Greater East End Management District

Pedestrian/Transit Access Plan

Environmental Analysis

Federal Transit Administration

Livable Communities Initiative Project

Houston-Galveston Area Council

Livable Centers Project

Prepared for

Greater East End Management District

Prepared by

The Goodman Corporation

December 2009

The Goodman Corporation is a nationally recognized transportation and urban planning consulting firm possessing a wide range of planning skills complemented with a unique understanding of the governmental processes for funding and implementing complex publicly sponsored transportation and land use initiatives. Since 1980 TGC has specialized in assisting public and private clients in planning, funding, and implementing land use and mobility projects. In addition to a strong reputation in innovative planning, TGC is accomplished in leading multi-disciplinary teams to prepare various planning products to support successful development and redevelopment initiatives. Public involvement is the cornerstone of TGC's approach to transportation and urban planning. TGC is exceptionally adept at engaging elected leadership, staff, and the community-at-large to actively participate in the planning process. TGC is very aware of how strong community support can be a catalyst for securing available public funding resources.

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Contents

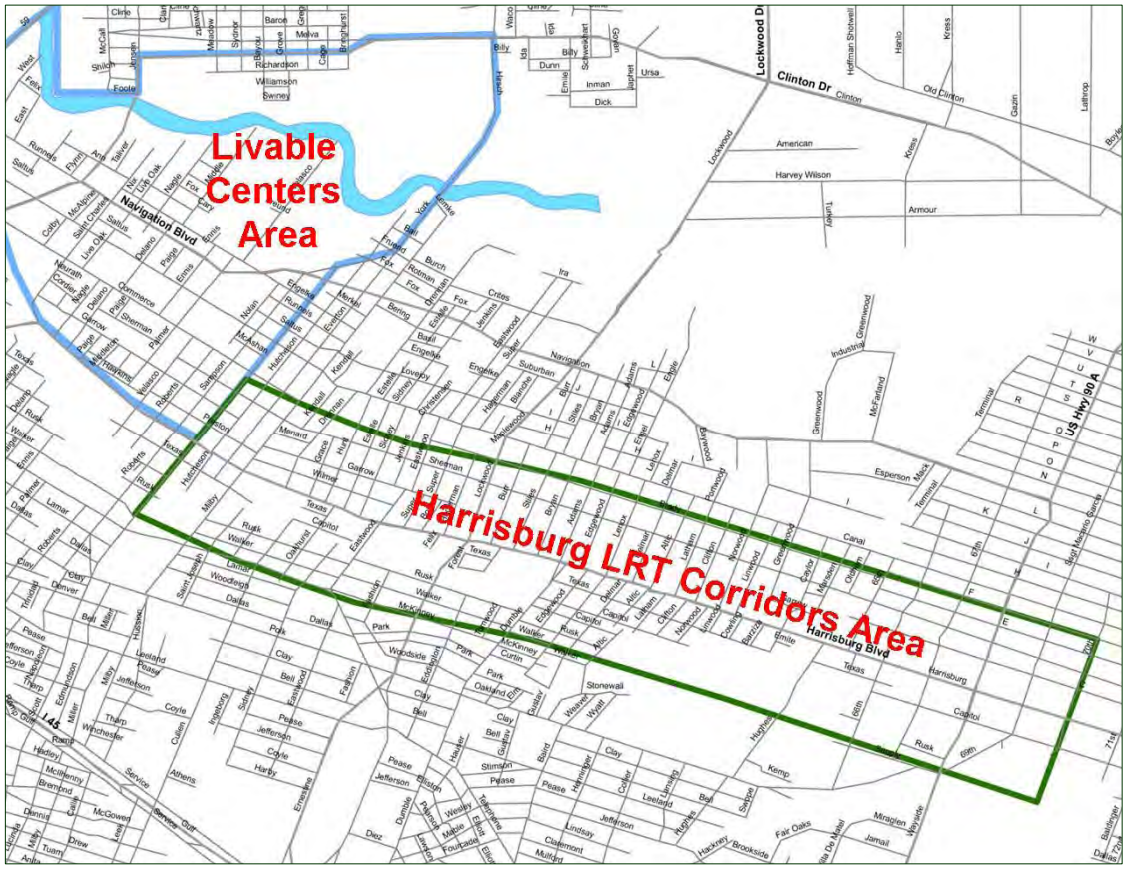
This project was funded in part through the Federal Transit Administration. The contents of this report reflect the analysis of The Goodman Corporation which is responsible for the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Transit Administration.

Section I. NEED FOR AND DESCRIPTION OF THE PROPOSED ACTION

Need for the Proposed Action

The East End, east of downtown Houston, is one of the city's oldest and most historic areas. Because of its age, much of the pedestrian infrastructure in the area is in poor condition or does not exist at all. This is to the detriment of the area's residents, who exhibit many of the characteristics typical of a significantly transit-dependent population. Specifically, the area has a relatively low median household income, high poverty rates, high percentage of disabled residents, and an elderly population that approximately a quarter of the population in certain areas. The percentage of workers who use public transportation or walk to work is also far higher than the national averages of approximately five percent and three percent, respectively. Without adequate pedestrian infrastructure, the area's residents are impeded in their efforts to utilize transit or walk to their destinations. The GEEMD Pedestrian/Transit Access Plan is the result of the combination of two studies (*Figure I.1).*

