 1: Channel Stability

Indicative of hydrological flow regime alteration and general condition of physical / aquatic habitat and provides insight into the past, present, and possible future changes in stream channel morphometry.

	Score Selection:				*Score*
	Excellent (11 – 9)	*Good (8 – 6)*	*Fair (5 – 3)*	*Poor (2 – 0)*	
Stability of bank network	> 80% is stable, no evidence of bank sloughing or failure	71-80% is stable, infrequent signs of bank sloughing, slumping or failure	50-70% is stable, some signs of bank sloughing, slumping or failure	< 50% is stable, recent or frequent signs of bank sloughing, slumping	7
Stream bends at study site or immediate vicinity of study site	Very stable: outer bank height is slightly above stream level, bank overhang minimal	Stable: outer bank height 2-3 ft. above stream level, bank overhang slight to moderate	Unstable: outer bank height is substantially above stream level, substantial bank overhang	Highly unstable: outer bank height significantly above stream level, overhangs large and deep.	7
Exposed tree roots	Old, large, and woody exposed roots, generally 0-1 recent large tree falls / stream mile	Old and large exposed roots, some smaller young roots, 2- 3 recent large tree falls / stream mile	Young exposed tree roots are common, 4-5 recent large tree falls per stream mile	No trees exist, or young exposed tree roots are abundant, 6 or more recent large tree falls per stream mile.	7
Presence of highly erosion-resistant plant/soil matrix or material in bottom 1/3 of bank	dominant	present	compromised	severely compromised or nonexistent.	4
Channel crossing section shape	generally, V or U-shaped	"wide" U	generally trapezoid shaped	wide trapezoid to rectangle shape	7
Table 1 score (average of points given, rounded to nearest whole number)					6

Table 2: Channel Scouring and Sediment Deposition

Relates to the level of uncontrolled storm water runoff, sediment load, and transport and degradation of in-stream habitat.

	Score Selection:				*Score*
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Riffle embeddedness with sand/silt	small stream order: <25% embeddedness larger stream order: <35% embeddedness	25 – 49% 35 – 59%	50 – 79% 60 – 85%	>75% >85%	5
Potential for deep pools 2 ft or greater, substrate condition	High number of pools Pool substrate <30% sand/silt	Moderate number 30-59% sand/silt	Low number 60-80% sand/silt	Few, if any >80% sand/silt	5
Frequency of streak marks and/or banana-shaped deposits	Absent	Uncommon	Common	Very Common	5
Fresh, large sand deposits in channel and on overbank areas	Rare or absent	Uncommon, fresh localized deposits along top of low banks	Common, fresh deposits along top of low banks	Large deposits in channel and along major portion of overbank area	8
Frequency and condition of point bars	Few, small, stable, and vegetated	Small and stable, well vegetated, moderate fresh sand	Large and unstable, high amount of fresh sand	Moderate to large, unstable, high amount of fresh sand	6
Table 2 score (average of points given, rounded to nearest whole number)					6

Table 3: Physical In-Stream Habitat

Relates to the ability of the stream to meet basic physical requirements necessary for the support of a well-balanced aquatic community (i.e, water temperature, water velocity, substrate type and quality).

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent wetted perimeter of channel bottom during base flow events	>85%	61 – 85%	40 – 60%	<40%	5
Frequency of diverse habitat (riffles, runs and pools) and flow when water is present	Highly diverse habitat and flows	Good mix of habitat types and relatively diverse flows	Low diversity of habitat types, depth and flow relatively uniform	One habitat type dominates, velocity and flow uniform	5
Percent of riffle composition from larger material (cobble or gravel)	>50%	49 – 25%	24 – 5%	Dominated by sand or silt	4
Typical base flow riffle depth (non-stormwater base flows)	>6”	5.9 – 4.0”	3.9 – 2.0”	<2”	5
Typical depth of large pools	>24”	24 – 18”	18 – 12”	<12”	4
Channel alterations at study site	No evidence	Minor	Moderate	Extensive	4
Summer afternoon water temperature (estimated using tree canopy coverage)	<82 degrees F	82 – 89	89 – 94	>94	4
Table 3 score (average of points given, rounded to nearest whole number)					4

Table 4: Riparian Habitat

Provides insight into changes in stream energetics, temperature regimes, and both aquatic and terrestrial habitat conditions.

	Score Selection:				Score
	Excellent (7 – 6)	*Good (5 – 4)*	*Fair (3 – 2)*	*Poor (1 – 0)*	
Width of forested buffer along both banks	Wide (>200 ft)	> 100 ft along major portion of both banks	Predominantly wooded, major gaps in one or both banks	Mostly non-woody vegetation with narrow riparian zones	3
Canopy coverage	small stream order: >80% large stream order: >60%	79 – 65% 59 – 45%	64 – 45% 44 – 30%	<45% <30%	5
Table 4 score (average of points given, rounded to nearest whole number)					4

Is the water feature actively flowing?

☑ Yes, surface water is flowing and there are connects pools. Complete Tables 5 and 6.

☐ No, standing water, waterway is dry, or there are dry beds are seen between pools. Skip Tables 5 and 6.

Table 5: Water Quality

Indicative of watershed perturbations and general level of human activity, point and nonpoint source pollutant loadings, and aquatic habitat conditions.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent substrate fouling on underside of cobble	Minimal, 0 – 10%	Light, 11 – 20%	Moderate, 21 – 50%	High, >50%	6
Total Dissolved Solids	350 – 399 mg/L	400 – 449	450 – 500	>500	6
Water odor	No odor	Slight organic odor	Slight – moderate organic odor	Strong organic odor	6
Table 5 score (average of points given, rounded to nearest whole number)					6

Table 6: Biological Indicators

Considered to be the best overall indication of stream health and the level of watershed perturbation.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Macroinvertebrate community diversity	High diversity of good water quality indicator species. Few snails, leeches, aquatic worms.	Good diversity of good water quality indicator species. Mayflies and caddisflies present.	Low diversity of good water quality indicator species.	Low diversity, predominantly pollution-tolerant species.	6
Number of organisms	High to moderate	Moderate	Moderate to low	Very low number	6
Table 6 score (average of points given, rounded to nearest whole number)					6

Table 7: RSAT Summary

	Score – flow	Score – no flow
1. Channel Stability	6	
2. Channel Scouring/Deposition	6	
3. Physical In-Stream Habitat	4	
4. Riparian Habitat	4	
5. Water Quality	6	
6. Biological Indicators	6	
Total Score:	32	
Verbal Score from Total Score:	☐ Excellent (42-50) ☑ Good (30-41) ☐ Fair (16-29) ☐ Poor (<16)	☐ Excellent (29-34) ☐ Good (20-28) ☐ Fair (11-19) ☐ Poor (<11)

Project Number: ESA

Riparian Buffer ESA Assessment Form

Environmental Services and Sustainability

A Riparian Buffer ESA Assessment Form is to be completed for each feature identified as potentially to exist on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of a riparian buffer is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about riparian buffers and assessing this feature may be found on the City of Denton webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID:**	Data Form 3
Property ID can be found through Denton Central Appraisal District		*Provide a unique ID when multiple features are assessed*	

Hydrologic Segment Information:

Name:	Unnamed tributary of Pecan Creek	**Width:**	25	**Order:**	6
When available, stream or tributary to segment name		*Approximate stream width*		*Stream order*	

Assessment Conclusion:

Select one of the following.

☐ IS an ESA. Based upon this assessment the area is a Riparian Buffer ESA. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.

☑ NOT an ESA. Based upon this assessment the area is not a Riparian Buffer ESA. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:

Provide a summary and discussion of details found in the field to support the conclusion selected above. Include a discussion of the Rapid Stream Assessment Techniques and the final verbal score (Section 5).

The unnamed tributary of Pecan Creek was confirmed to be present in the field. The creek held flowing water at the time of evaluation and conditions on site indicated that flow would be intermittent. No riparian vegetation was present in the region where the erosion control was installed along the Spencer Road bridge to the south. The RSAT along the southern region indicated that the stream was classified as Fair with a final verbal score of 27.

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA FIRM

Field Assessor:

Name of Field Assessor: Tyler Frohlich

Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.

Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:08:56 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

General Land Use:

Provide description of land hydrologically influencing feature. Select all that apply and provide more details as appropriate.

☐ Forest	Briefly describe:
☐ Agricultural:	☑ Pasture ☐ Fallow ☐ Crop, crop type:
☑ Residential:	☑ Low Intensity ☐ High Intensity
☑ Commercial/Industrial	
☐ Recreational	
☐ Other:	

Potential pollutants from current drainage area:

☑ urban/suburban landscape maintenance	■ urban/suburban parking lots or roads
☐ intensive agricultural use	☐ grazing animals have access to water feature
■ water feature has steep slopes	☐ plant or animal species of concern present
☐ water feature used for recreation	☐ waterway a drinking water source/adjacent to well
☐ other:	

Proposed construction activity in the drainage area of the water feature:

☐ Low impact potential (parks, low density residential)
■ High impact potential (high density residential, commercial development)
☐ Gas well plat

Benefit(s) current Riparian Buffer offers to the water feature:

■ intercepts sediment	■ provides fish habitat
■ intercepts nutrients	■ improves wildlife habitat
■ intercepts pesticides	■ stabilizes streambank
■ intercepts other pollutants	☐ unique aesthetics / privacy
☐ other:	

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Section 2. System Conditions

Stream Bank:

Evidence of frequent water level changes	☐ yes ☑ no		
Slope of bank	.30 %		
Soil class	☑ clay ☑ sand ☐ loam ☑ gravel ☐ ledge		
Active erosion	☐ slight ☑ moderate ☐ severe		
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☑ grass ☐ shrub ☐ young forest ☐ mature forest		
Large leaning trees	☑ yes ☐ no		
Invasive exotics present	☐ yes ☑ no	If yes, species:	% infestation:

Top of Bank:

Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☑ grass ☐ shrub ☐ young forest ☐ mature forest		
Invasive exotics present	☐ yes ☑ no	If yes, species:	% infestation:

Above the Bank:

Slope	.30 %		
Direction of slope	☑ toward the water feature ☐ away from water feature		
Runoff flow	☐ sheet flow across the land ☑ concentrated flow		
Active erosion	☐ slight ☑ moderate ☐ severe		
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☑ grass ☐ shrub ☐ young forest ☐ mature forest		
Invasive exotics present	☐ yes ☑ no	If yes, species:	% infestation:

Section 3. Brief Vegetation Survey

List all vegetative species where feature occurs for species covering >10% of the feature area and provide hydrophytic vegetation indicator of the species.

Bank:

Scientific name	*Common name*	*% Cover*	*Indicator*
Spreading Hedgeparsley	Torilis arvensis	25	NL
Prickly Lettuce	Lactuca serriola	20	FAC
Climbing Hempvine	Mikania scandens	15	FACW
Swamp Smartweed	Polygonum hydropiperoides	10	OBL
Pinkladies	Oenothera speciosa	10	NL

Bank Hydrophytic Vegetation Indicator: 3 : 0
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Buffer:

Scientific name	*Common name*	*% Cover*	*Indicator*
Virginia Pepperweed	Lepidium virginicum	30	FACU
Perennial Ryegrass	Lolium perenne	25	FACU
Field Brome	Bromus arvensis	15	FACU
Pinkladies	Oenothera speciosa	15	NL

Buffer Hydrophytic Vegetation Indicator: 0 : 3
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Section 4. Hydrology and Hydric Soils Indicators

Hydrology Indicators:

Primary	*Secondary*
☐ inundated	☐ oxidized root channels in upper 12”
☐ soil saturated in upper 12”	☐ water-stained leaves
☐ water marks	☐ county soil survey
☐ drift lines	☐ fac-neutral test
■ sediment deposits	
■ evidence of drainage pattern	
Comments:	

Hydric Soil Indicators:

☐ histosol	☐ concretions
☐ histic epipendon	☐ high surface organic content
☐ sulfidic odor	☐ organic streaking in sandy soils
☐ aquic moisture regime	☐ listed on local hydric soil list
☑ reducing conditions	☐ listed on national hydric soil list
☐ gleyed or low chroma colors	☐ other:
Comments:	

Section 5. Rapid Stream Assessment Techniques (RSAT)

The Rapid Stream Assessment Techniques is adapted from the Texas Commission on Environmental Quality's Surface Water Quality Monitoring Procedures, Chapter 9. Physical Habitat of Aquatic Systems. To complete the RSAT provide a score for each table, as applicable. Sum Tables 1 – 6 scores and provide the average using a whole number. Complete Table 7 with these scores. Provide a total RSAT score and a verbal score. Please note, the order of tables 4 and 5 were switched at Version 5 of this form.

Table 1: Channel Stability

Indicative of hydrological flow regime alteration and general condition of physical / aquatic habitat and provides insight into the past, present, and possible future changes in stream channel morphometry.

	Score Selection:				*Score*
	Excellent (11 – 9)	*Good (8 – 6)*	*Fair (5 – 3)*	*Poor (2 – 0)*	
Stability of bank network	> 80% is stable, no evidence of bank sloughing or failure	71-80% is stable, infrequent signs of bank sloughing, slumping or failure	50-70% is stable, some signs of bank sloughing, slumping or failure	< 50% is stable, recent or frequent signs of bank sloughing, slumping	7
Stream bends at study site or immediate vicinity of study site	Very stable: outer bank height is slightly above stream level, bank overhang minimal	Stable: outer bank height 2-3 ft. above stream level, bank overhang slight to moderate	Unstable: outer bank height is substantially above stream level, substantial bank overhang	Highly unstable: outer bank height significantly above stream level, overhangs large and deep.	7
Exposed tree roots	Old, large, and woody exposed roots, generally 0-1 recent large tree falls / stream mile	Old and large exposed roots, some smaller young roots, 2- 3 recent large tree falls / stream mile	Young exposed tree roots are common, 4-5 recent large tree falls per stream mile	No trees exist, or young exposed tree roots are abundant, 6 or more recent large tree falls per stream mile.	7
Presence of highly erosion-resistant plant/soil matrix or material in bottom 1/3 of bank	dominant	present	compromised	severely compromised or nonexistent.	4
Channel crossing section shape	generally, V or U-shaped	"wide" U	generally trapezoid shaped	wide trapezoid to rectangle shape	2
Table 1 score (average of points given, rounded to nearest whole number)					5

Table 2: Channel Scouring and Sediment Deposition

Relates to the level of uncontrolled storm water runoff, sediment load, and transport and degradation of in-stream habitat.

	Score Selection:				*Score*
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Riffle embeddedness with sand/silt	small stream order: <25% embeddedness larger stream order: <35% embeddedness	25 – 49% 35 – 59%	50 – 79% 60 – 85%	>75% >85%	5
Potential for deep pools 2 ft or greater, substrate condition	High number of pools Pool substrate <30% sand/silt	Moderate number 30-59% sand/silt	Low number 60-80% sand/silt	Few, if any >80% sand/silt	5
Frequency of streak marks and/or banana-shaped deposits	Absent	Uncommon	Common	Very Common	5
Fresh, large sand deposits in channel and on overbank areas	Rare or absent	Uncommon, fresh localized deposits along top of low banks	Common, fresh deposits along top of low banks	Large deposits in channel and along major portion of overbank area	8
Frequency and condition of point bars	Few, small, stable, and vegetated	Small and stable, well vegetated, moderate fresh sand	Large and unstable, high amount of fresh sand	Moderate to large, unstable, high amount of fresh sand	6
Table 2 score (average of points given, rounded to nearest whole number)					6

Table 3: Physical In-Stream Habitat

Relates to the ability of the stream to meet basic physical requirements necessary for the support of a well-balanced aquatic community (i.e, water temperature, water velocity, substrate type and quality).

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent wetted perimeter of channel bottom during base flow events	>85%	61 – 85%	40 – 60%	<40%	6
Frequency of diverse habitat (riffles, runs and pools) and flow when water is present	Highly diverse habitat and flows	Good mix of habitat types and relatively diverse flows	Low diversity of habitat types, depth and flow relatively uniform	One habitat type dominates, velocity and flow uniform	5
Percent of riffle composition from larger material (cobble or gravel)	>50%	49 – 25%	24 – 5%	Dominated by sand or silt	5
Typical base flow riffle depth (non-stormwater base flows)	>6”	5.9 – 4.0”	3.9 – 2.0”	<2”	5
Typical depth of large pools	>24”	24 – 18”	18 – 12”	<12”	4
Channel alterations at study site	No evidence	Minor	Moderate	Extensive	3
Summer afternoon water temperature (estimated using tree canopy coverage)	<82 degrees F	82 – 89	89 – 94	>94	2
Table 3 score (average of points given, rounded to nearest whole number)					4

Table 4: Riparian Habitat

Provides insight into changes in stream energetics, temperature regimes, and both aquatic and terrestrial habitat conditions.

	Score Selection:				Score
	Excellent (7 – 6)	*Good (5 – 4)*	*Fair (3 – 2)*	*Poor (1 – 0)*	
Width of forested buffer along both banks	Wide (>200 ft)	> 100 ft along major portion of both banks	Predominantly wooded, major gaps in one or both banks	Mostly non-woody vegetation with narrow riparian zones	1
Canopy coverage	small stream order: >80% large stream order: >60%	79 – 65% 59 – 45%	64 – 45% 44 – 30%	<45% <30%	1
Table 4 score (average of points given, rounded to nearest whole number)					1

Is the water feature actively flowing?

☑ Yes, surface water is flowing and there are connects pools. Complete Tables 5 and 6.

☐ No, standing water, waterway is dry, or there are dry beds are seen between pools. Skip Tables 5 and 6.

Table 5: Water Quality

Indicative of watershed perturbations and general level of human activity, point and nonpoint source pollutant loadings, and aquatic habitat conditions.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent substrate fouling on underside of cobble	Minimal, 0 – 10%	Light, 11 – 20%	Moderate, 21 – 50%	High, >50%	6
Total Dissolved Solids	350 – 399 mg/L	400 – 449	450 – 500	>500	6
Water odor	No odor	Slight organic odor	Slight – moderate organic odor	Strong organic odor	6
Table 5 score (average of points given, rounded to nearest whole number)					6

Table 6: Biological Indicators

Considered to be the best overall indication of stream health and the level of watershed perturbation.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Macroinvertebrate community diversity	High diversity of good water quality indicator species. Few snails, leeches, aquatic worms.	Good diversity of good water quality indicator species. Mayflies and caddisflies present.	Low diversity of good water quality indicator species.	Low diversity, predominantly pollution-tolerant species.	6
Number of organisms	High to moderate	Moderate	Moderate to low	Very low number	6
Table 6 score (average of points given, rounded to nearest whole number)					6

Table 7: RSAT Summary

	Score – flow	Score – no flow
1. Channel Stability	5	
2. Channel Scouring/Deposition	6	
3. Physical In-Stream Habitat	4	
4. Riparian Habitat	1	
5. Water Quality	6	
6. Biological Indicators	6	
Total Score:	27	
Verbal Score from Total Score:	☐ Excellent (42-50) ☐ Good (30-41) ☑ Fair (16-29) ☐ Poor (<16)	☐ Excellent (29-34) ☐ Good (20-28) ☐ Fair (11-19) ☐ Poor (<11)

Project Number: ESA

Riparian Buffer ESA Assessment Form

Environmental Services and Sustainability

A Riparian Buffer ESA Assessment Form is to be completed for each feature identified as potentially to exist on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of a riparian buffer is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about riparian buffers and assessing this feature may be found on the City of Denton webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID:**	Data Form 4

Property ID can be found through Denton Central Appraisal District — *Provide a unique ID when multiple features are assessed*

Hydrologic Segment Information:

Name:	**Width:**	**Order:**
Unnamed tributary of Pecan Creek	7	1
When available, stream or tributary to segment name	*Approximate stream width*	*Stream order*

Assessment Conclusion:

Select one of the following.

