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APPLICATION OF LCRA	§	BEFORE THE STATE OFFICE
TRANSMISSION SERVICES	§	
CORPORATION TO AMEND A	§	
CERTIFICATE OF CONVENIENCE AND	§	OF
NECESSITY FOR THE ROUND ROCK-	§	
TO-LEANDER138 kV TRANSMISSION	§	
LINE IN WILLIAMSON COUNTY, TEXAS	§	ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY AND EXHIBITS

OF

TOM YANTIS

ON BEHALF OF THE

CITY OF LEANDER

September 12, 2016

1174

DIRECT TESTIMONY AND EXHIBITS OF TOM YANTIS

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I. BACKGROUND AND QUALIFICATIONS

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: My name is Tom Yantis. My business address is 104 North Brushy, Leander, Texas 78641.

Q: BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?

A: I am employed by the City of Leander, Texas as Director of Development Services and Assistant City Manager. A copy of my resume, which details my work and educational experience, is attached to this testimony as **EXHIBIT TY-1**.

Q: PLEASE DESCRIBE YOUR WORK HISTORY AT THE CITY OF LEANDER.

A: I joined the City of Leander in May 2013 as Director of Development Services and added the title of Assistant City Manager in October 2014. My duties include management of the City's Planning, Engineering, Building Inspections, and Parks and Recreation Departments. I oversee and manage all of the City's planning initiatives, including preparation of its comprehensive plan, transportation plan, and parks plan, and approvals of planned residential and commercial developments. I also oversee and manage the City's water, wastewater, and transportation engineering teams and am involved in development and implementation of the City's public infrastructure master plans, capital improvement plans, and other public utility matters. In my capacity as Assistant City Manager, I represent my departments to the public and before the City Council and City boards, commissions and committees, and perform city manager duties in the absence of the City Manager.

Q: PLEASE SUMMARIZE YOUR WORK EXPERIENCE PRIOR TO JOINING THE CITY OF LEANDER.

A: Prior to joining the City of Leander, I was employed from 2011 to 2013 by the Brushy Creek Municipal Utility District as its Chief Administrative Officer where my duties included oversight of all of the administrative functions and regulatory compliance aspects of the District, including planning and operations of the District's utility and parks and recreation systems. From 2009 to 2011 I was vice-president and leader of the community planning national practice for H. W. Lochner, which specializes in municipal comprehensive planning and urban design. In 2011 I led the planning team for the City

of Coppell's Comprehensive Master Plan which was selected as the winner of the State Comprehensive Planning Award by the Texas Chapter of the American Planning Association. From 1999 to December 2008 I was employed by the City of Georgetown in various positions including Interim City Manager in 2002 and Assistant City Manager for over eight (8) years. For the majority of my tenure at the City of Georgetown I was an Assistant City Manager and I managed the following departments: Planning, Building Inspections, Housing, Parks and Recreation, Convention and Visitors Bureau, Main Street Program, Public Library, Municipal Airport, and Information Technology.

Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND ANY PROFESSIONAL LICENSES OR CERTIFICATIONS HELD BY YOU.

A: My degrees are both from the University of Texas at Austin: In 1993 I obtained a Bachelor of Arts degree in Government and in 1995 I obtained a Master of Science degree in Community and Regional Planning. I am also certified as a professional planner by the American Institute of Certified Planners, which is the American Planning Association's professional institute providing nationwide, independent verification of planners' qualifications.

Q: WHAT PROFESSIONAL MEMBERSHIPS OR ASSOCIATIONS DO YOU HOLD?

A: I am a member of the following organizations:

- American Planning Association (American Institute of Certified Planners)
  Texas City Management Association
  Envision Central Texas, Secretary 2012, Vice Chair 2011, Treasurer 2010, Board of Directors 2005-2013, Community Design Committee co-chair 2009-present, Community Outreach Committee co-chair 2006-2009
  Congress for the New Urbanism, Central Texas Chapter, Secretary 2010, Founding Member of the Board of Directors 2006-2011

Q: ON WHOSE BEHALF ARE YOU TESTIFYING?

A: The City of Leander, Texas ("City" or "Leander").

Q: DESCRIBE THE ASPECTS OF YOUR CURRENT JOB THAT RELATE TO PLANNING AND DEVELOPMENT.

A: I manage all of the City's departments related to planning and development including Planning, Engineering, and Building Inspections. I am involved in the review and approval of all new development projects and present those projects, when necessary, to the Planning and Zoning Commission and City Council for final approvals.

Q: DESCRIBE THE ASPECTS OF YOUR CURRENT JOB THAT RELATE TO TRANSPORTATION.

A: I manage the departments that maintain the City's Transportation Plan and am integrally involved in ongoing refinements and updates to that plan. I also review all new subdivision and site development applications that include the extension and expansion of the City's transportation network. I routinely coordinate with Williamson and Travis Counties, the Texas Department of Transportation, the Central Texas Regional Mobility Authority, and Capital Metro on projects within the City that impact those agencies' facilities. I serve as the alternate for the City's membership on the Capital Area Metropolitan Planning Organization (CAMPO).

Q: DESCRIBE THE ASPECTS OF YOUR CURRENT JOB THAT RELATE TO PARKS AND RECREATION.

A: The Director of Parks and Recreation is one of my direct reports. I am involved on a daily basis in the planning of new parks, recreational facilities and trails. I review and approve development applications as they relate to the provision of park and recreational facilities in compliance with the City's parkland dedication ordinance. I routinely coordinate with Williamson and Travis Counties and adjacent municipalities on the planning of parks and recreational improvements of mutual interest.

Q: DESCRIBE THE ASPECTS OF YOUR CURRENT JOB THAT RELATE TO ENGINEERING.

A: The City Engineer is one of my direct reports. I am involved on a daily basis in the planning of new and expanded utility systems including water, wastewater and drainage. I review and approve development applications as they relate to the provision or expansion of the City's utility system. I routinely coordinate with neighboring municipalities on utility projects of mutual interest including the negotiation of agreements for the provision and receipt of wholesale water and wastewater services.

II. OVERVIEW OF TESTIMONY

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of my testimony is to address the City's position on various route Segments and Substation Sites proposed in LCRA's Application.

Q: IDENTIFY ALL EXHIBITS THAT YOU ARE SPONSORING THROUGH YOUR TESTIMONY.

A: I am sponsoring the following exhibits:

- EXHIBIT TY-1 Resume of Thomas ("Tom") K. Yantis
- EXHIBIT TY-2 City Council Resolution No. 16-014-00 (August 4, 2016)
- EXHIBIT TY-3 2016 Leander City Limits Map
- EXHIBIT TY-4 US Census Bureau Population Data
- EXHIBIT TY-5 2016 Aerial Photo of Leander
- EXHIBIT TY-6 Chart of Residential Building Permits Issued
- EXHIBIT TY-7 2015 Area Developments Map
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- EXHIBIT TY-10 Water Plan Map
- EXHIBIT TY-11 Transportation Plan Map
- EXHIBIT TY-12 Google Earth image of The Domain in Austin
- EXHIBIT TY-13 Riverside Resources - LCRA TSC 1-1
- EXHIBIT TY-14 City of Leander - LCRA TSC 1-1
- EXHIBIT TY-15 City of Leander - LCRA TSC 1-2

Q: WERE THESE DOCUMENTS PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A: **EXHIBIT TY-1, EXHIBIT TY-3, EXHIBIT TY-6, EXHIBIT TY-7, EXHIBITS TY-8, EXHIBIT TY-9, EXHIBIT TY-10,** and **EXHIBIT TY-11** were each prepared by me or under my direct supervision. **EXHIBIT TY-2** was prepared by the City's legal counsel after consultation with the City Council, which approved the resolution on August 4, 2016. **EXHIBIT TY-4** was prepared by me using the datasets created by the US Census Bureau available at www.census.gov. **EXHIBIT TY-5** is an

aerial photograph taken by Pictometry, an aerial photography service to which the City subscribes which produces images upon which the City routinely relies for updating its GIS system and for other mapping purposes, and upon which I rely for various additional land use planning purposes. **EXHIBIT TY-12** was prepared by me using Google Earth on September 7, 2016 and is an aerial photographic representation of conditions on the ground in the location shown as of the date of the image. **EXHIBIT TY-13, EXHIBIT TY-14** and **EXHIBIT TY-15** were prepared by LCRA in response to Requests for Information in this proceeding.

Q: HAS THE CITY COUNCIL TAKEN A POSITION ON ROUTING AND SUBSTATION LOCATIONS IN THIS CASE?

A: Yes, on August 4, 2016 the City Council adopted Resolution No. 16-014-00, which is attached to my testimony as **EXHIBIT TY-2**. Prior to that date, on February 2, 2016, the City Council adopted Resolution No. 16-003-00 on the same subject. The February resolution was adopted during the public comment period but before the official filing of LCRA's Application. LCRA made some changes after the public comment period and as a result the City Council's February resolution became outdated due to changes in segment designations, additions of new segments, and additions of new potential substation locations which were not revealed until LCRA's April 2016 Application filing. The February 2016 resolution also erroneously referenced use of redundant segments in the Round Rock area. For those reasons and after reviewing the routes in the final LCRA Application, the City Council decided to repeal the February resolution and issue a new resolution, and the new resolution is attached to my testimony as **EXHIBIT TY-2.**

Q: WHAT ROUTE SEGMENTS DOES THE CITY OPPOSE IN THIS PROCEEDING?