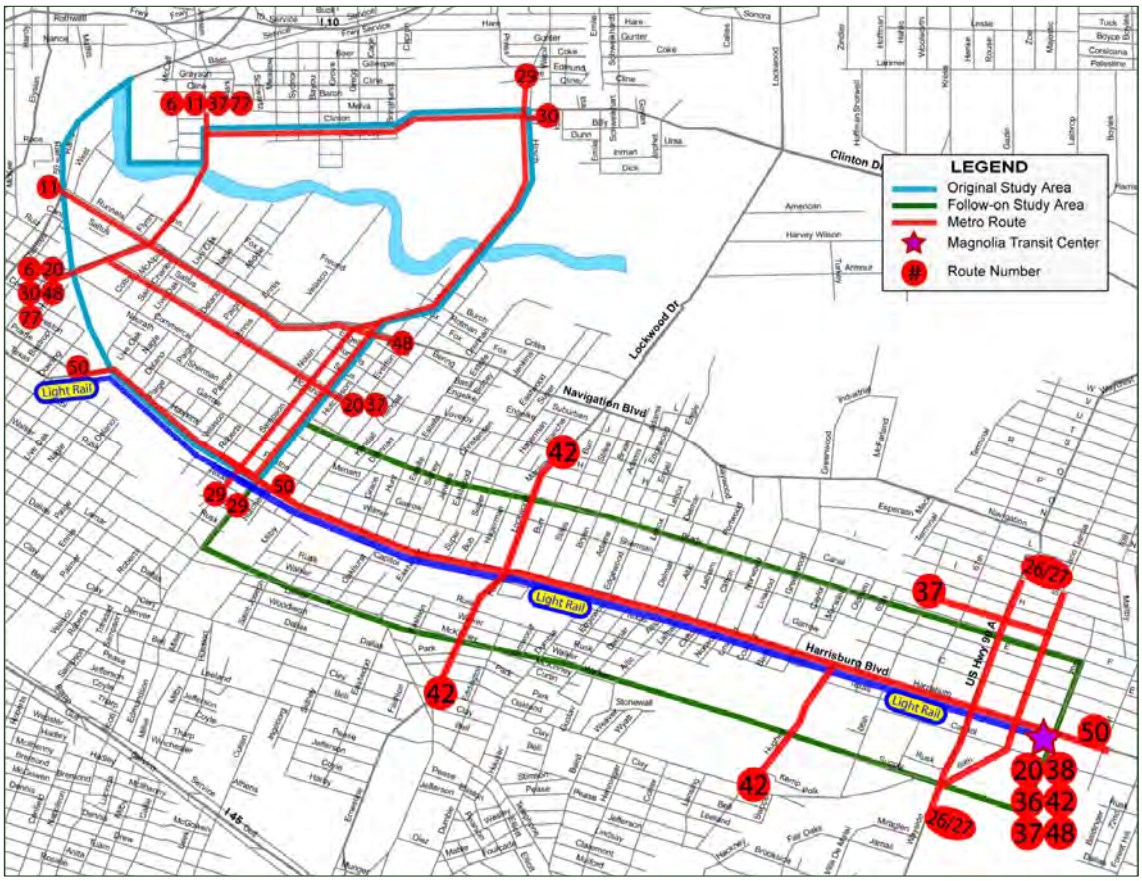
Figure I.1 – Greater East End Pedestrian/Transit Access Plan Area



The first is the GEEMD's H-GAC Livable Centers project, which is documented in the Livable Centers Plan. The plan and EA have received a Federal Transit Administration (FTA) environmental clearance. The other is the Harrisburg LRT Corridor project. *Figure I.1* presents the combined project areas that make up the access plan area.

The Metropolitan Transit Authority of Harris County (METRO) serves the area with eight bus routes and a soon-to-be constructed light rail line. The streetscape improvements recommended in this access plan will serve to make transit more accessible and pedestrian activity easier and safer in the area. This not only serves the transit-dependent, but can also make transit and/or walking attractive choices even for those who have access to an automobile and would otherwise drive. Replacing automobile trips with transit and walking leads to decreased vehicle emissions and improved air quality.

Figure I.2 – METRO East End Transit Routes



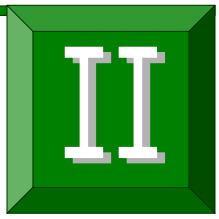
Description of the Proposed Action

As provided by FTA in its Livable Communities Initiative (LCI) guidelines, the project includes design and construction of pedestrian access enhancements along the selected corridors within 500 feet of bus stops and planned light rail stations. Improvements to these areas would unify the streetscape and enhance the pedestrian/transit access environment of the project area. Proposed improvements include the following:

- Upgrade transit stops (shelters, benches, signage, lighting, waste receptacle, pavement)
- Install/repair sidewalks, curbs, and ramps in compliance with Americans with Disabilities Act (ADA) requirements at intersections, driveways, and alleys as needed
- Install pedestrian-oriented lighting
- Install street furniture (benches, waste receptacles, bike racks)
- Install pedestrian wayfinding signage and restore historical monument signs
- Install landscaping (trees)

This environmental analysis report is a companion to the Access Plan. In particular, Chapter 4 of the Access Plan includes a comprehensive inventory of existing conditions for the areas to be improved, proposed improvement program, and LCI cost estimates.

Section II. ALTERNATIVES TO THE PROPOSED ACTION



There are no reasonable alternatives to the proposed action that would provide the same or similar benefits.

Do-Nothing Alternative

In the Do-Nothing alternative, streetscapes of the project area corridors would not be improved. Some sidewalks, curbs, wheelchair ramps, pedestrian-oriented lighting, and benches may remain broken or missing. There would be no improvement to the pedestrian and transit accessibility of the area and no increase in air quality. This is the only alternative to actually implementing the proposed project improvements.

