

**APPENDIX G: Draft Programmatic Section 4(f) Net Benefit Evaluations:
USACE Property
Highland Lakes Park**

DRAFT PROGRAMMATIC SECTION 4(f)
NET BENEFIT EVALUATION

IH 35E: FROM PRESIDENT GEORGE BUSH
TURNPIKE TO FM 2181

USACE PROPERTY,
INCLUDING COPPERAS BRANCH PARK

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INTRODUCTION

The following Section Programmatic 4(f) Net Benefit Evaluation discusses the proposed reconstruction of Interstate Highway (IH) 35E and the anticipated impacts to U.S. Army Corps of Engineers (USACE) land as a result of the Texas Department of Transportation (TxDOT) proposed improvements to IH 35E from the President George Bush Turnpike (PGBT) to Farm-to-Market (FM) 2181. Compliance with the Section 4(f) process requirements is of paramount importance to the successful implementation of the proposed project. Extensive planning has been conducted and appropriate measures have been followed to minimize harm and develop mitigation necessary to preserve and enhance the features and values of USACE property, including Copperas Branch Park. The proposed project results in an overall enhancement when compared to the future do-nothing or avoidance alternatives and the present condition of the Section 4(f) property, considering the activities, features, and attributes that qualify the property for Section 4(f) protection.

Section 4(f) Process

The Section 4(f) legislation as established under the U. S. Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) provides protection for publicly owned parks, recreation areas, or wildlife and/or waterfowl refuges of national, state, or local significance or land of an historic site of national, state, or local significance from conversion to transportation usage. Section 4(f) also applies to all archaeological sites on or eligible for inclusion on the National Register of Historic Places and which warrant preservation in place. The Federal Highway Administration (FHWA) may not approve the use of publicly owned land of a publicly owned park; recreation area; wildlife and waterfowl refuge of national, state, or local significance; or land of a historic site of national, state, or local significance unless a determination is made that:

- There is no feasible and prudent alternative to the use of the land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 771.135).

Section 4(f) Programmatic Evaluation-Net Benefit

In April 2005, the FHWA issued a final nationwide programmatic Section 4(f) evaluation (programmatic evaluation) for use in certain Federal (Federal-aid or Federal Lands Highway) transportation improvement projects where the use of publicly owned property from a Section 4(f) park, recreation area, or wildlife and waterfowl refuge or property from a historic site results in a net benefit to the Section 4(f) property. The application of this programmatic evaluation is intended to promote environmental stewardship by encouraging the development of measures that enhance Section 4(f) properties and to streamline the Section 4(f) process by reducing the time it takes to prepare, review and circulate a draft and final individual Section 4(f) Evaluation (individual evaluation) that documents compliance with Section 4(f) requirements. This programmatic evaluation provides a procedural option for demonstrating compliance with the statutory requirements of Section 4(f) and is an addition to the existing nationwide programmatic evaluations, all of which remain in effect. This programmatic evaluation has been prepared for a federally assisted transportation improvement project on existing alignment that would use property of a Section 4(f) park, which in the view of the Administration and official(s) with jurisdiction over the Section 4(f) property, the use of the Section 4(f) property would result in a net benefit to the Section 4(f) property.

Section 6(f) Legislation

When parkland has been acquired or developed with funds provided by the Land and Water Conservation Fund (LWCF) Act of 1965 (16 USC 4601-4 to 4601-11) and this land is required for highway right-of-way, Section 6(f) procedures must be followed. Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) concerns transportation projects that propose impacts, or the permanent conversion, of outdoor recreation property that was acquired or developed with LWCFA grant assistance which is administered by the Texas Parks and Wildlife Department (TPWD) through the Texas Recreation Park Account. Correspondence with the TPWD indicates the proposed project would not cause impacts to any LWCF or Local Parks Fund projects or sites (**Appendix A: Agency Coordination**). Consequently, USACE Property, including Copperas Branch Park is not subject to a Section 6(f) Evaluation which directs the National Park Service to assure that replacement lands are of equal value, location and usefulness as impacted lands.

PROPOSED ACTION

As stated in the corresponding Environmental Assessment (EA), IH 35E is proposed for reconstruction from PGBT to FM 2181 (**Exhibit 1: Location Map**). The proposed reconstruction includes:

- eight mainlanes (four in each direction);
- two to four collector distributor lanes (each direction) from south of PGBT to north of SH 121;
- four concurrent tolled HOV/managed lanes in the center median of IH 35E; and
- two, three, and four-lane continuous frontage roads in each direction along the entire project corridor including auxiliary lanes at the cross streets.

The need of the proposed project is to address the transportation needs of the area resulting from an increase in population and the subsequent increase in travel demand. The proposed project, which traverses Dallas and Denton Counties, is an essential element of the local and regional transportation system. Within the project area, IH 35E serves multiple purposes. It functions as an interstate and also serves as a major arterial serving local trips to and from work, school, shopping, etc. IH 35E also serves as an important regional commuter route connecting the Cities of Carrollton, Lewisville, Highland Village, Lake Dallas, Corinth and the Town of Hickory Creek, as well as neighboring developing communities.

The area adjacent to the IH 35E corridor between Dallas and Denton is in a state of rapid growth and continues to need substantial improvements to the existing transportation system. Between 1980 and 2000, the populations of Dallas and Denton Counties increased 42.5 percent and 202.5 percent, respectively.¹

¹ North Central Texas Council of Governments. *Census Total Population by Decade*.
<http://www.nctcog.org/ris/census/searchcounty.asp>

The purpose of the proposed project is to address the transportation needs by increasing capacity, managing traffic congestion, improving mobility, and improving roadway deficiencies within the Dallas Fort Worth metropolitan area. The project will also serve to enhance the regional and national transportation system. Please reference the Need and Purpose section of the associated EA (Section I.B.) for supporting information.

DESCRIPTION OF USACE PROPERTY

Size and Location of Impact

The USACE property surrounds portions of IH 35E beginning south of Garden Ridge Boulevard to just north of Denton Drive South and Lewisville Lake (**Exhibit 2: USACE Property Land Use Classification Map**). The limits of USACE property within the proposed project area and associated land classifications are described in detail in the corresponding EA, *Section V., USACE Property, USACE Property Limits and Existing Use* and are summarized in **Table 1** below. The existing IH 35E facility utilizes approximately 77.8 acres of USACE property within the proposed project limits. The proposed improvements would require approximately 20.7 acres of additional USACE property, including 6.4 acres from Copperas Branch Park. This would result in a total of approximately 98.5 acres becoming utilized via permanent easement for the IH 35E facility.

Table 1
USACE Property within Existing Easement & Additional Areas Affected

Impacted USACE Property	Total Acreage Within Existing Easement (Approximate)	Additional Acres Affected by Proposed Improvements (Approximate)	Type	USACE Classification
South of Garden Ridge Boulevard to 800 ft north of Garden Ridge Boulevard	25.0	0.2	Highway	Not Classified
800 ft north of Garden Ridge Boulevard to Denton Drive South	42.2	0.0	Utility/Highway	Utility Corridor
South of Highland Village Road west of IH 35E	2.2	3.9	Water	Fish and Wildlife Management
North of Highland Village Road to south of Copperas Branch Park	0.0	1.2	Upland	Flowage Easement
Copperas Branch Park	0.0	6.4	Park	Intensive Recreation
Lewisville Lake	7.8	8.9	Water	Lake (Open Water)
North of Lewisville Lake west of IH 35E	0.6	0.1	Upland	Fish and Wildlife Management
Total Acreage	77.8	20.7		

Ownership and Type of Property

The Section 4(f) property owned by the USACE is associated with Lewisville Lake. Lewisville Lake is an outdoor recreational area operated by the USACE as a multi-purpose lake with the primary purpose being flood control and water conservation.

Copperas Branch Park is leased from the USACE by the City of Highland Village and serves the community through events such as the Lion's Club Balloon Festival and Highland Village Days. Copperas Branch Park is designated as intensive recreational use and is located on the shoreline of Lewisville Lake in the northeast corner of Highland Village at the IH 35E service road and Lewisville Lake. The park is approximately 74.9 acres in size and is open year round. The City of Highland Village operates Copperas Branch Park and entered into a 20-year lease with the USACE in 2001.