- [x] IS an ESA. Based upon this assessment the area is a Riparian Buffer ESA. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.
- [ ] NOT an ESA. Based upon this assessment the area is not a Riparian Buffer ESA. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:

Provide a summary and discussion of details found in the field to support the conclusion selected above. Include a discussion of the Rapid Stream Assessment Techniques and the final verbal score (Section 5).

The unnamed tributary of Pecan Creek was confirmed to be present in the field. The creek held flowing water at the time of evaluation and conditions on site indicated that flow would be intermittent. The riparian vegetation was comprised of an over story of American elm, and Osage orange with an under story comprised of Chinese privet shrubs, and greenbrier. The RSAT indicated that the stream was classified as Good with a final verbal score of 30.

Attachments Provided:

Required:	[x] overall site map [x] current map of feature [x] proposed map of feature [x] soils map [x] photographs representative of feature
Other:	FEMA FIRM

Field Assessor:

Name of Field Assessor: Tyler Frohlich

Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.

Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:09:17 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

General Land Use:

Provide description of land hydrologically influencing feature. Select all that apply and provide more details as appropriate.

☑ Forest	Briefly describe: Forested along creek
☐ Agricultural:	☑ Pasture ☐ Fallow ☑ Crop, crop type:
☑ Residential:	☑ Low Intensity ☐ High Intensity
☑ Commercial/Industrial	
☐ Recreational	
☐ Other:	

Potential pollutants from current drainage area:

☑ urban/suburban landscape maintenance	■ urban/suburban parking lots or roads
☐ intensive agricultural use	☐ grazing animals have access to water feature
■ water feature has steep slopes	☐ plant or animal species of concern present
☐ water feature used for recreation	☐ waterway a drinking water source/adjacent to well
☐ other:	

Proposed construction activity in the drainage area of the water feature:

☐ Low impact potential (parks, low density residential)
■ High impact potential (high density residential, commercial development)
☐ Gas well plat

Benefit(s) current Riparian Buffer offers to the water feature:

■ intercepts sediment	■ provides fish habitat
■ intercepts nutrients	■ improves wildlife habitat
■ intercepts pesticides	■ stabilizes streambank
■ intercepts other pollutants	☐ unique aesthetics / privacy
☐ other:	

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Section 2. System Conditions

Stream Bank:

Evidence of frequent water level changes	☐ yes ☑ no		
Slope of bank	.30 %		
Soil class	☑ clay ☑ sand ☐ loam ☑ gravel ☐ ledge		
Active erosion	☐ slight ☑ moderate ☐ severe		
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☐ grass ☐ shrub ☑ young forest ☑ mature forest		
Large leaning trees	☑ yes ☐ no		
Invasive exotics present	☑ yes ☐ no	If yes, species: Chinese privet	% infestation: 20

Top of Bank:

Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☐ grass ☑ shrub ☑ young forest ☑ mature forest		
Invasive exotics present	☑ yes ☐ no	If yes, species: Chinese privet	% infestation: 60

Above the Bank:

Slope	.30 %		
Direction of slope	☑ toward the water feature ☐ away from water feature		
Runoff flow	☐ sheet flow across the land ☑ concentrated flow		
Active erosion	☐ slight ☑ moderate ☐ severe		
Existing plant cover	☐ little to none ☑ moderate ☐ well vegetated		
Dominant cover	☐ cement ☐ bare ☐ grass ☐ shrub ☑ young forest ☐ mature forest		
Invasive exotics present	☑ yes ☐ no	If yes, species: Chinese privet	% infestation: 50

Section 3. Brief Vegetation Survey

List all vegetative species where feature occurs for species covering >10% of the feature area and provide hydrophytic vegetation indicator of the species.

Bank:

Scientific name	*Common name*	*% Cover*	*Indicator*
American Elm	Ulmus americana	15	FAC
Chinese Privet	Ligustrum sinense	20	UPL
Swamp Smartweed	Polygonum hydropiperoides	10	OBL

Bank Hydrophytic Vegetation Indicator: 2 : 1
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Buffer:

Scientific name	*Common name*	*% Cover*	*Indicator*
American Elm	Ulmus americana	10	FAC
Chinese privet	Ligustrum sinense	60	UPL
Mustang Grape	Vitis mustangensis	10	NL
Osage Orange	Maclura pomifera	45	FACU

Buffer Hydrophytic Vegetation Indicator: 1 : 2
(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Section 4. Hydrology and Hydric Soils Indicators

Hydrology Indicators:

Primary	*Secondary*
☐ inundated	☐ oxidized root channels in upper 12”
☐ soil saturated in upper 12”	☐ water-stained leaves
☐ water marks	☐ county soil survey
☐ drift lines	☐ fac-neutral test
■ sediment deposits	
■ evidence of drainage pattern	
Comments:	

Hydric Soil Indicators:

☐ histosol	☐ concretions
☐ histic epipendon	☐ high surface organic content
☐ sulfidic odor	☐ organic streaking in sandy soils
☐ aquic moisture regime	☐ listed on local hydric soil list
☑ reducing conditions	☐ listed on national hydric soil list
☐ gleyed or low chroma colors	☐ other:
Comments:	

Section 5. Rapid Stream Assessment Techniques (RSAT)

The Rapid Stream Assessment Techniques is adapted from the Texas Commission on Environmental Quality's Surface Water Quality Monitoring Procedures, Chapter 9. Physical Habitat of Aquatic Systems. To complete the RSAT provide a score for each table, as applicable. Sum Tables 1 – 6 scores and provide the average using a whole number. Complete Table 7 with these scores. Provide a total RSAT score and a verbal score. Please note, the order of tables 4 and 5 were switched at Version 5 of this form.

Table 1: Channel Stability

Indicative of hydrological flow regime alteration and general condition of physical / aquatic habitat and provides insight into the past, present, and possible future changes in stream channel morphometry.

	Score Selection:				*Score*
	Excellent (11 – 9)	*Good (8 – 6)*	*Fair (5 – 3)*	*Poor (2 – 0)*	
Stability of bank network	> 80% is stable, no evidence of bank sloughing or failure	71-80% is stable, infrequent signs of bank sloughing, slumping or failure	50-70% is stable, some signs of bank sloughing, slumping or failure	< 50% is stable, recent or frequent signs of bank sloughing, slumping	7
Stream bends at study site or immediate vicinity of study site	Very stable: outer bank height is slightly above stream level, bank overhang minimal	Stable: outer bank height 2-3 ft. above stream level, bank overhang slight to moderate	Unstable: outer bank height is substantially above stream level, substantial bank overhang	Highly unstable: outer bank height significantly above stream level, overhangs large and deep.	7
Exposed tree roots	Old, large, and woody exposed roots, generally 0-1 recent large tree falls / stream mile	Old and large exposed roots, some smaller young roots, 2- 3 recent large tree falls / stream mile	Young exposed tree roots are common, 4-5 recent large tree falls per stream mile	No trees exist, or young exposed tree roots are abundant, 6 or more recent large tree falls per stream mile.	7
Presence of highly erosion-resistant plant/soil matrix or material in bottom 1/3 of bank	dominant	present	compromised	severely compromised or nonexistent.	4
Channel crossing section shape	generally, V or U-shaped	"wide" U	generally trapezoid shaped	wide trapezoid to rectangle shape	7
Table 1 score (average of points given, rounded to nearest whole number)					6

Table 2: Channel Scouring and Sediment Deposition

Relates to the level of uncontrolled storm water runoff, sediment load, and transport and degradation of in-stream habitat.

	Score Selection:				*Score*
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Riffle embeddedness with sand/silt	small stream order: <25% embeddedness larger stream order: <35% embeddedness	25 – 49% 35 – 59%	50 – 79% 60 – 85%	>75% >85%	5
Potential for deep pools 2 ft or greater, substrate condition	High number of pools Pool substrate <30% sand/silt	Moderate number 30-59% sand/silt	Low number 60-80% sand/silt	Few, if any >80% sand/silt	5
Frequency of streak marks and/or banana-shaped deposits	Absent	Uncommon	Common	Very Common	5
Fresh, large sand deposits in channel and on overbank areas	Rare or absent	Uncommon, fresh localized deposits along top of low banks	Common, fresh deposits along top of low banks	Large deposits in channel and along major portion of overbank area	8
Frequency and condition of point bars	Few, small, stable, and vegetated	Small and stable, well vegetated, moderate fresh sand	Large and unstable, high amount of fresh sand	Moderate to large, unstable, high amount of fresh sand	6
Table 2 score (average of points given, rounded to nearest whole number)					6

Table 3: Physical In-Stream Habitat

Relates to the ability of the stream to meet basic physical requirements necessary for the support of a well-balanced aquatic community (i.e, water temperature, water velocity, substrate type and quality).

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent wetted perimeter of channel bottom during base flow events	>85%	61 – 85%	40 – 60%	<40%	5
Frequency of diverse habitat (riffles, runs and pools) and flow when water is present	Highly diverse habitat and flows	Good mix of habitat types and relatively diverse flows	Low diversity of habitat types, depth and flow relatively uniform	One habitat type dominates, velocity and flow uniform	5
Percent of riffle composition from larger material (cobble or gravel)	>50%	49 – 25%	24 – 5%	Dominated by sand or silt	4
Typical base flow riffle depth (non-stormwater base flows)	>6”	5.9 – 4.0”	3.9 – 2.0”	<2”	5
Typical depth of large pools	>24”	24 – 18”	18 – 12”	<12”	4
Channel alterations at study site	No evidence	Minor	Moderate	Extensive	4
Summer afternoon water temperature (estimated using tree canopy coverage)	<82 degrees F	82 – 89	89 – 94	>94	4
Table 3 score (average of points given, rounded to nearest whole number)					4

Table 4: Riparian Habitat

Provides insight into changes in stream energetics, temperature regimes, and both aquatic and terrestrial habitat conditions.

	Score Selection:				Score
	Excellent (7 – 6)	*Good (5 – 4)*	*Fair (3 – 2)*	*Poor (1 – 0)*	
Width of forested buffer along both banks	Wide (>200 ft)	> 100 ft along major portion of both banks	Predominantly wooded, major gaps in one or both banks	Mostly non-woody vegetation with narrow riparian zones	2
Canopy coverage	small stream order: >80% large stream order: >60%	79 – 65% 59 – 45%	64 – 45% 44 – 30%	<45% <30%	1
Table 4 score (average of points given, rounded to nearest whole number)					2

Is the water feature actively flowing?

☑ Yes, surface water is flowing and there are connects pools. Complete Tables 5 and 6.

☐ No, standing water, waterway is dry, or there are dry beds are seen between pools. Skip Tables 5 and 6.

Table 5: Water Quality

Indicative of watershed perturbations and general level of human activity, point and nonpoint source pollutant loadings, and aquatic habitat conditions.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Percent substrate fouling on underside of cobble	Minimal, 0 – 10%	Light, 11 – 20%	Moderate, 21 – 50%	High, >50%	6
Total Dissolved Solids	350 – 399 mg/L	400 – 449	450 – 500	>500	6
Water odor	No odor	Slight organic odor	Slight – moderate organic odor	Strong organic odor	6
Table 5 score (average of points given, rounded to nearest whole number)					6

Table 6: Biological Indicators

Considered to be the best overall indication of stream health and the level of watershed perturbation.

	Score Selection:				Score
	Excellent (8 – 7)	*Good (6 – 5)*	*Fair (4 – 3)*	*Poor (2 – 0)*	
Macroinvertebrate community diversity	High diversity of good water quality indicator species. Few snails, leeches, aquatic worms.	Good diversity of good water quality indicator species. Mayflies and caddisflies present.	Low diversity of good water quality indicator species.	Low diversity, predominantly pollution-tolerant species.	6
Number of organisms	High to moderate	Moderate	Moderate to low	Very low number	6
Table 6 score (average of points given, rounded to nearest whole number)					6

Table 7: RSAT Summary

	Score – flow	Score – no flow
1. Channel Stability	6	
2. Channel Scouring/Deposition	6	
3. Physical In-Stream Habitat	4	
4. Riparian Habitat	2	
5. Water Quality	6	
6. Biological Indicators	6	
Total Score:	30	
Verbal Score from Total Score:	☐ Excellent (42-50) ☑ Good (30-41) ☐ Fair (16-29) ☐ Poor (<16)	☐ Excellent (29-34) ☐ Good (20-28) ☐ Fair (11-19) ☐ Poor (<11)

Project Number: ESA

Water-Related Habitat Assessment Form

Environmental Services and Sustainability

A Water-Related Habitat Assessment Form is to be completed for each feature identified as potentially existing on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of a water-related habitat is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about water-related habitats and assessing this feature may be found on the City of Denton webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID:**	Data Form 5

Property ID can be found through Denton Central Appraisal District — *Provide a unique ID when multiple features are assessed*

Type of Water-Related Habitat

Select the type. Complete assessment Section 1 and the appropriate section below.

- ☐ Isolated and Adjacent Wetland(s) (Section 2)
- ☐ Spring(s) (Section 4)
- ☑ Bottomland Hardwood Forest (Section 3)
- ☐ Deep Water Habitat (Section 5)

Assessment Conclusion:

Select one of the following.

- ☐ IS an ESA. Based upon this assessment the area is a Water-Related Habitat. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.
- ☑ NOT an ESA. Based upon this assessment the area is not a Water-Related Habitat. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:

Provide a summary of details found in the field to support the conclusion selected above.

A region surrounding the unnamed tributary of Pecan Creek was identified on the City of Denton ESA map as water related habitat - not assessed or assessment expired. Bottomland hardwood habitat was not identified in the region as it had been previously cleared for a utility line ROW between 2022 and 2023. The region was observed with no existing canopy cover and was removed from the Water Related Habitat - Bottomland Hardwood ESA designation.

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA FIRM

Field Assessor:

Name of Field Assessor: Tyler Frohlich

Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.

Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:09:40 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

General Land Use

Provide description of land hydrologically influencing feature. Select all that apply and provide more details as appropriate.

☐ Forest	Briefly describe:
☐ Agricultural:	☐ Pasture ☐ Fallow ☐ Crop, crop type:
☑ Residential:	☑ Low Intensity ☐ High Intensity
☑ Commercial/Industrial	
☐ Recreational	
☐ Other:	

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Section 2. Isolated and Adjacent Wetland(s)

Hydrology Indicators

Primary	*Secondary*
☐ inundated	☐ oxidized root channels in upper 12”
☐ soil saturated in upper 12”	☐ water-stained leaves
☐ water marks	☐ county soil survey
☐ drift lines	☐ fac-neutral test
☐ sediment deposits	
☐ evidence of drainage pattern	
Comments:	

Hydric Soil Indicators

☐ histosol	☐ concretions
☐ histic epipendon	☐ high surface organic content
☐ sulfidic odor	☐ organic streaking in sandy soils
☐ aquic moisture regime	☐ listed on local hydric soil list
☐ reducing conditions	☐ listed on national hydric soil list
☐ gleyed or low chroma colors	☐ other:
Comments:	

Brief Vegetation Survey:

List all vegetative species where feature occurs for species covering >10% of the feature area and provide hydrophytic vegetation indicator of the species.

Scientific name	*Common name*	*% Cover*	*Indicator*

Hydrophytic Vegetation Indicator: ___ : ___

(*Number of plant species that are OBL, FACW and FAC to number of plant species that are FACU and UPL*)

Section 3. Bottomland Hardwood Forest

List vegetative species covering >10% of the feature area.

Bottomland hardwood forests are deciduous forested wetlands and river bottoms with alluvial soil deposition. Periodic to constant wet conditions support certain species of trees such as pecan, Texas hickory, American elm, Chinkapin oak, Chittamwood, Green ash, Black walnut, Indigo bush, Texas persimmon, Shumard oak, sycamore, and Carolina buckthorn.

Old growth canopy trees

Scientific name	*Common name*	*% Cover*

Re-growth canopy trees

Scientific name	*Common name*	*% Cover*

Small trees / understory trees

Scientific name	*Common name*	*% Cover*

Understory vegetation – shrub / vine / forb / grass

Scientific name	*Common name*	*% Cover*
Ligustrum sinense	Chinese privet	70
Sorgum halepense	Johnson Grass	10
Vitis mustangensis	Mustang Grape	10
Smilax bona-nox	Saw Greenbrier	10

Forest floor conditions:

Select all that apply.

☐ Standing dead timber ☐ Fallen dead timber ☑ Detritus / leaf litter ☐ fungi

Comments:

Section 4. Spring(s)

List vegetative species covering >10% of the feature area.

Brief Vegetation Survey:

Scientific name	*Common name*	*% Cover*

Comments:

Section 5. Deep Water Habitat

Deep water habitats are permanently flooded lands lying below the deep water boundaries of wetlands. The boundary between wetland and deep water habitat in the riverine and lacustrine systems lies at a depth of 2 meters (6.6 feet) below low water; however, if emergent, shrubs or trees grow beyond this depth at any time, their deep water edge is the boundary.

Functions

☐ intercept sediment	☐ provide fish habitat
☐ intercept nutrients	☐ evidence of wildlife use
☐ intercept pesticides	☐ unique aesthetics

Impairments

☐ trash or litter / evidence of dumping	☐ livestock has access

Vegetation in water and on bank

☐ submerged aquatic vegetation	☐ moist soil grasses and forbs
☐ floating-leaf	☐ tree cover (shade)
☐ emergent vegetation	

Brief Vegetation Survey:

List vegetative species covering >10% of the feature area.

Scientific name	*Common name*	*% Cover*

Comments:

Project Number: ESA

Cross Timbers Upland Habitat Assessment Form

Environmental Services and Sustainability

A Cross Timbers Upland Habitat Assessment Form is to be completed for each feature identified as potentially existing on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of upland habitat is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about upland habitats and assessing this feature may be found on the City of Denton ESA webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID(s):**	Data Form 6
Property ID can be found through Denton Central Appraisal District		*Provide a feature ID when multiple features are assessed*	

Assessment Conclusion:
Select one of the following.

- ☐ IS an ESA. Based upon this assessment the area meets the criteria of Cross Timbers Upland Habitat. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.
- ☑ NOT an ESA. Based upon this assessment the area is not Cross Timbers Upland Habitat. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:
Provide a summary and discussion of details found in the field to support the conclusion selected above.

The region is dominated by herbaceous species. The area lacks the basic characteristics of a cross timbers upland forest. Therefore, this area does not meet the requirements to be verified as an ESA.

