



TECHNICAL MEMORANDUM
LAND USE

To: Jerry Smiley, AICP, AECOM

From: Jason Aprill, AICP, AECOM
Kristen Lueken, AECOM

Date: November 1, 2017

RE: DALLAS TO HOUSTON HSR EIS – LAND USE

This technical memorandum summarizes the structural displacements that would occur along the limits of disturbance (LOD) of the Dallas to Houston High-speed Rail Project. A structural displacement would occur when an impact with the LOD, either directly or indirectly, necessitates the removal of a structure.

Structural displacements would be based on a myriad of factors, including the proximity of the structure to the LOD (within the LOD or within 50 feet), the percentage of the overall structure's parcel impacted by the LOD and the permanent disruption of access to the structure caused by the LOD. A structure directly within the LOD or within 50 feet is referred to as a displaced structure while a structure on an acquired parcel is referred to as an acquired structure (or acquisition).

The following scenarios were developed to be used during the extensive analysis of all parcels and structures along the extension of the Project. If a structure was located on a parcel or portion of a parcel that was deemed a take by the following scenarios, the structure would be considered a displaced structure.

- Any structure located within the LOD or within 50 feet of the LOD was classified as a potential displacement of that structure
- Any parcel in which the primary structure was displaced was classified as a potential acquisition of the entire parcel, regardless of size
- If the LOD impacted more than 30 percent of a parcel, regardless of size, it was classified as a potential acquisition of the entire parcel and a potential displacement of all structures on the parcel
- If access to a parcel or a remnant would be blocked or impassable because the Project would not be on viaduct in that location, the portion of the parcel without access would be classified as a potential acquisition and all structures located on the remnant or impassable portion were classified as potential displacements
- If the cumulative impact from the LOD and remnant parcel would be greater than 30 percent, it was classified as a potential acquisition of the entire parcel and displacement of all structures on the parcel
- If the LOD impacted less than 30 percent of a parcel and no primary structures, potential acquisition was limited to the impacted area

The structural displacements and acquisitions, both commercial and residential, were documented using GIS analysis of ARUP parcel survey data, land use classification, county appraisal information and aerial and planar photography. Displacements were initially categorized as residential, commercial, community facilities, civic, oil/gas, agricultural, transportation, or utility. This technical memorandum presents the value and acreage of residential displacements and the business use and estimated employment for commercial displacements. All other categories of displacement are discussed collectively as miscellaneous displacements. A scan of comparable residential properties and businesses was conducted to gauge the effect of the displacements within the community. The findings and summaries are presented in the following memorandum.

Residential Displacements and Acquisitions

Residential structures include both single-family and multi-family buildings. Multi-family buildings within the LOD contain multiple dwelling units within a single building and each unit would be a single displacement. This analysis uses real estate information available from Zillow.com to ascertain the availability of comparable housing stock. **Table 1** provides a thorough analysis of the residential displacements and acquisitions in each county (broken out by segments) and a summary of the comparable residential properties in the surrounding areas.

Table 1: Primary Residential Displacements and Acquisitions

Segment	Displaced Units	Improvement Value			County	Type	Comparable Residential Property in County (Price)		
		Low	High	Avg.			#	Low	High
1	56	\$0 ¹	\$199,050	\$30,040	Dallas	Urban	12*	\$71,000	\$165,000
1	7	\$0 ²	\$59,760	\$19,587	Ellis	Suburban	6*	\$192,000	\$315,000
2A & 2B	47	\$1,336	\$307,365	\$103,093	Ellis	Suburban	10*	\$119,000	\$585,000
3A and 3C	1	\$107,460	\$107,460	\$107,460	Ellis	Suburban	0*	\$0	\$0
3A, 3B, & 3C	61	\$2	\$240,090	\$66,573	Navarro	Suburban	20*	\$45,000	\$918,750
3C	9	\$0 ⁴	\$292,893	\$84,666	Freestone	Rural	5*	\$220,500	349000
4	9	\$0 ⁴	\$147,973	\$48,293	Freestone	Rural	4*	\$289,000	\$699,950
4	8	\$0 ⁵	\$94,320	\$30,915	Limestone	Rural	10*	\$40,000	\$529,000
3C	5	\$22,890	\$205,790	\$70,882	Madison	Rural	6*	\$179,500	\$1,128,500
3C	13	\$3,270	\$ 265,299.43	\$ 77,653.86	<i>Leon</i>	<i>Rural</i>	<i>31*</i>	<i>\$26,000</i>	<i>\$599,500</i>
4	11	\$3,270	\$ 265,299.43	\$ 77,653.86	<i>Leon</i>	<i>Rural</i>	<i>31*</i>	<i>\$26,000</i>	<i>\$599,500</i>
4	19	\$0 ⁶	\$473,410	\$139,860	Madison	Rural	4*	\$179,500	\$390,000
5	41	\$0 ⁷	\$342,090	\$93,155	Grimes	Rural	24*	\$167,500	\$1,485,000
5	38	<i>\$18,355</i>	<i>\$200,357</i>	<i>\$76,191</i>	<i>Waller</i>	<i>Suburban</i>	5*	\$275,000	\$861,190
5	95	\$0 ⁸	\$638,592	\$136,021	Harris	Urban	340*	\$116,900	\$2,000,000
5	10 (1 apartment building) ⁹	\$25,983,362	\$25,983,362	\$25,983,362	Harris	Urban	340*	\$116,900	\$2,000,000
5: Northwest Transit Center	124 (1 apartment building) ¹⁰	\$14,127,971	\$14,127,971	\$14,127,971	Harris	Urban	163*	\$82,500	\$1,500,000

NOTES: Text in RED indicates counties where complete county appraisal data was unavailable; therefore, the average of the county is based on its type (i.e. urban, suburban, rural)

Source: Zillow.com; Dallas CAD 2016, Ellis CAD 2015, Navarro CAD 2015, Freestone CAD 2015, Limestone CAD 2015, Leon CAD 2015, Madison CAD 2016, Grimes CAD 2016, Waller CAD 2015, Harris CAD 2016

*Zillow Accessed on 10/26/2017

¹ Improvement value for residential structure was \$0, according to the Dallas Central Appraisal District

² Improvement value for residential structure was \$0, according to the Ellis Central Appraisal District

³ Improvement value for residential structure was \$0, according to the Navarro Central Appraisal District

⁴ Improvement value for residential structure was \$0, according to the Freestone Central Appraisal District

⁵ Improvement value for residential structure was \$0, according to the Limestone Central Appraisal District

⁶ Improvement value for residential structure was \$0, according to the Madison Central Appraisal District

⁷ Improvement value for residential structure was \$0, according to the Grimes Central Appraisal District

⁸ Improvement value for residential structure was \$0, according to the Harris Central Appraisal District

⁹ This apartment is called North Haven Apartments. The total units in this complex are 310 and one of the 31 buildings would be removed, with an estimated remaining number of units of 300. The building removed has 10 units.

¹⁰ This apartment is called 1300 North Post Oak. The total units in the complex are 247 and one of 2 buildings would be removed, with an estimated remaining number of units of 124.

Averages of Rural Counties

The appraisal district data for Leon County was not accurate or complete. Leon County has been defined as a rural county. It was determined in the analysis for the *Land Use Technical Memorandum* that the averages of rural counties would be used and transferred for Leon County data. The averages of Navarro, Freestone, Limestone, Madison and Grimes counties were used to fill in data for Leon County. **Table 2**, below, illustrates the averages of Navarro, Freestone, Limestone, Madison, and Grimes Counties.

Segment	Displaced Units	Improvement Value			County
		Low	High	Avg.	
3A, 3B & 3C	61	\$2	\$240,090	\$66,573	Navarro
3C	9	\$4	\$292,893	\$84,666	Freestone
4	9	\$4	\$147,973	\$48,293	Freestone
4	9	\$5	\$94,320	\$30,915	Limestone
3C	5	\$22,890	\$205,790	\$70,882	Madison
4	19	\$6	\$473,410	\$139,860	Madison
5	41	\$7	\$342,090	\$93,155	Grimes
3C	13	<i>\$3,274</i>	<i>\$256,652</i>	<i>\$76,335</i>	<i>Leon</i>
4	11	<i>\$3,274</i>	<i>\$256,652</i>	<i>\$76,335</i>	<i>Leon</i>

NOTES: Text in **RED** indicates counties where complete county appraisal data was unavailable; therefore, the average of the county is based on its type (i.e. urban, suburban, rural)

¹ Improvement value for the oil/gas structures was \$0, according to the Navarro Central Appraisal District² Improvement value for the oil/gas structures was \$0, according to the Freestone Central Appraisal District

³ Improvement value for the oil/gas structures was \$0, according to the Limestone Central Appraisal District

⁴ Improvement value for the oil/gas structures was \$0, according to the Madison Central Appraisal District

⁵ Improvement value for the oil/gas structures was \$0, according to the Grimes Central Appraisal District

Averages for Suburban Counties

Similar to Leon County, the appraisal district data for Waller County was not accurate or complete. Waller County is located just north of Harris County and is deemed a suburban county for this study. The data from Ellis County (the other suburban county) was used to fill in data gaps for Waller County. **Table 3** illustrates the averages of Ellis County segments.

Segment	Displaced Units	Improvement Value			County
		Low	High	Avg.	
1	7	\$2	\$59,760	\$19,587	Ellis
2A & 2B	47	\$1,336	\$307,365	\$103,093	Ellis
3A & 3C	1	\$107,460	\$107,460	\$107,460	Ellis
5	38	<i>\$36,266</i>	<i>\$158,195</i>	<i>\$91,503</i>	<i>Waller</i>

NOTES: Text in **RED** indicates counties where complete county appraisal data was unavailable; therefore, the average of the county is based on its type (i.e. urban, suburban, rural)

Miscellaneous Primary Structure Displacements and Acquisitions

The structural displacements that could potentially result from the Build Alternatives include some structures that are neither residential nor commercial. A summary of potential impacts to primary structures including oil/gas, community facilities, civic and cultural resource is presented in **Table 4**.

Table 4: Miscellaneous Displacements and Acquisitions of Primary Structures

Segment	Type	#	Improvement Value			County
			Low	High	Avg.	
1	Civic ¹	1	\$4,614,210	\$4,614,210	\$4,614,210	Dallas
2B	Oil/Gas	1	7,000	7,000	-	Ellis
3C	Oil/Gas ²	9	\$0	\$ 120,863	\$ 12,086	Freestone
3C	Community Facilities ³	1	\$905,298	\$905,298	\$905,298	Freestone
4	Community Facilities ⁴	1	\$0	\$0	\$0	Madison
4	Oil/Gas ⁵	8	\$0	\$155,810	\$67,953	Madison
4	Cultural Resource ⁶	1	\$0	\$0	\$0	Madison
4	Utilities	1	\$96,490	\$96,490	\$96,490	Madison
4	Oil/Gas ⁷	9	\$0	\$167,040	\$42,205	Limestone
5	Oil/Gas	2	\$2,330	\$342,090	\$69,054	Grimes
5	Civic ⁸	2	\$0	\$0	\$0	Harris
5	Oil/Gas ⁹	1	\$0	\$0	\$0	Harris
5	Community Facilities ¹⁰	1	\$0	\$0	\$0	Harris

Source: Dallas CAD 2016, Ellis CAD 2015, Navarro CAD 2015, Freestone CAD 2015, Limestone CAD 2015, Leon CAD 2015, Madison CAD 2016, Grimes CAD 2016, Waller CAD 2015, Harris CAD 2016

¹ Property is a vacant warehouse building owned by the City of Dallas

² Improvement value for the oil/gas structures was \$0, according to the Freestone Central Appraisal District

³ Community Facility is Mount Zion Missionary Baptist Church.

⁴ Community Facility is Union Church. It has no improvement value according to the Madison Central Appraisal District

⁵ Improvement value for an oil/gas structure was \$0, according to the Madison Central Appraisal District

⁶ Cultural Resource is a structure located on a cemetery. It has no improvement value according to the Madison Central Appraisal District. While the property containing the cemetery would likely be purchased, the cemetery burials would not likely have to be relocated as a result of this project.

⁷ Improvement value for the oil/gas structures was \$0, according to the Limestone Central Appraisal District

⁸ Improvement value includes a concrete batch plant for TxDOT. Improvement value is \$0, according to the Harris Central Appraisal District

⁹ Improvement value for the oil/gas structures was \$0, according to the Harris Central Appraisal District

¹⁰ This is part of the Connection School of Houston. The improvement value is \$0, according to the Harris Central Appraisal District

Primary Commercial Structure Displacements and Acquisitions

Displaced commercial structures were identified through survey data, where available, and supplemented with listed businesses available through a standard Google search. In cases of limited data availability (where noted in **Tables 5-9** below), the business type was ascertained through examination of aerial, planar and street-level photography. All businesses were classified according to their nearest North American Industry Classification System (NAICS) code in order to determine the average number of employees per firm and the number of similar businesses operating within the county. Employment per firm and similar business were determined using the US Census Bureau (USCB)'s County Business Pattern (CBP) tables for 2014, by detailed industry. All averages are taken at the county level, unless otherwise noted in the tables. No commercial displacements were found for Ellis, Navarro, Madison, Limestone or Waller counties.

Table 5: Dallas County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Dallas County
1	Rodeo Arena	711212	Racetracks	107	3
1	Shipping Warehouse ¹	484121	General freight trucking, long-distance, truckload	33	252
1	Recycling Center	562920	Materials recovery facilities	16	17
1	PVC, Resin, Chlorine Manufacturer	325211	Plastics material and resin manufacturing	20	6
1	Vocational Training Center	611519	Other technical and trade schools	14	43
1	Steel Plate Manufacturer ²	332313	Plate work manufacturing	0	8
1	Structural Engineer	541330	Engineering services	21	536
1	Steel Construction Specialist	238120	Structural steel and precast concrete contractors	37	34
1	Used Tire Services	441320	Tire dealers	8	159
1	Data Center ²	517911	Telecommunications resellers	0	25
1	Gas Station	447110	Gasoline stations with convenience stores	7	731
1	Portable Toilet Supplier	562991	Septic tank and related services	21	6
1	Concrete Plant ¹	327320	Ready-mix concrete manufacturing	17	20
1	Millwork/Retail Display Manufacturer	337215	Showcase, partition, shelving and locker manufacturing	26	10
1	Concrete Recycling/Infrastructure Materials Supplier	327390	Other concrete product manufacturing	30	13
1	Concrete Plant	327320	Ready-mix concrete manufacturing	17	20
1	Liquor Store	445310	Beer, wine and liquor stores	4	202
1	Building Material Supplier	327390	Other concrete product manufacturing	30	13
1	Used Auto Sales ¹	441120	Used car dealers	9	275
1	Liquor store	445310	Beer, wine and liquor stores	4	202

Source: North American Industry Classification System (NAICS), 2016; AECOM, 2016.

¹Unlisted business, based on visual imagery

²Structure represents an offsite storage or utility location to a larger business located elsewhere, assuming no dedicated employment at this location.

Table 6: Freestone County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Freestone County
3C	Chicken Farm ¹	424440	Poultry and poultry product merchant wholesalers	10	1
3C	Nursery ¹	444220	Nursery, garden center and farm supply stores	7	4
3C	Gas station	447110	Gasoline stations with convenience stores	4	13
3C	Private medical Air Transportation	621910	Ambulance services	17	3
3C	Distribution shed ^{1,2}	N/A	N/A	7	N/A
3C	Gas Station/Truck Stop	447190	Other gasoline stations	14	3
3C	Trailer Sales	441310	Automotive parts and accessories stores	10	1
3C	Distribution shed ^{1,2}	N/A	N/A	8	N/A
3C	RV Park Office	721211	RV (recreational vehicle) parks and campgrounds	10	1

Source: North American Industry Classification System (NAICS), 2016; AECOM, 2016.

¹ Unlisted business, based on visual imagery

² Insufficient detail to classify, employment estimate is based on vehicle activity at site

Table 7: Leon County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Leon County
3C	Freight Trucking ¹	484121	General freight trucking, long-distance, truckload	3	4
3C	Gas Station	447110	Gasoline stations with convenience stores	11	15
3C	Vacant Gas Station ²	447110	Gasoline stations with convenience stores	0	15
3C	Sand/Gravel Quarry ^{1,3}	212321	Construction sand and gravel mining	12	N/A
3C	Animal Production/Farm ¹	115210	Support activities for animal production	25	2
3C	Fast Food Restaurant	722513	Limited-service restaurants	17	10
3C	Concrete Plant ³	327320	Ready-mix concrete manufacturing	14	N/A
3C	Sand/Gravel Pit ^{1,3}	212321	Construction sand and gravel mining	12	N/A

Source: North American Industry Classification System (NAICS), 2016; AECOM, 2016.

¹ Unlisted business, based on visual imagery

² Vacant Structure therefore no employment

³ Employment estimates based on state-level NAICS data

Table 8: Grimes County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Grimes County
5	Rail Yard ¹	488210	Support activities for rail transportation	0	2

Source: North American Industry Classification System (NAICS), 2016; AECOM, 2016.

¹Structure represents an offsite storage or utility location to a larger business located elsewhere, assuming no dedicated employment at this location.

Table 9: Harris County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Harris County
5	Used Auto Sales	441120	Used car dealers	9	275
5	Warehousing and distribution	484121	General freight trucking, long-distance, truckload	14	367
5	Machine Manufacturer	333249	Other industrial machinery manufacturing	17	14
5	Motel	721110	Hotels (except casino hotels) and motels	25	667
5	Auto Repair Shop	811111	General automotive repair	5	968
5	Adult Club	711120	Dance companies	46	7
5	Record Retention/Document Storage	493190	Other warehousing and storage	29	75
5	Filtration Equipment Manufacturer	333413	Industrial and commercial fan and blower and air purification equipment manufacturing	30	9
5	Lab	541380	Testing laboratories	42	209
5	Drilling Contractor	213111	Drilling oil and gas wells	124	100
5	Pipe, Sprinkler and Plumbing Supplier	423720	Plumbing and heating equipment and supplies (hydronic) merchant wholesalers	19	87
5	Cabinet Maker	337110	Wood kitchen cabinet and countertop manufacturing	4	20
5	Storage Facility	531130	Lessors of mini warehouses and self-storage units	2	350
5	Rice Milling	311212	Rice milling	25	2

Table 9: Harris County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Harris County
5	Pipeline	486910	Pipeline transportation of refined petroleum products	26	17
5	Freight Trucking	484121	General freight trucking, long-distance, truckload	14	367
5	Roofing and Siding Contractor	238160	Roofing contractors	9	167
5	Granite Supplier	327991	Cut stone and stone product manufacturing	14	17
5	Oil well Machinery and Parts Manufacturer, Vendor and Rental	333132	Oil and gas field machinery and equipment manufacturing	143	149
5	Fast Food Restaurant	722513	Limited-service restaurants	17	10
5	Recycling Center	562920	Materials recovery facilities	16	20
5	Gas Station	447110	Gasoline stations with convenience stores	5	1,537
NWTC	Flat rolled steel manufacturing and distribution	331221	Rolled steel shape manufacturing	10	1
NWTC	Wire fabric/fence Manufacturer	332618	Other fabricated wire product manufacturing	57	15
NWTC	Wire fabric/fence Manufacturer	332618	Other fabricated wire product manufacturing	57	15
NWTC	Fitness Gym	713940	Fitness and recreational sports centers	24	342
NWTC	Oil/Gas/Mining Tool Manufacturer	333517	Machine tool manufacturing	10	15
NWTC	Office Supply Store	453210	Office supplies and stationery stores	7	91
NWTC	Office Equipment Wholesaler	423420	Office equipment merchant wholesalers	14	138
NWTC	Hydraulic Equipment Supplier	333911	Pump and pumping equipment manufacturing	63	35
NWTC	Capital Investment Services	523930	Investment advice	7	304
NWTC	Communications Provider (non-retail)	517911	Telecommunications resellers	7	31
NWTC	Picture Frame Shop	423220	Home furnishing merchant wholesalers	15	117
NWTC	Senior Computing Services	561439	Other business service centers (including copy	12	93

Table 9: Harris County Commercial Displacements and Acquisitions (Primary)

Segment	Business Type	Nearest NAICS	NAICS Industry	Estimated Employees	Similar Businesses within Harris County
			shops)		
NWTC	Urgent Care Facility	621493	Freestanding ambulatory surgical and emergency centers	18	108
NWTC	Warehouse and local freight	484110	General freight trucking, local	7	321
NWTC	Warehouse and local freight	484110	General freight trucking, local	7	321
NWM	Parking Garage	812930	Parking lots and garages	16	225
NWM	Granite and Marble Supplier	327991	Cut stone and stone product manufacturing	14	17
IND	Plumbing Contractor	238220	Plumbing, heating and air-conditioning contractors	17	964

Source: North American Industry Classification System (NAICS), 2016; AECOM, 2016.



**TECHNICAL MEMORANDUM
SOCIOECONOMIC AND COMMUNITY FACILITIES**

To: Jerry Smiley, AICP, AECOM

From: Peggy Roberts, AECOM

Date: November 1, 2017

RE: DALLAS TO HOUSTON HSR EIS – SOCIOECONOMIC AND COMMUNITY FACILITIES

The enclosed documentation supports the Socioeconomic impact analyses for the Dallas to Houston HSR EIS. The following data tables are enclosed:

- Selected Demographic Characteristics for Block Groups along Each Segment Table

Data shown in this table includes the demographic characteristics for each block group by county along the Build Alternatives. Information includes the block group number, census tract, county, 2010 population, percent minority population, percent Hispanic origin, percent individuals below poverty level and median household income. Project segments have been identified for each block group/census tract listed.

The following files contain census data by population, race, ethnicity, low income, median income and children under 18 for the entire study area as well as a summary table.

- Census Data – 5 year – Total Population within the Study Area by Block Group, County
- Census Data – 5 Year – Race within the Study Area by Block Group and Census Tract, County
- Census Data – 5 Year – Ethnicity within the Study Area by Block Group and Census Tract, County
- Census Data – 5 Year – Low Income within the Study Area by Block Group and Census Tract, County
- Census Data – Summary – Percent Minority, Percent Hispanic, Percent Poverty, Median Income by Block Group and Census Tract, County
- Census Data – 2014 Total and Percent of Children under 18 Years Old – by Block, Census Tract, and County

In addition, economic data files from various sources are provided. These data support the economic impact analyses.

- Economics – Project Cost¹ by Alternative, Source: ARUP
- Economics – HSR Construction Cost² Estimate, Source: TCRR
- Economics – TCR Summary Schedule, Source: TCRR
- Economics – 2015 Occupational Employment Statistics (OES), Source: Bureau of Labor Statistics, U.S. Department of Labor
- Economics – Staffing Assumptions

¹ Excludes Systems, Rolling Stock and ROW costs

² Includes Systems and Rolling Stock

- Economics – 1940 – 2009 Deflator – Source: Whitehouse.gov
- Economics – Project Costs by Geography

**Socioeconomic:
Total Population within the Study Area by
Block Group and Census Tract, County:**

Geography	Total Population
Block Group 2, Census Tract 20, Dallas County, Texas	652
Block Group 1, Census Tract 34, Dallas County, Texas	653
Block Group 2, Census Tract 34, Dallas County, Texas	730
Block Group 1, Census Tract 40, Dallas County, Texas	397
Block Group 2, Census Tract 40, Dallas County, Texas	587
Block Group 2, Census Tract 41, Dallas County, Texas	535
Block Group 1, Census Tract 86.03, Dallas County, Texas	912
Block Group 1, Census Tract 86.04, Dallas County, Texas	1671
Block Group 2, Census Tract 86.04, Dallas County, Texas	1334
Block Group 1, Census Tract 87.01, Dallas County, Texas	1192
Block Group 2, Census Tract 87.01, Dallas County, Texas	727
Block Group 4, Census Tract 87.01, Dallas County, Texas	501
Block Group 5, Census Tract 87.01, Dallas County, Texas	1089
Block Group 1, Census Tract 89, Dallas County, Texas	1267
Block Group 1, Census Tract 100, Dallas County, Texas	9511
Block Group 1, Census Tract 114.01, Dallas County, Texas	1783
Block Group 3, Census Tract 115, Dallas County, Texas	228
Block Group 4, Census Tract 115, Dallas County, Texas	789
Block Group 1, Census Tract 167.03, Dallas County, Texas	1091
Block Group 2, Census Tract 168.02, Dallas County, Texas	1651
Block Group 1, Census Tract 169.02, Dallas County, Texas	3294
Block Group 2, Census Tract 169.02, Dallas County, Texas	1965
Block Group 3, Census Tract 169.03, Dallas County, Texas	1542
Block Group 5, Census Tract 169.03, Dallas County, Texas	778
Block Group 1, Census Tract 202, Dallas County, Texas	433
Block Group 2, Census Tract 202, Dallas County, Texas	2175
Block Group 3, Census Tract 202, Dallas County, Texas	1417
Block Group 1, Census Tract 204, Dallas County, Texas	1336
Block Group 3, Census Tract 204, Dallas County, Texas	2226
Block Group 1, Census Tract 601.01, Ellis County, Texas	2571
Block Group 2, Census Tract 601.01, Ellis County, Texas	1381
Block Group 1, Census Tract 601.02, Ellis County, Texas	3017
Block Group 3, Census Tract 601.02, Ellis County, Texas	3140
Block Group 1, Census Tract 602.10, Ellis County, Texas	893
Block Group 1, Census Tract 611, Ellis County, Texas	1584
Block Group 1, Census Tract 612, Ellis County, Texas	756
Block Group 2, Census Tract 612, Ellis County, Texas	1203
Block Group 1, Census Tract 613, Ellis County, Texas	924
Block Group 2, Census Tract 613, Ellis County, Texas	1496
Block Group 1, Census Tract 1, Freestone County, Texas	2781
Block Group 2, Census Tract 1, Freestone County, Texas	2700
Block Group 1, Census Tract 3, Freestone County, Texas	1031
Block Group 2, Census Tract 4, Freestone County, Texas	1476
Block Group 1, Census Tract 6, Freestone County, Texas	671
Block Group 2, Census Tract 6, Freestone County, Texas	930
Block Group 3, Census Tract 6, Freestone County, Texas	2907

Geography	Total Population
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1788
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1669
Block Group 5, Census Tract 1802, Grimes County, Texas	1250
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1425
Block Group 2, Census Tract 1803.01, Grimes County, Texas	1254
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1848
Block Group 2, Census Tract 1803.02, Grimes County, Texas	1595
Block Group 1, Census Tract 4301, Harris County, Texas	813
Block Group 2, Census Tract 4301, Harris County, Texas	1658
Block Group 5, Census Tract 4301, Harris County, Texas	1104
Block Group 4, Census Tract 5108, Harris County, Texas	865
Block Group 2, Census Tract 5109, Harris County, Texas	3703
Block Group 1, Census Tract 5110.01, Harris County, Texas	1551
Block Group 2, Census Tract 5110.01, Harris County, Texas	1005
Block Group 1, Census Tract 5201, Harris County, Texas	2439
Block Group 1, Census Tract 5203, Harris County, Texas	2264
Block Group 1, Census Tract 5204, Harris County, Texas	1383
Block Group 2, Census Tract 5204, Harris County, Texas	2156
Block Group 1, Census Tract 5205, Harris County, Texas	1439
Block Group 2, Census Tract 5205, Harris County, Texas	3471
Block Group 3, Census Tract 5205, Harris County, Texas	1691
Block Group 4, Census Tract 5205, Harris County, Texas	1732
Block Group 1, Census Tract 5206.01, Harris County, Texas	2331
Block Group 1, Census Tract 5206.02, Harris County, Texas	1024
Block Group 1, Census Tract 5214, Harris County, Texas	1203
Block Group 2, Census Tract 5214, Harris County, Texas	1566
Block Group 3, Census Tract 5214, Harris County, Texas	1660
Block Group 4, Census Tract 5214, Harris County, Texas	2727
Block Group 4, Census Tract 5215, Harris County, Texas	2204
Block Group 1, Census Tract 5216, Harris County, Texas	2400
Block Group 2, Census Tract 5216, Harris County, Texas	1173
Block Group 1, Census Tract 5217, Harris County, Texas	1414
Block Group 2, Census Tract 5217, Harris County, Texas	2387
Block Group 3, Census Tract 5217, Harris County, Texas	1822
Block Group 4, Census Tract 5217, Harris County, Texas	1401
Block Group 1, Census Tract 5218, Harris County, Texas	2459
Block Group 3, Census Tract 5301, Harris County, Texas	819
Block Group 1, Census Tract 5342.03, Harris County, Texas	1772
Block Group 1, Census Tract 5401, Harris County, Texas	7658
Block Group 3, Census Tract 5401, Harris County, Texas	1653
Block Group 2, Census Tract 5408, Harris County, Texas	3294
Block Group 2, Census Tract 5409.02, Harris County, Texas	2428
Block Group 1, Census Tract 5410.01, Harris County, Texas	8473
Block Group 1, Census Tract 5410.02, Harris County, Texas	7007
Block Group 2, Census Tract 5410.02, Harris County, Texas	1493
Block Group 1, Census Tract 5410.03, Harris County, Texas	4913

Geography	Total Population
Block Group 1, Census Tract 5430.01, Harris County, Texas	5848
Block Group 1, Census Tract 5430.02, Harris County, Texas	9606
Block Group 2, Census Tract 5430.02, Harris County, Texas	3680
Block Group 1, Census Tract 5431, Harris County, Texas	2785
Block Group 6, Census Tract 5517.01, Harris County, Texas	2279
Block Group 1, Census Tract 5518, Harris County, Texas	2540
Block Group 3, Census Tract 5518, Harris County, Texas	1055
Block Group 1, Census Tract 5519, Harris County, Texas	1023
Block Group 2, Census Tract 5519, Harris County, Texas	2305
Block Group 3, Census Tract 5519, Harris County, Texas	2823
Block Group 3, Census Tract 5520.01, Harris County, Texas	2491
Block Group 1, Census Tract 5520.02, Harris County, Texas	1926
Block Group 1, Census Tract 5521.01, Harris County, Texas	3842
Block Group 1, Census Tract 5521.03, Harris County, Texas	1071
Block Group 2, Census Tract 5522, Harris County, Texas	1620
Block Group 3, Census Tract 5522, Harris County, Texas	2412
Block Group 2, Census Tract 5544.01, Harris County, Texas	9344
Block Group 2, Census Tract 5544.02, Harris County, Texas	6573
Block Group 1, Census Tract 5544.03, Harris County, Texas	9721
Block Group 2, Census Tract 5557.01, Harris County, Texas	4213
Block Group 1, Census Tract 5560, Harris County, Texas	1284
Block Group 3, Census Tract 9501, Leon County, Texas	2679
Block Group 1, Census Tract 9502, Leon County, Texas	607
Block Group 2, Census Tract 9502, Leon County, Texas	735
Block Group 3, Census Tract 9502, Leon County, Texas	617
Block Group 5, Census Tract 9502, Leon County, Texas	1083
Block Group 2, Census Tract 9503, Leon County, Texas	1320
Block Group 3, Census Tract 9503, Leon County, Texas	1138
Block Group 4, Census Tract 9503, Leon County, Texas	1886
Block Group 1, Census Tract 9707, Limestone County, Texas	673
Block Group 2, Census Tract 9707, Limestone County, Texas	977
Block Group 1, Census Tract 2, Madison County, Texas	862
Block Group 1, Census Tract 3, Madison County, Texas	1001
Block Group 1, Census Tract 9703, Navarro County, Texas	1418
Block Group 3, Census Tract 9704, Navarro County, Texas	1301
Block Group 4, Census Tract 9709, Navarro County, Texas	2567
Block Group 5, Census Tract 9709, Navarro County, Texas	1769
Block Group 1, Census Tract 9710, Navarro County, Texas	1896
Block Group 1, Census Tract 6806, Waller County, Texas	2472
Block Group 2, Census Tract 6806, Waller County, Texas	2443

**Socioeconomic:
Race within the Study Area by
Block Group and Census Tract, County:**

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 20, Dallas County, Texas	652	345	229	0	19	0	0	59	59	0
Block Group 1, Census Tract 34, Dallas County, Texas	653	47	571	0	0	0	35	0	0	0
Block Group 2, Census Tract 34, Dallas County, Texas	730	237	426	3	21	0	43	0	0	0
Block Group 1, Census Tract 40, Dallas County, Texas	397	109	288	0	0	0	0	0	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	587	77	510	0	0	0	0	0	0	0
Block Group 2, Census Tract 41, Dallas County, Texas	535	240	251	0	13	0	19	12	0	12
Block Group 1, Census Tract 86.03, Dallas County, Texas	912	243	657	0	0	0	0	12	12	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	1671	553	1081	0	0	0	0	37	0	37
Block Group 2, Census Tract 86.04, Dallas County, Texas	1334	124	1167	0	0	18	25	0	0	0
Block Group 1, Census Tract 87.01, Dallas County, Texas	1192	0	1192	0	0	0	0	0	0	0
Block Group 2, Census Tract 87.01, Dallas County, Texas	727	30	697	0	0	0	0	0	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	501	0	501	0	0	0	0	0	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	1089	37	991	0	0	0	40	21	11	10

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 89, Dallas County, Texas	1267	523	744	0	0	0	0	0	0	0
Block Group 1, Census Tract 100, Dallas County, Texas	9511	4958	3989	88	52	18	250	156	32	124
Block Group 1, Census Tract 114.01, Dallas County, Texas	1783	187	1570	11	0	0	0	15	0	15
Block Group 3, Census Tract 115, Dallas County, Texas	228	149	79	0	0	0	0	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	789	478	307	0	0	0	4	0	0	0
Block Group 1, Census Tract 167.03, Dallas County, Texas	1091	893	175	0	0	0	5	18	18	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	1651	588	963	0	0	0	93	7	0	7
Block Group 1, Census Tract 169.02, Dallas County, Texas	3294	1788	1377	18	0	20	78	13	0	13
Block Group 2, Census Tract 169.02, Dallas County, Texas	1965	1239	453	43	0	54	160	16	16	0
Block Group 3, Census Tract 169.03, Dallas County, Texas	1542	980	481	22	1	0	52	6	5	1
Block Group 5, Census Tract 169.03, Dallas County, Texas	778	503	239	0	0	0	36	0	0	0
Block Group 1, Census Tract 202, Dallas County, Texas	433	0	375	0	0	0	55	3	3	0
Block Group 2, Census Tract 202, Dallas County, Texas	2175	18	2145	0	0	0	0	12	0	12

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 3, Census Tract 202, Dallas County, Texas	1417	281	1091	0	0	0	0	45	0	45
Block Group 1, Census Tract 204, Dallas County, Texas	1336	717	555	0	0	11	53	0	0	0
Block Group 3, Census Tract 204, Dallas County, Texas	2226	1007	753	6	171	0	88	201	25	176
Block Group 1, Census Tract 601.01, Ellis County, Texas	2571	2180	224	0	13	0	0	154	0	154
Block Group 2, Census Tract 601.01, Ellis County, Texas	1381	865	243	148	11	0	46	68	34	34
Block Group 1, Census Tract 601.02, Ellis County, Texas	3017	2128	41	0	20	0	709	119	0	119
Block Group 3, Census Tract 601.02, Ellis County, Texas	3140	2488	114	146	0	0	240	152	9	143
Block Group 1, Census Tract 602.10, Ellis County, Texas	893	829	33	0	0	0	25	6	0	6
Block Group 1, Census Tract 611, Ellis County, Texas	1584	1423	81	0	0	0	6	74	57	17
Block Group 1, Census Tract 612, Ellis County, Texas	756	716	11	25	0	0	1	3	0	3
Block Group 2, Census Tract 612, Ellis County, Texas	1203	920	124	30	0	0	40	89	0	89
Block Group 1, Census Tract 613, Ellis County, Texas	924	872	0	25	0	0	9	18	0	18
Block Group 2, Census Tract 613, Ellis County, Texas	1496	1378	34	7	0	0	51	26	0	26

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 1, Freestone County, Texas	2781	2259	340	65	19	0	73	25	0	25
Block Group 2, Census Tract 1, Freestone County, Texas	2700	2450	195	0	10	0	33	12	0	12
Block Group 1, Census Tract 3, Freestone County, Texas	1031	608	419	0	0	0	0	4	0	4
Block Group 2, Census Tract 4, Freestone County, Texas	1476	1119	313	6	0	0	0	38	0	38
Block Group 1, Census Tract 6, Freestone County, Texas	671	671	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 6, Freestone County, Texas	930	882	27	9	0	0	0	12	0	12
Block Group 3, Census Tract 6, Freestone County, Texas	2907	2262	470	54	0	0	109	12	6	6
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1788	1466	78	0	0	0	162	82	0	82
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1669	1440	19	0	0	0	174	36	0	36
Block Group 5, Census Tract 1802, Grimes County, Texas	1250	887	257	0	0	0	11	95	0	95
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1425	1006	86	187	0	0	96	50	0	50
Block Group 2, Census Tract 1803.01, Grimes County, Texas	1254	1181	5	5	0	0	17	46	0	46
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1848	1591	126	19	0	0	15	97	0	97

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 1803.02, Grimes County, Texas	1595	1399	186	0	0	0	7	3	0	3
Block Group 1, Census Tract 4301, Harris County, Texas	813	728	0	0	49	0	14	22	10	12
Block Group 2, Census Tract 4301, Harris County, Texas	1658	1452	64	0	103	0	0	39	0	39
Block Group 5, Census Tract 4301, Harris County, Texas	1104	1001	43	0	60	0	0	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	865	719	0	30	53	0	0	63	0	63
Block Group 2, Census Tract 5109, Harris County, Texas	3703	2988	140	0	253	0	166	156	0	156
Block Group 1, Census Tract 5110.01, Harris County, Texas	1551	1416	51	15	45	0	10	14	0	14
Block Group 2, Census Tract 5110.01, Harris County, Texas	1005	916	31	0	24	0	34	0	0	0
Block Group 1, Census Tract 5201, Harris County, Texas	2439	1932	53	0	121	0	239	94	0	94
Block Group 1, Census Tract 5203, Harris County, Texas	2264	1524	116	0	15	0	533	76	41	35
Block Group 1, Census Tract 5204, Harris County, Texas	1383	795	16	0	15	0	522	35	10	25
Block Group 2, Census Tract 5204, Harris County, Texas	2156	1535	42	0	29	0	482	68	7	61
Block Group 1, Census Tract 5205, Harris County, Texas	1439	1180	37	0	0	0	222	0	0	0

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 5205, Harris County, Texas	3471	2354	608	91	0	0	418	0	0	0
Block Group 3, Census Tract 5205, Harris County, Texas	1691	1384	0	0	0	0	307	0	0	0
Block Group 4, Census Tract 5205, Harris County, Texas	1732	1441	133	0	0	0	158	0	0	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	2331	1593	0	62	84	0	592	0	0	0
Block Group 1, Census Tract 5206.02, Harris County, Texas	1024	542	0	0	0	0	482	0	0	0
Block Group 1, Census Tract 5214, Harris County, Texas	1203	315	0	69	0	0	727	92	75	17
Block Group 2, Census Tract 5214, Harris County, Texas	1566	401	33	0	0	0	1116	16	16	0
Block Group 3, Census Tract 5214, Harris County, Texas	1660	1181	0	0	14	17	361	87	73	14
Block Group 4, Census Tract 5214, Harris County, Texas	2727	990	0	89	0	0	1648	0	0	0
Block Group 4, Census Tract 5215, Harris County, Texas	2204	1437	44	0	22	0	627	74	0	74
Block Group 1, Census Tract 5216, Harris County, Texas	2400	1937	26	17	7	0	358	55	55	0
Block Group 2, Census Tract 5216, Harris County, Texas	1173	670	393	0	0	0	110	0	0	0
Block Group 1, Census Tract 5217, Harris County, Texas	1414	995	331	0	0	0	88	0	0	0

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 5217, Harris County, Texas	2387	1060	534	219	49	0	525	0	0	0
Block Group 3, Census Tract 5217, Harris County, Texas	1822	1004	385	0	102	0	308	23	23	0
Block Group 4, Census Tract 5217, Harris County, Texas	1401	591	548	0	10	0	207	45	0	45
Block Group 1, Census Tract 5218, Harris County, Texas	2459	1424	408	0	536	0	91	0	0	0
Block Group 3, Census Tract 5301, Harris County, Texas	819	716	14	0	0	0	89	0	0	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	1772	802	524	13	202	0	231	0	0	0
Block Group 1, Census Tract 5401, Harris County, Texas	7658	4514	391	0	2175	0	399	179	33	146
Block Group 3, Census Tract 5401, Harris County, Texas	1653	1089	0	0	0	0	528	36	0	36
Block Group 2, Census Tract 5408, Harris County, Texas	3294	2098	467	128	307	0	219	75	75	0
Block Group 2, Census Tract 5409.02, Harris County, Texas	2428	1306	778	0	230	0	0	114	0	114
Block Group 1, Census Tract 5410.01, Harris County, Texas	8473	4561	1797	41	1479	0	421	174	73	101
Block Group 1, Census Tract 5410.02, Harris County, Texas	7007	3948	1197	17	1089	0	353	403	55	348
Block Group 2, Census Tract 5410.02, Harris County, Texas	1493	1149	80	0	100	0	45	119	0	119

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 5410.03, Harris County, Texas	4913	2369	1251	0	427	0	360	506	0	506
Block Group 1, Census Tract 5430.01, Harris County, Texas	5848	4144	661	132	800	0	20	91	0	91
Block Group 1, Census Tract 5430.02, Harris County, Texas	9606	6370	1305	0	1293	0	336	302	130	172
Block Group 2, Census Tract 5430.02, Harris County, Texas	3680	2607	413	0	252	0	283	125	0	125
Block Group 1, Census Tract 5431, Harris County, Texas	2785	2354	165	0	11	0	188	67	35	32
Block Group 6, Census Tract 5517.01, Harris County, Texas	2279	1509	14	0	508	0	119	129	27	102
Block Group 1, Census Tract 5518, Harris County, Texas	2540	2196	101	0	201	0	7	35	7	28
Block Group 3, Census Tract 5518, Harris County, Texas	1055	1008	0	10	37	0	0	0	0	0
Block Group 1, Census Tract 5519, Harris County, Texas	1023	744	126	0	12	0	0	141	23	118
Block Group 2, Census Tract 5519, Harris County, Texas	2305	965	753	0	187	0	333	67	0	67
Block Group 3, Census Tract 5519, Harris County, Texas	2823	1441	989	0	180	0	180	33	33	0
Block Group 3, Census Tract 5520.01, Harris County, Texas	2491	1302	468	52	41	0	628	0	0	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	1926	1269	494	30	130	0	3	0	0	0

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 5521.01, Harris County, Texas	3842	2047	775	0	689	0	172	159	50	109
Block Group 1, Census Tract 5521.03, Harris County, Texas	1071	844	94	106	11	0	0	16	12	4
Block Group 2, Census Tract 5522, Harris County, Texas	1620	1382	33	44	32	0	129	0	0	0
Block Group 3, Census Tract 5522, Harris County, Texas	2412	857	735	0	562	0	148	110	87	23
Block Group 2, Census Tract 5544.01, Harris County, Texas	9344	8658	59	0	351	0	0	276	108	168
Block Group 2, Census Tract 5544.02, Harris County, Texas	6573	4886	609	0	872	0	115	91	0	91
Block Group 1, Census Tract 5544.03, Harris County, Texas	9721	8091	1006	0	484	0	19	121	0	121
Block Group 2, Census Tract 5557.01, Harris County, Texas	4213	3086	836	11	19	0	150	111	0	111
Block Group 1, Census Tract 5560, Harris County, Texas	1284	1051	215	0	18	0	0	0	0	0
Block Group 3, Census Tract 9501, Leon County, Texas	2679	2199	229	45	0	0	202	4	0	4
Block Group 1, Census Tract 9502, Leon County, Texas	607	601	0	0	0	0	6	0	0	0
Block Group 2, Census Tract 9502, Leon County, Texas	735	651	0	0	0	0	84	0	0	0
Block Group 3, Census Tract 9502, Leon County, Texas	617	610	0	0	0	0	0	7	0	7