An aerial view of the park layout is shown on **Exhibit 3: USACE Property Impacts and Mitigation/Enhancements Maps**.

Function of Activities

The majority of the proposed improvements would impact areas designated as either open water (Lewisville Lake) or intensive recreational use (Copperas Branch Park). Lewisville Lake serves several purposes including fish and wildlife management areas, hydroelectric power generation, and recreational opportunities. Lewisville Lake is primarily used for fishing and boating activities. The shoreline of Lewisville Lake provides numerous recreational opportunities, including camping, picnicking, boating activities, other water sports, swimming, and horse trails. The lake is also a major source of public drinking water for the surrounding communities.

Copperas Branch Park is used for a variety of activities that include baseball, soccer, swimming and other lake related activities. Approximately 37 acres of the 74.9 acres is used for intensive recreational purposes. Currently, the remaining acreage is only accessible by walking trails and is considered passive recreation and is outside of the maintained boundaries of the park. Copperas Branch Park offers covered and uncovered picnic tables, a swim area, boat dock, four-lane concrete ramp and parking for vehicles, restrooms with showers, baseball and soccer fields, and parking for sports participants and picnickers. Photographs of Copperas Branch Park and Copperas Branch East Park are shown in **Exhibit 4: Photographs**.

Additionally, the City of Highland Village uses the existing park facilities to accommodate the Lion's Club Balloon Festival. The Balloon Festival is a Highland Village annual tradition. This annual festival includes live entertainment, skydivers, arts and crafts exhibits, food vendors and a carnival. This event draws an estimated crowd of 20,000 to 25,000 park visitors annually.

Highland Village Days is a city and local business sponsored held at Copperas Branch Park. In 2004, the event was expanded to include the Texas Music Festival and Fireworks Extravaganza and has become an annual event. This celebration includes a family fish-out, children's area, music, food and fireworks.

Current/Planned Improvements

A Master Plan for Copperas Branch Park is currently being developed by the City of Highland

Village. The Master Plan is being developed to address the reorganization of the park amenities based on the proposed improvements to IH 35E. Additionally, the City of Highland Village is developing a new location trail system known as the Inland Trail System. The trail system is being planned and phased so that the trail segments are consistent with the Copperas Branch Park Master Plan and proposed Section 4(f) mitigation and enhancements.

Access and Usage

Most of the accessible USACE property that would be impacted is located at Copperas Branch Park. Access to Copperas Branch Park is by automobile from the southbound IH 35E frontage road. The frontage road on the west side of IH 35E is a two-way road from Garden Ridge Boulevard north to the south entrance of Copperas Branch Park. Park visitors traveling north on IH 35E can exit at Garden Ridge Boulevard, cross over IH 35E to the frontage road, then proceed north on the frontage road to the park. Park visitors who are eastbound on Highland Village Road can turn left onto the frontage road and make a left turn into the park. Park visitors traveling south on IH 35E can utilize the Highland Lakes/Garden Ridge exit onto the frontage road and turn right into the park.

The admission for day use is \$3.00 per car and \$1.00 per person. The park is open from 6:00 a.m. to 11:00 p.m. An annual pass is available for \$45.00, which allows for access to the park 12 months per year. The annual pass also allows for free access to special events at the park. Copperas Branch Park also has a boat ramp that is accessible to the public. **Table 2** provides event and usage numbers related to Copperas Branch from fiscal years (FY) 2004 and 2005. The Highland Village Days Red, White, and Blue Festival and the Lion's Club Balloon Festival are the single largest fund raisers for the City of Highland Village.

Table 2
Copperas Branch Usage Numbers

Fiscal Year	Event or Usage	Frequency	Description
FY 04-05	Highland Village Days RWB Festival	Annually	Music festival and fireworks show, 8,000 attendees.
FY 04-05	Lion's Club Balloon Festival	Annually	Event held by area Lion's Club and is their main source of revenue. 20,000 attendees over this 3-day event.
FY 04-05	Bass Tournament	Semi-Annually	Fishing Tournament held with 250-300 participants.
FY 04-05	Park Day Use and Annual Pass Fees	Daily	Day use and annual passes sold generate the majority of revenue for the park. Annual total ending Sept 2005 was \$46,000.
FY 04-05	Youth Baseball Fields	Semi-annually	Field usage fees collected from youth association for baseball/softball programs in the spring and fall. Annual revenues total \$4,000 with 1,460 participants.
FY 04-05	Soccer Fields	As needed	Field usage fees collected for soccer programs. Annual revenues total \$1,000.
FY 05-06	Highland Village Days RWB Festival	Annually	Music festival and fireworks show with 10,000 attendees.
FY 05-06	Lion's Club Balloon Festival	Annually	Event held by area Lion's Club and is their main source of revenue. 25,000 attendees over this 3-day event.

Fiscal Year	Event or Usage	Frequency	Description
FY 05-06	Bass Tournament	Semi-Annually	Fishing Tournament held with 250-300 participants.
FY 05-06	Park Day Use and Annual Pass Fees	Daily	Day use and annual passes sold generate the majority of revenue for the park. Annual estimated total ending Sept 2006 is \$35,000. (Down due to drought conditions.)
FY 05-06	Youth Baseball Fields	Semi-annually	Field usage fees collected from youth association for baseball/softball programs in the spring and fall. Annual revenues total \$5,000 with 1,523 participants.
FY 05-06	Soccer Fields	As needed	Field usage fees collected for soccer programs. Annual revenues total \$1,000.

Relationship to Other Similar Lands in the Area

Copperas Branch Park is one of 13 leased parks and recreational areas associated with Lewisville Lake. The parks serve similar needs and offer amenities associated with Lewisville Lake such as boating, soccer and baseball fields, volleyball, jogging facilities, picnic areas, and playground equipment.

Copperas Branch East Access/Development

Due to the loss of recreational land at Copperas Branch Park, the USACE has requested pedestrian access to Copperas Branch East Park. Copperas Branch East Park is a 38 acre property east of IH 35E and Union Pacific Railroad (UPRR), due east of Copperas Branch Park. The City of Lewisville currently leases the property from the USACE; however, the USACE would transfer the lease to the City of Highland Village for future management. Currently, there is no public access to this property.

Copperas Branch East Park Existing Conditions

Access to Copperas Branch East Park is restricted by IH 35E and the UPRR on the west side of the property and Lewisville Lake on the remaining boundaries. Depending on the lake level, the size of this habitat varies; however, when Lewisville Lake is at normal levels, the habitat consists of woodlands and shrublands. During the site visit, lake levels were very low and various herbaceous species were invading the exposed lake bed. Dominant woody vegetation in the woodland and shrubland areas consisted of eastern cottonwood (*Populus deltoides*), post oak (*Quercus stellata*), green ash (*Fraxinus pennsylvanica*), sugarberry (*Celtis laevigata*), winged elm (*Ulmus alata*), cedar elm (*Ulmus crassifolia*), common persimmon (*Diospyros virginiana*), smooth sumac (*Rhus glabra*), bois d'arc (*Maclura pomifera*), black willow (*Salix nigra*), eastern red cedar (*Juniperus virginiana*), mesquite (*Prosopis glandulosa*), hercule's club (*Zanthoxylum clava-herculis*), and willow baccharis (*Baccharis salicina*). Herbaceous plant species included silver bluestem (*Bothriochloa saccharoides*), southern dewberry (*Rubus trivialis*), snailseed (*Cocculus diversifolius*), prickly pear cactus (*Opuntia* spp.), goldenrod (*Solidago* spp.), Texas wintergrass (*Nassella leucotricha*), cheatgrass (*Bromus tectorum*), Johnson grass (*Sorghum halepense*), milkweed (*Asclepia* spp.), western ragweed (*Ambrosia psilostchya*), giant ragweed (*Ambrosia trifida*), silverleaf nightshade (*Solanum elaeagnifolium*), and poison ivy (*Toxicodendron radicans*). Between the woodlands and Lewisville Lake, the vegetation transitions from shrublands to areas dominated by invader plant species and mesic vegetation such as buttonbush (*Cephalanthus occidentalis*), rattlebox (*Sesbania punicea*), smartweed

(*Polygonum* spp.), curlydock (*Rumex crispus*), cocklebur (*Xanthium strumarium*), horsetail conyza (*Conyza canadensis*), hogpeanut (*Amphicarpaea* spp.), *Carex* spp., *Juncus* spp., *Eleocharis* spp., and *Cyperus* spp.