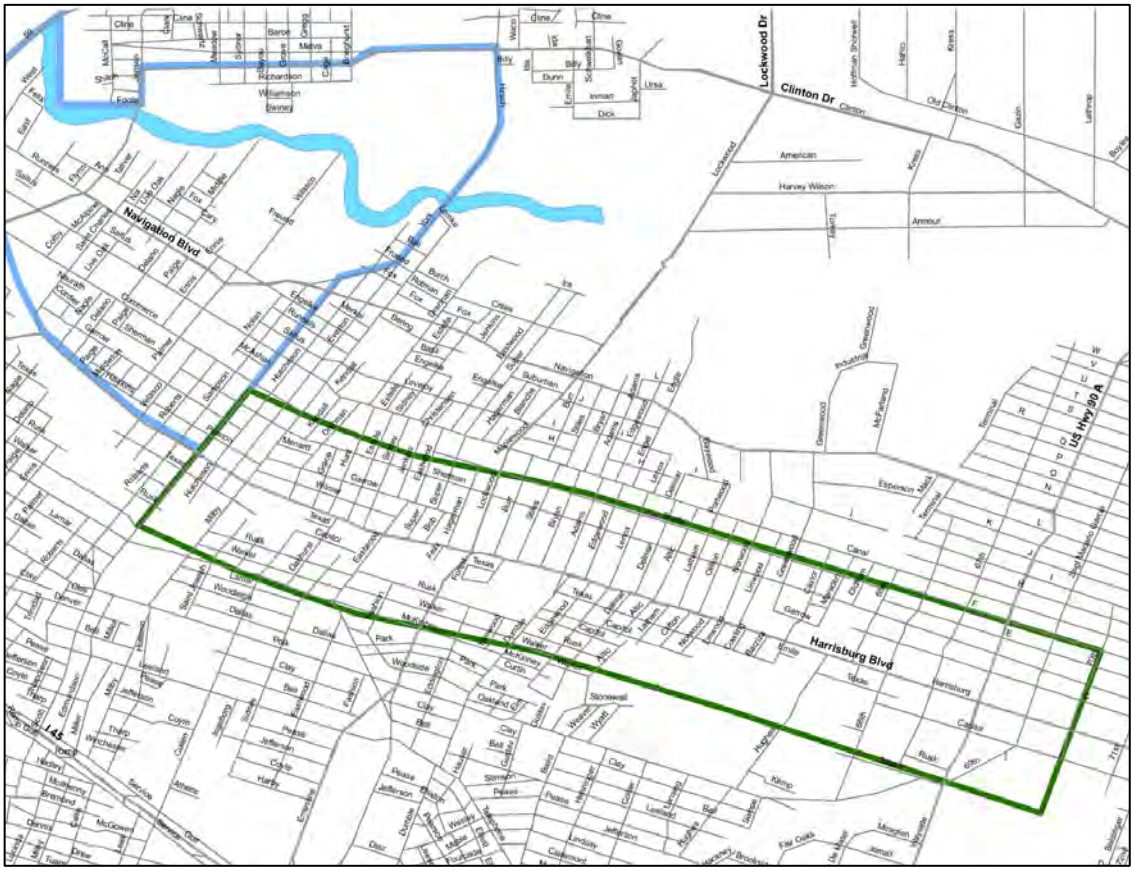
Build Alternative

With the build alternative all of the improvements, amenities, and benefits described in the Access Plan would be achieved, resulting in an increase in transit ridership and pedestrian activity, a decrease in air pollution, and a reduction in energy consumption.

Section III. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

This section describes the potential environmental impacts of the proposed Livable Communities Initiative streetsape improvements. Five major corridors as well as numerous side streets are included in the area and improvements are distributed throughout the area according to need (as established by the physical inventory described in Chapter 4 of the Access Plan The East End project area is presented in *Figure III.1*.

Figure III.1 – Access Plan Study Area



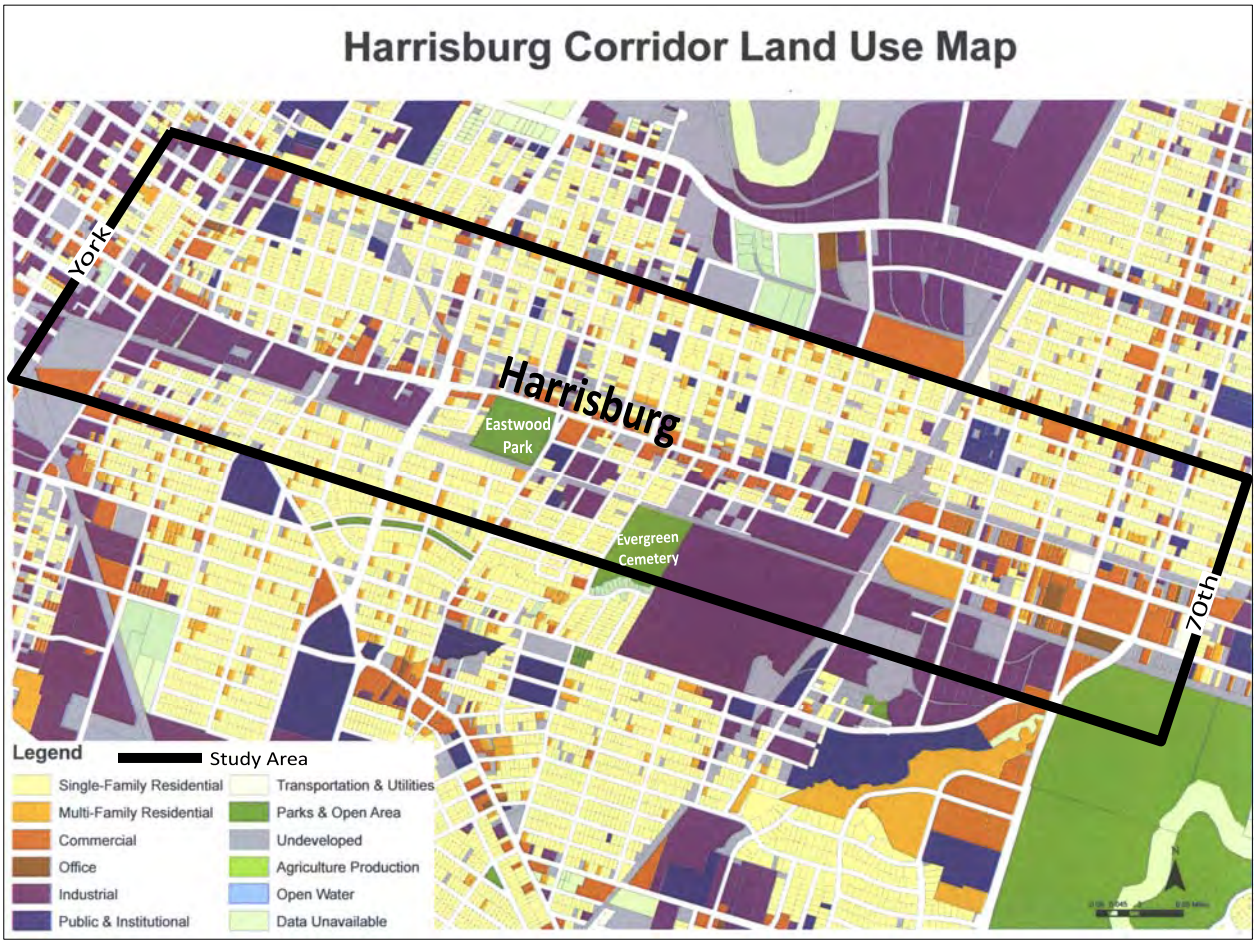
Land Acquisition and Displacements

All improvements will be installed on public right-of-way adjacent to City of Houston streets. No land will need to be acquired or residences and businesses relocated for this project.

Land Use and Zoning

The City of Houston does not have zoning. The improvements to the pedestrian environment will complement adjacent land uses and make them more accessible and safe for pedestrians, transit users, and the disabled. Land uses within the Harrisburg LRT corridors project area are presented in *Figure III.2*.

Figure III.2 – Harrisburg LRT Corridor Land Uses



Air Quality

Air quality benefits come from two sources: increased transit ridership due to improved pedestrian access and safety; and infill mixed-use development and its associated reduction in automobile trips through increases in transit use to complete relatively short trips between adjacent land uses. The proposed project would result in a daily reduction of 320,424 grams of reduced emissions (Nox, VOC and CO) at build-out. Detailed calculations, methods and assumptions are presented in Chapters 6 and 7 of the Access Plan.

Noise

The project includes passive improvements that would not generate any noise in themselves. The proposed project will not contribute to community noise levels or impact the noise levels at sensitive receptors in the project area Therefore no noise analysis was conducted. No noise generators are associated with the proposed items to be added. The cumulative noise level would not increase due to this project, but the reduction in VMT by encouraging greater public transit use may reduce overall traffic-related noise in the area.

