



Exeter – Westpark Phase 3

Alternative Environmentally Sensitive Area (AESAs) Report
(AESAs22-0002)

July 2022

For compliance with:

City of Denton Environmentally Sensitive Areas Assessment
(ESA21-0011)

City of Denton Preliminary Plat
(PP21-0015)

Civil Engineering Plans
(CEP22-0010)

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Introduction and Authority/Purpose and Need for Action

Kimley-Horn and Associates (Kimley-Horn) was retained by Exeter Property Group (Exeter) for Civil Engineering and Environmental Services for the Exeter – Martino Property. This Alternative Environmentally Sensitive Area (AESAs) 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 the impacts required to construct two functioning stormwater control structures for the proposed industrial distribution center.

The intersection of the drainage channels with the Riparian Buffer ESA is the subject of this AESA Plan. Pursuant to DDC Section 7.4.6, the disturbance of Undeveloped Floodplain is a permitted activity for the placement of this utility facility as long as the disturbed area is restored to minimize erosion and promote the recovery of the ESA. The mitigation activities offered as a part of this AESA would achieve this goal.

Description of Overall Development

The proposed Exeter – Westpark Phase 3 project is approximately 90.4-acres in size located on the southern side of Jim Christal Road between Western Blvd. and Masch Branch Road in the City of Denton, Denton County, Texas (Figure 1).

The proposed project includes the construction of a distribution warehouse with associated parking and driveways. Two stormwater control structures will be constructed as part of the project. The location of the stormwater structures has been designed and included in the DIA as shown on the attached Figures. The current zoning for this tract is Heavy Industrial (HI) which allows for the proposed development.

Existing Site Description

The project area consists of ruderal pastureland with open forest in the northeastern and southeastern portion of the site. Kimley-Horn Environmental staff conducted a site visit to the project area on May 28, 2021 to confirm environmentally sensitive areas (ESA) mapped by the City of Denton. Prior to the site visit, Kimley-Horn reviewed the previously mapped ESAs as depicted on the City of Denton GIS (Figure 2).

The ESAs were observed to be similar to the City mapped boundaries. During the site visit, one intermittent stream, a tributary of the Dry Fork Trinity River, was observed in the southeastern portion of the site. The stream bank was dominated by Johnson grass, water willow, and spike rush, while the buffer was dominated by cedar elm, Johnson grass, and native grasses and forbs. Based on the drainage basin of the intermittent stream, a 100-foot Riparian Buffer was identified on either side of the stream within the property boundary at the time of the ESA assessment.

FEMA 100-year floodplain was also associated with the intermittent stream and appeared to be primarily undeveloped in the southeastern portion of the of the property. Additional floodplain was mapped along the eastern boundary but is associated to a channelized stream on the eastern adjacent property. As such, the additional eastern floodplain is developed.

The onsite stream, Riparian Buffer ESA, and Undeveloped Floodplain ESA identified during the site reconnaissance are depicted on Figure 3. The habitat within the ESAs is as follows:

Streams

An intermittent stream generally flows through a culvert near the eastern boundary of the assessment area, bounds the southern boundary before veering offsite to the south. The intermittent stream had an ordinary high water mark (OHWM) ranging from 5 to 15 feet wide.

Overall the stream was in *Good* condition based on the Rapid Stream Assessment Technique (RSAT) evaluation performed during the ESA assessment.

Riparian Buffer ESA

The 100-foot Riparian Buffer was identified along the intermittent stream *within the assessment area*. The understory generally consisted of upland grasses, small cedar elm (*Ulmus crassifolia*), and annual ragweed. The tree community (measuring 6-inches and larger at diameter breast height (DBH)) consisted primarily of cedar elm, mesquite (*Prosopis glandulosa*), Hackberry (*Celtis laevigata*), and Osage orange (*Maclura pomifera*). A full tree inventory was previously completed for the site and the associated data has been submitted to the City with the Landscape Plans.

Undeveloped Floodplain ESA

Undeveloped Floodplain ESA was mapped around the intermittent stream channel. The Floodplain ESA is associated to FEMA 100-year floodplain Zone AE. The floodplain is generally encompassed within the Riparian Buffer ESA boundary.

Purpose of AESA

The purpose of the AESA Report is to propose mitigation for the impacts to the Riparian Buffer caused by the construction of two stormwater drainage channels. The proposed structures would consist of excavating a channel that will direct stormwater from an outfall to the adjacent stream channel. Consolidating the stormwater into the respective channels allows for efficient site layout of the warehouse building by eliminating the need for additional stormwater detention to prevent downstream erosion. Grading required for the construction would be limited to the minimum necessary for the channel construction: approximately 0.47-acres within the Riparian Buffer and Undeveloped Floodplain ESAs. The large portion of Riparian Buffer ESA and Floodplain ESA overlap within the ESA impact areas. Figure 4 shows the proposed impacts to both ESAs.

Pursuant to DDC Section 7.4.6B.1.c., the disturbance of Undeveloped Floodplain is a permitted activity for the placement of this utility facility as long as the disturbed area is restored to minimize erosion and promote the recovery of the ESA. The mitigation activities offered as a part of this AESA would achieve this goal.

Additional project information is available from City of Denton Case Number ESA21-0011, PP21-0015, and CEP22-0010 within ProjectDox.

Notification and Review

This AESA Report explaining the mitigation measures for impacts to an ESA will be provided to the City of Denton for formal notification of the activity and review of the proposed restoration activity. A review of the Nationwide Permit program indicates that the NWP 58 – Utility Line Activities for Water and Other Substances should authorize the proposed outfall and associated stormwater control structures and does not require Preconstruction Notification to the Corps.

Affected Environment and Summary of Impacts

Figure 3 shows the observed Riparian Buffer and Undeveloped Floodplain ESAs associated with stream channel through the southeastern portion of the site. The total Riparian Buffer ESA covers approximately 2.1-acres and the Undeveloped Floodplain ESA covers approximately 1.8-acres within the assessment area. The Undeveloped Floodplain ESA is almost completely within the Riparian Buffer ESA.

The project is proposing to construct two stormwater drainage channels within the onsite Riparian Buffer and Undeveloped Floodplain ESAs. The drainage channels will consist of grading a pathway from a stormwater outfall to the adjacent stream channel to prevent erosion from increased overland flow. The location and size of these channels have been determined by evaluating the proposed trapezoidal channel grading using the Modified Rational Method developed flows as per the City of Denton requirements. All vegetation within the path of the channels will be removed during the initial construction; however, the impacts will be limited to the minimum extent necessary to construct a functional drainage pathway. The proposed impacts from the construction of the drainage channels are limited to 0.47 combined acres in the Riparian Buffer and Undeveloped Floodplain ESA. The total impacts are shown on Figure 4.

Based on the tree inventory completed prior to the preparation of this report, tree species within the impact area included elm, Osage orange, and mesquite (as labeled on the tree preservation plan). The forest within the riparian buffer was primarily open with the understory primarily made up of herbaceous grass species. The trees to be removed are described in Table 1 below and summarized in Table 2. The proposed healthy trees to be removed total 118-caliper inches at diameter at breast height (DBH) from ten trees. The removed healthy trees make up a small portion of the total healthy trees within the onsite ESAs.

Table 1. Summary of individual trees tagged within the Riparian Buffer and Undeveloped Floodplain ESA areas.

Tag#	DBH (caliper inches)	Common Name	Scientific Name	Condition	Protection Status
10249	12	Elm	<i>Ulmus sp.</i>	Healthy	Protected
10250	12	Elm	<i>Ulmus sp.</i>	Healthy	Protected
10251	18	Osage-orange	<i>Maclura pomifera</i>	Healthy	Protected
10252	12	Elm	<i>Ulmus sp.</i>	Healthy	Protected
10289	12	Mesquite	<i>Prosopis glandulosa</i>	Healthy	Non-Protected
30356	10	Elm	<i>Ulmus sp.</i>	Healthy	Protected
30357	10	Elm	<i>Ulmus sp.</i>	Healthy	Protected
30358	10	Elm	<i>Ulmus sp.</i>	Healthy	Protected
30359	10	Elm	<i>Ulmus sp.</i>	Healthy	Protected
30360	12	Elm	<i>Ulmus sp.</i>	Healthy	Protected
Total	118				

Table 2. Summary of healthy trees tagged within the Riparian Buffer and Undeveloped Floodplain ESA areas.

Tree Species	No. Healthy Trees (total DBH)
Elm	8 (88")
Osage orange	1 (18")
Mesquite	1 (12")
Total Trees (caliper inches)	10 (118")

Mitigation Activities

The impacts to the Riparian Buffer ESA and Undeveloped Floodplain ESAs shown in Figure 4 are minimal and limited to the two drainage channels required to direct stormwater flow from the proposed industrial development to the adjacent stream channel. Vegetation will be removed during the initial construction of the drainage structures. No additional adverse impacts to the streams or surrounding ESAs are expected from the construction.

Following the construction of the drainage channels, a contractor will be instructed by Exeter to seed native grasses within the channels (impact areas identified on Figure 4). Once revegetated, the resulting AESA will continue to provide native habitat while also aiding in stormwater management for the industrial development.

Proposed Revegetation

The developer is proposing to reseed the drainage control structures with a combination of native seed mixes. Each of the trees proposed to be removed are hardy species that are innately capable of rapid spread and growth. As an abundance of young, healthy representatives of each species (both trees and emerging saplings) will remain in the proximity of the impact areas, the removal of the ten healthy trees for the construction of the stormwater structures will cause minimal impacts to the overall habitat. It is expected that the removed trees will quickly be replaced from natural seed propagation following the completion of construction activities.

While no tree plantings are proposed within the AESA, the removed caliper inches of the healthy trees are included in the overall tree mitigation and will be replaced through planted landscape trees in other portions of the development area. The proposed plantings are shown in Landscape Plan that were submitted with the CEP submittal for staff review, comment, and approval.

A combination of a Drainfield Mix and Riparian Recovery Mix of seeds will be seeded throughout the disturbed ESA areas to provide a protective ground cover and functional understory strata. The Drainfield mix is described as a grass mix designed for areas that have periodic moist soils, i.e. within drainage channels, that may retain moisture for 24 to 48 hours. The plants in this mix were included for their adaptability to a wide range of growing conditions. The Riparian Recovery mix is described as a combination of 36 native grass & wildflower species to aid in rebuilding stream bank buffer zones. The seed mixes include multiple native species including herbaceous species such as Eastern gamagrass (*Tripsacum dactyloides*), switchgrass (*Panicum virgatum*), and bushy bluestem (*Andropogon glomeratus*). A full list of the species included in both seed mixes can be found at Native American Seed (<http://www.seedsources.com/catalog/>). The Drainfield mix will be seeded within the center of the drainage channel while the Riparian Recovery mix will be seeded on the slopes and top of the channel. The goal of the proposed seeding is to develop an AESA with a quality, functioning native habitat that will not need additional maintenance beyond the initial seeding.

To improve the adjacent ESAs and surrounding habitat, a combination of native seed mixes will also be utilized outside of the impacted ESA locations. Within the DIA, the seed mixes will be selected by the proposed use and resulting conditions of the area. The seed mixes will include the Drainfield Mix and Riparian Recovery Mix described previously, as well as wildflower mix to include forbs such as bluebonnet (*Lupinus texensis*), lemon mint (*Monarda citriodora*), and Indian blanket (*Gaillardia pulchella*) among others. While the forested area west of the impact areas are included in the DIA, no grading will occur in the area. Instead, the understory will be cleared and reseeded with a wildflower mix. The seeding area is depicted on Figure 5.

The avoided ESA, adjacent to the impact areas and outside of the DIA, will be overseeded with the Riparian Recovery Mix in order to promote the native grass community in these areas. No other activities are proposed in these areas to also protect the existing environment. The overseeding areas are depicted on Figure 5.

The seed mixes will be sown following final grading. In the interim, temporary non-invasive vegetative cover approved by City Staff, such as Canadian wild rye (*Elymus canadensis*), cereal rye (*Secale cereale*), winter wheat (*Triticum aestivum*), or oats (*Avena sp.*) will be established by hydro-mulching or installing erosion control blankets. Irrigation is not proposed at this time; however, if the seeded forbs and grasses show signs of stress or the survival rate does not meet or exceed 90% cover, irrigation may be deemed necessary and installed following the plantings. An initial site visit by Kimley-Horn environmental staff will be performed following the completion of the seeding and prior to the first annual monitoring event. Kimley-Horn staff will perform additional site visits as necessary during the first annual monitoring period.

While the initial construction activity will result in impacts to the existing ESAs, the resulting stormwater drainage features will be seeded to create a native vegetative community that will also promote the native grasses in the surrounding area. The resulting habitat will provide vegetative cover for birds and small animals as well as provide foraging for larger mammals. The overlapping ecosystems created from the existing adjacent forest, created herbaceous strip, and periodically saturated area will result in an edge effect. The edge effect is an ecological concept that describes the increased diversity in areas where different ecosystems overlap.

Erosion Control

A downstream assessment (DSA21-0009) was approved by the City on August 19, 2021 which indicated that the proposed improvements would not create erosive conditions downstream of the site. Therefore, detention will not be provided for this project. Velocities at the outfalls of pipes will be mitigated with rip-rap designed in accordance with the Integrated Stormwater Management (iSWM) criteria published by the North Central Texas Council of Governments (NCTCOG). The proposed ESA encroachments are needed to drain the site due to the elevation of the adjacent southern stream, the primary drainageway for the proposed overall project. In order to protect the downstream waterway, riprap is being provided to slow the water down and herbaceous cover will be provided downstream of the riprap.

Erosion control measures will be installed prior to the start of land disturbing activities on the project and will be installed in accordance with the approved plans and specifications. The proposed erosion control plan indicates erosion and sediment control measures at the location of the development outfall into the channel. For the construction of the drainage structures, a silt fence will be utilized to protect the ESAs and prevent illicit discharges. Inspections shall be made weekly and after storm events to ensure the controls are functioning properly. If the control measures cannot manage erosion and offsite sedimentation, the plans will be revised and additional controls installed.

Proposed erosion control plans for the channels were submitted with the CEP submittal for staff review, comment and approval.

Compliance with Authorities

The City of Denton is the authority over compliance with this AESA mitigation plan. Once the drainage structures have been constructed and the AESA mitigation activities have been completed, the City of Denton will be notified that the restoration activities have been completed.

Annual Reporting

The applicant will prepare an annual report each year for three consecutive years, beginning 12 months following the implementation of the mitigation activities, for the purposes of describing the cumulative mitigation work that has been performed during the reporting period, and to report on the current

survivability of the seeding, condition of the protective fence, and presence of trash within the adjacent stream channel. These annual reports will be submitted to the City for review and inspection.

The first two annual reports will contain action items that may include: the implementation of additional erosion control, re-seeding the seed mixtures as needed, removing weeds within the seeded areas, fence repairs or removal of construction debris within the ESAs and adjacent stream.

Upon completion of the three-year monitoring and reporting period, the City of Denton Environmental Services shall inspect the plantings and determine whether ninety percent (90%) of the seeded area is healthy and has a reasonable chance of sustained cover. If it is determined that 90% of the seeded area is healthy and has a reasonable chance of sustained cover, the City will issue the final acceptance of the project. After city inspection, if more than 10% of seeded area is found to be diseased or not having a reasonable chance of sustained cover, the applicant shall be notified to reseed that 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 changes need to be made to the mitigation plan during the three-year monitoring period, the City of Denton will be notified prior to making the plan modifications.

Criteria for Approval

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

1. Mitigation goals are obtained by creating, expanding and/or improving ESAs.

The proposed AESA proposes to mitigate the impacts to the Riparian Buffer ESA from the construction of two stormwater control channels by seeding the channels and associated slopes with native seed mixtures to both provide a protective ground cover and functional understory strata. While the initial construction activity will result in impacts to the existing ESAs, the resulting stormwater drainage features will be seeded to create a native vegetative community that will also promote the native grasses in the surrounding area. The resulting habitat will provide vegetative cover for birds and small animals as well as provide foraging for larger mammals. The mitigation will also expand into the surrounding, avoided ESAs by overseeding with a native seed mix to promote a native grass community. Additionally, native seed mixes will be utilized in the surrounding areas within the DIA, outside of the ESA impact areas.

2. Mitigation goals are obtained by preserving environmentally sensitive areas above the minimum requirements, exchanges between different types of ESAs, installing pollution prevention controls, and/or implementing best management practices or any other approaches that result in the improvement of the environment being impacted.

Once revegetated, the native grasses planted within the stormwater structures will provide vegetative cover and forage for local wildlife, promote the native herbaceous community within the ESA, and expand the edge effect within the ESA by creating overlapping ecosystems (forests, grassland, and periodically saturated areas). The stormwater structures themselves will prevent negative impacts from increased flows through the ESAs.

3. Areas offered as mitigation are linked to existing or planned open space or conserved areas to provide an overall open space system.

The disturbances and proposed AESA are located within larger, openly forested ESAs surrounding an ephemeral stream and remnant channel. The impact areas are a fraction of the overall, undisturbed habitat onsite, and will be revegetated to avoid lasting negative impacts to the overall ecosystem and promote the native vegetative community. Native grass seed mixes are also being utilized outside of the ESAs to expand the native grass communities.

4. Development is arranged for maximizing access and utilization of the ESAs by citizens.

Not applicable. The ESAs are located away from public visibility and will remain away from public visibility at the southern side of the property, opposite Jim Christal Road.

5. Areas offered as mitigation are placed either in a lot or lots that incorporate a permanent conservation easement, restrictive covenants, or such other legal mechanism to allow for the long term conservation of said areas. Such legal mechanism shall limit any future land disturbing activity or construction within the ESAs and shall run with the land and be binding upon all successors and assigns of the current owner.

As the stormwater control structures are being revegetated to maintain the native habitat, the ESA designation will remain and therefore be subject to use restrictions set forth in the DDC.

6. The AESA plan shall demonstrate that the developer's alternative proposal results in a high-quality development meeting the intent of the standards in the DDC.

The AESA has been designed to minimize the impacts to ESAs necessary to meet the stormwater design standards for the overall development and proposes to mitigate for the impacts by revegetating the constructed channels and associated slopes. As such the proposed development meets the criteria for approval for an AESA.

Summary

The impacts proposed to the Riparian Buffer and Undeveloped Floodplain ESAs are 0.47 combined acres resulting from the construction of drainage channels directing stormwater flow from outfalls to the adjacent stream channel. The mitigation for the impacts to the Riparian Buffer ESA will consist of seeding the channel and associated slopes within both ESAs impacted by the construction with native seed mixtures to provide a protective ground cover and functional understory strata. The native grasses planted within the stormwater structures will provide vegetative cover and forage for local wildlife, promote the native herbaceous community within the ESA, and expand the edge effect within the ESA by creating overlapping ecosystems (forests, grassland, and periodically saturated areas).

Annual Reporting Contacts

Developer/Owner:

Exeter Property Group
16622 North Dallas Pkwy, Suite 280
Addison, TX 75001
Contact: Colby Schraegle
Phone: 469-983-8810
Email: cschraegle@exeterpg.com

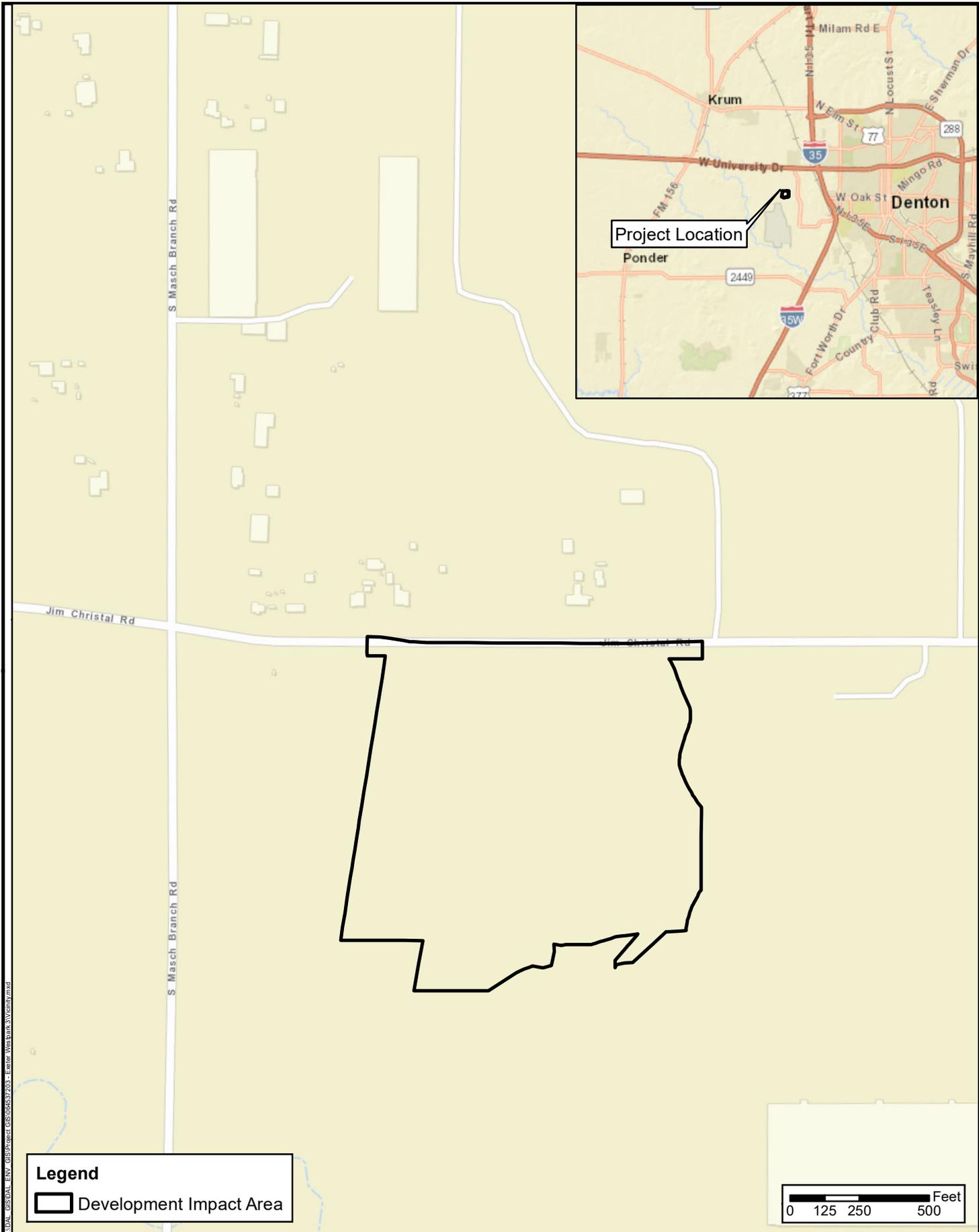
Environmental Scientist:

Kimley-Horn and Associates
13455 Noel Road, Two Galleria Office Tower, Suite 700
Dallas, TX 75240
Contact: Sierra Gibbons, PWS
Phone: 972-776-1762
Email: sierra.gibbons@kimley-horn.com

Engineer:

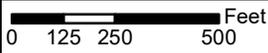
Kimley-Horn and Associates
100 West Oak Street, Suite 203
Denton, TX 76201
Contact: Mack Mattke, P.E.
Phone: 940-536-0176
Email: mack.mattke@kimley-horn.com