The woodland habitat provides important habitat for migrating and breeding songbirds as the diversity of the plant community provides a wide range of nesting and feeding opportunities. The snags, downed logs, brush piles, and thickets associated with the woodland and shrubland areas also provide habitat for a variety of mammalian and reptilian species. The habitat along the shoreline provides feeding opportunities for water birds and waterfowl. Mollusks and other invertebrates were observed along the mud flats of the receding Lewisville Lake shoreline providing food for Great Blue Herons and Great Egrets that were observed feeding in shallow waters during the site visit.

Applicable Clauses Affecting Ownership

The City of Highland Village operates Copperas Branch Park and entered into a 20-year lease with the Department of the Army. Lease No. DACW63-1-01-0766 was signed by the Chief, Real Estate Division, Department of the Army, Fort Worth District, Corps of Engineers on October 4, 2001 and by the City Manager, City of Highland Village on October 3, 2001 (**Appendix B: City of Highland Village Lease**). All other USACE property impacted by the proposed improvements remain under USACE-Elm Fork Project office operation and management.

Unusual Characteristics of USACE Land

The U.S. Government holds a perpetual flowage easement along Lewisville Lake, which abuts Copperas Branch Park. The Government has full, complete and perpetual right, power, privilege and easement to occasionally overflow, flood and submerge lands in connection with the operation and maintenance of the lake. Flowage easement lands around Lewisville Lake are defined as those lands below the elevation contour of 537.0 feet (ft) above mean sea level.

IMPACTS TO USACE PROPERTY

The proposed reconstruction of IH 35E would require the use of approximately 20.7 acres of additional USACE property, including 6.4 acres from Copperas Branch Park. Although portions of Copperas Branch Park and USACE Property would be impacted, the reconstruction of IH 35E does not result in a substantial diminishment of the function or value that made the USACE Property, including Copperas Branch, eligible for Section 4(f) protection.

The existing Copperas Branch Park elements that would be impacted by the proposed reconstruction of IH 35E include:

- Gatehouse Complex (2 buildings)
- Park Roads [(approximately 1,000 linear feet (LF))]
- Signage (2)
- Parking (67,500 SF)
- Baseball Backstops with Hood and Baseball Diamond (2)
- Soccer Goals (2)
- Precast Picnic Tables with Grills (6)

- Metal Rail Fencing (1,728 LF), Barrier Posts (100), and Gates (2)
- Landscaping (stand of hardwoods in picnic area)

In addition to the No-Build Alternative, several Build Alternatives were analyzed and discussed in the Avoidance Alternatives & Findings section below.

AVOIDANCE ALTERNATIVES & FINDINGS

The intent of the Section 4(f) statute and the policy of the USDOT is to avoid the use of significant public parks, recreation areas, wildlife and waterfowl refuges and historic sites as part of a project, unless there is no feasible and prudent alternative to the use of such land. In order to demonstrate that there is no feasible and prudent alternative to the use of Section 4(f) land, the evaluation must address both location alternatives and design/alignment shifts that totally avoid the Section 4(f) property. The Alternative selected must also address the need and purpose of the project.

As part of the associated EA and project development process, the No-Build and Build Alternatives were analyzed. Please reference the Alternatives section of the associated EA (*Section III, Alternatives*) for supporting information. The Alternatives were further refined with the objective to avoid impacts to USACE Property, including Copperas Branch Park, and to meet the need and purpose of the proposed project.

The following Alternatives were considered, including:

1. No-Build;
2. Reconstructing IH 35E in a manner that addresses the need and purpose without the use of USACE Property, including Copperas Branch Park; and
3. Building a new facility on new location without the use of USACE Property, including Copperas Branch Park.

Alternative 1

No action would be taken to reconstruct IH 35E if Alternative 1 is implemented. The No-Build Alternative is not feasible and prudent because it neither addresses nor corrects the need as cited, which necessitated the proposed project. The No-Build Alternative is not consistent with local planning efforts of the local jurisdictions or the North Central Texas Council of Governments (NCTCOG) and would not satisfy 2030 transportation demand.

Alternative 2

Several Build Alternatives were developed that addressed the need and purpose of the proposed project. Each Build Alternative was assessed to determine if it would be feasible and prudent to avoid the Section 4(f) property through engineering design or transportation system management techniques. Design and techniques such as double-decking the mainlanes over frontage roads, reducing or eliminating frontage roads, and bridging the managed lanes were considered.

Double-decking the mainlanes over the frontages roads would shift the proposed centerline alignment approximately 50 ft east. This shift would not require property from Copperas Branch Park; however, this Alternative would not allow for an exit ramp from southbound IH 35E. Additionally, this Alternative would still require the acquisition of other Section 4(f) property

(Lewisville Lake Park) and as well as the required relocation of portions of the UPRR, and displacement of a substantial number of residences and businesses.

This Alternative would create adverse community impacts by reducing access to adjacent homes and Copperas Branch Park, and would substantially increase the cost of the proposed facility.

Eliminating frontage roads would also not allow for access to Copperas Branch Park or the subdivision which utilizes the park. To gain access to Highland Village Road, motorists would need to circulate back to their respective closest road. This Alternative would reduce the operational and safety benefits provided by a three-lane frontage road and would create adverse community impacts to adjacent homes and Copperas Branch Park.

Bridging the managed lanes over the mainlanes would require cantilever design and construction. Cantilever construction allows for long structures without external bracing and a beam is anchored at one end and projected into space. While this Alternative would meet current transportation needs, future transportation needs could not be met and would substantially increase the cost of the proposed facility.

These Alternatives would result in a substantial missed opportunity to benefit the Section 4(f) property and the identified need would not be met. The impacts, costs, and problems would be of extraordinary magnitude when compared to the proposed use of USACE Property and Copperas Branch Park after taking into account measures to minimize harm and mitigate for adverse uses, and enhance the functions and values of the Section 4(f) resource.

Alternative 3

Building a new facility on new location without the use of USACE Property and Copperas Branch Park would not be feasible and prudent because of substantial adverse social, economic, and environmental impacts such as impacts to other Section 4(f) property (Lewisville Lake Park) as well as the required relocation of portions of the UPRR, and displacement of a substantial number of residences and businesses. The new location would also substantially increase costs and create additional engineering difficulties, including meeting the requirements of various agencies, especially the USACE, Texas Historical Commission, Environmental Protection Agency, and TPWD.

Such problems, impacts, costs, and difficulties would truly be unusual and of extraordinary magnitude when compared with the proposed use of USACE Property and Copperas Branch Park after taking into account the proposed measures to minimize harm, mitigate for adverse impacts, and the enhancement of the property's functions and value.

Findings

The net impact of the No-Build (Alternative 1) and Build Alternatives (Alternatives 2-3) have considered the function and value of USACE Property, including Copperas Branch Park before and after project implementation as well as the physical and/or functional relationship of this property to the surrounding community. Given the present condition of USACE Property, including Copperas Branch Park, Alternatives 1-3 described above are not feasible and prudent. There is no feasible and prudent alternative which avoids the use of the Section 4(f) property.

MEASURES TO MINIMIZE HARM

In order to reduce impacts to USACE Property, including Copperas Branch Park, all appropriate measures to minimize harm have been included. Although the reconstruction of IH 35E proposes three-lane continuous frontage roads throughout most of the project limits, frontage roads have been minimized to two-lanes, thus further reducing impacts to USACE Property, including Copperas Branch Park.

MITIGATION/ENHANCEMENTS

The preferred Alternative would require approximately 20.7 acres of USACE Property to be converted from parkland to transportation use. The following mitigation and enhancements have been proposed during coordination efforts with City of Highland Village Parks Department and USACE staff and in formal correspondence. These options are consistent with the USACE and City of Highland Village's requests to replace the loss of any existing amenities at Copperas Branch Park, improve park access and develop the Copperas Branch East Park, which is currently not accessible via pedestrian or vehicular access.

Copperas Branch Park Enhancements

Mitigation/enhancements for impacts to USACE property, including Copperas Branch Park have been documented and categorized based on 1) fair market value, 2) recreation, and 3) natural resources based on coordination and consultation with USACE staff. The mitigation/enhancements are illustrated in **Exhibit 3** and **Exhibit 5** contains the detailed breakout of impacts and associated mitigation by category. A summary of each category is included below.