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 5, Census Tract 9502, Leon County, Texas	1083	861	143	0	0	0	53	26	0	26
Block Group 2, Census Tract 9503, Leon County, Texas	1320	1239	36	0	0	0	30	15	0	15
Block Group 3, Census Tract 9503, Leon County, Texas	1138	886	252	0	0	0	0	0	0	0
Block Group 4, Census Tract 9503, Leon County, Texas	1886	1718	91	10	19	0	16	32	0	32
Block Group 1, Census Tract 9707, Limestone County, Texas	673	613	0	0	51	0	9	0	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	977	973	4	0	0	0	0	0	0	0
Block Group 1, Census Tract 2, Madison County, Texas	862	809	14	0	0	0	39	0	0	0
Block Group 1, Census Tract 3, Madison County, Texas	1001	978	0	10	1	0	3	9	0	9
Block Group 1, Census Tract 9703, Navarro County, Texas	1418	1257	78	0	63	0	20	0	0	0
Block Group 3, Census Tract 9704, Navarro County, Texas	1301	1218	49	27	0	0	3	4	1	3
Block Group 4, Census Tract 9709, Navarro County, Texas	2567	1973	416	0	0	75	99	4	0	4
Block Group 5, Census Tract 9709, Navarro County, Texas	1769	1708	47	2	0	0	12	0	0	0
Block Group 1, Census Tract 9710, Navarro County, Texas	1896	1799	21	24	9	0	31	12	0	12

Geography	Total	White Alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some other race alone	Two or more races:	Two or more races: Two races including Some other race	Two or more races: Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 6806, Waller County, Texas	2472	2314	58	17	83	0	0	0	0	0
Block Group 2, Census Tract 6806, Waller County, Texas	2443	2225	0	12	23	0	183	0	0	0

**Socioeconomic:
Ethnicity within the Study Area by
Block Group and Census Tract, County:**

Geography	Total	Not Hispanic or Latino	Not Hispanic or Latino: White alone	Not Hispanic or Latino: Black or African American alone	Not Hispanic or Latino: American Indian and Alaska Native alone	Not Hispanic or Latino: Asian alone	Not Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	Not Hispanic or Latino: Some other race alone	Not Hispanic or Latino: Two or more races:
Block Group 2, Census Tract 20, Dallas County, Texas	652	436	188	229	0	19	0	0	0
Block Group 1, Census Tract 34, Dallas County, Texas	653	594	23	571	0	0	0	0	0
Block Group 2, Census Tract 34, Dallas County, Texas	730	581	131	426	3	21	0	0	0
Block Group 1, Census Tract 40, Dallas County, Texas	397	380	92	288	0	0	0	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	587	510	0	510	0	0	0	0	0
Block Group 2, Census Tract 41, Dallas County, Texas	535	274	10	251	0	13	0	0	0
Block Group 1, Census Tract 86.03, Dallas County, Texas	912	666	9	657	0	0	0	0	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	1671	1145	55	1081	0	0	0	0	9
Block Group 2, Census Tract 86.04, Dallas County, Texas	1334	1205	20	1167	0	0	18	0	0
Block Group 1, Census Tract 87.01, Dallas County, Texas	1192	1155	0	1155	0	0	0	0	0
Block Group 2, Census Tract 87.01, Dallas County, Texas	727	668	0	668	0	0	0	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	501	501	0	501	0	0	0	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	1089	1010	9	991	0	0	0	0	10
Block Group 1, Census Tract 89, Dallas County, Texas	1267	806	62	744	0	0	0	0	0
Block Group 1, Census Tract 100, Dallas County, Texas	9511	7830	3616	3963	49	52	4	22	124
Block Group 1, Census Tract 114.01, Dallas County, Texas	1783	1650	56	1570	9	0	0	0	15
Block Group 3, Census Tract 115, Dallas County, Texas	228	79	0	79	0	0	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	789	339	32	307	0	0	0	0	0

Geography	Total	Not Hispanic or Latino	Not Hispanic or Latino: White alone	Not Hispanic or Latino: Black or African American alone	Not Hispanic or Latino: American Indian and Alaska Native alone	Not Hispanic or Latino: Asian alone	Not Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	Not Hispanic or Latino: Some other race alone	Not Hispanic or Latino: Two or more races:
Block Group 1, Census Tract 167.03, Dallas County, Texas	1091	443	268	175	0	0	0	0	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	1651	1328	338	963	0	0	0	20	7
Block Group 1, Census Tract 169.02, Dallas County, Texas	3294	2341	941	1367	6	0	20	0	7
Block Group 2, Census Tract 169.02, Dallas County, Texas	1965	846	388	404	0	0	54	0	0
Block Group 3, Census Tract 169.03, Dallas County, Texas	1542	1074	574	481	17	1	0	0	1
Block Group 5, Census Tract 169.03, Dallas County, Texas	778	513	295	207	0	0	0	11	0
Block Group 1, Census Tract 202, Dallas County, Texas	433	375	0	375	0	0	0	0	0
Block Group 2, Census Tract 202, Dallas County, Texas	2175	2175	18	2145	0	0	0	0	12
Block Group 3, Census Tract 202, Dallas County, Texas	1417	1136	0	1091	0	0	0	0	45
Block Group 1, Census Tract 204, Dallas County, Texas	1336	1067	501	555	0	0	11	0	0
Block Group 3, Census Tract 204, Dallas County, Texas	2226	1876	793	753	6	171	0	0	153
Block Group 1, Census Tract 601.01, Ellis County, Texas	2571	1797	1406	224	0	13	0	0	154
Block Group 2, Census Tract 601.01, Ellis County, Texas	1381	855	582	228	0	11	0	0	34
Block Group 1, Census Tract 601.02, Ellis County, Texas	3017	992	898	41	0	20	0	0	33
Block Group 3, Census Tract 601.02, Ellis County, Texas	3140	1924	1662	114	75	0	0	0	73
Block Group 1, Census Tract 602.10, Ellis County, Texas	893	706	673	33	0	0	0	0	0
Block Group 1, Census Tract 611, Ellis County, Texas	1584	1328	1230	81	0	0	0	0	17
Block Group 1, Census Tract 612, Ellis County, Texas	756	521	502	11	5	0	0	0	3

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Block Group 2, Census Tract 612, Ellis County, Texas	1203	742	563	114	14	0	0	0	51
Block Group 1, Census Tract 613, Ellis County, Texas	924	710	692	0	0	0	0	0	18
Block Group 2, Census Tract 613, Ellis County, Texas	1496	907	847	34	0	0	0	0	26
Block Group 1, Census Tract 1, Freestone County, Texas	2781	2114	1665	340	65	19	0	0	25
Block Group 2, Census Tract 1, Freestone County, Texas	2700	2274	2057	195	0	10	0	0	12
Block Group 1, Census Tract 3, Freestone County, Texas	1031	822	399	419	0	0	0	0	4
Block Group 2, Census Tract 4, Freestone County, Texas	1476	1412	1055	313	6	0	0	0	38
Block Group 1, Census Tract 6, Freestone County, Texas	671	659	659	0	0	0	0	0	0
Block Group 2, Census Tract 6, Freestone County, Texas	930	895	847	27	9	0	0	0	12
Block Group 3, Census Tract 6, Freestone County, Texas	2907	2448	1966	470	6	0	0	0	6
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1788	1567	1407	78	0	0	0	0	82
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1669	1404	1349	19	0	0	0	0	36
Block Group 5, Census Tract 1802, Grimes County, Texas	1250	1157	805	257	0	0	0	0	95
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1425	1120	984	86	0	0	0	0	50
Block Group 2, Census Tract 1803.01, Grimes County, Texas	1254	1110	1059	5	0	0	0	0	46
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1848	1810	1571	126	19	0	0	0	94

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Block Group 2, Census Tract 1803.02, Grimes County, Texas	1595	1313	1124	186	0	0	0	0	3
Block Group 1, Census Tract 4301, Harris County, Texas	813	742	681	0	0	49	0	0	12
Block Group 2, Census Tract 4301, Harris County, Texas	1658	1604	1398	64	0	103	0	0	39
Block Group 5, Census Tract 4301, Harris County, Texas	1104	1057	954	43	0	60	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	865	865	719	0	30	53	0	0	63
Block Group 2, Census Tract 5109, Harris County, Texas	3703	2665	2141	115	0	253	0	0	156
Block Group 1, Census Tract 5110.01, Harris County, Texas	1551	1170	1056	40	15	45	0	0	14
Block Group 2, Census Tract 5110.01, Harris County, Texas	1005	722	667	31	0	24	0	0	0
Block Group 1, Census Tract 5201, Harris County, Texas	2439	1386	1118	53	0	121	0	0	94
Block Group 1, Census Tract 5203, Harris County, Texas	2264	537	419	76	0	15	0	0	27
Block Group 1, Census Tract 5204, Harris County, Texas	1383	237	196	16	0	15	0	0	10
Block Group 2, Census Tract 5204, Harris County, Texas	2156	587	455	42	0	29	0	0	61
Block Group 1, Census Tract 5205, Harris County, Texas	1439	188	151	37	0	0	0	0	0
Block Group 2, Census Tract 5205, Harris County, Texas	3471	969	361	608	0	0	0	0	0

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Block Group 3, Census Tract 5205, Harris County, Texas	1691	297	297	0	0	0	0	0	0
Block Group 4, Census Tract 5205, Harris County, Texas	1732	654	521	133	0	0	0	0	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	2331	345	247	0	14	84	0	0	0
Block Group 1, Census Tract 5206.02, Harris County, Texas	1024	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5214, Harris County, Texas	1203	24	24	0	0	0	0	0	0
Block Group 2, Census Tract 5214, Harris County, Texas	1566	43	43	0	0	0	0	0	0
Block Group 3, Census Tract 5214, Harris County, Texas	1660	290	245	0	0	14	17	0	14
Block Group 4, Census Tract 5214, Harris County, Texas	2727	69	69	0	0	0	0	0	0
Block Group 4, Census Tract 5215, Harris County, Texas	2204	1098	958	44	0	22	0	0	74
Block Group 1, Census Tract 5216, Harris County, Texas	2400	482	449	26	0	7	0	0	0
Block Group 2, Census Tract 5216, Harris County, Texas	1173	393	0	393	0	0	0	0	0
Block Group 1, Census Tract 5217, Harris County, Texas	1414	397	66	331	0	0	0	0	0
Block Group 2, Census Tract 5217, Harris County, Texas	2387	999	416	534	0	49	0	0	0
Block Group 3, Census Tract 5217, Harris County, Texas	1822	724	214	385	0	102	0	0	23
Block Group 4, Census Tract 5217, Harris County, Texas	1401	928	271	531	0	10	0	71	45
Block Group 1, Census Tract 5218, Harris County, Texas	2459	1375	454	408	0	513	0	0	0
Block Group 3, Census Tract 5301, Harris County, Texas	819	166	152	14	0	0	0	0	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	1772	1085	346	524	13	202	0	0	0

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Block Group 1, Census Tract 5401, Harris County, Texas	7658	6586	3891	369	0	2137	0	53	136
Block Group 3, Census Tract 5401, Harris County, Texas	1653	298	298	0	0	0	0	0	0
Block Group 2, Census Tract 5408, Harris County, Texas	3294	1825	1051	467	0	307	0	0	0
Block Group 2, Census Tract 5409.02, Harris County, Texas	2428	2127	1005	778	0	230	0	0	114
Block Group 1, Census Tract 5410.01, Harris County, Texas	8473	6211	2793	1797	41	1479	0	0	101
Block Group 1, Census Tract 5410.02, Harris County, Texas	7007	5764	3147	1197	0	1089	0	0	331
Block Group 2, Census Tract 5410.02, Harris County, Texas	1493	790	524	80	0	100	0	0	86
Block Group 1, Census Tract 5410.03, Harris County, Texas	4913	3570	1702	1251	0	427	0	0	190
Block Group 1, Census Tract 5430.01, Harris County, Texas	5848	4846	3293	635	41	786	0	0	91
Block Group 1, Census Tract 5430.02, Harris County, Texas	9606	7920	5143	1305	0	1293	0	17	162
Block Group 2, Census Tract 5430.02, Harris County, Texas	3680	2411	1621	413	0	252	0	0	125
Block Group 1, Census Tract 5431, Harris County, Texas	2785	1589	1381	165	0	11	0	0	32
Block Group 6, Census Tract 5517.01, Harris County, Texas	2279	1536	912	14	0	508	0	0	102
Block Group 1, Census Tract 5518, Harris County, Texas	2540	2323	1979	101	0	201	0	7	35
Block Group 3, Census Tract 5518, Harris County, Texas	1055	1034	987	0	10	37	0	0	0
Block Group 1, Census Tract 5519, Harris County, Texas	1023	648	498	126	0	0	0	0	24

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Block Group 2, Census Tract 5519, Harris County, Texas	2305	1425	418	753	0	187	0	0	67
Block Group 3, Census Tract 5519, Harris County, Texas	2823	1759	592	954	0	180	0	0	33
Block Group 3, Census Tract 5520.01, Harris County, Texas	2491	1241	732	468	0	41	0	0	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	1926	1538	884	494	30	130	0	0	0
Block Group 1, Census Tract 5521.01, Harris County, Texas	3842	2813	1340	765	0	689	0	0	19
Block Group 1, Census Tract 5521.03, Harris County, Texas	1071	872	657	94	106	11	0	0	4
Block Group 2, Census Tract 5522, Harris County, Texas	1620	1069	960	33	44	32	0	0	0
Block Group 3, Census Tract 5522, Harris County, Texas	2412	1806	486	735	0	562	0	0	23
Block Group 2, Census Tract 5544.01, Harris County, Texas	9344	8282	7596	59	0	351	0	0	276
Block Group 2, Census Tract 5544.02, Harris County, Texas	6573	5968	4400	579	0	872	0	26	91
Block Group 1, Census Tract 5544.03, Harris County, Texas	9721	7560	5989	966	0	484	0	0	121
Block Group 2, Census Tract 5557.01, Harris County, Texas	4213	3616	2673	836	0	19	0	0	88
Block Group 1, Census Tract 5560, Harris County, Texas	1284	1169	936	215	0	18	0	0	0
Block Group 3, Census Tract 9501, Leon County, Texas	2679	2145	1914	182	45	0	0	0	4
Block Group 1, Census Tract 9502, Leon County, Texas	607	421	421	0	0	0	0	0	0
Block Group 2, Census Tract 9502, Leon County, Texas	735	644	644	0	0	0	0	0	0
Block Group 3, Census Tract 9502, Leon County, Texas	617	617	610	0	0	0	0	0	7

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Block Group 5, Census Tract 9502, Leon County, Texas	1083	1013	844	143	0	0	0	0	26
Block Group 2, Census Tract 9503, Leon County, Texas	1320	1245	1194	36	0	0	0	0	15
Block Group 3, Census Tract 9503, Leon County, Texas	1138	1138	886	252	0	0	0	0	0
Block Group 4, Census Tract 9503, Leon County, Texas	1886	1677	1518	91	10	19	0	7	32
Block Group 1, Census Tract 9707, Limestone County, Texas	673	525	474	0	0	51	0	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	977	977	973	4	0	0	0	0	0
Block Group 1, Census Tract 2, Madison County, Texas	862	766	752	14	0	0	0	0	0
Block Group 1, Census Tract 3, Madison County, Texas	1001	957	937	0	10	1	0	0	9
Block Group 1, Census Tract 9703, Navarro County, Texas	1418	1117	976	78	0	63	0	0	0
Block Group 3, Census Tract 9704, Navarro County, Texas	1301	1238	1156	49	27	0	0	3	3
Block Group 4, Census Tract 9709, Navarro County, Texas	2567	1963	1469	416	0	0	75	0	3
Block Group 5, Census Tract 9709, Navarro County, Texas	1769	1334	1285	47	2	0	0	0	0
Block Group 1, Census Tract 9710, Navarro County, Texas	1896	1445	1394	21	9	9	0	0	12
Block Group 1, Census Tract 6806, Waller County, Texas	2472	1677	1519	58	17	83	0	0	0
Block Group 2, Census Tract 6806, Waller County, Texas	2443	1947	1912	0	12	23	0	0	0

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Block Group 2, Census Tract 20, Dallas County, Texas	0	0	216	157	0	0	0	0	0
Block Group 1, Census Tract 34, Dallas County, Texas	0	0	59	24	0	0	0	0	35
Block Group 2, Census Tract 34, Dallas County, Texas	0	0	149	106	0	0	0	0	43
Block Group 1, Census Tract 40, Dallas County, Texas	0	0	17	17	0	0	0	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	0	0	77	77	0	0	0	0	0
Block Group 2, Census Tract 41, Dallas County, Texas	0	0	261	230	0	0	0	0	19
Block Group 1, Census Tract 86.03, Dallas County, Texas	0	0	246	234	0	0	0	0	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	0	9	526	498	0	0	0	0	0
Block Group 2, Census Tract 86.04, Dallas County, Texas	0	0	129	104	0	0	0	0	25
Block Group 1, Census Tract 87.01, Dallas County, Texas	0	0	37	0	37	0	0	0	0
Block Group 2, Census Tract 87.01, Dallas County, Texas	0	0	59	30	29	0	0	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	0	0	0	0	0	0	0	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	0	10	79	28	0	0	0	0	40
Block Group 1, Census Tract 89, Dallas County, Texas	0	0	461	461	0	0	0	0	0
Block Group 1, Census Tract 100, Dallas County, Texas	0	124	1681	1342	26	39	0	14	228
Block Group 1, Census Tract 114.01, Dallas County, Texas	0	15	133	131	0	2	0	0	0
Block Group 3, Census Tract 115, Dallas County, Texas	0	0	149	149	0	0	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	0	0	450	446	0	0	0	0	4

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Block Group 1, Census Tract 167.03, Dallas County, Texas	0	0	648	625	0	0	0	0	5
Block Group 2, Census Tract 168.02, Dallas County, Texas	0	7	323	250	0	0	0	0	73
Block Group 1, Census Tract 169.02, Dallas County, Texas	0	7	953	847	10	12	0	0	78
Block Group 2, Census Tract 169.02, Dallas County, Texas	0	0	1119	851	49	43	0	0	160
Block Group 3, Census Tract 169.03, Dallas County, Texas	0	1	468	406	0	5	0	0	52
Block Group 5, Census Tract 169.03, Dallas County, Texas	0	0	265	208	32	0	0	0	25
Block Group 1, Census Tract 202, Dallas County, Texas	0	0	58	0	0	0	0	0	55
Block Group 2, Census Tract 202, Dallas County, Texas	0	12	0	0	0	0	0	0	0
Block Group 3, Census Tract 202, Dallas County, Texas	0	45	281	281	0	0	0	0	0
Block Group 1, Census Tract 204, Dallas County, Texas	0	0	269	216	0	0	0	0	53
Block Group 3, Census Tract 204, Dallas County, Texas	0	153	350	214	0	0	0	0	88
Block Group 1, Census Tract 601.01, Ellis County, Texas	0	154	774	774	0	0	0	0	0
Block Group 2, Census Tract 601.01, Ellis County, Texas	0	34	526	283	15	148	0	0	46
Block Group 1, Census Tract 601.02, Ellis County, Texas	0	33	2025	1230	0	0	0	0	709
Block Group 3, Census Tract 601.02, Ellis County, Texas	0	73	1216	826	0	71	0	0	240
Block Group 1, Census Tract 602.10, Ellis County, Texas	0	0	187	156	0	0	0	0	25
Block Group 1, Census Tract 611, Ellis County, Texas	0	17	256	193	0	0	0	0	6
Block Group 1, Census Tract 612, Ellis County, Texas	0	3	235	214	0	20	0	0	1

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Block Group 2, Census Tract 612, Ellis County, Texas	0	51	461	357	10	16	0	0	40
Block Group 1, Census Tract 613, Ellis County, Texas	0	18	214	180	0	25	0	0	9
Block Group 2, Census Tract 613, Ellis County, Texas	0	26	589	531	0	7	0	0	51
Block Group 1, Census Tract 1, Freestone County, Texas	0	25	667	594	0	0	0	0	73
Block Group 2, Census Tract 1, Freestone County, Texas	0	12	426	393	0	0	0	0	33
Block Group 1, Census Tract 3, Freestone County, Texas	0	4	209	209	0	0	0	0	0
Block Group 2, Census Tract 4, Freestone County, Texas	0	38	64	64	0	0	0	0	0
Block Group 1, Census Tract 6, Freestone County, Texas	0	0	12	12	0	0	0	0	0
Block Group 2, Census Tract 6, Freestone County, Texas	0	12	35	35	0	0	0	0	0
Block Group 3, Census Tract 6, Freestone County, Texas	6	0	459	296	0	48	0	0	109
Block Group 1, Census Tract 1801.02, Grimes County, Texas	0	82	221	59	0	0	0	0	162
Block Group 2, Census Tract 1801.02, Grimes County, Texas	0	36	265	91	0	0	0	0	174
Block Group 5, Census Tract 1802, Grimes County, Texas	0	95	93	82	0	0	0	0	11
Block Group 1, Census Tract 1803.01, Grimes County, Texas	0	50	305	22	0	187	0	0	96
Block Group 2, Census Tract 1803.01, Grimes County, Texas	0	46	144	122	0	5	0	0	17
Block Group 1, Census Tract 1803.02, Grimes County, Texas	0	94	38	20	0	0	0	0	15

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Block Group 2, Census Tract 1803.02, Grimes County, Texas	0	3	282	275	0	0	0	0	7
Block Group 1, Census Tract 4301, Harris County, Texas	0	12	71	47	0	0	0	0	14
Block Group 2, Census Tract 4301, Harris County, Texas	0	39	54	54	0	0	0	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	0	0	47	47	0	0	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	0	63	0	0	0	0	0	0	0
Block Group 2, Census Tract 5109, Harris County, Texas	0	156	1038	847	25	0	0	0	166
Block Group 1, Census Tract 5110.01, Harris County, Texas	0	14	381	360	11	0	0	0	10
Block Group 2, Census Tract 5110.01, Harris County, Texas	0	0	283	249	0	0	0	0	34
Block Group 1, Census Tract 5201, Harris County, Texas	0	94	1053	814	0	0	0	0	239
Block Group 1, Census Tract 5203, Harris County, Texas	0	27	1727	1105	40	0	0	0	533
Block Group 1, Census Tract 5204, Harris County, Texas	0	10	1146	599	0	0	0	0	522
Block Group 2, Census Tract 5204, Harris County, Texas	0	61	1569	1080	0	0	0	0	482
Block Group 1, Census Tract 5205, Harris County, Texas	0	0	1251	1029	0	0	0	0	222
Block Group 2, Census Tract 5205, Harris County, Texas	0	0	2502	1993	0	91	0	0	418

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Block Group 3, Census Tract 5205, Harris County, Texas	0	0	1394	1087	0	0	0	0	307
Block Group 4, Census Tract 5205, Harris County, Texas	0	0	1078	920	0	0	0	0	158
Block Group 1, Census Tract 5206.01, Harris County, Texas	0	0	1986	1346	0	48	0	0	592
Block Group 1, Census Tract 5206.02, Harris County, Texas	0	0	1024	542	0	0	0	0	482
Block Group 1, Census Tract 5214, Harris County, Texas	0	0	1179	291	0	69	0	0	727
Block Group 2, Census Tract 5214, Harris County, Texas	0	0	1523	358	33	0	0	0	1116
Block Group 3, Census Tract 5214, Harris County, Texas	0	14	1370	936	0	0	0	0	361
Block Group 4, Census Tract 5214, Harris County, Texas	0	0	2658	921	0	89	0	0	1648
Block Group 4, Census Tract 5215, Harris County, Texas	0	74	1106	479	0	0	0	0	627
Block Group 1, Census Tract 5216, Harris County, Texas	0	0	1918	1488	0	17	0	0	358
Block Group 2, Census Tract 5216, Harris County, Texas	0	0	780	670	0	0	0	0	110
Block Group 1, Census Tract 5217, Harris County, Texas	0	0	1017	929	0	0	0	0	88
Block Group 2, Census Tract 5217, Harris County, Texas	0	0	1388	644	0	219	0	0	525
Block Group 3, Census Tract 5217, Harris County, Texas	23	0	1098	790	0	0	0	0	308
Block Group 4, Census Tract 5217, Harris County, Texas	0	45	473	320	17	0	0	0	136
Block Group 1, Census Tract 5218, Harris County, Texas	0	0	1084	970	0	0	23	0	91
Block Group 3, Census Tract 5301, Harris County, Texas	0	0	653	564	0	0	0	0	89
Block Group 1, Census Tract 5342.03, Harris County, Texas	0	0	687	456	0	0	0	0	231

Geography	Not Hispanic or Latino: Two or more races - Two races including Some other race	Not Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races	Hispanic or Latino:	Hispanic or Latino: White alone	Hispanic or Latino: Black or African American alone	Hispanic or Latino: American Indian and Alaska Native alone	Hispanic or Latino: Asian alone	Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino: Some other race alone
Block Group 1, Census Tract 5401, Harris County, Texas	33	103	1072	623	22	0	38	0	346
Block Group 3, Census Tract 5401, Harris County, Texas	0	0	1355	791	0	0	0	0	528
Block Group 2, Census Tract 5408, Harris County, Texas	0	0	1469	1047	0	128	0	0	219
Block Group 2, Census Tract 5409.02, Harris County, Texas	0	114	301	301	0	0	0	0	0
Block Group 1, Census Tract 5410.01, Harris County, Texas	0	101	2262	1768	0	0	0	0	421
Block Group 1, Census Tract 5410.02, Harris County, Texas	41	290	1243	801	0	17	0	0	353
Block Group 2, Census Tract 5410.02, Harris County, Texas	0	86	703	625	0	0	0	0	45
Block Group 1, Census Tract 5410.03, Harris County, Texas	0	190	1343	667	0	0	0	0	360
Block Group 1, Census Tract 5430.01, Harris County, Texas	0	91	1002	851	26	91	14	0	20
Block Group 1, Census Tract 5430.02, Harris County, Texas	0	162	1686	1227	0	0	0	0	319
Block Group 2, Census Tract 5430.02, Harris County, Texas	0	125	1269	986	0	0	0	0	283
Block Group 1, Census Tract 5431, Harris County, Texas	0	32	1196	973	0	0	0	0	188
Block Group 6, Census Tract 5517.01, Harris County, Texas	0	102	743	597	0	0	0	0	119
Block Group 1, Census Tract 5518, Harris County, Texas	7	28	217	217	0	0	0	0	0
Block Group 3, Census Tract 5518, Harris County, Texas	0	0	21	21	0	0	0	0	0
Block Group 1, Census Tract 5519, Harris County, Texas	0	24	375	246	0	0	12	0	0

Geography	Not Hispanic or Latino: Two or more races - Two races including Some other race	Not Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races	Hispanic or Latino:	Hispanic or Latino: White alone	Hispanic or Latino: Black or African American alone	Hispanic or Latino: American Indian and Alaska Native alone	Hispanic or Latino: Asian alone	Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino: Some other race alone
Block Group 2, Census Tract 5519, Harris County, Texas	0	67	880	547	0	0	0	0	333
Block Group 3, Census Tract 5519, Harris County, Texas	33	0	1064	849	35	0	0	0	180
Block Group 3, Census Tract 5520.01, Harris County, Texas	0	0	1250	570	0	52	0	0	628
Block Group 1, Census Tract 5520.02, Harris County, Texas	0	0	388	385	0	0	0	0	3
Block Group 1, Census Tract 5521.01, Harris County, Texas	0	19	1029	707	10	0	0	0	172
Block Group 1, Census Tract 5521.03, Harris County, Texas	0	4	199	187	0	0	0	0	0
Block Group 2, Census Tract 5522, Harris County, Texas	0	0	551	422	0	0	0	0	129
Block Group 3, Census Tract 5522, Harris County, Texas	0	23	606	371	0	0	0	0	148
Block Group 2, Census Tract 5544.01, Harris County, Texas	108	168	1062	1062	0	0	0	0	0
Block Group 2, Census Tract 5544.02, Harris County, Texas	0	91	605	486	30	0	0	0	89
Block Group 1, Census Tract 5544.03, Harris County, Texas	0	121	2161	2102	40	0	0	0	19
Block Group 2, Census Tract 5557.01, Harris County, Texas	0	88	597	413	0	11	0	0	150
Block Group 1, Census Tract 5560, Harris County, Texas	0	0	115	115	0	0	0	0	0
Block Group 3, Census Tract 9501, Leon County, Texas	0	4	534	285	47	0	0	0	202
Block Group 1, Census Tract 9502, Leon County, Texas	0	0	186	180	0	0	0	0	6
Block Group 2, Census Tract 9502, Leon County, Texas	0	0	91	7	0	0	0	0	84
Block Group 3, Census Tract 9502, Leon County, Texas	0	7	0	0	0	0	0	0	0

Geography	Not Hispanic or Latino: Two or more races - Two races including Some other race	Not Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races	Hispanic or Latino:	Hispanic or Latino: White alone	Hispanic or Latino: Black or African American alone	Hispanic or Latino: American Indian and Alaska Native alone	Hispanic or Latino: Asian alone	Hispanic or Latino: Native Hawaiian and Other Pacific Islander alone	Hispanic or Latino: Some other race alone
Block Group 5, Census Tract 9502, Leon County, Texas	0	26	70	17	0	0	0	0	53
Block Group 2, Census Tract 9503, Leon County, Texas	0	15	75	45	0	0	0	0	30
Block Group 3, Census Tract 9503, Leon County, Texas	0	0	0	0	0	0	0	0	0
Block Group 4, Census Tract 9503, Leon County, Texas	0	32	209	200	0	0	0	0	9
Block Group 1, Census Tract 9707, Limestone County, Texas	0	0	148	139	0	0	0	0	9
Block Group 2, Census Tract 9707, Limestone County, Texas	0	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 2, Madison County, Texas	0	0	96	57	0	0	0	0	39
Block Group 1, Census Tract 3, Madison County, Texas	0	9	44	41	0	0	0	0	3
Block Group 1, Census Tract 9703, Navarro County, Texas	0	0	301	281	0	0	0	0	20
Block Group 3, Census Tract 9704, Navarro County, Texas	0	3	63	62	0	0	0	0	0
Block Group 4, Census Tract 9709, Navarro County, Texas	0	3	604	504	0	0	0	0	99
Block Group 5, Census Tract 9709, Navarro County, Texas	0	0	435	423	0	0	0	0	12
Block Group 1, Census Tract 9710, Navarro County, Texas	0	12	451	405	0	15	0	0	31
Block Group 1, Census Tract 6806, Waller County, Texas	0	0	795	795	0	0	0	0	0
Block Group 2, Census Tract 6806, Waller County, Texas	0	0	496	313	0	0	0	0	183

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 20, Dallas County, Texas	59	59	0
Block Group 1, Census Tract 34, Dallas County, Texas	0	0	0
Block Group 2, Census Tract 34, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 40, Dallas County, Texas	0	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	0	0	0
Block Group 2, Census Tract 41, Dallas County, Texas	12	0	12
Block Group 1, Census Tract 86.03, Dallas County, Texas	12	12	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	28	0	28
Block Group 2, Census Tract 86.04, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 87.01, Dallas County, Texas	0	0	0
Block Group 2, Census Tract 87.01, Dallas County, Texas	0	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	0	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	11	11	0
Block Group 1, Census Tract 89, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 100, Dallas County, Texas	32	32	0
Block Group 1, Census Tract 114.01, Dallas County, Texas	0	0	0
Block Group 3, Census Tract 115, Dallas County, Texas	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	0	0	0

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 167.03, Dallas County, Texas	18	18	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 169.02, Dallas County, Texas	6	0	6
Block Group 2, Census Tract 169.02, Dallas County, Texas	16	16	0
Block Group 3, Census Tract 169.03, Dallas County, Texas	5	5	0
Block Group 5, Census Tract 169.03, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 202, Dallas County, Texas	3	3	0
Block Group 2, Census Tract 202, Dallas County, Texas	0	0	0
Block Group 3, Census Tract 202, Dallas County, Texas	0	0	0
Block Group 1, Census Tract 204, Dallas County, Texas	0	0	0
Block Group 3, Census Tract 204, Dallas County, Texas	48	25	23
Block Group 1, Census Tract 601.01, Ellis County, Texas	0	0	0
Block Group 2, Census Tract 601.01, Ellis County, Texas	34	34	0
Block Group 1, Census Tract 601.02, Ellis County, Texas	86	0	86
Block Group 3, Census Tract 601.02, Ellis County, Texas	79	9	70
Block Group 1, Census Tract 602.10, Ellis County, Texas	6	0	6
Block Group 1, Census Tract 611, Ellis County, Texas	57	57	0
Block Group 1, Census Tract 612, Ellis County, Texas	0	0	0

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 612, Ellis County, Texas	38	0	38
Block Group 1, Census Tract 613, Ellis County, Texas	0	0	0
Block Group 2, Census Tract 613, Ellis County, Texas	0	0	0
Block Group 1, Census Tract 1, Freestone County, Texas	0	0	0
Block Group 2, Census Tract 1, Freestone County, Texas	0	0	0
Block Group 1, Census Tract 3, Freestone County, Texas	0	0	0
Block Group 2, Census Tract 4, Freestone County, Texas	0	0	0
Block Group 1, Census Tract 6, Freestone County, Texas	0	0	0
Block Group 2, Census Tract 6, Freestone County, Texas	0	0	0
Block Group 3, Census Tract 6, Freestone County, Texas	6	0	6
Block Group 1, Census Tract 1801.02, Grimes County, Texas	0	0	0
Block Group 2, Census Tract 1801.02, Grimes County, Texas	0	0	0
Block Group 5, Census Tract 1802, Grimes County, Texas	0	0	0
Block Group 1, Census Tract 1803.01, Grimes County, Texas	0	0	0
Block Group 2, Census Tract 1803.01, Grimes County, Texas	0	0	0
Block Group 1, Census Tract 1803.02, Grimes County, Texas	3	0	3

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 1803.02, Grimes County, Texas	0	0	0
Block Group 1, Census Tract 4301, Harris County, Texas	10	10	0
Block Group 2, Census Tract 4301, Harris County, Texas	0	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5109, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5110.01, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5110.01, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5201, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5203, Harris County, Texas	49	41	8
Block Group 1, Census Tract 5204, Harris County, Texas	25	10	15
Block Group 2, Census Tract 5204, Harris County, Texas	7	7	0
Block Group 1, Census Tract 5205, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5205, Harris County, Texas	0	0	0

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 3, Census Tract 5205, Harris County, Texas	0	0	0
Block Group 4, Census Tract 5205, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5206.02, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5214, Harris County, Texas	92	75	17
Block Group 2, Census Tract 5214, Harris County, Texas	16	16	0
Block Group 3, Census Tract 5214, Harris County, Texas	73	73	0
Block Group 4, Census Tract 5214, Harris County, Texas	0	0	0
Block Group 4, Census Tract 5215, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5216, Harris County, Texas	55	55	0
Block Group 2, Census Tract 5216, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5217, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5217, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5217, Harris County, Texas	0	0	0
Block Group 4, Census Tract 5217, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5218, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5301, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	0	0	0

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 1, Census Tract 5401, Harris County, Texas	43	0	43
Block Group 3, Census Tract 5401, Harris County, Texas	36	0	36
Block Group 2, Census Tract 5408, Harris County, Texas	75	75	0
Block Group 2, Census Tract 5409.02, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5410.01, Harris County, Texas	73	73	0
Block Group 1, Census Tract 5410.02, Harris County, Texas	72	14	58
Block Group 2, Census Tract 5410.02, Harris County, Texas	33	0	33
Block Group 1, Census Tract 5410.03, Harris County, Texas	316	0	316
Block Group 1, Census Tract 5430.01, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5430.02, Harris County, Texas	140	130	10
Block Group 2, Census Tract 5430.02, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5431, Harris County, Texas	35	35	0
Block Group 6, Census Tract 5517.01, Harris County, Texas	27	27	0
Block Group 1, Census Tract 5518, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5518, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5519, Harris County, Texas	117	23	94

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 2, Census Tract 5519, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5519, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5520.01, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5521.01, Harris County, Texas	140	50	90
Block Group 1, Census Tract 5521.03, Harris County, Texas	12	12	0
Block Group 2, Census Tract 5522, Harris County, Texas	0	0	0
Block Group 3, Census Tract 5522, Harris County, Texas	87	87	0
Block Group 2, Census Tract 5544.01, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5544.02, Harris County, Texas	0	0	0
Block Group 1, Census Tract 5544.03, Harris County, Texas	0	0	0
Block Group 2, Census Tract 5557.01, Harris County, Texas	23	0	23
Block Group 1, Census Tract 5560, Harris County, Texas	0	0	0
Block Group 3, Census Tract 9501, Leon County, Texas	0	0	0
Block Group 1, Census Tract 9502, Leon County, Texas	0	0	0
Block Group 2, Census Tract 9502, Leon County, Texas	0	0	0
Block Group 3, Census Tract 9502, Leon County, Texas	0	0	0

Geography	Hispanic or Latino: Two or more races:	Hispanic or Latino: Two or more races - Two races including Some other race	Hispanic or Latino: Two or more races - Two races excluding Some other race, and three or more races
Block Group 5, Census Tract 9502, Leon County, Texas	0	0	0
Block Group 2, Census Tract 9503, Leon County, Texas	0	0	0
Block Group 3, Census Tract 9503, Leon County, Texas	0	0	0
Block Group 4, Census Tract 9503, Leon County, Texas	0	0	0
Block Group 1, Census Tract 9707, Limestone County, Texas	0	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	0	0	0
Block Group 1, Census Tract 2, Madison County, Texas	0	0	0
Block Group 1, Census Tract 3, Madison County, Texas	0	0	0
Block Group 1, Census Tract 9703, Navarro County, Texas	0	0	0
Block Group 3, Census Tract 9704, Navarro County, Texas	1	1	0
Block Group 4, Census Tract 9709, Navarro County, Texas	1	0	1
Block Group 5, Census Tract 9709, Navarro County, Texas	0	0	0
Block Group 1, Census Tract 9710, Navarro County, Texas	0	0	0
Block Group 1, Census Tract 6806, Waller County, Texas	0	0	0
Block Group 2, Census Tract 6806, Waller County, Texas	0	0	0

**Socioeconomic:
Low Income within the Study Area by
Block Group and Census Tract, County:**

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 20, Dallas County, Texas	633	115	20	0	0	0	20	20	0
Block Group 1, Census Tract 34, Dallas County, Texas	631	210	131	35	35	0	96	25	25
Block Group 2, Census Tract 34, Dallas County, Texas	717	328	216	103	103	0	113	10	10
Block Group 1, Census Tract 40, Dallas County, Texas	397	209	184	92	92	0	92	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	587	262	195	77	77	0	118	23	0
Block Group 2, Census Tract 41, Dallas County, Texas	535	295	263	118	118	0	145	11	0
Block Group 1, Census Tract 86.03, Dallas County, Texas	912	495	478	30	30	0	448	115	103
Block Group 1, Census Tract 86.04, Dallas County, Texas	1671	785	742	58	58	0	684	98	81
Block Group 2, Census Tract 86.04, Dallas County, Texas	1334	870	517	0	0	0	517	63	47
Block Group 1, Census Tract 87.01, Dallas County, Texas	1192	972	957	11	11	0	946	33	26

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 87.01, Dallas County, Texas	727	305	199	22	22	0	177	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	501	114	96	0	0	0	96	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	1034	521	286	38	38	0	248	44	44
Block Group 1, Census Tract 89, Dallas County, Texas	1267	553	525	0	0	0	525	389	270
Block Group 1, Census Tract 100, Dallas County, Texas	1572	140	16	16	16	0	0	0	0
Block Group 1, Census Tract 114.01, Dallas County, Texas	1676	842	720	286	258	28	434	84	84
Block Group 3, Census Tract 115, Dallas County, Texas	228	81	81	81	81	0	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	789	322	287	24	24	0	263	96	69
Block Group 1, Census Tract 167.03, Dallas County, Texas	1091	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	1651	118	110	0	0	0	110	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 1, Census Tract 169.02, Dallas County, Texas	1387	193	141	141	141	0	0	0	0
Block Group 2, Census Tract 169.02, Dallas County, Texas	1912	607	537	359	359	0	178	69	58
Block Group 3, Census Tract 169.03, Dallas County, Texas	1122	287	287	256	256	0	31	0	0
Block Group 5, Census Tract 169.03, Dallas County, Texas	778	80	74	0	0	0	74	38	38
Block Group 1, Census Tract 202, Dallas County, Texas	433	174	130	0	0	0	130	55	55
Block Group 2, Census Tract 202, Dallas County, Texas	2175	744	659	0	0	0	659	21	21
Block Group 3, Census Tract 202, Dallas County, Texas	1363	667	485	33	33	0	452	21	21
Block Group 1, Census Tract 204, Dallas County, Texas	1336	458	98	0	0	0	98	0	0
Block Group 3, Census Tract 204, Dallas County, Texas	2226	390	0	0	0	0	0	0	0
Block Group 1, Census Tract 601.01, Ellis County, Texas	2571	100	38	0	0	0	38	38	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 601.01, Ellis County, Texas	1374	202	163	126	126	0	37	8	0
Block Group 1, Census Tract 601.02, Ellis County, Texas	2893	418	375	170	170	0	205	0	0
Block Group 3, Census Tract 601.02, Ellis County, Texas	3121	356	323	237	233	4	86	7	7
Block Group 1, Census Tract 602.10, Ellis County, Texas	893	14	6	6	6	0	0	0	0
Block Group 1, Census Tract 611, Ellis County, Texas	1584	233	230	19	19	0	211	18	0
Block Group 1, Census Tract 612, Ellis County, Texas	751	102	83	30	30	0	53	0	0
Block Group 2, Census Tract 612, Ellis County, Texas	1203	174	151	74	74	0	77	0	0
Block Group 1, Census Tract 613, Ellis County, Texas	924	150	125	68	68	0	57	57	57
Block Group 2, Census Tract 613, Ellis County, Texas	1496	449	446	252	228	24	194	172	172
Block Group 1, Census Tract 1, Freestone County, Texas	2781	530	465	113	89	24	352	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 1, Freestone County, Texas	2636	555	493	332	332	0	161	14	0
Block Group 1, Census Tract 3, Freestone County, Texas	1005	161	120	26	26	0	94	0	0
Block Group 2, Census Tract 4, Freestone County, Texas	1447	143	101	15	13	2	86	10	10
Block Group 1, Census Tract 6, Freestone County, Texas	671	49	42	42	42	0	0	0	0
Block Group 2, Census Tract 6, Freestone County, Texas	898	38	0	0	0	0	0	0	0
Block Group 3, Census Tract 6, Freestone County, Texas	1613	89	53	6	6	0	47	5	0
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1788	477	424	278	278	0	146	0	0
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1669	311	213	33	33	0	180	77	77
Block Group 5, Census Tract 1802, Grimes County, Texas	1249	48	19	0	0	0	19	19	19
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1425	52	49	0	0	0	49	49	40