FIGURES



Legend

 Development Impact Area

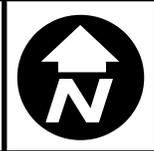


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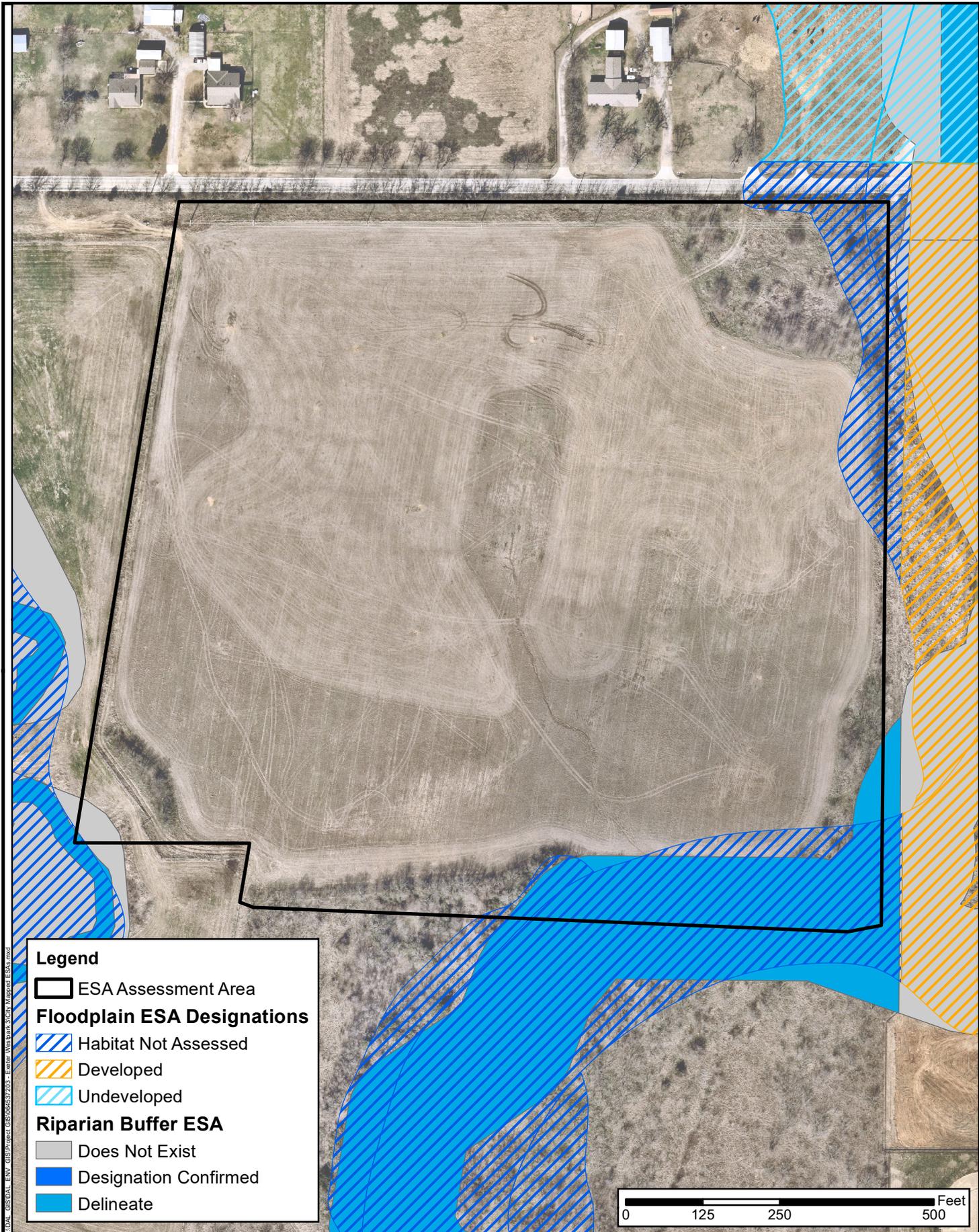
Vicinity Map

Exeter - Westpark
Phase 3
Denton, Denton County, Texas



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Legend

- ESA Assessment Area
- Floodplain ESA Designations**
- Habitat Not Assessed
- Developed
- Undeveloped
- Riparian Buffer ESA**
- Does Not Exist
- Designation Confirmed
- Delineate

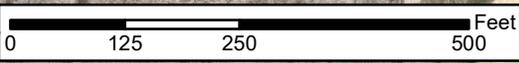


FIGURE 2	DATE: 03/28/2022
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**City of Denton
Mapped ESAs**

Source: Nearmap Feb, 2022

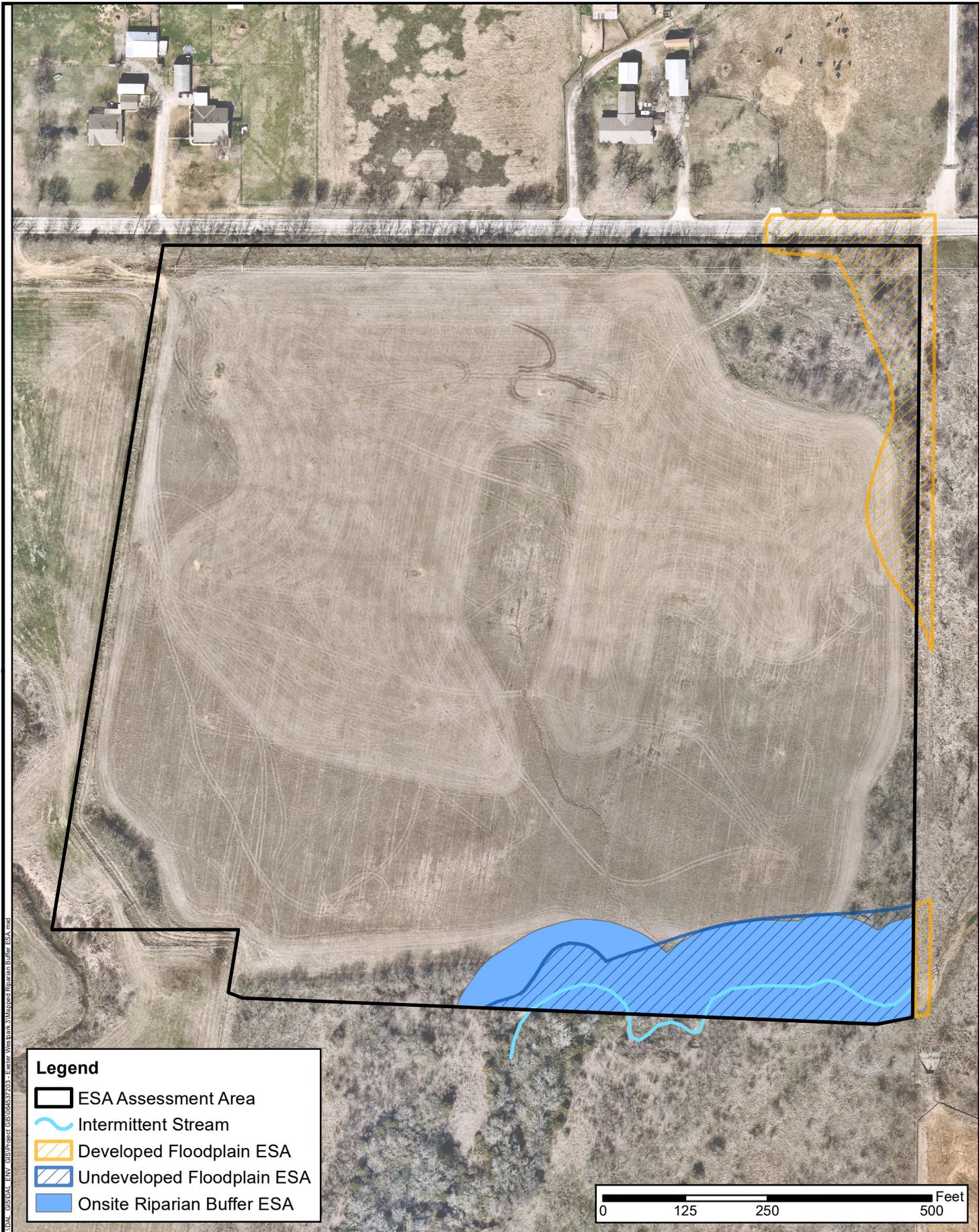
**Exeter - Westpark
Phase 3**

Denton, Denton County, Texas



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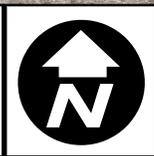


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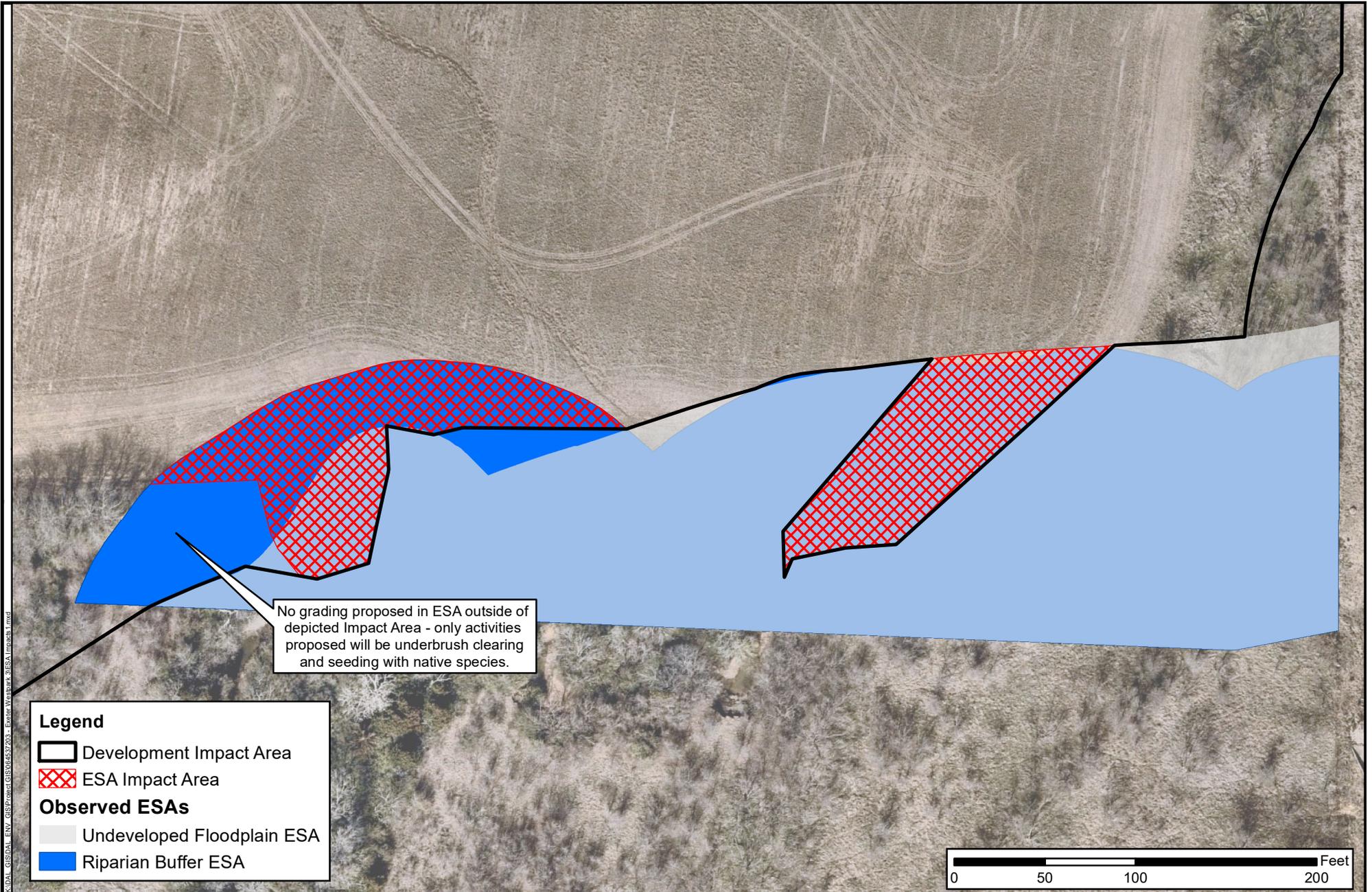
Onsite ESAs and Aquatic Features
Source: Nearmap Feb, 2022

Exeter - Westpark Phase 3
Denton, Denton County, Texas



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Legend

- Development Impact Area
- ESA Impact Area

Observed ESAs

- Undeveloped Floodplain ESA
- Riparian Buffer ESA

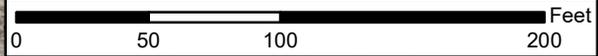


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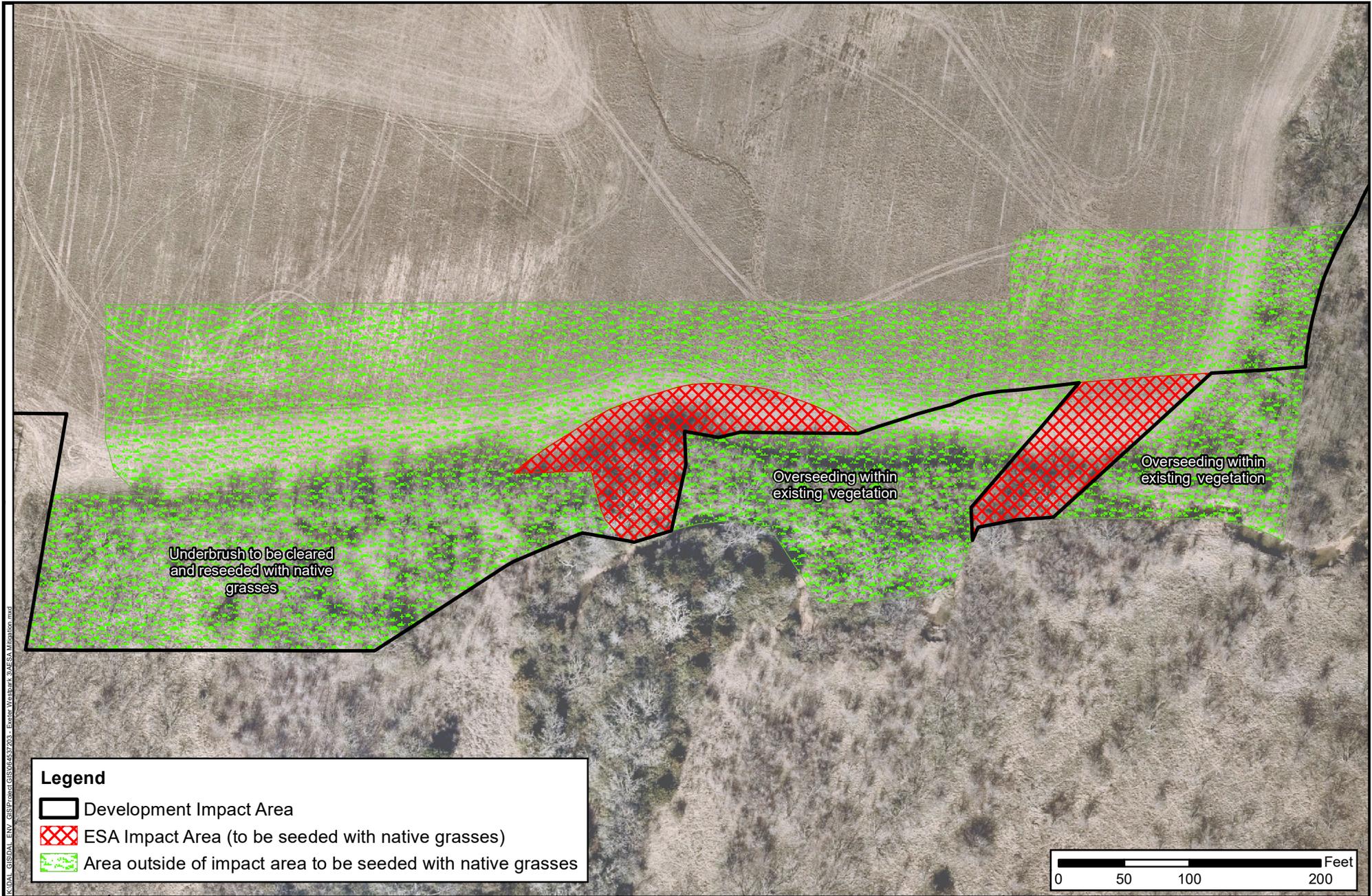
Proposed ESA Impacts
Source: Nearmap Feb, 2021

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Denton, Denton County, Texas



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Legend

- Development Impact Area
- ESA Impact Area (to be seeded with native grasses)
- Area outside of impact area to be seeded with native grasses

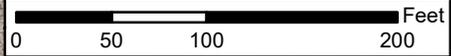
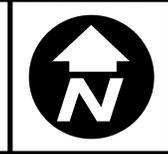


FIGURE 5	DATE: 07/01/2022
	DESIGN: SDG
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AESA Proposed Mitigation
Source: Nearmap Feb, 2021

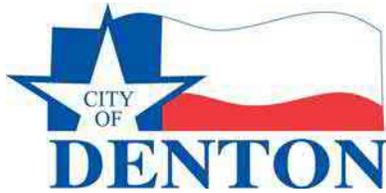
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APPENDIX A



Floodplain ESA Assessment Form

Version 3, February 2020

Owner: Randall Smith TrakIt# _____

Address or Location: South of Jim Christal Road

Stream Name: Tributary to Dry Fork Hickory Creek

Floodplain Information

Floodplain fill and structures: Do no exist

If undeveloped, is there an approved LOMR, CLOMR or LOMA for the site? No

If undeveloped, is there a pending LOMR, CLOMR or LOMA for the site? No

Floodplain zone(s): both 100-year and 500-year

Approximate width of floodplain (Based on FEMA Map): 628 ft.

Is floodway present? Yes

If yes, is Riparian ESA assessment needed? Yes

Waterway: Natural Describe: 628

Sinuosity: Meandering

General Land Use

Forest

Agricultural High Intensity

Crop type: Fallow

Residential

Commercial / Industrial

Recreational

Other: _____

Soil Deposition and Erosion

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

If natural levee is present, are wetlands located behind it?

If yes, is Water-Related Habitat assessment needed? No

Soil Map Unit Names(s): Gowen clay loam, frequently flooded

Justin fine sandy loam, 1 to 3 percent slopes

Ponder loam, 1 to 3 percent slopes

Active erosion: Slight

Is evidence of sheet flow present? Yes

Is evidence of concentrated flow present? Yes

Vegetation

Cover type: Young Forest

Plant cover on existing land: well vegetated

Briefly describe dominant vegetation: cedar elm, mesquite, hackberry, Johnson grass, native forbs and grasses

Invasive exotics present? Yes

Invasive specie(s): Chinese privet

Approximate area of infestation (%): 10

Trees

Are tree(s) present > 6" DBH? Yes

Are any trees to be removed? Yes

Are any trees > 6" DBH to be removed? Yes

Required Attachments: (List attached photographs, maps, and any other documents used to support the conclusion(s))

Figure 1 - Vicinity Map, Figure 2 - City Mapped Riparian Buffer ESA, Figure 3 - Existing Onsite Riparian Buffer ESA, Figure 4 - Photo Location Map and Photo Log

Comments: (Provide a summary of findings that support the conclusion)

The intermittent stream west of the culvert along the eastern boundary appears to be undisturbed. Therefore the Floodplain ESA is undeveloped.

Conclusions:

Based upon the site inspection by the City of Denton, the area in question is NOT an ESA and therefore is not subjected to the ESA requirements outlined in the Denton Development Code. All other appropriate aspects of the Denton Development Code, however, still apply. The official city ESA map will be updated to remove the area from ESA status

Based upon the site inspection by the City of Denton, the area in question IS an ESA and is subject to the requirement set forth in Section 17 of the Denton Development Code.

Based upon the site inspection by the City of Denton, insufficient information is available to determine the ESA status of the area in question. A more extensive inspection is required from either the City of Denton or the property owner.

The determination of the ESA status is permanently valid and may only be revisited if significant new information that necessitates a major change in the determination becomes available. A request for reconsideration of the determination may be submitted in writing by the applicant, landowner, or agent within 30 days of the date below.

Signature of field investigator: 

Date: 06/07/2021

Approval: _____

Date: _____



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Legend

Development Area

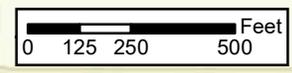
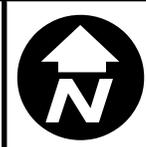


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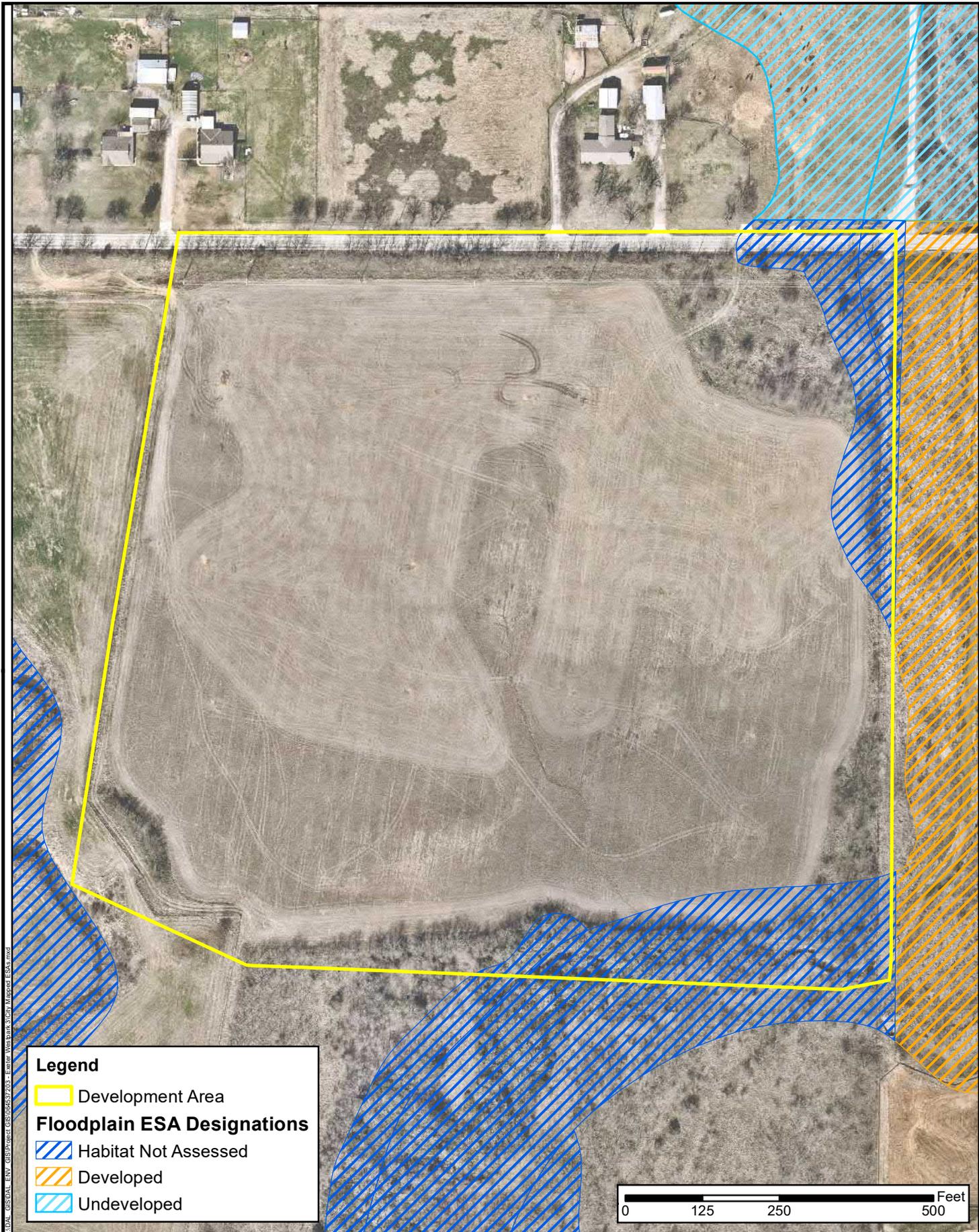
Vicinity Map

Exeter Westpark 3
Denton, Denton County, Texas



Kimley»Horn

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.