Fair Market Value

Fair market value (FMV) consists of the value of the actual land and water areas impacted by the proposed project, which totals 20.7 acres (11.94 Land and 8.72 Open Water). All existing facilities such as the park roads, signage and baseball fields are considered under the Recreation section below as National Environmental Policy Act (NEPA) recreation mitigation per USACE requirements. Although FMV costs were estimated for impacts to USACE Land/Open Water based on an independent appraisal conducted by TxDOT, the FMV costs may be waived by the USACE because pedestrian sidewalks have been proposed that would benefit the general public. The proposed pedestrian sidewalks over Lewisville Lake have recreational value as further described in *Section V., USACE Property, Other Mitigation/Enhancements*, of the EA but are not considered Section 4(f) mitigation.

Recreation

Recreation elements are the existing recreation facilities and activities conducted on USACE property. Recreation mitigation is not identified as a dollar amount but as a commitment of items to be replaced and/or constructed because of a loss of recreational facilities, use, areas, both on land and water.

Copperas Branch Park

The existing Copperas Branch Park elements that would be impacted by the proposed reconstruction of IH 35E include:

- Gatehouse Complex (2 buildings)
- Park Roads (approximately 1,000 LF)
- Signage (2)
- Parking (67,500 SF)
- Baseball Backstops with Hood and Baseball Diamond (2)
- Soccer Goals (2)
- Precast Picnic Tables with Grills (6)
- Metal Rail Fencing (1,728 LF), Barrier Posts (100), and Gates (2)
- Landscaping (stand of hardwoods in picnic area)

As part of the mitigation for impacts to recreation elements, the park facilities listed above would be replaced and a parking area under the IH 35E bridge over Lewisville Lake (68,000 SF/180 Spaces) would be constructed by TxDOT. A Multiple Use Agreement is required for the parking under the IH 35E bridge over Lewisville Lake in accordance with 23 CFR 710.405 and FHWA Airspace Guidelines and would be obtained prior to the start of construction.

Additionally, the existing beach complex would be restored to meet USACE guidelines, minimum sanitary facilities would be provided and additional buoys would be provided and maintained by TxDOT.

Copperas Branch East Park

In addition to the mitigation provided at the existing Copperas Branch Park, facilities are proposed at Copperas Branch East Park to ensure no net loss of recreation classified lands. The following basic amenities would be provided at Copperas Branch East Park as part of the conceptual mitigation plan:

- A new park road providing access to Copperas Branch East Park (requiring grade separation) to be constructed by TxDOT (1,200 LF);
- Railroad crossing and gates to accommodate at grade design for park road access to Copperas Branch East Park;
- Primary trail head to connect Copperas Branch East Park with Copperas Branch;
- Minimum sanitary facilities (drinking fountain pad, restroom);
- Parking access at sanitary facilities and trailhead parking lot (approximately 15-20 spaces);
- New trail approximately 10 ft wide trail and one-mile long; and
- Buoys to be provided and maintained by TxDOT

A maintenance agreement would be determined in coordination with the USACE for the installation and long-term maintenance of buoys placed in Lewisville Lake adjacent to the IH 35E bridge.

Natural Resources

The Natural Resources Mitigation has been divided in to four areas: 1) existing ROW, 2) additional ROW/easement, 3) construction easement and 4) Copperas Branch East Park. Section 3 of **Exhibit 5** contains more detail regarding each of the four areas of Natural Resources

impacts and mitigation. Each area was assessed to determine the flood event frequency, habitat type/condition, mitigation ratio, total acreage, impacted acres, cost/acre of mitigation, and estimated costs to be paid to the Lewisville Lake Environmental Learning Area (LLELA).

The natural resources mitigation for the existing ROW consists of wooded areas within the existing ROW north of Lewisville Lake on the west side of IH 35E that would be permanently impacted. The natural resources impacted within the existing ROW are approximately 1.9 acres.

The impacts calculated for additional ROW/easement areas directly correlate to the FMV acreage listed previously and account for the areas that would be permanently impacted (20.7 acres) due to the proposed reconstruction of IH 35E.

Impacts were also calculated for the construction easement, although the precise location of construction activity that would occur on USACE property has not yet been identified at this stage of project development. For planning purposes, a 300 ft construction easement has been assumed that would begin at the proposed ROW/easement and extend approximately 300 feet westerly and constitutes approximately 13.3 acres.

Due to the construction of amenities at Copperas Branch East Park, (trail, access road, and parking lot, minimum sanitary facilities), 6.51 acres of natural resources are anticipated to be impacted.

Per coordination with the USACE, mitigation for permanent impacts to natural resources on USACE property consists of a direct payment to the LLELA) or onsite mitigation at Copperas Branch East Park to control non-native and or invasive species. Temporary impacts to the mowed/maintained herbaceous vegetation would be mitigated by permanently revegetating the area(s) after construction is complete.

Summary

Approximately 20.7 acres of USACE Property, including Copperas Branch Park would be converted to a transportation use. Approximately 38 acres of undeveloped USACE property (Copperas Branch East Park) would be developed/enhanced for public use. Additionally, Copperas Branch Park would be enhanced. **Exhibit 3** depicts the general locations of vehicular access points, pedestrian crossings, and the proposed trail system at Copperas Branch East Park and other mitigation/enhancements. The proposed mitigation and enhancement measures would greatly improve the park user's experience and includes the addition of the new entrance road off Highland Village Road. This access would consist of a park road west of and roughly parallel to the new frontage road. Eastbound Highland Village Road traffic could turn left onto this new park road. Northbound IH 35E traffic could exit at Highland Village Road, cross under the highway, and turn right into the park.

The USACE has concurred with the above mentioned mitigation/enhancements and encouraged the consideration of a design charette and workshop to jointly formulate a design solution in order to finalize the proposed conceptual mitigation shown in **Exhibit 3** and listed in **Exhibit 5**.

Other enhancements and commitments for impacts to USACE Property have been proposed that are unrelated to Section 4(f) requirements can be reviewed in *Section V., USACE Property*, of the associated EA.

Temporary Impacts

As part of the construction phase of IH 35E, temporary impacts may occur at Copperas Branch Park which cannot be fully identified at this stage of project development. TxDOT would continue to coordinate and work closely with USACE and City of Highland Village staff to minimize interruptions and would restore park impacts to their existing conditions. The following measures would be taken if Copperas Branch Park is to be used for temporary construction staging purposes:

- In order to ensure the safety of the public, the public would be restricted from entry and prohibited from use of USACE property being used for construction activities.
- The prohibited use of USACE property would be temporary and of short duration.
- When construction activities pose no potential harm to the public, the USACE property would be re-opened for public use.
- No property ownership transfers to TxDOT for any portion of the USACE property would occur. No portion of the property would be retained for long-term use by TxDOT.
- The temporary use of property for construction staging would not result in temporary or permanent adverse changes to the activities, features, or attributes, which are essential to the purpose or functions of the property.
- TxDOT would coordinate the schedule of the use of this property for construction staging with the USACE.

COORDINATION

City of Highland Village and the USACE

The City of Highland Village and the USACE have been consulted throughout the evaluation process, including the Major Investment Study (MIS 1998) process. In addition, multiple coordination meetings with the City of Highland Village, TxDOT, Denton County, Denton County Transit Authority (DCTA), Dallas Area Rapid Transit (DART) and the USACE have occurred throughout the course of this project. A letter and Resolution No. 00-1307 supporting the IH 35E project have been received (**Appendix A: City of Highland Village-May 3, 2000 Letter & May 9, 2000 Resolution**). Additionally, several meetings occurred with the City of Highland Village. A meeting with Michael Leavitt, Highland Village City Manager, and Rhoda Savage, Highland Village Director of Parks and Recreation, was held on June 24, 2003 to discuss park mitigation ideas. During a follow-up meeting on July 14, 2003, the City of Highland Village agreed upon a list of conceptual mitigation options. An additional presentation was made to the Highland Village City Council on May 11, 2004 and the City Council voted to accept a Resolution of Support for the proposed project (**Appendix A: City of Highland Village-May 14, 2004 Letter and May 11, 2004 Resolution**).