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA FIRM, aerial photographs

Field Assessor:

Name of Field Assessor: Tyler Frohlich
Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.
Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:07:20 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Callisburg fine sandy loam, 1 to 3 percent slopes	
Gasil fine sandy loam, 1 to 3 percent slopes	

Alfisol or Ultisol soil type present: ☑ yes ☐ no

Trails, Utility Clearings and Forest Openings within the Tree Stand:

Are there existing drive aisles, trails, utility clearings or canopy openings interior to the tree stand?
(*roadways and similar hard breaks do not apply*)

☐ yes: complete Section 3. ☑ no

Section 2. Forest Vegetation Survey

List all vegetative species covering >10% of the feature area

Old Growth Canopy Trees

Scientific name	*Common name*	*% Cover*

Re-Growth Canopy Trees

Are tree(s) present >6" DBH: ☐ yes ☑ no

Scientific name	*Common name*	*% Cover*

Small Trees/Saplings

Scientific name	*Common name*	*% Cover*

Understory Vegetation (shrubs/vines/grasses/forbs)

Scientific name	*Common name*	*% Cover*
Lolium perenne	Perennial Ryegrass	40
Lolium arundinaceum	Tall Fescue	25
Heterotheca subaxillaris	Camphorweed	15
Hordeum pusillum	Little Barley	10

Forest floor conditions:

Select all that apply.

☐ standing dead timber ☑ fallen dead timber ☑ detritus/leaf litter ☐ fungi

Section 3. Interior Forest Opening(s)

Interior forest openings or canopy gaps have traditionally served important roles in Cross Timbers Upland Habitats. Characterized by limited canopy cover and increased light penetration, these areas support native forbs, grasses, and shrubs that enhance wildlife habitat and biodiversity. They can also be important areas of regrowth for Quercus species. Common vegetative species seen in these areas include American beautyberry, plum or sumac thickets, Coralberry, Little bluestem, Big bluestem, Indiangrass, Switchgrass, Coneflower, and Indian blanket.

List all vegetative species covering >10% of the feature area.

Vegetation Survey

Scientific name	*Common name*	*% Cover*

Supports forest habitat:

Does the vegetation of the forest opening(s) provide wildlife resources, such as food or shelter?	☐ yes ☐ no
Is wildlife able to traverse the habitat through the forest opening(s)?	☐ yes ☐ no
Do(es) the forest opening(s) increase species richness?	☐ yes ☐ no

Comments:

Provide a supporting discussion on interior forest openings included or not included as part of the overall habitat. Labeling on the map may be needed if more than one area is considered.

Project Number: ESA

Cross Timbers Upland Habitat Assessment Form

Environmental Services and Sustainability

A Cross Timbers Upland Habitat Assessment Form is to be completed for each feature identified as potentially existing on the Official ESA Map. Additionally, any feature identified onsite that potentially has characteristics of upland habitat is to be identified, described and documented through this form. Features of substantially similar characteristics and location may be grouped together on one form. More information about upland habitats and assessing this feature may be found on the City of Denton ESA webpage.

Property Address or Property ID:	2201 & 2203 Spencer Road **R** 34406, 191269	**Feature ID(s):**	Data Form 7
Property ID can be found through Denton Central Appraisal District		*Provide a feature ID when multiple features are assessed*	

Assessment Conclusion:
Select one of the following.

☑ IS an ESA. Based upon this assessment the area meets the criteria of Cross Timbers Upland Habitat. I recommend the Official ESA Map be updated to confirm the ESA designation in this area.

☐ NOT an ESA. Based upon this assessment the area is not Cross Timbers Upland Habitat. I recommend the Official ESA Map be updated to remove the ESA designation from this area.

Assessment Comments:
Provide a summary and discussion of details found in the field to support the conclusion selected above.

Post oak overstory with scattered eastern red cedar trees and saplings. Chinese privet overgrown in understory. Recent aerial photography indicates that the forested area has remained forested for several decades. The area was previously part of a larger, contiguous forest but a portion was removed between 2007 and 2008 for a development to the east. Based on aerial photography in Google Earth, the current contiguous canopy cover is 12.5 acres. Therefore, this area meets the minimum 10-acre requirement to be verified as an ESA.

Attachments Provided:

Required:	☑ overall site map ☑ current map of feature ☑ proposed map of feature ☑ soils map ☑ photographs representative of feature
Other:	FEMA FIRM, aerial photographs

Field Assessor:
Name of Field Assessor: Tyler Frohlich
Affiliation of Assessor (Organization): Integrated Environmental Solutions, LLC.
Date the assessment was performed: 09 May 2024

I certify that the information provided here is an accurate description of the area(s) assessed.

Karisa Fenton Digitally signed by Karisa Fenton Date: 2024.05.20 15:07:48 -05'00'

Environmental Services Representative:

I concur with the description of this ESA and conclusion of this assessment.

Section 1. General Information

Soil Map Unit Name(s):

Provide soil classification types where feature occurs.

Silstid loamy fine sand, 1 to 5 percent slopes	

Alfisol or Ultisol soil type present: ☑ yes ☐ no

Trails, Utility Clearings and Forest Openings within the Tree Stand:

Are there existing drive aisles, trails, utility clearings or canopy openings interior to the tree stand?
(*roadways and similar hard breaks do not apply*)

☐ yes: complete Section 3. ☑ no

Section 2. Forest Vegetation Survey

List all vegetative species covering >10% of the feature area

Old Growth Canopy Trees

Scientific name	*Common name*	*% Cover*
Quercus stellata	Post Oak	50

Re-Growth Canopy Trees

Are tree(s) present >6" DBH: ☑ yes ☐ no

Scientific name	*Common name*	*% Cover*
Quercus stellata	Post Oak	30

Small Trees/Saplings

Scientific name	*Common name*	*% Cover*
Quercus stellata	Post Oak	20
Juniperus virginiana	Eastern red cedar	10

Understory Vegetation (shrubs/vines/grasses/forbs)

Scientific name	*Common name*	*% Cover*
Ligustrum sinense	Chinese privet	60
Smilax bona-nox	Saw Greenbrier	10

Forest floor conditions:

Select all that apply.

☐ standing dead timber ☑ fallen dead timber ☑ detritus/leaf litter ☐ fungi

Section 3. Interior Forest Opening(s)

Interior forest openings or canopy gaps have traditionally served important roles in Cross Timbers Upland Habitats. Characterized by limited canopy cover and increased light penetration, these areas support native forbs, grasses, and shrubs that enhance wildlife habitat and biodiversity. They can also be important areas of regrowth for Quercus species. Common vegetative species seen in these areas include American beautyberry, plum or sumac thickets, Coralberry, Little bluestem, Big bluestem, Indiangrass, Switchgrass, Coneflower, and Indian blanket.

List all vegetative species covering >10% of the feature area.

Vegetation Survey

Scientific name	*Common name*	*% Cover*

Supports forest habitat:

Does the vegetation of the forest opening(s) provide wildlife resources, such as food or shelter?	☐ yes ☐ no
Is wildlife able to traverse the habitat through the forest opening(s)?	☐ yes ☐ no
Do(es) the forest opening(s) increase species richness?	☐ yes ☐ no

Comments:

Provide a supporting discussion on interior forest openings included or not included as part of the overall habitat. Labeling on the map may be needed if more than one area is considered.

APPENDIX C

Tree Inventory Data

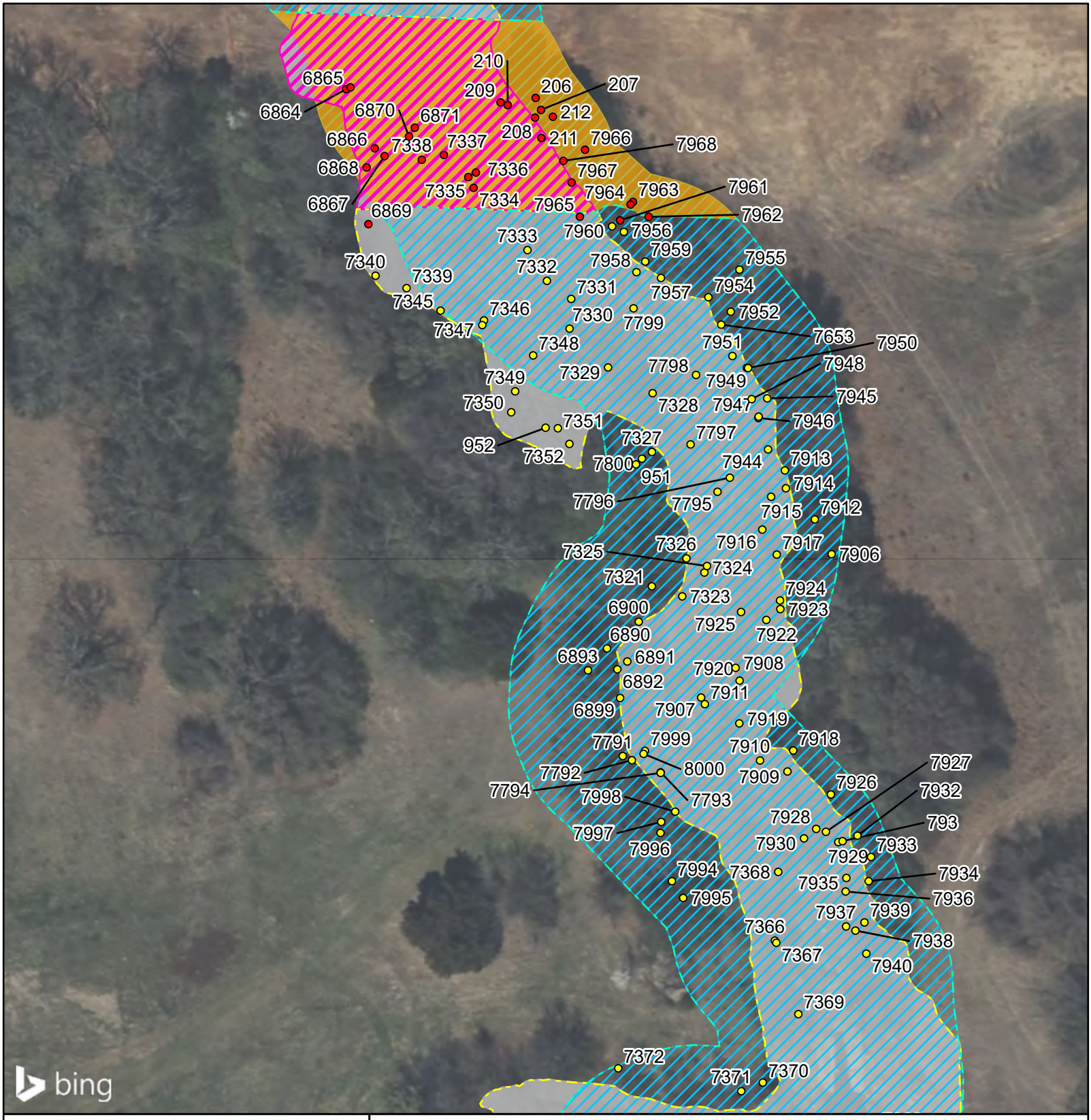


Figure 1A.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0 55

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Undeveloped Floodplain ESA
- Riparian Buffer ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

Direct/ Permanent Impacts

- Floodplain
- Riparian Buffer
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas

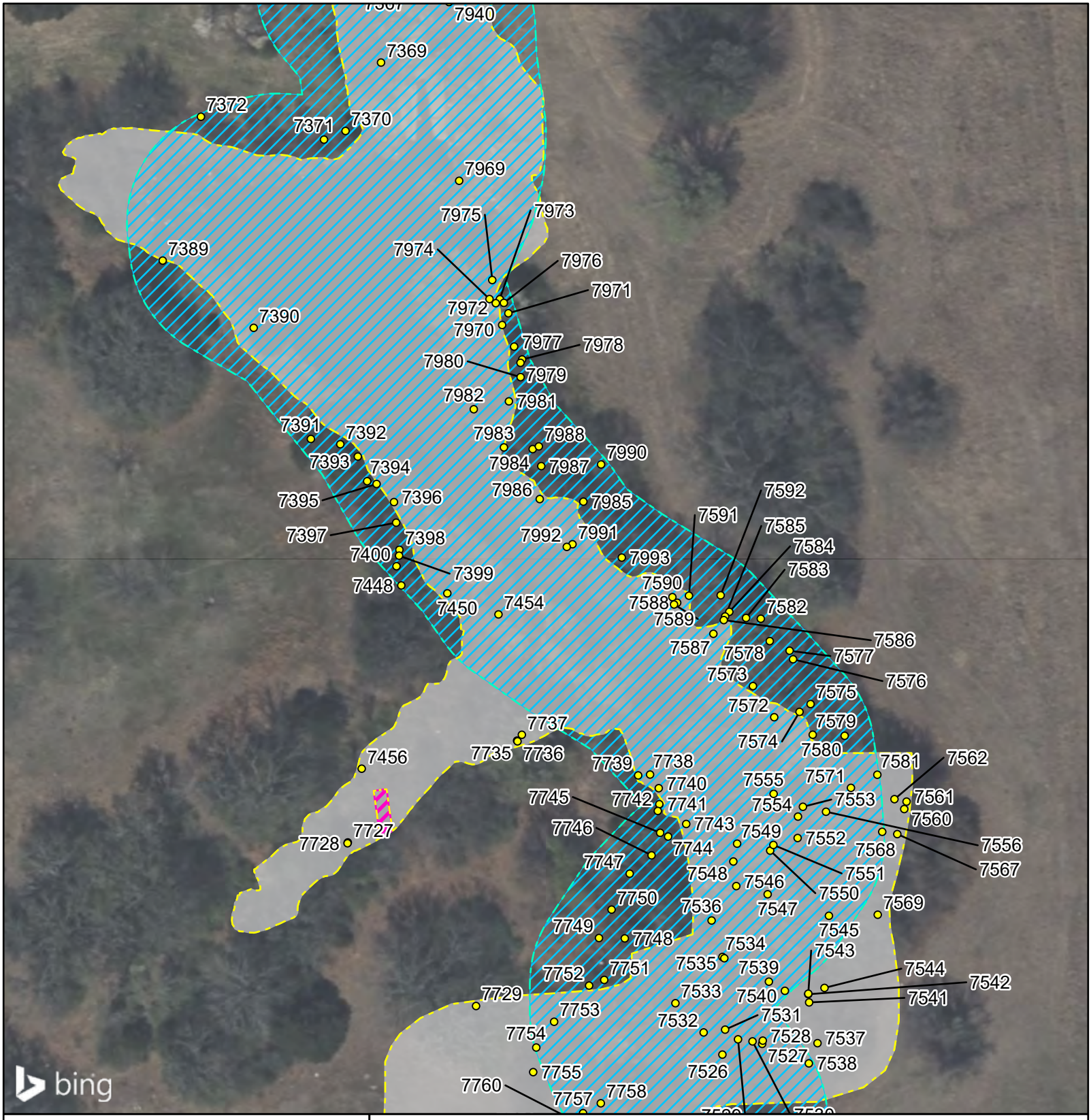


Figure 1B.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0 55

N
W E
S

File Ref. 04.110.165
Date: 4/8/2025

Survey Area
Undeveloped Floodplain ESA
Riparian Buffer ESA

Mitigation/ Preservation Area

Riparian Buffer
Floodplain

Direct/ Permanent Impacts

Floodplain
Riparian Buffer
Trees within the Mitigation Areas
Trees within the Proposed Impact Areas

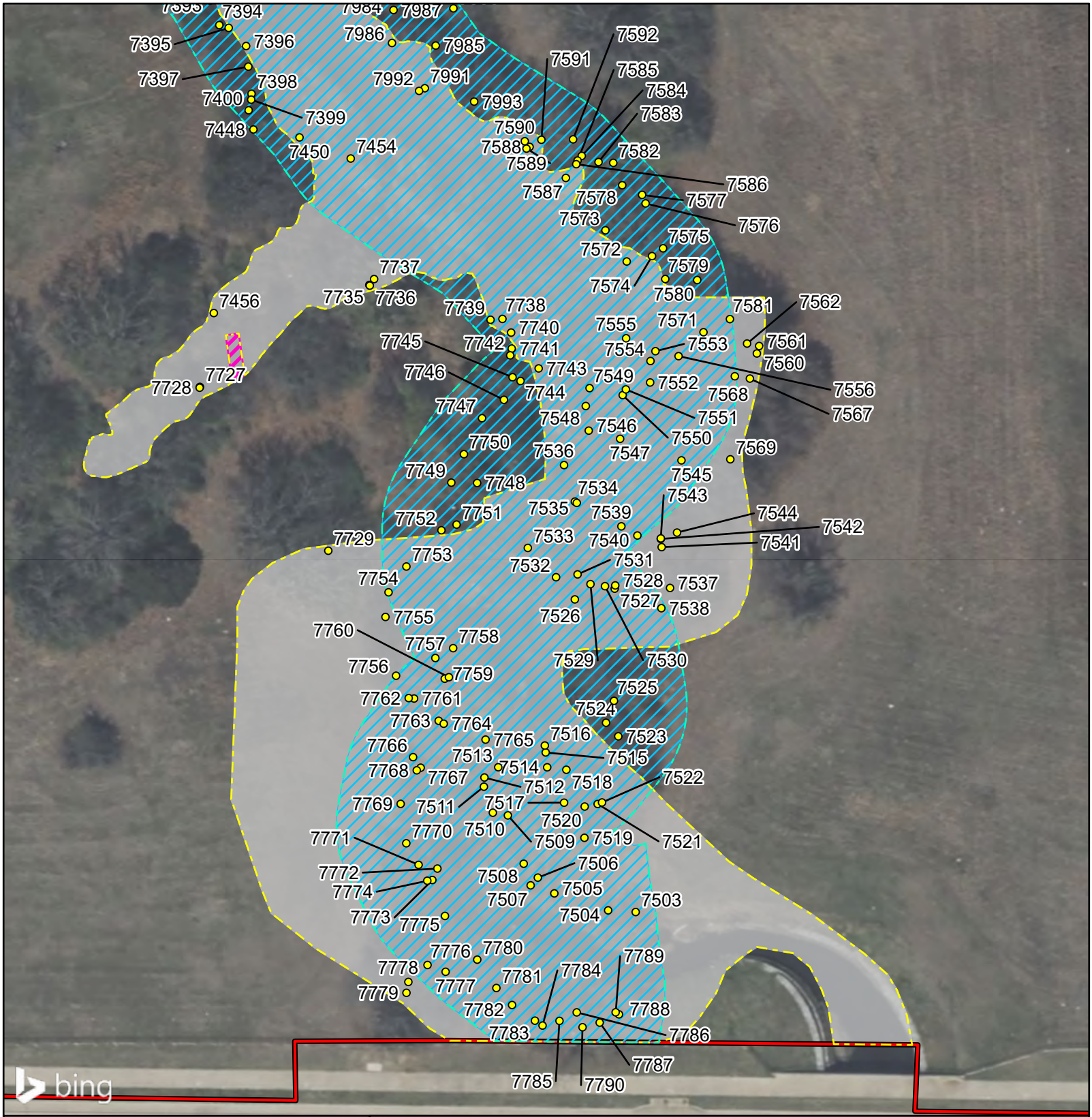


Figure 1C.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0 55

N
W E
S

File Ref. 04.110.165
Date: 4/8/2025

- Survey Area
- Undeveloped Floodplain ESA
- Riparian Buffer ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