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Legend

- Development Area
- Floodplain ESA Designations**
- Habitat Not Assessed
- Developed
- Undeveloped

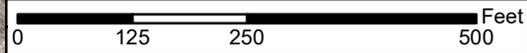


FIGURE 2	DATE: 06/06/2021
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	CHECKED: AMB
	KHA NO.: 064537203

**City Mapped ESAs -
Floodplain**

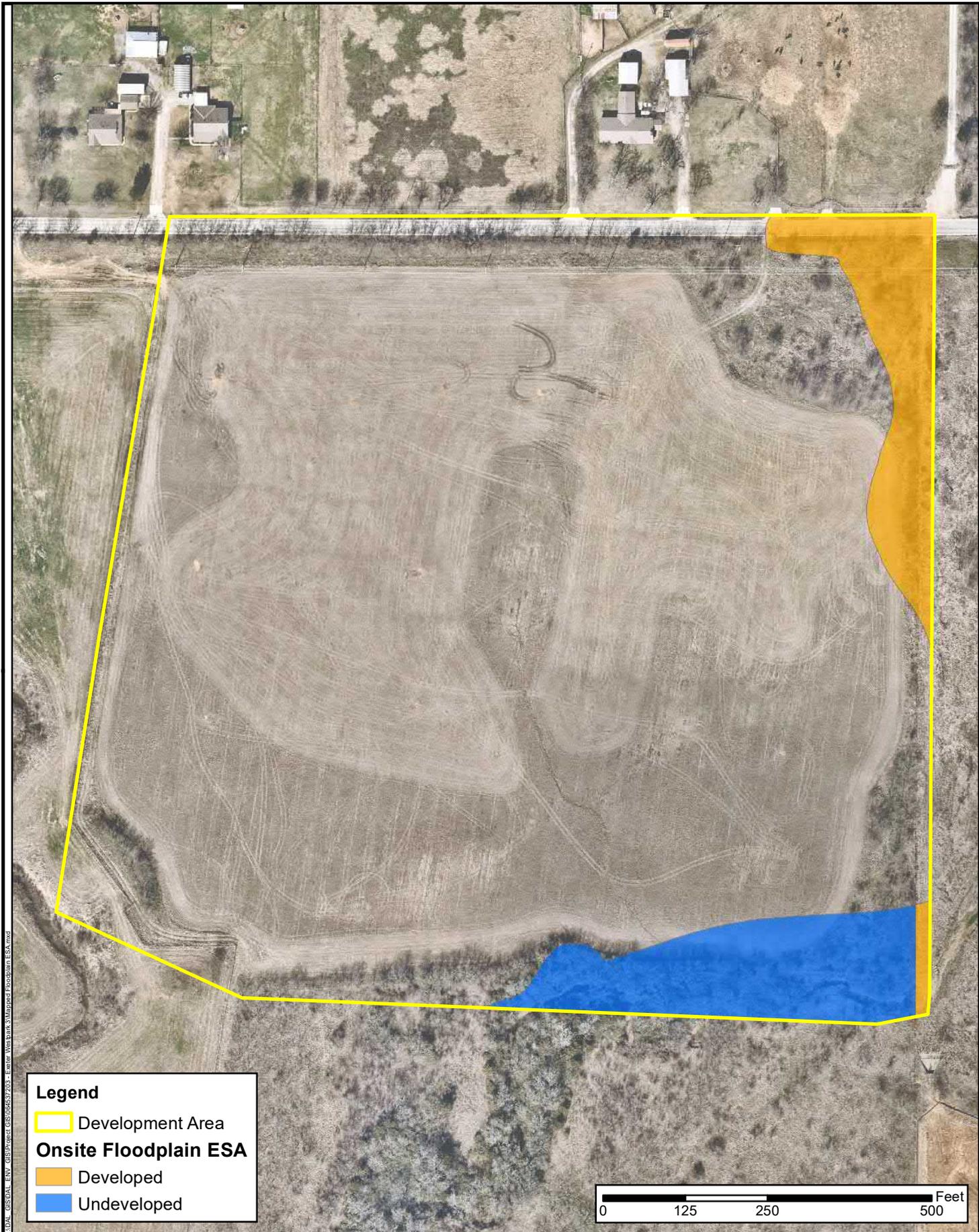
Nearmap Feb. 2021

Exeter Westpark 3
Denton, Denton County, Texas



Kimley»Horn

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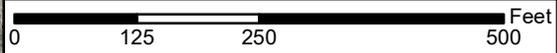


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- Development Area

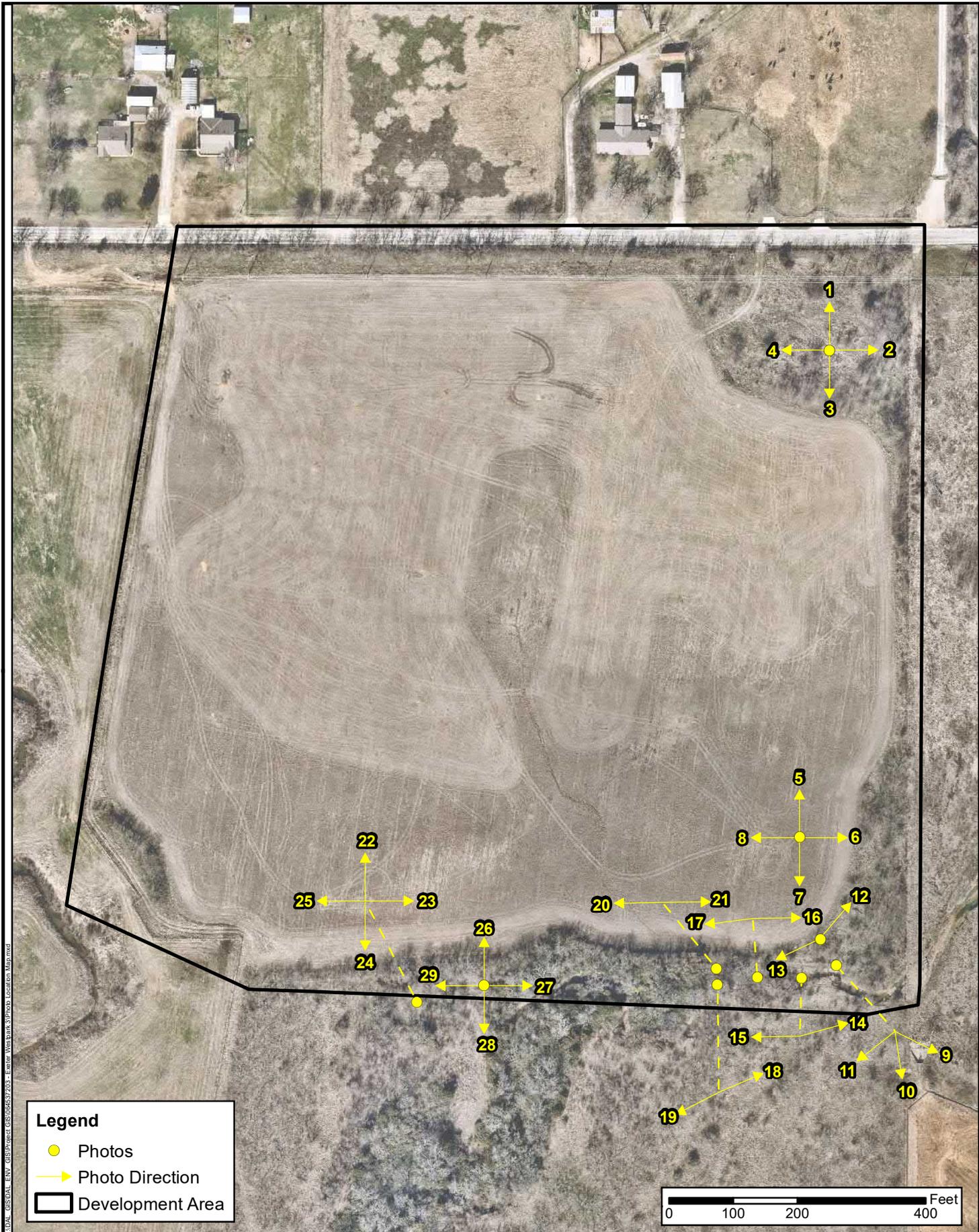
Onsite Floodplain ESA

- Developed
- Undeveloped



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FIGURE 3	DATE: 06/06/2021	Onsite Floodplain ESAs Nearmap Feb. 2021	Exeter Westpark 3 Denton, Denton County, Texas		Kimley»Horn <small>This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.</small>
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	KHA NO.: 064537203				



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Legend

- Photos
- ➔ Photo Direction
- Development Area

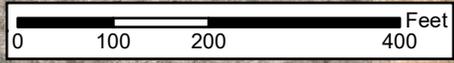
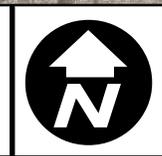


FIGURE 4	DATE: 06/06/2021
	DRAWN: SDG
	CHECKED: AMB
	KHA NO.: 064537203

Photo Location Map
Nearmap Feb. 2021

Exeter Westpark 3
Denton, Denton County, Texas



Kimley»Horn

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1



2



3



4



5



6

Photos were taken on 05/28/2021



7



8



9



10



11



12

Photos were taken on 05/28/2021



13



14



15



16



17



18



19



20



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24

Photos were taken on 05/28/2021



25



26



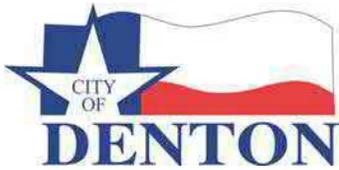
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28



29



Riparian ESA Assessment Form

Version 4, J. Dailey, October 2012

Owner: Randall Smith TrakIt #: _____

Address or Location: South of Jim Christal Road

Stream Name: Tributary to Dry Fork Hickory Creek Approximate Width: 5 to 15 Order: 2

General Land Use (current)

- | | | |
|---|------|--|
| <input checked="" type="checkbox"/> Forest | | <input type="checkbox"/> Commercial / Industrial |
| <input checked="" type="checkbox"/> Agricultural Crop | Crop | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Residential | | <input type="checkbox"/> Other: _____ |

Purpose of Riparian Buffer (check all that apply)

- | | |
|--|---|
| <input checked="" type="checkbox"/> intercept sediment | <input checked="" type="checkbox"/> Intercept nutrients / fertilizers |
| <input checked="" type="checkbox"/> intercept pesticides | <input type="checkbox"/> intercept other pollutants |
| <input type="checkbox"/> lower water temperature | <input type="checkbox"/> help stabilize streambank |
| <input type="checkbox"/> Improve fish habitat | <input checked="" type="checkbox"/> improve wildlife habitat |
| <input type="checkbox"/> aesthetics | (species of interest _____) |
| <input type="checkbox"/> Privacy | |

Stream Bank Condition

Evidence of frequent water level changes Yes Existing plant cover: moderate

Slope of bank: 45% Dominant cover: grass

Soil class: loam Large leaning trees? Yes

Active erosion: moderate Invasive exotics present? No

Approximate area of infestation: 5%

Top of Bank

Existing plant cover: well-vegetated Floodway present? Yes

Dominant cover: shrub Soil type: Gowen clay loam, frequently flooded

Invasive exotics present? Yes Justin fine sandy loam, 1 to 3 percent slopes

Approximate area of infestation: 5% Ponder loam, 1 to 3 percent slopes

Above the Bank

Active erosion:

Slope: 10%

Does the land slope toward or away from water? toward the water

Does the land direct runoff towards the buffer? yes

Evidence of sheet flow or concentrated flow? concentrated flow

Plant cover on existing land: well-vegetated

Dominant cover: young forest

Invasive exotics present? Yes

Approximate area of infestation: 5%

Nuisance wildlife present? yes

Species: hog

Water Quality

Color: turbid

Type and Quantity of Potential Pollutants from Drainage Area

(check all that apply)

- Lawns, landscapes, or other areas where fertilizers or pesticides are used
- Land intensively cropped with exposed soils at certain times of the year
- Commercial fertilizer used
- Commercial pesticides used
- Grazing animals use the drainage area
- Grazing animals have access to the stream
- Parking lots or roads send runoff into the stream
- Steep slopes drain into the stream
- Sensitive fisheries present
- Plant or animal species of concern are present
- Stream used for swimming or boating
- Stream is used as a drinking water source
- A well is located near the stream
- Construction is proposed in the drainage area. Construction is:
 - Low impact potential (parks, low density residential)
 - High impact potential (urban development)
 - Gas well plat
- Stream / watershed is in close proximity (3-4 miles) to a downstream surface water supply

Vegetation Brief Survey

Bank

	Dominant species scientific names	Common names	% cover	Indicator status
1	Justicia americana	Water willow	30	OBL
2	Sorghum halepense	Johnson grass	30	FACU
3	Eleocharis sp.	Spike rush	10	OBL
4				
5				
6				
7				
8				
9				
10				

Buffer

	Dominant species scientific names	Common names	% cover	Indicator status
1	Ulmus crassifolia	Cedar elm	30	FAC
2	Prosopis glandulosa	Mesquite	15	FACU
3	Celtis laevigata	Hackberry	15	FAC
4	Sorghum halepense	Johnson grass	50	FACU
5	Hackelia virginiana	Beggar's lice	20	FACU
6	Multiple	Native forbs	15	FAC
7	Ambrosia trifida	Great ragweed	10	FAC
8				
9				
10				

Hydrophytic Vegetation Indicator Ratio

Bank 2 : 3

Buffer 4 : 7

Hydrology Indicators

(Primary)

- Inundated
- Soil Saturated in Upper 12 inches
- Water marks
- Drift lines
- Sediment Deposits
- Evidence of drainage pattern

(Secondary)

- Oxidized Root channels in upper 12 inches
- Water stained leaves
- County Soil Survey
- Fac-Neutral Test

Comments: Drift lines and drainage patterns immediately adjacent to stream channel

Hydric Soil Indicators

- Histosol
- Histic Epipedon
- Sulfidic odor
- Aquic Moisture Regime
- Reducing conditions
- Gleyed or Low Chroma Colors

- Concretions
- High surface organic content
- Organic streaking in sandy soils
- Listed on local hydric soil list
- Listed on national hydric soils list
- Other (explain in comments)

Comments: None

Required Attachments: (List attached photographs, maps, and any other documents used to support the conclusion(s))

Figure 1 - Vicinity, Figure 2 - City Mapped Riparian Buffer ESA, Figure 3 - Existing Onsite Riparian Buffer ESA, Figure 4 - Photo Location Map and Photo Log

Comments: (Provide a summary of findings that support the conclusion)

The riparian buffer begins to the west of a culvert along the eastern boundary of the Site. The flow, water level, and turbidity was impacted from recent extended rainfall; however, during normal conditions, the stream is likely intermittent.

Flow is carried from the adjacent agricultural fields to the intermittent stream primarily through swale features, however overland flow and flooding appeared to occur adjacent to the stream channel. Braiding and cutoff channels were present on the northern side of the main stream channel.

Conclusions

Based upon the site inspection by the City of Denton, the area in question is NOT an ESA requiring 50 or 100 foot buffers and therefore is not subjected to the ESA requirements outlined in the Denton Development Code. All other appropriate aspects of the Denton Development Code, however, still apply. The official city ESA map will be updated to remove the area from

Based upon the site inspection by the City of Denton, the area in question IS an ESA and is subject to the requirement set forth in Section 17 of the Denton Development Code (if this box is checked, fill out supplemental RSAT form)

Based upon the site inspection by the City of Denton, insufficient information is available to determine the ESA status of the area in question. A more extensive inspection is required from either the City of Denton or the property owner.

The determination of the ESA status is permanently valid and may only be revisited if significant new information that necessitates a major change in the determination becomes available. A request for reconsideration of the determination may be submitted in writing by the applicant, landowner, or agent within 30 days of the date below.

Signature of field investigator:



Date:

06/07/2021

Approval:

Date:



Supplemental RSAT Form

Rapid Stream Assessment Techniques version 1.1

In Tables 1 through 6 below provide a score for each row, as applicable. Sum the table scores and calculate the average for each table. On this page, calculate the total score or % of total and select a verbal score.

RSAT Evaluation Category	General Rating Categories and Associated Point Ranges				
	Excellent	Good	Fair	Poor	Points
1. Channel Stability	9-11	6-8	3-5	0-2	6
2. Channel Scouring / Deposition	7-8	5-6	3-4	0-2	5
3. Physical In-stream Habitat	7-8	5-6	3-4	0-2	5
4. Water Quality	7-8	5-6	3-4	0-2	5
5. Riparian Habitat Conditions	6-7	4-5	2-3	0-2	4
6. Biological Indicators	7-8	5-6	3-4	0-2	5

Total Score 30 or, (if NA is entered on any category) _____% of total. Verbal Score: Good

Verbal Scoring: Excellent 42-50, or, ≥ 84 percent of total
 Good 30-41, or, $60 \leq$ percent of total > 84
 Fair 16-29, or, $32 \leq$ percent of total > 60
 Poor < 16 , or, less than 32 percent of total

Relative Significance and Point Range	Excellent 9 to 11	Good 6 to 8	Fair 3 to 5	Poor 0 to 2
Indicative of hydrological flow regime alteration and general condition of physical / aquatic habitat	> 80% of bank network is stable. No evidence of bank sloughing or failure	71-80 % of bank network stable. Infrequent signs of bank sloughing, slumping or failure.	50-70 % of bank network stable. Some signs of bank sloughing, slumping or failure.	< 50 % of bank network stable. Recent signs of bank sloughing, slumping or failures are frequently observed.
Provides insight into the past, present, and possible future changes in stream channel morphometry.	Stream bend areas are very stable. Outer bank height is slightly above stream level. Bank overhang minimal	Stream bend areas are stable. Outer bank height 2-3 ft. above stream level. Bank overhang slight to moderate	Stream bend areas are unstable. Outer bank height is substantially above stream level. Bank overhang is substantial	Stream bend areas are highly unstable. Outer bank height significantly above stream level. Overhangs are large and deep.
Provides insight into the past, present, and possible future changes in stream channel morphometry.	Exposed tree roots old, large, and woody. Generally, 0-1 recent large tree falls / stream mile	Exposed tree roots old and large, smaller young roots scarce. 2-3 recent large tree falls / stream mile	Young exposed tree roots are common. 4-5 recent large tree falls per stream mile	Young exposed tree roots are abundant. 6 or more recent large tree falls per stream mile.
Provides insight into the past, present, and possible future changes in stream channel morphometry.	Bottom 1/3 of bank is generally highly erosion resistant plant / soil matrix or material	Bottom 1/3 of bank is generally highly erosion resistant plant / soil matrix or material	Bottom 1/3 of bank is generally highly erodible material. Plant / soil matrix is compromised.	Bottom 1/3 of bank is highly erodible material. Plant / soil matrix is severely compromised or nonexistent.
Provides insight into the past, present, and possible future changes in stream channel morphometry.	Channel Cross section is generally V or U-shaped	Channel cross section is shaped as a "wide" U.	Channel cross section is generally trapezoid-shaped	Channel cross section is generally shaped like a wide trapezoid to rectangle
Total Points Given	Table 1 Score (average of points given)			6

Relative Significance and Points Range	Excellent 7 to 8	Good 5 to 6	Fair 3 to 4	Poor 0 to 2
Relates to the level of uncontrolled storm water runoff, sediment load, and transport and degradation of in-stream habitat	Riffle embedded < 25% sand / silt (<35 % for larger order streams)	Riffle embedded 25 to 49% sand / silt (35 to 59 % for larger order streams)	Riffle embedded 50-75 % (60 to 85% embedded for larger streams)	> 75 % riffle embedded (> 85% for larger streams)
	Potential for high number of deep pools (2 ft. or deeper). Pool substrate < 30% sand / silt	Potential for moderate number of deep pools. Pool substrate 30-59 percent sand / silt.	Potential for low number of deep pools. Pool substrate is 60 to 80 percent sand / silt	Potential for few, if any, deep pools. Pool substrate >80 percent sand / silt
	Streambed streak marks and / or banana-shaped sediment deposits are absent	Streak marks or banana-shaped deposits are uncommon	Streak marks or banana-shaped deposits are common	Streak marks or banana-shaped deposits are very common
	Fresh, large sand deposits in channel are rare or absent. No evidence of fresh deposition on overbank areas	Fresh, large sand deposits in channel are uncommon. Small localized areas of fresh sand deposits along the top of low banks	Fresh, large sand deposits in channel are common. Moderate numbers of localized areas of fresh sand deposits along the top of low banks	Fresh, large sand deposits very common in channel. Moderate to heavy sand deposition along major portions of the overbank area
	Point bars are few, small, stable, and are well vegetated and / or covered with little or no fresh sand on point bars.	Point bars are small and stable, and are well vegetated and / or covered with a moderate amount of fresh sand	Point bars are moderate to large sized and are unstable. High amounts of fresh sand are common	Point bars are moderate to large sized and unstable, with high amounts of fresh sand present in most stream bends
Total Points Given		Table 2 Score (average of points given)		5

High water level made observations of sediment deposits difficult. Score based on size of stream channel and available observations.