Since the 2004 letter and resolution of support, design changes precluded the previously agreed upon mitigation option. TxDOT has proposed a revised conceptual mitigation plan and has requested concurrence from the USACE and City of Highland Village (**Appendix A: TxDOT**

Letter-July 7, 2006). The City of Highland Village has submitted additional letters and resolution of support (**Appendix A: City of Highland Village-August 8, 2006 Letter and Supporting Documentation**). The USACE has also provided a letter that agrees with the mitigation options provided in the July 7, 2006 letter. (**Appendix A: Department of Army, August 29, 2006**).

Since the 2006 letter of support, design changes and requested revisions precluded the previously agreed upon mitigation option. The mitigation modification requests have been accepted by TxDOT and incorporated in to the associated EA (VIII. Mitigation and Monitoring Commitments). TxDOT submitted a revised coordination letter to the USACE requesting concurrence from the officials with jurisdiction that the use of the Section 4(f) property will result in a net benefit to USACE Property with the proposed amenities and enhancements (**Appendix A: TxDOT Letter-July 2, 2009**). In a letter dated November 6, 2009, the USACE provided conditional concurrence regarding the assessment and impacts to USACE property resulting from the proposed project and the proposed mitigation plan for USACE property (**Appendix A: USACE Letter-November 6, 2009**). As stated in Resolution No. 2010-2236, the City of Highland Village who leases Copperas Branch Park from the USACE concurs with the assessment of impacts and proposed conceptual mitigation to USACE land, specifically Copperas Branch Park, as described in this draft programmatic Section 4(f) Net Benefit evaluation (**Appendix A: City of Highland Village- September 28, 2010 Resolution**).

Public Involvement

The proposed project is consistent with the specific requirements of 23 CFR 771.111, early coordination, public involvement, and project development. Once the project is approved by FHWA as satisfactory for further processing, a public hearing would be held for this project.

CONCLUSION

The Alternatives set forth in the Avoidance Alternatives and Findings section of this Programmatic Section 4(f) Net Benefit Evaluation have been fully assessed. The findings in the Avoidance Alternatives and Findings section conclude that the Build Alternative identified in the associated EA is the only feasible and prudent alternative and results in a clear net benefit to USACE property, including Copperas Branch Park. This project complies with the Measures to Minimize Harm and Mitigation/Enhancement sections of this document and such measures will be incorporated in to the proposed reconstruction of IH 35E. The required coordination efforts are ongoing and future public involvement efforts shall be conducted and successfully completed. The most current written agreements can be reviewed in **Appendix A**.



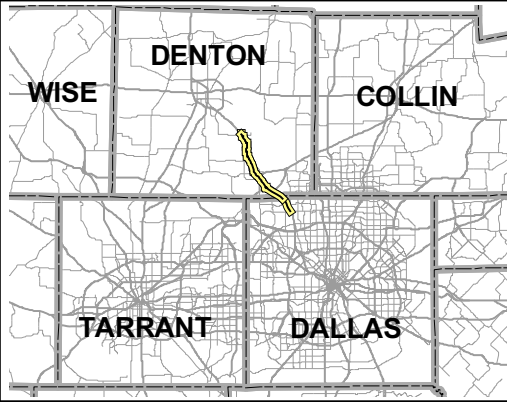
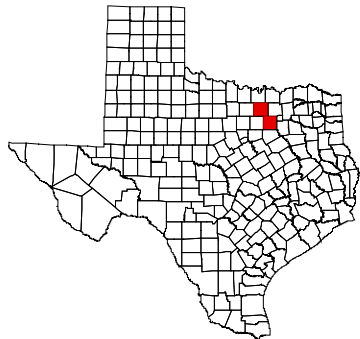
Source: NCTCOG GIS Data - counties, cities, highways, streets, and lakes