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 1803.01, Grimes County, Texas	1251	82	44	39	39	0	5	0	0
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1848	388	330	32	32	0	298	90	83
Block Group 2, Census Tract 1803.02, Grimes County, Texas	1595	200	91	35	35	0	56	10	0
Block Group 1, Census Tract 4301, Harris County, Texas	813	25	25	0	0	0	25	0	0
Block Group 2, Census Tract 4301, Harris County, Texas	1597	16	0	0	0	0	0	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	974	73	0	0	0	0	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	865	21	0	0	0	0	0	0	0
Block Group 2, Census Tract 5109, Harris County, Texas	3688	657	576	485	485	0	91	91	78
Block Group 1, Census Tract 5110.01, Harris County, Texas	1551	85	0	0	0	0	0	0	0
Block Group 2, Census Tract 5110.01, Harris County, Texas	1005	38	0	0	0	0	0	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 1, Census Tract 5201, Harris County, Texas	2416	396	358	141	124	17	217	217	217
Block Group 1, Census Tract 5203, Harris County, Texas	2258	358	305	280	280	0	25	25	25
Block Group 1, Census Tract 5204, Harris County, Texas	1363	651	496	336	336	0	160	0	0
Block Group 2, Census Tract 5204, Harris County, Texas	2156	818	763	343	343	0	420	179	155
Block Group 1, Census Tract 5205, Harris County, Texas	1422	343	286	239	239	0	47	0	0
Block Group 2, Census Tract 5205, Harris County, Texas	3471	1098	933	490	490	0	443	96	81
Block Group 3, Census Tract 5205, Harris County, Texas	1691	469	431	431	431	0	0	0	0
Block Group 4, Census Tract 5205, Harris County, Texas	1732	408	392	0	0	0	392	288	219
Block Group 1, Census Tract 5206.01, Harris County, Texas	2331	989	878	188	163	25	690	37	26
Block Group 1, Census Tract 5206.02, Harris County, Texas	1024	558	558	273	273	0	285	39	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 1, Census Tract 5214, Harris County, Texas	1203	297	297	162	162	0	135	59	0
Block Group 2, Census Tract 5214, Harris County, Texas	1494	782	749	254	254	0	495	0	0
Block Group 3, Census Tract 5214, Harris County, Texas	1660	494	485	485	485	0	0	0	0
Block Group 4, Census Tract 5214, Harris County, Texas	2669	1186	1127	710	710	0	417	132	0
Block Group 4, Census Tract 5215, Harris County, Texas	2204	174	164	127	116	11	37	37	18
Block Group 1, Census Tract 5216, Harris County, Texas	2400	350	334	130	130	0	204	124	38
Block Group 2, Census Tract 5216, Harris County, Texas	1171	254	245	88	88	0	157	20	20
Block Group 1, Census Tract 5217, Harris County, Texas	1414	445	382	293	293	0	89	30	0
Block Group 2, Census Tract 5217, Harris County, Texas	2387	1274	1134	486	486	0	648	173	128
Block Group 3, Census Tract 5217, Harris County, Texas	1822	669	484	198	198	0	286	224	224

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 4, Census Tract 5217, Harris County, Texas	1401	144	112	0	0	0	112	0	0
Block Group 1, Census Tract 5218, Harris County, Texas	2451	518	305	140	140	0	165	107	107
Block Group 3, Census Tract 5301, Harris County, Texas	819	230	189	0	0	0	189	0	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	1647	132	57	24	24	0	33	14	14
Block Group 1, Census Tract 5401, Harris County, Texas	7582	337	249	205	189	16	44	44	44
Block Group 3, Census Tract 5401, Harris County, Texas	1653	20	0	0	0	0	0	0	0
Block Group 2, Census Tract 5408, Harris County, Texas	3294	504	304	274	274	0	30	0	0
Block Group 2, Census Tract 5409.02, Harris County, Texas	2428	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5410.01, Harris County, Texas	8473	1134	1019	710	710	0	309	13	0
Block Group 1, Census Tract 5410.02, Harris County, Texas	6966	485	420	340	311	29	80	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 5410.02, Harris County, Texas	1493	0	0	0	0	0	0	0	
Block Group 1, Census Tract 5410.03, Harris County, Texas	4913	574	540	476	476	0	64	0	
Block Group 1, Census Tract 5430.01, Harris County, Texas	5848	111	86	86	86	0	0	0	
Block Group 1, Census Tract 5430.02, Harris County, Texas	9606	182	127	67	67	0	60	0	
Block Group 2, Census Tract 5430.02, Harris County, Texas	3646	419	397	149	149	0	248	32	
Block Group 1, Census Tract 5431, Harris County, Texas	2702	558	553	461	461	0	92	51	
Block Group 6, Census Tract 5517.01, Harris County, Texas	2279	0	0	0	0	0	0	0	
Block Group 1, Census Tract 5518, Harris County, Texas	2539	34	0	0	0	0	0	0	
Block Group 3, Census Tract 5518, Harris County, Texas	1055	68	0	0	0	0	0	0	
Block Group 1, Census Tract 5519, Harris County, Texas	1023	55	0	0	0	0	0	0	

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 2, Census Tract 5519, Harris County, Texas	2264	442	396	187	187	0	209	0	0
Block Group 3, Census Tract 5519, Harris County, Texas	2823	769	547	262	262	0	285	0	0
Block Group 3, Census Tract 5520.01, Harris County, Texas	2491	74	30	0	0	0	30	0	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	1926	114	107	63	49	14	44	44	0
Block Group 1, Census Tract 5521.01, Harris County, Texas	3842	316	136	10	0	10	126	51	0
Block Group 1, Census Tract 5521.03, Harris County, Texas	1071	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 5522, Harris County, Texas	1620	242	129	0	0	0	129	0	0
Block Group 3, Census Tract 5522, Harris County, Texas	2412	678	616	0	0	0	616	0	0
Block Group 2, Census Tract 5544.01, Harris County, Texas	9344	167	167	167	111	56	0	0	0
Block Group 2, Census Tract 5544.02, Harris County, Texas	6573	356	340	146	126	20	194	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 1, Census Tract 5544.03, Harris County, Texas	9629	623	459	21	0	21	438	61	45
Block Group 2, Census Tract 5557.01, Harris County, Texas	4213	34	34	34	0	34	0	0	0
Block Group 1, Census Tract 5560, Harris County, Texas	1284	86	78	0	0	0	78	78	78
Block Group 3, Census Tract 9501, Leon County, Texas	2644	282	257	37	37	0	220	0	0
Block Group 1, Census Tract 9502, Leon County, Texas	607	173	148	0	0	0	148	140	140
Block Group 2, Census Tract 9502, Leon County, Texas	733	130	49	0	0	0	49	49	49
Block Group 3, Census Tract 9502, Leon County, Texas	617	103	29	29	29	0	0	0	0
Block Group 5, Census Tract 9502, Leon County, Texas	1083	174	146	61	61	0	85	0	0
Block Group 2, Census Tract 9503, Leon County, Texas	1290	154	147	0	0	0	147	0	0
Block Group 3, Census Tract 9503, Leon County, Texas	1138	105	33	23	6	17	10	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In family households: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 4, Census Tract 9503, Leon County, Texas	1850	122	56	52	52	0	4	4	2
Block Group 1, Census Tract 9707, Limestone County, Texas	673	58	48	0	0	0	48	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	977	162	127	64	64	0	63	0	0
Block Group 1, Census Tract 2, Madison County, Texas	851	128	98	22	22	0	76	14	14
Block Group 1, Census Tract 3, Madison County, Texas	1001	153	111	31	31	0	80	0	0
Block Group 1, Census Tract 9703, Navarro County, Texas	1418	97	79	35	28	7	44	2	0
Block Group 3, Census Tract 9704, Navarro County, Texas	1301	171	81	24	22	2	57	0	0
Block Group 4, Census Tract 9709, Navarro County, Texas	2476	638	622	213	213	0	409	22	7
Block Group 5, Census Tract 9709, Navarro County, Texas	1769	259	206	20	20	0	186	0	0
Block Group 1, Census Tract 9710, Navarro County, Texas	1896	381	289	218	214	4	71	0	0

Geography	Total:	Income in the past 12 months below poverty level:	Income in the past 12 months below poverty level: - In family households:	Income in the past 12 months below poverty level: - In married couple families:	Income in the past 12 months below poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months below poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives
Block Group 1, Census Tract 6806, Waller County, Texas	2472	378	328	217	217	0	111	0	0
Block Group 2, Census Tract 6806, Waller County, Texas	2443	107	85	23	0	23	62	32	32

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 2, Census Tract 20, Dallas County, Texas	20	0	0	0	95	82	82	0
Block Group 1, Census Tract 34, Dallas County, Texas	0	71	59	12	79	35	20	15
Block Group 2, Census Tract 34, Dallas County, Texas	0	103	98	5	112	72	68	4
Block Group 1, Census Tract 40, Dallas County, Texas	0	92	85	7	25	25	21	4
Block Group 2, Census Tract 40, Dallas County, Texas	23	95	83	12	67	47	38	9
Block Group 2, Census Tract 41, Dallas County, Texas	11	134	110	24	32	32	32	0
Block Group 1, Census Tract 86.03, Dallas County, Texas	12	333	333	0	17	17	17	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	17	586	571	15	43	43	43	0
Block Group 2, Census Tract 86.04, Dallas County, Texas	16	454	454	0	353	311	279	32
Block Group 1, Census Tract 87.01, Dallas County, Texas	7	913	900	13	15	15	15	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone
Block Group 2, Census Tract 87.01, Dallas County, Texas	0	177	177	0	106	70	61	9
Block Group 4, Census Tract 87.01, Dallas County, Texas	0	96	94	2	18	18	18	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	0	204	204	0	235	167	146	21
Block Group 1, Census Tract 89, Dallas County, Texas	119	136	117	19	28	28	28	0
Block Group 1, Census Tract 100, Dallas County, Texas	0	0	0	0	124	61	26	35
Block Group 1, Census Tract 114.01, Dallas County, Texas	0	350	350	0	122	109	109	0
Block Group 3, Census Tract 115, Dallas County, Texas	0	0	0	0	0	0	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	27	167	167	0	35	35	35	0
Block Group 1, Census Tract 167.03, Dallas County, Texas	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	0	110	103	7	8	8	8	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 1, Census Tract 169.02, Dallas County, Texas	0	0	0	0	52	19	19	0
Block Group 2, Census Tract 169.02, Dallas County, Texas	11	109	109	0	70	60	60	0
Block Group 3, Census Tract 169.03, Dallas County, Texas	0	31	31	0	0	0	0	0
Block Group 5, Census Tract 169.03, Dallas County, Texas	0	36	36	0	6	6	6	0
Block Group 1, Census Tract 202, Dallas County, Texas	0	75	72	3	44	44	44	0
Block Group 2, Census Tract 202, Dallas County, Texas	0	638	638	0	85	67	56	11
Block Group 3, Census Tract 202, Dallas County, Texas	0	431	404	27	182	104	26	78
Block Group 1, Census Tract 204, Dallas County, Texas	0	98	98	0	360	15	15	0
Block Group 3, Census Tract 204, Dallas County, Texas	0	0	0	0	390	15	15	0
Block Group 1, Census Tract 601.01, Ellis County, Texas	38	0	0	0	62	62	62	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone
Block Group 2, Census Tract 601.01, Ellis County, Texas	8	29	29	0	39	39	39	0
Block Group 1, Census Tract 601.02, Ellis County, Texas	0	205	205	0	43	0	0	0
Block Group 3, Census Tract 601.02, Ellis County, Texas	0	79	76	3	33	19	4	15
Block Group 1, Census Tract 602.10, Ellis County, Texas	0	0	0	0	8	8	8	0
Block Group 1, Census Tract 611, Ellis County, Texas	18	193	193	0	3	2	0	2
Block Group 1, Census Tract 612, Ellis County, Texas	0	53	39	14	19	3	3	0
Block Group 2, Census Tract 612, Ellis County, Texas	0	77	63	14	23	10	10	0
Block Group 1, Census Tract 613, Ellis County, Texas	0	0	0	0	25	18	18	0
Block Group 2, Census Tract 613, Ellis County, Texas	0	22	22	0	3	3	3	0
Block Group 1, Census Tract 1, Freestone County, Texas	0	352	352	0	65	65	61	4

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 2, Census Tract 1, Freestone County, Texas	14	147	147	0	62	62	62	0
Block Group 1, Census Tract 3, Freestone County, Texas	0	94	70	24	41	26	5	21
Block Group 2, Census Tract 4, Freestone County, Texas	0	76	72	4	42	35	35	0
Block Group 1, Census Tract 6, Freestone County, Texas	0	0	0	0	7	7	7	0
Block Group 2, Census Tract 6, Freestone County, Texas	0	0	0	0	38	38	38	0
Block Group 3, Census Tract 6, Freestone County, Texas	5	42	42	0	36	26	26	0
Block Group 1, Census Tract 1801.02, Grimes County, Texas	0	146	133	13	53	43	37	6
Block Group 2, Census Tract 1801.02, Grimes County, Texas	0	103	103	0	98	24	24	0
Block Group 5, Census Tract 1802, Grimes County, Texas	0	0	0	0	29	28	28	0
Block Group 1, Census Tract 1803.01, Grimes County, Texas	9	0	0	0	3	3	3	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 2, Census Tract 1803.01, Grimes County, Texas	0	5	5	0	38	34	29	5
Block Group 1, Census Tract 1803.02, Grimes County, Texas	7	208	192	16	58	29	29	0
Block Group 2, Census Tract 1803.02, Grimes County, Texas	10	46	46	0	109	109	109	0
Block Group 1, Census Tract 4301, Harris County, Texas	0	25	25	0	0	0	0	0
Block Group 2, Census Tract 4301, Harris County, Texas	0	0	0	0	16	0	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	0	0	0	0	73	68	68	0
Block Group 4, Census Tract 5108, Harris County, Texas	0	0	0	0	21	0	0	0
Block Group 2, Census Tract 5109, Harris County, Texas	13	0	0	0	81	54	54	0
Block Group 1, Census Tract 5110.01, Harris County, Texas	0	0	0	0	85	0	0	0
Block Group 2, Census Tract 5110.01, Harris County, Texas	0	0	0	0	38	13	13	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: Householder: Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 1, Census Tract 5201, Harris County, Texas	0	0	0	0	38	10	0	10
Block Group 1, Census Tract 5203, Harris County, Texas	0	0	0	0	53	35	26	9
Block Group 1, Census Tract 5204, Harris County, Texas	0	160	160	0	155	73	45	28
Block Group 2, Census Tract 5204, Harris County, Texas	24	241	241	0	55	55	55	0
Block Group 1, Census Tract 5205, Harris County, Texas	0	47	30	17	57	41	18	23
Block Group 2, Census Tract 5205, Harris County, Texas	15	347	347	0	165	63	0	63
Block Group 3, Census Tract 5205, Harris County, Texas	0	0	0	0	38	15	0	15
Block Group 4, Census Tract 5205, Harris County, Texas	69	104	104	0	16	16	16	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	11	653	653	0	111	85	63	22
Block Group 1, Census Tract 5206.02, Harris County, Texas	39	246	246	0	0	0	0	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone
Block Group 1, Census Tract 5214, Harris County, Texas	59	76	76	0	0	0	0
Block Group 2, Census Tract 5214, Harris County, Texas	0	495	495	0	33	33	0
Block Group 3, Census Tract 5214, Harris County, Texas	0	0	0	0	9	9	0
Block Group 4, Census Tract 5214, Harris County, Texas	132	285	285	0	59	30	30
Block Group 4, Census Tract 5215, Harris County, Texas	19	0	0	0	10	10	0
Block Group 1, Census Tract 5216, Harris County, Texas	86	80	69	11	16	16	0
Block Group 2, Census Tract 5216, Harris County, Texas	0	137	130	7	9	9	0
Block Group 1, Census Tract 5217, Harris County, Texas	30	59	59	0	63	14	0
Block Group 2, Census Tract 5217, Harris County, Texas	45	475	457	18	140	71	25
Block Group 3, Census Tract 5217, Harris County, Texas	0	62	62	0	185	85	14

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 4, Census Tract 5217, Harris County, Texas	0	112	112	0	32	32	32	0
Block Group 1, Census Tract 5218, Harris County, Texas	0	58	58	0	213	78	63	15
Block Group 3, Census Tract 5301, Harris County, Texas	0	189	112	77	41	41	41	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	0	19	19	0	75	0	0	0
Block Group 1, Census Tract 5401, Harris County, Texas	0	0	0	0	88	71	71	0
Block Group 3, Census Tract 5401, Harris County, Texas	0	0	0	0	20	20	20	0
Block Group 2, Census Tract 5408, Harris County, Texas	0	30	30	0	200	106	106	0
Block Group 2, Census Tract 5409.02, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5410.01, Harris County, Texas	13	296	296	0	115	35	35	0
Block Group 1, Census Tract 5410.02, Harris County, Texas	0	80	80	0	65	65	65	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone
Block Group 2, Census Tract 5410.02, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5410.03, Harris County, Texas	0	64	64	0	34	34	0	34
Block Group 1, Census Tract 5430.01, Harris County, Texas	0	0	0	0	25	0	0	0
Block Group 1, Census Tract 5430.02, Harris County, Texas	0	60	60	0	55	35	35	0
Block Group 2, Census Tract 5430.02, Harris County, Texas	32	216	216	0	22	0	0	0
Block Group 1, Census Tract 5431, Harris County, Texas	30	41	41	0	5	5	5	0
Block Group 6, Census Tract 5517.01, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5518, Harris County, Texas	0	0	0	0	34	14	14	0
Block Group 3, Census Tract 5518, Harris County, Texas	0	0	0	0	68	9	9	0
Block Group 1, Census Tract 5519, Harris County, Texas	0	0	0	0	55	9	9	0

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 2, Census Tract 5519, Harris County, Texas	0	209	209	0	46	29	29	0
Block Group 3, Census Tract 5519, Harris County, Texas	0	285	285	0	222	163	163	0
Block Group 3, Census Tract 5520.01, Harris County, Texas	0	30	30	0	44	44	44	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	44	0	0	0	7	7	7	0
Block Group 1, Census Tract 5521.01, Harris County, Texas	51	75	75	0	180	131	131	0
Block Group 1, Census Tract 5521.03, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 5522, Harris County, Texas	0	129	129	0	113	25	12	13
Block Group 3, Census Tract 5522, Harris County, Texas	0	616	616	0	62	62	62	0
Block Group 2, Census Tract 5544.01, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 2, Census Tract 5544.02, Harris County, Texas	0	194	194	0	16	13	0	13

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone
Block Group 1, Census Tract 5544.03, Harris County, Texas	16	377	377	0	164	22	22	0
Block Group 2, Census Tract 5557.01, Harris County, Texas	0	0	0	0	0	0	0	0
Block Group 1, Census Tract 5560, Harris County, Texas	0	0	0	0	8	8	8	0
Block Group 3, Census Tract 9501, Leon County, Texas	0	220	220	0	25	25	25	0
Block Group 1, Census Tract 9502, Leon County, Texas	0	8	6	2	25	25	25	0
Block Group 2, Census Tract 9502, Leon County, Texas	0	0	0	0	81	30	13	17
Block Group 3, Census Tract 9502, Leon County, Texas	0	0	0	0	74	33	0	33
Block Group 5, Census Tract 9502, Leon County, Texas	0	85	84	1	28	15	12	3
Block Group 2, Census Tract 9503, Leon County, Texas	0	147	147	0	7	7	7	0
Block Group 3, Census Tract 9503, Leon County, Texas	0	10	10	0	72	72	65	7

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 4, Census Tract 9503, Leon County, Texas	2	0	0	0	66	61	54	7
Block Group 1, Census Tract 9707, Limestone County, Texas	0	48	48	0	10	10	10	0
Block Group 2, Census Tract 9707, Limestone County, Texas	0	63	63	0	35	35	35	0
Block Group 1, Census Tract 2, Madison County, Texas	0	62	58	4	30	21	15	6
Block Group 1, Census Tract 3, Madison County, Texas	0	80	80	0	42	7	0	7
Block Group 1, Census Tract 9703, Navarro County, Texas	2	42	26	16	18	11	6	5
Block Group 3, Census Tract 9704, Navarro County, Texas	0	57	51	6	90	73	62	11
Block Group 4, Census Tract 9709, Navarro County, Texas	15	387	352	35	16	2	1	1
Block Group 5, Census Tract 9709, Navarro County, Texas	0	186	186	0	53	53	48	5
Block Group 1, Census Tract 9710, Navarro County, Texas	0	71	56	15	92	56	30	26

Geography	Income in the past 12 months below poverty level: - In family households: - In other families: Male householder, no wife present: - Non-relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months below poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months below poverty level: - In non-family households and other living arrangement:	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	
Block Group 1, Census Tract 6806, Waller County, Texas	0	111	86	25	50	15	15	0
Block Group 2, Census Tract 6806, Waller County, Texas	0	30	30	0	22	22	22	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level: - In family households:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - Male householder, no wife present: - Non-relatives		
Block Group 2, Census Tract 20, Dallas County, Texas	13	518	339	84	84	0	255	53	35	18
Block Group 1, Census Tract 34, Dallas County, Texas	44	421	333	171	162	9	162	73	73	0
Block Group 2, Census Tract 34, Dallas County, Texas	40	389	182	133	133	0	49	34	34	0
Block Group 1, Census Tract 40, Dallas County, Texas	0	188	90	27	27	0	63	0	0	0
Block Group 2, Census Tract 40, Dallas County, Texas	20	325	204	31	31	0	173	58	37	21
Block Group 2, Census Tract 41, Dallas County, Texas	0	240	224	88	88	0	136	62	62	0
Block Group 1, Census Tract 86.03, Dallas County, Texas	0	417	361	205	205	0	156	0	0	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	0	886	773	277	277	0	496	172	156	16
Block Group 2, Census Tract 86.04, Dallas County, Texas	42	464	271	111	111	0	160	82	82	0
Block Group 1, Census Tract 87.01, Dallas County, Texas	0	220	174	33	33	0	141	20	20	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 2, Census Tract 87.01, Dallas County, Texas	36	422	367	130	130	0	237	50	50	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	0	387	348	63	63	0	285	14	14	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	68	513	393	100	100	0	293	29	29	0
Block Group 1, Census Tract 89, Dallas County, Texas	0	714	689	153	153	0	536	189	171	18
Block Group 1, Census Tract 100, Dallas County, Texas	63	1432	319	178	178	0	141	106	106	0
Block Group 1, Census Tract 114.01, Dallas County, Texas	13	834	680	251	251	0	429	99	99	0
Block Group 3, Census Tract 115, Dallas County, Texas	0	147	139	97	97	0	42	42	42	0
Block Group 4, Census Tract 115, Dallas County, Texas	0	467	419	150	150	0	269	95	95	0
Block Group 1, Census Tract 167.03, Dallas County, Texas	0	1091	1074	473	473	0	601	467	467	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	0	1533	1412	1115	1115	0	297	45	45	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level: - In family households:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives		
Block Group 1, Census Tract 169.02, Dallas County, Texas	33	1194	1004	651	651	0	353	102	102	0
Block Group 2, Census Tract 169.02, Dallas County, Texas	10	1305	1160	970	970	0	190	162	131	31
Block Group 3, Census Tract 169.03, Dallas County, Texas	0	835	747	624	624	0	123	43	34	9
Block Group 5, Census Tract 169.03, Dallas County, Texas	0	698	598	403	403	0	195	195	186	9
Block Group 1, Census Tract 202, Dallas County, Texas	0	259	226	71	71	0	155	0	0	0
Block Group 2, Census Tract 202, Dallas County, Texas	18	1431	1272	681	681	0	591	219	219	0
Block Group 3, Census Tract 202, Dallas County, Texas	78	696	622	296	296	0	326	76	76	0
Block Group 1, Census Tract 204, Dallas County, Texas	345	878	490	408	408	0	82	0	0	0
Block Group 3, Census Tract 204, Dallas County, Texas	375	1836	609	470	470	0	139	119	104	15
Block Group 1, Census Tract 601.01, Ellis County, Texas	0	2471	2354	2003	2003	0	351	152	152	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 2, Census Tract 601.01, Ellis County, Texas	0	1172	1156	952	952	0	204	79	68	11
Block Group 1, Census Tract 601.02, Ellis County, Texas	43	2475	2226	2088	2070	18	138	36	36	0
Block Group 3, Census Tract 601.02, Ellis County, Texas	14	2765	2599	2049	2049	0	550	175	155	20
Block Group 1, Census Tract 602.10, Ellis County, Texas	0	879	847	667	667	0	180	18	18	0
Block Group 1, Census Tract 611, Ellis County, Texas	1	1351	1243	1063	1063	0	180	74	74	0
Block Group 1, Census Tract 612, Ellis County, Texas	16	649	583	465	465	0	118	27	27	0
Block Group 2, Census Tract 612, Ellis County, Texas	13	1029	967	840	840	0	127	14	14	0
Block Group 1, Census Tract 613, Ellis County, Texas	7	774	721	570	570	0	151	25	9	16
Block Group 2, Census Tract 613, Ellis County, Texas	0	1047	915	739	739	0	176	69	52	17
Block Group 1, Census Tract 1, Freestone County, Texas	0	2251	2004	1389	1389	0	615	42	42	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives		
Block Group 2, Census Tract 1, Freestone County, Texas	0	2081	1824	1479	1479	0	345	168	168	0
Block Group 1, Census Tract 3, Freestone County, Texas	15	844	719	366	366	0	353	189	189	0
Block Group 2, Census Tract 4, Freestone County, Texas	7	1304	1158	835	835	0	323	19	16	3
Block Group 1, Census Tract 6, Freestone County, Texas	0	622	553	338	338	0	215	29	29	0
Block Group 2, Census Tract 6, Freestone County, Texas	0	860	779	750	750	0	29	0	0	0
Block Group 3, Census Tract 6, Freestone County, Texas	10	1524	1314	1134	1134	0	180	76	76	0
Block Group 1, Census Tract 1801.02, Grimes County, Texas	10	1311	1256	1077	1077	0	179	37	37	0
Block Group 2, Census Tract 1801.02, Grimes County, Texas	74	1358	1211	1014	1014	0	197	22	22	0
Block Group 5, Census Tract 1802, Grimes County, Texas	1	1201	1040	822	822	0	218	25	25	0
Block Group 1, Census Tract 1803.01, Grimes County, Texas	0	1373	1257	1173	1173	0	84	41	41	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 2, Census Tract 1803.01, Grimes County, Texas	4	1169	1060	869	869	0	191	140	130	10
Block Group 1, Census Tract 1803.02, Grimes County, Texas	29	1460	1220	1075	1068	7	145	42	40	2
Block Group 2, Census Tract 1803.02, Grimes County, Texas	0	1395	1275	544	544	0	731	169	169	0
Block Group 1, Census Tract 4301, Harris County, Texas	0	788	467	222	222	0	245	0	0	0
Block Group 2, Census Tract 4301, Harris County, Texas	16	1581	1373	1239	1239	0	134	0	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	5	901	527	456	456	0	71	0	0	0
Block Group 4, Census Tract 5108, Harris County, Texas	21	844	615	589	589	0	26	0	0	0
Block Group 2, Census Tract 5109, Harris County, Texas	27	3031	1743	1111	1111	0	632	480	389	91
Block Group 1, Census Tract 5110.01, Harris County, Texas	85	1466	976	918	918	0	58	22	22	0
Block Group 2, Census Tract 5110.01, Harris County, Texas	25	967	699	466	466	0	233	54	54	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 1, Census Tract 5201, Harris County, Texas	28	2020	1596	1348	1318	30	248	86	86	0
Block Group 1, Census Tract 5203, Harris County, Texas	18	1900	1700	1139	1139	0	561	0	0	0
Block Group 1, Census Tract 5204, Harris County, Texas	82	712	477	266	266	0	211	190	164	26
Block Group 2, Census Tract 5204, Harris County, Texas	0	1338	1081	871	871	0	210	21	21	0
Block Group 1, Census Tract 5205, Harris County, Texas	16	1079	914	848	848	0	66	0	0	0
Block Group 2, Census Tract 5205, Harris County, Texas	102	2373	1622	1229	1227	2	393	0	0	0
Block Group 3, Census Tract 5205, Harris County, Texas	23	1222	1131	1011	1011	0	120	25	18	7
Block Group 4, Census Tract 5205, Harris County, Texas	0	1324	1276	753	753	0	523	130	130	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	26	1342	1095	679	679	0	416	86	86	0
Block Group 1, Census Tract 5206.02, Harris County, Texas	0	466	466	96	96	0	370	126	126	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 1, Census Tract 5214, Harris County, Texas	0	906	663	563	563	0	100	100	100	0
Block Group 2, Census Tract 5214, Harris County, Texas	0	712	491	246	246	0	245	131	131	0
Block Group 3, Census Tract 5214, Harris County, Texas	0	1166	1092	951	931	20	141	63	63	0
Block Group 4, Census Tract 5214, Harris County, Texas	29	1483	1383	254	254	0	1129	571	529	42
Block Group 4, Census Tract 5215, Harris County, Texas	0	2030	1889	1433	1417	16	456	151	151	0
Block Group 1, Census Tract 5216, Harris County, Texas	0	2050	1922	1274	1274	0	648	548	530	18
Block Group 2, Census Tract 5216, Harris County, Texas	0	917	811	643	630	13	168	109	109	0
Block Group 1, Census Tract 5217, Harris County, Texas	49	969	427	168	168	0	259	70	70	0
Block Group 2, Census Tract 5217, Harris County, Texas	69	1113	850	376	376	0	474	0	0	0
Block Group 3, Census Tract 5217, Harris County, Texas	100	1153	826	502	502	0	324	80	37	43

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 4, Census Tract 5217, Harris County, Texas	0	1257	920	553	553	0	367	45	45	0
Block Group 1, Census Tract 5218, Harris County, Texas	135	1933	1539	1231	1231	0	308	0	0	0
Block Group 3, Census Tract 5301, Harris County, Texas	0	589	558	181	181	0	377	89	58	31
Block Group 1, Census Tract 5342.03, Harris County, Texas	75	1515	1330	751	751	0	579	4	0	4
Block Group 1, Census Tract 5401, Harris County, Texas	17	7245	6736	5981	5981	0	755	136	97	39
Block Group 3, Census Tract 5401, Harris County, Texas	0	1633	1495	1254	1254	0	241	0	0	0
Block Group 2, Census Tract 5408, Harris County, Texas	94	2790	2583	2169	2169	0	414	71	42	29
Block Group 2, Census Tract 5409.02, Harris County, Texas	0	2428	1815	1636	1636	0	179	0	0	0
Block Group 1, Census Tract 5410.01, Harris County, Texas	80	7339	6491	4951	4951	0	1540	259	214	45
Block Group 1, Census Tract 5410.02, Harris County, Texas	0	6481	6241	4890	4863	27	1351	877	836	41

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 2, Census Tract 5410.02, Harris County, Texas	0	1493	1424	1402	1402	0	22	0	0
Block Group 1, Census Tract 5410.03, Harris County, Texas	0	4339	4044	3560	3552	8	484	0	0
Block Group 1, Census Tract 5430.01, Harris County, Texas	25	5737	5538	5436	5436	0	102	58	58
Block Group 1, Census Tract 5430.02, Harris County, Texas	20	9424	9026	8585	8585	0	441	40	40
Block Group 2, Census Tract 5430.02, Harris County, Texas	22	3227	2968	2344	2344	0	624	97	97
Block Group 1, Census Tract 5431, Harris County, Texas	0	2144	2041	1787	1787	0	254	156	117
Block Group 6, Census Tract 5517.01, Harris County, Texas	0	2279	1956	1566	1548	18	390	0	0
Block Group 1, Census Tract 5518, Harris County, Texas	20	2505	2310	2095	2095	0	215	128	128
Block Group 3, Census Tract 5518, Harris County, Texas	59	987	823	731	731	0	92	0	0
Block Group 1, Census Tract 5519, Harris County, Texas	46	968	793	724	680	44	69	0	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives		
Block Group 2, Census Tract 5519, Harris County, Texas	17	1822	1136	583	578	5	553	215	215	0
Block Group 3, Census Tract 5519, Harris County, Texas	59	2054	1356	757	757	0	599	75	75	0
Block Group 3, Census Tract 5520.01, Harris County, Texas	0	2417	2032	1311	1311	0	721	352	332	20
Block Group 1, Census Tract 5520.02, Harris County, Texas	0	1812	1566	1138	1138	0	428	204	204	0
Block Group 1, Census Tract 5521.01, Harris County, Texas	49	3526	3097	2154	2143	11	943	589	565	24
Block Group 1, Census Tract 5521.03, Harris County, Texas	0	1071	1048	797	797	0	251	143	143	0
Block Group 2, Census Tract 5522, Harris County, Texas	88	1378	1077	991	991	0	86	24	24	0
Block Group 3, Census Tract 5522, Harris County, Texas	0	1734	1567	1405	1405	0	162	13	13	0
Block Group 2, Census Tract 5544.01, Harris County, Texas	0	9177	8708	8181	8181	0	527	212	212	0
Block Group 2, Census Tract 5544.02, Harris County, Texas	3	6217	5771	5018	5018	0	753	180	180	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 1, Census Tract 5544.03, Harris County, Texas	142	9006	8547	7401	7401	0	1146	22	22	0
Block Group 2, Census Tract 5557.01, Harris County, Texas	0	4179	4088	3077	3061	16	1011	298	298	0
Block Group 1, Census Tract 5560, Harris County, Texas	0	1198	1124	1089	1089	0	35	35	35	0
Block Group 3, Census Tract 9501, Leon County, Texas	0	2362	2154	1406	1383	23	748	310	310	0
Block Group 1, Census Tract 9502, Leon County, Texas	0	434	390	311	311	0	79	79	77	2
Block Group 2, Census Tract 9502, Leon County, Texas	51	603	439	439	439	0	0	0	0	0
Block Group 3, Census Tract 9502, Leon County, Texas	41	514	491	491	491	0	0	0	0	0
Block Group 5, Census Tract 9502, Leon County, Texas	13	909	833	474	474	0	359	228	222	6
Block Group 2, Census Tract 9503, Leon County, Texas	0	1136	1042	894	883	11	148	95	95	0
Block Group 3, Census Tract 9503, Leon County, Texas	0	1033	958	646	580	66	312	85	66	19

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level: - In family households:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 4, Census Tract 9503, Leon County, Texas	5	1728	1478	877	877	0	601	347	347	0
Block Group 1, Census Tract 9707, Limestone County, Texas	0	615	552	506	506	0	46	0	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	0	815	754	565	565	0	189	47	47	0
Block Group 1, Census Tract 2, Madison County, Texas	9	723	631	528	528	0	103	46	46	0
Block Group 1, Census Tract 3, Madison County, Texas	35	848	754	615	615	0	139	9	9	0
Block Group 1, Census Tract 9703, Navarro County, Texas	7	1321	1285	1001	1001	0	284	10	10	0
Block Group 3, Census Tract 9704, Navarro County, Texas	17	1130	1081	853	853	0	228	27	27	0
Block Group 4, Census Tract 9709, Navarro County, Texas	14	1838	1558	748	748	0	810	219	202	17
Block Group 5, Census Tract 9709, Navarro County, Texas	0	1510	1471	1205	1205	0	266	155	155	0
Block Group 1, Census Tract 9710, Navarro County, Texas	36	1515	1263	947	947	0	316	94	94	0

Geography	Income in the past 12 months below poverty level: - In non-family households and other living arrangement: - Other living arrangement	Income in the past 12 months at or above poverty level:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families:	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In married couple families: - Non-relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Male householder, no wife present: - Non-relatives	
Block Group 1, Census Tract 6806, Waller County, Texas	35	2094	1953	1677	1677	0	276	129	115	14
Block Group 2, Census Tract 6806, Waller County, Texas	0	2336	2108	1992	1992	0	116	38	38	0

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 20, Dallas County, Texas	202	188	14	179	179	179	0	0
Block Group 1, Census Tract 34, Dallas County, Texas	89	89	0	88	76	60	16	12
Block Group 2, Census Tract 34, Dallas County, Texas	15	10	5	207	168	127	41	39
Block Group 1, Census Tract 40, Dallas County, Texas	63	63	0	98	81	72	9	17
Block Group 2, Census Tract 40, Dallas County, Texas	115	115	0	121	109	93	16	12
Block Group 2, Census Tract 41, Dallas County, Texas	74	60	14	16	16	16	0	0
Block Group 1, Census Tract 86.03, Dallas County, Texas	156	156	0	56	56	56	0	0
Block Group 1, Census Tract 86.04, Dallas County, Texas	324	324	0	113	113	113	0	0
Block Group 2, Census Tract 86.04, Dallas County, Texas	78	78	0	193	170	143	27	23
Block Group 1, Census Tract 87.01, Dallas County, Texas	121	121	0	46	46	46	0	0

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 87.01, Dallas County, Texas	187	159	28	55	55	55	0	0
Block Group 4, Census Tract 87.01, Dallas County, Texas	271	251	20	39	39	39	0	0
Block Group 5, Census Tract 87.01, Dallas County, Texas	264	264	0	120	120	94	26	0
Block Group 1, Census Tract 89, Dallas County, Texas	347	344	3	25	25	25	0	0
Block Group 1, Census Tract 100, Dallas County, Texas	35	35	0	1113	833	569	264	280
Block Group 1, Census Tract 114.01, Dallas County, Texas	330	272	58	154	154	144	10	0
Block Group 3, Census Tract 115, Dallas County, Texas	0	0	0	8	8	8	0	0
Block Group 4, Census Tract 115, Dallas County, Texas	174	174	0	48	42	36	6	6
Block Group 1, Census Tract 167.03, Dallas County, Texas	134	134	0	17	17	17	0	0
Block Group 2, Census Tract 168.02, Dallas County, Texas	252	225	27	121	121	121	0	0

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 1, Census Tract 169.02, Dallas County, Texas	251	237	14	190	145	99	46	45
Block Group 2, Census Tract 169.02, Dallas County, Texas	28	21	7	145	126	97	29	19
Block Group 3, Census Tract 169.03, Dallas County, Texas	80	65	15	88	88	88	0	0
Block Group 5, Census Tract 169.03, Dallas County, Texas	0	0	0	100	88	75	13	12
Block Group 1, Census Tract 202, Dallas County, Texas	155	155	0	33	33	33	0	0
Block Group 2, Census Tract 202, Dallas County, Texas	372	372	0	159	122	89	33	37
Block Group 3, Census Tract 202, Dallas County, Texas	250	230	20	74	42	33	9	32
Block Group 1, Census Tract 204, Dallas County, Texas	82	82	0	388	264	197	67	124
Block Group 3, Census Tract 204, Dallas County, Texas	20	20	0	1227	937	768	169	290
Block Group 1, Census Tract 601.01, Ellis County, Texas	199	187	12	117	102	87	15	15

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 601.01, Ellis County, Texas	125	125	0	16	16	16	0	0
Block Group 1, Census Tract 601.02, Ellis County, Texas	102	52	50	249	149	62	87	100
Block Group 3, Census Tract 601.02, Ellis County, Texas	375	369	6	166	150	135	15	16
Block Group 1, Census Tract 602.10, Ellis County, Texas	162	124	38	32	32	32	0	0
Block Group 1, Census Tract 611, Ellis County, Texas	106	80	26	108	104	104	0	4
Block Group 1, Census Tract 612, Ellis County, Texas	91	85	6	66	66	53	13	0
Block Group 2, Census Tract 612, Ellis County, Texas	113	108	5	62	55	37	18	7
Block Group 1, Census Tract 613, Ellis County, Texas	126	119	7	53	40	36	4	13
Block Group 2, Census Tract 613, Ellis County, Texas	107	75	32	132	132	132	0	0
Block Group 1, Census Tract 1, Freestone County, Texas	573	573	0	247	220	199	21	27

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 1, Freestone County, Texas	177	177	0	257	233	217	16	24
Block Group 1, Census Tract 3, Freestone County, Texas	164	149	15	125	125	125	0	0
Block Group 2, Census Tract 4, Freestone County, Texas	304	282	22	146	127	115	12	19
Block Group 1, Census Tract 6, Freestone County, Texas	186	186	0	69	55	39	16	14
Block Group 2, Census Tract 6, Freestone County, Texas	29	29	0	81	60	40	20	21
Block Group 3, Census Tract 6, Freestone County, Texas	104	104	0	210	210	202	8	0
Block Group 1, Census Tract 1801.02, Grimes County, Texas	142	137	5	55	55	55	0	0
Block Group 2, Census Tract 1801.02, Grimes County, Texas	175	175	0	147	147	95	52	0
Block Group 5, Census Tract 1802, Grimes County, Texas	193	193	0	161	154	146	8	7
Block Group 1, Census Tract 1803.01, Grimes County, Texas	43	43	0	116	93	78	15	23

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 1803.01, Grimes County, Texas	51	46	5	109	87	62	25	22
Block Group 1, Census Tract 1803.02, Grimes County, Texas	103	100	3	240	213	147	66	27
Block Group 2, Census Tract 1803.02, Grimes County, Texas	562	562	0	120	120	120	0	0
Block Group 1, Census Tract 4301, Harris County, Texas	245	208	37	321	282	245	37	39
Block Group 2, Census Tract 4301, Harris County, Texas	134	134	0	208	208	208	0	0
Block Group 5, Census Tract 4301, Harris County, Texas	71	71	0	374	351	351	0	23
Block Group 4, Census Tract 5108, Harris County, Texas	26	26	0	229	229	208	21	0
Block Group 2, Census Tract 5109, Harris County, Texas	152	152	0	1288	808	394	414	480
Block Group 1, Census Tract 5110.01, Harris County, Texas	36	36	0	490	447	370	77	43
Block Group 2, Census Tract 5110.01, Harris County, Texas	179	179	0	268	242	193	49	26

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 1, Census Tract 5201, Harris County, Texas	162	162	0	424	332	263	69	92
Block Group 1, Census Tract 5203, Harris County, Texas	561	549	12	200	200	190	10	0
Block Group 1, Census Tract 5204, Harris County, Texas	21	16	5	235	96	39	57	139
Block Group 2, Census Tract 5204, Harris County, Texas	189	151	38	257	170	127	43	87
Block Group 1, Census Tract 5205, Harris County, Texas	66	66	0	165	51	40	11	114
Block Group 2, Census Tract 5205, Harris County, Texas	393	393	0	751	486	228	258	265
Block Group 3, Census Tract 5205, Harris County, Texas	95	95	0	91	91	91	0	0
Block Group 4, Census Tract 5205, Harris County, Texas	393	393	0	48	48	48	0	0
Block Group 1, Census Tract 5206.01, Harris County, Texas	330	290	40	247	158	112	46	89
Block Group 1, Census Tract 5206.02, Harris County, Texas	244	244	0	0	0	0	0	0

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 1, Census Tract 5214, Harris County, Texas	0	0	0	243	157	98	59	86
Block Group 2, Census Tract 5214, Harris County, Texas	114	0	114	221	106	15	91	115
Block Group 3, Census Tract 5214, Harris County, Texas	78	78	0	74	63	53	10	11
Block Group 4, Census Tract 5214, Harris County, Texas	558	504	54	100	100	100	0	0
Block Group 4, Census Tract 5215, Harris County, Texas	305	305	0	141	119	96	23	22
Block Group 1, Census Tract 5216, Harris County, Texas	100	100	0	128	93	85	8	35
Block Group 2, Census Tract 5216, Harris County, Texas	59	59	0	106	106	106	0	0
Block Group 1, Census Tract 5217, Harris County, Texas	189	159	30	542	516	470	46	26
Block Group 2, Census Tract 5217, Harris County, Texas	474	424	50	263	212	169	43	51
Block Group 3, Census Tract 5217, Harris County, Texas	244	244	0	327	191	102	89	136