Table 3. Physical In-stream Habitat				
Relative Significance and Points Range	Excellent 7 to 8	Good 5 to 6	Fair 3 to 4	Poor 0 to 2
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, etc...)	wetted perimeter >85 percent of bottom channel width during seasons where water flows (non-storm water base flows)	wetted perimeter 61 to 85 percent of bottom channel width during seasons where water flows (non-storm water base flows)	wetted perimeter 40 to 60 percent of bottom channel width during seasons where water flows (non-storm water base flows)	wetted perimeter < 40 percent of bottom channel width during seasons where water flows (non-storm water base flows)
	Evidence of riffles, runs and pools is present. Stream will likely have areas of diverse flow when water is present.	Good mix between riffles, runs, and pools. Evidence of relatively diverse velocity and depth of flow when water is present.	Few pools are present and riffles / runs predominate. Depth is shallower and more uniform.	Dominated by one habitat type (usually runs) and one velocity / depth condition. Velocity / depth diversity is very low.
	Riffles are composed of cobble, gravel, or rubble with little sand / silt (> 50 percent larger material)	Riffles represent a good mix of cobble, gravel, or rubble(25-49 % larger material)	Riffle substrate composition is predominantly small cobble with gravel and sand (5-24 % cobble)	Riffle composition is predominantly small gravel with a high percentage of sand (<5 percent cobble).
	Riffle depths are ≥ 6 inches deep during periods when water flows (non-storm base flows)	Riffle depths are 4.0 to 5.9 inches deep during periods when water flows (non-storm base flows)	Riffle depths are 2.0 to 3.9 inches deep during periods when water flows (non-storm base flows)	Riffle depths are less than 2 inches deep during periods when water flows (non-storm base flows)
	Large pools are generally > 24 inches deep.	Large pools are generally 18 to 24 inches deep.	Large pools are generally 12 to 18 inches deep.	Large pools are generally < 12 inches deep.
	No channel alteration	Slight amount of channel modification	Moderate amount of channel modification	Extensive channel modification
	Summer afternoon water temperature in middle of water column < 82 degrees	Summer afternoon water temperature in middle of water column 82 – 89 degrees	Summer afternoon water temperature in middle of water column 89 – 94 degrees	Summer afternoon water temperature in middle of water column > 94 degrees
Total Points Given		Table 3 Score (average of points given)		5

Relative Significance and Points Range	Excellent 7 to 8	Good 5 to 6	Fair 3 to 4	Poor 0 to 2
Indicative of watershed perturbations / general level of human activity, point and non-point source pollutant loadings, and aquatic habitat conditions. Only applicable during times when the stream is actively flowing	Substrate fouling level 0-10 % on the underside of rocks (refers to the percentage of a cobble sized stone lying free in the streambed that is coated with biological growth).	Substrate fouling level light (11-20 %) on the underside of rocks (refers to the percentage of a cobble sized stone lying free in the streambed that is coated with biological growth).	Substrate fouling level moderate (21-50 %) on the underside of rocks (refers to the percentage of a cobble sized stone lying free in the streambed that is coated with biological growth).	Substrate fouling level high (> 50 %) on the underside of rocks (refers to the percentage of a cobble sized stone lying free in the streambed that is coated with biological growth).
	TDS 350-399 mg/L	TDS 400-449 mg/L	TDS 450-500 mg/L	TDS >500 mg/L
	Water has no odor	Water has slight organic odor	Water has slight – moderate organic odor	Water has moderate to strong organic odor
Total Points Given	Table 4 Score (average of points given)			5

Relative Significance and Points Range	Excellent 6 to 7	Good 4 to 5	Fair 2 to 3	Poor 0 to 1
Provides insight into changes in stream energetics, temperature regimes, and both aquatic and terrestrial habitat conditions.	Wide (<200 feet) mature forested buffer along both banks	Forested buffer generally more than 100 feet wide along the major portion of both banks	Riparian area is predominantly wooded, but there are major localized gaps in one or both banks	Riparian area is mostly non-woody vegetation, with narrow-width riparian areas.
	Canopy coverage provides ≥ 80 percent shading for a majority of the stream (≥ 60 percent for large streams)	Canopy coverage provides 65-79 percent shading for a majority of the stream (45 to 59 percent for large streams)	Canopy coverage provides 45-64 percent shading for a majority of the stream (30-44 percent for large streams)	Canopy coverage provides < 45 percent shading for a majority of the stream (<30 percent for large streams)
Total Points Given	Table 5 Score (average of points given)			4

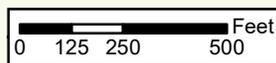
Relative Significance and Points Range	Excellent 7 to 8	Good 5 to 6	Fair 3 to 4	Poor 0 to 2
Considered to be the best overall indication of stream health and the level of watershed perturbation.	Diverse community of macroinvertebrates dominated by mayflies and caddisflies. Few snails, leeches, aquatic worms present	Mayflies and caddisflies are present. Good overall diversity	Pollution tolerant caddisflies, midge larva or other dipterans predominant, large number of aquatic worms, lower diversity	Low diversity, generally dominated by midge larva or other dipterans, aquatic worms, and snails.
	Moderate to high number of different organisms	Moderate to high number of different organisms	Low to moderate number of individuals	Very low number of individuals
Total Points Given	Table 6 Score (average of points given)			5

No organisms observed due to rapid flow of stream channel. Score assumed based on size, vegetative cover, and ground cover of stream.



Legend

Development Area

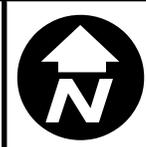


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FIGURE 1	DATE: 06/06/2021
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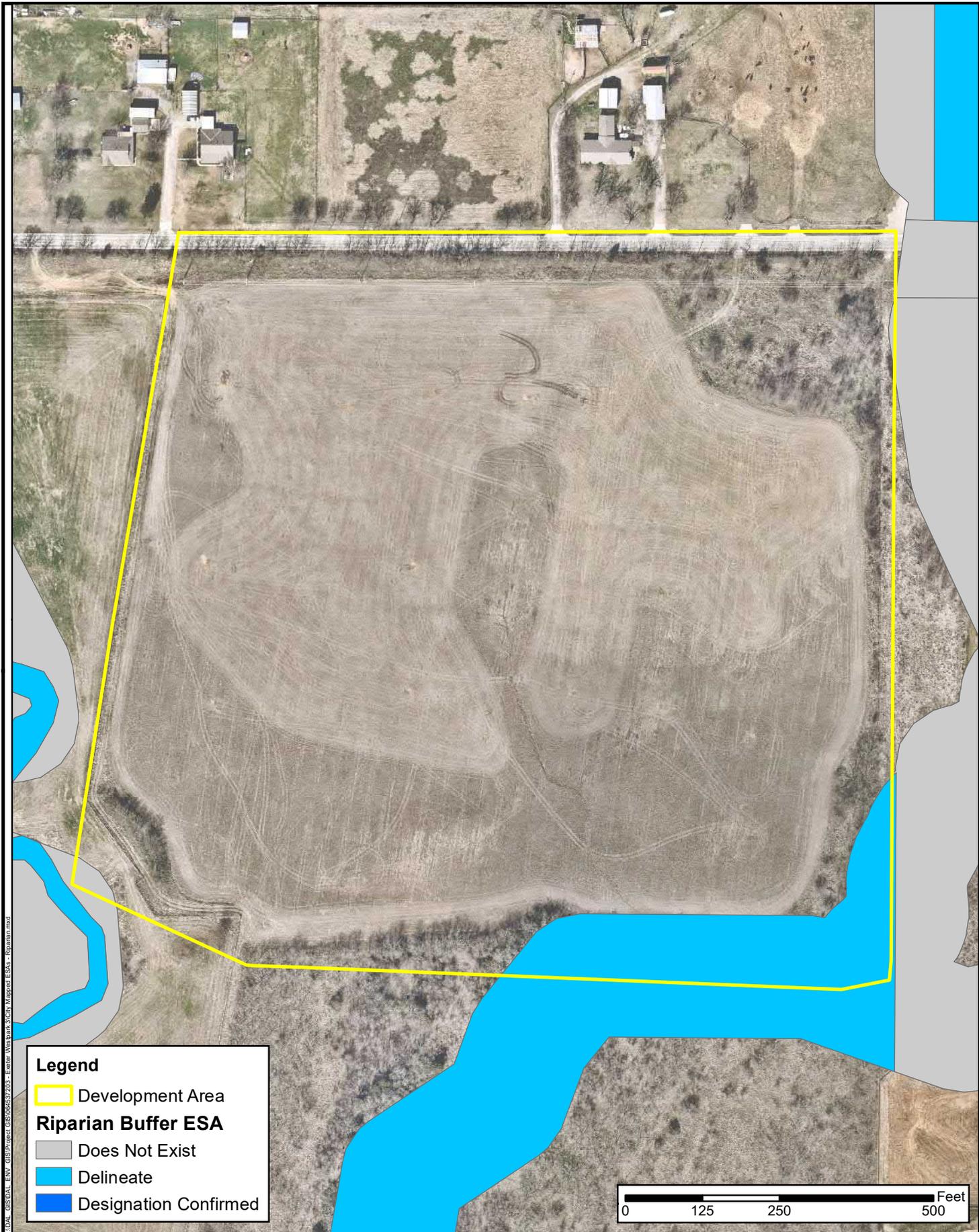
Vicinity Map

Exeter Westpark 3
Denton, Denton County, Texas



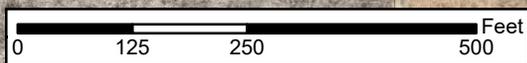
Kimley»Horn

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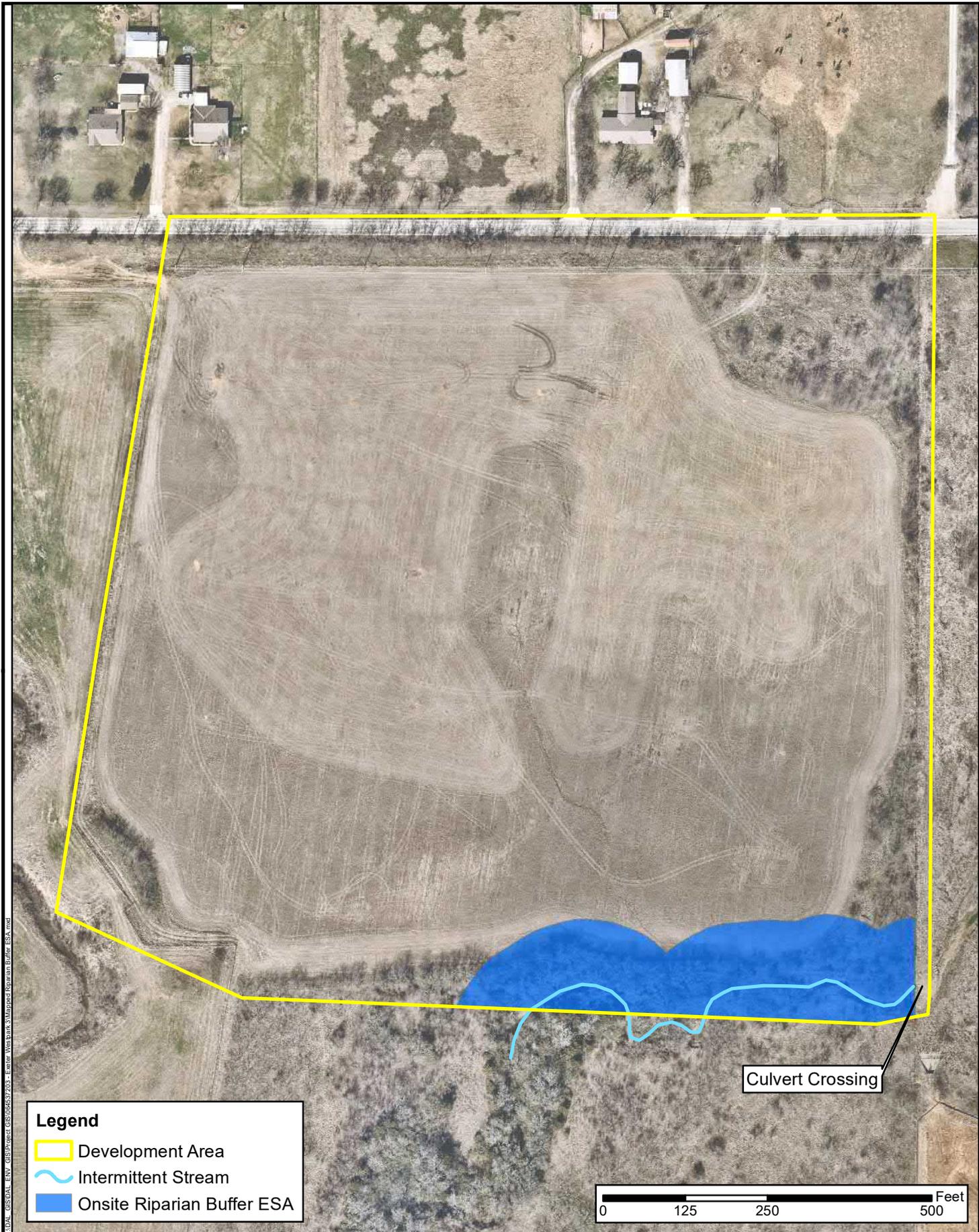
Legend

- Development Area
- Riparian Buffer ESA**
- Does Not Exist
- Delineate
- Designation Confirmed



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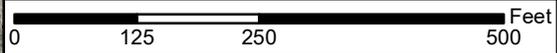
FIGURE 2	DATE: 06/06/2021	City Mapped ESAs - Riparian Buffer	Exeter Westpark 3		Kimley»Horn
	DRAWN: SDG				
	CHECKED: AMB				
	KHA NO.: 064537203				
	Nearmap Feb. 2021	Denton, Denton County, Texas	This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.		



Legend

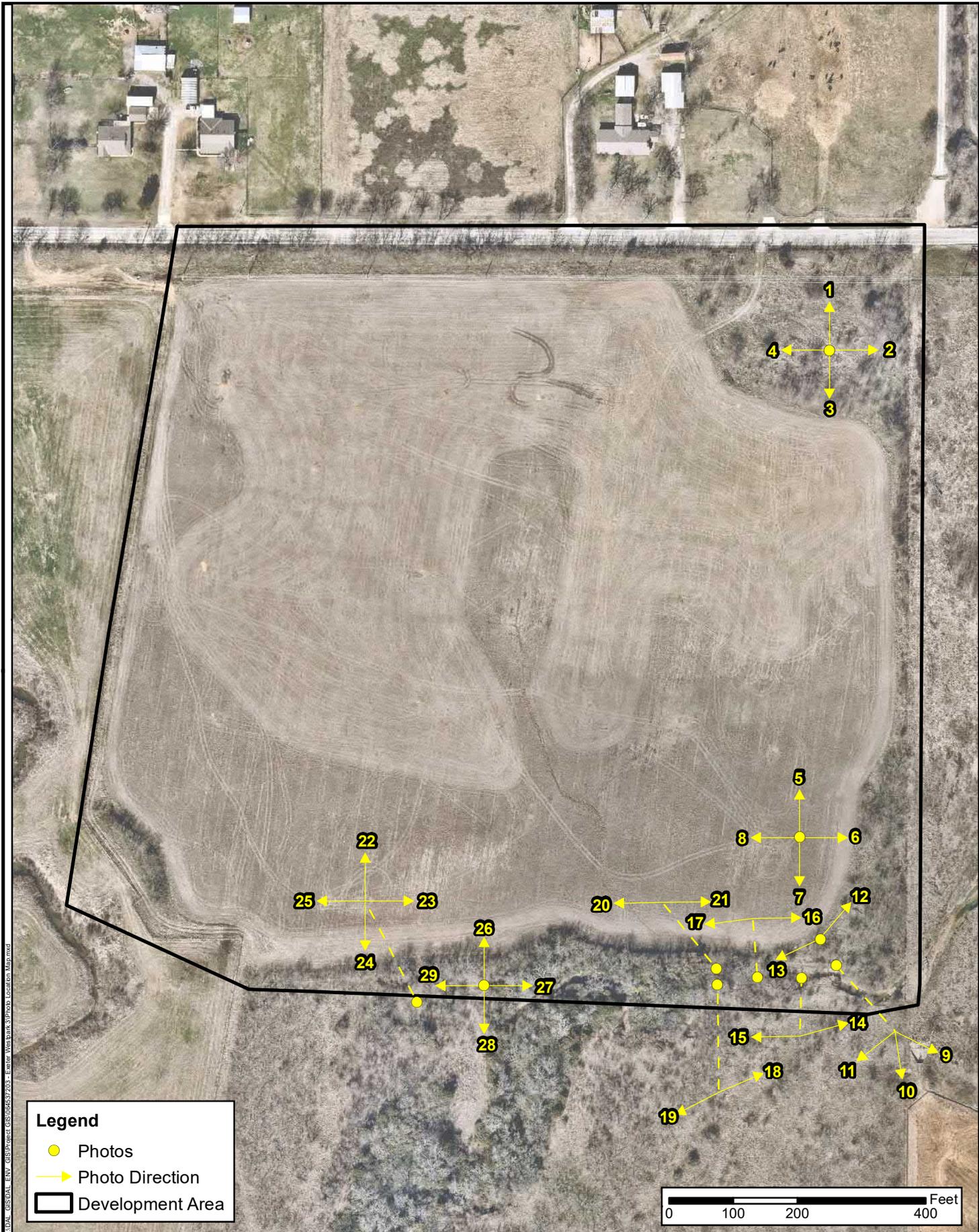
- Development Area
- ~ Intermittent Stream
- Onsite Riparian Buffer ESA

Culvert Crossing



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FIGURE 3	DATE: 06/06/2021	Onsite Riparian Buffer ESAs Exeter Westpark 3 Nearmap Feb. 2021	Exeter Westpark 3 Denton, Denton County, Texas		Kimley»Horn <small>This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.</small>
	DRAWN: SDG				
	CHECKED: AMB				
	KHA NO.: 064537203				



K:\DATA_GIS\DATA_ENV_GIS\Project GIS\0625197203 - Exeter Westpark 3\Photo Location Map.mxd

Legend

- Photos
- Photo Direction
- Development Area

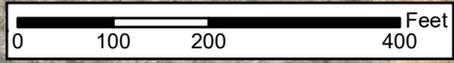
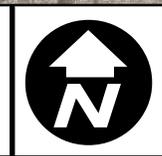


FIGURE 4	DATE: 06/06/2021
	DRAWN: SDG
	CHECKED: AMB
	KHA NO.: 064537203

Photo Location Map
Nearmap Feb. 2021

Exeter Westpark 3
Denton, Denton County, Texas



Kimley»Horn

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Photos were taken on 05/28/2021



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Photos were taken on 05/28/2021



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Photos were taken on 05/28/2021



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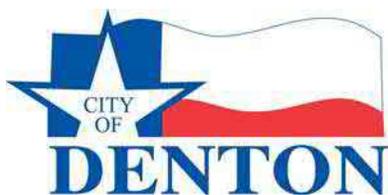
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Floodplain ESA Assessment Form

Version 3, February 2020

Owner: Randall Smith TrakIt# _____
Address or Location: South of Jim Christal Road
Stream Name: Offsite unnamed tributary

Floodplain Information

Floodplain fill and structures: Exist

If undeveloped, is there an approved LOMR, CLOMR or LOMA for the site?

If undeveloped, is there a pending LOMR, CLOMR or LOMA for the site?

Floodplain zone(s): both 100-year and 500-year

Approximate width of floodplain (Based on FEMA Map): 636 ft.

Is floodway present? Yes

If yes, is Riparian ESA assessment needed? No

Waterway: Channelized Describe: 636

Sinuosity: Straight

General Land Use

Forest

Agricultural High Intensity

Crop type: Fallow

Residential

Commercial / Industrial

Recreational

Other: Field

Soil Deposition and Erosion

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

If natural levee is present, are wetlands located behind it?

If yes, is Water-Related Habitat assessment needed? No

Soil Map Unit Names(s): Ponder loam, 1 to 3 percent slopes

Active erosion:

Is evidence of sheet flow present? Yes

Is evidence of concentrated flow present? No

Vegetation

Cover type: Young Forest

Plant cover on existing land: well vegetated

Briefly describe dominant vegetation: Mesquite, hackberry, Johnson grass, native grasses and forbs

Invasive exotics present? No

Invasive specie(s): _____

Approximate area of infestation (%): _____

Trees

Are tree(s) present > 6" DBH? Yes

Are any trees to be removed? Yes

Are any trees > 6" DBH to be removed? Yes

Required Attachments: (List attached photographs, maps, and any other documents used to support the conclusion(s))

Figure 1 - Vicinity, Figure 2 - City Mapped Riparian Buffer ESA, Figure 3 - Existing Onsite Riparian Buffer ESA, Figure 4 - Photo Location Map and Photo Log

Comments: (Provide a summary of findings that support the conclusion)

This assessment is for the developed floodplain within the development area. The associated stream is offsite and was previously assessed with the eastern development. The stream has been previously channelized, highly eroded, and the immediate land cover to the stream is maintained upland grasses. Based on the manipulation of the offsite stream the associated floodplain is considered developed.

Conclusions:

Based upon the site inspection by the City of Denton, the area in question is NOT an ESA and therefore is not subjected to the ESA requirements outlined in the Denton Development Code. All other appropriate aspects of the Denton Development Code, however, still apply. The official city ESA map will be updated to remove the area from ESA status

Based upon the site inspection by the City of Denton, the area in question IS an ESA and is subject to the requirement set forth in Section 17 of the Denton Development Code.

Based upon the site inspection by the City of Denton, insufficient information is available to determine the ESA status of the area in question. A more extensive inspection is required from either the City of Denton or the property owner.

The determination of the ESA status is permanently valid and may only be revisited if significant new information that necessitates a major change in the determination becomes available. A request for reconsideration of the determination may be submitted in writing by the applicant, landowner, or agent within 30 days of the date below.