A: The City opposes route Segments A, A6, B, C5, D5, E5, G, K1, U4, V4, X4. The City also opposes all route Segments that cross or are near Brushy Creek and any of the City's parkland or trail corridors. The City also opposes route Segments that use US 183A Toll; Ronald Reagan Blvd.; Parmer Lane; FM 1431 between Ronald Reagan Blvd. and Sam Bass Road/CR 175; and Sam Bass Road/CR 175 south of FM 1431.

Q: WHAT OTHER ROUTE SEGMENTS DOES THE CITY OPPOSE IN THIS PROCEEDING?

A: The City opposes certain Substation Sites; therefore, the City also opposes the route Segments that provide access to those Substation Sites.

Q: WHAT ROUTE SEGMENTS DOES THE CITY SUPPORT IN THIS PROCEEDING?

A: The City supports routes that use route Segments D, E, K, L4, N4, R and Q4, which commence at the existing Leander substation, then extend easterly along the north side of Hero Way, then head south to connect to FM 2243 at Substation 2-6. From that point Leander supports using route Segments N4, R and Q4, which connect to Sam Bass Road/CR 175. Beginning with route Segment Q4, the City supports the same route Segments as are shown in LCRA's Application for Route 31.

Q: WHAT SUBSTATION LOCATIONS WITHIN LEANDER'S JURISDICTION DOES THE CITY OPPOSE IN THIS PROCEEDING?

A: The City specifically opposes Substation Sites 2-2, 2-4, 2-8 and 1-6. In addition, the City opposes placement of both Substation Sites within Leander's jurisdiction. The City does not oppose hosting one new Substation Site for this project in the jurisdictional boundaries of Leander, but does not want to bear the burden of being the situs of both Substation Sites.

Q: ARE ALL OF THE PROPOSED SUBSTATION SITES DESIGNATED IN LCRA'S APPLICATION WITH A "*1-__*" LOCATED WITHIN THE CITY OF CEDAR PARK'S JURISDICTION?

A: No. As is shown on **EXHIBIT TY-3**, Substation Site 1-1 and Substation Site 1-6 are actually in Leander's extraterritorial jurisdiction, and are not in the City of Cedar Park's jurisdiction. The land where Substation Site 1-6 is located is slated to be annexed by Leander in the next five (5) years, and Substation Site 1-1 is slated to be annexed by Leander within the next two (2) years.

Q: WHAT SUBSTATION LOCATION IN LEANDER'S JURISDICTION DOES THE CITY SUPPORT IN THIS PROCEEDING?

A: The City supports Substation Site 2-6, as long as the second substation site is not also in Leander's jurisdictional limits.

Q: IS THE CITY RECOMMENDING A SPECIFIC ROUTE IN THIS PROCEEDING?

A: Yes, the City is recommending the following route: D-E-K-L4-(Substation Site 2-6)-N4-R-Q4-V-W-T4-X-J1-A5-L1-P1-T1-V5-D2-(Substation Site 1-7)-K4-J2-Q2-S2-Y2-Z2-P5-B3-C3-E3-G3-I3-J4.

Q: IS THE CITY QUESTIONING THE NEED FOR THE TRANSMISSION LINES PROPOSED IN THIS PROCEEDING?

A: No, the City understands the need to have reliable electric service and City takes no issue with the need for the lines. The City supports infrastructure improvements that benefit areas within the City's jurisdiction, but believes that the infrastructure should be sited in a way that does not conflict with other City goals, responsibilities and community values.

Q: DID YOU PREPARE THIS TESTIMONY?

A: Yes, it was prepared by me or under my direct supervision.

III. LEANDER CHARACTERISTICS

Q: PLEASE DESCRIBE THE GROWTH LEANDER HAS BEEN EXPERIENCING IN RECENT YEARS.

A: The City of Leander has been one of the fastest growing cities in Texas and the United States for the past several years. As is shown on the US Census Bureau's data reports excerpted on **EXHIBIT TY-4,** between 2005 and 2015 the City's population increased approximately 112%, from 17,851 to 37,889 people. And as is shown on **EXHIBIT TY-5**, which an aerial photograph taken over the City in January of 2016, that growth is heavily concentrated between and along US 183A Toll and Ronald W. Reagan Blvd.

Q: DO YOU HAVE ANY OTHER EVIDENCE OF THE CITY OF LEANDER'S RAPID BUILD OUT?

A: Yes, **EXHIBIT TY-6** is a chart I prepared summarizing the number of residential building permits issued in the City each year from 2007 through 2015. You can see from **EXHIBIT TY-6** that the residential growth in the City has been quite dramatic. This explosive residential growth is one of the key reasons why the City has been engaged in

updating all of its planning documents to ensure that development is guided in a way that achieves the citizens' long-term community vision, goals and values.

Q: PLEASE DESCRIBE THE CHARACTER OF US 183A TOLL AS IT EXISTS IN LEANDER'S JURISDICTIONAL LIMITS.

A: US 183A Toll is divided six lane limited access tollway with multi-lane access roads on both sides, which runs in a north-south direction originating just north of its intersection with US 29 and continuing south all the way through Leander. As it exists in LCRA's study area, and as can be seen on **EXHIBIT TY-7**, US 183A Toll is primarily bordered on both sides by existing or planned development, with only a few developable tracts remaining. **EXHIBIT TY-7** was last updated in 2015 (before annexations in 2016 changing the City limits and extraterritorial jurisdiction boundaries). As of the date it was prepared, **EXHIBIT TY-7** is an accurate representation of the platted and proposed residential developments in the City's jurisdiction, and of the developed and undeveloped residential lots (i.e., lots that are exempt from platting but are still developed). On this exhibit, you can see that there are very few tracts that are completely "white," that is, there are few lots that have not been designated as being improved, platted, proposed for platting, or for which there are current plans for development. When the City updates this map at the end of 2016, there will be more platted and proposed development areas shown, and more improved lots designated. One important note about **EXHIBIT TY-7** – it does not reflect all lots having commercial development. Commercial development may or may not require platting, so some of the "white" areas shown on **EXHIBIT TY-7** may in fact have commercial development existing or currently planned.

As shown on **EXHIBIT TY-8,** US 183A Toll has been designated on the City's Future Land Use Map as a Mixed Use Corridor for most of its length, as Community Center at its intersection with Crystal Falls Parkway, and as Employment Mixed Use on the east side of the road in the area between Hero Way and the banks of Brushy Creek.

Also, as can be seen in **EXHIBIT TY-9**, the City has 18-and 24-inch diameter wastewater lines on either side of US 183A Toll south of Crystal Falls Parkway, and as can be seen in **EXHIBIT TY-10**, the City has 18- and 24-inch diameter water lines crossing US 183A Toll at FM 2243 and Crystal Falls Parkway, respectively. Additional

wastewater and water infrastructure is in the process of being designed and/or constructed to serve the new developments shown on **EXHIBIT TY-7.**

Q: PLEASE DESCRIBE THE CHARACTER OF RONALD W. REAGAN BLVD. AS IT EXISTS IN LEANDER'S JURISDICTIONAL LIMITS.

A: Ronald W. Reagan Blvd. is a City road from about 3,500 feet south of Journey Parkway (which is the boundary between the jurisdictions of the Cities of Leander and Cedar Park), all the way north to its intersection with SH 29. It is a divided four-lane road, and as can be seen on **EXHIBIT TY-7**, in the LCRA study area it is primarily bordered on both sides by existing or planned development, with only a few non-developed tracts remaining. In addition, as can be seen on **EXHIBIT TY-9**, there is also a 30-inch diameter wastewater line across Ronald W. Reagan Blvd. commencing at the boundary line between Leander and Cedar Park which continues north for approximately 1,600 feet and is on the west side of Ronald W. Reagan Blvd. Also, as is shown on **EXHIBIT TY-10,** the City has a 16- to 42-inch diameter water line on the east side of Ronald W. Reagan Blvd. extending from a point near its intersection with Kauffman Loop (outside of the LCRA study area) and continuing south to its intersection with CR 272 (into Cedar Park's jurisdiction). The City also has a 12-inch diameter water line on the west side of Ronald W. Reagan Blvd. in the area roughly between Crystal Falls Parkway and Journey Parkway which is also shown on **EXHIBIT TY-10**. Additional wastewater and water infrastructure is in the process of being designed and/or constructed to serve the new developments shown on **EXHIBIT TY-7.**

In the LCRA study area, Ronald W. Reagan Blvd. has been designated on the City's Future Land Use Map as Activity Center in a large area in the vicinity of its intersection with Hero Way and FM 2243, with smaller Neighborhood Centers at the intersections of E. Crystal Falls Parkway and Journey Parkway, and Mixed Use Corridor on both sides in between, as shown on **EXHIBIT TY-8**.

Q: PLEASE DESCRIBE THE CHARACTER OF CR 175/SAM BASS ROAD BETWEEN FM 2243 AND FM 1431.

A: CR 175/Sam Bass Road is a City road in two places – one near its intersection with FM 2243 and one near its intersection with Journey Parkway. It is a two lane undivided road from its intersection with FM 2243 to a point just due north of its

intersection with Parkside Parkway, after which it is divided by a median of varying widths up to a point just south of its intersection with FM 1431. As can be seen on **EXHIBIT TY-7**, within Leander, CR 175/Sam Bass Road is bordered primarily by undeveloped property, with the exception of the Trails of Shady Oak subdivision on the east side of the road south of Journey Parkway and a few homes on large lots in the Creek Meadow Estates Subdivision, which is in the City's extraterritorial jurisdiction. The Parkside at Mayfield Ranch Municipal Utility District is also on the east side of the road north of Journey Parkway, but is not within the City of Leander's city limits or extraterritorial jurisdiction. As is shown on **EXHIBIT TY-9** and **EXHIBIT TY-10,** the City only has water and wastewater utilities across CR 175/Sam Bass Road at Journey Parkway to serve the Trails of Shady Oak Subdivision.