Direct/ Permanent Impacts

- Floodplain
- Riparian Buffer
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas

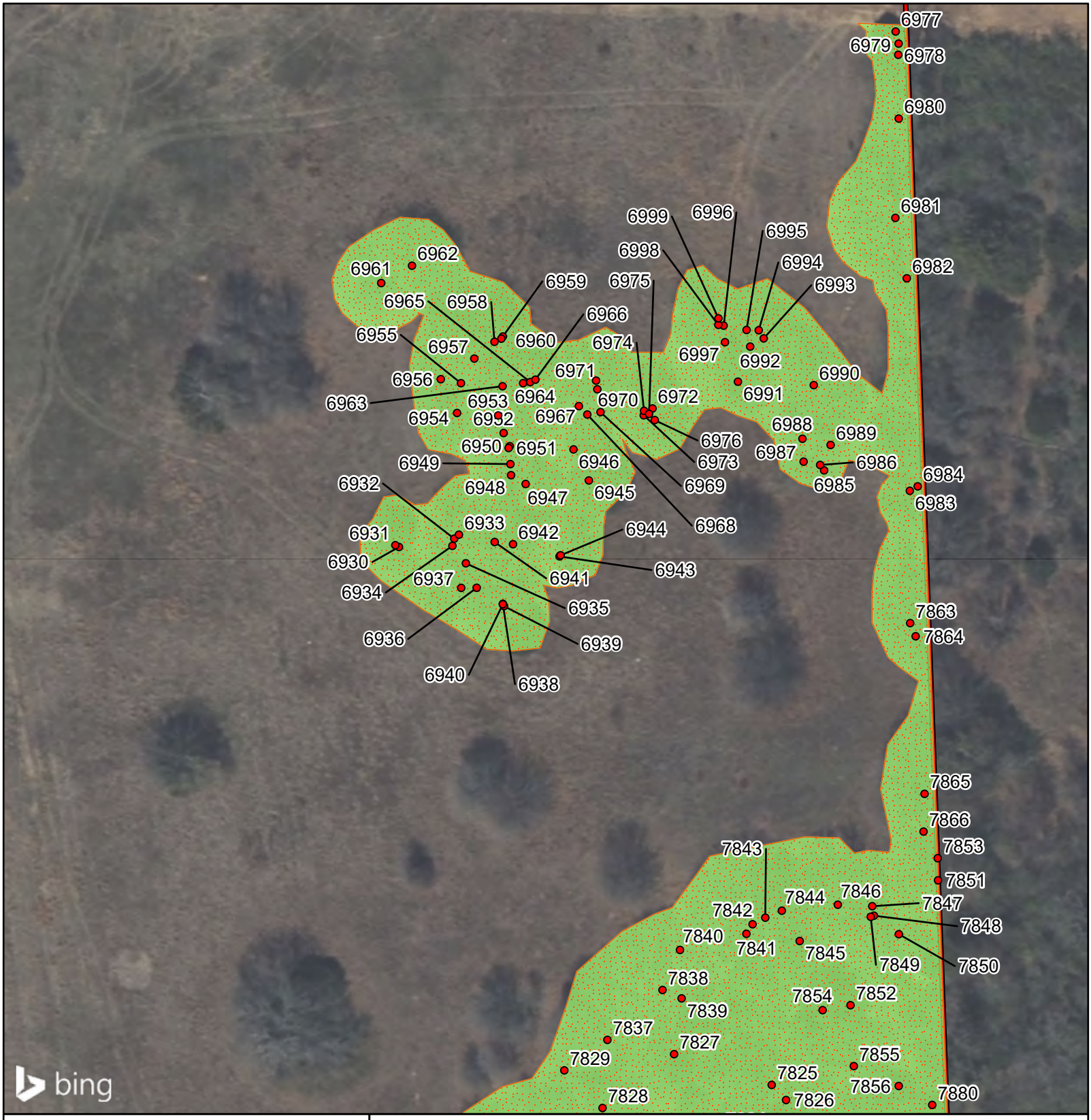


Figure 1D.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0 55

N
W E
S

File Ref. 04.110.165
Date: 4/9/2025

Survey Area

Cross Timbers Upland ESA

Cross Timbers Preservation

Direct/ Permanent Impacts

Cross Timbers

Trees within the Mitigation Areas

Trees within the Proposed Impact Areas

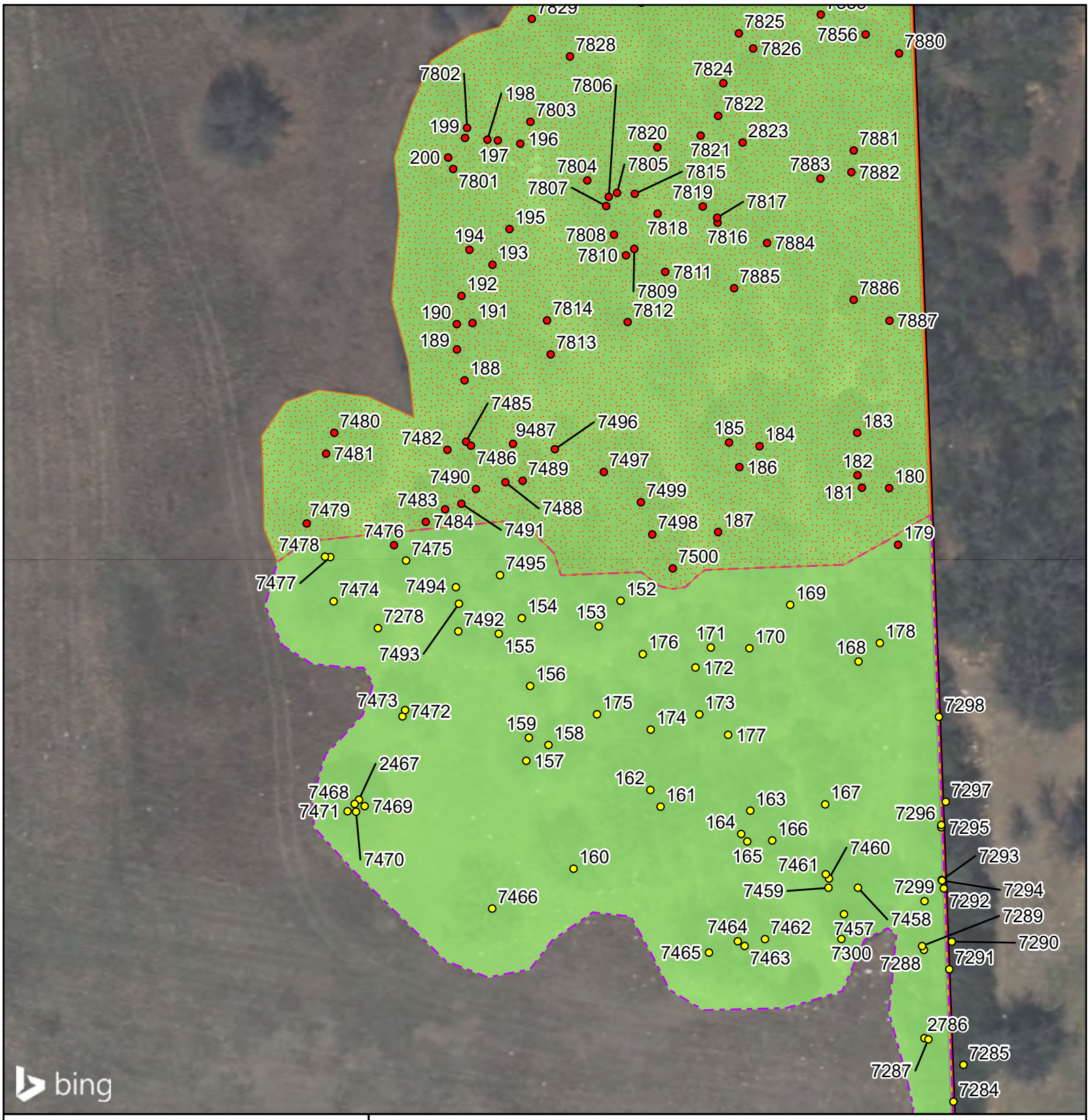


Figure 1E.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0 55

N
W E
S

File Ref. 04.110.165
Date: 4/9/2025

Survey Area

Cross Timbers Upland ESA

Cross Timbers Preservation

Direct/ Permanent Impacts

Cross Timbers

Trees within the Mitigation Areas

Trees within the Proposed Impact Areas

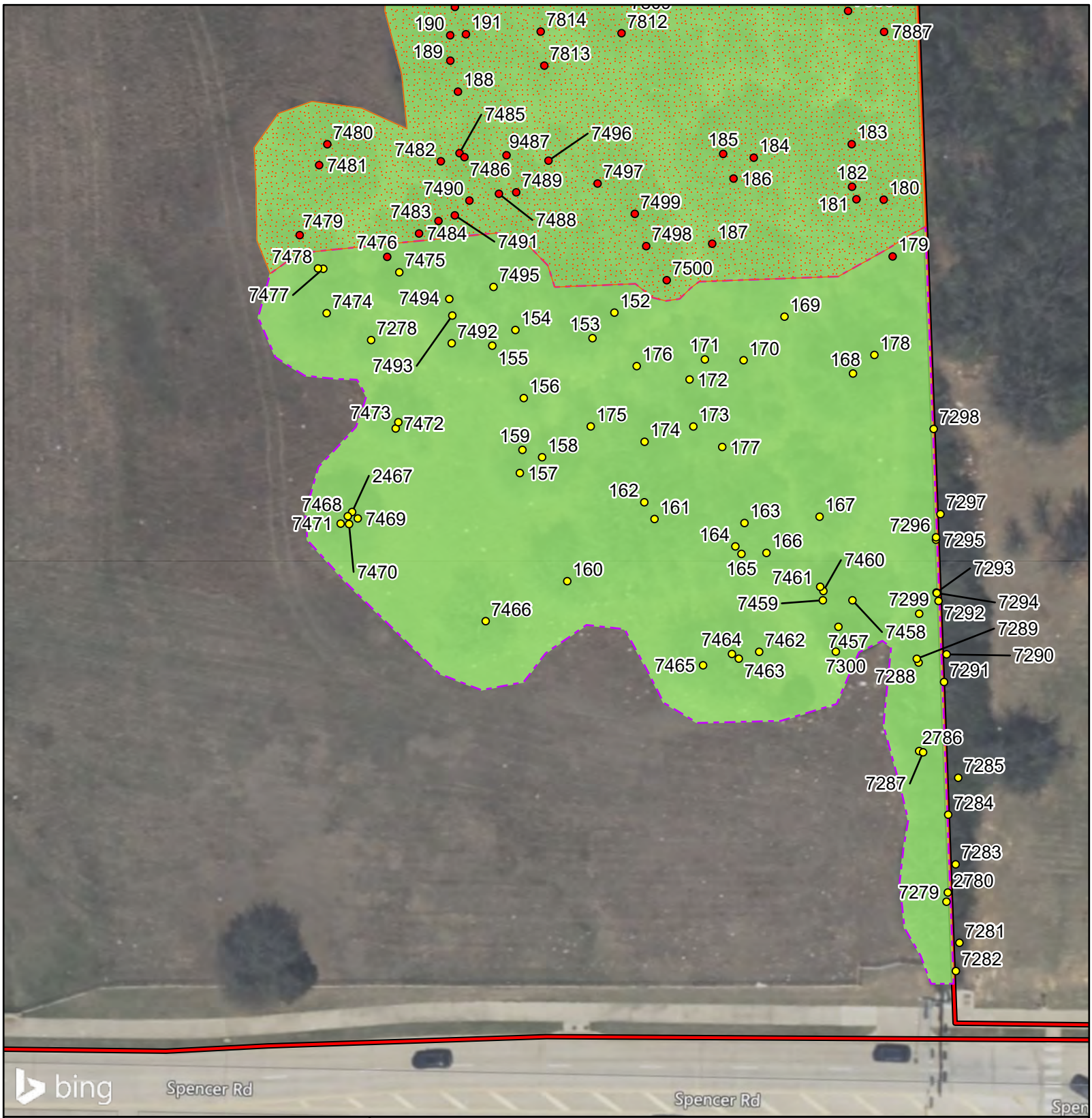


Figure 1F.
Tree Inventory Overview

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 55 ft

Feet
0
55

N
W
E
S

File Ref. 04.110.165
Date: 4/9/2025

Survey Area

Cross Timbers Upland ESA

Cross Timbers Preservation

Direct/ Permanent Impacts

Cross Timbers

Trees within the Mitigation Areas

Trees within the Proposed Impact Areas

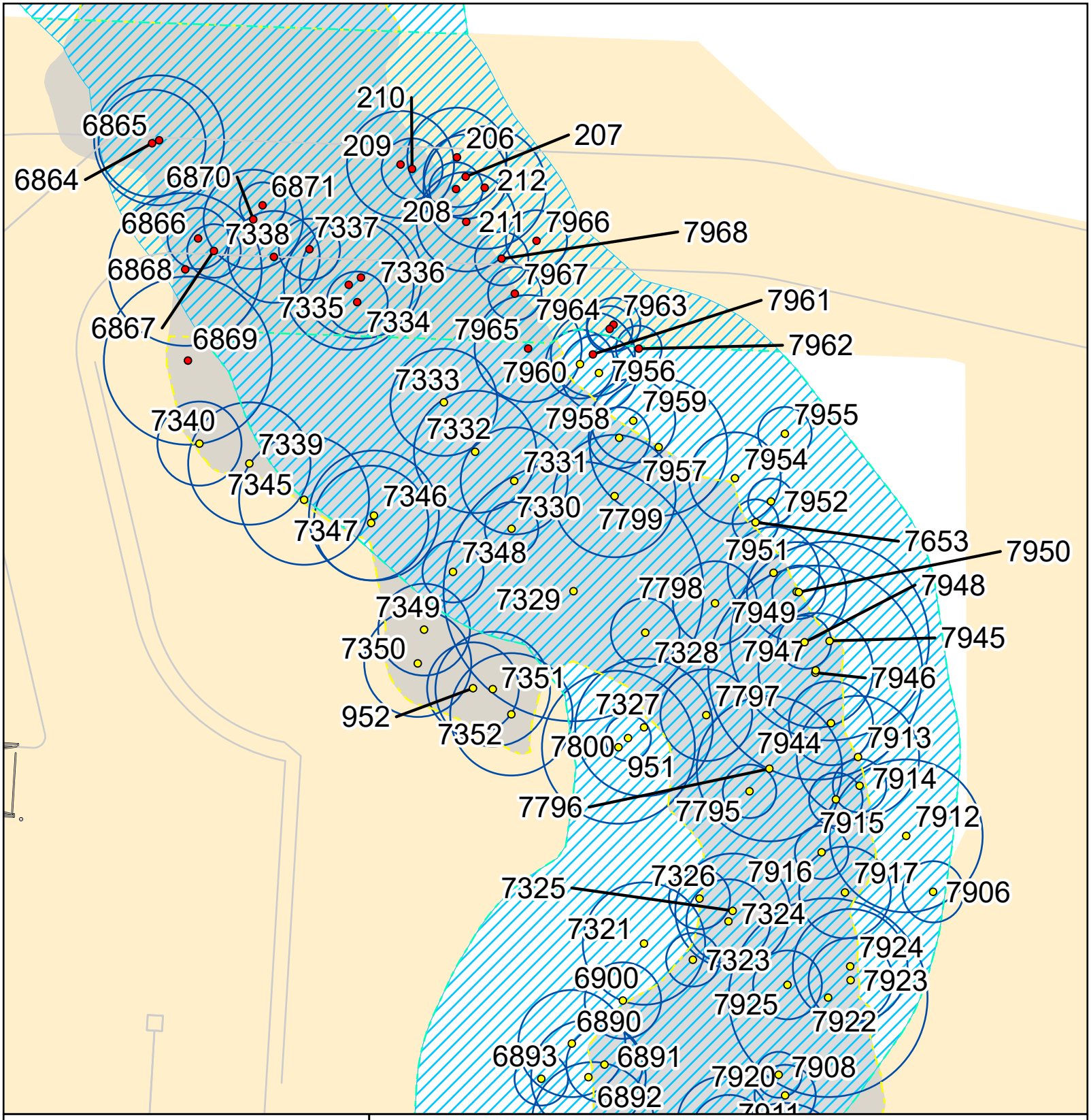