Signature of field investigator: 

Date: 06/07/2021

Approval: _____

Date: _____



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Legend

Development Area

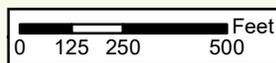
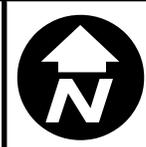


FIGURE 1	DATE: 06/06/2021
	DRAWN: SDG
	CHECKED: AMB
	KHA NO.: 064537203

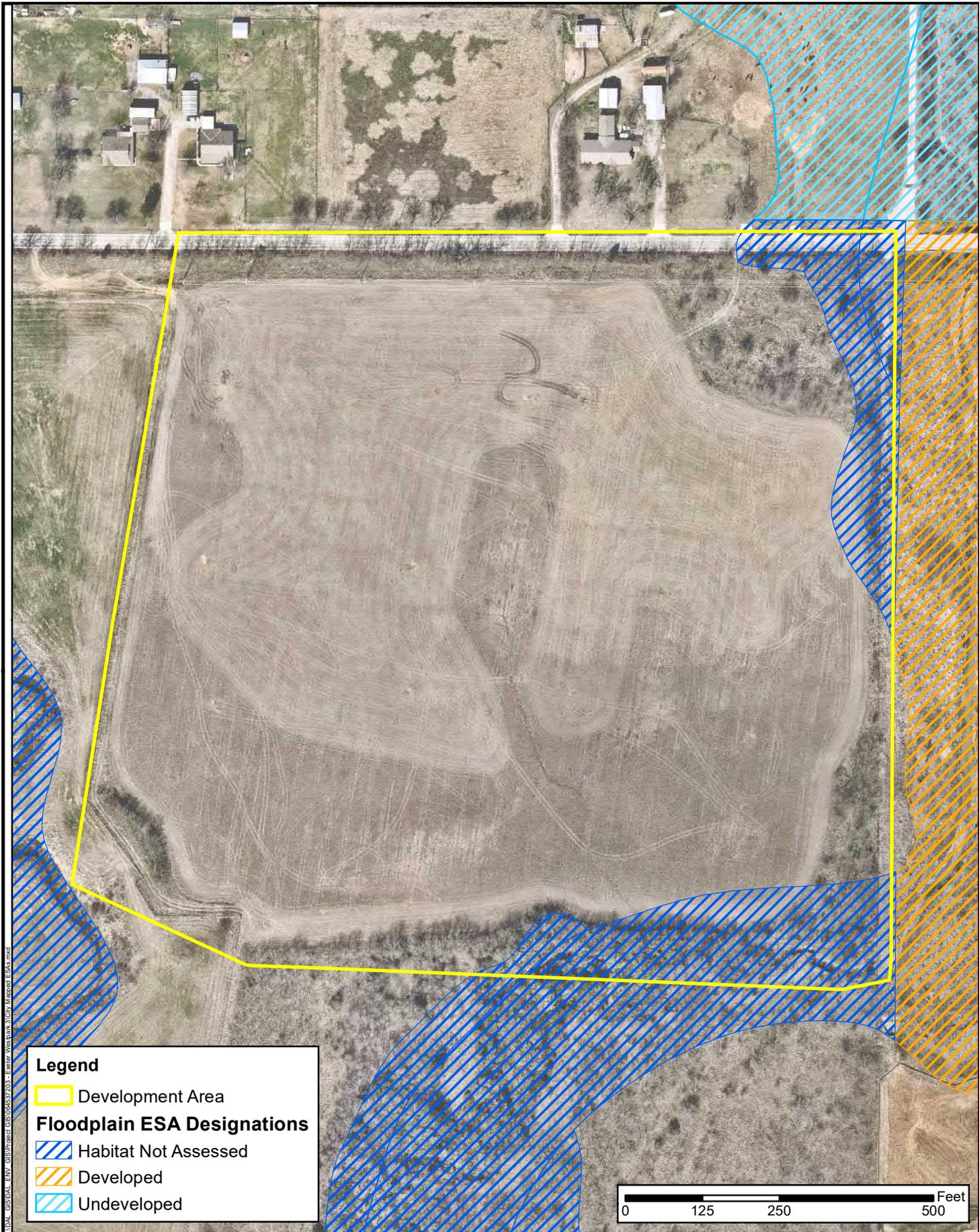
Vicinity Map

Exeter Westpark 3
Denton, Denton County, Texas



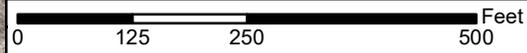
Kimley»Horn

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Legend

- Development Area
- Floodplain ESA Designations**
- Habitat Not Assessed
- Developed
- Undeveloped



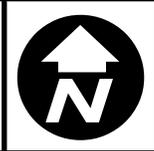
K:\DATA_GIS\PROJECT GIS\0605237203 - Exeter Westpark 3\City Mapped ESAs.mxd

FIGURE 2	DATE: 06/06/2021
	DRAWN: SDG
	CHECKED: AMB
	KHA NO.: 064537203

**City Mapped ESAs -
Floodplain**

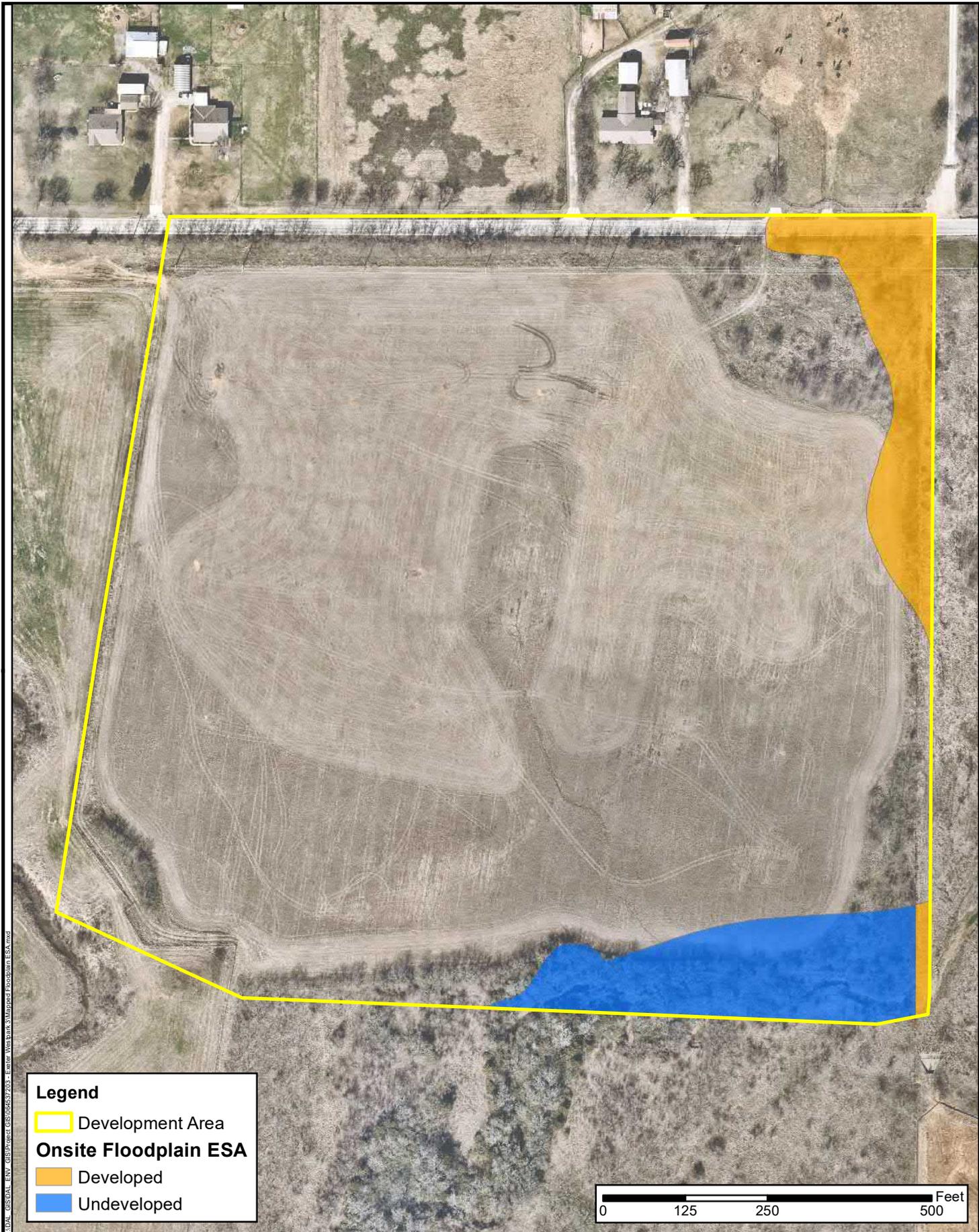
Nearmap Feb. 2021

Exeter Westpark 3
Denton, Denton County, Texas



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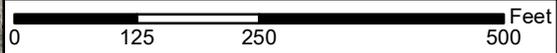


Legend

- Development Area

Onsite Floodplain ESA

- Developed
- Undeveloped



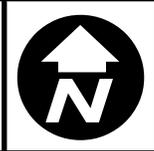
K:\DATA_GIS\DATA_ENV_GIS\Projects\GIS\064537203 - Exeter Westpark 3\MapDocs\ESAs.mxd

FIGURE 3	DATE: 06/06/2021
	DRAWN: SDG
	CHECKED: AMB
	KHA NO.: 064537203

**Onsite Floodplain
ESAs**

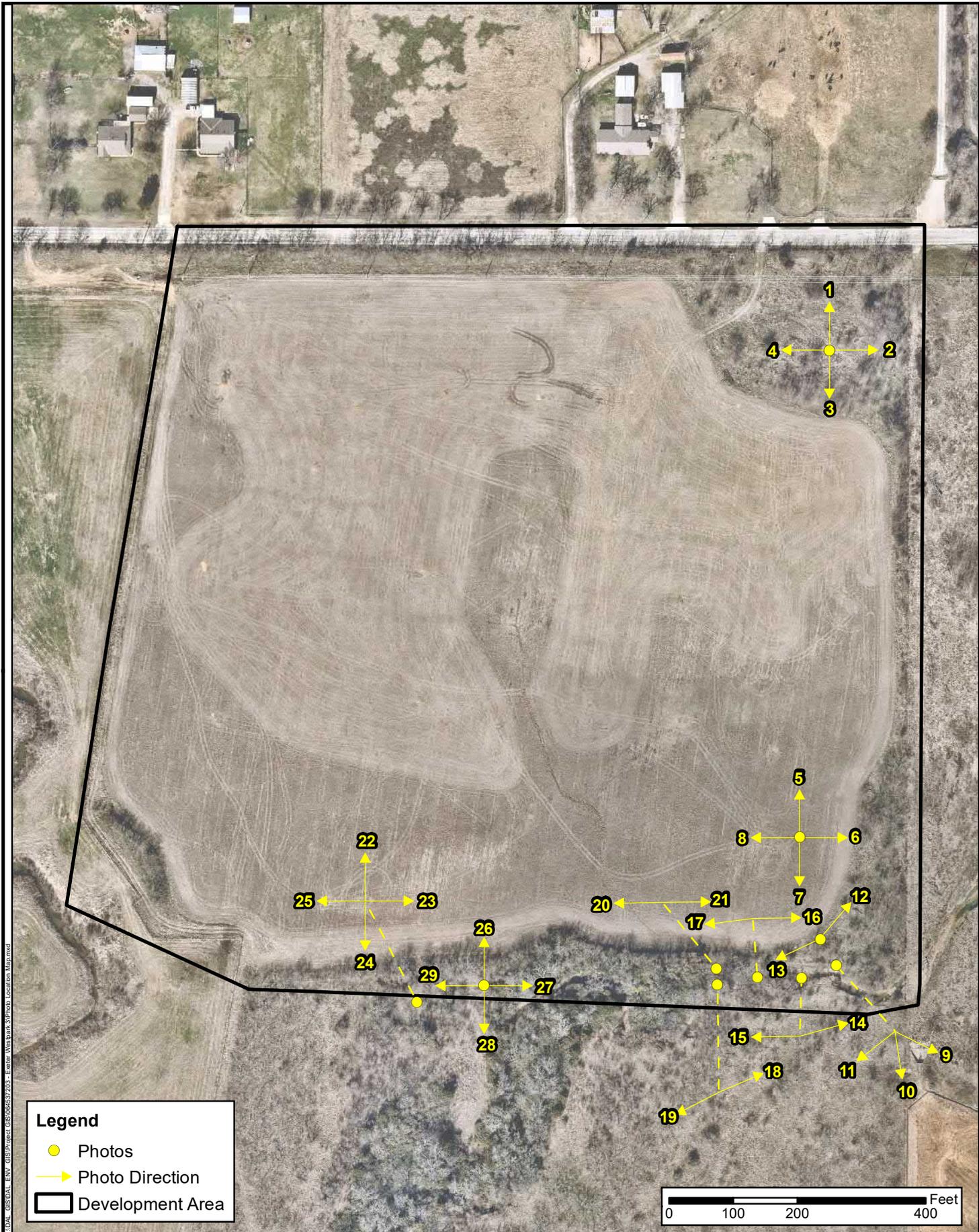
Nearmap Feb. 2021

Exeter Westpark 3
Denton, Denton County, Texas



Kimley»Horn

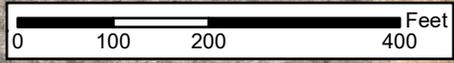
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Legend

- Photos
- ➔ Photo Direction
- Development Area



<p>FIGURE</p> <p style="font-size: 24pt; font-weight: bold; text-align: center;">4</p>	<p>DATE: 06/06/2021</p> <p>DRAWN: SDG</p> <p>CHECKED: AMB</p> <p>KHA NO.: 064537203</p>	<p style="font-size: 18pt; font-weight: bold;">Photo Location Map</p> <p>Nearmap Feb. 2021</p>	<p style="font-size: 18pt; font-weight: bold;">Exeter Westpark 3</p> <p>Denton, Denton County, Texas</p>	 <p style="font-size: 18pt; font-weight: bold; margin-top: 10px;">Kimley»Horn</p> <p style="font-size: 8pt; margin-top: 5px;">This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.</p>
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Photos were taken on 05/28/2021



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Photos were taken on 05/28/2021



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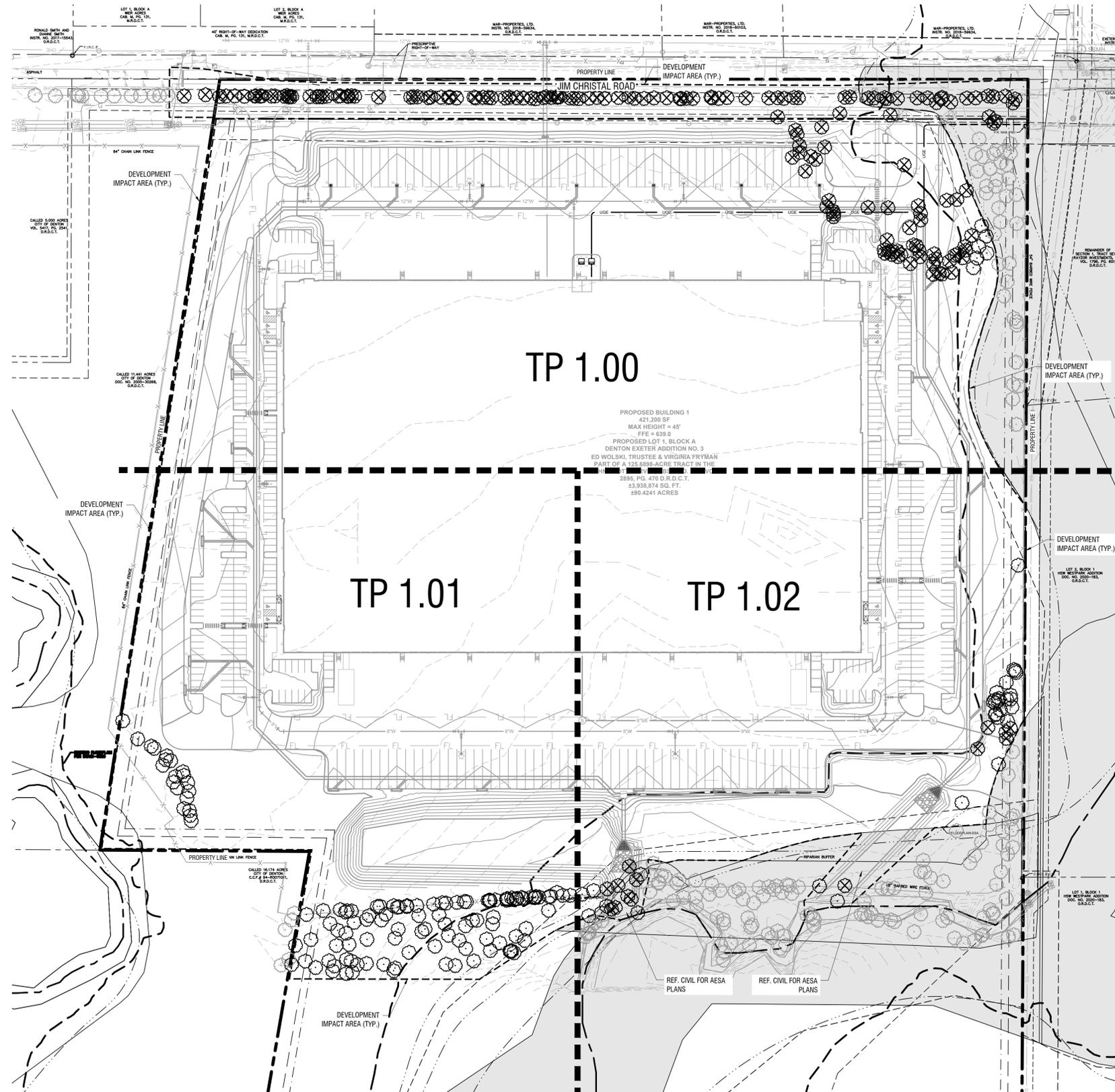
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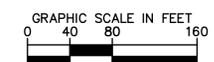
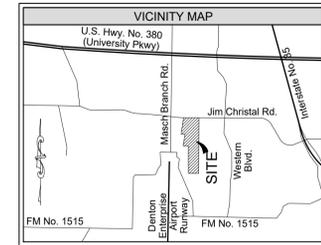
APPENDIX B

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LEGEND

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING OFFSITE TREE
- TREE PROTECTION FENCING REF. DETAIL A, SHEET TP 2.00
- PROPOSED CONTOUR
- EXISTING CONTOUR
- FLOOD PLANE ESA



WARNING: EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE RECORD DRAWINGS AND ABOVE GROUND FIELD SURVEY DATA. THEREFORE THERE MAY BE UTILITIES PRESENT THAT ARE NOT SHOWN ON THESE CONSTRUCTION PLANS. CONTRACTOR TO FIELD VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND USE CAUTION DURING CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY DISCREPANCIES.



No.	REVISIONS	DATE	BY

Kimley-Horn

13455 NOEL ROAD, TWO GALLERIA OFFICE TOWER,
DENTON, TX 76201
PHONE: 972.777.2000 FAX: 972.939.9820
WWW.KIMLEY-HORN.COM TX F-928
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KHA PROJECT	064537203
DATE	06/24/2022
SCALE	AS SHOWN
DESIGNED BY	AMP
DRAWN BY	AMP
CHECKED BY	KWS

EXETER WESTPARK 3

TEXAS

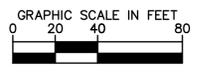
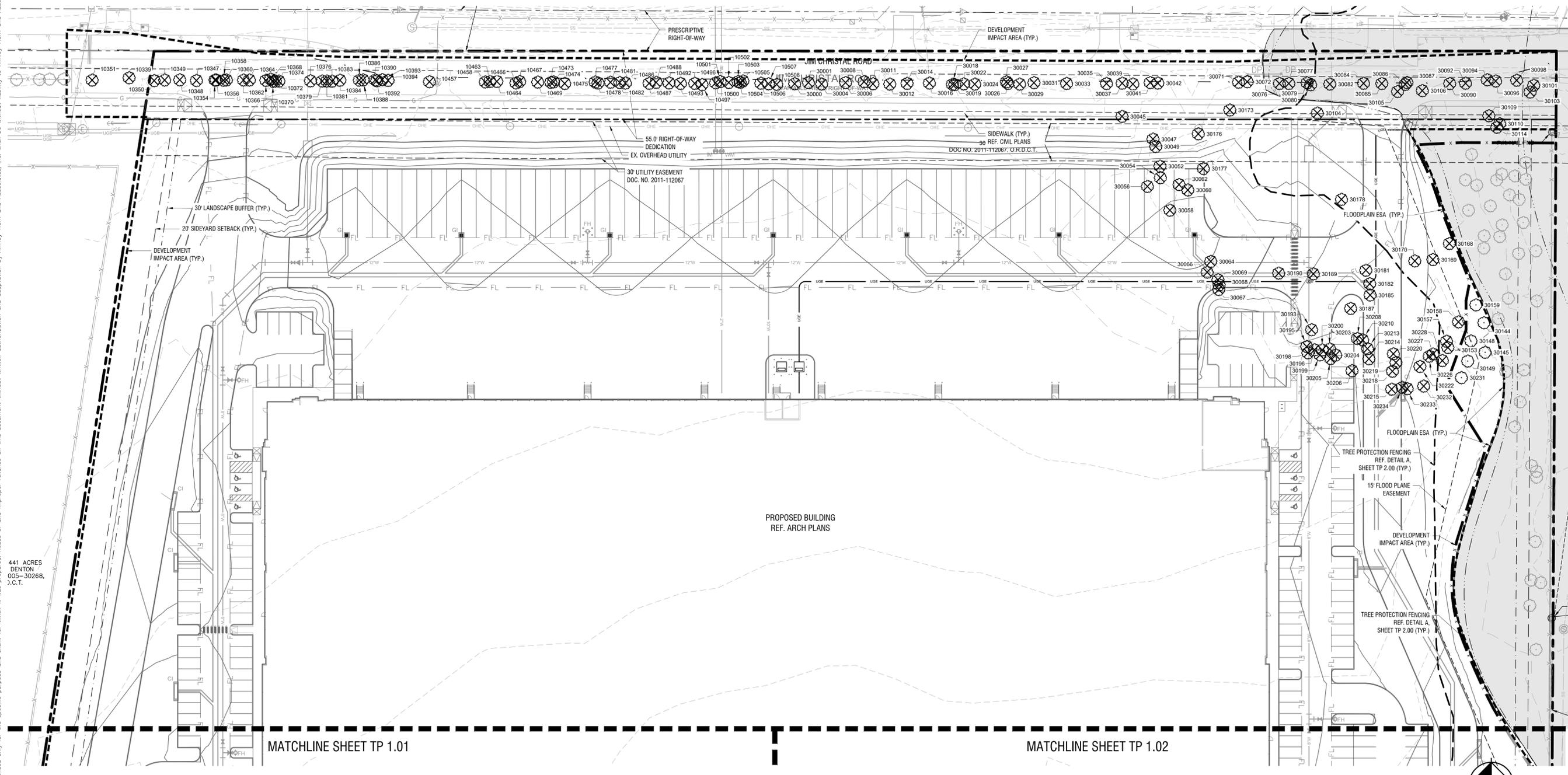
KEY MAP

DENTON

SHEET NUMBER
TP 0.00

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441 ACRES
DENTON
005-30268,
J.C.T.