In Leander's jurisdiction, CR 175/Sam Bass Road has been designated on the City's Land Use Map as Neighborhood Residential roughly between its intersection with FM 2243 and CR 177, and Mixed Use Corridor for the remainder with a small Neighborhood Center node at its intersection with Journey Parkway as shown on **EXHIBIT TY-8**. At the present time, there are no approved plans for development along CR 175/Sam Bass Road other than the existing subdivisions mentioned previously and an old 2008 Concept Plan for the Sarita Valley Subdivision on the west side of the road south of FM 2243. However, that 2008 Concept Plan will likely not be implemented along CR 175/Sam Bass Road as that property was subsequently sold to Leander Independent School District for a future school site.

IV. ROUTING CONSIDERATIONS

Q: WHY DOES THE CITY OPPOSE ROUTE SEGMENTS A, B, G, U4, V4, and X4?

A: The City opposes these segments because they are near or cross Brushy Creek, which is one of the City's main parkland and trail corridors. The City has a large trail project called the North Brushy Creek Trail that is or will be constructed along the creek and it wants to protect that trail and the parkland surrounding that trail from transmission line and substation influences. The City also opposes route Segments L, G, K1, D6, B5,C5, M1, E5 G5, W1 and X1 for the same reasons.

Q: WHAT IS THE NORTH BRUSHY CREEK TRAIL?

A: The North Brushy Creek Trail is a regional trail that is planned to extend along Brushy Creek through Leander, eventually connecting with the Williamson County's Southwest Regional Park and Preserve. The extent of the North Brushy Creek Trail system within Leander's planning jurisdiction can be seen on **EXHIBIT TY-11** in orange solid or dashed lines. The solid orange line on that exhibit shows the portions of North Brushy Creek Trail that are already constructed. The dashed orange line on that exhibit shows the portions of North Brushy Creek Trail that are planned to be constructed in the future.

Q: WHAT LAND ALONG BRUSHY CREEK IS EXISTING OR PLANNED PARKLAND?

A: TABLE 1 below identifies the parcels where there is existing and currently planned public or private parkland. The proposed route Segments and Substation Sites that affect these areas are also shown on TABLE 1:

TABLE 1

Name	**Ownership**	**WCAD "R" No. and (LCRA Tract No.)**	**Affected by Segments or Substation Site No.**
Sarita Valley Greenbelt and Hike & Bike Trail	City	R515433 (U4-002), R521163 (V4-026), R521164 (V4-017), R517894 (V4-011), R513725 (V4-003).	Segments V4, U4
Brushy Creek Greenbelt	City	R091801 (L-019), R031277 (G-006).	Segments L, G
Pecan Creek	HOA	R522827 (E5-003), R538030 (E5-002), plus additional parcels not yet final platted but with preliminary plats requiring additional HOA parkland dedication.	Segment E5, Substation 1-6

Q: WHAT DO YOU MEAN BY THIS STATEMENT IN THE THIRD COLUMN IN TABLE 1, "PLUS ADDITIONAL PARCELS NOT YET FINAL PLATTED BUT WITH PRELIMINARY PLATS REQUIRING ADDITIONAL HOA PARKLAND DEDICATION?"

A: I am referring to land that I know will be dedicated as parkland in the future but has not yet been dedicated.

Q: HOW DO YOU KNOW IT WILL BE DEDICATED AS PARKLAND IN THE FUTURE?

A: Under the City's Code of Ordinances, developers are required to obtain approval of concept plans and preliminary plats before they seek approval of and record final plats. The City Code of Ordinances requires final plats to be consistent with concept plans and preliminary plats. In this case, the approved concept plan and preliminary plat for the Pecan Creek Subdivision show lots or areas along Brushy Creek that are to be dedicated as parkland at the time of final platting. However, the subdivision is being developed in sections or stages, and final plats for all sections of the subdivision have not yet been approved. This is a common occurrence for larger subdivisions. So what I mean by the statement in the third column of TABLE 1 is that the approved concept plan and preliminary plat for the Pecan Creek Subdivision both show additional areas of parkland along Brushy Creek, and those parkland dedications are required by City Code to occur at the time of final platting.

Q: DO THE CITY REGULATIONS REQUIRE PARKLAND DEDICATION FOR ALL TRACTS OF LAND ALONG BRUSHY CREEK?

A: Yes, for residential projects, parkland dedication is required along the creek and for non-residential projects, the trail corridor is required to be dedicated as parkland in compliance with the City Code of Ordinances. This is consistent with the vision outlined in the City's multiple planning documents, which identify the creation and preservation of the Brushy Creek Trail Corridor as a top community priority.

Q: PLEASE DESCRIBE IN DETAIL WHY THE CITY OPPOSES TRANSMISSION LINE ROUTES AND SUBSTATION SITES ALONG BRUSHY CREEK.

A: The Brushy Creek corridor is an important environmental and recreational asset that traverses the City from northwest to southeast. The City is actively planning and developing the Brushy Creek corridor for public parkland and recreational trails. In addition, the City is protecting the environmental quality and ecological character of the Brushy Creek corridor through the requirement of a development setback known as a

Riparian Corridor Setback. Riparian areas are the areas adjacent to a creek or stream. These areas serve many environmental and ecological functions including: water quality, soil conservation, wildlife habitat, wildlife corridors and more. The City's subdivision and zoning ordinances establish a minimum development setback requirement from riparian areas in order to help protect the unique characteristics of these riparian areas. The setback is based upon the drainage area that flows into the creek or stream. Along Brushy Creek, the riparian setback is one hundred (100) feet on both sides of the centerline of Brushy Creek for a total width of two hundred (200) feet. No structures or other development are allowed to occur within this area with the exception of crossings, trails and underground utilities.

The City opposes the location of overhead transmission lines and substations in proximity to Brushy Creek for two reasons: First, because the clearing that is required for the construction and ongoing maintenance of those facilities could significantly alter the characteristics of the creek and diminish the environmental and ecological function of the riparian zone. Second, the City also opposes the location of transmission lines and substations in these areas because they would create a less desirable aesthetic experience for users of the trail system, marring the natural environment in a way that is inconsistent with the objective of preserving a natural area. During construction especially, any removal of trees will have detrimental impacts to the area in the short term, and even if the area is allowed to return to a somewhat natural state over the long term, the ongoing mowing and maintenance of a transmission line easement would create a wide swath of land along the creek that would be significantly altered from its natural state, perhaps even render it totally devoid of any trees. Any lack of trees will result in a lack of shade, aesthetic interest and wildlife along the trail corridor which would negatively impact the use of the trail corridor for recreational purposes, and be the opposite of what was intended by the City in making significant investments in preserving the riparian corridor. There are several segments that cross the creek and if these crossings require the removal of trees and the ongoing mowing/clearing of the easement, this would be a problem. Segments of concern in regards to the impact on Brushy Creek within Leander are: A, B, G, L, U4, V4, I1, X4, K1, D6, B5, C5, M1, E5, G5, W1, and X1.

Q: WHY DOES THE CITY OPPOSE ROUTE SEGMENT A6?

A: Because recently the City Council directed City staff to commence work to create a tax increment reinvestment zone ("TIRZ") under Chapter 311 of the Texas Tax Code over the land generally shown on **EXHIBIT TY-7** as the white area between "Kittie Hill Acres" and "Ridgemar Landing" just west of Ronald W. Reagan Blvd. and north of FM 2243. The creation of the TIRZ is expected to expedite development on the land within the TIRZ and maximize the amount of taxes that can be collected by the City from the land within the TIRZ. The difference in taxes before and after development, known as the tax increment, is used to ensure that the land in the TIRZ is a sustainable economic development engine. So the after-development value of the land is critical to the success of the TIRZ. The proposed TIRZ may not be successful if developable area is displaced by a transmission line. For example, if Segment A6 is part of the route, Mr. Meledez's testimony states that an 80-foot wide right-of-way easement would be necessary (*see* Melendez Direct Testimony at p. 6, ll. 21-23). This would be about nine (9) acres of right-of-way out of the total TIRZ area, plus the area immediately adjacent to the right-of-way, in which development could be limited, thwarting the purpose of TIRZ creation. Because the City wants to create the highest taxable value of development of the land within the TIRZ, the City opposes placement of a transmission line through the TIRZ. Based on the City's preliminary analysis, the transmission line would cause difficulties for development in the proposed TIRZ area due to the location of Segment A6 for certain, and probably Segments X5 and Z5 as well, since land use for transmission line purposes conflicts with land uses for other taxable development purposes on the TIRZ tracts.

Q: PLEASE DESCRIBE WHY THE CITY FAVORS A ROUTE ALONG CR 175/SAM BASS RD. AND NOT ALONG RONALD REAGAN BLVD. OR 183A TOLL.

A: There are two primary reasons that the City prefers transmission line routes using Segments along CR 175/Sam Bass Rd. alignment over routes using Segments along US 183A or Ronald Reagan Blvd.