Figure 2A.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

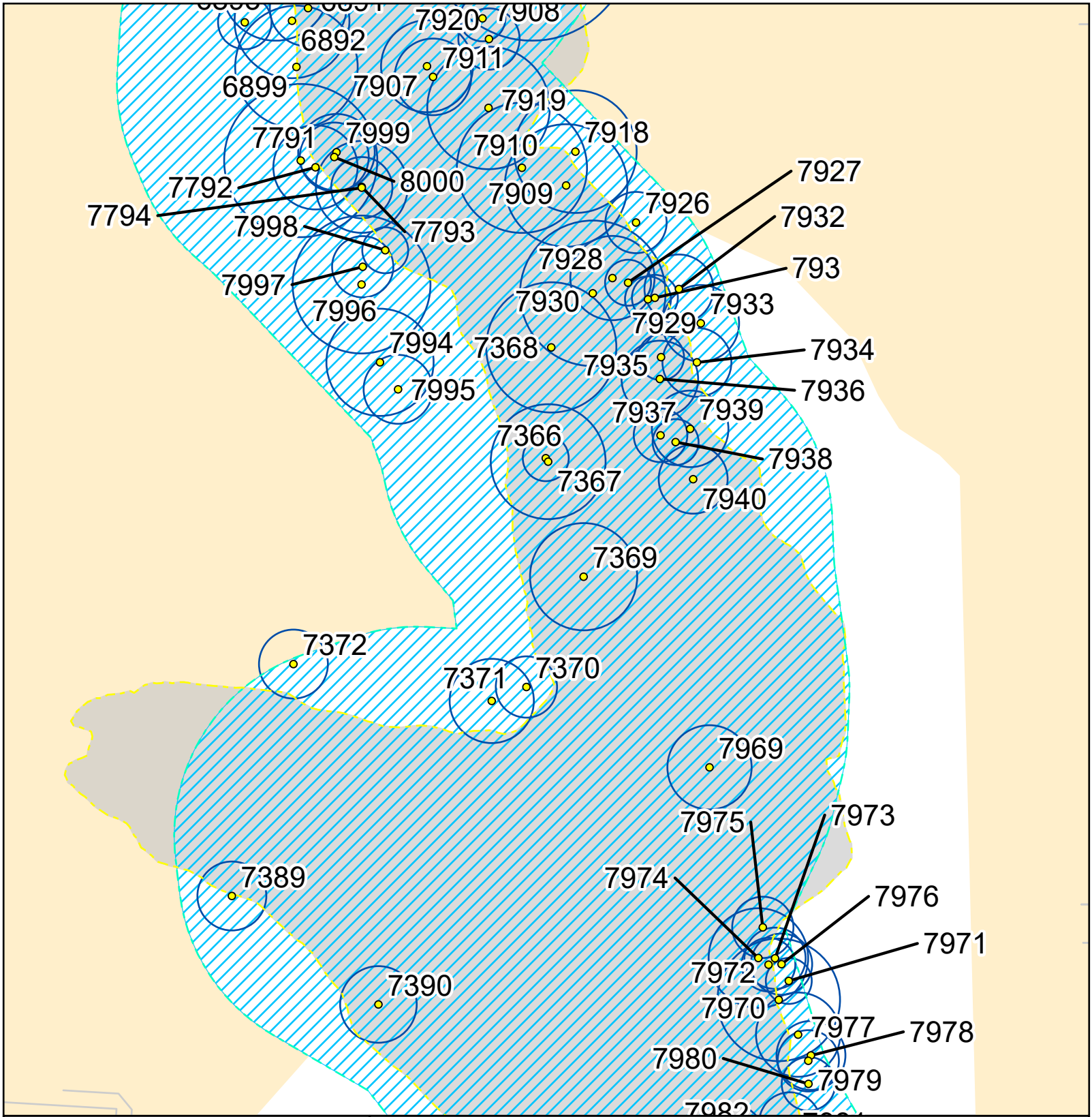


Figure 2B.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

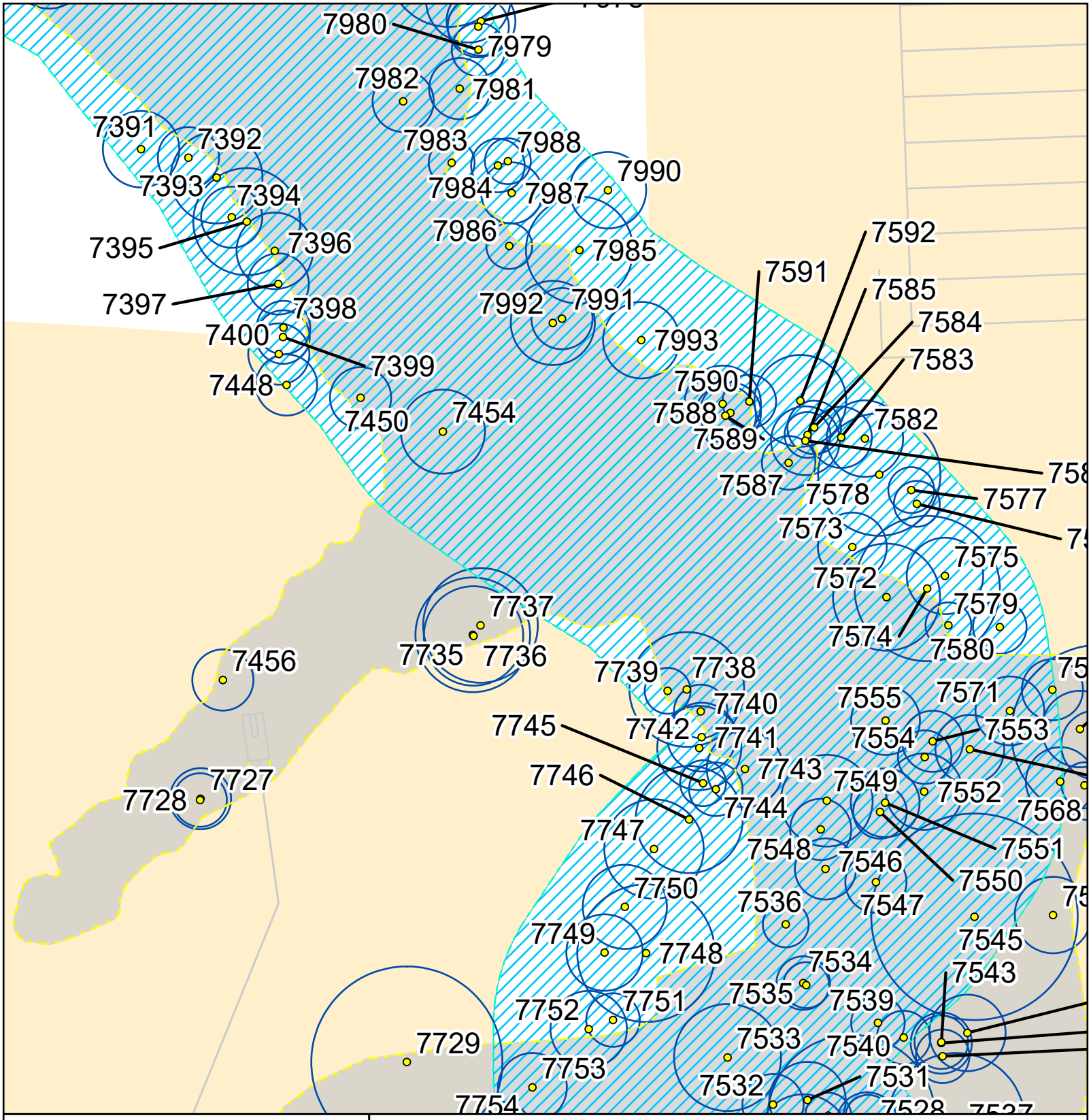


Figure 2C.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

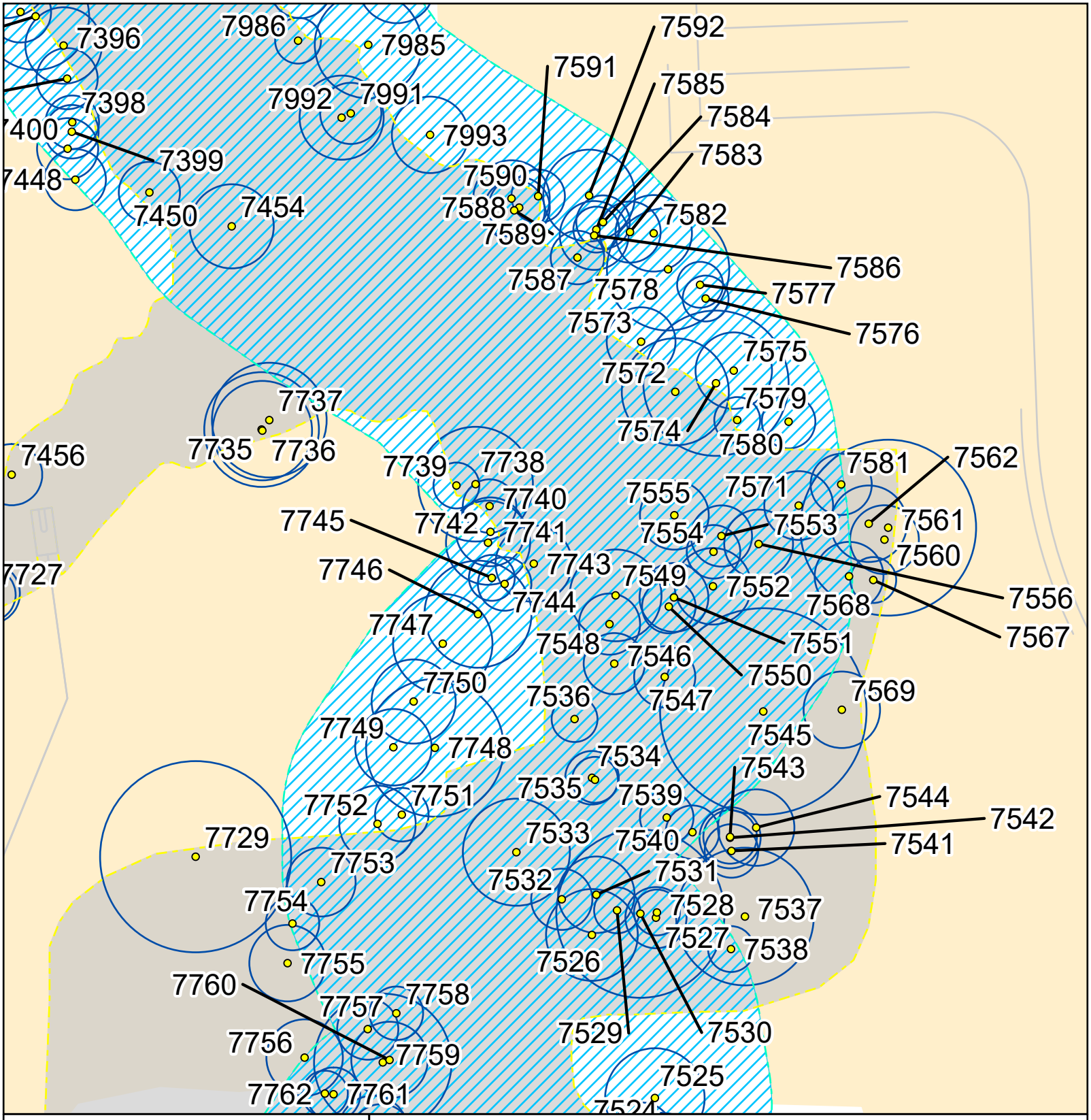


Figure 2D.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0
34

N
W
E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

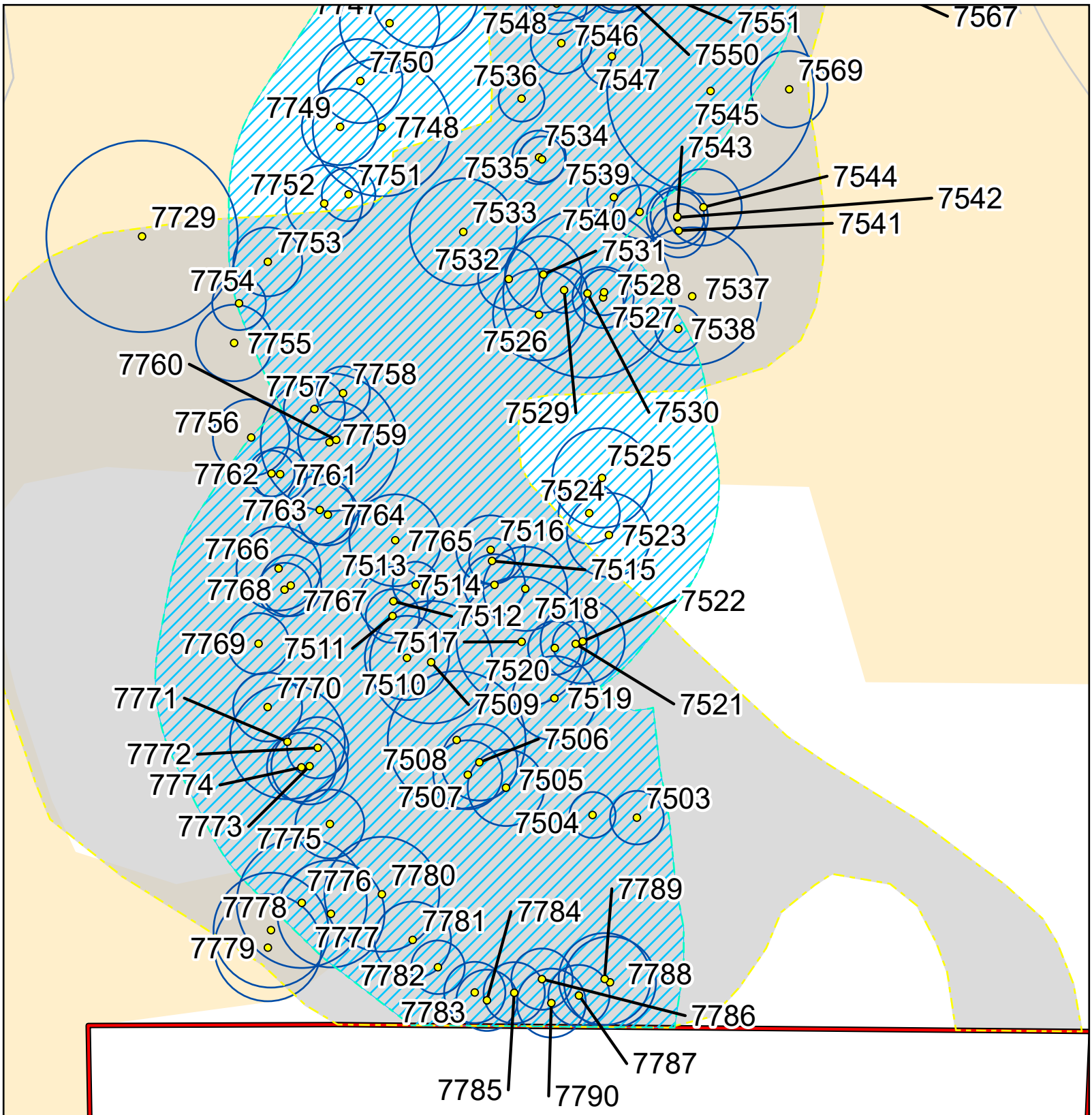


Figure 2E.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Riparian Buffer ESA
- Undeveloped Floodplain ESA

Mitigation/ Preservation Area

- Riparian Buffer
- Floodplain

- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

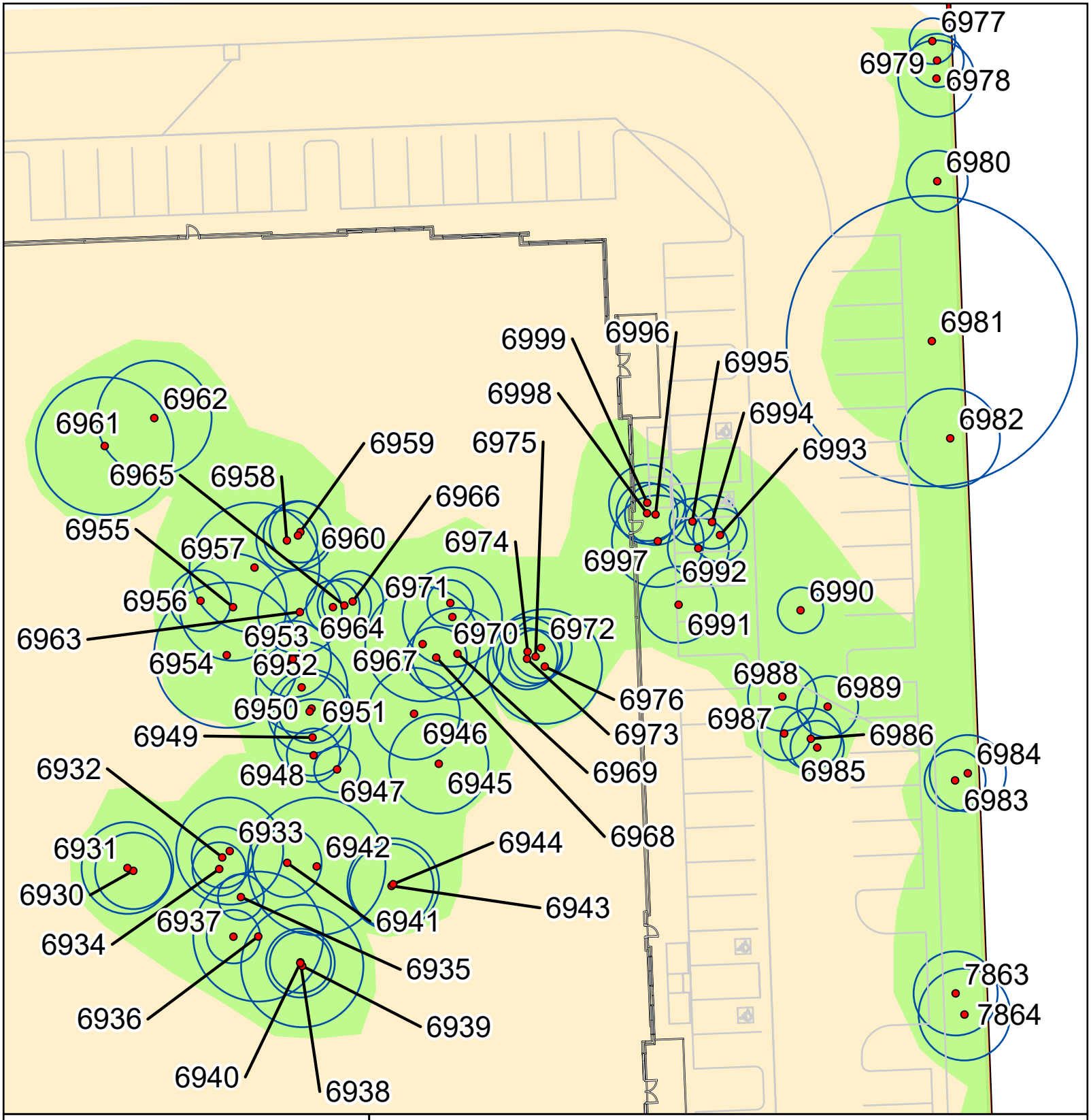


Figure 2F.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Cross Timbers Upland ESA
- Riparian Buffer ESA
- Undeveloped Floodplain ESA
- Cross Timbers Preservation
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

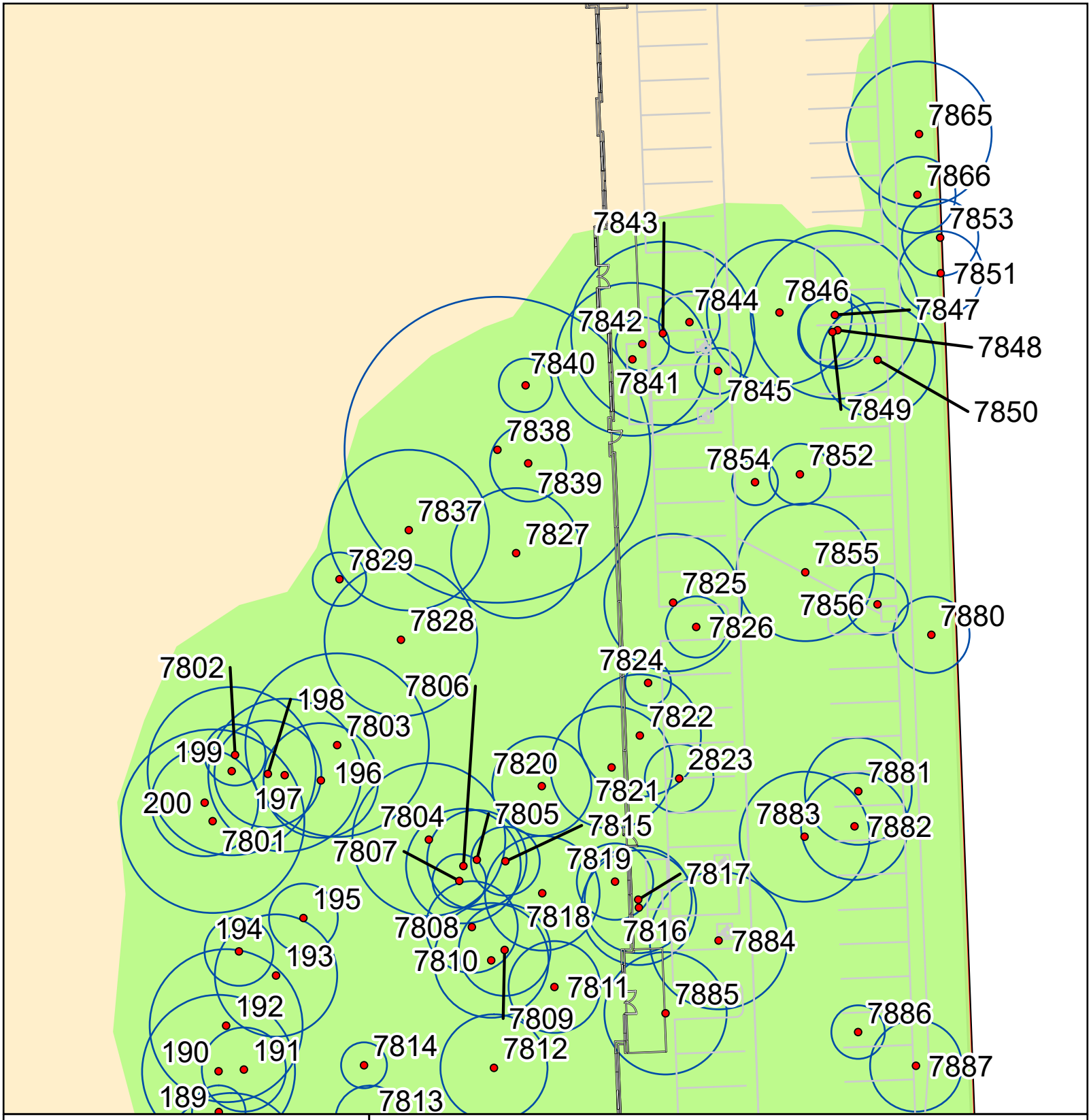


Figure 2G.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Cross Timbers Upland ESA
- Riparian Buffer ESA
- Undeveloped Floodplain ESA
- Cross Timbers Preservation
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