LEGEND	
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING OFFSITE TREE
	TREE PROTECTION FENCING REF. DETAIL A, SHEET TP 2.00
	PROPOSED CONTOUR
	EXISTING CONTOUR
	FLOOD PLANE ESA

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

NO.	REVISIONS	DATE	BY

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 13455 NOEL ROAD, TWO GALLERIA OFFICE TOWER,
 DENTON, TEXAS 76201
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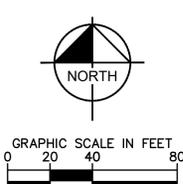
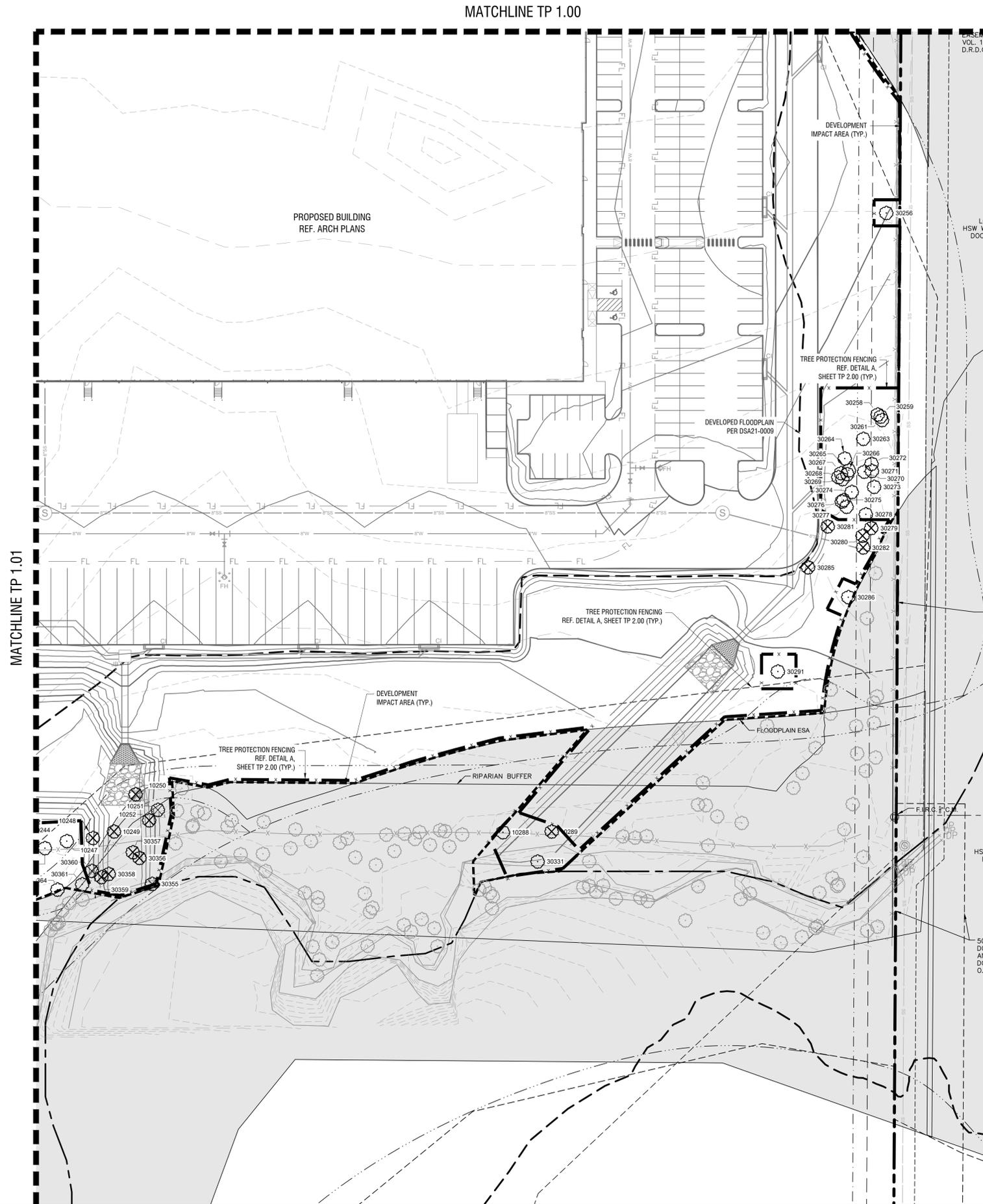
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 DATE: 06/24/2022
 SCALE: AS SHOWN
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 DRAWN BY: AMP
 CHECKED BY: KWS
 TEXAS

EXETER WESTPARK 3

TREE PROTECTION PLAN
 SHEET NUMBER
TP 1.00

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LEGEND	
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING OFFSITE TREE
	TREE PROTECTION FENCING REF. DETAIL A, SHEET TP 2.00
	PROPOSED CONTOUR
	EXISTING CONTOUR
	FLOOD PLANE ESA

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No.	REVISIONS	DATE	BY

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DRAWN BY	AMP
CHECKED BY	KWS

EXETER WESTPARK 3

TEXAS

DENTON

TREE PROTECTION PLAN

SHEET NUMBER
TP 1.02

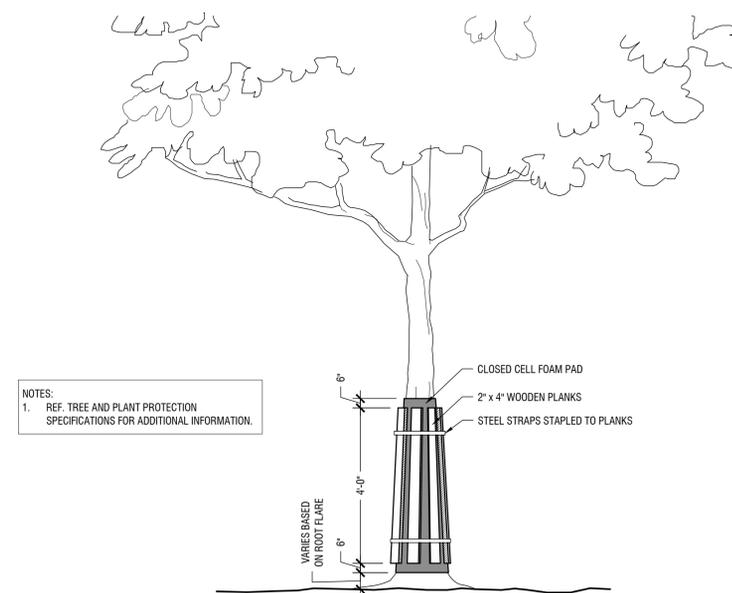
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Tree Inventory							
Exeter Westpark - Tree Inventory							
Tree Number	Common Name of Tree	Diameter (DBH)	Clustered?	Status	Classification	Action	Site Location
10000	Sugarberry	12		Healthy	Quality	Preserve	DIA
10003	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10005	Mesquite	14		Healthy	Non-Protected	Preserve	DIA
10008	Mesquite	16		Healthy	Non-Protected	Preserve	DIA
10010	Sugarberry	8	Yes	Healthy	Quality	Preserve	DIA
10012	Mesquite	17	Yes	Healthy	Non-Protected	Preserve	DIA
10014	Mesquite	18	Yes	Healthy	Non-Protected	Preserve	DIA
10016	Sugarberry	7	Yes	Healthy	Quality	Preserve	DIA
10018	Mesquite	11	Yes	Healthy	Non-Protected	Preserve	DIA
10020	Mesquite	12	Yes	Healthy	Non-Protected	Preserve	DIA
10023	Mesquite	14	Yes	Healthy	Non-Protected	Preserve	DIA
10025	Mesquite	18	Yes	Healthy	Non-Protected	Preserve	DIA
10026	Sugarberry	12		Dead	Non-Protected	Preserve	DIA
10028	Sugarberry	13		Healthy	Quality	Preserve	DIA
10030	Mesquite	14		Healthy	Non-Protected	Preserve	DIA
10033	Mesquite	16		Healthy	Non-Protected	Preserve	DIA
10034	Sugarberry	10	Yes	Healthy	Quality	Preserve	DIA
10036	Mesquite	16	Yes	Healthy	Non-Protected	Preserve	DIA
10039	Mesquite	15	Yes	Healthy	Non-Protected	Preserve	DIA
10041	Mesquite	13	Yes	Healthy	Non-Protected	Preserve	DIA
10045	Mesquite	16		Healthy	Non-Protected	Preserve	DIA
10053	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10057	Mesquite	19		Healthy	Non-Protected	Preserve	DIA
10060	Mesquite	20		Healthy	Non-Protected	Preserve	DIA
10061	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10063	Mesquite	7		Healthy	Non-Protected	Preserve	DIA
10065	Mesquite	16	Yes	Healthy	Non-Protected	Preserve	DIA
10067	Mesquite	12	Yes	Healthy	Non-Protected	Preserve	DIA
10069	Mesquite	9	Yes	Healthy	Non-Protected	Preserve	DIA
10071	Mesquite	7		Healthy	Non-Protected	Preserve	DIA
10073	Mesquite	13		Healthy	Non-Protected	Preserve	DIA
10075	Mesquite	12		Healthy	Non-Protected	Preserve	DIA
10077	Mesquite	9		Healthy	Non-Protected	Preserve	DIA
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10081	Mesquite	13		Healthy	Non-Protected	Preserve	DIA
10083	Mesquite	9		Healthy	Non-Protected	Preserve	DIA
10085	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10087	Mesquite	6		Healthy	Non-Protected	Preserve	DIA
10089	Mesquite	11	Yes	Healthy	Non-Protected	Preserve	DIA
10091	Mesquite	8	Yes	Healthy	Non-Protected	Preserve	DIA
10093	Mesquite	8	Yes	Healthy	Non-Protected	Preserve	DIA
10095	Mesquite	5		Healthy	Non-Protected	Preserve	DIA
10097	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
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10101	Mesquite	9		Healthy	Non-Protected	Preserve	DIA
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10105	Mesquite	9		Healthy	Non-Protected	Preserve	DIA
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10118	Sugarberry	16	Yes	Healthy	Quality	Preserve	DIA
10121	Sugarberry	15	Yes	Healthy	Quality	Preserve	DIA
10123	Mesquite	13		Healthy	Non-Protected	Preserve	DIA
10124	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10128	Mesquite	14	Yes	Healthy	Non-Protected	Preserve	DIA
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10131	Sugarberry	15	Yes	Healthy	Quality	Preserve	DIA
10134	Sugarberry	10	Yes	Healthy	Quality	Preserve	DIA
10135	Sugarberry	11	Yes	Healthy	Quality	Preserve	DIA
10138	Sugarberry	18	Yes	Healthy	Quality	Preserve	DIA
10140	Sugarberry	12		Healthy	Quality	Preserve	DIA
10142	Honey Locust	14		Healthy	Non-Protected	Preserve	DIA
10144	Sugarberry	12		Healthy	Quality	Preserve	DIA
10146	Sugarberry	16	Yes	Healthy	Quality	Preserve	DIA
10148	Sugarberry	20	Yes	Healthy	Heritage	Preserve	DIA
10149	Sugarberry	10	Yes	Healthy	Heritage	Preserve	DIA
10152	Sugarberry	12	Yes	Healthy	Quality	Preserve	DIA
10153	Sugarberry	11	Yes	Healthy	Quality	Preserve	DIA
10154	Sugarberry	14	Yes	Healthy	Quality	Preserve	DIA
10155	Bois D Arc	7	Yes	Healthy	Secondary	Preserve	DIA
10160	Sugarberry	20	Yes	Healthy	Heritage	Preserve	DIA
10162	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10164	Mesquite	15		Healthy	Non-Protected	Preserve	DIA
10166	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10168	Mesquite	7		Healthy	Non-Protected	Preserve	DIA
10170	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10172	Mesquite	13		Healthy	Non-Protected	Preserve	DIA
10174	Bois D Arc	17		Healthy	Secondary	Preserve	DIA
10176	Mesquite	6		Healthy	Non-Protected	Preserve	DIA
10179	Honey Locust	10		Healthy	Non-Protected	Preserve	DIA
10180	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10182	Mesquite	10		Healthy	Non-Protected	Preserve	DIA
10184	Elm	14		Healthy	Quality	Preserve	DIA
10186	Mesquite	8		Healthy	Non-Protected	Preserve	DIA
10188	Mesquite	12		Healthy	Non-Protected	Preserve	DIA
10190	Elm	7		Healthy	Quality	Preserve	DIA
10192	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10194	Elm	10		Healthy	Quality	Preserve	DIA
10195	Honey Locust	11		Healthy	Non-Protected	Preserve	DIA
10196	Honey Locust	12		Healthy	Non-Protected	Preserve	DIA
10199	Sugarberry	9		Healthy	Quality	Preserve	DIA
10202	Mesquite	12		Healthy	Non-Protected	Preserve	DIA
10203	Mesquite	11		Healthy	Non-Protected	Preserve	DIA
10205	Elm	14	Yes	Healthy	Quality	Preserve	DIA
10206	Honey Locust	10	Yes	Healthy	Non-Protected	Preserve	DIA

Tree Inventory								
Exeter Westpark - Tree Inventory								
Tree Number	Common Name of Tree	Diameter (DBH)	Clustered?	Status	Classification	Action	Site Location	
10207	Elm	4		Yes	Healthy	Quality	Preserve	DIA
10208	Elm	7		Yes	Healthy	Quality	Preserve	DIA
10213	Sugarberry	18		Yes	Healthy	Quality	Preserve	DIA
10214	Sugarberry	12		Yes	Healthy	Quality	Preserve	DIA
10215	Sugarberry	12		Yes	Healthy	Quality	Preserve	DIA
10217	Sugarberry	16		Yes	Healthy	Quality	Preserve	DIA
10218	Sugarberry	15		Yes	Healthy	Quality	Preserve	DIA
10219	Sugarberry	8		Yes	Healthy	Quality	Preserve	DIA
10220	Sugarberry	16		Yes	Healthy	Quality	Preserve	DIA
10225	Sugarberry	16		Yes	Healthy	Quality	Preserve	DIA
10226	Sugarberry	15		Yes	Healthy	Quality	Preserve	DIA
10228	Sugarberry	16		Yes	Healthy	Quality	Preserve	DIA
10229	Sugarberry	10		Yes	Healthy	Quality	Preserve	DIA
10230	Sugarberry	13		Yes	Healthy	Quality	Preserve	DIA
10231	Sugarberry	12		Yes	Healthy	Quality	Preserve	DIA
10234	Sugarberry	6		Yes	Healthy	Quality	Preserve	DIA
10236	Sugarberry	14	Yes	Healthy	Quality	Preserve	DIA	
10237	Sugarberry	6		Healthy	Quality	Preserve	DIA	
10240	Elm	13		Healthy	Quality	Preserve	DIA	
10242	Sugarberry	10		Healthy	Quality	Preserve	DIA	
10244	Sugarberry	8		Healthy	Quality	Preserve	DIA	
10246	Elm	7		Healthy	Quality	Preserve	DIA	
10247	Bois D Arc	15		Healthy	Secondary	Preserve	DIA	
10248	Privet	6		Healthy	Non-protected	Remove	DIA	
10249	Elm	12		Healthy	Quality	Remove	DIA	
10250	Elm	12		Healthy	Quality	Remove	DIA	
10251	Bois D Arc	18		Healthy	Secondary	Remove	DIA	
10252	Elm	12		Healthy	Quality	Remove	DIA	
10288	Beech	11		Healthy	Quality	Preserve	DIA	
10289	Mesquite	12		Healthy	Non-protected	Remove	DIA	
10339	Sugarberry	6		Healthy	Quality	Remove	MROW	
10347	Sugarberry	14		Healthy	Quality	Remove	MROW	
10348	Sugarberry	15		Healthy	Quality	Remove	MROW	
10349	Sugarberry	9		Healthy	Quality	Remove	MROW	
10350	Sugarberry	15		Healthy	Quality	Remove	MROW	
10351	Sugarberry	10		Healthy	Quality	Remove	MROW	
10354	Sugarberry	9		Healthy	Quality	Remove	MROW	
10356	Sugarberry	17		Healthy	Quality	Remove	MROW	
10358	Sugarberry	12		Healthy	Quality	Remove	MROW	
10360	Sugarberry	7		Healthy	Quality	Remove	MROW	
10362	Sugarberry	13		Healthy	Quality	Remove	MROW	
10364	Sugarberry	9		Healthy	Quality	Remove	MROW	
10366	Sugarberry	13		Healthy	Quality	Remove	MROW	
10368	Sugarberry	12		Healthy	Quality	Remove	MROW	
10370	Sugarberry	6		Healthy	Quality	Remove	MROW	
10372	Sugarberry	7		Healthy	Quality	Remove	MROW	
10374	Sugarberry	5		Healthy	Non-protected	Remove	MROW	
10376	Sugarberry	8		Healthy	Quality	Remove	MROW	
10379	Sugarberry	9		Healthy	Quality	Remove	MROW	
10381	Sugarberry	13		Healthy	Quality	Remove	MROW	
10383	Sugarberry	6		Healthy	Quality	Remove	MROW	
10384	Sugarberry	9		Healthy	Quality	Remove	MROW	
10386	Sugarberry	11		Healthy	Quality	Remove	MROW	
10388	Sugarberry	12		Healthy	Quality	Remove	MROW	
10390	Sugarberry	11		Healthy	Quality	Remove	MROW	
10392	Sugarberry	13		Healthy	Quality	Remove	MROW	
10393	Sugarberry	17		Healthy	Quality	Remove	MROW	
10394	Sugarberry	14		Healthy	Quality	Remove	MROW	
10457	Honey Locust	6		Healthy	Non-protected	Remove	MROW	
10458	Sugarberry	14		Healthy	Quality	Remove	MROW	
10463	Sugarberry	19		Healthy	Heritage	Remove	MROW	
10464	Sugarberry	10		Healthy	Quality	Remove	MROW	
10466	Sugarberry	17		Healthy	Quality	Remove	MROW	
10467	Sugarberry	12		Healthy	Quality	Remove	MROW	
10469	Sugarberry	13		Healthy	Quality	Remove	MROW	
10473	Sugarberry	22		Healthy	Heritage	Remove	MROW	
10474	Sugarberry	10		Healthy	Quality	Remove	MROW	
10475	Sugarberry	12		Healthy	Quality	Remove	MROW	
10477	Sugarberry	19		Healthy	Heritage	Remove	MROW	
10478	Sugarberry	16		Healthy	Quality	Remove	MROW	
10481	Sugarberry	11		Healthy	Quality	Remove	MROW	
10482	Sugarberry	12		Healthy	Quality	Remove	MROW	
10486	Sugarberry	10		Healthy	Quality	Remove	MROW	
10487	Sugarberry	14		Healthy	Quality	Remove	MROW	
10488	Sugarberry	10		Healthy	Quality	Remove	MROW	
10492	Sugarberry	15		Healthy	Quality	Remove	MROW	
10493	Sugarberry	16		Healthy	Quality	Remove	MROW	
10496	Sugarberry	8		Healthy	Quality	Remove	MROW	
10497	Sugarberry	19		Healthy	Heritage	Remove	MROW	
10500	Sugarberry	12		Dead/Dise	Non-protected	Remove	MROW	
10501	Sugarberry	15		Healthy	Quality	Remove	MROW	
10502	Sugarberry	20		Healthy	Heritage	Remove	MROW	
10503	Sugarberry	12		Healthy	Quality	Remove	MROW	
10504	Sugarberry	16		Healthy	Quality	Remove	MROW	
10505	Sugarberry	15		Healthy	Quality	Remove	MROW	
10506	Sugarberry	23		Healthy	Heritage	Remove	MROW	
10507	Sugarberry	13		Healthy	Quality	Remove	MROW	
10508	Sugarberry	20		Healthy	Heritage	Remove	MROW	
30000	Sugarberry	8		Healthy	Quality	Remove	MROW	
30001	Sugarberry	10		Healthy	Quality	Remove	MROW	
30004	Sugarberry	7		Healthy	Quality	Remove	MROW	
30006	Sugarberry	12		Healthy	Quality	Remove	MROW	
30008	Sugarberry	13		Healthy	Quality	Remove	MROW	
30011	Sugarberry	11		Healthy	Quality	Remove	MROW	
30012	Sugarberry	9		Healthy	Quality	Remove	MROW	
30014	Sugarberry	7		Healthy	Quality	Remove	MROW	
30016	Sugarberry	10		Healthy	Quality	Remove	MROW	
30018	Sugarberry	12		Healthy	Quality	Remove	MROW	
30019	Sugarberry	13		Healthy	Quality	Remove	MROW	
30022	Sugarberry	11		Healthy	Quality	Remove	MROW	

Tree Inventory							
Exeter Westpark - Tree Inventory							
Tree Number	Common Name of Tree	Diameter (DBH)	Clustered?	Status	Classification	Action	Site Location
30024	Sugarberry	9		Healthy	Quality	Remove	MROW
30026	Sugarberry</						

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NOTES:
1. REF. TREE AND PLANT PROTECTION SPECIFICATIONS FOR ADDITIONAL INFORMATION.

CLOSED CELL FOAM PAD
2" x 4" WOODEN PLANKS
STEEL STRAPS STAPLED TO PLANKS

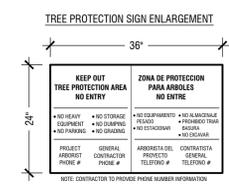
VARIES BASED ON ROOT FLARE

TRUNK PROTECTION

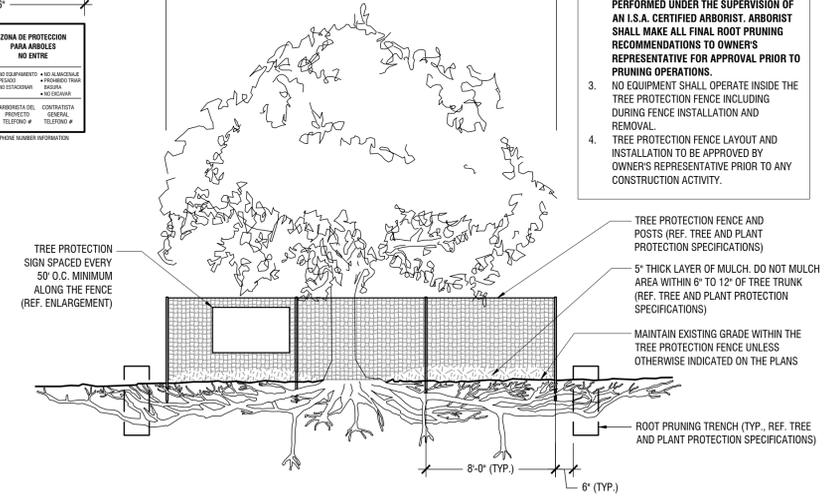
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B

- TREE REMOVAL NOTES:**
- REMOVE ALL TREES INDICATED BY THE DRAWINGS AND SPECIFICATIONS, AS REQUIRING REMOVAL, IN A MANNER THAT WILL NOT DAMAGE ADJACENT TREES OR STRUCTURES OR COMPACTS THE SOIL.
 - REMOVE TREES THAT ARE ADJACENT TO TREES OR STRUCTURES TO REMAIN, IN SECTIONS, TO LIMIT THE OPPORTUNITY OF DAMAGE TO ADJACENT CROWNS, TRUNKS, GROUND PLANE ELEMENTS AND STRUCTURES.
 - DO NOT DROP TREES WITH A SINGLE CUT UNLESS THE TREE WILL FALL IN AN AREA NOT INCLUDED IN THE TREE PROTECTION AREA.
 - NO TREE TO BE REMOVED WITHIN 50 FEET OF OR INSIDE THE TREE PROTECTION AREA SHALL BE PUSHED OVER OR UP-ROOTED USING A PIECE OF GRADING EQUIPMENT. NO HEAVY EQUIPMENT IS ALLOWED INSIDE THE TREE PROTECTION AREA.
 - PROTECT ADJACENT PAVING, SOIL, TREES, SHRUBS, GROUND COVER PLANTINGS AND UNDERSTORY PLANTS TO REMAIN FROM DAMAGE DURING ALL TREE REMOVAL OPERATIONS, AND FROM CONSTRUCTION OPERATIONS. PROTECTION SHALL INCLUDE THE ROOT SYSTEM, TRUNK, LIMBS, AND CROWN FROM BREAKAGE OR SCARRING, AND THE SOIL FROM COMPACTION.
 - REMOVE STUMPS AND IMMEDIATE ROOT PLATE FROM EXISTING TREES TO BE REMOVED. GRIND TRUNK BASES AND LARGE BUTTRESS ROOTS TO A DEPTH OF THE LARGEST BUTTRESS ROOT OR AT LEAST 18 INCHES BELOW THE TOP MOST ROOTS WHICHEVER IS LESS AND OVER THE AREA OF THREE TIMES THE DIAMETER OF THE TRUNK (DBH).
 - FOR TREES WHERE THE STUMP WILL FALL UNDER NEW PAVED AREAS, GRIND ROOTS TO A TOTAL DEPTH OF 18 INCHES BELOW THE EXISTING GRADE. IF THE SIDES OF THE STUMP HOLE STILL HAVE GREATER THAN APPROXIMATELY 20% WOOD VISIBLE, CONTINUE GRINDING OPERATION DEEPER AND OR WIDER UNTIL THE RESULTING HOLE HAS LESS THAN 20% WOOD. REMOVE ALL WOOD CHIPS PRODUCED BY THE GRINDING OPERATION AND BACK FILL IN 8 INCH LAYERS WITH CONTROLLED FILL OF A QUALITY ACCEPTABLE TO THE SITE ENGINEER FOR FILL MATERIAL UNDER STRUCTURES, COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY STANDARD PROCTOR. THE OWNER'S REPRESENTATIVE SHALL APPROVE EACH HOLE AT THE END OF THE GRINDING OPERATION.
 - IN AREAS WHERE THE TREE LOCATION IS TO BE A PLANTING BED OR LAWN, REMOVE ALL WOODCHIPS AND BACKFILL STUMP HOLES WITH PLANTING SOIL AS DEFINED IN SPECIFICATION SECTION PLANTING SOIL, IN MAXIMUM OF 12 INCH LAYERS AND COMPACT TO 80 - 85% OF THE MAXIMUM DRY DENSITY STANDARD PROCTOR.



CROWN DRIP LINE OR OTHER LIMIT OF TREE AND PLANT PROTECTION AREA
SEE TREE PROTECTION PLAN FOR FENCE LAYOUT



- NOTES:
- SEE TREE AND PLANT PROTECTION SPECIFICATIONS FOR WATERING AND OTHER ADDITIONAL REQUIREMENTS.
 - ALL TREE AND ROOT PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN I.S.A. CERTIFIED ARBORIST. ARBORIST SHALL MAKE ALL FINAL ROOT PRUNING RECOMMENDATIONS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PRUNING OPERATIONS.
 - NO EQUIPMENT SHALL OPERATE INSIDE THE TREE PROTECTION FENCE INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
 - TREE PROTECTION FENCE LAYOUT AND INSTALLATION TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION ACTIVITY.