The first reason is related to the City's Comprehensive Plan and Future Land Use Map. Those documents embody the City's vision for the future and were just updated in

October 2015 after an extensive public input including public meetings and workshops, online community surveys, open-house community meetings, small stakeholder roundtables, social media engagement and similar traditional and innovative public engagement over a several month period. The end result is captured visually in the City's October 2015 Future Land Use Map attached to my testimony as **EXHIBIT TY-8**. I mentioned earlier that the Future Land Use Map shows that south of FM 2243, both 183A Toll and Ronald Reagan Blvd. are designated primarily as Mixed Use Corridors. The City's intention is for development in Mixed Use Corridors to have a variety of higher density residential, office, institutional and commercial land uses. The City's vision for this type of development is that it is compact, walkable and denser than development patterns that may occur outside the Mixed Use Corridors. Buildings in these Mixed Use Corridors are intended by the City to be located close to the edge of right-of-way with very shallow setbacks. Similarly, the areas designated on the Future Land Use Map as Activity Center, Community Center, Employment Mixed Use and Station Area Mixed Use are also areas intended for higher intensity development with very shallow setbacks from the roadway and compact, walkable blocks.

Transmission lines and substations can negatively impact the ability to achieve the City's stated land use goals, especially in terms of pedestrian access and general walkability. The transmission line right-of-way, if located adjacent to the street right-of-way, requires that buildings be set back significantly from the roadway. This is not a typical urban condition conducive to pedestrian mobility. If you think of a typical dense urban block, the buildings are set close to the street with a sidewalk between the building and the street edge. A transmission line easement adjacent to the street right-of-way creates a conflict. Examples of where transmission lines have negatively impacted the ability to develop walkable, mixed use areas include The Domain in Austin and Hero Way within the Transit Oriented Development (TOD) district west of US 183A Toll in Leander. In the Domain a transmission line crosses right through the middle of the project and effectively divides the project into two distinct, disconnected projects that are not conducive to pedestrian activity. This can be seen on the image I printed from Google Earth and attached to my testimony as **EXHIBIT TY-12**. On that exhibit I have marked the location of the transmission line corridor with a red rectangle and within that

rectangle you will note that on the ground in that area there are only parking lots and the substation location. The pedestrian access element of the Domain development is dramatically and significantly interrupted by the transmission lines and the substation. Along Hero Way west of US 183A Toll in the City's TOD, an existing transmission line easement has required that buildings be setback from the street in a way that is not in keeping with the City's goal of creating a walkable, mixed use urban development pattern in that area. The City's intent was to have a zero setback line from the right of way, and the existence of the electric easement thwarts that goal.

In contrast to 183A Toll and Ronald W. Reagan Blvd., CR 175/Sam Bass Road has a different land use designation on the City's Future Land Use Map. As I mentioned, and as is shown on **EXHIBIT TY-8**, the northern half of CR 175/Sam Bass Road as it exists in Leander is designated as Neighborhood Residential. The Neighborhood Residential land use designation is intended to accommodate primarily single-family detached-home neighborhoods. This land use type provides more opportunities to increase setbacks from a future transmission line without significantly compromising the overall character of the neighborhood. This is because the Neighborhood Residential land use designation calls for development patterns that are less compact and less dense than in the Mixed Use Corridors, Neighborhood Centers and Activity Centers. Although the land use designation for the southern portion of CR 175/Sam Bass Road as Mixed Use Corridor is the same as discussed above for US 183A Toll and Ronald W. Reagan Blvd., the remainder of CR 175/Sam Bass Road's is designated as Neighborhood Residential. That distinction, coupled with the lack of any currently-planned development along the west side of CR 175/Sam Bass Road (where the new transmission line may be placed) provides relatively more flexibility and a better opportunity to plan future development around the proposed transmission line.

Q: WHAT IS THE SECOND REASON WHY THE CITY FAVORS A ROUTE ALONG CR 175/SAM BASS RD. AND NOT ALONG RONALD REAGAN BLVD. OR 183A TOLL?

A: As I touched on above, the second reason is related to existing and planned development. **EXHIBIT TY-7** illustrates the significant amount of existing and planned

development along 183A Toll and Ronald W. Reagan Blvd. and shows that, by comparison, there is far less existing or planned development along CR 175/Sam Bass Road. **EXHIBIT TY-7** also shows that the undeveloped parcels along CR 175/Sam Bass Road are mostly large parcels. The size of these parcels means that when these larger parcels do come to the City for platting and other development approvals, there will be a lot more flexibility in terms of land planning which will more easily allow the landowner to develop the property to its desires and the City to implement the land use vision captured in its Future Land Use Map, while still accommodating the transmission line.

Q: WHY DOES THE CITY SUPPORT SEGMENTS D, E, K, L4, N4, R and Q4?

A: Those route Segments extend in an eastward direction along the north side of Hero Way from the existing Leander substation to FM 2243 into Substation Site 2-6, and then west along FM 2243 to its intersection with CR 175/Sam Bass Road. The City supports those route Segments for several reasons. First, this alignment allows connection at Substation Site 2-6, which is the Substation Site that the City supports. Second, the line would parallel an existing road, Hero Way, along route Segments E and K, and the proposed extension of Hero Way along route Segment L4. Also, Segments D, E and K would be on the north and opposite side of FM 2243 from the proposed TIRZ and are a better choice for the City for the reasons I discussed above. LCRA has also said that route Segments E and L4 are planned to have narrower rights-of-way than the standard 80-foot right of way (*see* Melendez Direct Testimony at p.6, l. 26 – p. 7, l. 6), which frees up more land for development.

V. SUBSTATION SITING CONSIDERATIONS

Q: WHY DOES THE CITY OPPOSE SUBSTATION SITE 2-2?

A: As is shown on **EXHIBIT TY-11** the City's Transportation Plan calls for the extension of Crystal Falls Parkway to the east of Ronald W. Reagan Blvd. and construction of Substation Site 2-2 would conflict with that extension. Also, Crystal Falls Parkway between US 183A Toll and Ronald W. Reagan Blvd. is designated as Mixed Use Commercial on the City's Future Land Use Map, and as I have previously

explained, installation of either a transmission line or a substation is inconsistent with that land use designation.

Q: WHY DOES THE CITY OPPOSE SUBSTATION SITE 2-4?

A: Substation Site 2-4 is within a Mixed Use Corridor, as is shown on the City's Future Land Use Map attached as **EXHIBIT TY-8**. As I mentioned above with regard to the type of development that is envisioned in the City's Mixed Use Corridor areas, these areas are intended to be dense with development yet walkable and pedestrian friendly. Placement of a five to seven acre substation site in this area conflicts with the vision and purpose of a Mixed Use Corridor because its presence will displace the desired development and thwart connectivity.

Q: WHY DOES THE CITY OPPOSE SUBSTATION SITE 2-8?

A: This is the worst possible location for a Substation Site from the City's perspective for several reasons. First, this site is within close proximity of Brushy Creek and, as I mentioned above, the City places a high value on preserving the natural character of the Brushy Creek corridor. In addition, this site has frontage on Ronald W. Reagan Blvd., which makes the location have high value for commercial development. Displacement of that high-value commercial development by an electric substation is not desirable or consistent with the City's plans for this area. Second, if Segment F6 is used in an in-and-out fashion, LCRA stated in its response to Request for Information No. 1-1 from Reagan & FM 2243, Ltd, NEC Reagan & FM 2243, LP, and Beasley Tract, LP attached as **EXHIBIT TY-13**, that it will need a 160-foot wide easement, which would effectively kill any development in that area. Third, as is shown in **EXHIBIT TY-8**, this site has been designated on the City's Future Land Use Map as an Activity Center, which are the largest shopping destinations within the City, providing a wide range of commercial uses including restaurants and a wide variety of retail stores. Activity Center uses may also include zero lot line townhomes and apartments. Good land planning is essential to successful Activity Centers, and interruption of an Activity Center with dead space (i.e., a substation site) is not consistent with good land planning.

Q: WHY DOES THE CITY OPPOSE SUBSTATION SITE 1-6?

A: As I explained above, and as is shown on **EXHIBIT TY-3,** Substation Site 1-6 is actually within the jurisdictional limits of the City of Leander, not the City of Cedar Park,

and Leander does not want to bear the burden of having both substations within Leander's jurisdiction. We realize that one new substation will have to be Leander's jurisdiction but we oppose having a second substation site within our jurisdiction, even if it meets LCRA's other substation siting criteria.

Q: WHY DOES THE CITY SUPPORT SUBSTATION SITE 2-6?

A: This site is located on a large tract that provides the opportunity to locate the substation significantly north of RM 2243 outside of the Mixed Use Corridor thereby having less impact on future development. Also, although LCRA's maps do not show it, Substation Site 2-6 (and other land) was annexed into the City limits by the City Council on April 21, 2016 via Ordinance No. 16-042-00 and so is now within the City limits. The current city limits of Leander are shown on **EXHIBIT TY-3.**

Q: WHY DOESN'T THE CITY WANT BOTH SUBSTATION SITES TO BE IN ITS JURISDICTIONAL BOUNDARIES?

A: The City believes that it is more equitable to split the burden of the substation sites between multiple jurisdictions as the beneficiaries of the increased capacity are located within multiple jurisdictions.

VI. LEANDER'S ALTERNATIVE ROUTE

Q: IS THE CITY RECOMMENDING A SPECIFIC ROUTE IN THIS PROCEEDING?

A: Yes, the City is recommending the following route: D-E-K-L4-(Substation Site 2-6)-N4-R-Q4-V-W-T4-X-J1-A5-L1-P1-T1-V5-D2-(Substation Site 1-7)-K4-J2-Q2-S2-Y2-Z2-P5-B3-C3-E3-G3-I3-J4.