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Other living arrangement
Block Group 4, Census Tract 5217, Harris County, Texas	322	306	16	337	251	189	62	86
Block Group 1, Census Tract 5218, Harris County, Texas	308	280	28	394	312	217	95	82
Block Group 3, Census Tract 5301, Harris County, Texas	288	288	0	31	31	31	0	0
Block Group 1, Census Tract 5342.03, Harris County, Texas	575	543	32	185	174	133	41	11
Block Group 1, Census Tract 5401, Harris County, Texas	619	580	39	509	382	260	122	127
Block Group 3, Census Tract 5401, Harris County, Texas	241	208	33	138	123	108	15	15
Block Group 2, Census Tract 5408, Harris County, Texas	343	333	10	207	191	104	87	16
Block Group 2, Census Tract 5409.02, Harris County, Texas	179	179	0	613	572	535	37	41
Block Group 1, Census Tract 5410.01, Harris County, Texas	1281	1236	45	848	684	496	188	164
Block Group 1, Census Tract 5410.02, Harris County, Texas	474	422	52	240	213	187	26	27

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangements: - Other living arrangement
Block Group 2, Census Tract 5410.02, Harris County, Texas	22	22	0	69	69	69	0	0
Block Group 1, Census Tract 5410.03, Harris County, Texas	484	360	124	295	240	224	16	55
Block Group 1, Census Tract 5430.01, Harris County, Texas	44	33	11	199	180	147	33	19
Block Group 1, Census Tract 5430.02, Harris County, Texas	401	362	39	398	314	214	100	84
Block Group 2, Census Tract 5430.02, Harris County, Texas	527	476	51	259	259	242	17	0
Block Group 1, Census Tract 5431, Harris County, Texas	98	93	5	103	67	34	33	36
Block Group 6, Census Tract 5517.01, Harris County, Texas	390	390	0	323	274	225	49	49
Block Group 1, Census Tract 5518, Harris County, Texas	87	87	0	195	181	162	19	14
Block Group 3, Census Tract 5518, Harris County, Texas	92	92	0	164	155	105	50	9
Block Group 1, Census Tract 5519, Harris County, Texas	69	69	0	175	175	137	38	0

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 2, Census Tract 5519, Harris County, Texas	338	313	25	686	632	580	52	54
Block Group 3, Census Tract 5519, Harris County, Texas	524	485	39	698	670	611	59	28
Block Group 3, Census Tract 5520.01, Harris County, Texas	369	323	46	385	385	385	0	0
Block Group 1, Census Tract 5520.02, Harris County, Texas	224	213	11	246	175	126	49	71
Block Group 1, Census Tract 5521.01, Harris County, Texas	354	330	24	429	357	284	73	72
Block Group 1, Census Tract 5521.03, Harris County, Texas	108	97	11	23	23	23	0	0
Block Group 2, Census Tract 5522, Harris County, Texas	62	62	0	301	296	245	51	5
Block Group 3, Census Tract 5522, Harris County, Texas	149	124	25	167	118	85	33	49
Block Group 2, Census Tract 5544.01, Harris County, Texas	315	315	0	469	339	229	110	130
Block Group 2, Census Tract 5544.02, Harris County, Texas	573	504	69	446	308	223	85	138

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 1, Census Tract 5544.03, Harris County, Texas	1124	1018	106	459	424	302	122	35
Block Group 2, Census Tract 5557.01, Harris County, Texas	713	713	0	91	91	91	0	0
Block Group 1, Census Tract 5560, Harris County, Texas	0	0	0	74	74	74	0	0
Block Group 3, Census Tract 9501, Leon County, Texas	438	417	21	208	183	157	26	25
Block Group 1, Census Tract 9502, Leon County, Texas	0	0	0	44	44	44	0	0
Block Group 2, Census Tract 9502, Leon County, Texas	0	0	0	164	138	113	25	26
Block Group 3, Census Tract 9502, Leon County, Texas	0	0	0	23	23	23	0	0
Block Group 5, Census Tract 9502, Leon County, Texas	131	131	0	76	56	49	7	20
Block Group 2, Census Tract 9503, Leon County, Texas	53	45	8	94	94	94	0	0
Block Group 3, Census Tract 9503, Leon County, Texas	227	221	6	75	57	57	0	18

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement
Block Group 4, Census Tract 9503, Leon County, Texas	254	254	0	250	176	132	44	74
Block Group 1, Census Tract 9707, Limestone County, Texas	46	38	8	63	63	63	0	0
Block Group 2, Census Tract 9707, Limestone County, Texas	142	142	0	61	61	61	0	0
Block Group 1, Census Tract 2, Madison County, Texas	57	46	11	92	92	88	4	0
Block Group 1, Census Tract 3, Madison County, Texas	130	117	13	94	88	67	21	6
Block Group 1, Census Tract 9703, Navarro County, Texas	274	260	14	36	36	36	0	0
Block Group 3, Census Tract 9704, Navarro County, Texas	201	193	8	49	47	41	6	2
Block Group 4, Census Tract 9709, Navarro County, Texas	591	508	83	280	247	216	31	33
Block Group 5, Census Tract 9709, Navarro County, Texas	111	105	6	39	32	31	1	7
Block Group 1, Census Tract 9710, Navarro County, Texas	222	200	22	252	207	146	61	45

Geography	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present:	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - All relatives	Income in the past 12 months at or above poverty level: - In family households: - In other families: - Female householder, no husband present: - Non-relatives	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement:	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Householder: - Not living alone	Income in the past 12 months at or above poverty level: - In non-family households and other living arrangement: - Other living arrangement	
Block Group 1, Census Tract 6806, Waller County, Texas	147	125	22	141	103	79	24	38
Block Group 2, Census Tract 6806, Waller County, Texas	78	78	0	228	115	76	39	113

**Socioeconomic:
Percent Minority, Percent Hispanic, Percent Poverty, Median Income within the Study Area by
Block Group and Census Tract, County:**

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 20, Dallas County, Texas	652	47%	33%	18%	17,737	Segment 1
Block Group 1, Census Tract 34, Dallas County, Texas	653	93%	9%	33%	32,292	Segment 1
Block Group 2, Census Tract 34, Dallas County, Texas	730	68%	20%	46%	25,425	Segment 1
Block Group 1, Census Tract 40, Dallas County, Texas	397	73%	4%	53%	21,042	Segment 1
Block Group 2, Census Tract 40, Dallas County, Texas	587	87%	13%	45%	25,069	Segment 1
Block Group 2, Census Tract 41, Dallas County, Texas	535	55%	49%	55%	18,036	Segment 1
Block Group 1, Census Tract 86.03, Dallas County, Texas	912	73%	27%	54%	17,120	Segment 1
Block Group 1, Census Tract 86.04, Dallas County, Texas	1,671	67%	31%	47%	20,913	Segment 1
Block Group 2, Census Tract 86.04, Dallas County, Texas	1,334	91%	10%	65%	10,641	Segment 1
Block Group 1, Census Tract 87.01, Dallas County, Texas	1,192	100%	3%	82%	8,933	Segment 1
Block Group 2, Census Tract 87.01, Dallas County, Texas	727	96%	8%	42%	19,665	Segment 1
Block Group 4, Census Tract 87.01, Dallas County, Texas	501	100%	0%	23%	23,988	Segment 1
Block Group 5, Census Tract 87.01, Dallas County, Texas	1,089	97%	7%	50%	14,663	Segment 1
Block Group 1, Census Tract 89, Dallas County, Texas	1,267	59%	36%	44%	27,353	Segment 1
Block Group 1, Census Tract 100, Dallas County, Texas	9,511	48%	18%	9%	79,063	Segment 1
Block Group 1, Census Tract 114.01, Dallas County, Texas	1,783	90%	7%	50%	19,767	Segment 1
Block Group 3, Census Tract 115, Dallas County, Texas	228	35%	65%	36%	18,438	Segment 1
Block Group 4, Census Tract 115, Dallas County, Texas	789	39%	57%	41%	32,829	Segment 1
Block Group 1, Census Tract 167.03, Dallas County, Texas	1,091	18%	59%	0%	61,146	Segment 1

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 168.02, Dallas County, Texas	1,651	64%	20%	7%	65,068	Segment 1
Block Group 1, Census Tract 169.02, Dallas County, Texas	3,294	46%	29%	14%	50,821	Segment 1
Block Group 2, Census Tract 169.02, Dallas County, Texas	1,965	37%	57%	32%	30,972	Segment 1
Block Group 3, Census Tract 169.03, Dallas County, Texas	1,542	36%	30%	26%	52,344	Segment 1
Block Group 5, Census Tract 169.03, Dallas County, Texas	778	35%	34%	10%	50,784	Segment 1
Block Group 1, Census Tract 202, Dallas County, Texas	433	100%	13%	40%	21,618	Segment 1
Block Group 2, Census Tract 202, Dallas County, Texas	2,175	99%	0%	34%	26,083	Segment 1
Block Group 3, Census Tract 202, Dallas County, Texas	1,417	80%	20%	49%	23,214	Segment 1
Block Group 1, Census Tract 204, Dallas County, Texas	1,336	46%	20%	34%	80,921	Segment 1
Block Group 3, Census Tract 204, Dallas County, Texas	2,226	55%	16%	18%	59,355	Segment 1
Block Group 1, Census Tract 601.01, Ellis County, Texas	2,571	15%	30%	4%	66,373	Segment 1
Block Group 2, Census Tract 601.01, Ellis County, Texas	1,381	37%	38%	15%	55,306	Segment 1, 2A, 2B
Block Group 1, Census Tract 601.02, Ellis County, Texas	3,017	29%	67%	14%	53,276	Segment 2A, 2B
Block Group 3, Census Tract 601.02, Ellis County, Texas	3,140	21%	39%	11%	53,125	Segment 2A, 2B
Block Group 1, Census Tract 602.10, Ellis County, Texas	893	7%	21%	2%	82,275	Segment 2A, 2B
Block Group 1, Census Tract 611, Ellis County, Texas	1,584	10%	16%	15%	58,250	Segment 2A, 2B
Block Group 1, Census Tract 612, Ellis County, Texas	756	5%	31%	14%	55,481	Segment 2A, 2B, 3A, 3B, 3C
Block Group 2, Census Tract 612, Ellis County, Texas	1,203	24%	38%	14%	40,735	Segment 2A, 2B, 3A, 3B, 3C
Block Group 1, Census Tract 613, Ellis County, Texas	924	6%	23%	16%	44,638	Segment 2A, 2B

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 613, Ellis County, Texas	1,496	8%	39%	30%	47,031	Segment 2A, 2B
Block Group 1, Census Tract 1, Freestone County, Texas	2,781	19%	24%	19%	42,500	Segment 3C
Block Group 2, Census Tract 1, Freestone County, Texas	2,700	9%	16%	21%	45,903	Segment 3C
Block Group 1, Census Tract 3, Freestone County, Texas	1,031	41%	20%	16%	35,200	Segment 3C
Block Group 2, Census Tract 4, Freestone County, Texas	1,476	24%	4%	10%	39,886	Segment 3A, 3B, 3C, 4
Block Group 1, Census Tract 6, Freestone County, Texas	671	0%	2%	7%	51,324	Segment 4
Block Group 2, Census Tract 6, Freestone County, Texas	930	5%	4%	4%	51,130	Segment 3C, 4
Block Group 3, Census Tract 6, Freestone County, Texas	2,907	22%	16%	6%	52,184	Segment 3C
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1,788	18%	12%	27%	60,352	Segment 5
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1,669	14%	16%	19%	43,050	Segment 5
Block Group 5, Census Tract 1802, Grimes County, Texas	1,250	29%	7%	4%	40,813	Segment 5
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1,425	29%	21%	4%	44,107	Segment 5
Block Group 2, Census Tract 1803.01, Grimes County, Texas	1,254	6%	11%	7%	66,307	Segment 3C, 4, 5
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1,848	14%	2%	21%	58,387	Segment 3C, 4, 5
Block Group 2, Census Tract 1803.02, Grimes County, Texas	1,595	12%	18%	13%	49,583	Segment 5
Block Group 1, Census Tract 4301, Harris County, Texas	813	10%	9%	3%	90,417	Northwest Transit Center Terminal Option
Block Group 2, Census Tract 4301, Harris County, Texas	1,658	12%	3%	1%	106,731	Northwest Transit Center Terminal Option
Block Group 5, Census Tract 4301, Harris County, Texas	1,104	9%	4%	7%	59,712	Northwest Transit Center Terminal Option
Block Group 4, Census Tract 5108, Harris County, Texas	865	17%	0%	2%	220,119	Northwest Transit Center Terminal Option

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 5109, Harris County, Texas	3,703	19%	28%	18%	119,462	Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5110.01, Harris County, Texas	1,551	9%	25%	5%	80,186	Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 2, Census Tract 5110.01, Harris County, Texas	1,005	9%	28%	4%	56,471	Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5201, Harris County, Texas	2,439	21%	43%	16%	75,417	Segment 5, Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5203, Harris County, Texas	2,264	33%	76%	16%	36,540	Segment 5, Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5204, Harris County, Texas	1,383	43%	83%	48%	36,250	Segment 5
Block Group 2, Census Tract 5204, Harris County, Texas	2,156	29%	73%	38%	30,625	Segment 5, Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5205, Harris County, Texas	1,439	18%	87%	24%	31,163	Segment 5, Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 2, Census Tract 5205, Harris County, Texas	3,471	32%	72%	32%	33,643	Segment 5
Block Group 3, Census Tract 5205, Harris County, Texas	1,691	18%	82%	28%	49,457	Segment 5
Block Group 4, Census Tract 5205, Harris County, Texas	1,732	17%	62%	24%	29,201	Segment 5
Block Group 1, Census Tract 5206.01, Harris County, Texas	2,331	32%	85%	42%	31,538	Segment 5
Block Group 1, Census Tract 5206.02, Harris County, Texas	1,024	47%	100%	54%	19,620	Segment 5
Block Group 1, Census Tract 5214, Harris County, Texas	1,203	74%	98%	25%	26,915	Segment 5
Block Group 2, Census Tract 5214, Harris County, Texas	1,566	74%	97%	52%	34,614	Segment 5

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 3, Census Tract 5214, Harris County, Texas	1,660	29%	83%	30%	52,625	Segment 5
Block Group 4, Census Tract 5214, Harris County, Texas	2,727	64%	97%	44%	24,577	Segment 5
Block Group 4, Census Tract 5215, Harris County, Texas	2,204	35%	50%	8%	59,773	Segment 5
Block Group 1, Census Tract 5216, Harris County, Texas	2,400	19%	80%	15%	56,250	Segment 5
Block Group 2, Census Tract 5216, Harris County, Texas	1,173	43%	66%	22%	37,083	Segment 5
Block Group 1, Census Tract 5217, Harris County, Texas	1,414	30%	72%	31%	27,334	Segment 5
Block Group 2, Census Tract 5217, Harris County, Texas	2,387	56%	58%	53%	29,340	Segment 5
Block Group 3, Census Tract 5217, Harris County, Texas	1,822	45%	60%	37%	25,389	Segment 5
Block Group 4, Census Tract 5217, Harris County, Texas	1,401	58%	34%	10%	42,328	Segment 5
Block Group 1, Census Tract 5218, Harris County, Texas	2,459	42%	44%	21%	48,807	Segment 5
Block Group 3, Census Tract 5301, Harris County, Texas	819	13%	80%	28%	27,212	Industrial Site Terminal Option, Northwest Mall Terminal Option, Northwest Transit Center Terminal Option
Block Group 1, Census Tract 5342.03, Harris County, Texas	1,772	55%	39%	8%	63,353	Segment 5
Block Group 1, Census Tract 5401, Harris County, Texas	7,658	41%	14%	4%	123,771	Segment 5
Block Group 3, Census Tract 5401, Harris County, Texas	1,653	34%	82%	1%	66,444	Segment 5
Block Group 2, Census Tract 5408, Harris County, Texas	3,294	36%	45%	15%	45,500	Segment 5
Block Group 2, Census Tract 5409.02, Harris County, Texas	2,428	46%	12%	0%	42,378	Segment 5
Block Group 1, Census Tract 5410.01, Harris County, Texas	8,473	46%	27%	13%	72,836	Segment 5
Block Group 1, Census Tract 5410.02, Harris County, Texas	7,007	44%	18%	7%	95,665	Segment 5

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 5410.02, Harris County, Texas	1,493	23%	47%	0%	157,500	Segment 5
Block Group 1, Census Tract 5410.03, Harris County, Texas	4,913	52%	27%	12%	107,941	Segment 5
Block Group 1, Census Tract 5430.01, Harris County, Texas	5,848	29%	17%	2%	142,747	Segment 5
Block Group 1, Census Tract 5430.02, Harris County, Texas	9,606	34%	18%	2%	119,185	Segment 5
Block Group 2, Census Tract 5430.02, Harris County, Texas	3,680	29%	34%	11%	126,934	Segment 5
Block Group 1, Census Tract 5431, Harris County, Texas	2,785	15%	43%	21%	70,951	Segment 5
Block Group 6, Census Tract 5517.01, Harris County, Texas	2,279	34%	33%	0%	78,468	Segment 5
Block Group 1, Census Tract 5518, Harris County, Texas	2,540	14%	9%	1%	126,000	Segment 5
Block Group 3, Census Tract 5518, Harris County, Texas	1,055	4%	2%	6%	80,104	Segment 5
Block Group 1, Census Tract 5519, Harris County, Texas	1,023	27%	37%	5%	42,212	Segment 5
Block Group 2, Census Tract 5519, Harris County, Texas	2,305	58%	38%	20%	40,286	Segment 5
Block Group 3, Census Tract 5519, Harris County, Texas	2,823	49%	38%	27%	36,478	Segment 5
Block Group 3, Census Tract 5520.01, Harris County, Texas	2,491	48%	50%	3%	49,005	Segment 5
Block Group 1, Census Tract 5520.02, Harris County, Texas	1,926	34%	20%	6%	74,219	Segment 5
Block Group 1, Census Tract 5521.01, Harris County, Texas	3,842	47%	27%	8%	60,820	Segment 5
Block Group 1, Census Tract 5521.03, Harris County, Texas	1,071	21%	19%	0%	87,639	Segment 5
Block Group 2, Census Tract 5522, Harris County, Texas	1,620	15%	34%	15%	59,000	Segment 5
Block Group 3, Census Tract 5522, Harris County, Texas	2,412	64%	25%	28%	52,593	Segment 5
Block Group 2, Census Tract 5544.01, Harris County, Texas	9,344	7%	11%	2%	137,900	Segment 5

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 2, Census Tract 5544.02, Harris County, Texas	6,573	26%	9%	5%	106,859	Segment 5
Block Group 1, Census Tract 5544.03, Harris County, Texas	9,721	17%	22%	6%	85,030	Segment 5
Block Group 2, Census Tract 5557.01, Harris County, Texas	4,213	27%	14%	1%	99,359	Segment 5
Block Group 1, Census Tract 5560, Harris County, Texas	1,284	18%	9%	7%	34,699	Segment 5
Block Group 3, Census Tract 9501, Leon County, Texas	2,679	18%	20%	11%	53,320	Segment 3C
Block Group 1, Census Tract 9502, Leon County, Texas	607	1%	31%	29%	52,232	Segment 4
Block Group 2, Census Tract 9502, Leon County, Texas	735	11%	12%	18%	44,932	Segment 4
Block Group 3, Census Tract 9502, Leon County, Texas	617	1%	0%	17%	135,294	Segment 4
Block Group 5, Census Tract 9502, Leon County, Texas	1,083	20%	6%	16%	35,972	Segment 4
Block Group 2, Census Tract 9503, Leon County, Texas	1,320	6%	6%	12%	44,955	Segment 3C
Block Group 3, Census Tract 9503, Leon County, Texas	1,138	22%	0%	9%	41,776	Segment 3C
Block Group 4, Census Tract 9503, Leon County, Texas	1,886	9%	11%	7%	53,448	Segment 3C
Block Group 1, Census Tract 9707, Limestone County, Texas	673	9%	22%	9%	42,679	Segment 4
Block Group 2, Census Tract 9707, Limestone County, Texas	977	0%	0%	17%	43,571	Segment 4
Block Group 1, Census Tract 2, Madison County, Texas	862	6%	11%	15%	42,321	Segment 3C, 4
Block Group 1, Census Tract 3, Madison County, Texas	1,001	2%	4%	15%	47,266	Segment 3C, 4
Block Group 1, Census Tract 9703, Navarro County, Texas	1,418	11%	21%	7%	42,500	Segment 3A, 3B, 3C
Block Group 3, Census Tract 9704, Navarro County, Texas	1,301	6%	5%	13%	48,882	Segment 3A, 3B, 3C
Block Group 4, Census Tract 9709, Navarro County, Texas	2,567	23%	24%	26%	33,709	Segment 3A, 3B, 3C

Selected Demographic Characteristics for Block Groups along Each Segment

Geography	2014 Population	Percent Minority Population	Percent Hispanic Origin	Percent Individuals Below Poverty Level	Median Household Income	Segment
Block Group 5, Census Tract 9709, Navarro County, Texas	1,769	3%	25%	15%	56,667	Segment 3A, 3B, 3C
Block Group 1, Census Tract 9710, Navarro County, Texas	1,896	5%	24%	20%	37,281	Segment 3A, 3B, 3C, 4
Block Group 1, Census Tract 6806, Waller County, Texas	2,472	6%	32%	15%	65,375	Segment 5
Block Group 2, Census Tract 6806, Waller County, Texas	2,443	9%	20%	4%	67,453	Segment 5

**Socioeconomic:
2014 Total and Percent of Children under 18 Years Old –
by Block Group and Census Tract, County**

Geography	Total	Total Under 18 Years of Age	Percent Under 18 Years of Age
Block Group 2, Census Tract 20, Dallas County, Texas	589	109	19%
Block Group 1, Census Tract 34, Dallas County, Texas	656	172	26%
Block Group 2, Census Tract 34, Dallas County, Texas	757	172	23%
Block Group 1, Census Tract 40, Dallas County, Texas	420	41	10%
Block Group 2, Census Tract 40, Dallas County, Texas	560	147	26%
Block Group 2, Census Tract 41, Dallas County, Texas	632	255	40%
Block Group 1, Census Tract 86.03, Dallas County, Texas	750	317	42%
Block Group 1, Census Tract 86.04, Dallas County, Texas	1657	706	43%
Block Group 2, Census Tract 86.04, Dallas County, Texas	1203	171	14%
Block Group 1, Census Tract 87.01, Dallas County, Texas	1301	671	52%
Block Group 2, Census Tract 87.01, Dallas County, Texas	615	200	33%
Block Group 4, Census Tract 87.01, Dallas County, Texas	526	77	15%
Block Group 5, Census Tract 87.01, Dallas County, Texas	1249	543	43%
Block Group 1, Census Tract 89, Dallas County, Texas	1123	493	44%
Block Group 1, Census Tract 100, Dallas County, Texas	8977	171	2%
Block Group 1, Census Tract 114.01, Dallas County, Texas	1602	496	31%
Block Group 3, Census Tract 115, Dallas County, Texas	397	125	31%
Block Group 4, Census Tract 115, Dallas County, Texas	902	418	46%
Block Group 1, Census Tract 167.03, Dallas County, Texas	1255	582	46%
Block Group 2, Census Tract 168.02, Dallas County, Texas	1904	594	31%
Block Group 1, Census Tract 169.02, Dallas County, Texas	3060	622	20%
Block Group 2, Census Tract 169.02, Dallas County, Texas	1797	695	39%
Block Group 3, Census Tract 169.03, Dallas County, Texas	1625	337	21%
Block Group 5, Census Tract 169.03, Dallas County, Texas	730	206	28%
Block Group 1, Census Tract 202, Dallas County, Texas	705	238	34%
Block Group 2, Census Tract 202, Dallas County, Texas	1715	215	13%
Block Group 3, Census Tract 202, Dallas County, Texas	1576	555	35%
Block Group 1, Census Tract 204, Dallas County, Texas	1574	231	15%
Block Group 3, Census Tract 204, Dallas County, Texas	2692	31	1%
Block Group 1, Census Tract 601.01, Ellis County, Texas	2980	902	30%
Block Group 2, Census Tract 601.01, Ellis County, Texas	1276	394	31%
Block Group 1, Census Tract 601.02, Ellis County, Texas	2998	1174	39%
Block Group 3, Census Tract 601.02, Ellis County, Texas	3034	1238	41%
Block Group 1, Census Tract 602.10, Ellis County, Texas	935	257	27%
Block Group 1, Census Tract 611, Ellis County, Texas	1548	356	23%
Block Group 1, Census Tract 612, Ellis County, Texas	692	168	24%
Block Group 2, Census Tract 612, Ellis County, Texas	1268	399	31%
Block Group 1, Census Tract 613, Ellis County, Texas	906	229	25%
Block Group 2, Census Tract 613, Ellis County, Texas	1644	622	38%
Block Group 1, Census Tract 1, Freestone County, Texas	2885	903	31%
Block Group 2, Census Tract 1, Freestone County, Texas	2446	535	22%
Block Group 1, Census Tract 3, Freestone County, Texas	1090	307	28%
Block Group 2, Census Tract 4, Freestone County, Texas	1485	434	29%
Block Group 1, Census Tract 6, Freestone County, Texas	642	236	37%
Block Group 2, Census Tract 6, Freestone County, Texas	1068	260	24%
Block Group 3, Census Tract 6, Freestone County, Texas	2958	350	12%
Block Group 1, Census Tract 1801.02, Grimes County, Texas	1457	455	31%
Block Group 2, Census Tract 1801.02, Grimes County, Texas	1699	581	34%
Block Group 5, Census Tract 1802, Grimes County, Texas	1588	337	21%
Block Group 1, Census Tract 1803.01, Grimes County, Texas	1354	348	26%
Block Group 2, Census Tract 1803.01, Grimes County, Texas	985	297	30%
Block Group 1, Census Tract 1803.02, Grimes County, Texas	1562	453	29%
Block Group 2, Census Tract 1803.02, Grimes County, Texas	1752	498	28%
Block Group 1, Census Tract 4301, Harris County, Texas	933	181	19%
Block Group 2, Census Tract 4301, Harris County, Texas	1695	380	22%
Block Group 5, Census Tract 4301, Harris County, Texas	1305	284	22%
Block Group 4, Census Tract 5108, Harris County, Texas	849	156	18%

Geography	Total	Total Under 18 Years of Age	Percent Under 18 Years of Age
Block Group 2, Census Tract 5109, Harris County, Texas	3705	907	24%
Block Group 1, Census Tract 5110.01, Harris County, Texas	1475	201	14%
Block Group 2, Census Tract 5110.01, Harris County, Texas	1197	181	15%
Block Group 1, Census Tract 5201, Harris County, Texas	2222	501	23%
Block Group 1, Census Tract 5203, Harris County, Texas	2505	985	39%
Block Group 1, Census Tract 5204, Harris County, Texas	1251	359	29%
Block Group 2, Census Tract 5204, Harris County, Texas	1760	480	27%
Block Group 1, Census Tract 5205, Harris County, Texas	1637	594	36%
Block Group 2, Census Tract 5205, Harris County, Texas	4060	1678	41%
Block Group 3, Census Tract 5205, Harris County, Texas	1359	407	30%
Block Group 4, Census Tract 5205, Harris County, Texas	1929	604	31%
Block Group 1, Census Tract 5206.01, Harris County, Texas	2543	1056	42%
Block Group 1, Census Tract 5206.02, Harris County, Texas	1024	625	61%
Block Group 1, Census Tract 5214, Harris County, Texas	1130	221	20%
Block Group 2, Census Tract 5214, Harris County, Texas	2213	988	45%
Block Group 3, Census Tract 5214, Harris County, Texas	1569	393	25%
Block Group 4, Census Tract 5214, Harris County, Texas	2491	766	31%
Block Group 4, Census Tract 5215, Harris County, Texas	2226	540	24%
Block Group 1, Census Tract 5216, Harris County, Texas	2191	779	36%
Block Group 2, Census Tract 5216, Harris County, Texas	1480	493	33%
Block Group 1, Census Tract 5217, Harris County, Texas	1477	373	25%
Block Group 2, Census Tract 5217, Harris County, Texas	2288	809	35%
Block Group 3, Census Tract 5217, Harris County, Texas	1586	531	33%
Block Group 4, Census Tract 5217, Harris County, Texas	1373	336	24%
Block Group 1, Census Tract 5218, Harris County, Texas	2523	461	18%
Block Group 3, Census Tract 5301, Harris County, Texas	1122	160	14%
Block Group 1, Census Tract 5342.03, Harris County, Texas	1857	638	34%
Block Group 1, Census Tract 5401, Harris County, Texas	7628	2231	29%
Block Group 3, Census Tract 5401, Harris County, Texas	1601	542	34%
Block Group 2, Census Tract 5408, Harris County, Texas	3338	1217	36%
Block Group 2, Census Tract 5409.02, Harris County, Texas	2367	954	40%
Block Group 1, Census Tract 5410.01, Harris County, Texas	8497	2729	32%
Block Group 1, Census Tract 5410.02, Harris County, Texas	6939	2454	35%
Block Group 2, Census Tract 5410.02, Harris County, Texas	1722	456	26%
Block Group 1, Census Tract 5410.03, Harris County, Texas	4713	1283	27%
Block Group 1, Census Tract 5430.01, Harris County, Texas	7142	2881	40%
Block Group 1, Census Tract 5430.02, Harris County, Texas	11156	4042	36%
Block Group 2, Census Tract 5430.02, Harris County, Texas	3796	1461	38%
Block Group 1, Census Tract 5431, Harris County, Texas	2985	1136	38%
Block Group 6, Census Tract 5517.01, Harris County, Texas	2498	791	32%
Block Group 1, Census Tract 5518, Harris County, Texas	2286	447	20%
Block Group 3, Census Tract 5518, Harris County, Texas	1105	248	22%
Block Group 1, Census Tract 5519, Harris County, Texas	917	235	26%
Block Group 2, Census Tract 5519, Harris County, Texas	2354	499	21%
Block Group 3, Census Tract 5519, Harris County, Texas	2837	949	33%
Block Group 3, Census Tract 5520.01, Harris County, Texas	2714	820	30%
Block Group 1, Census Tract 5520.02, Harris County, Texas	1747	444	25%
Block Group 1, Census Tract 5521.01, Harris County, Texas	3823	923	24%
Block Group 1, Census Tract 5521.03, Harris County, Texas	1143	352	31%
Block Group 2, Census Tract 5522, Harris County, Texas	1661	208	13%
Block Group 3, Census Tract 5522, Harris County, Texas	2610	848	32%
Block Group 2, Census Tract 5544.01, Harris County, Texas	9390	3749	40%
Block Group 2, Census Tract 5544.02, Harris County, Texas	7262	2471	34%
Block Group 1, Census Tract 5544.03, Harris County, Texas	10272	3689	36%
Block Group 2, Census Tract 5557.01, Harris County, Texas	4834	2030	42%
Block Group 1, Census Tract 5560, Harris County, Texas	1531	476	31%
Block Group 3, Census Tract 9501, Leon County, Texas	2482	697	28%

Geography	Total	Total Under 18 Years of Age	Percent Under 18 Years of Age
Block Group 1, Census Tract 9502, Leon County, Texas	574	186	32%
Block Group 2, Census Tract 9502, Leon County, Texas	830	109	13%
Block Group 3, Census Tract 9502, Leon County, Texas	754	53	7%
Block Group 5, Census Tract 9502, Leon County, Texas	915	200	22%
Block Group 2, Census Tract 9503, Leon County, Texas	1069	426	40%
Block Group 3, Census Tract 9503, Leon County, Texas	1233	258	21%
Block Group 4, Census Tract 9503, Leon County, Texas	2110	390	18%
Block Group 1, Census Tract 9707, Limestone County, Texas	974	360	37%
Block Group 2, Census Tract 9707, Limestone County, Texas	915	161	18%
Block Group 1, Census Tract 2, Madison County, Texas	981	209	21%
Block Group 1, Census Tract 3, Madison County, Texas	1141	228	20%
Block Group 1, Census Tract 9703, Navarro County, Texas	1467	351	24%
Block Group 3, Census Tract 9704, Navarro County, Texas	1303	340	26%
Block Group 4, Census Tract 9709, Navarro County, Texas	3053	895	29%
Block Group 5, Census Tract 9709, Navarro County, Texas	1854	580	31%
Block Group 1, Census Tract 9710, Navarro County, Texas	2034	595	29%
Block Group 1, Census Tract 6806, Waller County, Texas	2370	564	24%
Block Group 2, Census Tract 6806, Waller County, Texas	2748	818	30%

**Economics:
Project Cost by Alternative,
Source: ARUP**

Prof. Svcs. Assumption	Alternative	Capital Low*	Capital High*	Construction Low	Construction High
15%	A Low	\$ 10,000,000,000	\$ 12,000,000,000	\$ 8,500,000,000	\$ 10,200,000,000
	B Low	\$ 10,000,000,000	\$ 12,000,000,000	\$ 8,500,000,000	\$ 10,200,000,000
Tot. Direct Project Employment	C Low	\$ 11,000,000,000	\$ 13,000,000,000	\$ 9,350,000,000	\$ 11,050,000,000
1086	D Low	\$ 10,000,000,000	\$ 12,000,000,000	\$ 8,500,000,000	\$ 10,200,000,000
	E Low	\$ 10,000,000,000	\$ 12,000,000,000	\$ 8,500,000,000	\$ 10,200,000,000
	F Low	\$ 11,000,000,000	\$ 13,000,000,000	\$ 9,350,000,000	\$ 11,050,000,000

* Capital Costs Exclude Systems, ROW and Rolling Stock

Source: ARUP

Economics:
HSR Construction Cost Estimate
Source: TCRR



HSR Construction Cost Estimate, May 2017

Direct Labor Costs (28%)	\$2.4B
Direct Materials & Equipment Costs (72%)	\$6.1B
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Total Direct Costs ¹ (61%)	\$8.5B
Total Indirect Costs ² (39%)	\$5.5B
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Total Civil Infrastructure & Fixed Facilities	\$14B +/- \$1B
Systems & Rolling Stock³	\$2.5B +/- \$.5B
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Total Construction Cost Estimate	\$16.5B +/- \$1.5B

¹Includes Labor, Material, Equipment, and Subcontractors to perform the specific civil work items

²Includes OH & P, Design Services, Safety, QA/QC, Project Administration, etc.

³Includes Signals, Power Distribution, Communications, Train Control, Fare Collection, and Rolling Stock

Economics:
TCRR Summary Schedule
Source: TCRR

TCRR Summary Schedule



Economics:
2015 Occupational Employment Statistics (OES),
Source: Bureau of Labor Statistics, U.S. Department of Labor

May 2015 OES Estimates

Occupational Employment Statistics (OES) Survey

Bureau of Labor Statistics, Department of Labor

website: www.bls.gov/oes

phone: 202-691-6569

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National, 4-digit NAICS, cross-ownership estimates