**Project End:
FM 2181**

**USACE PROPERTY, INCLUDING
COPPERAS BRANCH PARK**

**Project Begin:
PGBT/SH 190**

Project Corridor

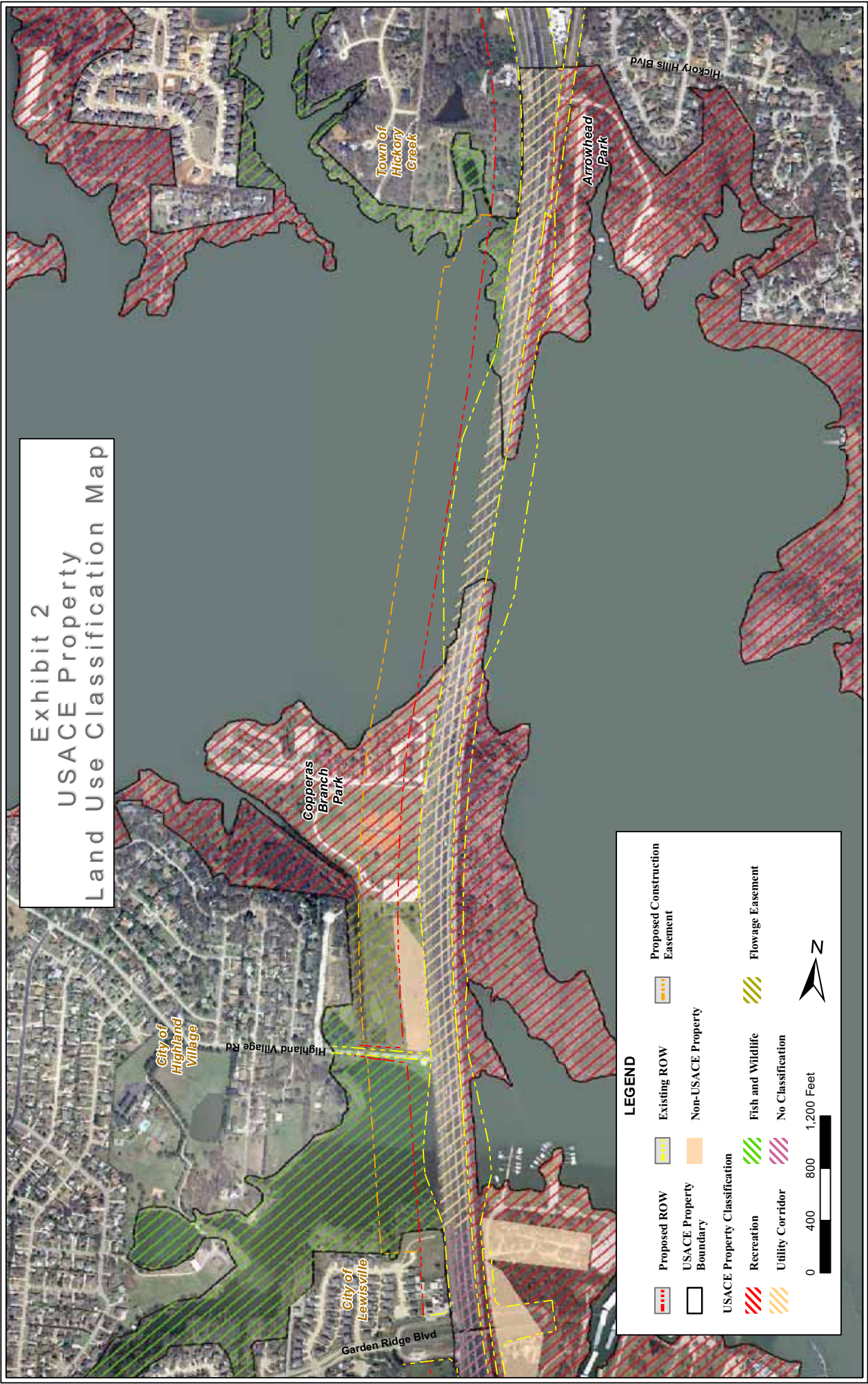


**EXHIBIT 1
LOCATION MAP**

IH 35E
PGBT to FM 2181

USACE Property, including
Copperas Branch Park
Dallas and Denton Counties, Texas

Exhibit 2 USACE Property Land Use Classification Map



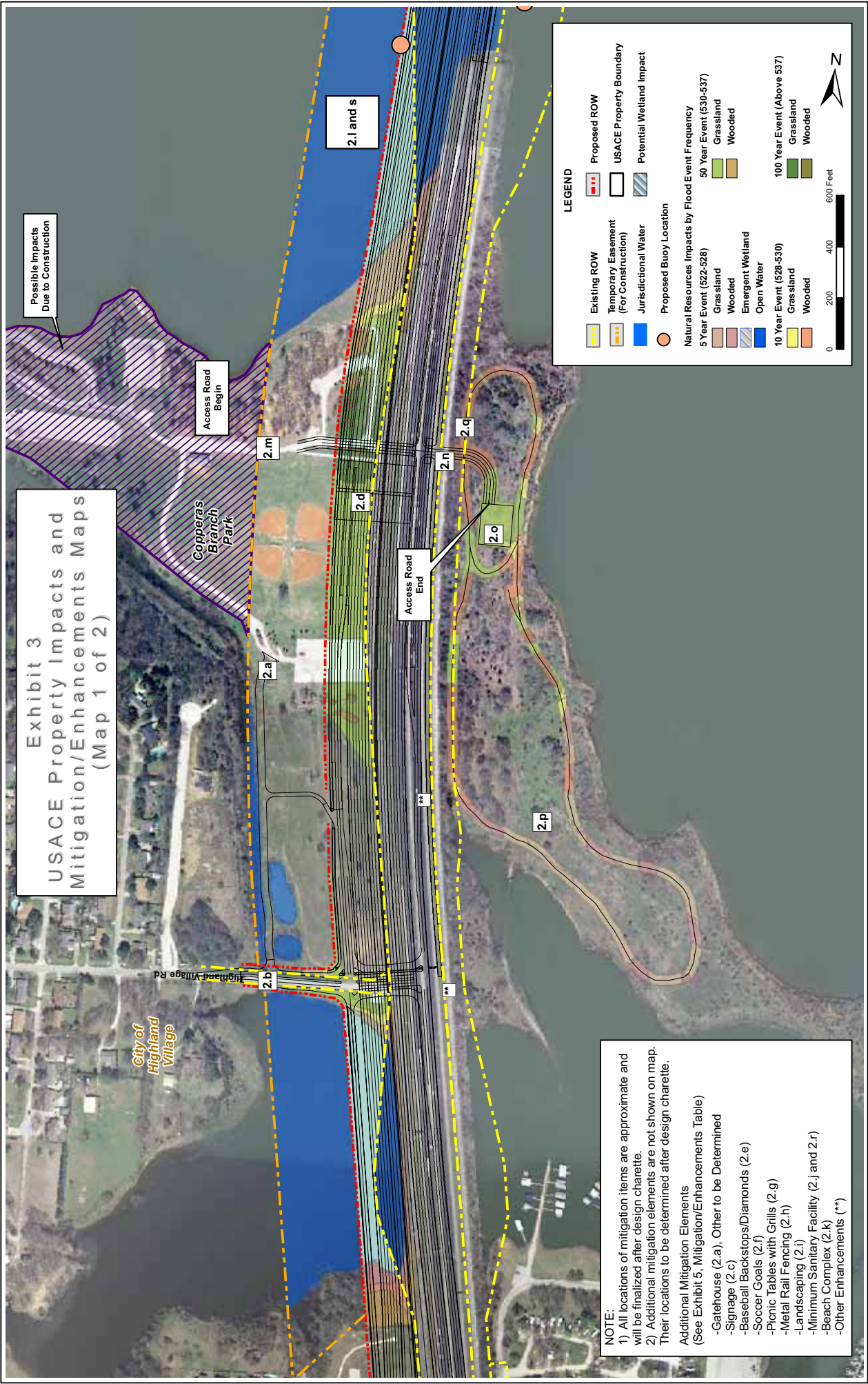
LEGEND

	Proposed ROW		Existing ROW		Proposed Construction Easement
	USACE Property Boundary		Non-USACE Property		Flowage Easement
USACE Property Classification					Fish and Wildlife
	Recreation		Utility Corridor		No Classification
					





Exhibit 3 USACE Property Impacts and Mitigation/Enhancements Maps (Map 1 of 2)



LEGEND

	Existing ROW		Proposed ROW
	Temporary Easement (for Construction)		USACE Property Boundary
	Jurisdictional Water		Potential Wetland Impact
	Proposed Buoy Location		

Natural Resources Impacts by Flood Event Frequency

	Grassland		Grassland
	Wooded		Wooded
	Emergent Wetland		Emergent Wetland
	Open Water		Open Water

10 Year Event (528-530)

	Grassland		Grassland
	Wooded		Wooded

50 Year Event (530-537)

	Grassland		Grassland
	Wooded		Wooded

100 Year Event (Above 537)

	Grassland		Grassland
	Wooded		Wooded

0 200 400 600 Feet

N

NOTE:

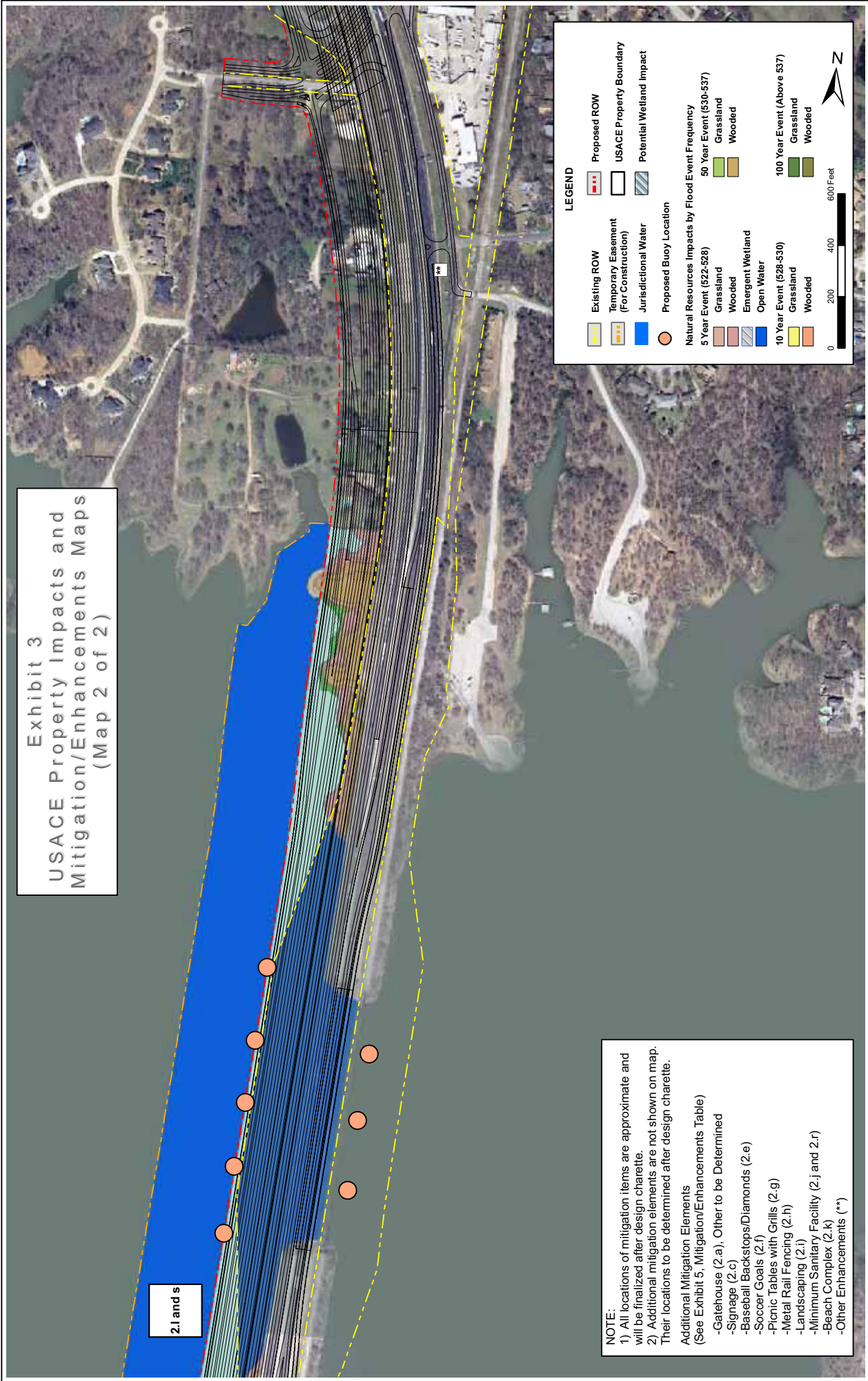
- All locations of mitigation items are approximate and will be finalized after design charrette.
- Additional mitigation elements are not shown on map. Their locations to be determined after design charrette.