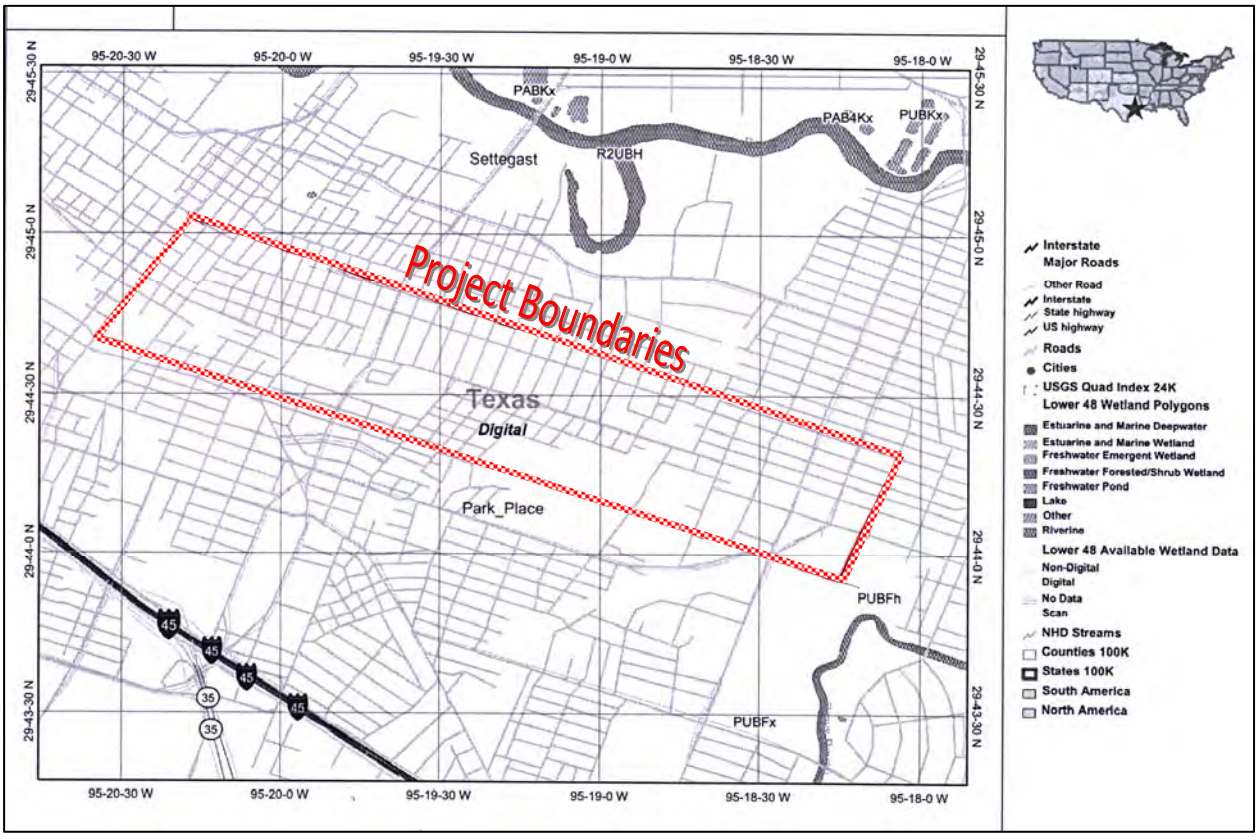
Water Quality

The proposed improvements would replace existing streetscape items in a manner that would have no negative impacts on water quality in the area. No surface bodies of water are located on or adjacent to the proposed project improvements. Dewatering is not required. Use of the proposed facilities does not entail the discharge of hazardous, polluting, or toxic substances into any body of water. Storm and sanitary sewers have the capacity to accommodate the projected facility needs (which would not change from the existing). Storm water drainage will be designed consistent with the existing facilities and area wide drainage patterns. The project would neither impact water quality, increase run-off, nor alter existing drainage patterns.

Wetlands

The proposed Harrisburg LRT corridors for improvements are located within public street right-of-way in a developed urban area and construction will be limited to the public right-of-way. Wetlands are not located within the vicinity of this project *(Figure III.3)*; therefore, there would be no impact.

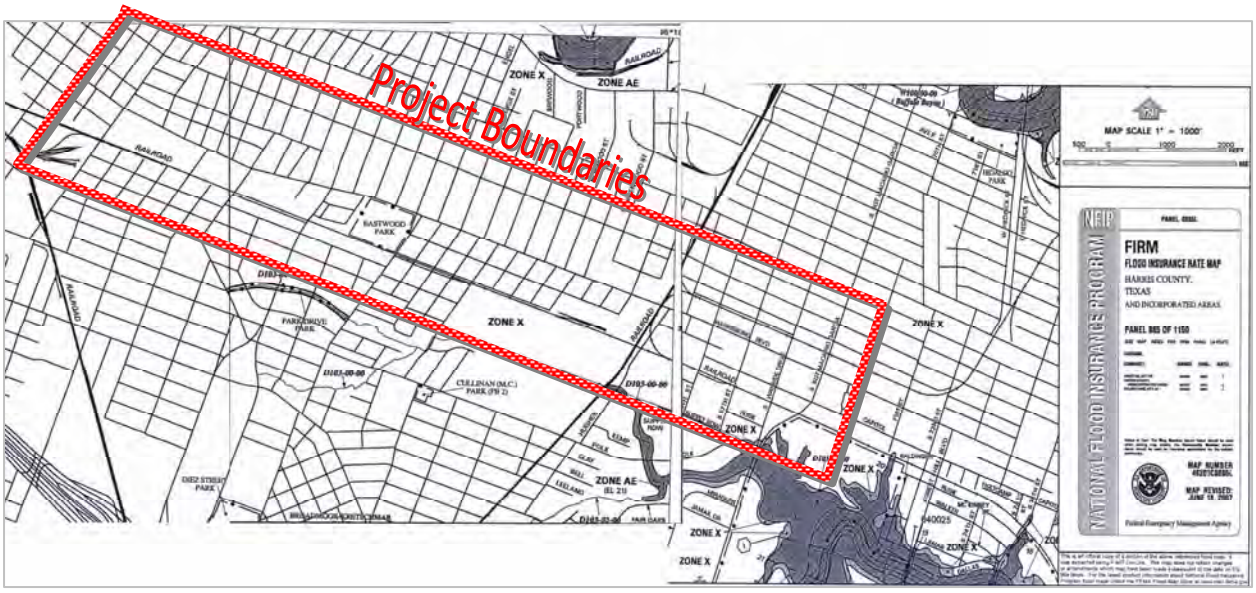
Figure III.3 – Project Area Wetlands Map



Flooding

The proposed Harrisburg LRT Corridor project is not within the 100-year flood plain *(Figure III.4)*. The proposed project would not alter flood plain capacity.

Figure III.4 – Project Area Flood Plain Map



Navigable Waterways and Coastal Zones

The proposed project will not impact navigable waterways or coastal zones. The proposed project is located in a developed urban area approximately 50 miles inland of West Galveston Bay.