Q: WHY IS THE CITY RECOMMENDING THAT ROUTE?

A: The City's recommended route is a slight adjustment to LCRA's Route 31. After route Segment Q4, the City's recommended route is identical to LCRA's Route 31. The City is recommending a slight alteration to the beginning of LCRA's Route 31 because, as I previously discussed, there is new TIRZ or economic development area coming online in the near future along Hero Way and because of the City's preference for Substation Site 2-6. As is shown on **EXHIBIT TY-14** and **EXHIBIT TY-15**, these slight adjustments to LCRA's Route 31 are over $2 million less expensive and affect about nine (9) fewer habitable structures than LCRA's Route 31.

Q: DIDN'T LCRA ADD SEGMENTS X5 AND A6 TO ACCOMMODATE COMMENTS FROM THE CITY OF LEANDER MADE DURING THE OPEN HOUSE PERIOD?

A: Yes, that is what LCRA's Environmental Assessment and Route Evaluation Report says at page 4-12, and the City did ask LCRA to consider adding route Segments that were in the back of property lines rather than in the front in this area. But at the time we did not know exactly where those property lines were so we were just asking for that option to be evaluated. Also, since that time, a new economic development opportunity has arisen associated with the TIRZ creation that I previously discussed, and the City has now determined that route Segments X5 and A6 do not work well for the City.

VII. CONCLUSION

Q: IN SUMMARY, WHAT IS THE CITY OF LEANDER'S POSITION IN THIS CASE?

A: The City recommends that the Commission approve the following route: D-E-K-L4-(Substation Site 2-6)-N4-R-Q4-V-W-T4-X-J1-A5-L1-P1-T1-V5-D2-(Substation Site 1-7)-K4-J2-Q2-S2-Y2-Z2-P5-B3-C3-E3-G3-I3-J4.

Q: DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A: Yes.

THOMAS K. YANTIS, AICP

PROFESSIONAL EXPERIENCE

City of Leander
Director of Development Services — **May 2013 – present**
Assistant City Manager — **October 2014 – present**

Manage the City's development services functions including the departments of Engineering, Planning, Building Inspection and Parks and Recreation. Oversee the development and implementation of the City's master plans including the comprehensive plan, transportation plan, utilities plans and parks and open space master plan. Lead negotiations with developers, land owners and other governmental agencies regarding development and infrastructure projects. Serve as liaison between the City Manager's office and the community. Fulfill the duties of City Manager in his absence.

Brushy Creek Municipal Utility District
Chief Administrative Officer — **May 2011 - May 2013**

Provided executive management for a fast growing municipal organization in western Williamson County. Managed all aspects of the District's administrative operations, facilities planning, parks and recreation planning, capital programming and budgeting. Developed procedures and processes to streamline the District's development review process, customer service function and management of District facilities and assets.

Lochner – BWR Division
Practice Lead — **January 2009 – May 2011**

Led the municipal consulting and community planning national practice for Lochner. Provided consulting services to municipal clients in management, comprehensive planning, economic development, land development and entitlement negotiation, downtown revitalization, parks and recreation planning, and capital planning and budgeting. Developed proposals of work, project plans, and budgets. Managed staff resources and project budgets and ensured projects were completed on time, within budget and to a high level of client satisfaction.

City of Georgetown, Texas
Division Director — **March 1999 – September 2000**
Interim City Manager — **January – September 2002**
Assistant City Manager — **September 2000 – December 2008**

Led the City's efforts to develop and implement a new comprehensive plan, unified development code, parks and recreation master plan, downtown master plan, city facilities plan, airport master plan and transit oriented development plan. Served as lead negotiator for all public/private partnership and economic development agreements including Wolf Ranch Town Center and the Rivery. Provided project management for major projects including the City's facilities plan, the 2004 and 2008 bond elections and the construction of a new public library, community center and recreation center. Served as liaison between the City Manager's office and the community. Served as City Manager in his absence.

KPMG
Manager — **May 1998 – March 1999**

Provided consulting services to public sector clients implementing enterprise-wide software applications. Served as project manager for technical resources on systems implementation and integration projects. Developed detailed proposals of work, project plans, and budgets.

Andersen Consulting (now Accenture)
Senior Consultant — **August 1995 – May 1998**

Provided functional and technical expertise for custom software implementations for clients in the public sector. Developed proposals of work, project budgets, and work plans and served as project manager and team lead on client engagements. Provided detailed requirements analysis for an innovative new system to manage the federal Medicare process.

EDUCATION

The University of Texas at Austin
Bachelor of Arts in Government, 1993 · Master of Science in Community and Regional Planning, 1995

PROFESSIONAL ORGANIZATIONS

Texas City Management Association
Mentoring Task Force 2004-06 · Public Relations Committee 2006-07 · Ethics Instructor 2005-08
American Planning Association
American Institute of Certified Planners (AICP certification)
Congress for the New Urbanism
Central Texas Chapter Board of Directors 2006-2011, Secretary 2010-2011
Envision Central Texas
Board of Directors 2005-2012 · Implementation Committee Co-Chair 2005-2012 · Chair-elect 2010-2011

RESOLUTION NO. 16-014-00

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LEANDER, TEXAS, REGARDING THE "APPLICATION OF THE LOWER COLORADO RIVER AUTHORITY TRANSMISSION SERVICES CORPORATION TO AMEND A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE ROUND ROCK – LEANDER 138-kV TRANSMISSION LINE IN WILLIAMSON COUNTY, TEXAS" (PUC DOCKET NO. 45866; SOAH DOCKET NO. 473-16-4342); PROVIDING DIRECTION TO CITY STAFF AND LEGAL COUNSEL; REPEALING CONFLICTING RESOLUTIONS; AND DECLARING AN EFFECTIVE DATE.

WHEREAS, on April 28, 2016 the Lower Colorado River Authority Transmission Services Corporation ("LCRA TSC") filed an application with the Texas Public Utilities Commission ("PUC") to amend a certificate of convenience and necessity for a proposed 138-kV transmission line from Round Rock to Leander in Williamson County and two new substations (PUC Docket No. 45866); and

WHEREAS, Williamson County, all four of the major cities in the County (including the City), and over other 200 persons filed motions to intervene in the case, and the application has been referred to the State Office of Administrative Hearings ("SOAH") for a contested case hearing (SOAH Docket No. 473-16-432); and

WHEREAS, on February 6, 2016 the City Council previously adopted Resolution No. 16-003-000 recommending and supporting certain transmission line routing alignments; and

WHEREAS, the LCRA application filed in April 2016 identifies different proposed routes than those considered by the City Council in February 2016, and adds new proposed substation locations; therefore, the route preferences identified in Resolution No. 16-003-00 are out of date; and

WHEREAS, the City Council desires to provide direction to City staff and legal counsel regarding the City's preferred route alignment(s) and substation location(s), but recognizes that any of the 16 proposed substation locations and any of the 31 alternative routes, or any combination of segments from any of the alternative routes and different substation locations, may be selected by the PUC; nonetheless, the City Council desires to provide general guidance to City staff and legal counsel for use in preparing prefiled testimony and participating in the contested case hearing.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LEANDER, TEXAS:

SECTION 1. The foregoing recitals are all true and correct and are hereby approved and adopted.

SECTION 2. With regard to the April 28, 2016 "Application of LCRA TSC to Amend a Certificate of Convenience and Necessity for the Round Rock to Leander 138-kV Transmission Line in Williamson County" (SOAH Docket No. 473-16-4342; PUC Docket No. 45866) (the "Application"), the City of Leander generally recommends that any transmission line route Segments and Substation Sites located in the City limits and the City's extraterritorial jurisdiction meet the following general criteria:

(a) Avoid existing and future parkland and hike-and-bike trail corridors; and
(b) Avoid future development areas; and
(c) Avoid Segments that use US 183A, Ronald Reagan Blvd., Parmer Lane, FM 1431 between Ronald Reagan Blvd. and Sam Bass Road/CR 175, and Sam Bass Road/CR 175 south of FM 1431; and
(d) Use monopole structures that minimize the width of right-of-way or easement needed for both transmission and distribution lines; and
(e) Comply with the City's site development standards for screening, fencing, lighting, etc.

SECTION 3. With regard to the specific route Segments identified in the Application that are located in the City limits or the City's extraterritorial jurisdiction, the City of Leander:

(a) Opposes Segments A, A6, B, C5, D5, E5, G, K1, U4, V4, X4; and
(b) Supports routes that use Segments D-E-K-L4-(Substation 2-6)-N4-R-Q4 north of FM 2243; and
(c) Supports using Segments along Sam Bass Road/CR 175 between FM 2243 and FM 1431.

SECTION 4. With regard to the specific Substation Sites identified in the Application, the City of Leander:

(a) Supports Substation Site 2-6, as long as the second substation site is located in Cedar Park, rather than in Leander's City limits or extraterritorial jurisdiction; and
(b) Opposes Substation Sites 2-2, 2-4, 2-8, and 1-6.

SECTION 5: The City Council hereby authorizes and directs the City staff and legal counsel to file prefiled testimony in SOAH Docket No. 473-16-4342; PUC Docket No. 45866 consistent with this Resolution and any subsequent guidance given by the City Council.

SECTION 6. Resolution No. 16-003-00 (February 6, 2016) is hereby repealed and replaced with this Resolution.

SECTION 7: It is hereby officially found and determined that the meeting at which this resolution is passed is open to the public and that public notice of the time, place, and purpose of said meeting was given as required by law.