Additional Mitigation Elements
(See Exhibit 5, Mitigation/Enhancements Table)

- Gatehouse (2.a), Other to be Determined
- Signage (2.c)
- Baseball Backstops/Diamonds (2.e)
- Soccer Goals (2.f)
- Picnic Tables with Grills (2.g)
- Metal Rail Fencing (2.h)
- Landscaping (2.i)
- Minimum Sanitary Facility (2.j and 2.r)
- Beach Complex (2.k)
- Other Enhancements (**)

Exhibit 3
 USACE Property Impacts and
 Mitigation/Enhancements Maps
 (Map 2 of 2)

2.1 and s



LEGEND

	Existing ROW		Proposed ROW
	Temporary Easement (for Construction)		USACE Property Boundary
	Jurisdictional Water		Potential Wetland Impact
	Proposed Buoy Location		

Natural Resources Impacts by Flood Event Frequency

	Grassland		Grassland
	Wooded		Wooded

50 Year Event (522-528)

50 Year Event (530-537)

100 Year Event (528-530)

100 Year Event (Above 537)

Grassland
 Wooded
 Grassland
 Wooded

0 200 400 600 Feet

N

NOTE:

- All locations of mitigation items are approximate and will be finalized after design charrette.
- Additional mitigation elements are not shown on map. Their locations to be determined after design charrette.

Additional Mitigation Elements
 (See Exhibit 5, Mitigation/Enhancements Table)

- Gatehouse (2.a), Other to be Determined
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- Soccer Goals (2.f)
- Picnic Tables with Grills (2.g)
- Metal Rail Fencing (2.h)
- Landscaping (2.i)
- Minimum Sanitary Facility (2.j and 2.r)
- Beach Complex (2.k)
- Other Enhancements (**)

**EXHIBIT 4
USACE PROPERTY, INCLUDING COPPERAS BRANCH PARK
PHOTOGRAPHS**



Photo 1: Copperas Branch East Park looking south at proposed park area.



Photo 2: Vegetative species at Copperas Branch East Park.



Photo 3: Copperas Branch Park entrance sign off Highland Village Rd. Existing IH 35E ROW just to the right of the photo.



Photo 4: Copperas Branch Park Picnic area.



Photo 5: Copperas Branch Park Swim beach – IH 35E in background.



Photo 6: Copperas Branch Park Boat launch area.



Photo 7: Copperas Branch Park Ball fields – IH 35E in background.



Photo 8: Copperas Branch Park, part of Gatehouse Complex

EXHIBIT 5
IH 35E: PGBT to FM 2181
USACE Property including Copperas Branch Park
Mitigation Table
CSJs: 0196-02-068, 0196-01-096, 0196-02-073,
0196-02-114, 0196-03-245

1. Fair Market Value (FMV). FMV consists of the value of the actual land and water areas impacted by the proposed project, which totals 20.66 acres (11.94 Land, and 8.72 Open Water). All existing facilities and proposed enhancements/mitigation are listed within the Recreation Mitigation section (Section 2 below) as NEPA Recreation Mitigation per USACE requirements. TxDOT costs were estimated for impacts to USACE Land/Open Water based on an independent appraisal and are subject to revision after USACE appraisal process is complete, however the FMV will be waived by the USACE for the purpose of benefiting the general public. NOTE: The proposed IH 35E pedestrian sidewalk over Lewisville Lake has recreational value because of the imbedded Trinity Trail System design and connectivity; while, ensuring that there is no net loss of recreation classified lands by opening Copperas Branch Park East for recreation activity, but is not considered Section 4(f) mitigation. The proposed trail head locations and pedestrian sidewalk over Lewisville Lake are shown on Maps 2 and 3 and denoted as Other Enhancements.

Existing elements	USACE Estimated Cost/Value of USACE property	TxDOT Estimated Replacement Cost/Value of USACE Property
a. Land (11.94 acres Upland)	\$537,300	\$537,300
b. Open Water (8.72 acres Lake)	\$131,468	\$131,468
Total	\$668,768	\$668,768

Note: Actual cost to be waived as Recreation Value and roadway benefiting the general public

2. Recreation Mitigation. Recreation elements are the existing recreation facilities and activities conducted on USACE property. Recreation Mitigation is not identified as a dollar amount but as a commitment of items to be replaced and/or constructed because of a loss of recreational facilities, use, areas, both on land and water. NOTE: The opening of Copperas Branch East, including full access (roads, trails, minimum sanitary and water fountains) ensures the USACE requirement that there is no net loss of Recreation Classified Lands.

Copperas Branch (West) Park	Existing elements	Elements to be replaced/provided by TxDOT
	a. Gatehouse Complex (2 buildings)	Approximate location known for one building, other location TBD.
	b. Park Roads (~1,000 LF)	Primary park access road (~1,230 LF) to be reconstructed by TxDOT.
	c. Signage (2)	Location TBD
	d. Parking (67,500 SF)	Parking area under IH 35E Bridge over Lewisville Lake (68,000 SF/180 Spaces) to be constructed by TxDOT.
	e. Baseball Backstops with hood and Baseball Diamond (2)	Location TBD
	f. Soccer Goals (2)	Location TBD
	g. Precast Picnic Tables with Grills (6)	Location TBD
	h. Metal Rail Fencing (1,728 LF), Barrier Posts (100), and Gates (2)	Location TBD
	i. Landscaping (stand of hardwoods in picnic area)	Location TBD
	j. Minimum Sanitary Facilities (drinking fountain pad, restroom)*	Location TBD
	k. Beach	Beach Complex to be restored meeting USACE guidelines. Location TBD.
	l. Buoy's*	Buoy maintenance throughout life of IH 35E.
	Temporary Construction License	Potential impacts are unknown at this time but will be included as part of the temporary construction license in the event that the area would be impacted to avoid possible construction delays. See Map 2 of 3.
Copperas Branch (East) Park	Proposed Basic facilities (roadway, parking lot, restroom, drinking fountain, lighting, trail head, trail system, etc.) to be provided by TxDOT to ensure no net loss of Recreation Lands	Description
	m. Park road providing access to Copperas Branch East	Park road (requiring grade separation) providing access to Copperas Branch East to be constructed by TxDOT(1,200 LF).
	n. Railroad Crossing and Gates	Component provided as requirement of railroad crossing to accommodate at grade design for park road access to Copperas Branch East.
	o. Parking Access at Sanitary Facilities & Trailhead	Parking Lot (15-20) Parking Spaces (20,000 SF) to be constructed by TxDOT.
	p. Copperas Branch Park East Trail	Approx one mile of 10 foot wide trail (location shown on map is approximate).
	q. Primary Trail Head	To connect Copperas Branch East with Copperas Branch West.
	r. Minimum Sanitary Facilities	To include drinking fountain pad, restroom.
	s. Buoy's*	Buoy maintenance throughout life of IH 35E.

3. Natural Resources Mitigation. Mitigation for permanent impacts to natural resources on USACE property consists of a direct payment to the Lewisville Lake Environmental Learning Area (LLELA) and on-site mitigation at Copperas Branch Park East to control non-native/invasive species. Temporary impacts to the mowed/maintained herbaceous vegetation would be mitigated by permanently revegetating the area(s) after construction is complete. Note: The ratios used below to determine mitigation acreage were obtained from the Lewisville Lake PEA (Chapter 8, Mitigation) and based on recent USACE direction (Gaylord EA example). The estimated mitigation costs were derived based on other similar projects. The Natural Resources Mitigation has been divided into four sections: Existing ROW, Additional ROW/ Easement, Construction Easement and Copperas Branch East. Note: The "Impacts - Additional ROW/Easement" section directly correlates to the FMV acreage shown in Section 1 and can be reviewed in Maps 2 and 3.