Ecologically Sensitive Areas

The proposed streetscape improvements are located on public streets and sidewalks in a fully developed urban area near downtown Houston; therefore, the proposed project would not impact any ecologically sensitive areas.

Endangered Species

The subject area is in an already developed urban environment near downtown Houston. The Endangered and Threatened Species List for Harris County, Texas, *(Appendix B)* indicates that there are two (2) state or federally listed threatened or endangered species in the county: the bald eagle and the Texas Prairie-Dawn Flower. However, neither of these species make their habitats within the proposed urban streetscape project area and they would not be affected by the proposed streetscape improvements.

Traffic and Parking

The proposed improvements are limited to the public right-of-way between the curb and the private property line; therefore, the proposed project will have no impacts on traffic and parking. Provisions are included in the project that will enhance pedestrian safety and transit access including pedestrian lighting, additional buffer area, safer pathways, and pedestrian access. The expected increase in transit users will result in a net reduction of traffic. No parking spaces will be eliminated.

Energy Requirements and Potential for Conservation

The proposed improvements would result in reduced annual VMT of 11,639,485 by shifting auto drivers to walking and transit *(Appendix A)*. Combined, over 581,974 gallons of gasoline will be saved per year *(for detailed analysis, refer to Chapter 7 of Access Plan).*

Historic Properties and Parklands

There are no historic properties listed in the National Register of Historic Places located within the project area.

There is a public park, Eastwood Park, on Harrisburg Blvd adjacent to the proposed improvements. However, the proposed improvements will take place between the curb and the park property line, within the public right-of-way. Therefore, the park will not be negatively impacted by these improvements.

Construction

The proposed action would result in some minor short-term construction impacts. These can all be easily mitigated. Specific categories considered for potential construction impacts are as follows:

NOISE - Noise related to construction can be a major factor resulting in annoyance. Although annoyance cannot be quantified, it is of major concern, as is evident from the complaints of groups and individuals in communities affected by construction projects. Most sensitive noise receptors in the project area consist of residences. Construction hours will be controlled to minimize noise at nearby residences during the day and eliminate noise at night. Construction noise created by the proposed action would be caused by the following construction phases:

- Ground clearing;
- Excavation and grading; and
- Finishing, including grading and cleanup operations.

The noise from these phases of construction is a transient problem. The source activity is rarely in any one location for an extended period of time, and, depending upon the duration and complexity of the project, it may be considered a temporarily offensive noise source.

Control of construction noise levels can be achieved by the use of one or a combination of the following general methods:

- Installation of noise reduction devices on equipment;
- Enforcing operation time control;
- Use of alternative, quieter equipment; and
- Use of shielding or screening devices on or around equipment.

Where feasible, some or all of the above-mentioned abatement techniques will be used to reduce construction noise impacts on surrounding areas, especially residences.

DISRUPTION OF UTILITIES - No utilities will be affected except for minimal time to tie into electric, water, and sewer services.

DISPOSAL OF DEBRIS AND SOIL - Excavated material will be disposed of at approved nearby sites or in conjunction with needs of other construction projects.

WATER QUALITY AND RUN-OFF - Construction will not result in excessive erosion or introduction of sediments, wastewater, or chemicals into adjacent bodies of water. Requirements of the U.S. Environmental Protection Agency's NPDES stormwater permitting program for construction will be followed.

ACCESS AND DISRUPTION OF TRAFFIC - The proposed action would not require any long-term street or lane closures or other major interference with the traffic flow. All adjacent streets and alleys may encounter brief delays from equipment entering or leaving the site as well as during associated utility work. Primary construction will be on-site, out of traffic flows. No traffic will be diverted through a residential area. No access to any land use will be disrupted. Construction equipment may impact on-street parking but only temporarily. This should not be a significant inconvenience due to other available parking options.

AIR QUALITY AND DUST CONTROL - Construction activity has short-term impacts on air quality. The only significant air quality impact from this construction project is generation of dust by clearing, grading, and hauling of materials. Particulates and dust control will be carefully monitored. Applicable mitigating measures to control particulates are the following:

- Use water or suitable chemical to control dust during clearing and grading;
- Cover dust-generating materials carried in open-bodied trucks;
- Control dust from unpaved surfaces used for access to construction sites and/or parking; and
- Clean streets as needed to remove soil tracked onto public roads during construction.

SAFETY AND SECURITY - All normal and reasonable contractor measures to promote safety during construction will be required. These will include the use of barriers, flaggers, securing of equipment after hours, and other measures commensurate with the level of activity and types of construction equipment to be used.

DISRUPTION OF BUSINESS - No nearby businesses will be disrupted during construction due to restriction of access or creation of inconveniences for patrons.

Aesthetics

The proposed project would be developed and designed with consideration of the existing and proposed character of the surrounding properties in the East End area. Landscaping improvements would further enhance aesthetic conditions.

Community Disruption

The community would not be negatively disrupted during this project. Corridors under construction would have adequate alternative walkways and amenities provided for the continual flow of pedestrians and transit users during that time period. Completed improvements would facilitate movement and circulation in the project area, reducing community disruption.

Safety and Security

The proposed project would enhance the safety and security of pedestrians and transit users in the project area by adding and making improvements to existing sidewalks, curbs, and alleys. Proposed improvements would include safety measures and provision of ADA-compliant ramps at intersections. Improved lighting would add to overall security in the area as well as improved visibility at intersections for pedestrians at curbs, stairs, ramps and crosswalks. All improvements would be designed with consideration of and subjected to review according to the latest Crime Prevention Through Environmental Design (CPTED) standards.

Secondary Development

Property redevelopment is expected as a positive benefit resulting from the proposed LCI streetscape improvements. These improvements in the area will be welcomed by the City and East End community. The improvements will encourage the use of transit and walking as viable alternatives to driving in the area. Keeping newly induced traffic to a minimum in this manner reduces traffic impact of new development, vehicle emissions, and results in air quality benefits for the region (refer to detailed analysis in Chapter 5 of the Access Plan.

Consistency with Local Plans

An East End stakeholder advisory committee has been consulted on an ongoing basis regarding the proposed improvements and is in full support of the project. The project is consistent with the City of Houston's pedestrian/sidewalk standards and plans associated both with general City wide requirements and more specifically as class A streets associated with METRO's LRT corridors.

Hazardous Materials

Streetscape construction activity will be limited to installation of items discussed in this report and described in detail in the Access Plan. All improvements will be installed in the existing public rights-of-way, mostly associated with existing sidewalks. No known hazardous materials are associated with existing sidewalks. The community will not be endangered by any contamination to soil or groundwater because of the construction or use of these proposed improvements.