PASSED AND APPROVED this the 4th day of August, 2016.

CITY OF LEANDER, TEXAS

Christopher Fielder, Mayor

ATTEST:

Debbie Haile, City Secretary

City Of Leander, Texas

CITY LIMITS AND EXTRATERRITORIAL JURISDICITON

May 06, 2016

Approximate Area

City Limits	33 24 Square Miles
E T J outside of City Limits	30 66 Square Miles
Total City Limits and E T J	63 90 Square Miles

Annexation or Release	
Document	**Date**
16-011-00	01/21/2016
16-012-00	01/21/2016
16-013-00	01/21/2016
16-030-00	04/21/2016
16-031-00	04/21/2016
16-032-00	04/21/2016
16-033-00	04/21/2016
16-034-00	04/21/2016
16-035-00	04/21/2016
16-036-00	04/21/2016
16-037-00	04/21/2016
16-038-00	04/21/2016
16-039-00	04/21/2016
16-040-00	04/21/2016
16-041-00	04/21/2016
16-042-00	04/21/2016
16-043-00	04/21/2016
16-044-00	04/21/2016
16-045-00	04/21/2016
16-046-00	04/21/2016
16-051-00	05/05/2016

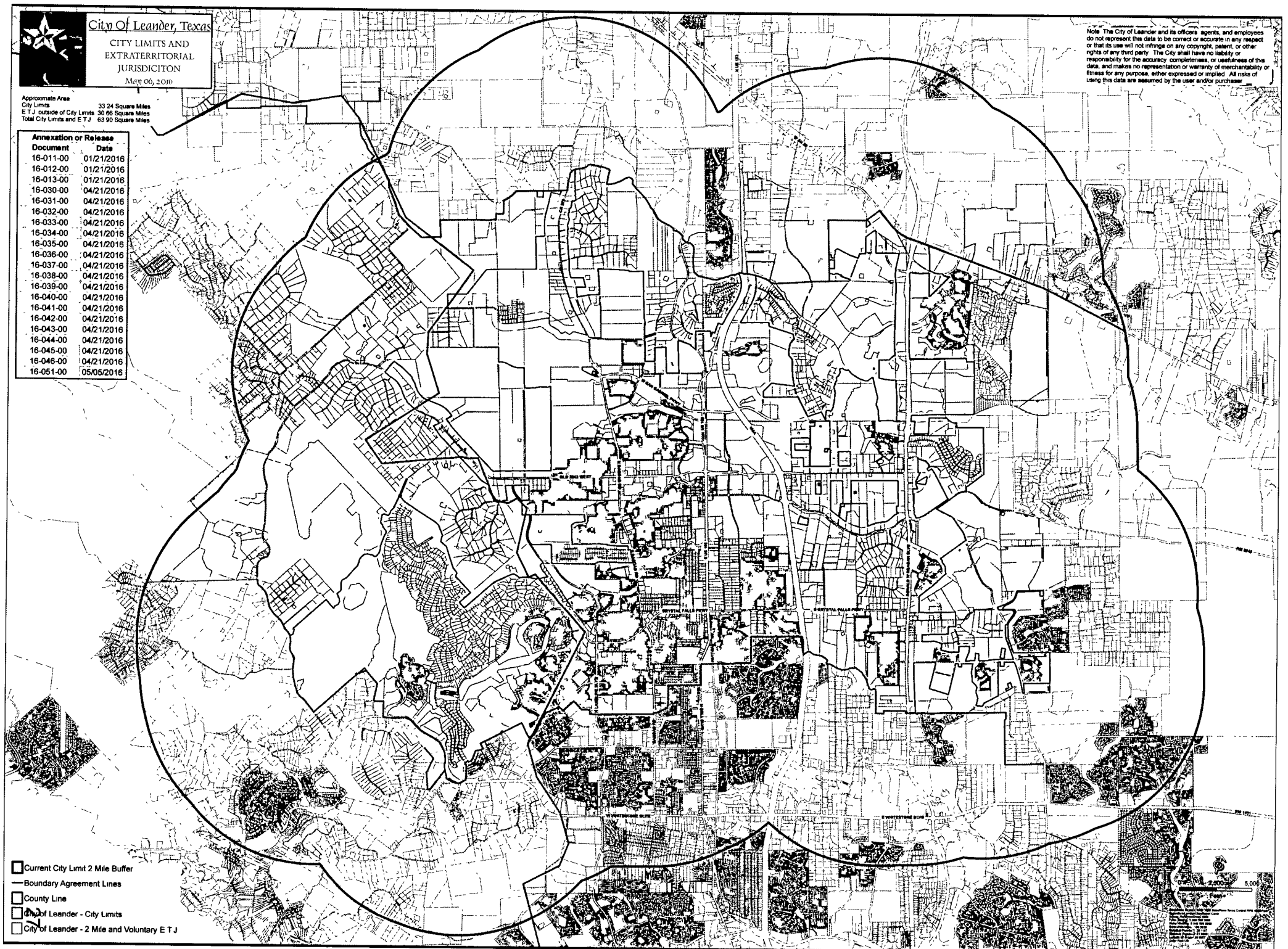
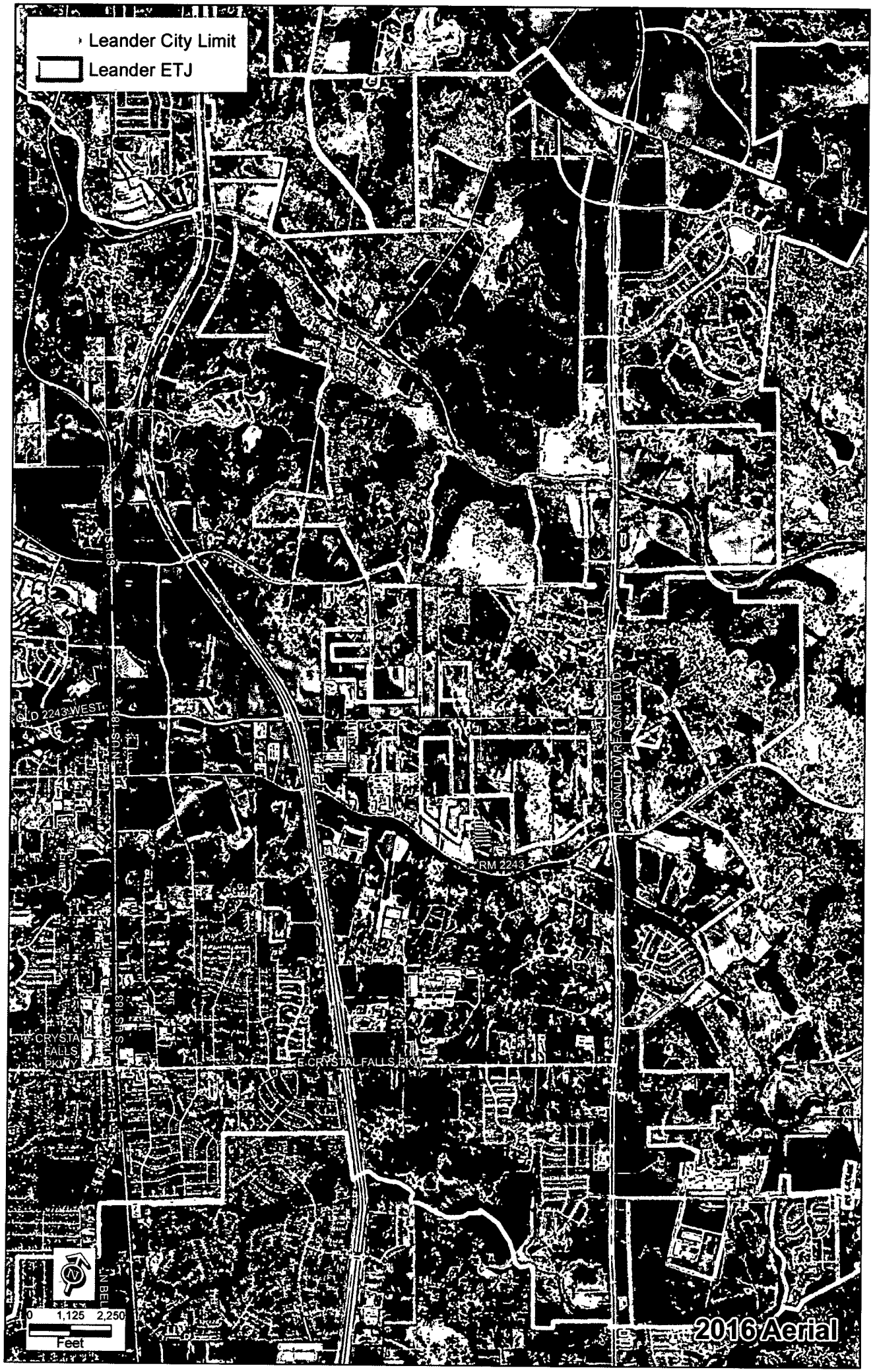


Table 4: Annual Estimates of the Population for Incorporated Places in Texas, Listed Alphabetically: April 1, 2000 to July 1, 2005