Flood Event Frequencies	Type of Habitat	Habitat Condition	Mitigation Ratio	Total Acreage	Impacted Acres	Mitigation Acres	Cost/Acre Mitigation	Estimated Mitigation Costs to be paid to LLELA	LLELA Administrative and Overhead Costs to implement Mitigation	Est. Mitigation Paid to LLELA linked to Consumer Price Index (CPI)
Existing Easement - These wooded areas are within the existing ROW north of Lewisville Lake on the west side of IH 35E and would be permanently impacted.										
5 Year (522 - 528)	Wooded	Good	2:1	N/A	0.58	1.16	\$20,400	\$23,664	0.25	\$29,580.00
	Wooded	Good	3:1	N/A	0.34	1.02	\$20,400	\$20,808	0.25	\$26,010.00
50 Year (530 - 537)	Wooded	Good	4:1	N/A	0.88	3.52	\$20,400	\$71,808	0.25	\$89,760.00
	Wooded	Good	5:1	N/A	0.12	0.60	\$20,400	\$12,240	0.25	\$15,300.00
Subtotal					1.92	6.3		\$128,520		\$160,650

EXHIBIT 5
IH 35E: PGBT to FM 2181
USACE Property including Copperas Branch Park
Mitigation Table
CSJs: 0196-02-068, 0196-01-096, 0196-02-073,
0196-02-114, 0196-03-245

Flood Event Frequencies	Type of Habitat	Habitat Condition	Mitigation Ratio	Total Acreage	Impacted Acres	Mitigation Acres	Cost/Acre Mitigation	Estimated Mitigation Costs to be paid to LLELA	LLELA Administrative and Overhead Costs to implement Mitigation	Est. Mitigation Paid to LLELA linked to Consumer Price Index (CPI)
Impacts - Easement. This section includes the easement needed to expand IH 35E (approximately 20.66 acres) and corresponds to Section 1, FMV. Impacts to Wooded and Grassland habitat areas would be mitigated for as listed below. The Open Water impacts listed below are attributed to the placement of bridge columns and are included in the Section 404 permit application. The remaining acreage of Open Water is within the area of additional easement necessary to construct IH 35E, however there are no permanent impacts. The mowed/maintained parkland, which is used for recreational activities and is mapped as recreation per Lewisville Lake Master Plan, would be mitigated for by providing recreational opportunities east of IH 35E at Copperas Branch Park East (See 2.m-2.s above).										
5 Year (522 - 528)										
	Mowed/Maintained Parkland	Poor	1:1	1.03	1.03	1.03	N/A	N/A	N/A	N/A
	Grassland	Good	2:1	0.21	0.21	0.42	\$3,000	\$1,260	0.25	\$1,575.00
	Wooded	Good	2:1	0.98	0.98	1.96	\$20,400	\$39,984	0.25	\$49,980.00
	Open Water**	Excellent	3:1	8.77	0.04	0.12	\$30,000	\$3,600	0.25	\$4,500.00
10 Year (528 - 530)										
	Mowed/Maintained Parkland	Poor	2:1	0.35	0.35	0.70	N/A	N/A	N/A	N/A
	Grassland	Good	3:1	0.02	0.02	0.06	\$3,000	\$180	0.25	\$225.00
	Wooded	Good	3:1	0.46	0.46	1.38	\$20,400	\$28,152	0.25	\$35,190.00
50 Year (530 - 537)										
	Mowed/Maintained Parkland	Poor	3:1	4.28	4.28	12.84	N/A	N/A	N/A	N/A
	Grassland	Good	4:1	0.01	0.01	0.04	\$3,000	\$120	0.25	\$150.00
	Wooded	Good	4:1	2.09	2.09	8.36	\$20,400	\$170,544	0.25	\$213,180.00
≥ 100 Year (Above 537)										
	Mowed/Maintained Parkland	Poor	4:1	0.98	0.98	3.92	N/A	N/A	N/A	N/A
	Grassland	Good	5:1	0.01	0.01	0.05	\$3,000	\$150	0.25	\$187.50
	Wooded	Good	5:1	0.08	0.08	0.40	\$20,400	\$8,160	0.25	\$10,200.00
Paved Areas										
				1.39						
Subtotal				20.66	10.54	31.28		\$252,150		\$315,188
Flood Event Frequencies	Type of Habitat	Habitat Condition	Mitigation Ratio	Total Acreage within 300' Easement	Impacted Acres within 300' Easement	Mitigation Acres	Cost/Acre Mitigation	Estimated Mitigation Costs to be paid to LLELA	LLELA Administrative and Overhead Costs to implement Mitigation	Est. Mitigation Paid to LLELA linked to Consumer Price Index (CPI)
Temporary Construction License. The total acreage included in the 300' construction license is listed below. Mitigation is proposed for impacts Emergent Wetland and Wooded habitat. Natural resources mitigation was not proposed for herbaceous vegetation within the park that is routinely mowed and maintained to a height of approximately 3 to 4 inches (Mowed/Maintained Parkland) or for Open Water.										
5 Year (522 - 528)										
	Mowed/Maintained Parkland	Poor	1:1	5.52	5.52	5.52	N/A	N/A	N/A	N/A
	Emergent Wetland**	Good	2:1	0.79	0.38	0.76	\$30,000	\$22,800	0.25	\$28,500.00
	Wooded	Good	2:1	0.70	0.70	1.40	\$20,400	\$28,560	0.25	\$35,700.00
	Open Water**	Excellent	3:1	34.42	0.00	0.00				
10 Year (528 - 530)										
	Mowed/Maintained Parkland	Poor	2:1	0.93	0.93	N/A	N/A	N/A	N/A	N/A
	Wooded	Good	3:1	1.57	0.69	2.07	\$20,400	\$42,228	0.25	\$52,785.00
50 Year (530 - 537)										
	Mowed/Maintained Parkland	Poor	3:1	4.93	2.11	N/A	N/A	N/A	N/A	N/A
	Wooded	Good	4:1	0.73	2.45	9.80	\$20,400	\$199,920	0.25	\$249,900.00
≥ 100 Year (Above 537)										
	Mowed/Maintained Parkland	Poor	4:1	0.44	0.44	N/A	N/A	N/A	N/A	N/A
	Wooded	Good	5:1	0.03	0.03	0.15	\$20,400	\$3,060	0.25	\$3,825.00
Subtotal				50.06	13.25			\$296,568		\$335,010
Copperas Branch Park East. Impacts resulting from construction of the trail, access road, and parking lot. A width of 40 feet was used for calculating impacts to the trail. For the access road and parking lot, impacts were calculated to 10 feet outside of pavement edge.										
Flood Event Frequencies	Type of Habitat	Habitat Condition	Mitigation Ratio	Total Acreage	Impacted Acres	Mitigation Acres	Cost/Acre Mitigation	Estimated Mitigation Costs to be paid to LLELA	LLELA Administrative and Overhead Costs to implement Mitigation	Est. Mitigation Paid to LLELA linked to Consumer Price Index (CPI)
5 Year (522 - 528)										
	Grassland	Good	2:1	1.54	1.54	3.08	\$3,000	\$9,240	0.25	\$11,550.00
	Wooded	Good	2:1	0.71	0.71	1.42	\$20,400	\$28,968	0.25	\$36,210.00
10 Year (528 - 530)										
	Grassland	Good	3:1	0.31	0.31	0.93	\$3,000	\$2,790	0.25	\$3,487.50
	Wooded	Good	3:1	0.69	0.69	2.07	\$20,400	\$42,228	0.25	\$52,785.00
50 Year (530 - 537)										
	Grassland	Good	4:1	1.59	1.59	6.36	\$3,000	\$19,080	0.25	\$23,850.00
	Wooded	Good	4:1	1.64	1.64	6.56	\$20,400	\$133,824	0.25	\$167,280.00
≥ 100 Year (Above)										
	Wooded	Good	5:1	0.03	0.03	0.15	\$20,400	\$3,060	0.25	\$3,825.00
Subtotal					6.51	20.57		\$239,190		\$298,987.50
Total								\$916,428		\$1,109,835
4. Water Quality Standards. Oil and Water Debris Removal Separators are required to ensure Water Quality Standards. Water Quality Standards and associated commitments are described in Section V. of the EA.										
Final plans would be submitted from TxDOT to USACE review when the IH 35E project is further along in the project development process.										
*Not an existing element										
**Part of Section 404 Mitigation										