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	00-0000	Industry Total	total	215,090	\$61,680.00
482100	Rail Transportation	11-0000	Management Occupations	major	13,670	\$108,680.00
482100	Rail Transportation	11-1000	Top Executives	minor	2,340	\$134,450.00
482100	Rail Transportation	11-1010	Chief Executives	broad	100	\$201,470.00
482100	Rail Transportation	11-1011	Chief Executives	detailed	100	\$201,470.00
482100	Rail Transportation	11-1020	General and Operations Managers	broad	2,240	\$131,380.00
482100	Rail Transportation	11-1021	General and Operations Managers	detailed	2,240	\$131,380.00
482100	Rail Transportation	11-2000	Advertising, Marketing, Promotions, Public Relations, and Sales Managers	minor	620	\$115,860.00
482100	Rail Transportation	11-2020	Marketing and Sales Managers	broad	540	\$113,910.00
482100	Rail Transportation	11-2021	Marketing Managers	detailed	270	\$120,620.00
482100	Rail Transportation	11-2022	Sales Managers	detailed	270	\$106,980.00
482100	Rail Transportation	11-2030	Sales Managers	broad	70	\$128,380.00
482100	Rail Transportation	11-2031	Public Relations and Fundraising Managers	detailed	70	\$128,380.00
482100	Rail Transportation	11-3000	Operations Specialties Managers	minor	7,110	\$102,000.00
482100	Rail Transportation	11-3010	Administrative Services Managers	broad	920	\$96,830.00
482100	Rail Transportation	11-3011	Administrative Services Managers	detailed	920	\$96,830.00
482100	Rail Transportation	11-3020	Computer and Information Systems Managers	broad	380	\$130,580.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	11-3021	Computer and Information Systems Managers	detailed	380	\$130,580.00
482100	Rail Transportation	11-3030	Financial Managers	broad	380	\$125,650.00
482100	Rail Transportation	11-3031	Financial Managers	detailed	380	\$125,650.00
482100	Rail Transportation	11-3060	Purchasing Managers	broad	140	\$110,990.00
482100	Rail Transportation	11-3061	Purchasing Managers	detailed	140	\$110,990.00
482100	Rail Transportation	11-3070	Transportation, Storage, and Distribution Managers	broad	4,770	\$97,110.00
482100	Rail Transportation	11-3071	Transportation, Storage, and Distribution Managers	detailed	4,770	\$97,110.00
482100	Rail Transportation	11-3110	Compensation and Benefits Managers	broad	40	\$109,900.00
482100	Rail Transportation	11-3111	Compensation and Benefits Managers	detailed	40	\$109,900.00
482100	Rail Transportation	11-3120	Human Resources Managers	broad	310	\$117,670.00
482100	Rail Transportation	11-3121	Human Resources Managers	detailed	310	\$117,670.00
482100	Rail Transportation	11-3130	Training and Development Managers	broad	170	\$112,030.00
482100	Rail Transportation	11-3131	Training and Development Managers	detailed	170	\$112,030.00
482100	Rail Transportation	11-9000	Other Management Occupations	minor	3,600	\$103,860.00
482100	Rail Transportation	11-9020	Construction Managers	broad	1,350	\$94,390.00
482100	Rail Transportation	11-9021	Construction Managers	detailed	1,350	\$94,390.00
482100	Rail Transportation	11-9040	Architectural and Engineering Managers	broad	360	\$121,520.00
482100	Rail Transportation	11-9041	Architectural and Engineering Managers	detailed	360	\$121,520.00
482100	Rail Transportation	11-9140	Property, Real Estate, and Community Association Managers	broad	130	\$115,120.00
482100	Rail Transportation	11-9141	Property, Real Estate, and Community Association Managers	detailed	130	\$115,120.00
482100	Rail Transportation	11-9160	Emergency Management Directors	broad	30	\$103,200.00
482100	Rail Transportation	11-9161	Emergency Management Directors	detailed	30	\$103,200.00
482100	Rail Transportation	11-9190	Miscellaneous Managers	broad	1,710	\$106,860.00
482100	Rail Transportation	11-9199	Managers, All Other	detailed	1,710	\$106,860.00
482100	Rail Transportation	13-0000	Business and Financial Operations Occupations	major	5,000	\$78,670.00
482100	Rail Transportation	13-1000	Business Operations Specialists	minor	3,870	\$77,570.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	13-1020	Buyers and Purchasing Agents	broad	200	\$72,640.00
482100	Rail Transportation	13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	detailed	200	\$72,650.00
482100	Rail Transportation	13-1030	Claims Adjusters, Appraisers, Examiners, and Investigators	broad	310	\$72,830.00
482100	Rail Transportation	13-1031	Claims Adjusters, Examiners, and Investigators	detailed	310	\$72,830.00
482100	Rail Transportation	13-1040	Compliance Officers	broad	150	\$86,460.00
482100	Rail Transportation	13-1041	Compliance Officers	detailed	150	\$86,460.00
482100	Rail Transportation	13-1070	Human Resources Workers	broad	470	\$80,210.00
482100	Rail Transportation	13-1071	Human Resources Specialists	detailed	370	\$78,120.00
482100	Rail Transportation	13-1075	Labor Relations Specialists	detailed	100	\$87,730.00
482100	Rail Transportation	13-1080	Logisticians	broad	170	\$77,780.00
482100	Rail Transportation	13-1081	Logisticians	detailed	170	\$77,780.00
482100	Rail Transportation	13-1110	Management Analysts	broad	510	\$83,430.00
482100	Rail Transportation	13-1111	Management Analysts	detailed	510	\$83,430.00
482100	Rail Transportation	13-1140	Compensation, Benefits, and Job Analysis Specialists	broad	70	\$75,040.00
482100	Rail Transportation	13-1141	Compensation, Benefits, and Job Analysis Specialists	detailed	70	\$75,040.00
482100	Rail Transportation	13-1150	Training and Development Specialists	broad	560	\$71,410.00
482100	Rail Transportation	13-1151	Training and Development Specialists	detailed	560	\$71,410.00
482100	Rail Transportation	13-1160	Market Research Analysts and Marketing Specialists	broad	450	\$76,760.00
482100	Rail Transportation	13-1161	Market Research Analysts and Marketing Specialists	detailed	450	\$76,760.00
482100	Rail Transportation	13-1190	Miscellaneous Business Operations Specialists	broad	960	\$79,010.00
482100	Rail Transportation	13-1199	Business Operations Specialists, All Other	detailed	960	\$79,010.00
482100	Rail Transportation	13-2000	Financial Specialists	minor	1,120	\$82,480.00
482100	Rail Transportation	13-2010	Accountants and Auditors	broad	650	\$83,220.00
482100	Rail Transportation	13-2011	Accountants and Auditors	detailed	650	\$83,220.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	13-2030	Budget Analysts	broad	130	\$80,500.00
482100	Rail Transportation	13-2031	Budget Analysts	detailed	130	\$80,500.00
482100	Rail Transportation	13-2050	Financial Analysts and Advisors	broad	240	\$84,200.00
482100	Rail Transportation	13-2051	Financial Analysts	detailed	240	\$84,200.00
482100	Rail Transportation	13-2090	Miscellaneous Financial Specialists	broad	60	\$83,200.00
482100	Rail Transportation	13-2099	Financial Specialists, All Other	detailed	60	\$83,200.00
482100	Rail Transportation	15-0000	Computer and Mathematical Occupations	major	2,580	\$88,730.00
482100	Rail Transportation	15-1100	Computer Occupations	minor	2,530	\$88,820.00
482100	Rail Transportation	15-1120	Computer and Information Analysts	broad	290	\$82,410.00
482100	Rail Transportation	15-1121	Computer Systems Analysts	detailed	250	\$79,260.00
482100	Rail Transportation	15-1122	Information Security Analysts	detailed	50	\$99,560.00
482100	Rail Transportation	15-1130	Software Developers and Programmers	broad	1,070	\$94,970.00
482100	Rail Transportation	15-1131	Computer Programmers	detailed	50	\$82,270.00
482100	Rail Transportation	15-1132	Software Developers, Applications	detailed	890	\$94,690.00
482100	Rail Transportation	15-1140	Database and Systems Administrators and Network Architects	broad	790	\$86,300.00
482100	Rail Transportation	15-1141	Database Administrators	detailed	90	\$86,390.00
482100	Rail Transportation	15-1142	Network and Computer Systems Administrators	detailed	570	\$81,680.00
482100	Rail Transportation	15-1143	Computer Network Architects	detailed	130	\$106,730.00
482100	Rail Transportation	15-1150	Computer Support Specialists	broad	150	\$70,900.00
482100	Rail Transportation	15-1151	Computer User Support Specialists	detailed	90	\$68,240.00
482100	Rail Transportation	15-1152	Computer Network Support Specialists	detailed	60	\$75,070.00
482100	Rail Transportation	15-1190	Miscellaneous Computer Occupations	broad	240	\$88,420.00
482100	Rail Transportation	15-1199	Computer Occupations, All Other	detailed	240	\$88,420.00
482100	Rail Transportation	15-2000	Mathematical Science Occupations	minor	50	\$83,690.00
482100	Rail Transportation	15-2030	Operations Research Analysts	broad	40	\$79,960.00
482100	Rail Transportation	15-2031	Operations Research Analysts	detailed	40	\$79,960.00
482100	Rail Transportation	17-0000	Architecture and Engineering Occupations	major	2,270	\$84,260.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	17-2000	Engineers	minor	2,100	\$85,830.00
482100	Rail Transportation	17-2050	Civil Engineers	broad	440	\$87,570.00
482100	Rail Transportation	17-2051	Civil Engineers	detailed	440	\$87,570.00
482100	Rail Transportation	17-2070	Electrical and Electronics Engineers	broad	**	\$96,320.00
482100	Rail Transportation	17-2071	Electrical Engineers	detailed	160	\$90,540.00
482100	Rail Transportation	17-2080	Environmental Engineers	broad	40	\$91,090.00
482100	Rail Transportation	17-2081	Environmental Engineers	detailed	40	\$91,090.00
482100	Rail Transportation	17-2110	Industrial Engineers, Including Health and Safety	broad	220	\$88,470.00
482100	Rail Transportation	17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	detailed	150	\$84,320.00
482100	Rail Transportation	17-2112	Industrial Engineers	detailed	60	\$98,350.00
482100	Rail Transportation	17-2140	Mechanical Engineers	broad	280	\$83,780.00
482100	Rail Transportation	17-2141	Mechanical Engineers	detailed	280	\$83,780.00
482100	Rail Transportation	17-2190	Miscellaneous Engineers	broad	660	\$76,720.00
482100	Rail Transportation	17-2199	Engineers, All Other	detailed	660	\$76,720.00
482100	Rail Transportation	17-3000	Drafters, Engineering Technicians, and Mapping Technicians	minor	150	\$62,180.00
482100	Rail Transportation	17-3010	Drafters	broad	40	\$67,410.00
482100	Rail Transportation	17-3020	Engineering Technicians, Except Drafters	broad	120	\$60,490.00
482100	Rail Transportation	19-0000	Life, Physical, and Social Science Occupations	major	110	\$91,040.00
482100	Rail Transportation	19-3000	Social Scientists and Related Workers	minor	60	\$106,600.00
482100	Rail Transportation	19-4000	Life, Physical, and Social Science Technicians	minor	40	\$68,350.00
482100	Rail Transportation	19-4090	Miscellaneous Life, Physical, and Social Science Technicians	broad	40	\$68,350.00
482100	Rail Transportation	23-0000	Legal Occupations	major	470	\$117,320.00
482100	Rail Transportation	23-1000	Lawyers, Judges, and Related Workers	minor	290	\$150,860.00
482100	Rail Transportation	23-1010	Lawyers and Judicial Law Clerks	broad	290	\$150,860.00
482100	Rail Transportation	23-1011	Lawyers	detailed	290	\$150,860.00
482100	Rail Transportation	23-2000	Legal Support Workers	minor	180	\$63,110.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	23-2010	Paralegals and Legal Assistants	broad	100	\$62,970.00
482100	Rail Transportation	23-2011	Paralegals and Legal Assistants	detailed	100	\$62,970.00
482100	Rail Transportation	23-2090	Miscellaneous Legal Support Workers	broad	80	\$63,280.00
482100	Rail Transportation	23-2099	Legal Support Workers, All Other	detailed	70	\$65,520.00
482100	Rail Transportation	27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	major	200	\$94,940.00
482100	Rail Transportation	27-3000	Media and Communication Workers	minor	150	\$101,040.00
482100	Rail Transportation	27-3030	Public Relations Specialists	broad	140	\$102,430.00
482100	Rail Transportation	27-3031	Public Relations Specialists	detailed	140	\$102,430.00
482100	Rail Transportation	29-0000	Healthcare Practitioners and Technical Occupations	major	160	\$77,210.00
482100	Rail Transportation	29-1000	Health Diagnosing and Treating Practitioners	minor	90	\$76,990.00
482100	Rail Transportation	29-1140	Registered Nurses	broad	90	\$71,790.00
482100	Rail Transportation	29-1141	Registered Nurses	detailed	90	\$71,790.00
482100	Rail Transportation	29-9000	Other Healthcare Practitioners and Technical Occupations	minor	70	\$77,500.00
482100	Rail Transportation	29-9010	Occupational Health and Safety Specialists and Technicians	broad	70	\$77,500.00
482100	Rail Transportation	29-9011	Occupational Health and Safety Specialists	detailed	60	\$76,130.00
482100	Rail Transportation	33-0000	Protective Service Occupations	major	900	\$68,220.00
482100	Rail Transportation	33-1000	Supervisors of Protective Service Workers	minor	70	\$78,630.00
482100	Rail Transportation	33-1090	Miscellaneous First-Line Supervisors, Protective Service Workers	broad	70	\$78,630.00
482100	Rail Transportation	33-1099	First-Line Supervisors of Protective Service Workers, All Other	detailed	70	\$78,630.00
482100	Rail Transportation	33-3000	Law Enforcement Workers	minor	570	\$63,280.00
482100	Rail Transportation	33-3050	Police Officers	broad	570	\$63,280.00
482100	Rail Transportation	33-3052	Transit and Railroad Police	detailed	570	\$63,280.00
482100	Rail Transportation	33-9000	Other Protective Service Workers	minor	250	\$76,380.00
482100	Rail Transportation	33-9030	Security Guards and Gaming Surveillance Officers	broad	110	\$51,290.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	33-9032	Security Guards	detailed	110	\$51,290.00
482100	Rail Transportation	33-9090	Miscellaneous Protective Service Workers	broad	110	\$100,960.00
482100	Rail Transportation	33-9093	Transportation Security Screeners	detailed	110	\$102,830.00
482100	Rail Transportation	35-0000	Food Preparation and Serving Related Occupations	major	400	\$38,740.00
482100	Rail Transportation	35-2000	Cooks and Food Preparation Workers	minor	170	\$39,230.00
482100	Rail Transportation	35-2010	Cooks	broad	170	\$39,230.00
482100	Rail Transportation	35-2019	Cooks, All Other	detailed	**	\$32,170.00
482100	Rail Transportation	35-3000	Food and Beverage Serving Workers	minor	40	\$40,420.00
482100	Rail Transportation	35-9000	Other Food Preparation and Serving Related Workers	minor	**	\$35,630.00
482100	Rail Transportation	35-9090	Miscellaneous Food Preparation and Serving Related Workers	broad	80	\$36,830.00
482100	Rail Transportation	35-9099	Food Preparation and Serving Related Workers, All Other	detailed	80	\$36,830.00
482100	Rail Transportation	37-0000	Building and Grounds Cleaning and Maintenance Occupations	major	460	\$31,680.00
482100	Rail Transportation	37-2000	Building Cleaning and Pest Control Workers	minor	410	\$29,840.00
482100	Rail Transportation	37-2010	Building Cleaning Workers	broad	410	\$29,840.00
482100	Rail Transportation	37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	detailed	410	\$29,840.00
482100	Rail Transportation	39-0000	Personal Care and Service Occupations	major	260	\$48,090.00
482100	Rail Transportation	39-6000	Baggage Porters, Bellhops, and Concierges	minor	250	\$47,320.00
482100	Rail Transportation	39-6010	Baggage Porters, Bellhops, and Concierges	broad	250	\$47,320.00
482100	Rail Transportation	39-6011	Baggage Porters and Bellhops	detailed	250	\$47,320.00
482100	Rail Transportation	41-0000	Sales and Related Occupations	major	550	\$76,210.00
482100	Rail Transportation	41-1000	Supervisors of Sales Workers	minor	30	\$100,230.00
482100	Rail Transportation	41-1010	First-Line Supervisors of Sales Workers	broad	30	\$100,230.00
482100	Rail Transportation	41-2000	Retail Sales Workers	minor	70	\$44,200.00
482100	Rail Transportation	41-2010	Cashiers	broad	50	\$50,180.00
482100	Rail Transportation	41-2011	Cashiers	detailed	50	\$50,180.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	41-3000	Sales Representatives, Services	minor	320	\$80,920.00
482100	Rail Transportation	41-3090	Miscellaneous Sales Representatives, Services	broad	310	\$81,500.00
482100	Rail Transportation	41-3099	Sales Representatives, Services, All Other	detailed	310	\$81,500.00
482100	Rail Transportation	41-4000	Sales Representatives, Wholesale and Manufacturing	minor	50	\$72,430.00
482100	Rail Transportation	41-4010	Sales Representatives, Wholesale and Manufacturing	broad	50	\$72,430.00
482100	Rail Transportation	41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	detailed	50	\$72,430.00
482100	Rail Transportation	41-9000	Other Sales and Related Workers	minor	80	\$79,620.00
482100	Rail Transportation	41-9020	Real Estate Brokers and Sales Agents	broad	80	\$79,620.00
482100	Rail Transportation	41-9022	Real Estate Sales Agents	detailed	70	\$80,010.00
482100	Rail Transportation	43-0000	Office and Administrative Support Occupations	major	14,620	\$51,160.00
482100	Rail Transportation	43-1000	Supervisors of Office and Administrative Support Workers	minor	1,220	\$69,600.00
482100	Rail Transportation	43-1010	First-Line Supervisors of Office and Administrative Support Workers	broad	1,220	\$69,600.00
482100	Rail Transportation	43-1011	First-Line Supervisors of Office and Administrative Support Workers	detailed	1,220	\$69,600.00
482100	Rail Transportation	43-3000	Financial Clerks	minor	1,040	\$46,910.00
482100	Rail Transportation	43-3020	Billing and Posting Clerks	broad	170	\$45,220.00
482100	Rail Transportation	43-3021	Billing and Posting Clerks	detailed	170	\$45,220.00
482100	Rail Transportation	43-3030	Bookkeeping, Accounting, and Auditing Clerks	broad	600	\$44,470.00
482100	Rail Transportation	43-3031	Bookkeeping, Accounting, and Auditing Clerks	detailed	600	\$44,470.00
482100	Rail Transportation	43-3050	Payroll and Timekeeping Clerks	broad	160	\$59,200.00
482100	Rail Transportation	43-3051	Payroll and Timekeeping Clerks	detailed	160	\$59,200.00
482100	Rail Transportation	43-3060	Procurement Clerks	broad	90	\$42,470.00
482100	Rail Transportation	43-3061	Procurement Clerks	detailed	90	\$42,470.00
482100	Rail Transportation	43-4000	Information and Record Clerks	minor	4,260	\$48,050.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	43-4050	Customer Service Representatives	broad	1,300	\$46,040.00
482100	Rail Transportation	43-4051	Customer Service Representatives	detailed	1,300	\$46,040.00
482100	Rail Transportation	43-4160	Human Resources Assistants, Except Payroll and Timekeeping	broad	60	\$48,400.00
482100	Rail Transportation	43-4161	Human Resources Assistants, Except Payroll and Timekeeping	detailed	60	\$48,400.00
482100	Rail Transportation	43-4170	Receptionists and Information Clerks	broad	100	\$50,600.00
482100	Rail Transportation	43-4171	Receptionists and Information Clerks	detailed	100	\$50,600.00
482100	Rail Transportation	43-4180	Reservation and Transportation Ticket Agents and Travel Clerks	broad	2,570	\$49,070.00
482100	Rail Transportation	43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	detailed	2,570	\$49,070.00
482100	Rail Transportation	43-4190	Miscellaneous Information and Record Clerks	broad	120	\$47,910.00
482100	Rail Transportation	43-4199	Information and Record Clerks, All Other	detailed	120	\$47,910.00
482100	Rail Transportation	43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	minor	4,620	\$56,010.00
482100	Rail Transportation	43-5010	Cargo and Freight Agents	broad	180	\$46,900.00
482100	Rail Transportation	43-5011	Cargo and Freight Agents	detailed	180	\$46,900.00
482100	Rail Transportation	43-5030	Dispatchers	broad	2,640	\$58,020.00
482100	Rail Transportation	43-5032	Dispatchers, Except Police, Fire, and Ambulance	detailed	2,640	\$58,020.00
482100	Rail Transportation	43-5060	Production, Planning, and Expediting Clerks	broad	910	\$61,400.00
482100	Rail Transportation	43-5061	Production, Planning, and Expediting Clerks	detailed	910	\$61,400.00
482100	Rail Transportation	43-5070	Shipping, Receiving, and Traffic Clerks	broad	330	\$52,370.00
482100	Rail Transportation	43-5071	Shipping, Receiving, and Traffic Clerks	detailed	330	\$52,370.00
482100	Rail Transportation	43-5080	Stock Clerks and Order Fillers	broad	550	\$42,520.00
482100	Rail Transportation	43-5081	Stock Clerks and Order Fillers	detailed	550	\$42,520.00
482100	Rail Transportation	43-6000	Secretaries and Administrative Assistants	minor	1,320	\$49,180.00
482100	Rail Transportation	43-6010	Secretaries and Administrative Assistants	broad	1,320	\$49,180.00
482100	Rail Transportation	43-6011	Executive Secretaries and Executive Administrative Assistants	detailed	490	\$57,950.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	43-6012	Legal Secretaries	detailed	50	\$60,780.00
482100	Rail Transportation	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	detailed	780	\$42,900.00
482100	Rail Transportation	43-9000	Other Office and Administrative Support Workers	minor	2,130	\$39,720.00
482100	Rail Transportation	43-9020	Data Entry and Information Processing Workers	broad	70	\$49,560.00
482100	Rail Transportation	43-9022	Word Processors and Typists	detailed	70	\$49,380.00
482100	Rail Transportation	43-9060	Office Clerks, General	broad	1,800	\$38,410.00
482100	Rail Transportation	43-9061	Office Clerks, General	detailed	1,800	\$38,410.00
482100	Rail Transportation	43-9110	Statistical Assistants	broad	50	\$54,480.00
482100	Rail Transportation	43-9111	Statistical Assistants	detailed	50	\$54,480.00
482100	Rail Transportation	43-9190	Miscellaneous Office and Administrative Support Workers	broad	**	\$42,530.00
482100	Rail Transportation	43-9199	Office and Administrative Support Workers, All Other	detailed	**	\$42,530.00
482100	Rail Transportation	47-0000	Construction and Extraction Occupations	major	18,480	\$57,720.00
482100	Rail Transportation	47-1000	Supervisors of Construction and Extraction Workers	minor	3,340	\$71,480.00
482100	Rail Transportation	47-1010	First-Line Supervisors of Construction Trades and Extraction Workers	broad	3,340	\$71,480.00
482100	Rail Transportation	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	detailed	3,340	\$71,480.00
482100	Rail Transportation	47-2000	Construction Trades Workers	minor	6,060	\$60,170.00
482100	Rail Transportation	47-2010	Boilermakers	broad	300	\$60,880.00
482100	Rail Transportation	47-2011	Boilermakers	detailed	300	\$60,880.00
482100	Rail Transportation	47-2030	Carpenters	broad	580	\$58,580.00
482100	Rail Transportation	47-2031	Carpenters	detailed	580	\$58,580.00
482100	Rail Transportation	47-2060	Construction Laborers	broad	120	\$46,890.00
482100	Rail Transportation	47-2061	Construction Laborers	detailed	120	\$46,890.00
482100	Rail Transportation	47-2070	Construction Equipment Operators	broad	930	\$58,060.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	47-2071	Paving, Surfacing, and Tamping Equipment Operators	detailed	80	\$50,140.00
482100	Rail Transportation	47-2073	Operating Engineers and Other Construction Equipment Operators	detailed	840	\$58,860.00
482100	Rail Transportation	47-2110	Electricians	broad	2,530	\$61,960.00
482100	Rail Transportation	47-2111	Electricians	detailed	2,530	\$61,960.00
482100	Rail Transportation	47-2150	Pipelayers, Plumbers, Pipefitters, and Steamfitters	broad	270	\$59,350.00
482100	Rail Transportation	47-2152	Plumbers, Pipefitters, and Steamfitters	detailed	270	\$59,350.00
482100	Rail Transportation	47-2210	Sheet Metal Workers	broad	1,240	\$59,310.00
482100	Rail Transportation	47-2211	Sheet Metal Workers	detailed	1,240	\$59,310.00
482100	Rail Transportation	47-2220	Structural Iron and Steel Workers	broad	**	\$76,950.00
482100	Rail Transportation	47-2221	Structural Iron and Steel Workers	detailed	**	\$76,950.00
482100	Rail Transportation	47-4000	Other Construction and Related Workers	minor	9,060	\$51,040.00
482100	Rail Transportation	47-4010	Construction and Building Inspectors	broad	40	\$68,280.00
482100	Rail Transportation	47-4011	Construction and Building Inspectors	detailed	40	\$68,280.00
482100	Rail Transportation	47-4060	Rail-Track Laying and Maintenance Equipment Operators	broad	7,830	\$52,260.00
482100	Rail Transportation	47-4061	Rail-Track Laying and Maintenance Equipment Operators	detailed	7,830	\$52,260.00
482100	Rail Transportation	47-4090	Miscellaneous Construction and Related Workers	broad	1,140	\$42,150.00
482100	Rail Transportation	47-4099	Construction and Related Workers, All Other	detailed	1,140	\$42,150.00
482100	Rail Transportation	49-0000	Installation, Maintenance, and Repair Occupations	major	32,190	\$60,470.00
482100	Rail Transportation	49-1000	Supervisors of Installation, Maintenance, and Repair Workers	minor	4,170	\$74,130.00
482100	Rail Transportation	49-1010	First-Line Supervisors of Mechanics, Installers, and Repairers	broad	4,170	\$74,130.00
482100	Rail Transportation	49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	detailed	4,170	\$74,130.00
482100	Rail Transportation	49-2000	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	minor	5,340	\$60,410.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	49-2020	Radio and Telecommunications Equipment Installers and Repairers	broad	**	\$64,120.00
482100	Rail Transportation	49-2021	Radio, Cellular, and Tower Equipment Installers and Repairers	detailed	**	\$72,110.00
482100	Rail Transportation	49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	detailed	60	\$58,180.00
482100	Rail Transportation	49-2090	Miscellaneous Electrical and Electronic Equipment Mechanics, Installers, and Repairers	broad	**	\$60,330.00
482100	Rail Transportation	49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	detailed	5,170	\$60,280.00
482100	Rail Transportation	49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	detailed	30	\$69,260.00
482100	Rail Transportation	49-3000	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	minor	14,470	\$57,270.00
482100	Rail Transportation	49-3030	Bus and Truck Mechanics and Diesel Engine Specialists	broad	2,170	\$55,760.00
482100	Rail Transportation	49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	detailed	2,170	\$55,760.00
482100	Rail Transportation	49-3040	Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics	broad	12,300	\$57,540.00
482100	Rail Transportation	49-3042	Mobile Heavy Equipment Mechanics, Except Engines	detailed	380	\$54,910.00
482100	Rail Transportation	49-3043	Rail Car Repairers	detailed	11,910	\$57,620.00
482100	Rail Transportation	49-9000	Other Installation, Maintenance, and Repair Occupations	minor	8,210	\$59,190.00
482100	Rail Transportation	49-9020	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	broad	60	\$67,830.00
482100	Rail Transportation	49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	detailed	60	\$67,830.00
482100	Rail Transportation	49-9040	Industrial Machinery Installation, Repair, and Maintenance Workers	broad	360	\$54,340.00
482100	Rail Transportation	49-9041	Industrial Machinery Mechanics	detailed	90	\$68,080.00
482100	Rail Transportation	49-9043	Maintenance Workers, Machinery	detailed	260	\$48,690.00
482100	Rail Transportation	49-9050	Line Installers and Repairers	broad	100	\$62,200.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	49-9051	Electrical Power-Line Installers and Repairers	detailed	100	\$62,580.00
482100	Rail Transportation	49-9070	Maintenance and Repair Workers, General	broad	850	\$50,770.00
482100	Rail Transportation	49-9071	Maintenance and Repair Workers, General	detailed	850	\$50,770.00
482100	Rail Transportation	49-9090	Miscellaneous Installation, Maintenance, and Repair Workers	broad	6,840	\$60,380.00
482100	Rail Transportation	49-9097	Signal and Track Switch Repairers	detailed	6,010	\$61,200.00
482100	Rail Transportation	49-9099	Installation, Maintenance, and Repair Workers, All Other	detailed	740	\$55,820.00
482100	Rail Transportation	51-0000	Production Occupations	major	10,320	\$50,530.00
482100	Rail Transportation	51-1000	Supervisors of Production Workers	minor	150	\$74,820.00
482100	Rail Transportation	51-1010	First-Line Supervisors of Production and Operating Workers	broad	150	\$74,820.00
482100	Rail Transportation	51-1011	First-Line Supervisors of Production and Operating Workers	detailed	150	\$74,820.00
482100	Rail Transportation	51-4000	Metal Workers and Plastic Workers	minor	9,610	\$50,250.00
482100	Rail Transportation	51-4040	Machinists	broad	5,920	\$51,000.00
482100	Rail Transportation	51-4041	Machinists	detailed	5,920	\$51,000.00
482100	Rail Transportation	51-4120	Welding, Soldering, and Brazing Workers	broad	3,630	*
482100	Rail Transportation	51-4121	Welders, Cutters, Solderers, and Brazers	detailed	3,610	\$48,950.00
482100	Rail Transportation	51-8000	Plant and System Operators	minor	50	\$63,890.00
482100	Rail Transportation	51-9000	Other Production Occupations	minor	480	\$46,380.00
482100	Rail Transportation	51-9060	Inspectors, Testers, Sorters, Samplers, and Weighers	broad	60	\$53,650.00
482100	Rail Transportation	51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	detailed	60	\$53,650.00
482100	Rail Transportation	51-9120	Painting Workers	broad	80	\$50,140.00
482100	Rail Transportation	51-9122	Painters, Transportation Equipment	detailed	**	\$48,230.00
482100	Rail Transportation	51-9190	Miscellaneous Production Workers	broad	350	\$44,280.00
482100	Rail Transportation	51-9198	Helpers--Production Workers	detailed	340	\$44,200.00
482100	Rail Transportation	53-0000	Transportation and Material Moving Occupations	major	112,440	\$57,610.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	53-1000	Supervisors of Transportation and Material Moving Workers	minor	4,340	\$68,230.00
482100	Rail Transportation	53-1020	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	broad	290	\$58,300.00
482100	Rail Transportation	53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	detailed	290	\$58,300.00
482100	Rail Transportation	53-1030	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	broad	4,050	\$68,950.00
482100	Rail Transportation	53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	detailed	4,050	\$68,950.00
482100	Rail Transportation	53-3000	Motor Vehicle Operators	minor	1,360	\$47,380.00
482100	Rail Transportation	53-3030	Driver/Sales Workers and Truck Drivers	broad	990	\$46,740.00
482100	Rail Transportation	53-3032	Heavy and Tractor-Trailer Truck Drivers	detailed	440	\$51,570.00
482100	Rail Transportation	53-3033	Light Truck or Delivery Services Drivers	detailed	550	\$42,910.00
482100	Rail Transportation	53-3090	Miscellaneous Motor Vehicle Operators	broad	**	\$44,560.00
482100	Rail Transportation	53-3099	Motor Vehicle Operators, All Other	detailed	**	\$44,560.00
482100	Rail Transportation	53-4000	Rail Transportation Workers	minor	96,530	\$57,760.00
482100	Rail Transportation	53-4010	Locomotive Engineers and Operators	broad	39,540	\$59,440.00
482100	Rail Transportation	53-4011	Locomotive Engineers	detailed	35,860	\$59,800.00
482100	Rail Transportation	53-4012	Locomotive Firers	detailed	1,590	\$54,580.00
482100	Rail Transportation	53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	detailed	2,100	\$57,000.00
482100	Rail Transportation	53-4020	Railroad Brake, Signal, and Switch Operators	broad	17,010	\$55,250.00
482100	Rail Transportation	53-4021	Railroad Brake, Signal, and Switch Operators	detailed	17,010	\$55,250.00
482100	Rail Transportation	53-4030	Railroad Conductors and Yardmasters	broad	38,440	\$56,810.00
482100	Rail Transportation	53-4031	Railroad Conductors and Yardmasters	detailed	38,440	\$56,810.00
482100	Rail Transportation	53-4090	Miscellaneous Rail Transportation Workers	broad	1,540	\$66,170.00
482100	Rail Transportation	53-4099	Rail Transportation Workers, All Other	detailed	1,540	\$66,170.00
482100	Rail Transportation	53-6000	Other Transportation Workers	minor	5,830	\$61,610.00

NAICS	NAICS_TITLE	OCC_CODE	OCC_TITLE	OCC_GROUP	TOT_EMP	A_MEAN
482100	Rail Transportation	53-6010	Bridge and Lock Tenders	broad	270	*
482100	Rail Transportation	53-6011	Bridge and Lock Tenders	detailed	270	*
482100	Rail Transportation	53-6050	Transportation Inspectors	broad	3,520	\$73,190.00
482100	Rail Transportation	53-6051	Transportation Inspectors	detailed	3,520	\$73,190.00
482100	Rail Transportation	53-6060	Transportation Attendants, Except Flight Attendants	broad	1,710	\$43,150.00
482100	Rail Transportation	53-6061	Transportation Attendants, Except Flight Attendants	detailed	1,710	\$43,150.00
482100	Rail Transportation	53-6090	Miscellaneous Transportation Workers	broad	330	*
482100	Rail Transportation	53-6099	Transportation Workers, All Other	detailed	330	*
482100	Rail Transportation	53-7000	Material Moving Workers	minor	4,370	\$41,330.00
482100	Rail Transportation	53-7020	Crane and Tower Operators	broad	420	\$50,520.00
482100	Rail Transportation	53-7021	Crane and Tower Operators	detailed	420	\$50,520.00
482100	Rail Transportation	53-7030	Dredge, Excavating, and Loading Machine Operators	broad	110	\$53,640.00
482100	Rail Transportation	53-7032	Excavating and Loading Machine and Dragline Operators	detailed	110	\$53,640.00
482100	Rail Transportation	53-7050	Industrial Truck and Tractor Operators	broad	430	\$50,640.00
482100	Rail Transportation	53-7051	Industrial Truck and Tractor Operators	detailed	430	\$50,640.00
482100	Rail Transportation	53-7060	Laborers and Material Movers, Hand	broad	3,180	\$38,230.00
482100	Rail Transportation	53-7061	Cleaners of Vehicles and Equipment	detailed	1,670	\$38,370.00
482100	Rail Transportation	53-7062	Laborers and Freight, Stock, and Material Movers, Hand	detailed	1,510	\$38,080.00
482100	Rail Transportation	53-7190	Miscellaneous Material Moving Workers	broad	190	\$43,810.00
482100	Rail Transportation	53-7199	Material Moving Workers, All Other	detailed	190	\$43,810.00

**Economics:
Staffing Assumptions**

Staff Assumptions	# of positions	Shifts	Full Time Equivalent
<i>Urban Station Staff</i>			
Station attendees(ticketing/information/baggage)	10	2	20
Maintenance/clearing	4	3	12
Security	4	3	12
Concession	33	2	66
Station Manager and assistance manager	3	2	6
Rental Car Staff	32	2	64
Rental Car - car wash	6	2	12
First Class lounge and bar	6	2	12
First Class kitchen	2	2	4
Train Operations	4	2	8
Subtotal (1 station)	104		216
Subtotal (2 stations)	208		432
<i>Rural Station Staff</i>			
Station attendees	4	2	8
Maintenance/clearing	2	3	6
Security	2	3	6
Concession	18	2	36
Station Manager and assistance manager	2	2	4
Rental Car Staff	24	2	48
Rental Car - car wash	4	2	8
First Class lounge and bar	4	2	8
Subtotal (1 station)	60		124
<i>Maintenance Facilities</i>			
TMF 1 (all staff)	120	2	240

Annual Mean Wage	Occupation Title EOS	Occupation Title EOS
\$49,070	Reservation and Transportation Ticket Agents and Travel Clerks	\$981,400
\$29,840	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$358,080
\$51,290	Security Guards	\$615,480
\$40,420	Food and Beverage Serving Workers	\$2,667,720
\$66,170	Rail Transportation Workers, All Other	\$397,020
\$51,160	Office and Administrative Support Occupations	\$3,274,240
\$31,680	Building and Grounds Cleaning and Maintenance Occupations	\$380,160
\$40,420	Food and Beverage Serving Workers	\$485,040
\$39,230	Cooks and Food Preparation Workers	\$156,920
\$56,810	Railroad Conductors and Yardmasters	\$454,480
		\$9,770,540
		\$19,541,080
\$49,070	Reservation and Transportation Ticket Agents and Travel Clerks	\$392,560
\$29,840	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$179,040
\$51,290	Security Guards	\$307,740
\$40,420	Food and Beverage Serving Workers	\$1,455,120
\$66,170	Rail Transportation Workers, All Other	\$264,680
\$51,160	Office and Administrative Support Occupations	\$2,455,680
\$31,680	Building and Grounds Cleaning and Maintenance Occupations	\$253,440
\$40,420	Food and Beverage Serving Workers	\$323,360
		\$5,631,620
\$60,470	Installation, Maintenance, and Repair Occupations	\$14,512,800

Staff Assumptions	# of positions	Shifts	Full Time Equivalent	Annual Mean Wage	Occupation Title EOS	Occupation Title EOS
<i>Maintenance Facilities</i>						
TMF 2 (all staff)	120	2	240	\$60,470	Installation, Maintenance, and Repair Occupations	\$14,512,800
Dallas MOW - Staff (night time crew)	10	1	10	\$60,470	Installation, Maintenance, and Repair Occupations	\$604,700
Dallas MOW - Staff (day time crew)	5	2	10	\$60,470	Installation, Maintenance, and Repair Occupations	\$604,700
Houston MOW - Staff (night time crew)	10	1	10	\$60,470	Installation, Maintenance, and Repair Occupations	\$604,700
Houston MOW - Staff (day time crew)	5	2	10	\$60,470	Installation, Maintenance, and Repair Occupations	\$604,700
Intermeiate MOW - Staff (night time crew)	50	1	50	\$60,470	Installation, Maintenance, and Repair Occupations	\$3,023,500
Intermediate MOW - Staff (day time crew)	25	2	50	\$60,470	Installation, Maintenance, and Repair Occupations	\$3,023,500
Subtotal (HMF, LMF, MOW)	345		620			\$37,491,400
Total staff			1176			
Total staff (Calculated)			1176			
Average Pay 2015						\$53,285.80
Median Pay 2015						\$60,470.00
Average Pay 2016						\$54,129.45
Median Pay 2016						\$61,427.40

\$45,416

Direct Earnings Estimate

All				\$54,129.45		\$63,656,234.07
Dallas				\$54,404.11		\$25,896,355.72
Harris				\$54,404.11	62932	\$25,896,355.72
Rural				\$52,962.15	41567	\$11,863,522.63
Texas				\$54,129.45		\$63,656,234.07

Note:

\$46,135

\$5,720,783.05

Subtotal from the client that does not match the sum of cells unders rural stations staff, this analysis relies on individual staff projections

One one rural station carried forward

for analysis

Calculated Total based on geographic
projections

Quick Facts: Railroad Workers

2015 Median Pay	\$55,180 per year \$26.53 per hour
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Source: <http://www.bls.gov/ooh/transportation-and-material-moving/railroad-occupations.htm#tab-5>

Economics:
1940— 2009 Deflator
Source: Whitehouse.gov

Fiscal Year	GDP (in billions of dollars)	GDP (Chained) Price Index	Composite Outlay Deflators												
			Total	Total Defense	Total Non-defense	Payment for Individuals			Other Grants	Net Interest	Undis-tributed Offsetting Receipts	All Other	Addendum: Direct Capital		
						Total	Direct	Grants					Total	Defense	Non-defense
1940	98.2	0.0809	0.0697	0.0651	0.0707	0.0788	0.0788	0.0788	0.0493	0.0809	0.0477	0.0674	0.1448	0.1484	0.1433
1941	116.2	0.0840	0.0769	0.0801	0.0743	0.0815	0.0815	0.0815	0.0446	0.0840	0.0474	0.0688	0.1548	0.1573	0.1490
1942	147.7	0.0902	0.0872	0.0976	0.0678	0.0892	0.0892	0.0892	0.0437	0.0902	0.0509	0.0595	0.1614	0.1616	0.1581
1943	184.6	0.0961	0.0964	0.1045	0.0671	0.0988	0.0988	0.0988	0.0469	0.0961	0.0557	0.0584	0.1582	0.1582	0.1585
1944	213.8	0.0995	0.0887	0.0918	0.0726	0.1061	0.1061	0.1061	0.0498	0.0995	0.0614	0.0624	0.1536	0.1536	0.1625
1945	226.4	0.1019	0.0834	0.0835	0.0831	0.1115	0.1116	0.1113	0.0503	0.1019	0.0647	0.0663	0.1433	0.1432	0.1668
1946	228.0	0.1097	0.0842	0.0801	0.1019	0.1176	0.1176	0.1174	0.0555	0.1097	0.0673	0.0719	0.1455	0.1451	0.1643
1947	238.9	0.1216	0.0956	0.0866	0.1019	0.1264	0.1264	0.1263	0.1309	0.1216	0.0713	0.0741	0.1624	0.1616	0.1670
1948	262.4	0.1331	0.0994	0.0812	0.1103	0.1380	0.1380	0.1379	0.0751	0.1331	0.0771	0.0816	0.1800	0.1773	0.1903
1949	276.8	0.1375	0.0958	0.0810	0.1056	0.1417	0.1418	0.1416	0.0791	0.1375	0.0749	0.0795	0.1902	0.1868	0.1985
1950	279.0	0.1355	0.1005	0.0818	0.1127	0.1399	0.1400	0.1395	0.0750	0.1355	0.0789	0.0848	0.1867	0.1860	0.1879
1951	327.4	0.1428	0.1009	0.0866	0.1226	0.1478	0.1479	0.1473	0.0894	0.1428	0.0778	0.0866	0.1998	0.2003	0.1978
1952	357.5	0.1485	0.1006	0.0901	0.1339	0.1537	0.1537	0.1532	0.0899	0.1485	0.0838	0.0944	0.2094	0.2094	0.2098
1953	382.5	0.1512	0.1080	0.0993	0.1349	0.1559	0.1560	0.1555	0.0941	0.1512	0.0887	0.0993	0.2122	0.2118	0.2177
1954	387.7	0.1530	0.1112	0.1009	0.1450	0.1580	0.1580	0.1578	0.0904	0.1530	0.0918	0.1061	0.2103	0.2099	0.2163
1955	407.0	0.1542	0.1151	0.1043	0.1390	0.1579	0.1579	0.1578	0.0921	0.1542	0.0943	0.1028	0.2162	0.2165	0.2126
1956	439.0	0.1582	0.1202	0.1105	0.1386	0.1598	0.1598	0.1597	0.0936	0.1582	0.0954	0.1024	0.2275	0.2280	0.2186
1957	464.2	0.1641	0.1261	0.1161	0.1441	0.1644	0.1644	0.1643	0.1019	0.1641	0.0976	0.1060	0.2401	0.2409	0.2291
1958	474.3	0.1691	0.1335	0.1216	0.1533	0.1692	0.1692	0.1691	0.1128	0.1691	0.1044	0.1150	0.2478	0.2487	0.2367
1959	505.6	0.1717	0.1391	0.1298	0.1513	0.1716	0.1716	0.1715	0.1199	0.1717	0.1097	0.1191	0.2521	0.2532	0.2402
1960	535.1	0.1741	0.1411	0.1286	0.1579	0.1747	0.1748	0.1746	0.1204	0.1741	0.1088	0.1229	0.2540	0.2552	0.2439
1961	547.6	0.1765	0.1443	0.1309	0.1612	0.1772	0.1772	0.1771	0.1184	0.1765	0.1142	0.1295	0.2554	0.2566	0.2462
1962	586.9	0.1783	0.1445	0.1312	0.1603	0.1789	0.1789	0.1788	0.1190	0.1783	0.1164	0.1315	0.2576	0.2588	0.2484
1963	619.3	0.1805	0.1507	0.1369	0.1661	0.1810	0.1810	0.1809	0.1231	0.1805	0.1202	0.1396	0.2617	0.2632	0.2508
1964	662.9	0.1827	0.1531	0.1388	0.1679	0.1835	0.1835	0.1834	0.1251	0.1827	0.1241	0.1462	0.2621	0.2634	0.2542
1965	710.7	0.1859	0.1553	0.1386	0.1707	0.1861	0.1862	0.1860	0.1286	0.1859	0.1311	0.1523	0.2627	0.2641	0.2564

Fiscal Year	GDP (in billions of dollars)	GDP (Chained) Price Index	Composite Outlay Deflators												
			Total	Total Defense	Total Non-defense	Payment for Individuals			Other Grants	Net Interest	Undis-tributed Offsetting Receipts	All Other	Addendum: Direct Capital		
						Total	Direct	Grants					Total	Defense	Non-defense
1966	781.9	0.1899	0.1596	0.1451	0.1727	0.1895	0.1895	0.1894	0.1255	0.1899	0.1356	0.1566	0.2648	0.2662	0.2576
1967	838.2	0.1957	0.1632	0.1498	0.1763	0.1946	0.1946	0.1945	0.1274	0.1957	0.1390	0.1589	0.2687	0.2698	0.2615
1968	899.3	0.2024	0.1691	0.1568	0.1813	0.2006	0.2006	0.2005	0.1319	0.2024	0.1441	0.1625	0.2746	0.2755	0.2673
1969	982.3	0.2117	0.1798	0.1657	0.1932	0.2091	0.2091	0.2090	0.1400	0.2117	0.1541	0.1747	0.2850	0.2858	0.2775
1970	1,049.1	0.2231	0.1899	0.1742	0.2030	0.2191	0.2191	0.2190	0.1494	0.2231	0.1668	0.1855	0.2998	0.3005	0.2930
1971	1,119.3	0.2344	0.2030	0.1853	0.2155	0.2289	0.2289	0.2288	0.1601	0.2344	0.1837	0.2031	0.3185	0.3196	0.3113
1972	1,219.5	0.2455	0.2165	0.2031	0.2242	0.2377	0.2377	0.2376	0.1679	0.2455	0.1979	0.2164	0.3417	0.3448	0.3259
1973	1,356.0	0.2562	0.2266	0.2176	0.2309	0.2466	0.2466	0.2465	0.1719	0.2562	0.2094	0.2289	0.3637	0.3692	0.3396
1974	1,486.2	0.2743	0.2454	0.2325	0.2512	0.2664	0.2664	0.2663	0.1878	0.2743	0.2222	0.2422	0.3863	0.3912	0.3661
1975	1,610.6	0.3027	0.2695	0.2533	0.2758	0.2940	0.2940	0.2939	0.2084	0.3027	0.2389	0.2586	0.4197	0.4234	0.4061
1976	1,790.3	0.3237	0.2888	0.2696	0.2955	0.3132	0.3132	0.3131	0.2246	0.3237	0.2588	0.2814	0.4485	0.4528	0.4331
TQ	472.6	0.3334	0.2961	0.2749	0.3032	0.3230	0.3230	0.3229	0.2327	0.3334	0.2666	0.2877	0.4651	0.4722	0.4435
1977	2,028.4	0.3470	0.3098	0.2906	0.3163	0.3366	0.3367	0.3365	0.2408	0.3470	0.2791	0.3023	0.4838	0.4913	0.4578
1978	2,278.2	0.3703	0.3292	0.3102	0.3353	0.3594	0.3595	0.3593	0.2562	0.3703	0.2966	0.3192	0.5134	0.5238	0.4806
1979	2,570.0	0.4001	0.3576	0.3355	0.3649	0.3892	0.3893	0.3891	0.2795	0.4001	0.3153	0.3436	0.5474	0.5581	0.5120
1980	2,796.8	0.4349	0.3951	0.3709	0.4028	0.4302	0.4303	0.4301	0.3107	0.4349	0.3414	0.3683	0.5909	0.5996	0.5584
1981	3,138.4	0.4775	0.4391	0.4133	0.4476	0.4720	0.4720	0.4718	0.3462	0.4775	0.3751	0.4038	0.6426	0.6507	0.6090
1982	3,313.9	0.5103	0.4721	0.4491	0.4803	0.5011	0.5011	0.5009	0.3759	0.5103	0.3930	0.4233	0.6966	0.7045	0.6554
1983	3,541.1	0.5327	0.4957	0.4720	0.5045	0.5241	0.5241	0.5239	0.3950	0.5327	0.4077	0.4371	0.7325	0.7410	0.6765
1984	3,952.8	0.5515	0.5184	0.4944	0.5278	0.5444	0.5444	0.5442	0.4155	0.5515	0.4173	0.4593	0.7594	0.7700	0.6939
1985	4,270.4	0.5698	0.5372	0.5128	0.5467	0.5637	0.5637	0.5634	0.4331	0.5698	0.4345	0.4782	0.7674	0.7773	0.7087
1986	4,536.1	0.5828	0.5486	0.5242	0.5585	0.5783	0.5784	0.5781	0.4486	0.5828	0.4407	0.4796	0.7621	0.7686	0.7174
1987	4,781.9	0.5958	0.5643	0.5325	0.5777	0.5930	0.5931	0.5928	0.4712	0.5958	0.4425	0.4894	0.7549	0.7592	0.7263
1988	5,155.1	0.6151	0.5835	0.5455	0.5991	0.6155	0.6156	0.6150	0.4890	0.6151	0.4566	0.5082	0.7560	0.7575	0.7473
1989	5,570.0	0.6396	0.6058	0.5647	0.6222	0.6425	0.6426	0.6415	0.5098	0.6396	0.4670	0.5163	0.7701	0.7698	0.7722
1990	5,914.6	0.6627	0.6237	0.5844	0.6371	0.6682	0.6684	0.6667	0.5341	0.6627	0.4797	0.5189	0.7851	0.7839	0.7921

Fiscal Year	GDP (in billions of dollars)	GDP (Chained) Price Index	Composite Outlay Deflators												
			Total	Total Defense	Total Non-defense	Payment for Individuals			Other Grants	Net Interest	Undistributed Offsetting Receipts	All Other	Addendum: Direct Capital		
						Total	Direct	Grants					Total	Defense	Non-defense
1991	6,110.1	0.6862	0.6526	0.6159	0.6629	0.6943	0.6946	0.6926	0.5557	0.6862	0.5124	0.5493	0.8067	0.8054	0.8135
1992	6,434.7	0.7030	0.6771	0.6231	0.6936	0.7122	0.7126	0.7102	0.5725	0.7030	0.5257	0.5906	0.8185	0.8179	0.8208
1993	6,794.9	0.7197	0.6972	0.6302	0.7171	0.7306	0.7310	0.7280	0.5909	0.7197	0.5560	0.6362	0.8359	0.8366	0.8332
1994	7,197.8	0.7354	0.7100	0.6366	0.7301	0.7459	0.7466	0.7425	0.6066	0.7354	0.5815	0.6449	0.8549	0.8570	0.8469
1995	7,583.4	0.7510	0.7306	0.6498	0.7511	0.7618	0.7626	0.7584	0.6271	0.7510	0.6001	0.6851	0.8766	0.8788	0.8701
1996	7,978.3	0.7650	0.7459	0.6641	0.7652	0.7771	0.7778	0.7735	0.6442	0.7650	0.6282	0.7057	0.8885	0.8925	0.8779
1997	8,483.2	0.7785	0.7612	0.6740	0.7817	0.7927	0.7934	0.7890	0.6559	0.7785	0.6431	0.7203	0.8858	0.8888	0.8778
1998	8,954.8	0.7881	0.7679	0.6866	0.7860	0.7999	0.8005	0.7973	0.6650	0.7881	0.6583	0.7101	0.8865	0.8887	0.8786
1999	9,510.5	0.7981	0.7777	0.7015	0.7943	0.8092	0.8097	0.8069	0.6816	0.7981	0.6774	0.7292	0.8951	0.8992	0.8846
2000	10,148.2	0.8147	0.7970	0.7235	0.8133	0.8283	0.8289	0.8256	0.7074	0.8147	0.7093	0.7551	0.9079	0.9108	0.9017
2001	10,564.6	0.8342	0.8183	0.7494	0.8333	0.8468	0.8473	0.8444	0.7301	0.8342	0.7310	0.7816	0.9114	0.9115	0.9113
2002	10,876.9	0.8477	0.8319	0.7761	0.8446	0.8568	0.8573	0.8547	0.7444	0.8477	0.7702	0.8084	0.9061	0.9041	0.9107
2003	11,332.4	0.8639	0.8554	0.8239	0.8630	0.8740	0.8745	0.8719	0.7672	0.8639	0.8057	0.8380	0.9130	0.9118	0.9160
2004	12,088.6	0.8853	0.8778	0.8552	0.8836	0.8930	0.8934	0.8912	0.7979	0.8853	0.8468	0.8680	0.9260	0.9250	0.9292
2005	12,888.9	0.9131	0.9081	0.8963	0.9111	0.9180	0.9183	0.9167	0.8458	0.9131	0.8867	0.9006	0.9437	0.9423	0.9484
2006	13,684.7	0.9428	0.9395	0.9350	0.9406	0.9457	0.9459	0.9446	0.8892	0.9428	0.9229	0.9326	0.9601	0.9593	0.9626
2007	14,322.9	0.9684	0.9643	0.9648	0.9642	0.9659	0.9660	0.9655	0.9354	0.9684	0.9562	0.9633	0.9749	0.9744	0.9766
2008	14,752.4	0.9885	0.9980	1.0019	0.9970	0.9999	1.0000	0.9996	0.9811	0.9885	0.9879	0.9893	0.9929	0.9921	0.9956
2009	14,414.6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2010	14,798.5	1.0088	1.0157	1.0183	1.0151	1.0162	1.0163	1.0159	1.0150	1.0088	1.0320	1.0152	1.0070	1.0052	1.0127
2011	15,379.2	1.0293	1.0395	1.0496	1.0371	1.0377	1.0378	1.0374	1.0432	1.0293	1.0686	1.0466	1.0278	1.0249	1.0361
2012	16,027.2	1.0481	1.0603	1.0647	1.0592	1.0597	1.0597	1.0596	1.0693	1.0481	1.0839	1.0683	1.0394	1.0373	1.0459
2013	16,498.1	1.0661	1.0742	1.0714	1.0748	1.0757	1.0757	1.0757	1.0915	1.0661	1.0930	1.0663	1.0447	1.0411	1.0547
2014	17,183.5	1.0843	1.0902	1.0890	1.0904	1.0913	1.0913	1.0913	1.1146	1.0843	1.1320	1.0798	1.0563	1.0519	1.0704
2015	17,803.4	1.0990	1.1056	1.1042	1.1058	1.1055	1.1054	1.1056	1.1379	1.0990	1.1473	1.1184	1.0711	1.0661	1.0849
2016															
estim	18,472.0	1.1164	1.1268	1.1218	1.1277	1.1265	1.1264	1.1266	1.1707	1.1164	1.1655	1.1404	1.0883	1.0831	1.1021

Fiscal Year	GDP (in billions of dollars)	GDP (Chained) Price Index	Composite Outlay Deflators												
			Total	Total Defense	Total Non-defense	Payment for Individuals			Other Grants	Net Interest	Undis-tributed Offsetting Receipts	All Other	Addendum: Direct Capital		
						Total	Direct	Grants					Total	Defense	Non-defense
ate															
2017 estimate	19,302.8	1.1364	1.1499	1.1420	1.1513	1.1501	1.1500	1.1503	1.2044	1.1364	1.1864	1.1638	1.1076	1.1025	1.1219
2018 estimate	20,129.6	1.1584	1.1745	1.1641	1.1762	1.1754	1.1753	1.1757	1.2407	1.1584	1.2093	1.1863	1.1291	1.1238	1.1436
2019 estimate	21,012.6	1.1816	1.2005	1.1875	1.2025	1.2024	1.2023	1.2028	1.2776	1.1816	1.2335	1.2100	1.1518	1.1463	1.1665
2020 estimate	21,921.4	1.2053	1.2275	1.2112	1.2299	1.2301	1.2300	1.2305	1.3190	1.2053	1.2582	1.2343	1.1748	1.1693	1.1898
2021 estimate	22,875.2	1.2294	1.2551	1.2355	1.2578	1.2584	1.2583	1.2589	1.3610	1.2294	1.2834	1.2590	1.1983	1.1927	1.2137

Note: Constant dollar research and development outlays are based on the GDP (chained) price index.