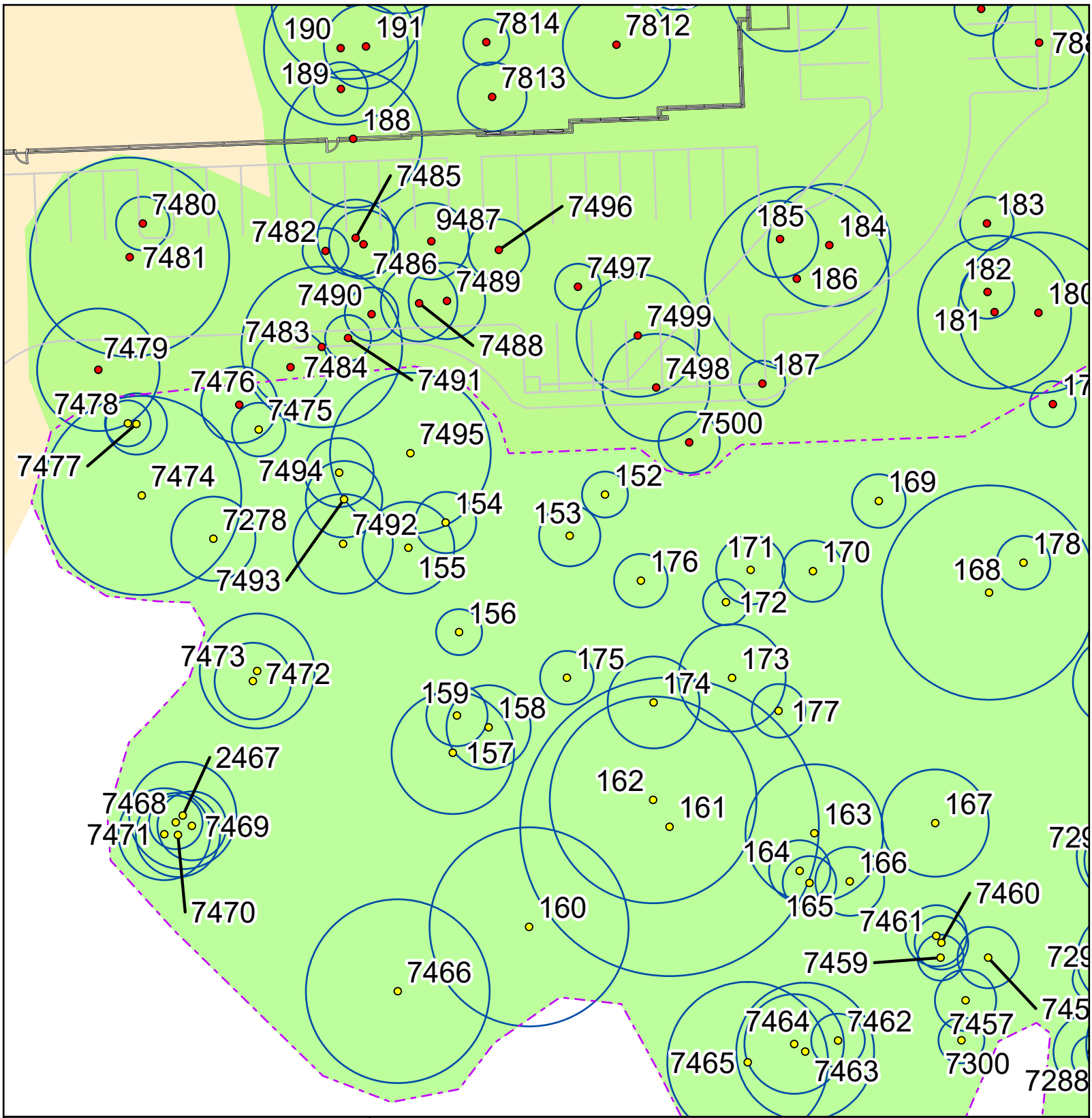


Figure 2H.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0 34

N
W E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Cross Timbers Upland ESA
- Riparian Buffer ESA
- Undeveloped Floodplain ESA
- Cross Timbers Preservation
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

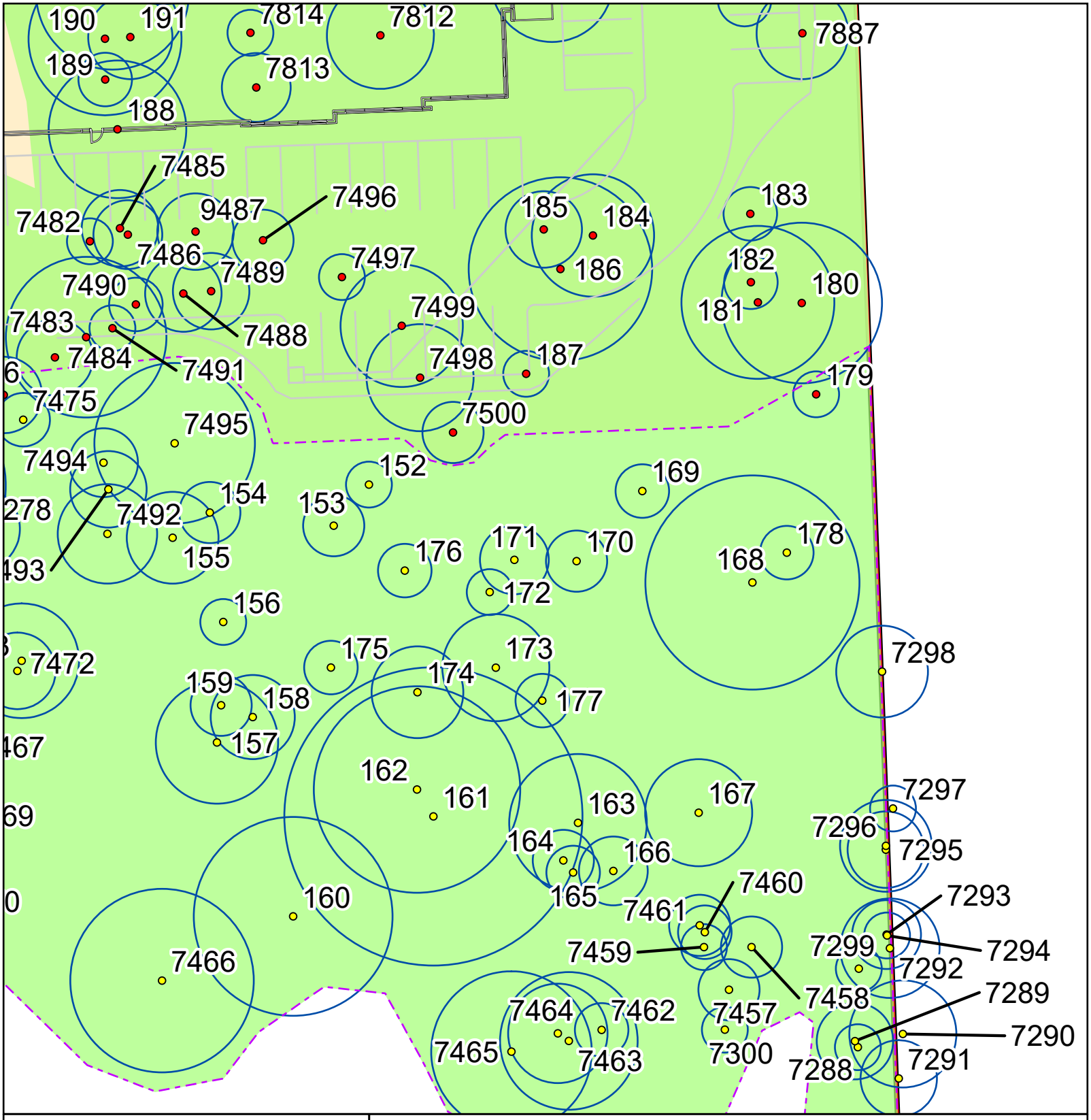


Figure 2I.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

1 in = 34 ft

Feet
0
34

N
W
E
S

File Ref. 04.110.165
Date: 5/27/2025

- Survey Area
- Cross Timbers Upland ESA
- Riparian Buffer ESA
- Undeveloped Floodplain ESA
- Cross Timbers Preservation
- Trees within the Mitigation Areas
- Trees within the Proposed Impact Areas
- Critical Root Zone
- Site Plan Structures
- Development Impact Area

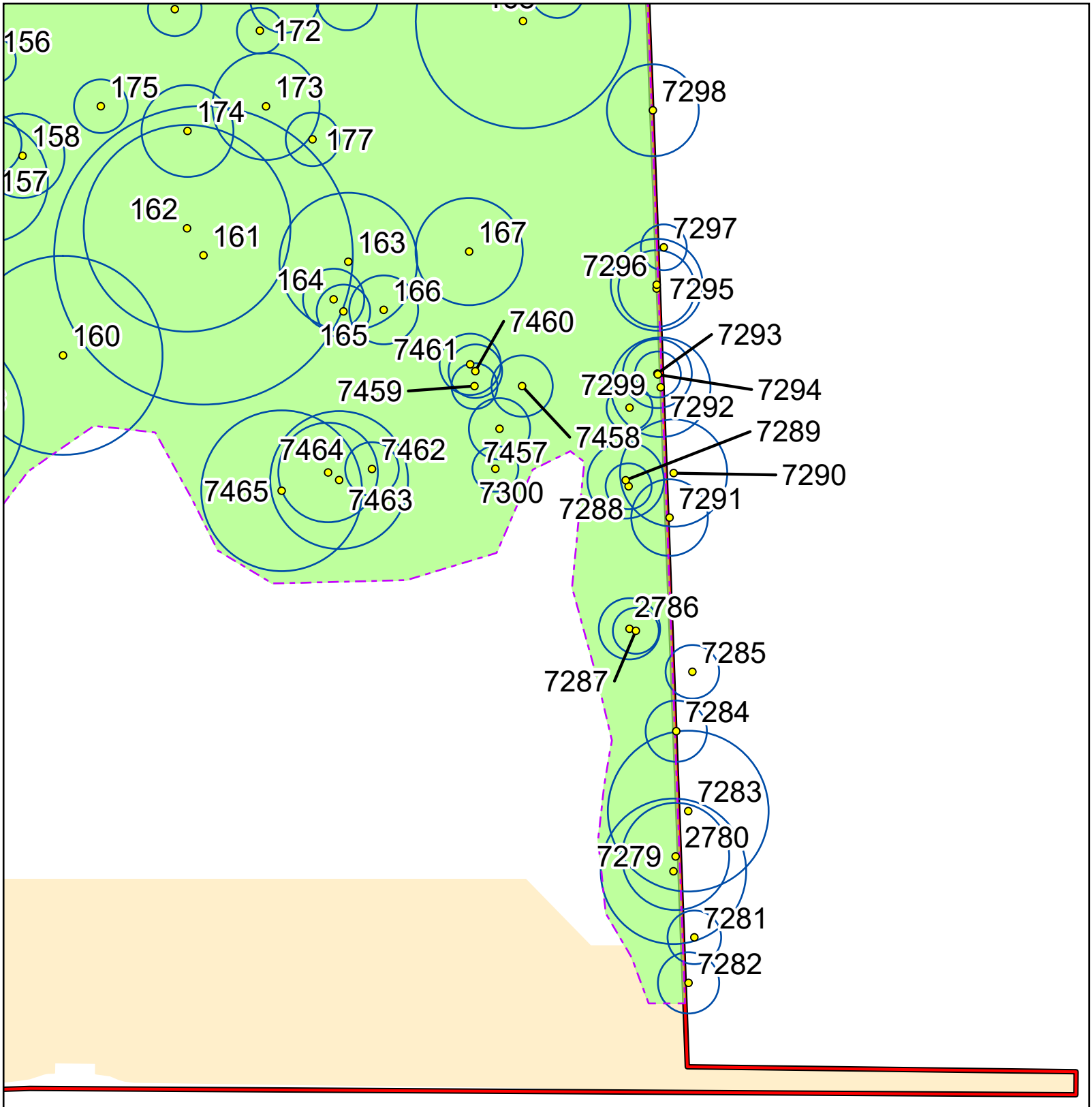


Figure 2J.
Tree Inventory

Spencer Road Industrial
City of Denton
Denton County, Texas

File Ref. 04.110.165
Date: 5/27/2025

Spencer Road Industrial Project Site - Tree Inventory within Confirmed ESA
City of Denton, Denton County, Texas

Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
152	6	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
153	8.4	post oak	8	No	Healthy	0	61-90	No	No	No	No
154	7.6	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
155	12.5	blackjack oak	8	Yes	Healthy	0	61-90	No	No	No	No
156	6.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
157	15.9	blackjack oak	15	Yes	Healthy	0	61-90	No	No	No	No
158	10.6	post oak	11	No	Healthy	0	61-90	No	No	No	No
159	8.3	post oak	8	No	Healthy	0	61-90	No	No	No	No
160	25.5	post oak	20	Yes	Healthy	0	61-90	No	No	No	No
161	39.2	post oak	36	Yes	Healthy	0	61-90	No	No	No	No
162	27.2	post oak	28	No	Healthy	0	61-90	No	No	No	No
163	18.4	post oak	18	No	Healthy	0	61-90	No	No	No	No
164	8	gum bumelia	7	No	Healthy	0	61-90	No	No	No	No
165	7.2	gum bumelia	7	No	Healthy	0	61-90	No	No	No	No
166	8.7	blackjack oak	9	Yes	Healthy	0	61-90	No	No	No	No
167	14	post oak	14	No	Healthy	0	61-90	No	No	No	No
168	28.4	post oak	29	No	Healthy	0	61-90	No	No	No	No
169	6.6	post oak	7	No	Healthy	0	61-90	No	No	No	No
170	7.5	blackjack oak	8	Yes	Healthy	0	61-90	No	No	No	No
171	8.9	blackjack oak	7	Yes	Healthy	0	61-90	No	No	No	No
172	6.4	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
173	14	blackjack oak	14	No	Healthy	0	61-90	No	No	No	No
174	12.2	post oak	12	No	Healthy	0	61-90	No	No	No	No
175	7	post oak	6	No	Healthy	0	61-90	No	No	No	No
176	7.2	post oak	7	No	Healthy	0	61-90	No	No	No	No
177	7.1	post oak	7	No	Healthy	0	61-90	No	No	No	No
178	6.9	Ashe juniper	7	No	Healthy	0	61-90	No	No	No	No
179	6	blackjack oak	6	Yes	Healthy	0	61-90	No	No	No	No
180	20.9	post oak	21	No	Healthy	0	61-90	No	No	No	No
181	19.7	post oak	21	Yes	Healthy	0	61-90	No	No	No	No
182	7.1	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
183	7.1	eastern red cedar	6	No	Damaged	60	61-90	No	No	No	No
184	16	post oak	17	No	Healthy	0	61-90	No	No	No	No
185	9.7	eastern red cedar	9	Yes	Healthy	0	61-90	No	No	No	No
186	24.5	post oak	25	Yes	Healthy	25	61-90	No	No	No	No
187	6.2	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
188	18.4	post oak	18	No	Healthy	0	61-90	No	No	No	No

Spencer Road Industrial Project Site - Tree Inventory within Confirmed ESA
City of Denton, Denton County, Texas

Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
189	6.7	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
190	19.7	post oak	20	No	Healthy	0	61-90	No	No	No	No
191	11.3	post oak	11	No	Healthy	0	61-90	No	No	No	No
192	20.1	post oak	20	No	Healthy	0	61-90	No	No	No	No
193	16.2	post oak	16	No	Healthy	0	61-90	No	No	No	No
194	9.4	post oak	9	No	Healthy	0	61-90	No	No	No	No
195	8.9	cedar elm	9	No	Healthy	0	61-90	No	No	No	No
196	14.6	post oak	15	No	Healthy	0	61-90	No	No	No	No
197	20.3	post oak	20	Yes	Healthy	0	61-90	No	Trunk	Trunk	Trunk
198	13.5	post oak	12	No	Healthy	0	61-90	No	No	No	No
199	21.7	post oak	22	No	Healthy	0	61-90	No	No	No	No
200	14.4	post oak	14	No	Healthy	0	61-90	No	No	No	No
206	12.9	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
207	10.6	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
208	7.3	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
209	14.1	pecan	11	No	Healthy	0	61-90	No	No	No	No
210	7.9	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
211	13.3	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
212	16	eastern red cedar	14	No	Healthy	0	61-90	No	No	No	No
793	6.2	American elm	6	No	Healthy	0	61-90	No	No	No	No
951	20.2	American elm	20	No	Healthy	0	61-90	No	No	No	No
952	11.8	sycamore	7	No	Damaged	75	61-90	No	No	No	No
2467	14	blackjack oak	15	Yes	Healthy	0	61-90	No	No	No	No
2780	14.4	post oak	15	No	Healthy	0	61-90	No	No	No	No
2786	8.1	post oak	8	No	Healthy	0	61-90	No	No	No	No
2823	9.4	post oak	10	No	Healthy	0	61-90	No	No	No	No
6864	13.9	American elm	17	No	Healthy	0	61-90	No	No	No	No
6865	17.4	American elm	20	No	Healthy	0	61-90	No	No	No	No
6866	8.3	Osage-orange	8	No	Damaged	40	61-90	No	No	No	No
6867	7.1	American elm	7	No	Healthy	0	61-90	No	No	No	No
6868	19.8	black walnut	17	No	Healthy	0	61-90	No	No	No	No
6869	21.9	black walnut	23	No	Damaged	0	61-90	No	Trunk	Trunk	Trunk
6870	12.8	American elm	13	No	Healthy	0	61-90	No	No	No	No
6871	6.3	cedar elm	7	No	Healthy	0	61-90	No	No	No	No
6890	14.5	post oak	15	No	Healthy	0	61-90	No	No	No	No
6891	10.5	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
6892	15.3	post oak	15	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
6893	7.2	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
6899	15.5	post oak	15	No	Healthy	0	61-90	No	No	No	No
6900	9.8	pecan	10	No	Healthy	0	61-90	No	No	No	No
6930	9.5	post oak	11	No	Healthy	0	61-90	No	No	No	No
6931	12.1	post oak	14	No	Healthy	0	61-90	No	No	No	No
6932	7.5	post oak	8	No	Healthy	0	61-90	No	No	No	No
6933	13.7	post oak	15	No	Healthy	0	61-90	No	No	No	No
6934	6.6	post oak	6	No	Healthy	0	61-90	No	No	No	No
6935	6	post oak	6	No	Healthy	0	61-90	No	No	No	No
6936	16.9	post oak	13	No	Damaged	80	61-90	No	No	No	No
6937	7.1	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
6938	7.8	post oak	7	No	Healthy	0	61-90	No	No	No	No
6939	16.1	post oak	18	No	Healthy	0	61-90	No	No	No	No
6940	9.1	post oak	9	No	Healthy	0	61-90	No	No	No	No
6941	9.4	post oak	10	No	Healthy	0	61-90	No	No	No	No
6942	18.1	post oak	16	No	Damaged	80	61-90	No	No	No	No
6943	10.8	post oak	12	No	Healthy	0	61-90	No	No	No	No
6944	11.6	post oak	12	No	Healthy	0	61-90	No	No	No	No
6945	13.1	eastern red cedar	14	No	Healthy	0	61-90	No	No	No	No
6946	11.5	post oak	12	No	Healthy	0	61-90	No	No	No	No
6947	6.5	post oak	6	No	Healthy	0	61-90	No	No	No	No
6948	7.2	post oak	6	No	Healthy	0	61-90	No	No	No	No
6949	9.8	post oak	8	No	Healthy	0	61-90	No	No	No	No
6950	8.6	post oak	6	No	Healthy	0	61-90	No	No	No	No
6951	11.3	post oak	14	No	Healthy	0	61-90	No	No	No	No
6952	12.3	post oak	14	Yes	Healthy	0	61-90	No	No	No	No
6953	10	post oak	12	No	Healthy	0	61-90	No	No	No	No
6954	19.3	post oak	17	Yes	Healthy	0	61-90	No	No	No	No
6955	14.2	post oak	12	No	Healthy	0	61-90	No	No	No	No
6956	8.3	post oak	7	No	Healthy	0	61-90	No	No	No	No
6957	17.1	post oak	20	No	Healthy	0	61-90	No	No	No	No
6958	7.8	eastern red cedar	8	Yes	Healthy	0	61-90	No	No	No	No
6959	7.7	post oak	7	No	Healthy	0	61-90	No	No	No	No
6960	8.8	post oak	9	Yes	Healthy	0	61-90	No	No	No	No
6961	18.3	post oak	20	No	Healthy	0	61-90	No	No	No	No
6962	15.4	post oak	20	No	Healthy	0	61-90	No	No	No	No
6963	10.8	post oak	9	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
6964	7.2	post oak	7	No	Healthy	0	61-90	No	No	No	No
6965	6.7	post oak	6	No	Healthy	0	61-90	No	No	No	No
6966	8.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
6967	15.1	post oak	12	Yes	Healthy	0	61-90	No	No	No	No
6968	7.5	post oak	8	No	Healthy	0	61-90	No	No	No	No
6969	11.6	post oak	10	Yes	Healthy	0	61-90	No	No	No	No
6970	12.6	post oak	12	No	Healthy	0	61-90	No	No	No	No
6971	6.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
6972	8	post oak	9	No	Healthy	0	61-90	No	No	No	No
6973	7.6	post oak	8	No	Healthy	0	61-90	No	No	No	No
6974	8.6	post oak	9	Yes	Healthy	0	61-90	No	No	No	No
6975	7.2	post oak	8	No	Healthy	0	61-90	No	No	No	No
6976	14.6	post oak	15	Yes	Healthy	0	61-90	No	No	No	No
6977	6.2	pecan	7	No	Healthy	0	61-90	No	No	No	No
6978	7.2	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
6979	10.1	post oak	12	No	Healthy	0	61-90	No	No	No	No
6980	8.3	post oak	9	No	Healthy	0	61-90	No	No	No	No
6981	38	post oak	28	No	Healthy	0	61-90	No	No	No	No
6982	12.7	post oak	14	No	Healthy	0	61-90	No	No	No	No
6983	8.3	eastern red cedar	9	No	Healthy	0	61-90	No	No	No	No
6984	9.5	post oak	8	No	Healthy	0	61-90	No	No	No	No
6985	7.1	post oak	8	No	Healthy	0	61-90	No	No	No	No
6986	7.9	post oak	8	No	Healthy	0	61-90	No	No	No	No
6987	7.4	post oak	0	Yes	Damaged	60	61-90	No	No	No	No
6988	9	post oak	11	No	Healthy	0	61-90	No	No	No	No
6989	8.4	post oak	10	No	Healthy	0	61-90	No	No	No	No
6990	6.4	post oak	6	No	Healthy	0	61-90	No	No	No	No
6991	10	post oak	10	No	Healthy	0	61-90	No	No	No	No
6992	8.2	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
6993	6.8	post oak	8	No	Healthy	0	61-90	No	No	No	No
6994	7.1	post oak	8	No	Healthy	0	61-90	No	No	No	No
6995	6.1	post oak	7	No	Healthy	0	61-90	No	No	No	No
6996	8.2	post oak	10	No	Healthy	0	61-90	No	No	No	No
6997	12.4	post oak	14	No	Healthy	0	61-90	No	No	No	No
6998	7.6	post oak	8	No	Healthy	0	61-90	No	No	No	No
6999	10.4	post oak	12	No	Healthy	0	61-90	No	No	No	No
7278	11.1	post oak	8	Yes	Healthy	0	61-90	No	No	No	No

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7279	18.6	post oak	18	No	Healthy	0	61-90	No	No	No	No
7281	7.4	post oak	7	No	Healthy	0	61-90	No	No	No	No
7282	7.7	sugarberry	6	Yes	Healthy	0	61-90	No	No	No	No
7283	21	post oak	22	No	Healthy	0	61-90	No	No	No	No
7284	8.4	post oak	8	No	Healthy	0	61-90	No	No	No	No
7285	7.1	gum bumelia	8	No	Healthy	0	61-90	No	No	No	No
7287	6	post oak	7	No	Healthy	0	61-90	No	No	No	No
7288	6.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
7289	9.9	blackjack oak	10	Yes	Healthy	0	61-90	No	No	No	No
7290	14.1	post oak	15	Yes	Healthy	0	61-90	No	No	No	No
7291	10.5	post oak	11	No	Healthy	0	61-90	No	No	No	No
7292	13.1	post oak	13	No	Healthy	0	61-90	No	No	No	No
7293	8.6	post oak	9	No	Healthy	0	61-90	No	No	No	No
7294	6.1	post oak	6	No	Healthy	0	61-90	No	No	No	No
7295	10	post oak	11	No	Healthy	0	61-90	No	No	No	No
7296	12.1	post oak	11	Yes	Healthy	0	61-90	No	No	No	No
7297	6.5	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7298	11.7	blackjack oak	12	No	Healthy	0	61-90	No	No	No	No
7299	6	post oak	6	No	Healthy	0	61-90	No	No	No	No
7300	6.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
7321	16.1	post oak	15	No	Healthy	0	61-90	No	No	No	No
7323	6.7	post oak	6	No	Healthy	0	61-90	No	No	No	No
7324	11.3	pecan	10	No	Healthy	0	61-90	No	No	No	No
7325	14.7	post oak	15	No	Healthy	0	61-90	No	No	No	No
7326	8.2	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
7327	18.5	post oak	20	No	Healthy	0	61-90	No	No	No	No
7328	9	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7329	33.9	American elm	30	Yes	Damaged	0	61-90	No	No	Trunk	Trunk
7330	7	common persimmon	7	No	Healthy	0	61-90	No	No	No	No
7331	14.2	American elm	15	No	Healthy	0	61-90	No	No	No	No
7332	16	American elm	15	No	Healthy	0	61-90	No	No	No	No
7333	13.9	American elm	15	No	Healthy	0	61-90	No	No	No	No
7334	7.8	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7335	16.6	American elm	15	No	Healthy	0	61-90	No	No	No	No
7336	16	American elm	12	No	Healthy	0	31-60	No	No	No	No
7337	7.8	American elm	8	No	Healthy	0	61-90	No	No	No	No
7338	11.5	American elm	10	No	Healthy	0	61-90	Yes	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7339	15.8	American elm	15	No	Healthy	0	61-90	No	No	No	No
7340	11.4	American elm	10	No	Healthy	0	31-60	No	No	No	No
7345	17.1	American elm	20	Yes	Healthy	0	61-90	No	No	No	No
7346	16.7	American elm	20	No	Healthy	0	61-90	No	No	No	No
7347	15	American elm	15	No	Healthy	0	61-90	No	No	No	No
7348	8	sycamore	8	No	Healthy	0	61-90	No	No	No	No
7349	12.1	pecan	12	No	Healthy	0	61-90	Yes	No	No	No
7350	13.8	post oak	20	No	Healthy	0	61-90	No	No	No	No
7351	15.1	post oak	15	No	Healthy	0	61-90	No	No	No	No
7352	16.3	pecan	16	No	Healthy	0	61-90	No	No	No	No
7366	6.5	American elm	6	No	Healthy	0	61-90	No	No	No	No
7367	14.7	American elm	15	No	Healthy	0	61-90	No	No	No	No
7368	16.7	pecan	20	No	Healthy	0	61-90	No	No	No	No
7369	13.7	American elm	15	No	Healthy	0	61-90	No	No	No	No
7370	8.2	gum bumelia	10	No	Healthy	0	61-90	No	No	No	No
7371	10.8	pecan	10	Yes	Healthy	0	61-90	No	No	No	No
7372	8.8	common persimmon	10	No	Healthy	0	61-90	No	No	No	No
7389	9	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
7390	9.9	eastern red cedar	10	Yes	Healthy	0	61-90	No	No	No	No
7391	9.8	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7392	8	pecan	10	No	Healthy	0	61-90	No	No	No	No
7393	12.3	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7394	7.5	post oak	6	No	Healthy	0	61-90	No	No	No	No
7395	13.6	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7396	10.2	post oak	10	No	Healthy	0	61-90	No	No	No	No
7397	8	post oak	8	No	Healthy	0	0-30	No	No	No	No
7398	6.8	cedar elm	6	No	Healthy	0	61-90	No	No	No	No
7399	6.7	cedar elm	5	No	Healthy	0	61-90	No	No	No	No
7400	7.9	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7448	7.7	American elm	12	No	Healthy	0	61-90	No	No	No	No
7450	8.2	pecan	12	No	Healthy	0	61-90	No	No	No	No
7454	11.3	green ash	12	No	Healthy	0	61-90	No	No	No	No
7456	8.5	pecan	5	No	Healthy	0	61-90	No	No	No	No
7457	8.1	Ashe juniper	8	No	Healthy	0	61-90	No	No	No	No
7458	7.5	Ashe juniper	8	No	Healthy	0	61-90	No	No	No	No
7459	6	post oak	7	No	Healthy	0	61-90	No	No	No	No
7460	6.9	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No

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7461	7.5	cedar elm	8	No	Healthy	0	61-90	No	No	No	No
7462	7.2	post oak	7	No	Healthy	0	61-90	No	No	No	No
7463	17.5	post oak	18	No	Healthy	0	61-90	No	No	No	No
7464	13.4	post oak	13	No	Healthy	0	61-90	No	No	No	No
7465	21	post oak	20	Yes	Healthy	0	61-90	No	No	No	No
7466	24.5	post oak	26	No	Healthy	0	61-90	No	No	No	No
7468	7.4	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7469	8.7	post oak	9	No	Healthy	0	61-90	No	No	No	No
7470	10.7	post oak	12	No	Healthy	0	61-90	No	No	No	No
7471	11.5	post oak	12	No	Healthy	0	61-90	No	No	No	No
7472	10.4	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7473	15	post oak	16	Yes	Healthy	0	61-90	No	No	No	No
7474	25.9	blackjack oak	26	Yes	Healthy	0	61-90	No	No	No	No
7475	7.4	eastern red cedar	7	Yes	Healthy	0	61-90	No	No	No	No
7476	10.5	blackjack oak	11	Yes	Healthy	0	61-90	No	No	No	No
7477	8.2	post oak	8	No	Healthy	0	61-90	No	No	No	No
7478	6.5	post oak	7	Yes	Healthy	0	61-90	No	No	No	No
7479	16	blackjack oak	16	No	Healthy	0	61-90	No	No	No	No
7480	7.4	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7481	25.5	post oak	26	No	Healthy	0	61-90	No	No	No	No
7482	6.5	post oak	7	No	Healthy	0	61-90	No	No	No	No
7483	20.6	eastern red cedar	18	Yes	Healthy	0	61-90	No	No	No	No
7484	9.7	blackjack oak	10	Yes	Healthy	0	61-90	No	No	No	No
7485	9.7	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7486	9.2	eastern red cedar	8	No	Damaged	50	61-90	No	No	No	No
7488	9.8	blackjack oak	10	Yes	Healthy	0	61-90	No	No	No	No
7489	10.1	blackjack oak	7	Yes	Healthy	0	61-90	No	No	No	No
7490	6.6	blackjack oak	7	Yes	Healthy	0	61-90	No	No	No	No
7491	6.1	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
7492	13	blackjack oak	13	Yes	Healthy	0	61-90	No	No	No	No
7493	9.5	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7494	9	blackjack oak	9	No	Healthy	0	61-90	No	No	No	No
7495	21	post oak	22	No	Healthy	0	61-90	No	No	No	No
7496	7.6	blackjack oak	8	Yes	Healthy	0	61-90	No	No	No	No
7497	6.3	post oak	6	No	Healthy	0	61-90	No	No	No	No
7498	13.5	blackjack oak	14	Yes	Healthy	0	61-90	No	No	No	No
7499	15.8	post oak	16	No	Healthy	0	61-90	No	No	No	No