Seismic Hazard

Houston, Texas, is located within an area with the lowest potential for seismic activity in the continental United States *(Figure III.5)*. The proposed project site is not within a seismic hazardous area.

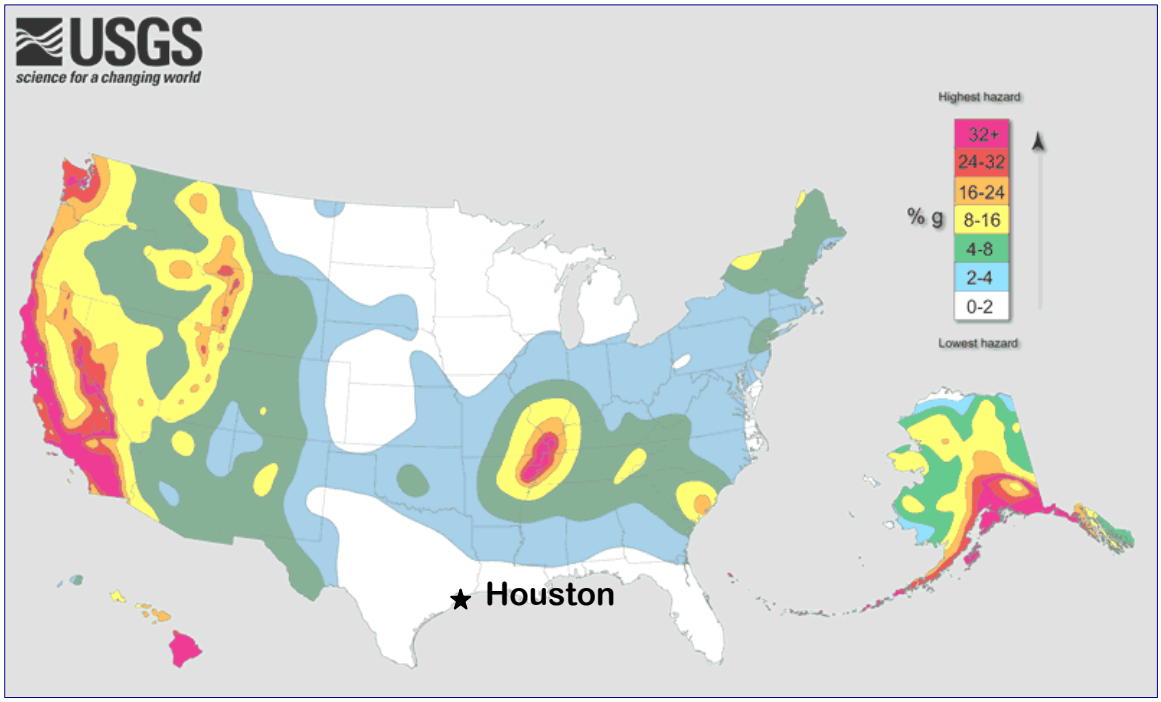


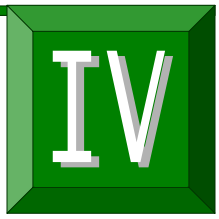
Figure III.5 – United States Seismic Hazard Zones

Environmental Justice

The proposed project improvement program has been designed to fulfill the intent of Environmental Justice and Title VI requirements by providing greater inter-community connectivity through streetscape enhancements that increase aesthetic beautification, enhance pedestrian/transit user security, and increase connectivity for employment and personal uses within the area. The proposed improvements will not create or adversely affect social and economic disparities among minority and low-income populations, but ensure an increase in pedestrian quality and transit access for all.

The development of the proposed improvement program has been pursued to be as inclusive and consultative as possible to inform and incorporate input from all community groups including low income and minority. Several community meetings have been held over a period of eight months to receive input on the plans. An advisory committee was formed with the task of providing broad-based community representation and input to the development of these proposed improvements.

Section IV. LIST OF AGENCIES AND PERSONS CONSULTED



City of Houston Geographic Information Systems Department

Greater East End Management District

Houston-Galveston Area Council Air Quality Department

U.S. Fish & Wildlife National Wetlands Inventory

Federal Emergency Management Agency

Texas General Land Office - Texas Coastal Management Program

National Register of Historic Places

CATEGORICAL EXCLUSION REQUEST

Greater East End Management District

LCI Streetscape Improvements

Houston, Texas

Grant TX-_____

The Greater East End Management District requests an Environmental Categorical Exclusion for its LCI streetscape improvements program. Based on the information presented in this report, the District believes that this project qualifies for categorical exclusion based on the following reasons as provided in FTA Circular 5620:

- Exclusion 7, "Installation of signs, small passenger shelters, and traffic signals if no substantial amount of land is to be acquired or traffic disrupted." (***no*** *land is to be acquired and* ***no*** *traffic will be disrupted)*
- Exclusion 10, "Minor road improvements, installation of curbs, widening of lanes, and intersection improvements for access to transit facilities or improvement of services." *(Only minor improvements are included in the proposed program.)*

The FTA Categorical Exclusion Checklist immediately follows this request form.

Approved By: _____

Approval Date: _____

Date _____

Grant No. _____

Grant Applicant Greater East End Management District

INFORMATION REQUIRED FOR PROBABLE CATEGORICAL EXCLUSION

(SECTION 771.117(d))

_____A. ***DETAILED PROJECT DESCRIPTION***

_____B. ***LOCATION (INCLUDING ADDRESS):*** Attached site map or diagram that identifies the land uses and resources on the site and the adjacent or nearby land uses and resources. This is used to determine the probability of impact on sensitive receptors (such as schools, hospitals, residences) and on protected resources.

_____C. ***METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY:*** Is the proposed project "included" in the current adopted MPO plan, either explicitly or in a grouping of projects or activities? What is the conformity status of that plan? Is the proposed project, or are appropriate phases of the project included in the TIP? What is the conformity status of the TIP?

_____D. ***ZONING:*** Description of zoning, if applicable, and consistency with proposed use.

_____E. ***TRAFFIC IMPACTS:*** Description of potential traffic impacts; including whether the existing roadways have adequate capacity to handle increased bus and other vehicular traffic.

_____F. ***CO HOT SPOTS:*** If there are serious traffic impacts at any affected intersection, and if the area is in nonattainment for CO, demonstrate that CO hot spots will not result.

_____G. ***HISTORIC RESOURCES:*** Description of any cultural, historic, or archaeological resource that is located in the immediate vicinity of the proposed project and the impact of the project on the resource.

_____H. ***NOISE:*** Comparison of distance between the center of the proposed project and the nearest noise receptor to the screening distance for this type of project in FTA's guidelines. If the screening distance is not achieved, attach a "General Noise Assessment" with conclusions.