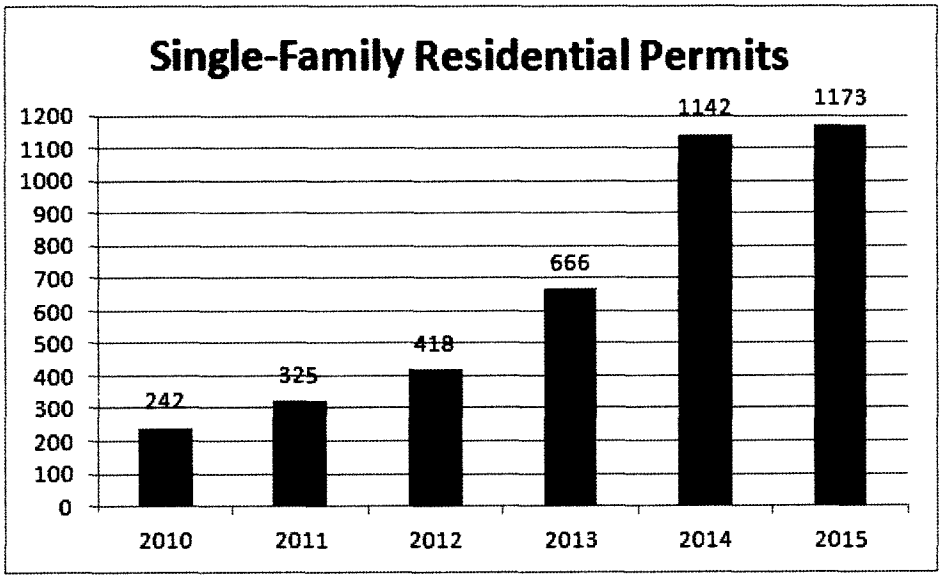
Geographic Area		Population estimates						April 1, 2000	
		July 1, 2005	July 1, 2004	July 1, 2003	July 1, 2002	July 1, 2001	July 1, 2000	Estimates base	Census
Lake City town	Texas	525	527	523	528	521	526	526	526
Lake Dallas city	Texas	7,000	6,891	6,777	6,647	6,477	6,226	6,168	6,166
Lake Jackson city	Texas	27,386	27,018	26,936	26,859	26,536	26,415	26,386	26,386
Lakeport city	Texas	910	905	897	885	874	862	861	861
Lakeside town	Texas	330	332	329	332	328	333	333	333
Lakeside town	Texas	1,164	1,134	1,125	1,114	1,097	1,051	1,040	1,040
Lakeside City town	Texas	1,032	1,042	1,024	1,005	993	997	984	984
Lake Tanglewood village	Texas	857	850	840	834	831	827	825	825
Lakeview town	Texas	151	154	153	152	154	151	152	152
Lakeway city	Texas	8,852	8,426	8,234	8,242	8,251	8,097	8,049	8,002
Lakewood Village city	Texas	364	362	358	354	350	343	342	342
Lake Worth city	Texas	4,681	4,649	4,662	4,650	4,629	4,620	4,618	4,618
La Marque city	Texas	13,860	13,746	13,744	13,702	13,654	13,702	13,747	13,682
Lamesa city	Texas	9,321	9,332	9,505	9,564	9,841	9,929	9,954	9,952
Lampasas city	Texas	7,465	7,845	7,363	7,194	6,986	6,911	6,868	6,786
Lancaster city	Texas	32,233	30,243	27,746	26,918	26,562	26,006	25,894	25,894
La Porte city	Texas	33,136	33,268	33,363	33,150	32,711	32,044	31,880	31,880
Laredo city	Texas	208,754	202,831	196,841	191,014	185,150	179,141	177,611	176,576
Latexo city	Texas	275	276	274	274	272	272	272	272
La Vernia city	Texas	1,087	1,054	1,011	970	954	938	931	931
La Villa city	Texas	1,455	1,447	1,439	1,398	1,362	1,332	1,324	1,305
Lavon town	Texas	421	419	415	412	410	399	397	387
La Ward city	Texas	198	199	199	199	200	201	200	200
Lawn town	Texas	349	350	349	347	350	353	353	353
League City city	Texas	61,490	58,129	54,719	51,288	48,188	45,925	45,447	45,444
Leakey city	Texas	372	375	383	380	383	387	387	387
Leander city	**Texas**	**17,851**	**16,049**	**14,071**	**11,888**	**9,852**	**8,148**	**7,801**	**7,596**
Leary city	Texas	565	563	564	563	559	556	555	555
Lefors town	Texas	540	536	539	546	549	556	559	559
Leona city	Texas	195	192	191	189	185	184	183	181
Leonard city	Texas	2,071	2,005	1,967	1,918	1,875	1,863	1,849	1,846
Leon Valley city	Texas	9,650	9,359	9,322	9,304	9,281	9,250	9,239	9,239
Leroy city	Texas	333	334	332	329	329	328	327	335
Levelland city	Texas	12,777	12,775	12,811	12,769	12,785	12,825	12,866	12,866

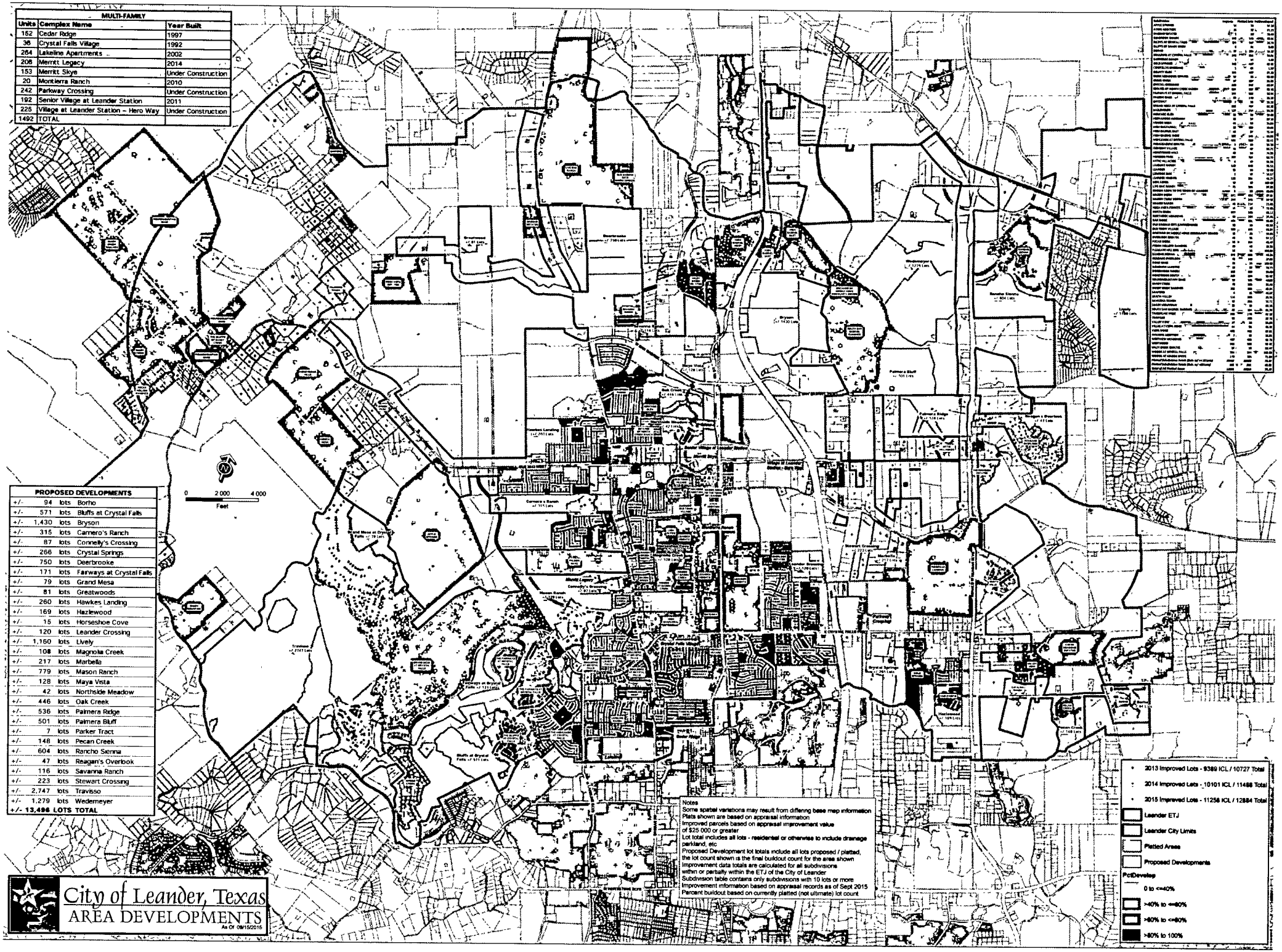
Geography	Population Estimate (as of July 1)		
	2013	2014	2015
Lakeside town (San Patricio County), Texas	315	316	316
Lakeside town (Tarrant County), Texas	1,364	1,373	1,385
Lakeside City town, Texas	972	982	981
Lake Tanglewood village, Texas	839	859	863
Lakeview town, Texas	102	100	101
Lakeway city, Texas	13,171	13,711	14,217
Lakewood Village city, Texas	554	557	560
Lake Worth city, Texas	4,695	4,753	4,822
La Marque city, Texas	15,178	15,528	15,908
Lamesa city, Texas	9,346	9,417	9,427
Lampasas city, Texas	6,876	7,247	7,687
Lancaster city, Texas	38,162	38,506	38,801
La Porte city, Texas	34,800	35,087	35,148
Laredo city, Texas	249,379	252,635	255,473
Latexo city, Texas	309	308	308
La Vernia city, Texas	1,166	1,209	1,261
La Villa city, Texas	2,481	2,507	2,600
Lavon city, Texas	2,433	2,602	2,889
La Ward city, Texas	222	223	224
Lawn town, Texas	316	319	320
League City city, Texas	90,977	94,435	98,312
Leakey city, Texas	428	432	424
Leander city, Texas	**31,694**	**34,187**	**37,889**
Leary city, Texas	481	481	483
Lefors town, Texas	508	511	507
Leona city, Texas	173	175	177
Leonard city, Texas	1,971	1,969	1,970
Leon Valley city, Texas	10,840	11,035	11,174
Leroy city, Texas	341	341	340
Levelland city, Texas	13,904	14,012	13,914
Lewisville city, Texas	101,257	103,080	104,039
Lexington town, Texas	1,162	1,167	1,181
Liberty city, Texas	8,823	8,929	9,039
Liberty Hill city, Texas	1,037	1,048	1,389
Lincoln Park town, Texas	318	322	326
Lindale city, Texas	5,307	5,490	5,692
Linden city, Texas	1,978	1,977	1,979
Lindsay city, Texas	1,039	1,060	1,078
Lipan city, Texas	436	442	452
Little Elm city, Texas	32,772	35,374	38,341
Littlefield city, Texas	6,254	6,191	6,090
Little River-Academy city, Texas	1,967	1,951	1,959
Live Oak city, Texas	14,789	15,142	15,346
Liverpool city, Texas	496	502	501
Livingston town, Texas	5,213	5,175	5,172
Llano city, Texas	3,319	3,312	3,341
Lockhart city, Texas	13,061	13,231	13,446
Lockney town, Texas	1,782	1,700	1,689
Log Cabin city, Texas	710	715	717
Lometa city, Texas	880	857	849
Lone Oak city, Texas	603	618	628
Lone Star city, Texas	1,557	1,550	1,525
Longview city, Texas	81,431	81,555	82,287
Loraine town, Texas	601	605	603
Lorena city, Texas	1,717	1,734	1,737
Lorenzo city, Texas	1,154	1,146	1,171
Los Fresnos city, Texas	6,230	6,448	6,582
Los Indios town, Texas	1,105	1,111	1,114
Los Ybanez city, Texas	19	19	19