TREE PROTECTION FENCE AND POSTS (REF. TREE AND PLANT PROTECTION SPECIFICATIONS)
5" THICK LAYER OF MULCH. DO NOT MULCH AREA WITHIN 6" TO 12" OF TREE TRUNK (REF. TREE AND PLANT PROTECTION SPECIFICATIONS)
MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS
ROOT PRUNING TRENCH (TYP., REF. TREE AND PLANT PROTECTION SPECIFICATIONS)

TYPICAL TREE PROTECTION FENCING

Scale: NTS

A

No.	REVISIONS	DATE	BY

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KHA PROJECT	064537203	DATE	06/24/2022	SCALE	AS SHOWN	DESIGNED BY	AMP	DRAWN BY	AMP	CHECKED BY	KWS
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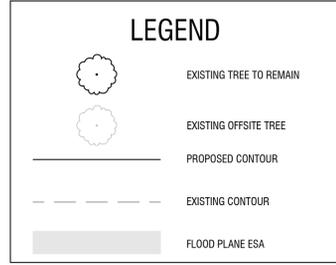
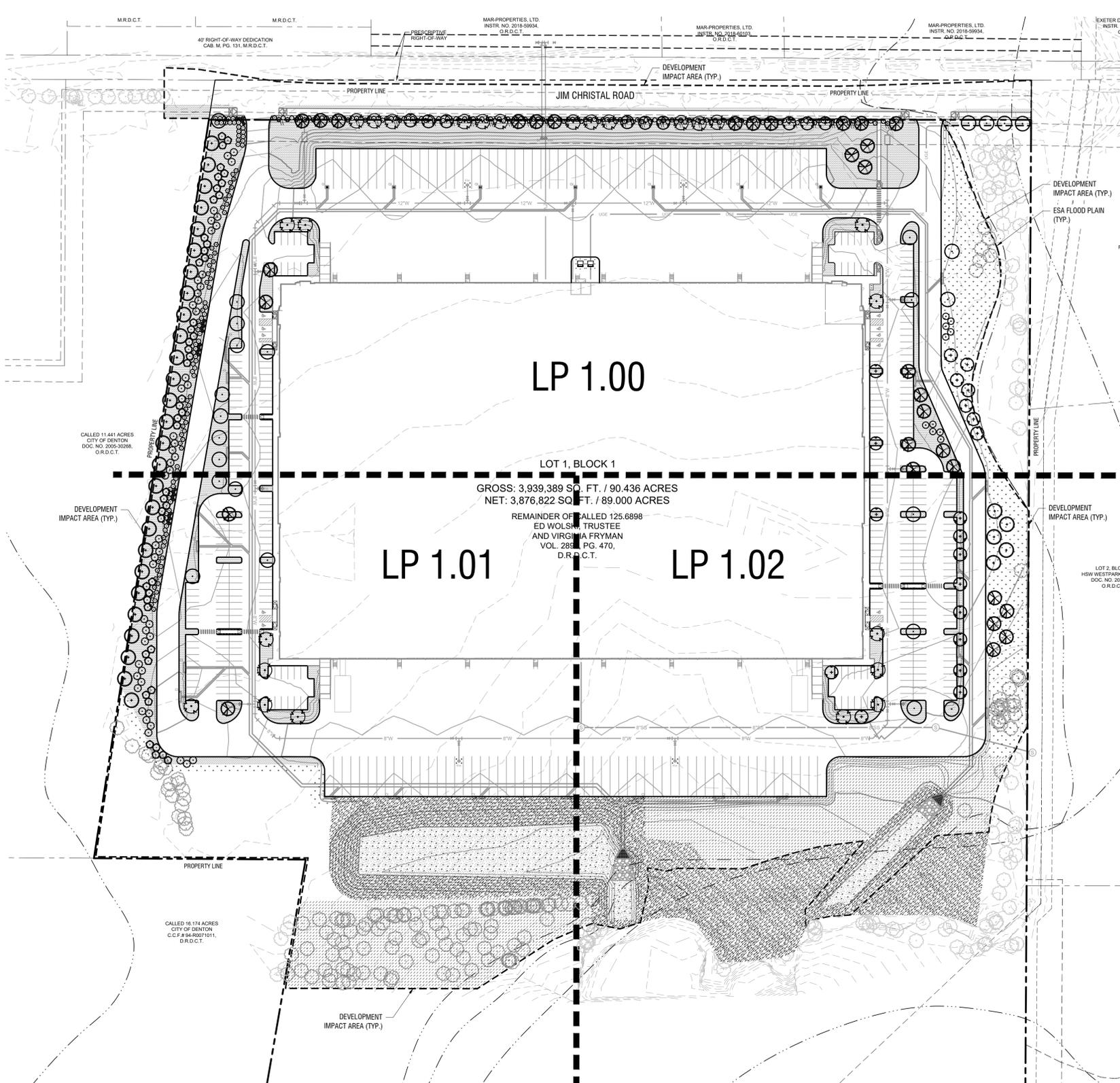
EXETER WESTPARK 3

TEXAS

TREE PROTECTION DETAILS

DENTON

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PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	UP	ULMUS PARVIFOLIA SEMPERVIRENS / ATHENA / ATHENA LACEBARK ELM		SEED	CYNODON DACTYLON / BERMUDA GRASS
	PC	PISTACIA CHINENSIS / CHINESE PISTACHE		SOD	CYNODON DACTYLON / COMMON BERMUDA GRASS
	QA	QUERCUS ACUMINATA / CHINKAPIN OAK		DM	DRAINFIELD MIX / DRAINFIELD MIX
	JE	JUNIPERUS VIRGINIANA / EASTERN RED CEDAR		SEED2	NATIVE WILDFLOWER MIX / NATIVE WILDFLOWER MIX
	OS	QUERCUS SHUMARDII / SHUMARD RED OAK		RR	RIPARIAN RECOVERY MIX / RIPARIAN RECOVERY MIX
	QV	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK		ROCK	RIVER GRAVEL (AS SHOWN ON PLANS)
	VR	VIBURNUM RUFODULUM / SOUTHERN RUSTY BLACKHAW			
	CC	CERCIS CANADENSIS / TEXENSIS / TEXAS REDBUD			
SHRUBS	CODE	BOTANICAL / COMMON NAME			
	IB	ILEX CORNUTA / BURFORDI / BURFORD HOLLY			
	MV	MALVAVISCUS ARBOREUS DRUMMONDI / GIANT TURK S CAP			
	YP	YUCCA PENDULA / SOFT LEAF YUCCA			
	LF	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE			

REF. SHEET LP 2.00 FOR COMPLETE PLANT SCHEDULE

BUFFER DATA TABLE

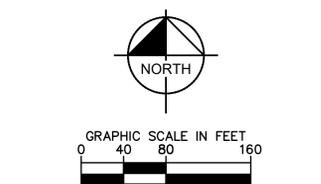
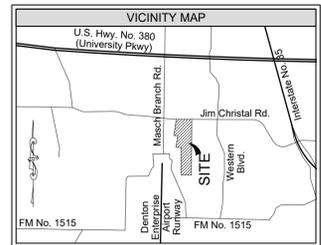
	Required Buffer Points	Proposed Buffer Elements	Proposed Buffer Points
North Property Boundary	Jim Christal Road	Street Trees	N/A
East Property Boundary	N/A - Industrial	N/A	N/A
South Property Boundary	N/A - Industrial	N/A	N/A
West Property Boundary	30 - Institutional Zoning	Ornamental Trees, Canopy Trees and Shrubs	30

City of Denton, Texas - Landscape Data Table
 Site Area: 30.42 acres (3,938,874 SF) - HI (Heavy Industrial)
 DIA Area: 30.78 acres (1,340,644 SF)

	REQUIRED	PROVIDED
Chapter 7.7 Landscaping, Screening, Buffering, and Fences		
7.7.4 Tree Preservation		
Reference Tree Survey and Preservation Plans for mitigation calculations		
7.7.5 Landscape and Tree Canopy Requirements		
Minimum landscape area	15% (201,097 SF)	16% (220,612 SF)
1,340,644 DIA SF x 15% = 201,097 SF		
Minimum tree canopy cover	15% (201,096 SF)	19% (255,488 SF)
1,340,644 SF DIA x 15% = 201,097 SF		
Ninety percent of plantings shall be from the approved landscape plant list in the Site Design Criteria Manual.	90% planting from approved Plant List	90% planting from approved Plant List and/or Natives
In order to ensure biodiversity and protect against tree disease, if 20 or more trees are planted, no one species of tree may exceed 30 percent of the total new trees on the site.	Max 30% (48 trees)	Max 30% (48 trees)
At least 50 percent of the trees planted must be native, indigenous, or adapted, as indicated on the approved landscape plant list	Min 50% (106 trees)	92% (194 trees)
7.7.5 SF Landscape Area Point System	30 points minimum	31 points
Section A: Right-of-Way Elements - 2 elements required minimum		
A minimum three-foot high continuous hedge of evergreen shrubs.	Yes	Yes
	5 points	5 points
Section B: Parking Lot Landscaping Elements - 2 elements required minimum		
Internal landscape islands with an area of at least 9' x 18' containing at least one large canopy tree placed evenly at an average of one for every 10 spaces (or portion thereof) 346 parking spaces / 10 = 34.6 trees	35 trees	35 trees
	5 points	5 points
End caps with an area of at least 9' x 18' containing at least one large canopy tree	Yes	Yes
	5 points	5 points
A landscape median of at least 8' wide running the length of a parking row and containing at least 1 large tree per 30 linear feet.	Yes	Yes
	5 points	5 points
Section C: Other Site Landscaping Elements		
Tree canopy exceeding minimum requirement by an additional 25% or more.	Additional 25% (236,800 SF)	Additional 25% (237,415 SF)
	3 points	3 points
Landscape area provided exceeds required minimum by an additional 10% or more.	Additional 10% (218,273 SF)	Additional 15% (220,612 SF)
	3 points	3 points
At least 75% of plants proposed are drought-tolerant as indicated in the approved landscape plant list or adaptive to Denton's plant hardness zone	75% minimum drought tolerant plants	75% minimum drought tolerant plants
	5 points	5 points
7.7.6 Compatibility Landscape Buffer Point System		
30' minimum width	Yes	Yes
5 shrubs for every 30 linear feet of buffer (10-gallon size)	133 shrubs	133 shrubs
798.56 LF / 30 LF = 26.62	10 points	10 points
26.62 * 5 = 133.09		
1 large canopy tree for every 30 linear feet of buffer (min. 3-inch caliper)	27 trees	27 trees
798.56 LF / 30 LF = 26.62	10 points	10 points
3 ornamental trees for every 25 linear feet of buffer	96 trees	96 trees
798.56 LF / 25 LF = 31.94	10 points	10 points
31.94 * 3 = 95.83		
7.7.7 Street Tree Requirements		
Street trees shall be located within the street right-of-way or within 10' of the street right-of-way	Yes	Yes
At least one street tree is required for every 30 LF of street frontage	38 trees	38 trees
1133 LF Jim Christal Road / 30 = 37.77 trees		
No one street tree species may exceed 30% of the total street trees	Max 30% (12 Trees)	Max 30% (12 Trees)
Tree Mitigation		
Per the Tree Protection Plans, 142.2 dbh of mitigation is required. Per 7.7.4.K.1. Property owner may plant trees on site or make a payment in lieu of replacement.	Plant trees or Payment into tree fund	Payment into Tree fund

TABLE

	Required	Proposed
Lot size in square feet		3,938,874 SF
Zoning District		Heavy Industrial
Development Impact Area		1,340,644 SF
Landscape area (in square feet and percentage)	15% (201,097 SF)	17% (220,612 SF)
Tree Canopy at maturity (includes preserved tree canopy as approved by the Tree Preservation Plan)	15% (201,096 SF)	19% (237,415 SF)
Number of Street Trees	38 trees	38 trees



WARNING: EXISTING UTILITIES SHOWN ARE BASED ON AVAILABLE RECORD DRAWINGS AND ABOVE GROUND FIELD SURVEY DATA. THEREFORE THERE MAY BE UTILITIES PRESENT THAT ARE NOT SHOWN ON THESE CONSTRUCTION PLANS. CONTRACTOR TO FIELD VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND USE CAUTION DURING CONSTRUCTION. NOTIFY ENGINEER AND OWNER OF ANY DISCREPANCIES.



REVISIONS

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DATE

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KHA PROJECT 064537203

DATE 06/24/2022

SCALE AS SHOWN

DESIGNED BY AMP

DRAWN BY AMP

CHECKED BY KWS

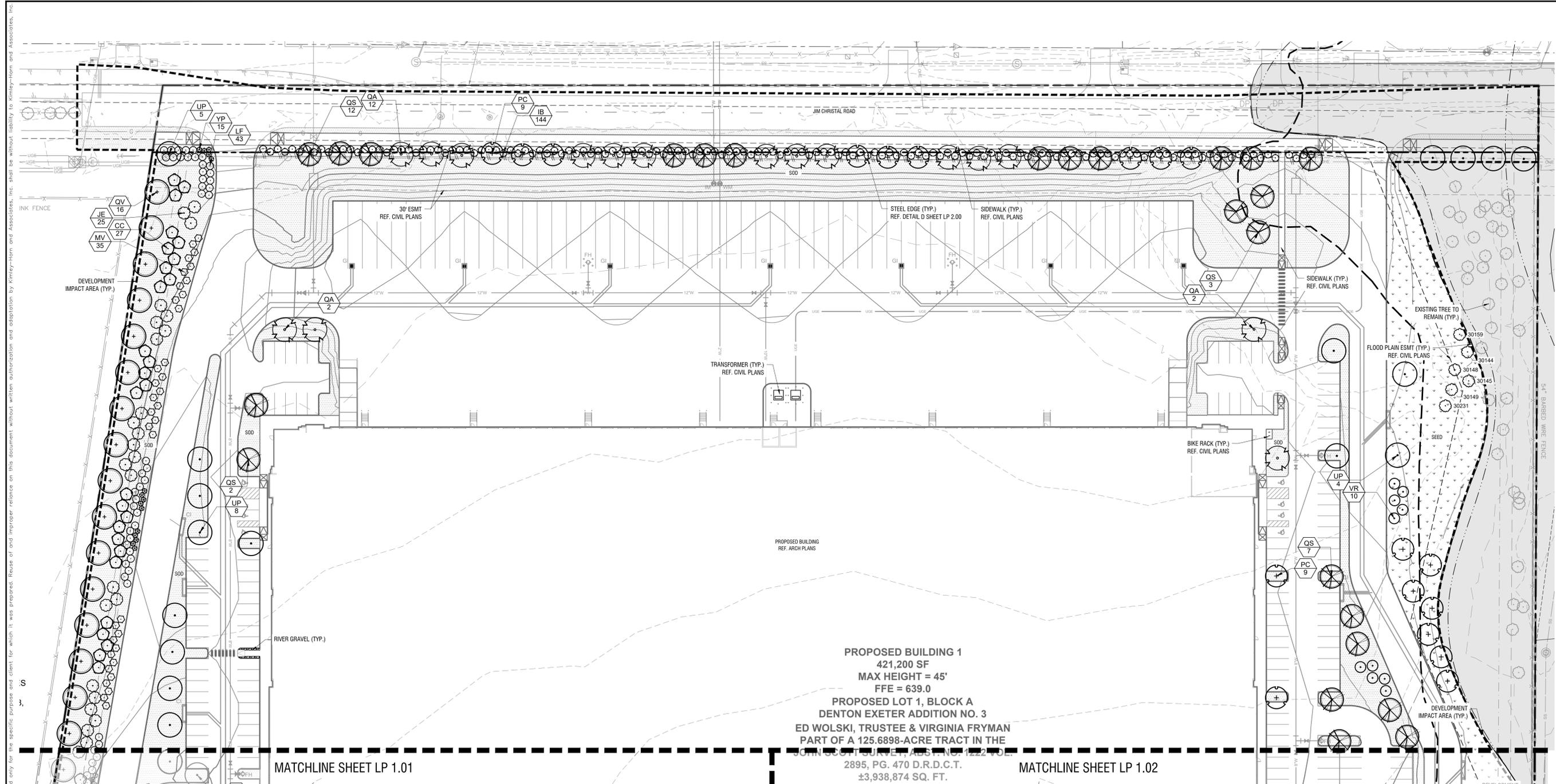
TEXAS

EXETER WESTPARK 3

LANDSCAPE KEY MAP

SHEET NUMBER LP 0.00

DENTON



PROPOSED BUILDING 1
 421,200 SF
 MAX HEIGHT = 45'
 FFE = 639.0

PROPOSED LOT 1, BLOCK A
DENTON EXETER ADDITION NO. 3
ED WOLSKI, TRUSTEE & VIRGINIA FRYMAN
PART OF A 125.6898-ACRE TRACT IN THE
CONTRIBUTOR SURVEY ABSTRACT NO. 122702
 2895, PG. 470 D.R.D.C.T.
 ±3,938,874 SQ. FT.

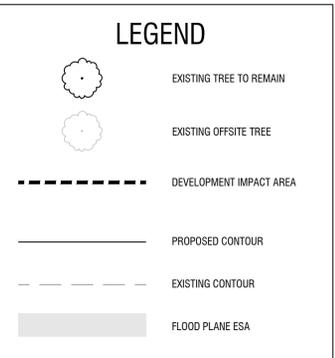
MATCHLINE SHEET LP 1.01

MATCHLINE SHEET LP 1.02

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NOTE:
 1. ALL LANDSCAPE REQUIREMENTS ARE BASED UPON THE HI ZONING REQUIREMENTS.

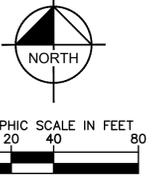
NOTE:
 1. CONTRACTOR TO SEED TO LIMITS OF DISTURBANCE
 2. ALL LANDSCAPED AREAS WILL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM



PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	UP	ULMUS PARVIFOLIA SEMPERVIRENS / ATHENA / ATHENA LACEBARK ELM		SEED	CYNODON DACTYLON / BERMUDA GRASS
	PC	PISTACIA CHINENSIS / CHINESE PISTACHE		S00	CYNODON DACTYLON / COMMON BERMUDA GRASS
	QA	QUERCUS ACUMINATA / CHINKAPIN OAK		DM	DRAINFIELD MIX / DRAINFIELD MIX
	JE	JUNIPERUS VIRGINIANA / EASTERN RED CEDAR		SEED2	NATIVE WILDFLOWER MIX / NATIVE WILDFLOWER MIX
	QS	QUERCUS SHUMARDII / SHUMARD RED OAK		RR	RIPARIAN RECOVERY MIX / RIPARIAN RECOVERY MIX
	QV	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK		ROCK	RIVER GRAVEL (AS SHOWN ON PLANS)
	VR	VIBURNUM RUFIDULUM / SOUTHERN RUSTY BLACKHAW			
	CC	CERCIS CANADENSIS 'TEXENSIS' / TEXAS REDBUD			
SHRUBS	CODE	BOTANICAL / COMMON NAME			
	IB	ILEX CORNUTA 'BURFORDII' / BURFORD HOLLY			
	MV	MALVAVISCUS ARBOREUS DRUMMONDII / GIANT TURK'S CAP			
	YP	YUCCA PENDULA / SOFT LEAF YUCCA			
	LF	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE			

REF. SHEET LP 2.00 FOR COMPLETE PLANT SCHEDULE



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NO.	REVISIONS	DATE	BY

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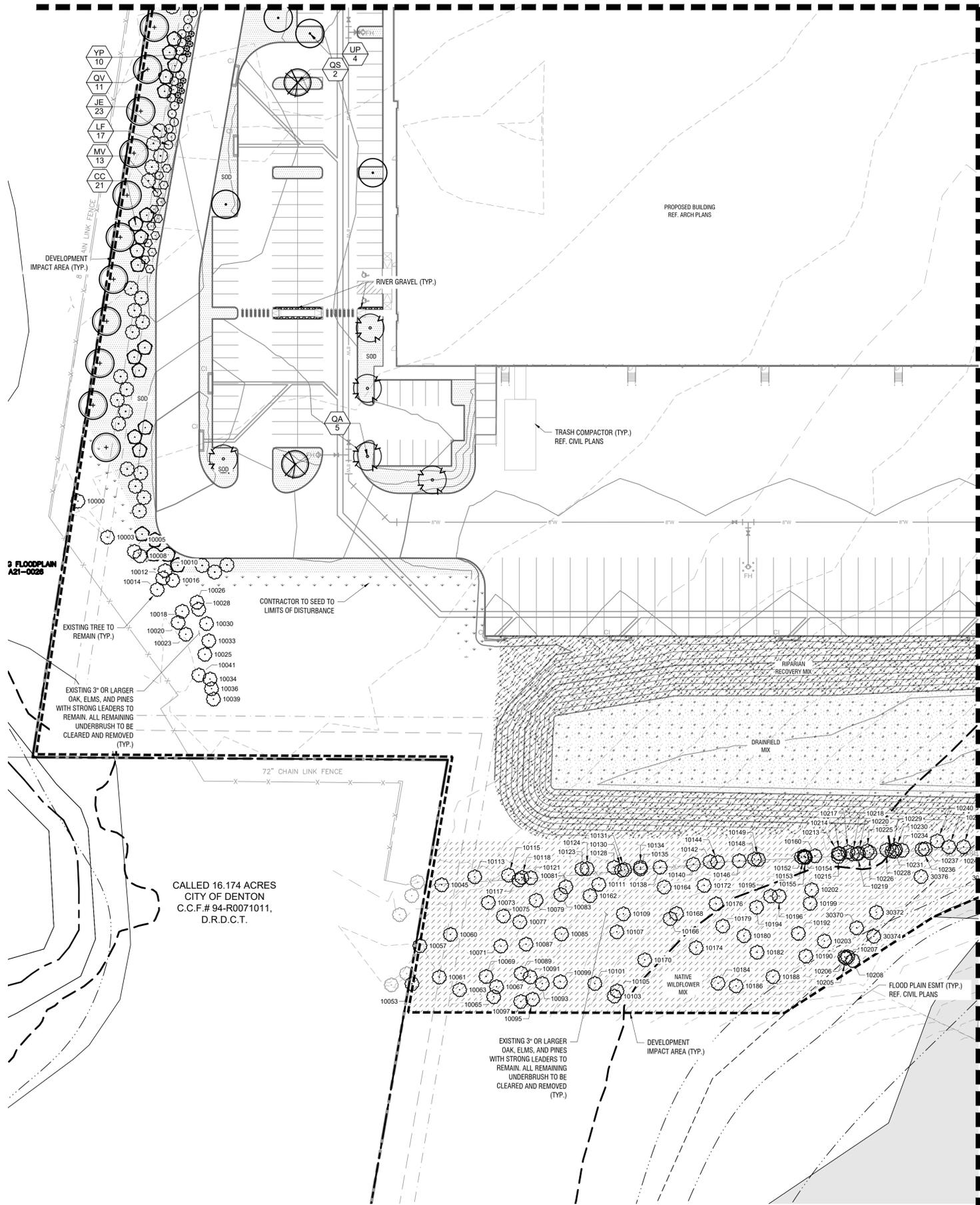
KHA PROJECT: 064537203
 DATE: 06/24/2022
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TEXAS
EXETER WESTPARK 3
 DENTON

LANDSCAPE PLAN

SHEET NUMBER
LP 1.00

MATCH LINE SHEET LP 1.00



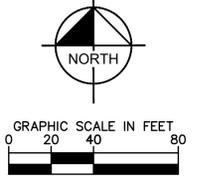
MATCHLINE LP 1.02

TREES	
CODE	BOTANICAL / COMMON NAME
UP	ULMUS PARVIFOLIA SEMPERVIRENS / ATHENA / ATHENA LACEBARK ELM
PC	PISTACIA CHINENSIS / CHINESE PISTACHE
QA	QUERCUS ACUMINATA / CHINKAPIN OAK
JE	JUNIPERUS VIRGINIANA / EASTERN RED CEDAR
QS	QUERCUS SHUMARDII / SHUMARD RED OAK
OV	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK
VR	VIBURNUM RUFIDULUM / SOUTHERN RUSTY BLACKHAWK
CC	CERIS CANADENSIS 'TEXENSIS' / TEXAS REDBUD
SHRUBS	
CODE	BOTANICAL / COMMON NAME
IB	ILEX CORNUTA 'BURFORDII' / BURFORD HOLLY
MV	MALVAVISCUS ARBOREUS DRUMMONDII / GIANT TURK' S CAP
YP	YUCCA PENDULA / SOFT LEAF YUCCA
LF	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE
GROUND COVERS	
CODE	BOTANICAL / COMMON NAME
SEED	CYNODON DACTYLON / BERMAUDA GRASS
SOD	CYNODON DACTYLON / COMMON BERMAUDA GRASS
DM	DRAINFIELD MIX / DRAINFIELD MIX
SEED2	NATIVE WILDFLOWER MIX / NATIVE WILDFLOWER MIX
RR	RIPARIAN RECOVERY MIX / RIPARIAN RECOVERY MIX
ROCK	RIVER GRAVEL (AS SHOWN ON PLANS)

LEGEND	
	EXISTING TREE TO REMAIN
	EXISTING OFFSITE TREE
	DEVELOPMENT IMPACT AREA
	PROPOSED CONTOUR
	EXISTING CONTOUR
	FLOOD PLANE ESA

NOTE:
1. ALL LANDSCAPE REQUIREMENTS ARE BASED UPON THE HI ZONING REQUIREMENTS.