Source: Table 10.1 White House

<https://www.whitehouse.gov/sites/default/files/omb/budget/fy2017/assets/hist10z1.xls>

Downloaded: March 21 2016

**Economics:
Project Costs by Geography**

	Construction Allocation	Prof. Services Allocation	Regional Jobs	Jobs Allocation	Systems Allocation
All	100%	100%	1086	100.0%	100%
Dallas	33%	50%	456	42.0%	4%
Harris	33%	50%	456	42.0%	10%
Rural	34%	0%	224	20.6%	86%
Texas	100%	100%	1086	100.0%	100%

Notes:

Construction cost detail is insufficient to allocate by geography. This allocation assumes that longer mileage in rural counties will be offset by higher grade separation and station costs in urban counties for a roughly even split.

Professional Services include engineering and environmental analysis. To date, the primary offices for this work are located in Dallas and Harris County, with an assumed 50/50 split.

Locational job estimates are based on staffing assumptions prepared for purposes of water usage estimates (not a final number). 20 MOW staff allocated to rural geography (unknown county). 30 staff unaccounted for in water analysis to reach estimated employment of 1086, not allocated to any-sub geography.

Systems Costs are allocated by milage of track in each geography



**TECHNICAL MEMORANDUM
ENVIRONMENTAL JUSTICE**

To: Jerry Smiley, AICP, AECOM

From: Matthew Ables, AICP, AECOM

Date: November 1, 2017

RE: DALLAS TO HOUSTON HSR EIS – ENVIRONMENTAL JUSTICE

This technical memorandum summarizes the data analyzed to determine disproportionately high or adverse impacts to EJ communities. That data below is represented in tables that display potential impacts by county, segment and Build Alternative for EJ communities. A comparison of impacts to EJ communities and the non-EJ communities is calculated to determine if highly disproportionate or adverse impacts would exist.

Identification of EJ Block Groups by Segments

Definitions and methods used to identify EJ block groups can be found in the Methodology section of the EIS (**Section 3.18.3, Methodology**). The following tables identify the block groups that are classified as minority, Hispanic and/or low-income, and would be intersected by the Build Alternatives’ study area. In **Table 2**, Segment 1 ends and Segments 2A and 2B begin in the same block group. Additionally, Segments 2A and 2B end in the same block group where Segments 3A, 3B and 3C begin. For the purpose of this analysis, any instance of a segment intersecting a block group is counted, and a footnote is added. However, in **Table 3**, for the calculation of total block groups intersected per Build Alternative, if a block group is intersected by multiple segments of the LOD the block group is only counted once.

Table 1: Number of EJ Block Groups By County				
County	EJ Block Groups Intersected by the LOD	EJ Block Groups Intersected by the Study Area	Total Block Groups Intersected by the LOD	Total Block Groups Intersected by the Study Area
Dallas	11	25	14	29
Ellis	9	9	9	9
Navarro	0	0	4	5
Freestone	1	2	6	7
Limestone	0	0	2	2
Leon	5	5	8	8
Madison	0	0	2	2
Grimes	1	1	7	7
Waller	0	0	2	2
Harris	12	29	27	60
Total	37	69	80	131

Source: AECOM, 2017

Table 2: Number of EJ Block Groups By Segment

Segment	EJ Block Groups Intersected by the LOD	EJ Block Groups Intersected by the Study Area****	Total Block Groups Intersected by the LOD	Total Block Groups Intersected by the Study Area*****
Segment 1	12*	27	14*	32
Segment 2A	7*	17	9*	21
Segment 2B	7*	16	9*	19
Segment 3A	1**	7	5**	21
Segment 3B	1**	7	6**	18
Segment 3C	4**	9	17**	36
Segment 4	3	3	12****	21
Segment 5	12	32	30	66
Industrial Site Terminal***	2	7	6	13
Northwest Mall Terminal***	2	9	3	19
Northwest Transit Center Terminal***	2	8	6	24

* The terminus of Segment 1 and the beginning of Segments 2A and 2B overlap in the same block group in Ellis County

**Segments 3A, 3B and 3C begin in the same EJ block group in Ellis County.

***Station options intersect the same block groups found on Segment 5.

**** Block groups can be intersected by multiple segments due to overlapping Study Area.

Source: AECOM, 2017

Table 3: Number of Block Groups By Build Alternative Within the LOD

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal*	Northwest Mall Terminal*	Northwest Transit Center Terminal*
Number of EJ Block Groups intersected by the LOD	34	34	34	34	34	34	2	2	2
Number of EJ Block Groups intersected by the Study Area	86	86	85	85	85	84	7	9	8
Total number of Block Groups intersected by the LOD	66	67	67	66	67	67	6	3	6
Total number of Block Groups intersected by the Study Area	161	158	155	159	156	153	6	10	16

*Station options intersect the same block groups found on Segment 5.

Source: AECOM, 2017

Identification of Potential Impacts by Resource Area

Air Quality

Across all Build Alternatives, there would be no disproportionately high or adverse air quality impacts to EJ populations.

Water Quality

Across all Build Alternatives, there would be no disproportionately high or adverse water quality impacts to EJ populations.

Noise and Vibration

Noise and vibration impacts would occur at various locations along the Build Alternatives where sensitive receptors are present. Generally these are locations that include residences, commercial businesses that would be sensitive to noise, locations where people gather and recreational areas where ambient noise levels are generally low. Sources of noise would be due to the construction and operation of the Build Alternatives. Therefore, a noise and vibration analysis was conducted by FRA. Noise impacts that were noted as severe are represented in the tables below. **Tables 4-6** show the number of impacts in EJ communities and total impacts within the LOD by county, segment and Build Alternative. Across all Build Alternatives there would be no vibration impacts in EJ communities. Data in the tables show that by quantity of noise impacts there would not be a disproportionately high or adverse number in EJ communities based on the selected Build Alternative.

Table 4: Severe and Moderate Noise Impacts by County				
County	Severe (EJ)	Severe (Total)	Moderate (EJ)	Moderate (Total)
Dallas	0	0	4	9
Ellis	2	2	33	35
Navarro	0	3	0	24
Freestone	0	6	0	8
Limestone	0	0	0	3
Leon	1	1	6	8
Madison	0	0	0	7
Grimes	1	1	5	15
Waller	0	1	0	24
Harris	8	8	175	206
Total	12	22	223	339

Source: AECOM, 2017

Table 5: Severe and Moderate Noise Impacts by Segment				
Segment	Severe (EJ)	Severe (Total)	Moderate (EJ)	Moderate (Total)
Segment 1	2	2	21	26
Segment 2A	0	0	12	14
Segment 2B	0	0	4	4
Segment 3A	0	0	0	4
Segment 3B	0	2	0	17
Segment 3C	0	3	4	15
Segment 4	1	5	2	14
Segment 5	9	10	180	245
Industrial Site Terminal	0	0	0	0
Northwest Mall Terminal	0	0	0	0
Northwest Transit Center Terminal	0	0	0	0
Total	12	22	223	339

Source: AECOM, 2017

Table 6: Severe and Moderate Noise Impacts and Vibration Impacts By Build Alternative

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
Severe (EJ)	12	12	11	12	12	11	0	0	0
Severe (Total)	17	19	15	17	19	15	0	0	0
Moderate (EJ)	215	215	217	207	207	209	0	0	0
Moderate (Total)	303	316	300	293	306	290	0	0	0

Source: AECOM, 2017

Hazardous Materials

Primary producers of hazardous materials for the Build Alternatives would be the construction of the HST System, TMFs, MOWs and station areas. TCRR conducted an analysis regarding quantities of hazardous materials generated by all aspects of the project. For EJ purposes, it is important to note that the Dallas County TMF would be located in EJ communities and the Harris County TMF would not be located in an EJ community. However, hazardous materials would be controlled in accordance with state and federal laws. The locations of these facilities would not represent a disproportionately high or adverse impact to EJ communities.

Additionally, the hazardous materials analysis included site specific research relating to potential hazardous sites that would potentially be encountered by each Build Alternative. **Tables 7-9** show the number of potentially high and moderate risk sites for each county, segment, and Build Alternatives. The data shows that a disproportionately high or adverse impact would not occur to EJ communities. It is possible that the selected Build Alternative would encounter high risk sites during construction that would require remediation. Remediation of hazardous sites could be a beneficial impact for an EJ community.

Table 7: High and Moderate Risk HAZMAT Impacts by County

County	High (EJ)	High (Total)	Moderate (EJ)	Moderate (Total)
Dallas	3	3	25	41
Ellis	1	1	0	1
Navarro	0	0	0	0
Freestone	0	0	3	8
Limestone	0	0	0	0
Leon	0	0	0	4
Madison	0	0	0	0
Grimes	0	0	0	0
Waller	0	0	0	1
Harris	0	4*	65	121
Total	4	6	93	176

*Includes sites at potential station areas.

Source: AECOM, 2017

Table 8: High and Moderate Risk HAZMAT Impacts by Segment

Segment	High (EJ)	High (Total)	Moderate (EJ)	Moderate (Total)
Segment 1	3	3	34	34
Segment 2A	1	1	0	0
Segment 2B	0	0	0	0
Segment 3A	0	0	0	0
Segment 3B	0	0	0	0
Segment 3C	0	0	6	9
Segment 4	0	0	0	0
Segment 5	0	2	62	101*
Industrial Site Terminal	0	2	0	3**
Northwest Mall Terminal	0	0	3	3**
Northwest Transit Center Terminal	0	0	0	8**
Total	4	8	105	144

*Includes sites at potential station areas.

**Resources at station area may be counted multiple times.

Source: AECOM, 2017

Table 9: High and Moderate HAZMAT Impacts By Build Alternative

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
High (EJ)	4	4	4	3	3	3	0	0	0
High (Total)	7	7	7	6	6	6	2	0	0
Moderate (EJ)	87	87	90	87	87	90	0	3	0
Moderate (Total)	135	135	144	135	135	144	3	3	8

Source: AECOM, 2017

Aesthetic and Scenic Resources

Across all Build Alternatives, there would be no disproportionately high or adverse Aesthetic and Scenic Resource impacts to EJ populations. **Tables 10-12** show the numbers of construction sites and MOW sites by county, segment and by Build Alternatives in EJ communities and total. These sites would cause temporary and permanent impacts that would be mitigated through measures covered in **Section 3.10.7, Avoidance, Minimization and Mitigation.**

Table 10: Temporary Construction Sites and MOWF by County

County	Temporary Construction Sites (EJ)	Temporary Construction Sites (Total)	MOWF (EJ)	MOWF (Total)
Dallas	17	19	1	1
Ellis	9	9	2	2
Navarro	0	11	0	0
Freestone	0	3	0	2
Limestone	0	1	0	0
Leon	11	11	1	2
Madison	0	2	0	0
Grimes	0	3	0	1
Waller	0	1	0	1
Harris	2	9	1	1
Total	23*	69*	5	10

Source: AECOM, 2017

*Some temporary construction sites are double counted as some sites are used for multiple segments.

Table 11: Temporary Construction Sites and MOWF by Segment

Segment	Temporary Construction Sites (EJ Acreage)	Temporary Construction Sites (Total Acreage)	MOWF (EJ)	MOWF (Total)
Segment 1	324	373	1	1
Segment 2A	219	219	1	1
Segment 2B	203	203	1	1
Segment 3A	0	218	0	1
Segment 3B	0	229	0	1
Segment 3C	87	576	1	3
Segment 4	173	500	1	4
Segment 5	16	833	0	4
Industrial Site Terminal	0		0	0
Northwest Mall Terminal	0		0	0
Northwest Transit Center Terminal	0	6	0	0
Total	1,022**	3,157**	5	16

Source: AECOM, 2017

**Some temporary construction sites are double counted as some sites are used for multiple segments.

Table 12: Temporary Construction Sites and MOWF By Build Alternative									
Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
Temporary Construction Sites (EJ Acreage)	641	641	554	625	625	538	0	0	0
Temporary Construction Sites(Total Acreage)	2,143	2,154	2,001	2,127	2,138	1,985	0	0	6
MOWF (EJ)	3	3	3	3	3	3	0	0	0
MOWF(Total)	11	11	9	11	11	9	0	0	0

Source: AECOM, 2017

Transportation

Transportation impacts caused as a result of the Build Alternatives would primarily affect EJ communities through roadway modifications. TCRR has designed the Build Alternatives to avoid and minimize impacts to the maximum extent. The HSR System avoids roadway impacts through the use of viaduct, road over and under rail, relocation, rerouting and closure. Permanent changes to roadways occur when roadways are relocated, rerouted or closed. Road closure is only considered when an alternate route serving traffic in a similar manner is nearby. **Tables 13-16** show roadway modifications across the all Build Alternatives, and roadway modifications in EJ communities by county, segment, and Build Alternative. The data shows that EJ communities are not disproportionately affected by permanent roadway modifications, and there would not be a disproportionately high or adverse impact to EJ communities.

Tables 17-20 show roadway modifications in EJ communities at station locations. These modifications would include only infrastructure changes or improvements and not represent a disproportionately high or adverse impact to EJ communities.

Table 13: Roadway Modifications by County				
County	All Modifications # (EJ)	All Modifications # (Total)	Relocations, Reroutes, Closures (EJ)	Relocations, Reroutes, Closures (Total)
Dallas	10	10	7	7
Ellis	26	27	10	11
Navarro	0	45	0	28
Freestone	0	40	0	27
Limestone	0	23	0	21
Leon	34	47	29	41
Madison	0	37	0	30
Grimes	2	46	1	38
Waller	0	10	0	8
Harris	0	31	0	26
Total	72	316	47	237

Source: AECOM, 2017

Table 14: Roadway Modifications by Segment				
County	All Modifications # (EJ)	All Modifications # (Total)	Relocations, Reroutes, Closures (EJ)	Relocations, Reroutes, Closures (Total)
Segment 1	10	10	7	7
Segment 2A	11	12	6	7
Segment 2B	11	11	4	4
Segment 3A	2	19	0	10
Segment 3B	2	25	0	14
Segment 3C	10	40	7	25
Segment 4	24	113	22	99
Segment 5	2	86	1	71
Industrial Site Terminal	12	19	0	0
Northwest Mall Terminal	10	16	0	0
Northwest Transit Center Terminal	10	11	0	0
Total	104	362	47	237

Source: AECOM, 2017

Table 15: Summary of Transportation Impacts						
Resource	Build Alternative					
	A	B	C	D	E	F
Roads Permanently Impacted (Closed, Relocated or Rerouted) in EJ Communities	36	36	21	34	34	19
Roads Permanently Impacted (Closed, Relocated or Rerouted)	194	198	110	191	195	107
Transit Services	All alternatives would have the same impacts on transit services. All alternatives could increase ridership on local transit systems, particularly in Dallas or where local rail connections would be most accessible from the station.					
Rail Facilities and Operations	There would be no permanent or long-term operational impacts associated with any of rail crossings as the Build Alternative would be fully grade separated.					
On-Road Pedestrian & Bicycle Facilities	None of the segments would permanently impact on-road pedestrian or bicycle facilities.					
Impacts to airports	1	2	1	1	2	1

Source: AECOM, 2017

Table 16: Roadways Impacted In EJ Communities

Roadway Name	Roadway Modification	Segment
Dallas County		
Private Drive	Closure	1
Cleveland Road	Reroute	1
Private Drive	Reroute	1
Private Drive	Reroute	1
Private Drive	Closure	1
Private Drive	Closure	1
Cornell Road	Reroute	1
E. Pleasant Run Road	Road Under Rail	1
Greene Road	Road Over Rail	1
Beltline Road	Road Over Rail	1
Ellis County		
Ewing Road	Reroute	2A
Dirt Road	Reroute	2A
FM 878	Road Over Rail	2A
Wilson Road	Road Over Rail	2A
Bacak Road	Road Over Rail	2A
East B Lane	Reroute	2A
SH 34	Road Over Rail	2A
Private Drive	Closure	2A
Farmer Road	Reroute	2A
Dirt Road	Reroute	2A
Hodge Road	Road Over Rail	2A
Ewing Road	Reroute	2B
Epps Road	Reroute	2B
Almand Road	Road Under Rail	2B
Wilson Road	Road Over Rail	2B
Private Driveway	Reroute	2B
Private Driveway	Reroute	2B
Old Boyce Road	Reroute	2B
Old Church Road	Road Over Rail	2B
Old Waxahachie Road / Getzendaner Road	Road Over Rail	2B
FM 984	Road Over Rail	2B
FM 984	Road Over Rail	2B
FM 985	Road Over Rail	3A
Sullivan Road	Road Over Rail	3A
FM 985	Road Over Rail	3B
Sullivan Road	Road Over Rail	3B
Leon County		
IH-45 Frontage	Relocation	3C
Industrial	Relocation	3C
IH-45 Frontage	Relocation	3C
County Road 3051	Reroute	3C
County Road 314	Road Over Rail	3C
County Road 477	Reroute	3C
IH-45	Relocation	3C
FM 977	Road Over Rail	3C
IH-45	Relocation	3C
CR 400	Road Over Rail	3C
Private Road	Closure	4
Private Road	Closure	4
Private Road	Closure	4

Table 16: Roadways Impacted In EJ Communities

Roadway Name	Roadway Modification	Segment
Private Road	Closure	4
Private Road	Closure	4
Private Road	Closure	4
FM 1512	Road Under Rail	4
Private Road	Closure	4
Private Road	Reroute	4
Private Road	Closure	4
Private Road	Closure	4
County Road 344	Reroute	4
Private Road	Closure	4
Private Road	Closure	4
Private Road 4255	Closure	4
Private Road	Closure	4
County Road 408	Reroute	4
Private Road	Closure	4
County Road 408	Reroute	4
Private Road	Closure	4
Private Road	Closure	4
Private Road	Closure	4
Private Road	Reroute	4
County Line Road	Road Over Rail	4
Grimes County		
County Road 302	Road Over Rail	5
Bronco Lane	Reroute	5
Harris County		
None		

Source: AECOM, 2017

Table 17: Dallas Terminal Intersection Design Modifications

Intersection	Improvement
Riverfront Boulevard/ Commerce Street	<ul style="list-style-type: none"> • Add right-turn bay to northbound approach to provide dual-right turn bays.
Riverfront Boulevard/ Cadiz Street	<ul style="list-style-type: none"> • Add one right-turn bay to provide dual right turns for southwest bound approach. • Add one left-turn bay to northeast approach to provide dual left-turn bays.
Lamar Street/ Cadiz Street	<ul style="list-style-type: none"> • Add one right-turn bay to southwest bound approach (IH-30 exit ramp). • Add right-turn bay to southeast bound approach.
Canton Street/Akard Street	<ul style="list-style-type: none"> • Add a protected left phase and signal head for northwest bound approach.
Bellevue Street/South Akard Street	<ul style="list-style-type: none"> • Provide stop control on both approaches of Akard Street to make the intersection four-way stop-controlled.

Source: AECOM, 2017

Table 18: Northwest Mall Terminal Intersection Design Modifications

Intersection	Improvement
Mangum Road/US 290 NBFR	<ul style="list-style-type: none"> • Add one left-turn bay to northbound approach to provide dual left-turn bays. • Add one through lane to southbound approach.
Mangum Road/US 290 SBFR	<ul style="list-style-type: none"> • Add one through lane to northbound approach.
Mangum Road/Dacoma Street	<ul style="list-style-type: none"> • Add one right-turn bay to northbound approach. • Convert the left turns at all approaches to protected then permissive.
Dacoma Street/US 290 SBFR	<ul style="list-style-type: none"> • Add a one right-turn bay to the northeast bound and southeast bound approaches.
Hempstead Road/Long Point Road	<ul style="list-style-type: none"> • Prohibit left turns at southeast bound approach.
W 18th Street/ Hempstead Road	<ul style="list-style-type: none"> • Prohibit left turns at westbound approach.

Table 18: Northwest Mall Terminal Intersection Design Modifications

Intersection	Improvement
Mangum Road/18th Street	<ul style="list-style-type: none"> • Add one right-turn bay to westbound approach. • Convert the left turns at all approaches to protected then permissive.
W 18th Street/IH-610 SBFR	<ul style="list-style-type: none"> • Add two right-turn bays and one through lane on the eastbound approach.
W 18th Street/IH-610 NBFR	<ul style="list-style-type: none"> • Add one right-turn bay and one through lane to westbound approach. • Add one right-turn bay to northbound approach.
Post Oak Road/Hempstead Road	<ul style="list-style-type: none"> • Add one right-turn bay to southeast bound approach. • Convert southwest bound approach center left-through lane to through lane. • Add one lane to northeast bound approach and convert to dual lefts, one through/right and one right-turn lane.

Source: AECOM, 2017

Table 19: Industrial Site Intersection Design Modifications

Intersection	Improvement
Mangum Road/US 290 NBFR	<ul style="list-style-type: none"> • Add one left-turn bay to northbound approach. • Add one through lane to southbound approach.
Mangum Road/Dacoma Street	<ul style="list-style-type: none"> • Add one right-turn bay to northbound approach. • Convert the left turns of all approaches to protected then permissive.
Dacoma Street/US 290 SBFR	<ul style="list-style-type: none"> • Add one right-turn bay to the southeast bound approach and northeast bound approaches.
Hempstead Road/Long Point Road	<ul style="list-style-type: none"> • Prohibit left-turns for southeast bound approach.
W 18th Street/Hempstead Road	<ul style="list-style-type: none"> • Prohibit left turns at westbound approach.
Mangum Road/18th Street	<ul style="list-style-type: none"> • Add one right-turn bay to westbound and northbound approaches. • Convert the left turns of all approaches to protected then permissive.
W 18th Street/IH-610 SBFR	<ul style="list-style-type: none"> • Add one right-turn bay and one through lane to eastbound approach.
W 18th Street/IH-610 NBFR	<ul style="list-style-type: none"> • Add one through lane to westbound approach.
Hempstead Road/ Mangum Road	<ul style="list-style-type: none"> • Add one right-turn bay to northwest bound approach on Hempstead Road.
Post Oak Road/ Hempstead Road	<ul style="list-style-type: none"> • Add one right-turn bay to southeast bound approach. • Add one left-turn bay to northwest bound approach. • Convert southwest bound approach center left/through lane to through lane. • Add one lane to northeast bound approach and convert to dual lefts, one through/right and one right-turn lane.
Hempstead Road/IH-610 SBFR	<ul style="list-style-type: none"> • Add one through lane to northwest bound approach to provide three through lanes.
Hempstead Road/IH-610 NBFR	<ul style="list-style-type: none"> • Convert northwest bound approach right-turn lane to a shared through/right-turn lane.

Source: AECOM, 2017

Table 20: Northwest Transit Center Terminal Intersection Design Modifications

Intersection	Improvement
Mangum Road/US 290 NBFR	<ul style="list-style-type: none"> • Add one left-turn bay to northbound approach. • Add one through lane to southbound approach.
Mangum Road/US 290 SBFR	<ul style="list-style-type: none"> • Add one through lane to northbound approach.
Mangum Road/Dacoma Street	<ul style="list-style-type: none"> • Convert northeast bound shared through/left-turn lane to through-only lane.
West T C Jester Boulevard/IH-610 Eastbound FR	<ul style="list-style-type: none"> • Convert northeast bound shared through/left-turn lane to through-only lane.
Jester Boulevard/IH-610 EBFR	<ul style="list-style-type: none"> • Convert southeast bound center lane from through to shared through/left.
Hempstead Road/Long Point Road	<ul style="list-style-type: none"> • Prohibit left turns from southeast bound approach.
W 18th Street/Hempstead Road	<ul style="list-style-type: none"> • Prohibit left turns at westbound approach.
Mangum Road/18th Street	<ul style="list-style-type: none"> • Add one right-turn bay to westbound approach. • Convert the left turns at all approaches to protected then permissive.
W 18th Street/IH-610 SBFR	<ul style="list-style-type: none"> • Add one right-turn bay to eastbound approach.

Table 20: Northwest Transit Center Terminal Intersection Design Modifications

Intersection	Improvement
Post Oak Road/Hempstead Road	<ul style="list-style-type: none"> • Add one right-turn bay to eastbound approach. • Convert northwest bound approach to dual left-turn bays, a shared through and right-turn lane and one right-turn bay. • Convert southeast bound approach outside through lane to a shared through/right-turn lane, providing two lanes permitting right-turns.

Source: AECOM, 2017

Displacements, Acquisitions and Relocations

Table 21 details primary structures (residences, commercial, and community facilities) that are located within the LOD based on the structure displacement and land use acquisition analysis in **Section 3.13, Land Use**. The results were then analyzed to determine if structures were in EJ Communities or not. Depending on the Build Alternative selected, these primary structures would be displaced by the Project. Details regarding the determination of displacements can be found in **Section 3.13, Land Use** and the Land Use Technical Memorandum. **Table 22** shows displaced structures by Build Alternative. The table shows that EJ communities would not experience a disproportionately high or adverse impact related to displacement of structures by the selected Build Alternative.

Table 21: Primary Structure Displacements within LOD and Within 50' of the LOD

County/Segment	Residential (EJ)	Residential (Total)	Commercial (EJ)	Commercial (Total)	Community Facilities (EJ)	Community Facilities (Total)
Dallas						
Segment 1	32	40	23	23	--	--
Ellis						
Segment 1	7	7	--	--	--	--
Segment 2A	14	18	--	--	--	--
Segment 2B	21	23	--	--	--	--
Segment 3A	1	1	--	--	--	--
Segment 3B	0	0	--	--	--	--
Segment 3C	1	1	--	--	--	--
Navarro						
Segment 3A	0	18	--	--	--	--
Segment 3B	0	29	--	--	--	--
Segment 3C	0	19	--	--	--	--
Freestone						
Segment 3A	--	--	--	--	--	--
Segment 3B	--	--	--	--	--	--
Segment 3C	0	6	0	10	0	1
Segment 4	0	6	--	--	--	--
Limestone						
Segment 4	0	6	--	--	--	--
Leon						
Segment 3C	13	17	6	9	--	1
Segment 4	10	12	--	--	--	--
Madison						
Segment 3C	0	5	--	--	--	--
Segment 4	0	16	--	--	0	1
Grimes						
Segment 3C	--	--	--	--	--	--
Segment 4	--	--	--	--	--	--
Segment 5	11	38	0	1	--	--

Table 21: Primary Structure Displacements within LOD and Within 50' of the LOD

County/Segment	Residential (EJ)	Residential (Total)	Commercial (EJ)	Commercial (Total)	Community Facilities (EJ)	Community Facilities (Total)
Waller						
Segment 5	0	35	--	--	--	--
Harris						
Segment 5	0	86	4	25	--	--
Houston Terminal Options						
Industrial Site	0	0	3	9	--	--
Northwest Mall	--	--	9	9	--	--
Northwest Transit Center	0	1	4	16	--	--
Total	110	384	49	102	0	3

Source: AECOM, 2017

Table 22: Displaced Structures within EJ Communities by Build Alternative

Resource	Build Alternative						Houston Terminal Options		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site	Northwest Mall	Northwest Transit Center
Residential (EJ)	75	74	78	82	81	85	0	0	0
Commercial (EJ)	27	27	33	27	27	33	3	9	4
Community Features (EJ)	0	0	0	0	0	0	0	0	0
Total	102	101	111	109	108	118	3	9	4
Residential (Total)	283	293	272	288	298	277	0	0	1
Commercial (Total)	49	49	68	49	49	68	9	9	16
Community Features (Total)	1	1	2	1	1	2	0	0	0
Total	333	343	342	338	348	347	18	19	23

Source: AECOM, 2017

Table 22: Estimated Parcel Acquisition by County

Segment	Temporary Parcels (EJ)*	Temporary Parcels (Total)*	Permanent Parcels (EJ)*	Permanent Parcels (Total)*
Dallas	21	35	233	265
Ellis	57	65	321	360
Navarro	0	73	8	559
Freestone	0	40	3	367
Limestone	0	5	1	67
Leon	26	29	195	286
Madison	0	22	1	176
Grimes	0	18	52	428
Waller	0	5	2	124
Harris	10	25	155	468
Total	114	312	975	3,100

Source: AECOM, 2017

*Counts include acquisitions which may only acquire a portion of a parcel.

Table 23: Estimated Parcel Acquisition by Segment

Segment	Temporary Parcels (EJ)*	Temporary Parcels (Total)*	Permanent Parcels (EJ)*	Permanent Parcels (Total)*
Segment 1	21	35	247	279
Segment 2A	35	40	135	160
Segment 2B	22	25	131	145
Segment 3A	0	15	17	183
Segment 3B	0	24	15	238
Segment 3C	6	59	114	644
Segment 4	20	66	107	451
Segment 5	1	35	174	897
Industrial Site Terminal	3	3	11	40
Northwest Mall Terminal	3	3	14	15
Northwest Transit Center Terminal	3	7	10	48
Total	114	312	975	3100

Source: AECOM, 2017

*Counts include acquisitions which may only acquire a portion of a parcel.

Table 24: Estimated Parcel Acquisition By Build Alternative

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
Temporary Parcels (EJ)*	77	77	63	64	64	50	3	3	3
Temporary Parcels (Total)*	191	200	169	176	185	154	3	3	7
Permanent Parcels (EJ)*	680	678	670	676	674	666	11	14	10
Permanent Parcels (Total)*	1,970	2,025	1,980	1,955	2,010	1,965	40	15	48

Source: AECOM, 2017 *Counts include acquisitions which may only acquire a portion of a parcel.

Community Cohesion

Table 23 shows communities identified in **Section 3.14, Socioeconomic**. Each of the communities would be impacted by all Build Alternatives. Two of the communities would be located in EJ communities. The Downtown Dallas area would be enhanced by the Build Alternative and would potentially increase community cohesion, employment and quality of life in the neighborhood. The LeMay and LeForge community would have numerous homes displaced by Segment 1 of all Build Alternatives. This would represent a severe impact to an EJ community; however across the entirety of the Build Alternatives EJ communities would not suffer the majority of impacts to community cohesion. Therefore, there would not be a disproportionately high or adverse impact to EJ Communities.

Table 25: Impacted Neighborhoods by Segment		
Community Name	Segment	EJ Community
Dallas County		
Downtown Dallas	1	Minority/Low-Income
LeMay and LeForge	1	Minority/Low-Income
Harris		
Saddle Creek Forest Development	5	No
Plantation Drive Neighborhood	5	No
White Oak Falls Neighborhood	5	No
Houston Terminus Station Options	5	No

Source: AECOM, 2017

Population and Employment

Effects from business displacements overall would be distributed throughout the Build Alternatives and would not be predominantly borne by minority or low-income groups. Overall, the Build Alternatives would create a beneficial impact for employment opportunities to EJ communities.

Community Facilities

Only one community facility would be impacted by the Build Alternatives. Honey Springs Cemetery would be spanned via viaduct for all Build Alternatives.

Table 26: Impacted Community Facilities by County		
County	Impacted Community Facilities (EJ)	Impacted Community Facilities (Total)
Dallas	1	1
Ellis	0	0
Navarro	0	0
Freestone	0	3
Limestone	0	0
Leon	0	0
Madison	0	1
Grimes	0	0
Waller	0	0
Harris	0	1
Total	1	6

Source: AECOM, 2017

Table 27: Impacted Community Facilities by Segment

Segment	Impacted Community Facilities (EJ)	Impacted Community Facilities (Total)
Segment 1	1	1
Segment 2A	0	0
Segment 2B	0	0
Segment 3A	0	0
Segment 3B	0	0
Segment 3C	0	2
Segment 4	0	1
Segment 5	0	2
Industrial Site Terminal	0	0
Northwest Mall Terminal	0	0
Northwest Transit Center Terminal	0	0
Total	1	6

Source: AECOM, 2017

Table 28: Community Facility Impacts in EJ Communities By Build Alternative

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
Community Facilities	1	1	1	1	1	1	0	0	0

Source: AECOM, 2017

Recreational Facilities

Tables 27-29 show recreational facilities impacted by county, segment and Build Alternative. Bardwell Lake and Fort Boggy State Park are the main impacts located on Segment 2B and 3C, respectively. A disproportionately high or adverse impact would not occur to use of these two resources by EJ communities.

Table 29: Impacted Recreational Facilities by County

County	Impacted Recreational Facilities (EJ)	Impacted Recreational Facilities (Total)
Dallas	0	0
Ellis	1	1
Navarro	0	0
Freestone	0	0
Limestone	0	0
Leon	1	1
Madison	0	0
Grimes	0	0
Waller	0	0
Harris	0	0
Total	2	2

Source: AECOM, 2017

Table 30: Recreational Facility Impacts by Segment

Segment	Impacted Facilities (EJ)	Impacted Facilities (Total)
Segment 1	0	0
Segment 2A	0	0
Segment 2B	1	1
Segment 3A	0	0
Segment 3B	0	0
Segment 3C	1	1
Segment 4	0	0
Segment 5	0	0
Industrial Site Terminal	0	0
Northwest Mall Terminal	0	0
Northwest Transit Center Terminal	0	0
Total	2	3

Source: AECOM, 2017

Table 31: Recreational Facility Impacts in EJ Communities By Build Alternative

Resource	Build Alternative						Houston Station Option		
	ALT A	ALT B	ALT C	ALT D	ALT E	ALT F	Industrial Site Terminal	Northwest Mall Terminal	Northwest Transit Center Terminal
Recreational Facilities	0	0	1	1	1	2	0	0	0
Trails	0	0	0	0	0	0	0	0	0

Source: AECOM, 2017



TECHNICAL MEMORANDUM
SOILS AND GEOLOGY

To: Jerry Smiley, AICP, AECOM

From: Jennifer Oakley, AECOM

Date: November 1, 2017

RE: Dallas to Houston HSR –Soils and Geology

This technical memorandum identifies the individual soil associations, soil units and geologic formations that comprise the Dallas to Houston EIS Study Area. The tables provided in this technical memorandum include soil associations, geologic formations descriptions and acreages within each county and project segment. For each table, the Study Area refers to each respective segment along the project corridor within each county. For additional information on soil and geologic conditions refer to **Chapter 3.0, Section 3.20, Soils and Geology**.

Dallas County

Soils

In Dallas County, the Study Area is comprised of five soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 1**. **Table 2** includes the soils units that comprise the Study Areas with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment. Please note that the soil map units in **Table 2** for Dallas County are represented by numbers.

Table 1. Soil Associations within the Study Area – Dallas County			
Soil Association	STATSGO code	Description	Segment 1 (acres)
Houston Black-Heiden-Austin	s7184	<ul style="list-style-type: none">• Nearly level to strongly sloping• Moderately well drained and well drained• Clayey soils• Associated with uplands• Used mainly as pasture, urban or cropland	94.5
Stephen-Houston Black-Heiden-Eddy-Austin	s7185	<ul style="list-style-type: none">• Nearly level to moderately steep• Moderately well drained and well drained• Loamy and clayey soils• Associated with uplands• Used mainly as pasture, range or cropland	41.6
Houston Black-Heiden-Altoga	s7377	<ul style="list-style-type: none">• Nearly level to strongly sloping• Moderately well drained and well drained• Clayey soils• Associated with uplands• Used mainly as pasture, urban or cropland	557.6

Table 1. Soil Associations within the Study Area – Dallas County

Soil Association	STATSGO code	Description	Segment 1 (acres)
Trinity-Kaufman	s7697	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained; very slowly permeable Clayey soils Associated with floodplains Used mainly as pasture or cropland 	306.1
Silstid-Silawa-Bastsil	s7644	<ul style="list-style-type: none"> Nearly level to sloping Well drained Loamy and sandy soils Associated with stream terraces Used mainly as pasture and urban 	1.3

Source: NRCS, 2006

Table 2: Soil Units within the Study Area – Dallas County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 1 (acres)	Prime Farmland Designation
Arents, loamy, gently undulating	2	Low	Moderate	High	7.5	None
Arents, loamy, hilly	3		Moderate	High	22.7	None
Eddy clay loam, 3 to 8 percent slopes	27		Moderate	Moderate	12.4	None
Eddy-Whitewright complex, 8 to 20 percent slopes	28		Moderate	Moderate	32.5	None
Eddy-Stephen complex, 1 to 5 percent slopes	30		Moderate	Moderate	86.1	None
Pits and Dumps	56		NA	NA	2.3	None
Silstid-Urban land complex, 0 to 6 percent slopes	65		Low	Moderate	0.5	None
Urban Land	75		NA	NA	58.8	None
Stephen silty clay, 1 to 4 percent slopes	67	Moderate	Low	High	5.4	None
Sunev clay loam, 3 to 8 percent slopes	71		Low	Moderate	13.4	None
Austin silty clay, 1 to 3 percent slopes	5		Low	High	28.3	Farmland of Statewide Importance
Austin silty clay, 2 to 5 percent slopes, eroded	6		Low	High	1.1	None
Frio silty clay, occasionally flooded	36		Low	High	17.7	None
Frio silty clay, frequently flooded	37		Low	High	40.4	None
Altoga silty clay, 5 to 12 percent slopes, eroded	1	High	Low	High	3.3	None

Table 2: Soil Units within the Study Area – Dallas County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 1 (acres)	Prime Farmland Designation
Axtell-Urban land complex, 1 to 5 percent slopes	13		Moderate	High	21.1	None
Lewisville silty clay, 1 to 3 percent slopes	46		Low	High	10.9	Prime Farmland
Lewisville silty clay, 3 to 5 percent slopes, eroded	47		Low	High	8.4	None
Austin-Lewisville complex, 5 to 8 percent slopes	7		Moderate	High	2.9	None
Wilson-Urban land complex, 0 to 2 percent slopes	80		Moderate	High	4.9	None
Houston Black clay, 0 to 1 percent slopes	43	Very High	Low	High	54.9	Prime Farmland
Houston black clay, 1 to 3 percent slopes	44		Moderate	High	371.7	Prime Farmland
Burleson clay, 0 to 1 percent slopes	18		Low	High	10.7	Prime Farmland
Burleson clay, 1 to 3 percent slopes	19		Low	High	10.3	Prime Farmland
Ferris-Heiden complex, 5 to 12 percent slopes	34		Low	High	4.7	None
Ferris-Urban land complex 5 to 12 percent slopes	35		Low	High	4.2	None
Houston Black-Urban land complex 0 to 4 percent slopes	45		Low	High	27.5	None
Trinity clay, occasionally flooded	72		Low	High	2.1	None
Trinity clay, frequently flooded	73		Low	High	41.4	None
Trinity-Urban land complex	74		Low	High	87.7	None

Source: NRCS, 2013

Geology

In Dallas County, the Study Area is comprised of four geologic formations. Descriptions of the formations and the area in acres in each segment are provided in **Table 3**.