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7500	7.6	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7503	7	pecan	10	Yes	Healthy	0	61-90	No	No	No	No
7504	6	pecan	8	No	Healthy	0	61-90	No	No	No	No
7505	10.2	pecan	12	No	Healthy	0	61-90	No	No	No	No
7506	10.2	pecan	10	Yes	Healthy	0	61-90	No	No	No	No
7507	8.7	green ash	15	No	Healthy	0	61-90	No	No	No	No
7508	17.7	green ash	18	Yes	Healthy	0	61-90	No	No	No	No
7509	16.5	pecan	20	No	Healthy	0	61-90	No	No	No	No
7510	11	green ash	14	Yes	Healthy	0	61-90	No	No	No	No
7511	7.4	green ash	8	No	Healthy	0	61-90	No	No	No	No
7512	8.8	green ash	10	No	Healthy	0	61-90	No	No	No	No
7513	6.3	Osage-orange	0	No	Healthy	0	61-90	No	No	No	No
7514	7.5	green ash	8	No	Healthy	0	61-90	No	No	No	No
7515	6.2	green ash	6	No	Healthy	0	61-90	No	No	No	No
7516	9.4	green ash	15	No	Healthy	0	61-90	No	No	No	No
7517	16.8	American elm	22	No	Healthy	10	61-90	No	No	No	No
7518	10.6	pecan	16	No	Healthy	0	61-90	No	No	No	No
7519	11.3	post oak	15	Yes	Healthy	0	61-90	No	No	No	No
7520	6.6	cedar elm	10	No	Healthy	0	61-90	No	No	No	No
7521	6.4	pecan	8	No	Healthy	0	61-90	No	No	No	No
7522	10.6	blackjack oak	12	No	Healthy	0	61-90	No	No	No	No
7523	10.9	American elm	14	Yes	Healthy	0	61-90	No	No	No	No
7524	8.1	pecan	10	No	Healthy	0	61-90	No	No	No	No
7525	13.1	blackjack oak	18	No	Healthy	0	61-90	No	No	No	No
7526	12.5	blackjack oak	16	No	Healthy	0	61-90	No	No	No	No
7527	8.5	blackjack oak	12	No	Healthy	0	61-90	No	No	No	No
7528	6.5	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7529	6.5	pecan	8	No	Healthy	0	31-60	No	No	No	No
7530	21.9	pecan	25	No	Healthy	0	61-90	No	No	No	No
7531	9.5	pecan	12	No	Healthy	0	61-90	No	No	No	No
7532	8	green ash	14	No	Healthy	0	61-90	No	No	No	No
7533	14	green ash	22	Yes	Healthy	0	31-60	No	No	No	No
7534	7.2	green ash	12	No	Healthy	0	61-90	No	No	No	No
7535	6.3	pecan	10	No	Healthy	0	61-90	No	No	No	No
7536	6	common persimmon	14	Yes	Healthy	0	61-90	No	No	No	No
7537	17.9	pecan	20	No	Healthy	10	61-90	No	No	No	No
7538	6.1	American elm	14	Yes	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7539	6.9	cedar elm	10	No	Healthy	0	61-90	No	No	No	No
7540	7.3	sugarberry	15	No	Healthy	0	61-90	No	No	No	No
7541	6.9	post oak	10	No	Healthy	0	61-90	No	No	No	No
7542	8.5	post oak	8	No	Healthy	0	61-90	No	No	No	No
7543	7.2	post oak	8	No	Healthy	0	61-90	No	No	No	No
7544	10.5	post oak	10	No	Healthy	0	61-90	No	No	No	No
7545	26.6	pecan	30	No	Healthy	0	61-90	No	No	No	No
7546	7.6	Osage-orange	15	No	Healthy	20	31-60	No	No	No	No
7547	8.2	Osage-orange	15	No	Healthy	0	61-90	No	Trunk	Trunk	No
7548	7.8	common persimmon	12	No	Healthy	0	61-90	No	No	No	No
7549	12.5	Osage-orange	10	Yes	Healthy	10	61-90	No	No	No	No
7550	7.3	green ash	12	No	Healthy	0	61-90	No	No	No	No
7551	8.7	Osage-orange	10	No	Healthy	40	61-90	No	Trunk	Trunk	Trunk
7552	10.5	green ash	15	No	Healthy	0	61-90	No	No	No	No
7553	8.5	green ash	12	No	Healthy	0	61-90	No	No	No	No
7554	7	Osage-orange	12	No	Healthy	10	61-90	No	Trunk	Trunk	Trunk
7555	9.3	green ash	20	No	Healthy	0	61-90	No	No	No	No
7556	8.7	common persimmon	12	Yes	Healthy	0	61-90	No	No	No	No
7560	9	post oak	10	No	Healthy	0	61-90	No	No	No	No
7561	23.3	post oak	22	Yes	Healthy	0	61-90	No	No	No	No
7562	10	blackjack oak	15	No	Healthy	0	61-90	No	No	No	No
7567	6.4	pecan	8	No	Healthy	0	61-90	No	No	No	No
7568	8.6	American elm	12	No	Healthy	0	31-60	No	No	No	No
7569	9.5	blackjack oak	10	No	Healthy	20	61-90	No	No	No	No
7571	9.4	pecan	15	No	Healthy	0	61-90	No	No	No	No
7572	14.4	green ash	20	Yes	Healthy	0	61-90	No	No	No	No
7573	8.6	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7574	19	blackjack oak	23	No	Healthy	0	61-90	No	No	No	No
7575	9.9	blackjack oak	12	No	Healthy	0	61-90	No	No	No	No
7576	6.3	pecan	6	No	Healthy	0	61-90	No	No	No	No
7577	6	green ash	8	No	Healthy	0	61-90	No	No	No	No
7578	16	American elm	18	No	Healthy	0	61-90	No	No	No	No
7579	6.2	pecan	7	No	Healthy	0	61-90	No	No	No	No
7580	6.6	American elm	8	No	Healthy	0	61-90	No	No	No	No
7581	8.3	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7582	9.5	post oak	10	No	Healthy	0	61-90	No	No	No	No
7583	7.5	American elm	10	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7584	6.7	pecan	8	No	Healthy	0	61-90	No	No	No	No
7585	6	American elm	8	No	Healthy	0	61-90	No	No	No	No
7586	9.3	cedar elm	8	No	Healthy	0	61-90	No	No	No	No
7587	7	pecan	8	No	Healthy	0	61-90	No	No	No	No
7588	8.5	pecan	8	No	Healthy	0	61-90	No	No	Trunk	No
7589	8.5	American elm	10	No	Healthy	0	61-90	No	No	Trunk	No
7590	10	American elm	10	No	Healthy	0	61-90	No	No	Trunk	No
7591	7	pecan	8	No	Healthy	0	61-90	No	No	No	No
7592	11.7	blackjack oak	14	No	Healthy	0	61-90	No	No	No	No
7653	6.5	post oak	6	No	Healthy	0	61-90	No	No	No	No
7727	7.6	American elm	8	No	Healthy	0	61-90	No	No	No	No
7728	7.4	eastern red cedar	9	No	Healthy	0	61-90	No	No	No	No
7729	25	post oak	30	No	Damaged	50	61-90	No	No	No	No
7735	15.4	post oak	18	No	Healthy	0	61-90	No	No	No	No
7736	13.3	American elm	13	No	Healthy	0	61-90	No	No	No	No
7737	14.6	American elm	15	No	Healthy	0	61-90	No	No	No	No
7738	14.8	American elm	19	No	Healthy	0	61-90	No	No	No	No
7739	6.2	post oak	5	No	Healthy	0	61-90	No	No	No	No
7740	6.7	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7741	8.6	American elm	7	No	Healthy	0	61-90	No	No	No	No
7742	11.2	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7743	9.9	American elm	11	No	Healthy	0	61-90	No	No	No	No
7744	7	American elm	7	No	Healthy	0	61-90	No	No	No	No
7745	6.3	American elm	6	No	Healthy	0	61-90	No	No	No	No
7746	14	American elm	15	No	Healthy	0	61-90	No	No	No	No
7747	12.6	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
7748	17.9	blackjack oak	17	No	Healthy	0	61-90	No	No	No	No
7749	10.2	American elm	10	No	Healthy	0	31-60	No	No	No	No
7750	11.3	post oak	11	No	Healthy	0	61-90	No	No	No	No
7751	7.2	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
7752	10	American elm	8	No	Healthy	0	61-90	No	No	No	No
7753	8.7	blackjack oak	9	No	Healthy	0	61-90	No	No	No	No
7754	7.3	blackjack oak	9	Yes	Healthy	0	61-90	No	No	No	No
7755	10	post oak	9	No	Healthy	0	61-90	No	No	No	No
7756	10	post oak	8	No	Healthy	0	61-90	No	No	No	No
7757	8	cedar elm	8	No	Healthy	0	61-90	No	No	No	No
7758	6.9	cedar elm	7	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7759	17.7	post oak	18	No	Healthy	0	61-90	No	No	No	No
7760	9.5	post oak	10	No	Healthy	0	61-90	No	No	No	No
7761	7	post oak	6	No	Healthy	0	61-90	No	No	No	No
7762	6.2	post oak	6	No	Healthy	0	61-90	No	No	No	No
7763	9.1	post oak	8	No	Healthy	0	61-90	No	No	No	No
7764	7.7	post oak	6	No	Healthy	0	61-90	No	No	No	No
7765	12.3	green ash	5	No	Damaged	80	61-90	No	No	No	No
7766	11.4	post oak	11	No	Healthy	0	61-90	No	No	No	No
7767	7.7	post oak	9	No	Healthy	0	61-90	No	No	No	No
7768	7	post oak	7	No	Healthy	0	61-90	No	No	No	No
7769	8.5	post oak	8	No	Healthy	0	61-90	No	No	No	No
7770	8.6	blackjack oak	9	No	Healthy	0	61-90	No	No	No	No
7771	15.1	pecan	18	No	Healthy	0	61-90	No	No	No	No
7772	8.1	pecan	8	No	Healthy	0	61-90	No	No	No	No
7773	9.7	cedar elm	10	No	Healthy	0	61-90	No	No	No	No
7774	9.2	cedar elm	8	No	Healthy	0	61-90	No	No	No	No
7775	8.9	post oak	8	No	Healthy	0	61-90	No	No	No	No
7776	17	blackjack oak	19	No	Healthy	0	61-90	No	No	No	No
7777	13.8	cedar elm	12	No	Healthy	0	61-90	No	No	No	No
7778	14.6	cedar elm	13	No	Healthy	0	61-90	No	No	No	No
7779	13.8	cedar elm	13	No	Healthy	0	61-90	No	No	No	No
7780	14.7	American elm	14	No	Healthy	0	61-90	No	No	No	No
7781	9.8	post oak	9	No	Healthy	0	61-90	No	No	No	No
7782	7.1	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7783	8	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7784	8.5	Chinaberry	7	No	Healthy	0	61-90	No	No	No	No
7785	7.6	Chinaberry	7	Yes	Healthy	0	61-90	No	No	No	No
7786	8.3	Chinaberry	6	No	Healthy	0	61-90	No	No	No	No
7787	8.3	Chinaberry	7	No	Healthy	0	61-90	No	No	No	No
7788	12.3	Chinaberry	12	Yes	Healthy	0	61-90	No	No	No	No
7789	11.8	Chinaberry	8	Yes	Healthy	0	61-90	No	No	No	No
7790	8.9	Chinaberry	7	No	Healthy	0	61-90	No	No	No	No
7791	20.5	post oak	20	No	Healthy	0	61-90	No	No	No	No
7792	11	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
7793	12	post oak	12	No	Healthy	0	61-90	No	No	No	No
7794	8.3	post oak	8	No	Healthy	0	61-90	No	No	No	No
7795	6.6	cedar elm	6	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7796	18.8	sycamore	18	No	Healthy	0	61-90	No	No	No	No
7797	11.7	sycamore	11	No	Healthy	0	61-90	No	No	No	No
7798	10.7	American elm	10	Yes	Healthy	0	61-90	No	No	No	No
7799	16.4	sycamore	16	No	Healthy	0	61-90	No	No	No	No
7800	6.4	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
7801	24.5	post oak	25	No	Healthy	0	61-90	No	No	No	No
7802	8.5	eastern red cedar	9	No	Healthy	0	61-90	No	No	No	No
7803	23.9	post oak	24	No	Healthy	0	61-90	No	No	No	No
7804	19.7	post oak	20	Yes	Healthy	0	61-90	No	No	No	No
7805	12.6	post oak	13	No	Healthy	0	61-90	No	No	No	No
7806	15.2	post oak	15	No	Healthy	0	61-90	No	No	No	No
7807	7.2	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7808	11.9	post oak	13	No	Damaged	90	61-90	No	No	No	No
7809	12	post oak	14	No	Healthy	0	61-90	No	No	No	No
7810	15.3	post oak	12	No	Healthy	0	61-90	No	No	No	No
7811	12.5	post oak	12	No	Healthy	10	61-90	No	No	No	No
7812	13.5	post oak	13	No	Healthy	0	61-90	No	No	No	No
7813	8.6	blackjack oak	9	No	Healthy	0	61-90	No	No	No	No
7814	6.5	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7815	8.9	post oak	9	No	Healthy	0	61-90	No	No	No	No
7816	14.8	post oak	13	No	Damaged	30	61-90	No	Trunk	Trunk	Trunk
7817	14.2	post oak	13	No	Healthy	0	61-90	No	No	No	No
7818	15	post oak	11	No	Damaged	40	61-90	No	No	No	No
7819	10.5	post oak	11	No	Healthy	0	61-90	No	No	No	No
7820	12.9	post oak	13	No	Healthy	0	61-90	No	No	No	No
7821	15.9	post oak	16	No	Healthy	0	61-90	No	No	No	No
7822	15.5	post oak	12	No	Healthy	0	61-90	No	No	No	No
7824	6	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7825	17.6	post oak	18	No	Healthy	0	61-90	No	No	No	No
7826	7.6	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
7827	17.1	post oak	17	No	Healthy	0	61-90	No	No	No	No
7828	20.4	post oak	22	No	Healthy	0	61-90	No	No	No	No
7829	6.6	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No
7837	20.8	post oak	20	No	Healthy	0	61-90	No	No	No	No
7838	40.3	post oak	30	Yes	Healthy	0	61-90	No	No	No	No
7839	9.6	eastern red cedar	10	No	Healthy	0	61-90	No	No	No	No
7840	6.6	blackjack oak	7	No	Healthy	0	61-90	No	No	No	No

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7841	20.1	post oak	21	No	Healthy	0	61-90	No	No	No	No
7842	7.3	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7843	24.2	post oak	24	No	Healthy	0	61-90	No	No	No	No
7844	7.5	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7845	6.4	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7846	19.3	post oak	20	No	Healthy	25	61-90	No	No	No	No
7847	21.8	post oak	23	Yes	Healthy	0	61-90	No	No	No	No
7848	10.3	post oak	10	No	Healthy	0	61-90	No	No	No	No
7849	9.3	post oak	9	No	Healthy	0	61-90	No	No	No	No
7850	14.9	post oak	15	No	Healthy	0	61-90	No	No	No	No
7851	10.6	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7852	8.2	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
7853	9.7	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7854	6.2	eastern red cedar	6	No	Healthy	0	61-90	No	No	No	No
7855	17.8	blackjack oak	18	No	Damaged	60	61-90	No	No	No	No
7856	7.6	eastern red cedar	9	No	Healthy	0	61-90	No	No	No	No
7863	11.1	post oak	10	No	Healthy	0	31-60	No	No	No	No
7864	12.5	post oak	14	No	Healthy	0	61-90	No	No	No	No
7865	18.9	post oak	18	No	Healthy	0	61-90	No	No	No	No
7866	10.1	post oak	11	No	Healthy	0	61-90	No	No	No	No
7880	10.5	blackjack oak	10	Yes	Healthy	0	61-90	No	No	No	No
7881	14.1	post oak	14	No	Healthy	0	61-90	No	No	No	No
7882	13.6	post oak	14	No	Healthy	0	61-90	No	No	No	No
7883	17.2	post oak	17	No	Healthy	0	61-90	No	No	No	No
7884	18	post oak	18	No	Healthy	0	61-90	No	No	No	No
7885	15.7	post oak	16	No	Healthy	0	61-90	No	No	No	No
7886	6.6	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7887	11.9	blackjack oak	10	No	Healthy	0	61-90	No	No	No	No
7906	8.2	eastern red cedar	7	No	Healthy	0	61-90	No	No	No	No
7907	12.5	gum bumelia	12	No	Healthy	0	61-90	No	No	No	No
7908	6	sugarberry	7	No	Healthy	0	61-90	No	No	No	No
7909	16.2	American elm	16	No	Healthy	0	61-90	No	No	No	No
7910	17	post oak	18	No	Healthy	0	61-90	No	No	No	No
7911	10	pecan	10	No	Healthy	0	61-90	No	No	No	No
7912	20	eastern red cedar	12	Yes	Healthy	0	61-90	No	No	No	No
7913	15.5	post oak	14	No	Healthy	0	61-90	No	No	No	No
7914	7.1	post oak	7	No	Healthy	0	61-90	No	No	No	No

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Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7915	6.7	American elm	6	No	Healthy	0	61-90	No	No	No	No
7916	7.2	American elm	7	No	Healthy	0	61-90	No	No	No	No
7917	11.6	post oak	11	No	Healthy	0	61-90	No	No	No	No
7918	16.1	American elm	16	No	Healthy	0	61-90	No	No	No	No
7919	16	post oak	16	No	Healthy	0	61-90	No	No	No	No
7920	8.1	post oak	8	No	Damaged	0	61-90	No	Trunk	Trunk	Trunk
7922	26	pecan	18	No	Healthy	0	61-90	No	No	No	No
7923	11	American elm	10	No	Healthy	0	61-90	No	No	No	No
7924	15.3	post oak	14	No	Healthy	0	61-90	No	No	No	No
7925	9.3	American elm	9	No	Healthy	0	61-90	No	No	No	No
7926	8.3	post oak	8	No	Healthy	0	61-90	No	No	No	No
7927	6.1	cedar elm	6	No	Healthy	0	61-90	No	No	No	No
7928	11.4	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
7929	6.3	American elm	6	No	Healthy	0	61-90	No	No	No	No
7930	18.6	black willow	18	No	Healthy	0	61-90	No	No	No	No
7932	8.7	American elm	8	Yes	Healthy	0	61-90	No	No	No	No
7933	9.7	post oak	9	No	Healthy	0	61-90	No	No	No	No
7934	8.8	American elm	8	No	Healthy	0	61-90	No	No	No	No
7935	6.4	cedar elm	6	No	Healthy	0	31-60	No	No	No	No
7936	10	cedar elm	10	No	Healthy	0	61-90	No	No	No	No
7937	7.1	American elm	7	No	Healthy	0	61-90	No	No	No	No
7938	6.5	American elm	6	No	Healthy	0	61-90	No	No	No	No
7939	10	pecan	10	No	Healthy	0	61-90	No	No	No	No
7940	9	American elm	9	No	Healthy	0	61-90	No	No	No	No
7944	10.6	pecan	10	No	Healthy	0	61-90	No	No	No	No
7945	26.5	blackjack oak	20	No	Healthy	0	61-90	No	No	No	No
7946	28	blackjack oak	25	No	Healthy	0	61-90	No	No	No	No
7947	14.7	post oak	14	No	Healthy	0	61-90	No	No	No	No
7948	7	cedar elm	8	No	Healthy	0	61-90	No	No	No	No
7949	13	post oak	12	No	Healthy	0	61-90	No	No	No	No
7950	7	post oak	6	No	Healthy	0	61-90	No	No	No	No
7951	12.5	post oak	12	No	Healthy	0	61-90	No	No	No	No
7952	6.4	blackjack oak	6	No	Healthy	0	0-30	No	No	No	No
7954	12	post oak	12	No	Healthy	0	61-90	No	No	No	No
7955	6.8	blackjack oak	6	No	Healthy	0	0-30	No	No	No	No
7956	9.9	post oak	10	No	Healthy	0	61-90	No	No	No	No
7957	18	post oak	22	No	Healthy	0	61-90	No	No	No	No

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City of Denton, Denton County, Texas

Tree Number	Diameter at Breast Height (Inches)	Species	Canopy Radius (Feet)	Multiple Trunks	General Condition	Dead Branches (%)	Lean	Vine Shrouded	Dead/ Missing Bark	Sapwood Damage/ Decay	Heartwood Damage/ Decay
7958	8.4	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7959	11.2	post oak	11	No	Healthy	0	61-90	No	No	No	No
7960	9.1	post oak	9	No	Healthy	0	61-90	No	No	No	No
7961	11.1	eastern red cedar	11	No	Healthy	0	61-90	No	No	No	No
7962	6.4	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
7963	7.4	post oak	7	No	Healthy	0	61-90	No	No	No	No
7964	6.5	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
7965	13.9	eastern red cedar	14	No	Healthy	0	61-90	No	No	No	No
7966	8.1	blackjack oak	8	No	Healthy	0	61-90	No	No	No	No
7967	6.8	American elm	6	No	Healthy	0	61-90	No	No	No	No
7968	7	pecan	7	No	Healthy	0	61-90	No	No	No	No
7969	11.3	boxelder	10	Yes	Healthy	0	61-90	No	No	No	No
7970	16.4	cedar elm	16	Yes	Healthy	0	61-90	No	No	No	No
7971	6.5	pecan	6	No	Healthy	0	61-90	No	No	No	No
7972	7.3	pecan	7	No	Healthy	0	61-90	No	No	No	No
7973	7.7	pecan	7	No	Healthy	0	61-90	No	No	No	No
7974	12.7	American elm	13	No	Healthy	0	61-90	No	No	No	No
7975	8	pecan	8	No	Healthy	0	61-90	No	No	No	No
7976	7.9	Bradford pear	8	No	Damaged	0	61-90	No	Trunk	No	No
7977	11.2	post oak	11	No	Healthy	0	61-90	No	No	No	No
7978	8.6	pecan	8	No	Healthy	0	61-90	No	No	No	No
7979	8.3	pecan	8	No	Healthy	0	61-90	No	No	No	No
7980	7.4	pecan	7	No	Healthy	0	61-90	No	No	No	No
7981	8.3	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
7982	8	boxelder	8	No	Healthy	0	61-90	No	No	No	No
7983	6.3	pecan	6	No	Healthy	0	61-90	No	No	No	No
7984	7.4	pecan	7	No	Healthy	0	61-90	No	No	No	No
7985	14.5	blackjack oak	14	No	Healthy	0	61-90	No	No	No	No
7986	6.5	boxelder	6	No	Healthy	0	61-90	No	No	No	No
7987	8.1	pecan	7	No	Healthy	0	61-90	No	No	No	No
7988	6.1	blackjack oak	6	No	Healthy	0	61-90	No	No	No	No
7990	10	American elm	6	No	Damaged	0	61-90	No	No	Trunk	Trunk
7991	8.4	pecan	8	No	Healthy	0	61-90	No	No	No	No
7992	11.1	boxelder	11	No	Healthy	0	61-90	No	No	No	No
7993	10.3	post oak	10	No	Healthy	0	61-90	No	No	No	No
7994	14.1	eastern red cedar	14	Yes	Healthy	0	61-90	No	No	No	No
7995	9.3	pecan	9	No	Healthy	0	61-90	No	No	No	No

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7996	18.4	post oak	25	No	Healthy	0	61-90	No	No	No	No
7997	8.4	eastern red cedar	8	No	Healthy	0	61-90	No	No	No	No
7998	6.1	post oak	6	No	Healthy	0	61-90	No	No	No	No
7999	9.5	post oak	9	No	Healthy	0	61-90	No	No	No	No
8000	8.8	post oak	9	No	Healthy	0	61-90	No	No	No	No
9487	10.4	blackjack oak	8	Yes	Healthy	0	61-90	No	No	No	No