_____I. ***VIBRATION:*** If the proposed project involves new or relocated steel tracks, a comparison of distance between the center of the proposed project and the nearest vibration receptor to the screening distance for this type of project in FTA's guidelines. If the screening distance is not achieved, attach a "General Vibration Assessment" with conclusions.

_____J. ***ACQUISITIONS AND RELOCATIONS REQUIRED:*** Description of land acquisitions and displacements of residences and businesses.

_____K. ***HAZARDOUS MATERIALS:*** If real property is to be acquired, has a Phase I site assessment for contaminated soil and groundwater been performed? If a Phase II site assessment is recommended, has it been performed? What steps will be taken to ensure that the community in which the project is located is protected from contamination during construction and operation of the project? State the results of consultation with the cognizant State agency regarding the proposed remediation?

_____L. ***COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE:*** Provide a socioeconomic profile of the affected community. Describe the impacts of the proposed project on the community. Identify any community resources that would be affected and the nature of the effect.

_____M. ***USE OF PUBLIC PARKLAND AND RECREATION AREAS:*** Indicate parks and recreational areas on the site map. If the activities and purposes of these resources will be affected by the proposed project, state how.

_____N. ***IMPACTS ON WETLANDS:*** Show potential wetlands on the site map. Description of the project's impact on on-site and adjacent wetlands.

_____O. ***FLOOD PLAIN IMPACTS:*** Is the proposed project located within the 100-year flood plain? If so, address possible flooding of the proposed project site and flooding induced by proposed project due to its taking of flood plain capacity.

_____P. ***IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, AND COASTAL ZONES:*** If any of these are implicated, provide detailed analysis.

_____Q. ***IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES:*** Description of any natural areas (woodlands, prairies, wetlands,

rivers, lakes, streams, designated wildlife or waterfowl refuges, and geological formations) on or near the proposed project area. If present, state the results of consultation with the state department of natural resources on the impacts to these natural areas and on threatened and endangered fauna and flora that may be affected**.**

_____R. ***IMPACTS ON SAFETY AND SECURITY:*** Description of measures that would need to be taken to provide for the safe and secure operation of the project after its construction.

_____S. ***IMPACTS CAUSED BY CONSTRUCTION:*** Description of construction plan and identify impacts due to construction noise, utility disruption, debris and spoil disposal, air and water quality, safety and security, and disruptions of traffic and access to property.

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance with 23 CFR Part 771.117.

_____

Title _____

Applicant's Environmental Reviewer **Date_____**

_____

Title _____

FTA Grant Representative **Date _____**

Appendix A – Annual Emission Reductions

Table A.1 – YEAR 1 Daily Emission Reductions

Type of Emission	*Vehicle Trips (Cold Starts) Reduced Daily(1)*	*H-GAC Cold Starts Factor*	*Grams Reduced Per Cold Start*	*VMT Reduced*	*H-GAC Emission Factor(2) (grams per mile)*	*VMT Reduced Associated Grams*	*Reductions Per Operating Period*	*Grams Conversion to Pounds Reduced (0.00222046)*	*Conversion to Tons Reduced (0.0005)*
NOx	960	4.13083	3,966	8,256	1.0842	8,951.06	12,916.66	28.476	0.014
VOC	960	9.38117	9,006	8,256	0.9286	7,666.59	16,672.52	36.756	0.018
CO	960	43.9721	42,213	8,256	8.0354	66,339.91	108,553.10	239.316	0.120
Total			**55,185**			**82,957.56**	**138,142.28**	**304.548**	**0.152**

(1) Vehicle Trips (Cold Starts) Reduced per Day = 960 multiplied by H-GAC Average Reduced Vehicle Trip Length = 8.6 totals 8,256
(2) Source: H-GAC/EPA arterial composite fleet 24-hour composite @ 25 mph

Table A.2 – YEAR 20 Daily Emission Reductions

Type of Emission	*Vehicle Trips (Cold Starts) Reduced Daily(1)*	*H-GAC Cold Starts Factor*	*Grams Reduced Per Cold Start*	*VMT Reduced*	*H-GAC Emission Factor(2) (grams per mile)*	*VMT Reduced Associated Grams*	*Reductions Per Operating Period*	*Grams Conversion to Pounds Reduced (0.00222046)*	*Conversion to Tons Reduced (0.0005)*
NOx	3,708	4.13083	15,317	31,889	1.0842	34,573.47	49,890.60	109.989	0.055
VOC	3,708	9.38117	34,785	31,889	0.9286	29,612.21	64,397.60	141.971	0.071
CO	3,708	43.9721	163,048	31,889	8.0354	256,237.90	419,286.33	924.359	0.462
Total			**213,150**			**320,423.58**	**533,574.53**	**1,176.319**	**0.588**

(1) Vehicle Trips (Cold Starts) Reduced per Day = 3,708 multiplied by H-GAC Average Reduced Vehicle Trip Length = 8.6 totals 31,889
(2) Source: H-GAC/EPA arterial composite fleet 24-hour composite @ 25 mph

Appendix B - Endangered Species List Harris County

B

U.S. Fish & Wildlife Service

Endangered Species List

Back to Start

List of species by county for Texas:

Counties Selected: Harris

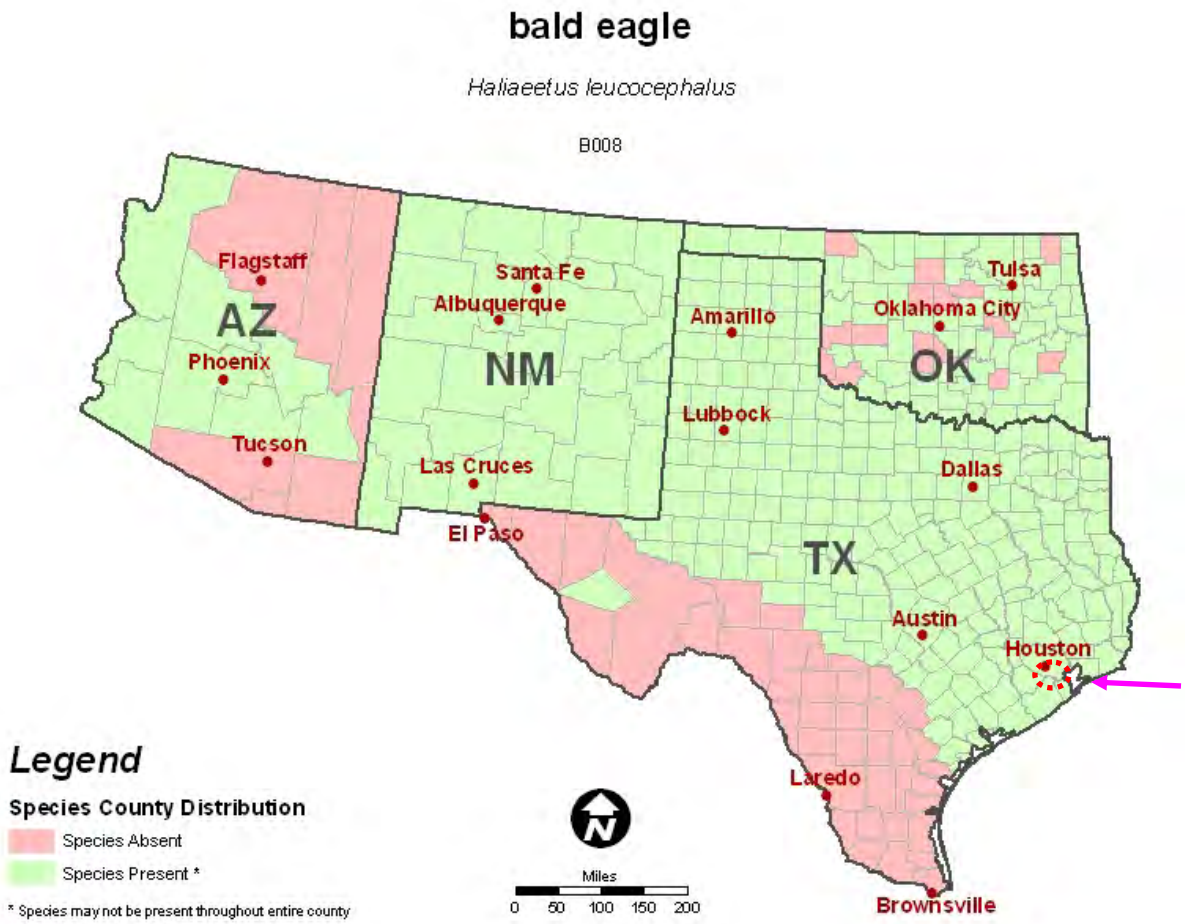
Select one or more counties from the following list to view a county list:

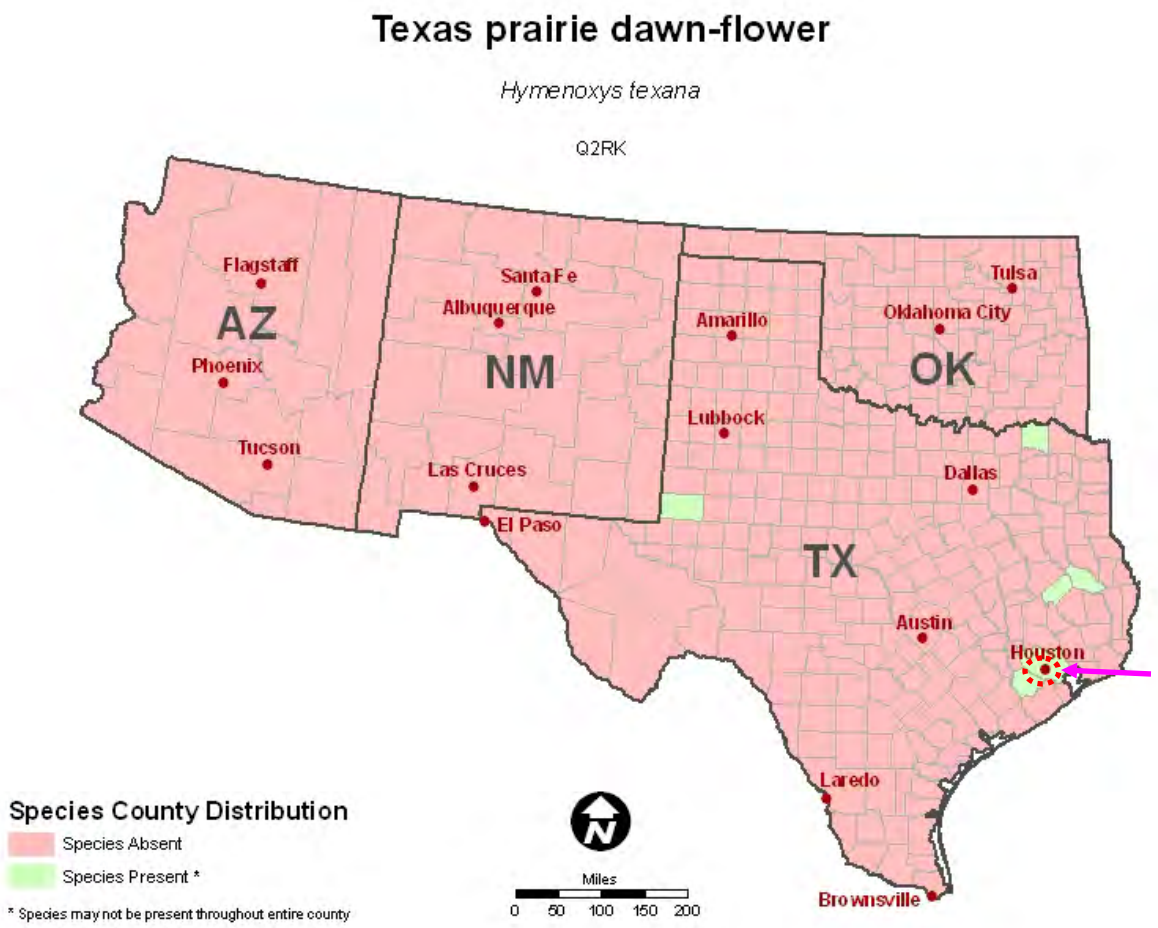
Anderson
Andrews
Angelina
Aransas
Archer

View County List

Harris County

Common Name	Scientific Name	Species Group	Listing Status	Species Image	Species Distribution Map	Critical Habitat	More Info
bald eagle	*Haliaeetus leucocephalus*	Birds	DM				P
Texas prairie dawn-flower	*Hymenoxys texana*	Flowering Plants	E				P


bald eagle
Haliaeetus leucocephalus
B008
Flagstaff
AZ
Phoenix
Tucson
Santa Fe
Albuquerque
NM
Las Cruces
El Paso
Amarillo
Lubbock
Tulsa
Oklahoma City
OK
Dallas
TX
Austin
Houston
Laredo
Brownsville
Legend
Species County Distribution
Species Absent
Species Present *
* Species may not be present throughout entire county
Miles
0 50 100 150 200


Texas prairie dawn-flower
Hymenoxys texana
Q2RK
Flagstaff
AZ
Phoenix
Tucson
Santa Fe
Albuquerque
NM
Las Cruces
El Paso
Amarillo
Lubbock
Tulsa
Oklahoma City
OK
Dallas
TX
Austin
Houston
Laredo
Brownsville
Species County Distribution
Species Absent
Species Present *
* Species may not be present throughout entire county
N
Miles
0 50 100 150 200