**Table 3: Predominant Geological Formations within the Study Area
– Dallas County**

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 1 (acres)
Austin Chalk	Kau	Cretaceous/ Gulfian/ Austin/ None listed	Upper and lower parts, chalk, mostly microgranular calcite, massive, some interbeds and partings of calcareous clay, thin bentonitic locally in lower part, lower part forms westward-facing scarp; light gray. Middle part, mostly thin-bedded marl with interbeds of massive chalk, locally burrowed, marcasite-pyrite modules common, light gray. Weathers white, marine megafossils scarce, thickness 300-500 feet, thins southward.	647.2
Alluvium	Qal	Quaternary/ Holocene/ None listed	Flood-plain deposits, includes indistinct low terrace deposits; gravel, sand, silt, silty clay and organic matter.	274.5
Ozan	Ko	Cretaceous/ Gulfian/ Taylor Group	Clay, calcareous, silt and sand content increases upward, montmorillonitic, blocky, conchoidal fracture, medium gray; some glauconite, phosphate pellets, hematitic nodules and pyrite nodules; some very thin limestone lenses locally in lower part; weathers light brownish gray with poor fissility, grades upward to Wolfe City Formation; marine megafossils; thickness 500 plus or minus feet.	15.9
Fluviatile terrace deposits	Qt	Quaternary/ Pleistocene/ None listed	Gravel, sand, silt and clay; contiguous terraces of different ages separated by solid line.	63.7

Source: BEG, 1996 and USGS, 2007

Ellis County

Soils

In Ellis County, the Study Area is comprised of three soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 4**. **Table 5** includes the soils units that comprise the Study Areas with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 4. Soil Associations within the Study Area – Ellis County

Soil Association	STATSGO code	Description	Segment 1 (acres)	Segment 2A (acres)	Segment 2B (acres)	Segment 3A (acres)	Segment 3B (acres)	Segment 3C (acres)
Houston Black-Heiden-Altoga	s7377	<ul style="list-style-type: none"> Nearly level to strongly sloping Moderately well drained and well drained Clayey soils Associated with uplands Used mainly as pasture, urban or cropland 	23.4	874.1	806.5	117.2	121.7	117.2
Trinity-Kaufman	s7697	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained; very slowly permeable Clayey soils Associated with floodplains Used mainly as pasture or cropland 	--	83.4	133.9	1.5	--	1.5
Wilson-Crockett-Burleson	s7732	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained and moderately well drained; very slowly permeable Loamy and clayey soils Associated with uplands Used mainly as pasture or cropland 	--	17.9	18.0	--	--	--

¹Source: NRCS, 2006

¹--' - not present

Table 5: Soil Units within the Study Area – Ellis County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 1 (acres)	Area of Segment 2A (acres)	Area of Segment 2B (acres)	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Prime Farmland Designation
Frio silty clay, 0 to 1 percent slopes, frequently flooded	Fr	Moderate	Low	High	--	3.0	3.0	--	--	--	None
Lamar clay loam, 3 to 8 percent slopes	LaD		Moderate	Moderate	--	--	--	--	0.5	--	None
Leson clay, 0 to 1 percent slopes	HuA	High	Low	High	--	16.8	10.9	--	--	--	Prime Farmland
Lewisville silty clay, 0 to 1 percent slopes	LeA		Low	High	--	4.2	--	--	--	--	Prime Farmland
Lewisville silty clay, 1 to 3 percent slopes	LeB		Low	High	--	1.1	0.3	--	--	--	Prime Farmland
Lewisville silty clay, 3 to 5 percent slopes, eroded	LeC 2		Low	High	--	3.2	1.8	3.1	4.2	3.1	None
Lewisville silty clay, 5 to 8 percent slopes, eroded	LeD 2		Low	High	--	13.5	4.1	--	--	--	None
Altoga soils, 5 to 8 percent slopes, severely eroded	LsD 3		Low	High	--	5.7	3.9	--	--	--	None
Wilson clay loam, 1 to 3 percent slopes	Wn B		Moderate	High	--	--	--	1.9	3.3	1.9	Farmland of Statewide Importance
Wilson clay loam, 1 to 3 percent slopes, eroded	WsB 2		Moderate	High	--	--	1.9	--	--	--	None
Wilson clay loam, terrace, 1 to 3 percent slopes	WtB		Moderate	High	--	2.7	2.0	1.5	2.4	1.4	Farmland of Statewide Importance
Crockett fine sandy loam, 1 to 3 percent slopes	CrB		High	High	--	--	--	0.7	--	0.7	Farmland of Statewide Importance
Leson clay, 1 to 3 percent slopes	LsB	Very High	Low	High	--	85.1	74.1	--	--	--	Prime Farmland
Houston Black clay, 1 to 3 percent slopes	HaB		Moderate	High	15.7	433.7	381333.3	--	--	--	Prime Farmland
Burleson clay, 1 to 3 percent slopes	BtB		Low	High	--	1.2	1.8	8.8	9.4	8.8	Prime Farmland
Burleson clay, 0 to 1 percent slopes	BuA		Low	High	--	23.0	41.6	9.1	7.9	9.1	Prime Farmland
Houston Black clay, 0 to 1 percent slopes	HaA		Low	High	0.1	84.4	6278.2	--	--	--	Prime Farmland

Table 5: Soil Units within the Study Area – Ellis County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 1 (acres)	Area of Segment 2A (acres)	Area of Segment 2B (acres)	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Prime Farmland Designation
Branyon clay, terrace, 0 to 1 percent slopes	HbA	Very High	Low	High	--	63.6	115.0	69.8	65.4	69.8	Prime Farmland
Branyon clay, terrace, 1 to 3 percent slopes	HbB		Low	High	--	49.1	70.2	24.0	28.7	24.0	Prime Farmland
Heiden clay, 1 to 3 percent slopes	HcB		Low	High	--	12.9	19.1	--	--	--	Prime Farmland
Heiden clay, 3 to 5 percent slopes, eroded	HcC 2		Low	High	6.8	90.0	87.8	--	--	--	None
Heiden clay, 5 to 8 percent slopes, eroded	HcD 2		Low	High	--	22.8	30.5	--	--	--	None
Heiden-Ferris complex, 5 to 8 percent slopes, severely eroded	HsD 3		Low	High	--	15.6	25.1	--	--	--	None
Ferris clay, 5 to 12 percent slopes severely eroded	SuE 3		Low	High	--	8.7	18.8	--	--	--	None
Trinity clay, frequently flooded	Tc		Low	High	0.8	23.9	25.9	--	--	--	None
Trinity clay, occasionally flooded	To		Low	High	--	9.2	7.0	--	--	--	None

Source: NRCS, 2015

'--' - not present

Geology

In Ellis County, the Study Area is comprised of three geologic formations. Descriptions of the formations and the area in acres of each segment are provided in **Table 6**.

Table 6: Predominant Geological Formations within the Study Area – Ellis County									
Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 1 (acres)	Area of Segment 2A (acres)	Area of Segment 2B (acres)	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)
Ozan	Ko	Cretaceous/ Gulfian/ Taylor Group	Previously described in Table 3 .	23.3	976900.1	886.0	--	--	--
Wolfe City	Kwc	Cretaceous/ Gulfian/ Taylor Group	Marl, sand, sandstone and mudstone. In Navarro County, marl, candy and silty, interbedded with thin sandstone beds and massive sandstone; medium gray. Grades northward into an upper fine-grained sand and silt unit, calcareous, medium yellowish gray; and a lower mudstone unit, calcareous, dark gray, weathers medium gray. Marine megafossils. Thickness 75-300 feet, thins northward.	--	31.1	32.7	118.7	121.7	118.7
Alluvium	Qal	Quaternary/ Holocene/ None listed	Previously described in Table 3 .	--	44.2	39.6	--	--	--

Source: BEG, 1996 and USGS, 2007

'--' - not present

Navarro County

Soils

In Navarro County, the Study Area is comprised of six soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 7**. **Table 8** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 7: Soil Associations within the Study Area – Navarro County

Soil Association	STATSGO code	Description	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)
Gredge-Crockett	s7354	<ul style="list-style-type: none"> Nearly level to sloping Moderately well drained; very slowly permeable Moderately deep and very deep loamy soils Associated with uplands Used mainly as pasture or cropland 	--	104.6	--
Houston Black-Heiden-Altoga	s7377	<ul style="list-style-type: none"> Nearly level to strongly sloping Moderately well drained and well drained Clayey soils Associated with uplands Used mainly as pasture, urban or cropland 	486.2	383.0	524.4
Tinn-Kaufman-Gladewater	s7392	<ul style="list-style-type: none"> Nearly level Somewhat poorly drained; very slowly permeable Clayey soils Associated with floodplains Used mainly as pasture or cropland 	71.3	17.8	74.9
Trinity-Kaufman	s7697	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained; very slowly permeable Clayey soils Associated with floodplains Used mainly as pasture or cropland 	23.5	21.0	23.5
Wilson-Crockett	s7269	<ul style="list-style-type: none"> Nearly level to sloping Moderately well drained; very slowly permeable Loamy and sandy soils Associated with uplands Used mainly as pasture or cropland 	564.4	624.5	528.7
Wilson-Crockett-Burleson	s7732	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained and moderately well drained; very slowly permeable Loamy and clayey soils Associated with uplands Used mainly as pasture or cropland 	--	85.1	--

Source: NRCS, 2006

'--' - not present

Table 8: Soil Units within the Study Area – Navarro County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Prime Farmland Designation
Bunyan loam, calcareous variant	Bn	Low	Moderate	Moderate	1.7	0.3	19.9	None
Chickasha fine sandy loam, 3 to 8 percent slopes	ChD		Low	Moderate	4.3	--	4.3	None
Gowen fine sandy loam	Gn	Moderate	Low	Moderate	1.5	1.6	1.4	None
Gowen fine sandy loam, frequently flooded	Go		Low	Moderate	2.3	1.2	--	None
Gowen clay loam	Gw		Moderate	Moderate	1.8	0.4	--	None
Gowen clay loam, frequently flooded	Gy		Moderate	Moderate	6.7	8.6	4.5	None
Lamar clay loam, 3 to 8 percent slopes	LaD		Moderate	Moderate	20.0	2.5	3.8	None
Pursley clay loam	Pr		Moderate	Low	11.0	12.9	10.0	None
Axtell fine sandy loam, 1 to 3 percent slopes	AxB		High	Moderate	High	39.5	100.5	21.0
Axtell fine sandy loam, 3 to 5 percent slopes	AxC	Moderate		High	2.0	11.5	0.9	Farmland of Statewide Importance
Axtell fine sandy loam, 2 to 5 percent slopes, moderately eroded	AxC2	Moderate		High	1.4	--	--	None
Axtell fine sandy loam, 5 to 12 percent slopes	AxE	Moderate		High	--	--	1.0	None
Bonham loam, 1 to 3 percent slopes	BmB	Moderate		Moderate	22.4	0.9	7.3	Prime Farmland
Blum loam, 0 to 1 percent slopes	OkA	Moderate		High	--	2.5	--	Prime Farmland
Purves rocky clay, 1 to 5 percent slopes	PuC	Low		High	37.0	8.2	--	None
Tabor fine sandy loam, 0 to 1 percent slopes	TaA	Moderate		High	20.6	1.4	19.3	Farmland of Statewide Importance
Mabank very fine sandy loam, 0 to 1 percent slopes	WIA	High		High	37.7	18.1	30.3	Farmland of Statewide Importance
Mabank very fine sandy loam, 1 to 3 percent slopes	WIB	High		High	4.7	13.0	2.3	Farmland of Statewide Importance
Ellis clay, 3 to 12 percent slopes	EIE	Moderate		High	--	--	12.5	None
Wilson clay loam, 0 to 1 percent slopes	WnA	Moderate		High	71.9	149.1	62.3	Farmland of Statewide Importance
Wilson clay loam, 1 to 3 percent slopes	WnB	Moderate		High	74.5	77.1	57.9	Farmland of Statewide Importance

Table 8: Soil Units within the Study Area – Navarro County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Prime Farmland Designation
Wilson clay loam, 3 to 5 percent slopes	WnC	High	Moderate	High	6.6	15.2	5.0	Farmland of Statewide Importance
Wilson clay loam, 2 to 5 percent slopes, eroded	WnC2		Moderate	High	1.9	1.9	3.6	None
Crockett fine sandy loam, 0 to 1 percent slopes	CrA		High	High	4.1	71.0	24.6	Farmland of Statewide Importance
Crockett fine sandy loam, 1 to 3 percent slopes	CrB		High	High	137.0	48.6	106.6	Farmland of Statewide Importance
Crockett fine sandy loam, 3 to 5 percent slopes	CrC		High	High	2.9	1.3	8.7	Farmland of Statewide Importance
Crockett fine sandy loam, 5 to 10 percent slopes	CrD		High	High	11.6	--	3.5	None
Crockett soils, 2 to 5 percent slopes, eroded	CtC2		High	High	15.6	3.4	8.0	None
Crockett fine sandy loam, 3 to 8 percent slopes, severely eroded	CtD3		High	High	18.9	5.5	10.4	None
Houston Black clay, 1 to 3 percent slopes	HbB	Very High	Moderate	High	267.9	295.7	256.9	Prime Farmland
Houston Black clay, 3 to 5 percent slopes	HbC		Moderate	High	54.7	0.1	54.7	Prime Farmland
Heiden clay, 1 to 3 percent slopes	HaB		Moderate	High	19.8	6.8	25.2	Prime Farmland
Heiden clay, 3 to 5 percent slopes	HaC		Moderate	High	6.6	57.0	37.3	Prime Farmland
Heiden clay, 3 to 5 percent slopes, eroded	HaC2		Moderate	High	56.7	54.0	72.2	None
Heiden clay, 5 to 8 percent slopes	HaD		Moderate	High	2.5	10.4	29.1	None
Heiden clay, 5 to 8 percent slopes, eroded	HaD2		Moderate	High	20.7	1.4	1.6	None
Burleson clay, 0 to 1 percent slopes	BuA		Low	High	0.3	19.7	4.5	Prime Farmland
Burleson clay, 1 to 3 percent slopes	BuB		Low	High	16.7	82.1	53.6	None
Ferris clay, 3 to 8 percent slopes, eroded	FeD2		Low	High	--	8.3	7.4	None
Ferris and Heiden clays, 5 to 15 percent slopes, eroded	FhE2		Low	High	9.7	18.5	42.1	None
Ferris and Heiden stony clays, 8-15 percent slopes	FIE		Low	High	--	2.6	--	None
Houston Black clay, 2 to 5 percent slopes, eroded	HbC2		Low	High	32.6	78.1	32.6	None
Kaufman clay	Ka		Low	High	12.0	--	11.1	None
Kaufman clay, frequently flooded	Kc	Low	High	--	--	11.8	None	

Table 8: Soil Units within the Study Area – Navarro County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Prime Farmland Designation
Lufkin fine sandy loam, 0 to 1 percent slopes	LuA	Very High	Moderate	Moderate	7.9	--	7.9	Farmland of Statewide Importance
Trinity clay	Tn		Low	High	37.7	10.9	45.8	None
Trinity clay, frequently flooded	Tr		Low	High	39.2	22.1	28.4	None

Source: NRCS, 2015

'--' - not present

Geology

In Navarro County, the Study Area is comprised of ten geologic formations. Descriptions of the formations and the area in acres of each segment are provided in **Table 9**.

Table 9: Predominant Geological Formations within the Study Area – Navarro County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)
Hooper	Eh	Tertiary/ Eocene/ Wilcox Group	Mostly mudstone with various amounts of sandstone, minor lignite, ironstone concretions and locally glauconite in lowermost part. Mudstone medium to dark gray, weathers yellowish brown. Sandstone, in upper part-fine to medium grained, moderately well sorted, cross-bedded, units 5 to 30 feet thick, light gray to pale yellowish brown; in lower part-very fine grained, well sorted and in part argillaceous, cross-bedded, locally burrowed, units a few inches to 10 feet thick, yellowish brown to moderate brown. Average thickness 500 feet.	12.1	12.0	--
Pisgah and Littig Members of Kincaid	Ekpl	Tertiary/ Eocene/ Midway Group	Pisgah Member, sand and clay; sand, glauconitic, argillaceous, poorly sorted, greenish gray; clay, sandy, silty, medium gray to black. Littig Member, sand and clay; sand very glauconitic, greenish black; clay, sandy, phosphatic nodules and pebbles present; weathers to yellow and yellowish-brown soil. Thickness 10-120 feet, thins locally, forms mid-slope of cuesta formed by Tehuacana Member.	87.2	5.9	5.0
Tehuacana Member of Kincaid	Ekt	Tertiary/ Eocene/ Midway Group	Limestone, glauconitic, hard, indurated, grayish white, interbedded with gray marl, forms crest of prominent northwest-facing cuesta; thickness up to 30 feet, absent south of Brazos River.	40.9	33.9	--

Table 9: Predominant Geological Formations within the Study Area – Navarro County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)
Kemp Clay	Kke	Cretaceous/ Gulfian/ Navarro Group	Calcareous, locally silty, massive, thinly laminated, conchoidal fracture, medium dark gray; weathers medium gray; thickness 80-200 feet, thins locally.	--	20.4	--
Nacatoch Sand	Kn	Cretaceous/ Gulfian/ Navarro Group	Quartz, fine to medium grained, glauconitic, poorly sorted, friable, greenish gray; local lenses of silty clay; calcite-cemented sandstone in thin hard beds in lower and upper parts; thickness up to 180 feet, feathers out southward near Rosebud.	107.3	275.2	38.2
Wolf City Formation	Kwc	Cretaceous/ Gulfian/ Taylor Group	Previously described in Table 6 .	111.8	45.4	111.8
Alluvium	Qal	Quaternary/ Holocene/ None listed	Previously described in Table 3 .	84.2	26.8	105.0
Fluviatile terrace deposits	Qt	Quaternary/ Pleistocene/ None listed	Gravel, sand, silt and clay.	125.2	3.1	96.8
Wills Point	Ewp	Tertiary/ Eocene/ Midway Group	Clay, silty, sandy, silt and sand more abundant upward, slightly glauconitic near base, 10-inch rosette limestone bed near middle, massive, poorly bedded, grades upward to mudstone and sand of Wilcox Group, light gray to dark bluish gray, topographically featureless; thickness 250-500 feet, thins southward.	123.1	251.1	367.1
Neylandville and Marlbrook Marl undivided	Knm	Cretaceous/ Gulfian/ Taylor Group	South of Rockwall County; where subdivided includes from the top down Neylandville Formation and Marlbrook Marl. Neylandville Formation, clay calcareous, silty, sandy, sand content increases upward, medium gray; weathers light gray, forms irregular topography; thickness 125 plus or minus feet. Marlbrook Marl ("upper Taylor marl"), clay, calcareous, variable amount of silt and glauconite, silt content increases upward, disseminated pyrite, locally phosphate nodules and phosphatized marine megafossils, blocky, conchoidal fracture, light to dark gray; weathers light gray with poor fissility; marine megafossils; thickness 350 plus or minus feet.	453.3	562.2	427.5

Source: BEG, 1996 and USGS, 2007

'--' - not present

Freestone County

Soils

In Freestone County, the Study Area is comprised of eight soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 10**. **Table 11** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 10: Soil Associations within the Study Area – Freestone County						
Soil Association	STATSGO code	Description	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Konsil-Gasil-Axtell	s7409	<ul style="list-style-type: none"> • Gently sloping • Moderately well drained; slowly permeable and moderately permeable • Loamy and sandy soils • Associated with stream terraces • Used mainly as pasture or wildlife habitat 	--	--	--	38.9
Nahatche-Hatliff	s7364	<ul style="list-style-type: none"> • Nearly level • Somewhat poorly drained and moderately well drained; moderately permeable and moderately rapidly permeable • Loamy soils • Associated with floodplains and creek • Used mainly as pasture or wildlife habitat 	--	--	71.7	--
Silstid-Padina	s7525	<ul style="list-style-type: none"> • Gently sloping to moderately sloping • Well drained; moderately permeable • Sandy soils • Associated with uplands • Used mainly as pasture or range 	--	--	140.8	136.8
Tabor-Gredge-Edge	s7306	<ul style="list-style-type: none"> • Nearly level to strongly sloping • Well drained and moderately well drained • Loamy soils • Associated with uplands and high stream terraces • Used mainly as pasture, range or cropland 	--	--	1006.9	227.0

Table 10: Soil Associations within the Study Area – Freestone County

Soil Association	STATSGO code	Description	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Tinn-Gowen	s7350	<ul style="list-style-type: none"> • Nearly level • Well drained • Loamy soils • Associated with floodplains • Used mainly as pasture, range or cropland 	--	--	52.6	65.2
Uhland-Sandow-Kaufman-Kaman-Gowen	s7629	<ul style="list-style-type: none"> • Nearly level • Somewhat poorly drained; very slowly permeable • Clayey soils • Associated with floodplains • Used mainly as pasture or range 	--	--	--	19.0
Wilson-Crockett	s7269	<ul style="list-style-type: none"> • Nearly level to sloping • Moderately well drained; very slowly permeable • Loamy and sandy soils • Associated with uplands • Used mainly as pasture or cropland 	0.4	0.4	87.9	505.0
Wolfpen-Pickton-Cuthbert	s7550	<ul style="list-style-type: none"> • Gently sloping to steep • Well drained; moderately permeable to moderately slowly permeable • Loamy and sandy soils • Associated with uplands • Used mainly as pasture or wildlife habitat 	--	--	5.3	--

Source: NRCS, 2006

'--' - not present

Table 11: Soil Units within the Study Area – Freestone County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Arenosa fine sand, 1 to 8 percent slopes	ArC	Low	Low	Low	--	--	1.7	15.2	None
Gasil fine sandy loam, 1 to 5 percent slopes	GfB		Low	Moderate	--	--	96.2	95.8	Prime Farmland
Padina loamy fine sand, 1 to 5 percent slopes	PaB		Low	Moderate	--	--	55.8	31.7	None
Silawa fine sandy loam, 5 to 12 percent slopes	SaE		Low	Moderate	--	--	80.5	22.4	None
Silstid loamy fine sand, 1 to 5 percent slopes	SsB		Low	Moderate	--	--	60.2	33.7	None
Silstid loamy fine sand, 5 to 8 percent slopes	SsD		Low	Moderate	--	--	24.2	6.3	None
Lamar clay loam, 5 to 12 percent slopes	LaE	Moderate	Moderate	Moderate	--	--	--	27.9	None
Cuthbert fine sandy loam, 5 to 15 percent slopes	CtE		Moderate	High	--	--	2.7	--	None
Hearne fine sandy loam, 5 to 15 percent slopes	HeE		Moderate	High	--	--	4.6	--	None
Nahatche clay loam, frequently flooded	Na		Moderate	High	--	--	10.3	--	None
Nahatche-Hatliff association, frequently flooded	NH		Moderate	High	--	--	74.1	28.4	None
Pluck loam, frequently flooded	Pu		Moderate	High	--	--	6.2	1.5	None
Whitesboro fine sandy loam, occasionally flooded	Wh		Low	Moderate	--	--	--	31.8	None
Whitesboro clay loam, occasionally flooded	Wk		Moderate	Moderate	--	--	6.5	20.0	None
Whitesboro clay loam, frequently flooded	Wm		Moderate	Moderate	--	--	3.9	18.8	None
Crockett fine sandy loam, 3 to 5 percent slopes	CrC	High	Moderate	High	--	--	3.2	--	Farmland of Statewide Importance
Crockett fine sandy loam, 5 to 8 percent slopes	CrD		Moderate	High	--	--	1.8	--	None
Crockett fine sandy loam, 3 to 8 percent slopes, severely eroded	CrD4		Moderate	High	--	--	22.2	17.2	None

Table 11: Soil Units within the Study Area – Freestone County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Edge fine sandy loam, 1 to 5 percent slopes	EgB	High	High	Moderate	--	--	240.2	124.2	Farmland of Statewide Importance
Edge fine sandy loam, 5 to 12 percent slopes	EgE		High	Moderate	--	--	339.7	19.2	None
Edge-Gullied land complex, 2 to 8 percent slopes	ErC		High	Moderate	--	--	0.6	6.9	None
Ellis clay, 3 to 12 percent slopes	EsE		Moderate	High	--	--	5.9	57.0	None
Leson clay, 3 to 5 percent slopes	LsC		Low	High	--	--	20.2	--	Prime Farmland
Mabank fine sandy loam, 0 to 1 percent slopes	MaA		Moderate	High	--	--	0.4	0.4	Farmland of Statewide Importance
Rader fine sandy loam, 0 to 3 percent slopes	RaB		Moderate	High	--	--	3.8	--	Prime Farmland
Robco loamy fine sand, 0 to 2 percent slopes	RoA		Low	High	--	--	0.3	--	None
Tabor fine sandy loam, 1 to 3 percent slopes	TaB		Moderate	High	--	--	209.5	95.5	Farmland of Statewide Importance
Tabor-Lufkin complex, 0 to 1 percent slopes	TfA		Moderate	Moderate	--	--	16.1	54.4	Farmland of Statewide Importance
Wilson silty clay loam, 1 to 3 percent slopes	WnB		High	High	--	--	1.9	50.0	Farmland of Statewide Importance
Wilson clay loam, 3 to 5 percent slopes	WnB		High	High	--	--	0.3	--	Farmland of Statewide Importance
Crockett fine sandy loam, 0 to 1 percent slopes	CrA		High	High	--	--	0.8	20.7	Farmland of Statewide Importance

Table 11: Soil Units within the Study Area – Freestone County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Crockett fine sandy loam, 1 to 3 percent slopes	CrB	High	High	High	0.4	0.4	48.6	226.6	Farmland of Statewide Importance
Crockett fine sandy loam, 2 to 5 percent slopes, eroded	CrC3		High	High	--	--	9.4	43.3	None
Kaufman clay loam, overwash, occasionally flooded	Ka	Very High	Low	High	--	--	--	85.2	None
Kaufman clay, occasionally flooded	Kc		Low	High	--	--	4.9	--	None
Kaufman clay, frequently flooded	Kd		Low	High	--	--	8.7	--	None

Source: NRCS, 2013

'--' - not present

Geology

In Freestone County, the Study Area is comprised of nine geologic formations. Descriptions of the formations and the area in acres of each segment are provided in **Table 12**.

Table 12: Predominant Geological Formations within the Study Area – Freestone County							
Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Carrizo Sand	Ec	Tertiary/ Eocene/ Wilcox Group	Upper part-sand very fine grained, partings of silty clay, light to dark gray and carbonaceous clay, black; weathers yellowish brown to dark reddish brown, some beds of ironstone, dark brownish, red. Lower part-sand, fine to medium grained, thickly bedded, grayish brown, weathers gray to various reds and purples. Thickness 75-200 feet, characterized by ridges thickly forested with oak.	--	--	85.6	--
Calvert Bluff Formation	Ecb	Tertiary/ Eocene/ Wilcox Group	Mostly mudstone with various amounts of sandstone, lignite, ironstone concretions and in uppermost part locally glauconitic. Mudstone, massive to thin bedded with silt and very fine sand laminae, pale brown to yellowish brown, weathers yellowish brown. Sandstone, medium to fine grained, moderately well sorted, cross-bedded, lenticular, thin beds locally burrowed, light gray to pale yellowish brown, weathers to various shades of brown. Lignite, mostly in lower part of formation, seams 1 to 20 feet thick, brownish black. Average thickness 1,200 feet.	--	--	570.5	--
Hooper	Eh	Tertiary/ Eocene/ Wilcox Group	Previously described in Table 9 .	--	--	374.5	541.1

Table 12: Predominant Geological Formations within the Study Area – Freestone County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3A (acres)	Area of Segment 3B (acres)	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Queen City Sand	Eqc	Tertiary/ Eocene/ Claiborne Group	Sand, fine-grained quartz, locally carbonaceous, light gray to brown; thin interbeds of clay, sandy, silty, brownish gray; a few lentils of glauconitic quartz greensand; weathers red and white mottled; characterized by low ridges heavily forested; thickness up to 100 feet, thins southwestward.	--	--	0.3	--
Reklaw	Er	Tertiary/ Eocene/ Claiborne Group	Includes front top down Marquez and Newby Members not separately mapped. Marquez Member, clay and silt, carbonaceous, lentils of glauconitic clay ironstone, brownish black, reddish brown; weathers light brown to light gray. Newby Member, quartz sand and clay, glauconitic, grayish green, weathers moderate brown and dark yellowish orange, some clay ironstone ledges and rubble; forms low scarp. Thickness about 80 feet, forms fairly narrow prairie.	--	--	7.0	--
Simsboro	Esb	Tertiary/ Eocene/ Wilcox Group	Mostly sand, some mudstone, clay and mudstone conglomerate. Sand, locally indurated, ranges from moderately well-sorted fine sand to sandy mudstone-boulder conglomerate, typically medium to coarse grained, cross-bedded, light gray, commonly weathers reddish brown. In uppermost part thin lenses of clay and mudstone, medium to dark gray. Forms gently rolling hills covered by dense growth of oak. Thickness up to 300 feet, pinches out in northern Freestone County.	--	--	60.0	81.1
Wills Point	Ewp	Tertiary/ Eocene/ Midway Group	Previously described in Table 9 .	0.4	0.4	128.3	229.0

Source: BEG, 1996 and USGS, 2007

-- - not present

Limestone County

Soils

In Limestone County, the Study Area is comprised of three soil associations. Descriptions of these soil associations and the area in acres are provided in **Table 13**. **Table 14** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area.

Table 13: Soil Associations within the Study Area – Limestone County

Soil Association	STATSGO code	Description	Area of Segment 4 (acres)
Silstid-Padina	s7525	Previously described in Table 10	2.4
Tabor-Gredge-Edge	s7306	Previously described in Table 10	337.1
Uhland-Sandow-Kaufman-Kaman-Gowen	s7629	Previously described in Table 10	18.2

Source: NRCS, 2006

Table 14: Soil Units within the Study Area – Limestone County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 4 (acres)	Prime Farmland Designation
Gasil loamy fine sand, 1 to 5 percent slopes	GfB	Low	Low	Moderate	100.8	Prime Farmland
Hatliff fine sandy loam, frequently flooded	Ha		Low	High	0.4	None
Padina loamy fine sand, 1 to 5 percent slopes	PaC		Low	Moderate	1.4	None
Padina loamy fine sand, 5 to 12 percent slopes	PaE		Low	Moderate	5.7	None
Silawa fine sandy loam, 1 to 3 percent slopes	SaB		Low	Moderate	8.8	Prime Farmland
Silawa fine sandy loam, 5 to 12 percent slopes	SaD		Low	Moderate	15.2	None
Silstid loamy fine sand, 1 to 3 percent slopes	SsB		Low	Moderate	44.1	None
Silstid loamy fine sand, 3 to 8 percent slopes	SsD		Low	Moderate	5.2	None
Uhland fine sandy loam, frequently flooded	Uh		Low	Moderate	17.3	None
Hearne fine sandy loam, 5 to 20 percent slopes	HeE	Moderate	Moderate	High	0.3	None
Nahatche loam, frequently flooded	Na		Moderate	High	9.3	None
Axtell fine sandy loam, 1 to 3 percent slopes	AxB	High	Moderate	High	2.2	Farmland of Statewide Importance
Edge fine sandy loam, 1 to 5 percent slopes	EgB		High	Moderate	17.6	Farmland of Statewide Importance
Edge fine sandy loam, 2 to 5 percent slopes, moderately eroded	EgC2		High	Moderate	13.0	None
Edge fine sandy loam, 5 to 12 percent slopes	EgD		High	Moderate	49.8	None

Table 14: Soil Units within the Study Area – Limestone County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 4 (acres)	Prime Farmland Designation
Edge fine sandy loam, 5 to 12 percent slopes	EgE	High	High	Moderate	1.6	None
Edge-Gullied land complex, 3 to 8 percent slopes	EhC3		High	Moderate	5.0	None
Rader fine sandy loam, 0 to 2 percent slopes	RaA		Moderate	High	15.3	Prime Farmland
Robco loamy fine sand, 0 to 2 percent slopes	RoA		Low	High	9.6	None
Tabor fine sandy loam, 0 to 2 percent slopes	TaA		Moderate	High	26.1	Farmland of Statewide Importance
Lufkin fine sandy loam, 0 to 1 percent slopes	LuA	Very High	Moderate	Moderate	9.0	Farmland of Statewide Importance

Source: NRCS, 2015

Geology

In Limestone County, the Study Area is comprised of three geologic formations. Descriptions of the formations and the area in acres are provided in **Table 15**.

Table 15: Predominant Geological Formations within the Study Area – Limestone County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 4 (acres)
Calvert Bluff Formation	Ecb	Tertiary/ Eocene/ Wilcox Group	Previously described in Table 12 .	331.3
Simsboro	Esb	Tertiary/ Eocene/ Wilcox Group	Previously described in Table 12 .	2.1
Alluvium	Qal	Quaternary/ Holocene/None listed	Previously described in Table 3 .	24.4

Source: BEG, 1996 and USGS, 2007

Leon County

Soils

In Leon County, the Study Area is comprised of 10 soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 16**. **Table 17** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 16: Soil Associations within the Study Area – Leon County

Soil Association	STATSGO code	Description	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Margie-Lexton	s7454	<ul style="list-style-type: none"> Gently sloping to steep Well drained Loamy soils Associated with savannahs Used mainly as pasture or range 	199.4	133.5
Nahatche-Hatliff	s7364	Previously described in Table 10	104.9	--
Silstid-Padina	s7525	Previously described in Table 10	193.5	606.4
Silstid-Padina-Jedd-Arenosa	s7524	<ul style="list-style-type: none"> Gently sloping to moderately steep Moderately well drained and somewhat excessively drained Sandy soils Associated with savannahs Used mainly as pasture or range 	35.0	164.8
Silstid-Rader-Padina-Crockett-Axtell	s7187	<ul style="list-style-type: none"> Nearly level to moderately steep Moderately well drained and somewhat excessively drained Sandy soils Associated with savannahs Used mainly as pasture or range 	--	92.6
Tabor-Gredge-Edge	s7306	Previously described in Table 10	--	14.3
Tonkawa-Tenaha-Pickton	s7549	<ul style="list-style-type: none"> Gently sloping to moderately steep Well drained and excessively drained; moderately and rapidly permeable Sandy and clayey soils Associated with uplands Used mainly as pasture or range 	50.7	--
Trawick-Elrose-Bub	s7693	<ul style="list-style-type: none"> Gently sloping to moderately steep Well drained Loamy soils Associated with woodlands Used mainly as pasture or woodland 	69.3	--
Wilson-Luling-Crockett-Benchley	s7267	<ul style="list-style-type: none"> Nearly level to gently sloping Moderately well drained; slowly and very slowly permeable Loamy and clayey soils Associated with uplands and ancient terraces Used mainly as pasture, range or hayland 	106.0	134.9
Wolfpen-Pickton-Cuthbert	s7550	Previously described in Table 10	612.2	--

Source: NRCS, 2006

'--' - not present

Table 17: Soil Units within the Study Area – Leon County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Arenosa fine sand, 1 to 8 percent slopes	ArC	Low	Low	Low	15.3	34.9	None
Eufaula loamy fine sand, 1 to 5 percent slopes	EuB		Low	Low	1.1	--	None
Tonkawa fine sand, 1 to 8 percent slopes	ToC		Low	Low	13.8	--	None
Attoyac fine sandy loam, 0 to 3 percent slopes	AtB		Low	Moderate	1.0	--	Prime Farmland
Dutek loamy fine sand, 1 to 8 percent slopes	DuC		Low	Moderate	0.7	19.7	None
Flo loamy fine sand, 1 to 8 percent slopes	FoC		Low	Low	11.9	--	None
Gasil fine sandy loam, 1 to 5 percent slopes	GfB		Low	Moderate	52.5	103.8	Prime Farmland
Hatliff fine sandy loam, frequently flooded	Ha		Low	High	34.0	17.1	None
Larue loamy, fine sand, 1 to 8 percent slopes	LaC		Low	Low	20.3	--	Farmland of Statewide Importance
Gasil fine sandy loam, 5 to 8 percent slopes	GfD		Low	Moderate	--	4.6	None
Melhomes loamy fine sand, 0 to 1 percent slopes	Ms		Low	Moderate	2.5	3.4	None
Padina loamy fine sand, 1 to 8 percent slopes	PaC		Low	Moderate	68.7	88.3	None
Padina loamy fine sand, 8 to 15 percent slopes	PaD		Low	Moderate	40.3	14.5	None
Pickton loamy fine sand, 1 to 8 percent slopes	PkC		Low	Moderate	180.1	--	None
Pickton loamy fine sand, 8 to 15 percent slopes	PkD		Low	Moderate	36.4	--	None
Silawa fine sandy loam, 1 to 5 percent slopes	SaB		Low	Moderate	--	14.9	Prime Farmland
Silstid loamy fine sand, 1 to 5 percent slopes	SdB		Low	Moderate	152.8	201.0	None
Tenaha-Cuthbert complex, 8 to 20 percent slopes	TcE		Low	Moderate	97.1	--	None
Wolfpen loamy fine sand, 1 to 8 percent slopes	WoC		Low	Moderate	82.8	--	None
Flynn fine sandy loam, 3 to 8 percent slopes	FyC		Moderate	Moderate	--	1.6	None
Cuthbert fine sandy loam, 5 to 15 percent slopes	CtE	Moderate	Moderate	High	0.1	--	None
Kirvin fine sandy loam, 1 to 5 percent slopes	KrB		Low	High	31.8	--	None
Cuthbert fine sandy loam, 5 to 20 percent slopes	CuE		Moderate	Moderate	65.2	--	None
Cuthbert fine sandy loam, 5 to 20 percent slopes, stony	CxE		Moderate	High	4.6	--	None
Hearne fine sandy loam, 1 to 5 percent slopes	HeB		Moderate	High	--	7.9	None
Hearne fine sandy loam, 5 to 20 percent slopes	HeE		Moderate	High	61.4	101.0	None

Table 17: Soil Units within the Study Area – Leon County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Hearne fine sandy loam, graded, 5 to 20 percent slopes	HxE	Moderate	Moderate	High	0.6	3.9	None
Jedd-Margie complex, 5 to 25 percent slopes	JmE		Moderate	High	19.2	42.7	None
Lexton clay loam, 1 to 3 percent slopes	LeB		Moderate	High	4.0	5.9	Prime Farmland
Margie fine sandy loam, 1 to 5 percent slopes	MgB		Moderate	High	52.6	43.7	Prime Farmland
Margie fine sandy loam, 5 to 8 percent slopes	MgD		Moderate	High	24.7	43.3	None
Marquez very fine sandy loam, 1 to 5 percent slopes	MkB		High	High	20.0	33.2	None
Marquez gravelly fine sandy loam, 1 to 5 percent slopes	MrB		Moderate	High	--	1.5	None
Nahatche loam, frequently flooded	Na		Moderate	High	46.0	14.2	None
Trawick fine sandy loam, 1 to 5 percent slopes	TrB		Low	High	8.3	--	Prime Farmland
Trawick-Bub complex, 8 to 20 percent slopes	TxE		Moderate	High	51.3	--	None
Axtell fine sandy loam, 1 to 5 percent slopes	AxB	High	Moderate	High	--	3.9	Farmland of Statewide Importance
Bremond-Wilson complex, 0 to 2 percent slopes	BrA		High	High	0.5	1.8	Farmland of Statewide Importance
Crockett loam, 1 to 3 percent slopes	CrB		Moderate	High	6.9	48.1	Farmland of Statewide Importance
Crockett fine sandy loam, 5 to 10 percent slopes	CrD		Moderate	High	7.8	1.7	None
Crockett-Wilson complex, 1 to 3 percent slopes	CsB		Moderate	High	63.2	39.2	Farmland of Statewide Importance
Derly silt loam, 0 to 1 percent slopes	De		High	High	4.0	19.3	None
Lummus fine sandy loam, 1 to 5 percent slopes	LmB		Low	High	24.6	--	Prime Farmland
Rader fine sandy loam, 1 to 3 percent slopes	RaB		Moderate	High	27.2	65.7	Prime Farmland
Rader-Derly complex, gently undulating	Rd		Moderate	High	--	3.0	Prime Farmland
Robco loamy fine sand, 1 to 8 percent slopes	RoC		Low	High	1.5	24.1	None
Robco-Gullied land complex, 1 to 8 percent slopes	RxC		Low	High	--	5.9	None
Tabor fine sandy loam, 1 to 5 percent slopes	TaB		Moderate	High	--	6.2	Farmland of Statewide Importance
Woodtell fine sandy loam, 5 to 12 percent slopes	WtD		Moderate	High	0.5	--	None
Benchley clay loam, 1 to 3 percent slopes	BeB	Moderate	High	14.1	27.1	Prime Farmland	

Table 17: Soil Units within the Study Area – Leon County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Crockett fine sandy loam, 1 to 5 percent slopes	CrB	High	High	High	6.9	47.4	Farmland of Statewide Importance
Dimebox silty clay, 0 to 1 percent slopes	DmA	Very High	Moderate	High	16.7	11.6	Prime Farmland
Kaufman clay, occasionally flooded	Ka		Low	High	1.5	--	None
Lufkin fine sandy loam, 0 to 1 percent slopes	LfA		Moderate	Moderate	1.7	7.5	Farmland of Statewide Importance

Source: NRCS, 2013

'--' - not present

Geology

In Leon County, the Study Area is comprised of ten geologic formations. Descriptions of the formations and the area in acres of each segment are provided in **Table 18**.