NOTE:
1. CONTRACTOR TO SEED TO LIMITS OF DISTURBANCE
2. ALL LANDSCAPED AREAS WILL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM



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NO.	REVISIONS	DATE	BY

Kimley **Horn**

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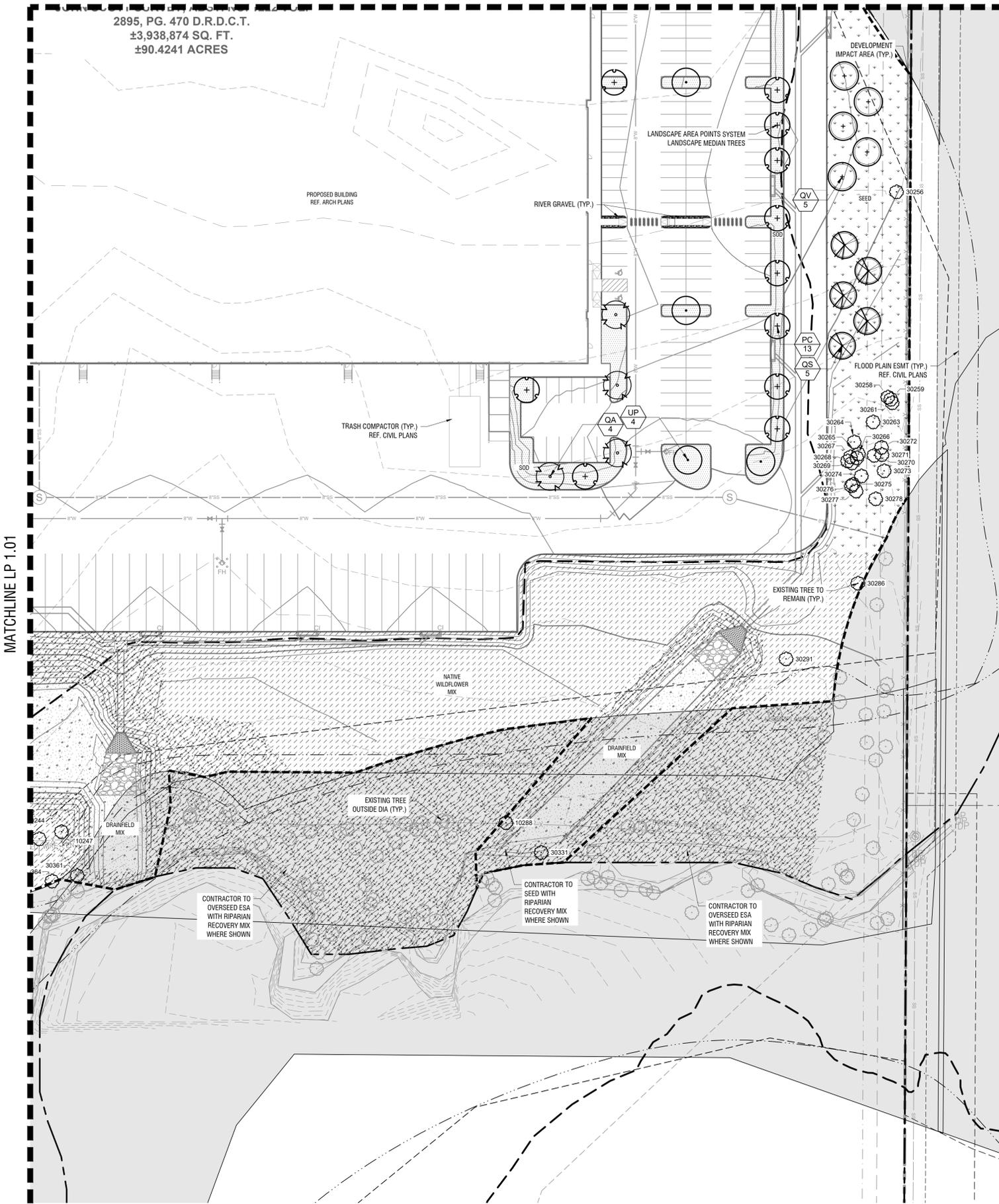
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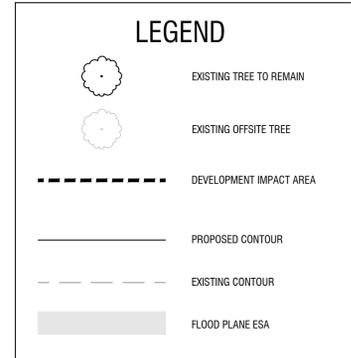
MATCHLINE LP 1.00



MATCHLINE LP 1.01

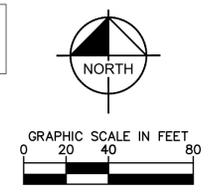
2895, PG. 470 D.R.D.C.T.
±3,938,874 SQ. FT.
±90.4241 ACRES

TREES	
CODE	BOTANICAL / COMMON NAME
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PC	PISTACIA CHINENSIS / CHINESE PISTACHE
QA	QUERCUS ACUMINATA / CHINKAPIN OAK
JE	JUNIPERUS VIRGINIANA / EASTERN RED CEDAR
OS	QUERCUS SHUMARDII / SHUMARD RED OAK
OV	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK
VR	VIBURNUM RUFIDULUM / SOUTHERN RUSTY BLACKHAW
CC	CERCIS CANADENSIS 'TEXENSIS' / TEXAS REDBUD
SHRUBS	
CODE	BOTANICAL / COMMON NAME
IB	ILEX CORNUTA 'BURFORDII' / BURFORD HOLLY
MV	MALVAVISCUS ARBOREUS DRUMMONDII / GIANT TURK 'S CAP
YP	YUCCA PENDULA / SOFT LEAF YUCCA
LF	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE
GROUND COVERS	
CODE	BOTANICAL / COMMON NAME
SEED	CYNODON DACTYLON / BERMUDA GRASS
SOD	CYNODON DACTYLON / COMMON BERMUDA GRASS
DM	DRAINFIELD MIX / DRAINFIELD MIX
SEED2	NATIVE WILDFLOWER MIX / NATIVE WILDFLOWER MIX
RR	RIPARIAN RECOVERY MIX / RIPARIAN RECOVERY MIX
ROCK	RIVER GRAVEL (AS SHOWN ON PLANS)



NOTE:
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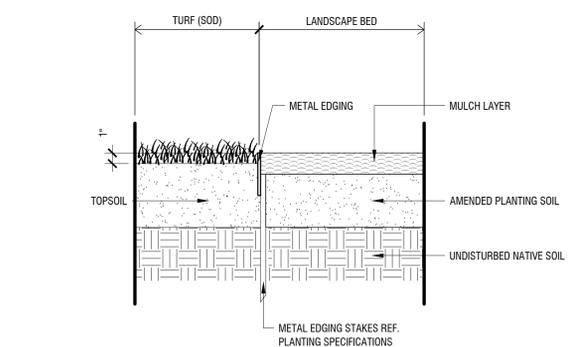
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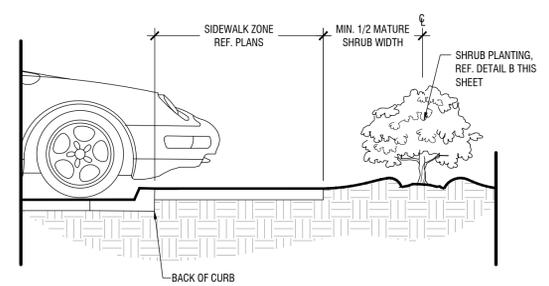
PLANT SCHEDULE							
TREES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	CAL.	SIZE	REMARKS
	UP	25	ULMUS PARVIFOLIA SEMPERVIRENS ATHENA / ATHENA LACEBARK ELM	B & B	3" CAL.	12' - 14' HT.	STRONG, CENTRAL LEADER, FULL
	PC	29	PISTACIA CHINENSIS / CHINESE PISTACHE	B & B	3" CAL.	12' - 14' HT.	STRONG, CENTRAL LEADER, FULL
	QA	25	QUERCUS ACUMINATA / CHINKAPIN OAK	B & B	3" CAL.	12' - 14' HT.	STRONG, CENTRAL LEADER, FULL
	JE	48	JUNIPERUS VIRGINIANA / EASTERN RED CEDAR	B & B	2" CAL.	10' - 12' HT.	STRONG, CENTRAL LEADER, FULL
	QS	31	QUERCUS SHUMARDII / SHUMARD RED OAK	B & B	3" CAL.	12' - 14' HT.	STRONG, CENTRAL LEADER, FULL
	QV	32	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK	B & B	3" CAL.	12' - 14' HT.	STRONG, CENTRAL LEADER, FULL
	VR	10	VIBURNUM RUFIDULUM / SOUTHERN RUSTY BLACKHAW	CONT.	3- 1.5" CANES	6' - 10' HT.	MULTI-TRUNK, FULL BRANCHED, MATCHING
	CC	48	CERCIS CANADENSIS TEXENSIS / TEXAS REDBUD	CONT.	2" CAL.	6' - 8' HT.	SINGLE STEM, FULL
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	SIZE	SPACING	REMARKS
	IB	144	ILEX CORNUTA BURFORDII / BURFORD HOLLY	CONT.	36" HT.	36" O.C.	FULL AND MATCHING
	MV	48	MALVAVISCUS ARBOREUS DRUMMONDI / GIANT TURK S CAP	10 GAL	36" HT.	72" O.C.	FULL AND MATCHING
	YP	25	YUCCA PENDULA / SOFT LEAF YUCCA	10 GAL	36" HT.	72" O.C.	FULL AND MATCHING
	LF	60	LEUCOPHYLLUM FRUTESCENS / TEXAS SAGE	10 GAL	36" HT.	72" O.C.	FULL AND MATCHING
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	SIZE	SPACING	REMARKS
	SEED	48,348 SF	CYNODON DACTYLON / BERMUDA GRASS	N/A	N/A	N/A	HYDROSEED
	SOD	120,114 SF	CYNODON DACTYLON / COMMON BERMUDA GRASS	N/A	N/A	N/A	SOD TO HAVE TIGHT, SAND FILLED JOINTS AND BE FREE OF WEEDS.
	DM	31,484 SF	DRAINFIELD MIX / DRAINFIELD MIX	N/A	N/A	N/A	MIX: BIG BLUESTEM, CEREAL RYE GRAM, EASTERN GAMAGRASS, GREEN SPRANGLETOP, PRAIRIE WILDRIE, SWITCHGRASS, WHITE TRIDENS, BROOMSEDE BLUESTEM, BUSHY BLUESTEM SEEDING RATE: 1 LB/950 SF CONTACT: NATIVE AMERICAN SEED (1.800.728.4043)
	SEED2	85,587 SF	NATIVE WILDFLOWER MIX / NATIVE WILDFLOWER MIX	N/A	N/A	N/A	MIX: BIG BLUESTEM, BUFFALOGRASS, EASTERN GAMAGRASS, GREEN SPRANGLETOP, INDIANGRASS LITTLE BLUESTEM, SAND LOVEGRASS, SIDEDOTS GRAMA, SWITCHGRASS, PRAIRIE WILDRIE, SAND DROPSSEED SEEDING RATE: 12 LB/ACRE CONTACT: NATIVE AMERICAN SEED (1.800.728.4043)
	RR	88,921 SF	RIPARIAN RECOVERY MIX / RIPARIAN RECOVERY MIX	N/A	N/A	N/A	MIX: EASTERN GAMAGRASS, PRAIRIE WILDRIE, SWITCHGRASS, BIG BLUESTEM, VIRGINIA WILDRIE, GREEN SPRANGLETOP, INDIANGRASS, WILAND SEAGRATS, SIDEDOTS GRAMA, PLAINS BRISTLEGRASS, FLORIDA PASTPALM, SAND DROPSSEED, TEXAS CUPGRASS, ALKALI SACATON, LINDS BUNDLEFLOWER, PLAINS COREOPSIS, BLACK-EYED SUSAN, CUTLEAF DAISY, PARTRIDGE PEA, MAXIMILIAN SUNFLOWER, SWAMP SUNFLOWER, FROSTWEED, CLASPING CONEFLOWER, CARDINAL FLOWER, SOUTHWESTERN BRISTLEGRASS, SAND DROPSSEED, PINK EVENING PRIMROSE, BUTTON BUSH, CANE BLUESTEM, BROOMSEDE BLUESTEM, LEMON MINT, SLIM TRIDENS, SWAMP ROSE MILKWEED, TALL DROPSSEED SEEDING RATE: 1 LB / 1,250 SF CONTACT: NATIVE AMERICAN SEED (1.800.728.4043)
	ROCK	TBD	RIVER GRAVEL (AS SHOWN ON PLANS)	N/A	N/A	N/A	2'-3" DIAMETER RIVER GRAVEL

- PLANTING NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE LANDSCAPE ARCHITECT OF ANY CONDITION FOUND ON SITE WHICH PERMITS INSTALLATION AS SHOWN ON THESE DRAWINGS.
 - ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY, GROWING CONDITION AND MUST BE REPLACED WITHIN 30 DAYS WITH PLANT MATERIAL OF THE SAME VARIETY AND SIZE IF DAMAGED, DESTROYED, OR REMOVED.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS.
 - FINAL FINE GRADING SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION PRIOR TO PLANTING.
 - CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES. ALL PLANT QUANTITIES ARE LISTED FOR INFORMATION PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FULL COVERAGE IN ALL PLANTING AREAS AS SHOWN ON THE PLANS AND SPECIFIED IN THE PLANT SCHEDULE.
 - CONTRACTOR TO PROVIDE STEEL EDGING BETWEEN ALL PLANTING BEDS AND TURF AREAS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 - ALL PLANT MATERIAL SHALL CONFORM TO THE SPECIFICATIONS GIVEN IN THE PLANT SCHEDULE, PLANTING DETAILS, AND PLANTING SPECIFICATIONS.
 - ALL PLANT MATERIAL SHALL MEET INDUSTRY STANDARDS AS INDICATED IN THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1).
 - ALL PLANT MATERIAL SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
 - CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING OPERATIONS.
 - ALL PLANTING AREAS SHALL RECEIVE SOIL AMENDMENTS.
 - PLANT MATERIAL SHALL BE PRUNED PER PLANTING DETAILS UNLESS OTHERWISE NOTED ON DRAWINGS.
 - PLANTING AREAS SHALL BE KEPT FREE OF TRASH, WEEDS, DEBRIS, AND DEAD PLANT MATERIAL.
 - ALL LIME STABILIZED SOIL AND INORGANIC SELECT FILL FOR BUILDING OR PAVING CONSTRUCTION SHALL BE REMOVED FROM ALL PLANTING BEDS TO A MINIMUM DEPTH OF 24" UNLESS OTHERWISE NOTED. REPLACE MATERIAL REMOVED WITH IMPORTED TOPSOIL.
 - TREES OVERHANGING PEDESTRIAN WALKS AND WITHIN VISIBILITY TRIANGLES AS NOTED ON THE PLANS SHALL BE LIMBED TO A HEIGHT OF SEVEN FEET (7'). TREE OVERHANGING PUBLIC STREETS AND FIRELANES SHALL BE LIMBED TO A HEIGHT OF FOURTEEN FEET (14').
 - TREES PLANTED NEXT TO ACCESSIBLE ROUTES AND ACCESSIBLE AREAS SHALL BE LIMBED TO 76" (8'0" MIN.) AFF.
 - ALL PROPOSED TREES SHALL BE STAKED WITH AN AT-GRADE ROOT BALL SECURING SYSTEM AS SHOWN IN THE PLANTING DETAILS AND SPECIFICATIONS. NO ABOVE-GROUND STAKING SYSTEMS, GUY WIRES/WIRES, HOSES, STRAPS, POSTS (METAL OR WOOD) SHALL BE ALLOWED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT.



METAL EDGING (AT TURF & LANDSCAPE BED)

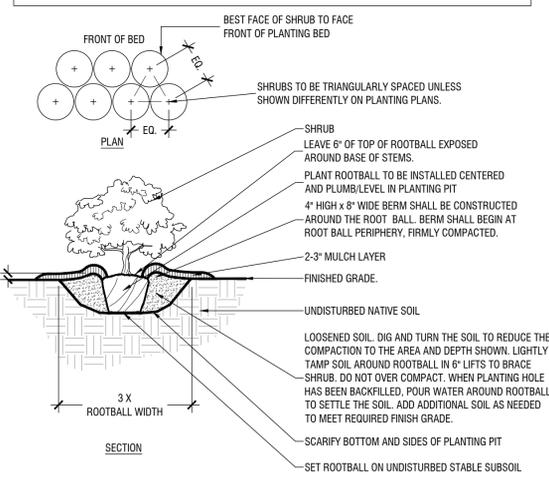
Scale: 1 1/2" = 1'-0"



SHRUB PLANTING AT SIDEWALK

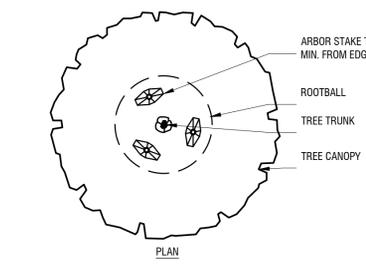
3" = 1' - 0"

- NOTES:**
- WHEN SHRUBS MASSES TOGETHER WITH GROUND COVER BEDS, ALL SOIL IN BED TO BE AMENDED. WHEN SHRUBS ARE USED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS/HEIGHT.
 - REF. TO PLANT SCHEDULE AND PLANTING PLANS FOR SPACING/LAYOUT.

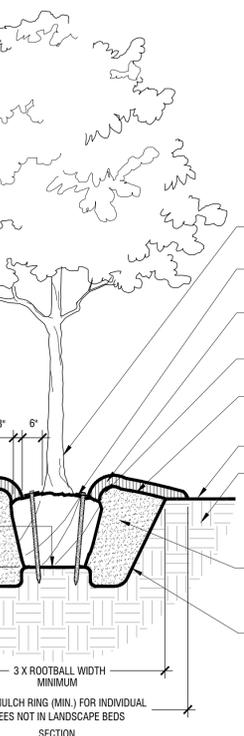


TYPICAL SHRUB PLANTING

3" = 1'-0"



- ARBOR STAKE TYP., INSTALL 4" MIN. FROM EDGE OF ROOTBALL.
- ROOTBALL
- TREE TRUNK
- TREE CANOPY



- NOTES:**
- PERFORM PERCOLATION TEST PER PLANTING SPECIFICATIONS. IF SUBSURFACE DRAINAGE PROBLEMS ARE ENCOUNTERED, NOTIFY PROJECT LANDSCAPE ARCHITECT.
- TRUNK/ROOTBALL TO BE CENTERED AND PLUMB/LEVEL IN PLANTING PIT
 - 6" DIA. CLEAR OF MULCH AT ROOT FLARE. IF REQUIRED, REMOVE EXCESS SOIL ON TOP OF ROOTBALL (MAX 2") AND EXPOSE TREE ROOT FLARE.
 - 4" MULCH LAYER. PLACE NO MORE THAN 1" OF MULCH ON TOP OF ROOTBALL (REF. PLANTING SPECIFICATIONS FOR MULCH TYPE)
 - 4" HIGH x 8" WIDE BERM SHALL BE CONSTRUCTED AROUND THE ROOTBALL. BERM SHALL BEGIN AT ROOTBALL PERIPHERY, FIRMLY COMPACTED.
 - FINISHED GRADE.
 - ORIGINAL GRADE.
 - UNDISTURBED NATIVE SOIL
 - NATIVE LOOSENED PLANTING SOIL BACKFILL. DIG AND TURN THE SOIL TO REDUCE COMPACTION TO THE AREA AND DEPTH SHOWN. LIGHTLY TAMP SOIL AROUND ROOTBALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. IN THE TOP 1/3 DEPTH OF BACK FILL, MIX 1/2" LAYER OF COMPOST INTO EACH 6" LIFT OF BACKFILL. WHEN THE PLANTING HOLE HAS BEEN BACKFILLED, POUR WATER AROUND ROOTBALL TO SETTLE THE SOIL. ADD ADDITIONAL SOIL AS NEEDED TO MEET REQUIRED FINISH GRADE.
 - SCARIFY BOTTOM AND LOOSEN SIDES OF PLANTING PIT
 - SET ROOTBALL ON UNDISTURBED STABLE SUBSOIL SO THAT TOP OF ROOTBALL IS 2'-3" ABOVE FINISHED GRADE. STABILIZE PLUMB TREE BY TAMPING SOIL FIRMLY AROUND THE LOWER 1/4 OF THE ROOTBALL.
 - FOR CONTAINER STOCK: REMOVE ENTIRE CONTAINER.
 - FOR B&B STOCK: COMPLETELY REMOVE TOP 1/2 OF THE ENTIRE WIRE BASKET. COMPLETELY REMOVE ALL BURLAP/SYNTHETIC FABRICS AND STRAPPING.
 - 8" DIA. MULCH RING (MIN.) FOR INDIVIDUAL TREES NOT IN LANDSCAPE BEDS
 - 3 X ROOTBALL WIDTH MINIMUM

TYPICAL TREE PLANTING

1/2" = 1'-0"

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