Table 18: Predominant Geological Formations within the Study Area – Leon County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Carrizo Sand	Ec	Tertiary/ Eocene/ Wilcox Group	Previously described in Table 12 .	--	85.4
Calvert Bluff Formation	Ecb	Tertiary/ Eocene/ Wilcox Group	Previously described in Table 12 .	--	51.6
Cook Mountain	Ecm	Tertiary/ Eocene/ Claiborne Group	In western part of sheet includes from top down Mount Tabor, Spiller, Landrum and Wheelock Members not separately mapped. Mount Tabor Member, clay and marl, brown, marine megafossils, thickness 45-100 feet; Spiller Member, sand, argillaceous, lignitic thickness 100 feet; Landrum Member, marl and clay, glauconitic, limestone lentils, near base bentonitic with some glauconitic clay_ironstone containing marine megafossils, brown, thickness 100 feet; Wheelock Member, marl and clay, some glauconitic calcareous ironstone, gray, abundant marine megafossils, thickness 70 feet. Total thickness 100 feet in eastern part of sheet to 370 feet in western part.	82.5	115.0
Queen City Sand	Eqc	Tertiary/ Eocene/ Claiborne Group	Previously described in Table 12 .	599.2	439.5
Reklaw	Er	Tertiary/ Eocene/ Claiborne Group	Previously described in Table 12 .	3.9	31.3
Sparta Sand	Es	Tertiary/ Eocene/ Claiborne Group	Quartz sand, very fine to fine grained, commonly with lignitic clay and silt partings, soft to indurated, light gray to brownish gray; weathers yellowish brown to reddish brown, local beds and upper few feet cemented by limonite; thickness 200±feet.	274.0	187.8

Table 18: Predominant Geological Formations within the Study Area – Leon County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Stone City	Esc	Tertiary/ Eocene/ Claiborne Group	Clay, silt and sand; clay, silty, sandy, fissile, brownish gray, interbedded with sand, argillaceous, glauconitic; weathers yellowish brown and orange red; thickness up to 80 feet.	180.8	113.5
Weches	Ew	Tertiary/ Eocene/ Claiborne Group	Greensand, sand and clay; greensand mostly glauconite in part marly, quartz sand common; interbedded with clay, silty, brown to gray; weathers light to dark reddish brown, locally forms layers of limonitic iron ore and clay ironstone concretions; thickness 2575 feet.	157.8	72.3
Alluvium	Qal	Quaternar/ Holocene/ None listed	Previously described in Table 3 .	56.7	37.6
Fluviatile terrace deposits	Qt	Quaternar/ Pleistocene/ None listed	Gravel, sand, silt and clay.	16.0	12.5

Source: BEG, 1996 and USGS, 2007

'--' - not present

Madison County

Soils

In Madison County, the Study Area is comprised of six soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 19**. **Table 20** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 19: Soil Association within the Study Area – Madison County

Soil Association	STATSGO code	Description	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Nahatche-Hatliff	s7364	Previously described in Table 10	68.2	39.6
Nahatche-Kaufman-Gowker	s7351	<ul style="list-style-type: none"> • Nearly level • Somewhat poorly drained and well drained • Loamy and clayey soils • Associated with broad, flat backswamps • Used mainly as pasture or range 	19.2	11.0
Tabor-Robco-Chazos	s7605	<ul style="list-style-type: none"> • Very gently to gently sloping • Moderately well drained; slowly and very slowly permeable • Loamy and clayey soils • Associated with high stream terraces and uplands • Used mainly as pasture, range or cropland 	98.7	--
Tabor-Spiller-Rader-Marquez-Gredge	s7585	<ul style="list-style-type: none"> • Very gently sloping to moderately sloping • Moderately well drained; slowly permeable • Loamy, sandy and clayey soils • Associated with high terraces and uplands • Used mainly as pasture, range or hayland 	207.8	252.6

Table 19: Soil Association within the Study Area – Madison County

Soil Association	STATSGO code	Description	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Wilson-Luling-Crockett-Benchley	s7267	Previously described in Table 16	20.4	184.1
Zulch-Zack-Boonville	s7748	<ul style="list-style-type: none">• Very gently sloping to moderately steep• Somewhat poorly drained and moderately well drained• Loamy soils• Associated with uplands• Used mainly as pasture, range or hayland	186.4	240.6

Source: NRCS, 2006

'-' - not present

Table 20: Soil Units within the Study Area – Madison County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Dutek loamy fine sand, 1 to 5 percent slopes	DuC	Low	Low	Moderate	4.0	--	None
Eufaula loamy fine sand, 1 to 5 percent slopes	EuB		Low	Low	6.3	--	None
Gasil fine sandy loam, 1 to 5 percent slopes	GaB		Low	Moderate	<0.01	--	Prime Farmland
Padina loamy fine sand, 1 to 5 percent slopes	PaC		Low	Moderate	10.9	--	None
Silawa fine sandy loam, 1 to 5 percent slopes	SaB		Low	Moderate	7.3	6.9	Prime Farmland
Silstid loamy fine sand, 1 to 5 percent slopes	SdB		Low	Moderate	30.9	--	None
Robco loamy fine sand, 1 to 5 percent slopes	RcB	Moderate	Low	High	20.7	42.6	None
Chazos loamy fine sand, 1 to 5 percent slopes	ChB		Moderate	Moderate	29.4	38.1	Prime Farmland
Gowker clay loam, frequently flooded	Go		Moderate	High	34.3	30.1	None
Gowker clay loam, frequently flooded	Gp		Low	High	0.04	0.1	None
Nahatche loam, frequently flooded	Na		Moderate	High	25.7	18.5	None
Rosanky fine sandy loam, 1 to 5 percent slopes	RoC		Moderate	Moderate	14.6	9.7	None
Spiller fine sandy loam, 1 to 3 percent slopes	SpB	Moderate	Moderate	3.1	--	Prime Farmland	
Boonville fine sandy loam, 1 to 3 percent slopes	BfB	High	High	High	0.01	--	Farmland of Statewide Importance
Boonville fine sandy loam, 1 to 3 percent slopes	BoB		High	High	21.7	68.6	Farmland of Statewide Importance
Bremond-Wilson complex, 0 to 2 percent slopes	BrA		High	High	13.4	47.3	Farmland of Statewide Importance
Crockett loam, 1 to 3 percent slopes	CrB		High	High	--	97.1	Farmland of Statewide Importance
Crockett fine sandy loam, 5 to 10 percent slopes	CrD		Moderate	High	--	0.04	None
Derly silt loam, 0 to 1 percent slopes	DdA		High	High	4.3	--	None
Derly-Rader complex, 0 to 1 percent slopes	DeA		High	High	10.1	--	None
Ellis clay, 5 to 15 percent slopes	EeE		Moderate	High	--	0.3	None
Gredge fine sandy loam, 1 to 5 percent slopes	GrC		High	Moderate	31.2	87.3	Farmland of Statewide Importance
Gredge fine sandy loam, 5 to 8 percent slopes	GrD		High	Moderate	15.1	7.9	None
Kurten fine sandy loam, 1 to 5 percent slopes	KuC		Moderate	High	8.8	--	Farmland of Statewide Importance

Table 20: Soil Units within the Study Area – Madison County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Prime Farmland Designation
Mabank fine sandy loam, 0 to 1 percent slopes	MaA	High	Moderate	High	4.7	--	Farmland of Statewide Importance
Rader fine sandy loam, 1 to 3 percent slopes	RaB		Moderate	High	97.1	121.9	Prime Farmland
Rader-Derly complex, 0 to 2 percent slopes	RbA		High	High	37.1	4.2	Prime Farmland
Tabor fine sandy loam, 1 to 3 percent slopes	TaB		Moderate	High	49.7	7.6	Farmland of Statewide Importance
Wilson loam, 0 to 1 percent slopes	WcA		Moderate	High	2.8	--	Farmland of Statewide Importance
Zack fine sandy loam, 1 to 5 percent slopes	ZaB		High	Moderate	50.0	76.4	None
Zack fine sandy loam, 3 to 8 percent slopes, eroded	ZaC2		High	Moderate	14.8	4.1	None
Zack fine sandy loam, 5 to 8 percent slopes	ZaD		High	Moderate	9.2	--	None
Zulch fine sandy loam, 1 to 3 percent slopes	ZuB		High	High	38.2	44.5	None
Benchley clay loam, 1 to 3 percent slopes	BeB		Moderate	High	4.1	10.6	Prime Farmland

Source: NRCS, 2013

'--' - not present

Geology

In Madison County, the Study Area is comprised of three geologic formations. Descriptions of the dominant geologic formations and the area in acres of each segment are provided in **Table 21**.

Table 21: Predominant Geological Formations within the Study Area – Madison County					
Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)
Cook Mountain	Ecm	Tertiary/ Eocene/ Claiborne Group	Previously described in Table 18 .	167.5	258.0
Yegua	Ey	Tertiary/ Eocene/ Claiborne Group	Sandstone, clay and lignite; sandstone mostly quartz, some chert, fine grained, subangular to subrounded, indurated to friable, calcareous, glauconitic, massive, locally crossbedded; clay, lignitic, bentonitic, sandy, silty, mostly well laminated, chocolate brown to reddish brown, lighter colored upward; lentils of lignite common; flat ironstone concretions and spherical calcareous concretions a foot or more in diameter common; some fossil wood; thickness 750-1,000 feet.	379.0	437.1
Alluvium	Qal	Quaternary/ Holocene/ None listed	Previously described in Table 3 .	54.1	32.8

Source: BEG, 1996 and USGS, 2007

Grimes County

Soils

In Grimes County, the Study Area is comprised of eight soil associations. Descriptions of these soil associations and the area in acres of each segment are provided in **Table 22**. **Table 23** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of each segment.

Table 22: Soil Associations within the Study Area – Grimes County					
Soil Association	STATSGO code	Description	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)
Greenvine-Falba-Burleswash-Arol	s7324	<ul style="list-style-type: none"> • Gently sloping to moderately sloping • Moderately well drained and well drained • Loamy, sandy and clayey soils • Associated with ridgetops and slopes • Used mainly as pasture or range 	--	--	259.9

Table 22: Soil Associations within the Study Area – Grimes County

Soil Association	STATSGO code	Description	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)
Huntsberg-Fetzer-Depcor-Boy-Annona	s7286	<ul style="list-style-type: none"> Gently sloping to moderately sloping Somewhat poorly drained and moderately well drained Loamy and sandy soils Associated with ridgetops, slopes, uplands and ancient terraces Used mainly as pasture or woodland 	--	--	577.6
Latium-Frelsburg-Crockett-Carbengle-Brenham-Bosque-Bleiberville	s7333	<ul style="list-style-type: none"> Gently sloping and moderately sloping Moderately well drained and well drained Loamy and clayey soils Associated with ridges and side slopes Used mainly as pasture, range or cropland 	--	--	374.9
Nahatche-Kaufman-Gowker	s7351	Previously described in Table 19	1.1	8.4	--
Rader-Lufkin-Axtell	s7584	<ul style="list-style-type: none"> Nearly level to strongly sloping Somewhat poorly drained and moderately well drained Loamy and clayey soils Associated with ridges, slopes and terraces Used mainly as pasture, range, or cropland 	--	--	130.8
Singleton-Shiro-Burleswash	s7647	<ul style="list-style-type: none"> Nearly level to strongly sloping Well drained and moderately well drained Loamy and sandy soils Associated with broad flats and divides Used mainly as pasture or range 	--	--	223.2
Tonkavar-Shiro-Gomery-Elmina	s7349	<ul style="list-style-type: none"> Gently sloping to moderately sloping Somewhat poorly drained, moderately well drained and well drained Sandy soils Associated with broad ridgetops Used mainly as pasture or range 	--	--	245.8
Zulch-Zack-Boonville	s7748	Previously described in Table 19	88.8	71.4	50.9

Source: NRCS, 2006

'--' - not present

Table 23: Soil Units within the Study Area – Grimes County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)	Prime Farmland Designation
Boy loamy fine sand, 1 to 5 percent slopes	BgD	Low	Low	High	--	--	51.4	None
Boy loamy fine sand, 1 to 5 percent slopes	BoC		Low	High	--	--	0.5	None
Carbengle clay loam, 1 to 5 percent slopes	CaC		Moderate	Moderate	--	--	8.7	Prime Farmland
Depcor loamy fine sand, 1 to 5 percent slopes	DeC		Low	High	--	--	296.7	None
Depcor loamy fine sand, 5 to 8 percent slopes	DeD		Low	Moderate	--	--	12.0	None
Gomery loamy fine sand, 1 to 5 percent slopes	GmC		Low	Moderate	--	--	102.1	None
Hatliff fine sandy loam, frequently flooded	Ha		Low	High	--	--	17.4	None
Landman loamy fine sand, 1 to 5 percent slopes	LaC		Low	Moderate	--	--	1.9	Farmland of Statewide Importance
Padina loamy fine sand, 1 to 8 percent slopes	PaD		Low	Moderate	--	--	0.7	None
Robco loamy fine sand, 1 to 5 percent slopes	RoC		Moderate	Low	High	23.9	22.0	15.4
Brenham clay loam, 3 to 8 percent slopes	BrD	Moderate		High	--	--	26.1	None
Chazos loamy fine sand, 1 to 5 percent slopes	ChC	Moderate		Moderate	--	--	26.6	Prime Farmland
Fetzer loamy fine sand, 1 to 5 percent slopes	FeC	Low		High	--	--	80.4	None
Gowker loam, frequently flooded	Go	Moderate		High	--	--	1.5	None
Gowker clay loam, frequently flooded	Gp	Low		High	--	19.8	1.3	None
Nahatche clay loam, frequently flooded	Na	Moderate		High	10.9	5.1	69.4	None
Tonkavar fine sand, 1 to 8 percent slopes	ToD	Low		Moderate	--	--	6.9	None
Annona fine sandy loam, 1 to 5 percent slopes	AnC	Moderate		High	--	--	114.6	None
Annona fine sandy loam, 1 to 5 percent slopes, eroded	AnC2	Moderate		High	--	--	4.1	None
Annona fine sandy loam, 5 to 8 percent slopes	AnD	Moderate	High	--	--	19.3	None	
Arol fine sandy loam, 0 to 1 percent slopes	ArA	High	High	High	--	--	0.3	None
Arol fine sandy loam, 1 to 5 percent slopes	ArC		High	High	--	--	18.6	None
Axtell fine sandy loam, 1 to 5 percent slopes	AxC		Moderate	High	--	--	33.3	Farmland of Statewide Importance
Axtell fine sandy loam, 2 to 5 percent slopes, moderately eroded	AxC2		Moderate	High	--	--	14.0	None
Boonville fine sandy loam, 1 to 3 percent slopes	BfB		High	High	5.2	4.2	14.8	Farmland of Statewide Importance
Burlewash fine sandy loam, 1 to 5 percent slopes	BuC		High	High	--	--	9.8	None

Table 23: Soil Units within the Study Area – Grimes County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)	Prime Farmland Designation
Burlewash-Gullied land complex, 5 to 15 percent slopes	BxE	High	High	High	--	1.9	--	None
Crockett fine sandy loam, 1 to 5 percent slopes	CrC		Moderate	Moderate	--	--	45.5	Farmland of Statewide Importance
Elmina loamy fine sand, 1 to 5 percent slopes	EmC		Low	High	--	--	45.5	None
Elmina loamy fine sand, 5 to 8 percent slopes	EmD		Low	High	--	--	9.7	None
Falba fine sandy loam, 1 to 5 percent slopes	FaC		Moderate	High	--	--	70.0	None
Flatonia clay loam, 1 to 4 percent slopes	FIB		Moderate	High	--	--	39.9	Prime Farmland
Gredge fine sandy loam, 1 to 5 percent slopes	GrC		High	Moderate	2.6	--	7.3	Farmland of Statewide Importance
Gredge fine sandy loam, 5 to 12 percent slopes	GrE		High	Moderate	3.5	--	--	None
Huntsburg loamy fine sand, 1 to 5 percent slopes	HuC		Moderate	High	--	--	28.8	Farmland of Statewide Importance
Huntsburg loamy fine sand, 5 to 8 percent slopes	HuD		Low	High	--	--	2.9	None
Shiro loamy fine sand, 1 to 5 percent slopes	ShC		Low	Moderate	--	--	247.9	Farmland of Statewide Importance
Singleton fine sandy loam, 1 to 5 percent slopes	SnC		Moderate	Moderate	--	--	95.4	None
Tabor fine sandy loam, 1 to 5 percent slopes	TaC		Moderate	High	--	--	22.6	Farmland of Statewide Importance
Wilson clay loam, 1 to 3 percent slopes	WIB		Moderate	High	--	--	9.6	Farmland of Statewide Importance
Zack fine sandy loam, 1 to 5 percent slopes	ZaC		High	High	37.0	26.9	12.7	None
Zulch fine sandy loam, 1 to 5 percent slopes	ZuC	High	High	6.7	--	13.6	None	
Tinn clay, 0 to 1 percent slopes, frequently flooded	Tn	Very High	Low	High	--	--	13.5	None
Bleiberville clay, 1 to 3 percent slopes	BcB		Moderate	High	--	--	7.3	Farmland of Statewide Importance
Frelsburg clay, 1 to 5 percent slopes	FrC		Low	High	--	--	132.0	Prime Farmland
Frelsburg clay, 1 to 5 percent slopes, eroded	FrC2		Low	High	--	--	0.01	None

Table 23: Soil Units within the Study Area – Grimes County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)	Prime Farmland Designation
Greenvine clay, 1 to 5 percent slopes	GvC	Very High	Low	High	--	--	12.3	Prime Farmland
Latium clay, 5 to 8 percent slopes	LtD		Low	High	--	--	7.5	None
Latium clay, 4 to 12 percent slopes, severely eroded	LtD3		Low	High	--	--	4.5	None
Lufkin fine sandy loam, 1 to 3 percent slopes	LuB		High	Moderate	--	--	31.8	Farmland of Statewide Importance
Lufkin-Rader complex, gently undulating	LxB		High	Moderate	--	--	43.7	Farmland of Statewide Importance

Source: NRCS, 2013
 '--' - not present

Geology

In Grimes County, the Study Area is comprised of 10 geologic formations. Descriptions of the formations and the area in acres of each segment are provided in **Table 24**.

Table 24: Predominant Geological Formations within the Study Area – Grimes County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)
Caddell	Eca	Tertiary/ Eocene/Jackson Group	Clay and quartz sand; clay sandy, lignitic, brown; sand, very fine grained, glauconitic, glauconitic ironstone concretions common; thickness 50-150 feet, thickens westward.	--	--	58.3
Catahoula	Mc	Tertiary/ Oligocene/ None Listed	Mudstone and sand. Upper part mudstone, tuffaceous, sandy, light gray; weathers dark gray. Lower 10-80 feet, quartz sand, coarse grained, grains polished, opal cement common; fossil wood abundant; forms cuesta; thickness 250-300 feet.	--	--	216.2
Fleming	Mf	Tertiary/ Miocene/ Fleming Group	Clay, silt and sand; mostly clay, commonly calcareous, calcareous concretions locally; silt and sand indurated, locally predominant; light gray to yellowish gray; weathers light gray to medium gray, locally red beneath Willis, forms brownish-black soil; thickness 1,300-1,450 feet.	--	--	458.0

Table 24: Predominant Geological Formations within the Study Area – Grimes County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)
Manning	Em	Tertiary/ Eocene/ Jackson Group	Clay and sandstone; clay lignitic, chocolate brown, interbedded fine- to medium-grained sand, fossil wood common; sandstone, fine to medium grained, tuffaceous, indurated, brittle, thick bedded, some crossbedding; forms resistant ledges, light yellowish gray; thickness 250± feet.	--	--	361.1
Wellborn	Ewb	Tertiary/ Eocene/ Jackson Group	Quartz sand, fine to very fine grained, glauconitic, light gray, weathers dark gray; interbeds of brown lignitic clay and lignite; fossil wood abundant, imprints of marine megafossils common; thickness 50-150 feet, thickens westward.	--	--	188.7
Whitsett	EOw	Tertiary/ Oligocene/ None Listed	Quartz sand, fine to medium grained, tuffaceous, lignitic, argillaceous, locally silica cemented, light gray; weathers dark gray; fossil wood abundant; thickness 30-70 feet.	--	--	57.9
Willis Formation (coastward belt)	Qwc	Quaternary/ Pleistocene/ Jackson Group	Has a thickness of +/- 100 feet and is characterized by clay, silt, sand and siliceous gravel of granule to pebble size, including some petrified wood. It is mostly deeply weathered and lateritic, indurated by clay and cemented by iron oxide locally, with iron oxide concretions abundant.	--	--	393.2
Willis Formation (landward belt)	Qwl	Quaternary/ Pleistocene/ None Listed	Clay, silt, sand and siliceous gravel of granule to pebble size, including some petrified wood; sand coarser than in younger rocks, noncalcareous; mostly deeply weathered and lateritic, indurated by clay and cemented by iron oxide locally, iron oxide concretions abundant and locally used as road material in coastward belt of outcrop, Qwc, iron oxide concretions less abundant and amount of weathering decreases eastward in landward belt of outcrop, Qwl; coastward edge of base of Qwl outcrop is mostly at a lower elevation than base of landward edge of Qwc, indicating that the two outcrop belts may be of different ages; forms scarps on landward side; fluvial; thickness ±100 feet.	--	--	102.5
Alluvium	Qal	Quaternary/ Holocene/None listed	Previously described in Table 3 .	8.2	17.1	9.5

Table 24: Predominant Geological Formations within the Study Area – Grimes County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 3C (acres)	Area of Segment 4 (acres)	Area of Segment 5 (acres)
Yegua	Ey	Tertiary/ Eocene/Claiborne Group	Previously described in Table 21 .	81.7	62.8	15.8

Source: BEG, 1996 and USGS, 2007

'-' - not present

Waller County

Soils

In Waller County, the Study Area is comprised of three soil associations. Descriptions of these soil associations and the area in acres are provided in **Table 25**. **Table 26** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres.

Table 25: Soil Associations within the Study Area – Waller County

Soil Association	STATSGO code	Description	Area of Segment 5 (acres)
Huntsberg-Fetzer-Depcor-Boy-Annona	s7286	Previously described in Table 22	95.8
Splendora-Segno-Landman-Boy	s7217	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained and moderately well drained Loamy and sandy soils Associated with uplands Used mainly as pasture, range or cropland 	70.2
Wockley-Segno-Monaville-Hockley	s7374	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained and moderately well drained; moderately slowly permeable Loamy and sandy soils Associated with hillsides and ridges Used mainly as pasture or cropland 	140.0

Source: NRCS, 2006

Table 26: Soil Units within the Study Area – Waller County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 5 (acres)	Prime Farmland Designation
Boy loamy fine sand, 1 to 5 percent slopes	BoC	Low	Low	High	33.1	None
Depcor loamy fine sand, 1 to 5 percent slopes	DeC		Low	High	52.6	None
Segno fine sandy loam, 1 to 5 percent slopes	SgC		Moderate	High	15.3	Prime Farmland
Splendora fine sandy loam, 0 to 2 percent slopes	SpB		Moderate	High	42.6	None
Wockley fine sandy loam, 0 to 1 percent slopes	WoA		High	High	54.2	Prime Farmland
Hockley loamy fine sand, 1 to 3 percent slopes	HoB		Low	High	26.4	Prime Farmland
Wockley fine sandy loam, 1 to 3 percent slopes	WoB		High	High	14.3	Prime Farmland
Hatliff-Pluck-Kian complex, 0 to 1 percent slopes, frequently flooded	HatA		High	Moderate	0.2	None
Chazos loamy fine sand, 1 to 5 percent slopes	ChC	Moderate	Moderate	Moderate	0.6	Prime Farmland
Conroe loamy fine sand, 1 to 5 percent slopes	CoC		Moderate	High	10.2	None
Fetzer loamy fine sand, 1 to 5 percent slopes	FeC		Low	High	0.8	None

Table 26: Soil Units within the Study Area – Waller County

Soil Unit Name	Soil Unit	Shrink/Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 5 (acres)	Prime Farmland Designation
Hockley gravelly fine sandy loam, 1 to 5 percent slopes	HpC	Moderate	Low	High	10.0	Prime Farmland
Katy fine sandy loam, 0 to 1 percent slopes	KaA		High	High	2.3	Prime Farmland
Katy fine sandy loam, 1 to 3 percent slopes	KaB			High	2.5	Prime Farmland
Monaville loamy fine sand, 1 to 5 percent slopes	MvC		Low	Moderate	15.9	None
Nahatche loam, frequently flooded	Na		Moderate	High	10.1	None
Edna loam, 0 to 1 percent slopes	EdA	High	High	Moderate	6.2	Farmland of Statewide Importance
Annona fine sandy loam, 1 to 5 percent slopes	AnC		High	High	4.0	Farmland of Statewide Importance
Axtell fine sandy loam, 1 to 5 percent slopes	AxC		Moderate	High	2.6	Farmland of Statewide Importance
Verland clay loam, 1 to 3 percent slopes	MdB		Moderate	High	1.3	Farmland of Statewide Importance
Frelsburg clay, 1 to 3 percent slopes	FrB	Very High	Low	High	0.8	Prime Farmland

Source: NRCS, 2013

Geology

In Waller County, the Study Area is comprised of three geologic formations. Descriptions of the formations and the area in acres are provided in **Table 27**.

Table 27: Predominant Geological Formations within the Study Area – Waller County

Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 5 (acres)
Alluvium	Qal	Quaternary/ Holocene/ None listed	Previously described in Table 3 .	5.5
Lissie	Ql	Quaternary/ Holocene, Pleistocene/ None listed	Upper part, clay, silt, sand and very minor siliceous gravel of granule and small pebble size gravel more abundant northwestward, locally calcareous, concretions of calcium carbonate, iron oxide and iron-manganese oxides common in zone of weathering; fluvialite; surface fairly flat and featureless except for numerous rounded shallow depressions and pimple mounds, lower part, clay, silt, sand and minor amount of gravel; gravel slightly coarser than in upper part, noncalcareous, iron oxide concretions more abundant than in upper part; fluvialite; very gently rolling; thickness ± 200 feet.	20.9
Willis (coastward belt)	Qw _c	Quaternary/ Pleistocene/None Listed	Previously described in Table 24 .	279.7

Source: BEG, 1996 and USGS, 2007

Harris County

Soils

In Harris County, the Study Area is comprised of five soil associations. Descriptions of these soil associations and the area in acres are provided in **Table 28**. **Table 29** includes the soils units that comprise the Study Area with associated characteristics including shrink-swell potential, erosion potential, corrosion potential and prime farmland designation and the area in acres of Segment 5 and the three terminal options.

Table 28: Soil Associations within the Study Area – Harris County						
Soil Association	STATSGO code	Description	Segment 5 (acres)	Segment 5: Industrial Site Terminal Option (acres)	Segment 5: Northwest Mall Terminal Option (acres)	Segment 5: Northwest Transit Center Terminal (acres)
Gessner-Clodine-Addicks	S7249	<ul style="list-style-type: none"> Nearly level Poorly drained; moderately permeable Loamy soils Associated with prairies Used mainly as pasture, range, or cropland 	237.2	--	--	--
Katy-Clodine-Aris	S7389	<ul style="list-style-type: none"> Nearly level Somewhat poorly drained and poorly drained Loamy soils Associated with prairies Used mainly as pasture, range, or cropland 	61.7	97.1	80.2	87.3
Morey-Mocarey-Bernard	S7198	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained; very slowly permeable Loamy soils Associated with uplands Used mainly as pasture, range, or cropland 	8.0	--	--	--
Wockley-Hockley-Gessner	S7740	<ul style="list-style-type: none"> Nearly level to gently sloping Somewhat poorly drained, moderately well drained and poorly drained; moderately slowly and moderately permeable Loamy soils Associated with prairies Used mainly as pasture, range, or cropland 	730.1	--	--	--
Wockley-Segno-Monaville-Hockley	S7374	Previously described in Table 25	364.1	--	--	--

Source: NRCS, 2006

Table 29: Soil Units within the Study Area – Harris County

Soil Unit Name	Soil Unit	Shrink/ Swell Potential	Erosion Potential	Corrosion Potential	Area of Segment 5 (acres)	Industrial Site Terminal Option (acres)	Northwest Mall Terminal Option (acres)	Northwest Transit Center Terminal (acres)	Prime Farmland Designation
Segno fine sandy loam, 0 to 1 percent slopes	SeA	Low	Moderate	High	2.2	--	--	--	Prime Farmland
Hatliff-Pluck-Kian complex, 0 to 1 percent slopes, frequently flooded	HatA		High	Moderate	1.1	--	--	--	None
Wockley fine sandy loam, 0 to 1 percent slopes	Wo		High	High	666.9	--	--	--	Prime Farmland
Hockley loamy fine sand, 1 to 3 percent slopes	HoB		Low	High	295.2	--	--	--	Prime Farmland
Gessner fine sandy loam, 0 to 1 percent slopes, ponded	Ge	Moderate	High	High	163.8	--	--	--	None
Addicks loam	Ad		High	High	46.6	--	--	--	Farmland of Statewide Importance
Addicks-Urban land complex	Ak		High	High	50.1	2.8	2.7	2.4	None
Clodine-Urban land complex	Ce		High	High	27.4	--	--	--	None
Katy fine sandy loam, 0 to 1 percent slopes	Kf		High	High	7.0	--	--	--	Prime Farmland
Nahatche loam, frequently flooded	Na		Moderate	High	0.1	--	--	--	None
Clodine fine sandy loam, 0 to 1 percent slopes	Cd		High	High	83.4	--	--	--	None
Aris fine sandy loam	Ap	High	Moderate	High	3.0	--	--	--	Prime Farmland, if Drained
Aris-Gessner complex	Ar		Moderate	High	52.6	--	--	--	Prime Farmland, if Drained
Aris-Urban land complex	As		Moderate	High	--	8.1	0.6	41.6	None
Urban land	URLX	NA	N/A	NA	--	86.2	77.0	43.4	None

Source: NRCS, 2013

Geology

In Harris County, the Study Areas are comprised of four geologic formations. Descriptions of the formations and the area in acres of Segment 5 and the three terminal options are provided in **Table 30**.

Table 30: Predominant Geological Formations within the Study Area – Harris County							
Formation	ID	Period/ Epoch Series/ Group	Characteristics	Area of Segment 5 (acres)	Industrial Site Terminal Option (acres)	Northwest Mall Terminal Option (acres)	Northwest Transit Center Terminal (acres)
Beaumont	Qb- stipled	Quaternary/ Holocene, Pleistocene/N one listed	Dominantly clay and mud of low permeability, high water-holding capacity, high compressibility, high to very high shrink-swell potential, poor drainage, level to depressed relief, low shear strength and high plasticity; geologic units include interdistributary muds, abandoned channel-fill muds and overbank fluvial muds.	--	7.0	--	69.1
Lissie	Ql	Quaternary/ Holocene, Pleistocene/N one listed	Previously described in Table 27 .	551.1	90.0	80.2	18.2
Willis	Qw	Tertiary/ Pliocene/ None listed	Clay, silt, sand and minor siliceous gravel of granule to pebble size including some petrified wood; sand coarser than in younger units. Deeply weathered and lateritic, indurated by clay and cemented by iron oxide locally, concretions of iron oxide numerous, noncalcareous; fluviatile; maximum thickness 75 feet.	421.1	--	--	--
Willis (coastward belt)	Qwc	Quaternary/ Pleistocene/N one listed	Previously described in Table 24 .	428.9	--	--	--

Source: BEG, 1996 and USGS, 2007



TECHNICAL MEMORANDUM
IMPACTS TO USACE PROJECTS

To: Jerry Smiley, AICP, AECOM

From: Jennifer Oakley, AECOM

Date: November 1, 2017

RE: DALLAS TO HOUSTON HSR – 408 Impacts to USACE Projects

As noted in **Section 3.7, Waters of the U.S.**, impacts to U.S. Army Corps of Engineers (USACE)-Projects are documented and approved through separate Section 408 permission and Section 404 permit authorization processes with the Fort Worth and/or Galveston District. These authorization requests will be developed, reviewed and submitted by Texas Central Railroad (TCRR), not the Federal Railroad Administration (FRA), and are not part of this Environmental Impact Statement (EIS). However, the USACE is a cooperating agency on the Dallas to Houston High-Speed Rail (HSR) Project and will use the EIS and its appendices as a base document for their review and supplemental analysis of USACE impacts. As part of that analysis, the USACE has requested specific data from FRA detailing estimated potential impacts to resources within the USACE project boundaries. This technical memorandum focuses on Section 408 potential impacts.

Section 408

The authority to grant permission to alter USACE federally authorized civil works projects is contained in Section 14 of the Rivers and Harbors Act of 1899 and codified in Title 33 Section 408 (Section 408). Current Section 408 policy can be found within Engineer Circular (EC) 1165-2-216, *Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Work Projects Pursuant to 33 USC 408*. Issuance of a Section 408 permission is a federal action and subject to NEPA and other environmental laws, executive orders, regulations, and policies. The approval under Section 408 is termed a *permission*. Non-USACE entities proposing to do the work are defined as *requesters*. An *alteration* is defined as, "...any action by any entity other than USACE that builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project." The proposed Dallas to Houston HSR Project would constitute an alteration of two USACE federally authorized civil works projects: the Dallas Floodway Extension (DFE) and the Dallas Floodway (DF). These USACE projects are described below.

Dallas County

Segment 1 is located in Dallas County (**Appendix D, Project Footprint Mapbook, Sheets 1-23**). The alignment begins on the south side of downtown Dallas near IH-30 and Lamar Street and parallels the existing Union Pacific Railroad (UPRR) freight line towards Interstate Highway (IH)-45. It parallels the west side of IH-45 as it crosses the Trinity River, running between the existing Burlington Northern Santa Fe (BNSF) freight line and the highway as it crosses East Illinois Avenue.

USACE federally authorized civil works projects subject to Section 408 approval located within Dallas County include:

- DFE-Central Wastewater Treatment Plant (CWWTP)
- DFE-Floodway
- DFE-Rochester Levee
- DFE-Future Levees (Lamar Street)
- DFE-Chain of Wetlands
- DFEIH-45 Realignment
- DF
- DF Levees (East, West, CWWTP Ring)
- DF-Sumps

The proposed Project corridor and affiliated structures will include alterations to two existing levees in the vicinity of the Trinity River, the existing DF East Levee, and the CWWTP Ring Levee.

The East Levee was completed in 1932 and provides protection along the north side of the Trinity River. This levee begins along the Elm Fork of the river and terminates at Santa Fe Avenue. In the 1950s, the DF reconstruction project modified the East Levee to flatten the levee slope to 3:1, widen the crest, and improve the interior drainage system. These improvements were completed in 1958. In 2012, the DF East and West Levees were updated to include a soil-bentonite cutoff wall to address seepage related concerns.

The CWWTP Ring Levee is located on the south side of the Trinity River and protects the CWWTP. The levee was constructed in the 1940s, encircles the facility, and provides protection from floodwaters – not directly providing protection to the public. These levee embankments were improved by the City of Dallas in 1994 to increase the crest height and flatten the slopes.

The DFE, an initiative jointly developed through the City of Dallas' partnership with the USACE, will eventually extend flood protection in the Trinity River corridor to the intersection of Interstate Highway 20 (IH-20) and Dowdy Ferry Road. Once completed, this Project will include the construction of new levee facilities, including the Lamar Street Levee (hereinafter the "Lamar Levee"), as well as a number of facilities providing recreational and environmental value.

The Lamar Levee will connect the DF East Levee system to the Rochester Levee system and is currently designed to a conceptual (35%) level. At this time, the Lamar Levee does not have a schedule for design completion nor does it have funding for construction.

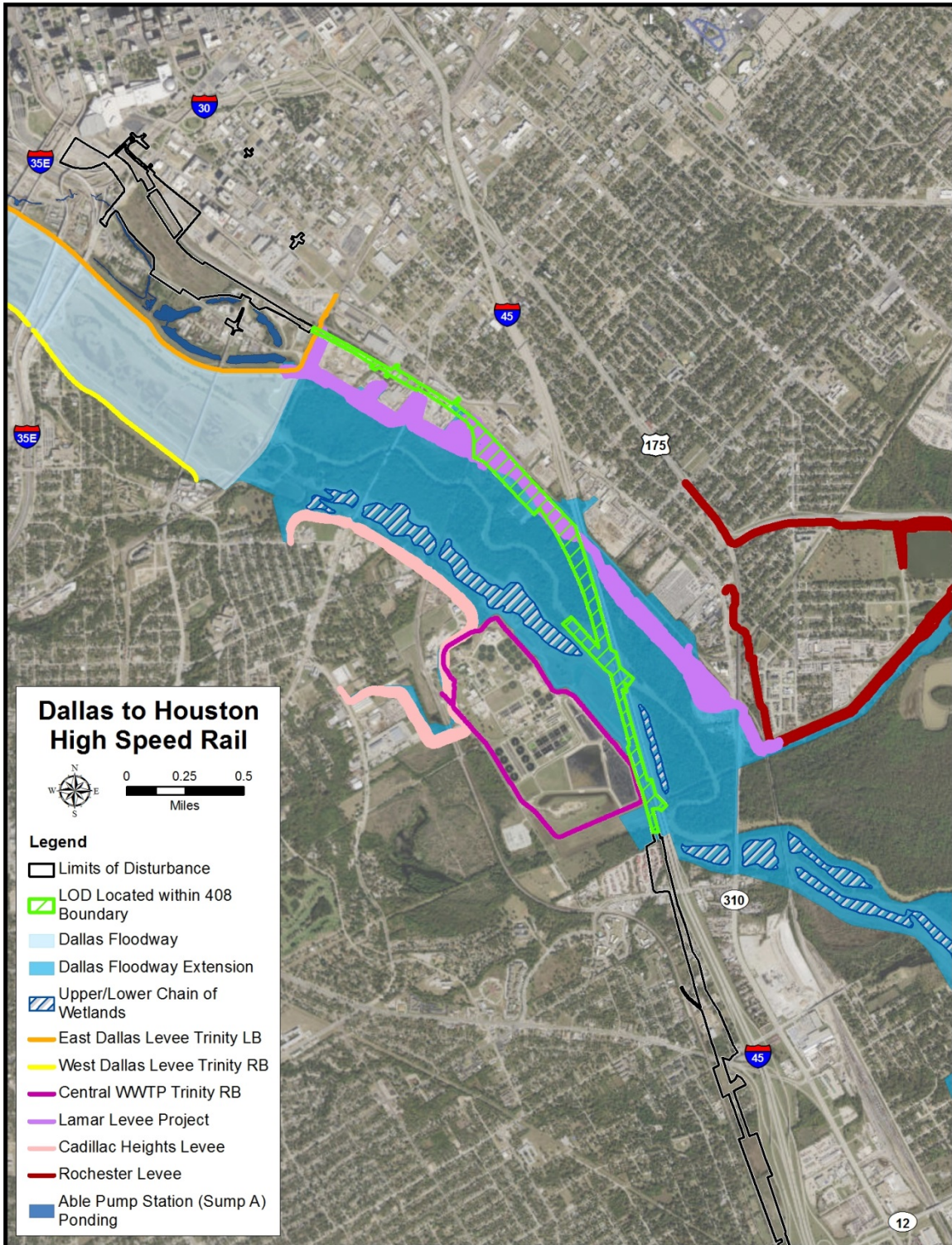
Along with crossing two existing levees and one proposed levee, the HSR Project also crosses between the Upper and Lower Chain of Wetlands, and near the Able Sump Pumps ponding areas.

The Upper and Lower Chain of Wetlands cells are interconnected ponds fed year-round by reclaimed water from the CWWTP. During flood events, the wetlands reduce flood risk by providing an efficient and second pathway to convey waters through the DF system. The wetlands project, which is part of the overall DFE, began in 2004 and is scheduled for completion in 2018.

The City of Dallas manages interior drainage by allowing stormwater runoff to pool in sumps in interior areas before pumping or draining to the Trinity River within the DF. The Able Pump Station manages stormwater in the Able Basin, which currently consists of nine sump ponds, two pump stations, and associated infrastructure. Although originally included as part of the DFE project, the City of Dallas expedited improvements due to safety concerns associated with flooding impacts. The HSR Project will not encroach on the Able Pump Station ponding areas and proposes no alterations to this system.

Figure 1 illustrates the Project footprint in association with these USACE Projects. It should be noted however, that there are additional mitigation lands not depicted on the figure as a part of the DFE. These areas are located to the southeast of the Project and outside of the LOD. Specifically, these mitigation lands are located to the east and southeast of the DFE-Lower Chain of Wetlands Cell G.

Figure 1: Project Footprint in Association with USACE Projects



Source: AECOM, 2017

Wetlands

Section 3.7.5.2.1, Waters of the U.S. outlines the estimated impacts to potential waters of the U.S. as a result of Segment 1 within Dallas County including impacts to USACE projects. As requested by the USACE, impacts to streams, wetlands and waterbodies within the USACE projects located within Segment 1 in Dallas County are provided in **Tables 1** through **3**.

Table 1: Estimated Stream Impacts – Dallas County				
Classification	Crossing Type	USACE Projects		
		# of Crossings*	Temp	Perm
			linear feet	
Artificial	Bridge/Viaduct	5	43.5	0.00
	Excavation	1	0.00	449.5
Perennial	Bridge/Viaduct	2	0.00	0.00
	Excavation	1	0.00	165.1
Total		9	43.5	614.6

Source: USGS, 2016; FNI, 2017

*Number of crossings was determined based on a combination of NHD and field collected data. Not all features have been field-verified. Each crossing is included by type, and includes where a single feature may be crossed multiple times within the LOD.

Table 2: Estimated Wetland Impacts – Dallas County				
Wetland Type	Crossing Type	USACE Projects		
		# of Crossings*	Temp	Perm
			acres	
Emergent	Bridge/Viaduct	7	0.27	0.00
	Excavation	2	0.00	2.1
Forested	Conversion	11	0.05	0.56
	Excavation	5	0.00	1.9
	Fill	2	0.00	0.05
Total		27	0.32	4.6

Source: USFWS, 2016; FNI, 2017

*Number of crossings was determined based on a combination of NWI and field collected data. Not all features have been field-verified. Each crossing is included by type, and includes where a single feature may be crossed multiple times within the LOD.

Table 3: Estimated Waterbody Impacts – Dallas County				
Waterbody Type	Crossing Type	USACE Projects		
		# of Crossings*	Temp	Perm
			acres	
Freshwater Pond	Bridge/Viaduct	8	<0.01	0.00
	Excavation	3	0.00	1.0
	Fill	2	0.00	0.09
Total		13	<0.01	1.1

Source: USGS, 2016; USFWS, 2016; FNI, 2017

*Number of crossings was determined based on a combination of NWI and field collected data. Not all features have been field-verified. Each crossing is included by type, and includes where a single feature may be crossed multiple times within the LOD

Vegetation

Section 3.6.5.2.1, Natural Ecological Systems and Protect Species, outlines impacts to vegetation in Dallas County, including impacts to USACE Projects. As requested by the USACE, **Table 4** identifies estimated impacts to vegetation within these USACE Projects based on Ecological Mapping System of Texas (EMST) data.

Table 4: Estimated Vegetation Impacts – Dallas County		
Vegetation Type	USACE Projects	
	Temp	Perm
	acres	
Urban Low Intensity	6.6	27.5
Central Texas: Floodplain Hardwood Forest	3.4	21.4
Urban High Intensity	8.2	15.2
Native Invasive: Deciduous Woodland	0.61	10.7
Open Water	0.05	2.7
Central Texas: Riparian Herbaceous Vegetation	0.00	0.02
Total	18.9	77.5

Source: Elliot et al., 2014

Cultural Resources

As noted in **Section 3.19, Cultural Resources**, there is one cultural resource site crossed by Segment 1 of the Project that requires coordination with the USACE. **Resource DA.072** is the Trinity River Floodway Historic District that encompasses 3,554.20 acres along the Trinity River. The DF, as a single engineering system for flood control and reclamation, is a historic and cultural resource with locally significant historical associations with flood control and the history of city planning and community development in Dallas, and is a significant statewide example of an engineering system designed for flood control and development enhancement. The period of significance of the DF spans from 1928, when floodway construction started, to 1959, when the project was completed. The essential physical features of the DF are the levees, diversion channels, and overbank. The DF retains all its essential physical features and its ability to convey its significance to the observer. The DF meets the NEPA definition of a significant historic and cultural resource that must be considered in assessment of environmental impacts as required under CEQ regulations Part 1502.16.

FRA has recommended this resource eligible for listing in the NRHP under Criterion A for community development. A narrow portion (approximately 140 feet wide) at the south end of the district crosses the LOD of Segment 1 in Dallas County, at the Santa Fe Railroad tracks. Previous coordination between the USACE and the THC determined that due to the type of resource, some changes in the setting of the historic district must be expected and that it is anticipated that the construction of additional bridges across the floodway would not adversely affect the historic floodway (THC Letter dated December 30, 2011). Therefore, it is recommended the Project would have no adverse effect on Resource DA.072.

It should be noted that Section 405 (a) of Public Law 111-212 and USACE guidance, directs the USACE to not to make any determinations under the NHPA for Resource DA.072, the DF, or resources within the DF. However, USACE must still consider impacts to cultural resources under NEPA. Additionally, the USACE Sections 404/10 permit evaluation covers actions impacting jurisdictional wetlands and waters of the U.S. Some of the actions of the Project in jurisdictional areas include compensatory mitigation areas and facilities built to support the high speed rail corridor, if the sites are located in wetlands or waters of the U.S. The USACE's Section 106 scope of analysis is established in accordance with 33 C.F.R. 325 Appendix C and is specifically identified and geographically defined for each crossing of a water of the U.S. and is not inclusive of the entire railway. In some instances FRA's Section 106 control and responsibility (area of potential effect (APE)) will be inclusive of the USACE's scope of analysis, while in other cases,

where large expanses of uplands are present, the FRA 106 APE will be well outside of the USACE's scope of analysis.

Permission Request Process

In response to these impacts, TCRR shall submit a Section 408 request to the USACE Fort Worth District. All Build Alternatives (A through F) would require 408 authorizations from the USACE Fort Worth District.

Ellis County

In Ellis County, Segments 2A and 2B cross USACE-owned property near Bardwell Lake. Segment 2A crosses a flowage easement and would require coordination with USACE. However, a Section 408 permission would not be required to cross a flowage easement. Segment 2B crosses fee land and would require Section 408 authorization. Further coordination with the USACE determined that with two alternatives evaluated for crossings in and around Bardwell Lake, one crossing fee land and the other crossing land where the government retains a flowage easement, per USACE National Non-Recreation Outgrant Policy, the alternative proposed to cross fee land would be denied and not carried forward in the USACE evaluation criteria as there is a viable alternative off of federal property. This would result in the USACE's removal of Build Alternatives D, E and F from consideration. As noted above, Segment 2A (Build Alternatives A, B and C) would not require a Section 408 permission; therefore, impacts to streams, wetlands, waterbodies, vegetation and cultural resources in relation to Segment 2A in Ellis County are not outlined in this technical memorandum.