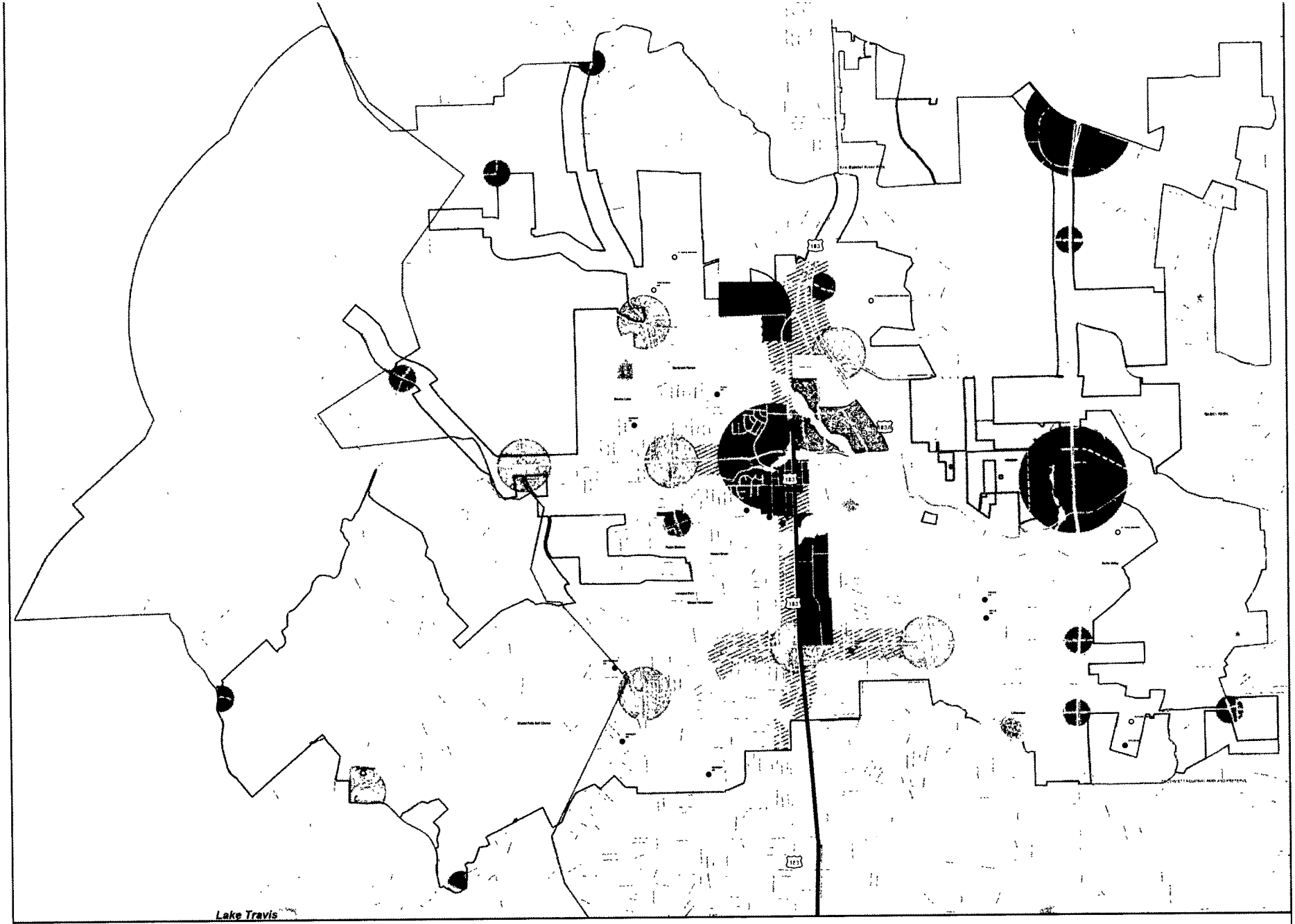
EXHIBIT TY-4


Leander City Limit
Leander ETJ
W SH 29
OLD 2243 WEST
N US 183
S US 183
RONALD W REAGAN BLVD
RM 2243
W CRYSTAL FALLS PKWY
E CRYSTAL FALLS PKWY
0 1,125 2,250
Feet
2016 Aerial

City of Leander Permits 2010 to 2015




MULTI-FAMILY
Units | Complex Name | Year Built
152 | Cedar Ridge | 1997
36 | Crystal Falls Village | 1992
264 | Lakeline Apartments | 2002
208 | Merritt Legacy | 2014
153 | Merritt Skye | Under Construction
20 | Montierra Ranch | 2010
242 | Parkway Crossing | Under Construction
192 | Senior Village at Leander Station | 2011
225 | Village at Leander Station – Hero Way | Under Construction
1492 | TOTAL
PROPOSED DEVELOPMENTS
+/- 94 lots Borho
+/- 571 lots Bluffs at Crystal Falls
+/- 1,430 lots Bryson
+/- 315 lots Camero's Ranch
+/- 87 lots Connelly's Crossing
+/- 266 lots Crystal Springs
+/- 750 lots Deerbrooke
+/- 171 lots Fairways at Crystal Falls
+/- 79 lots Grand Mesa
+/- 81 lots Greatwoods
+/- 260 lots Hawkes Landing
+/- 169 lots Hazlewood
+/- 15 lots Horseshoe Cove
+/- 120 lots Leander Crossing
+/- 1,160 lots Lively
+/- 108 lots Magnolia Creek
+/- 217 lots Marbella
+/- 779 lots Mason Ranch
+/- 128 lots Maya Vista
+/- 42 lots Northside Meadow
+/- 446 lots Oak Creek
+/- 536 lots Palmera Ridge
+/- 501 lots Palmera Bluff
+/- 7 lots Parker Tract
+/- 148 lots Pecan Creek
+/- 604 lots Rancho Sienna
+/- 47 lots Reagan's Overlook
+/- 116 lots Savanna Ranch
+/- 223 lots Stewart Crossing
+/- 2,747 lots Travisso
+/- 1,279 lots Wedemeyer
+/- 13,496 LOTS TOTAL
0 2,000 4,000
Feet
Notes
Some spatial variations may result from differing base map information
Plats shown are based on appraisal information
Improved parcels based on appraisal improvement value of $25,000 or greater
Lot total includes all lots - residential or otherwise to include drainage parkland, etc
Proposed Development lot totals include all lots proposed / platted, the lot count shown is the final buildout count for the area shown
Improvement data totals are calculated for all subdivisions within or partially within the ETJ of the City of Leander
Subdivison table contains only subdivisions with 10 lots or more
Improvement information based on appraisal records as of Sept 2015
Percent buildout based on currently platted (not ultimate) lot count
2013 Improved Lots - 9389 ICL / 10727 Total
2014 Improved Lots - 10101 ICL / 11488 Total
2015 Improved Lots - 11256 ICL / 12884 Total
Leander ETJ
Leander City Limits
Platted Areas
Proposed Developments
PctDevelop
0 to <=40%
>40% to <=60%
>60% to <=80%
>80% to 100%
City of Leander, Texas
AREA DEVELOPMENTS
As Of 09/15/2015



Texas Local Government Code Section 213 005 A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries

This map has been produced by the City of Leander for informational purposes only No warranty is made by the City regarding completeness or accuracy This data should not be construed as a legal description or survey instrument No responsibility is assumed for damages or other liabilities due to the accuracy, availability, completeness, use or misuse of the information herein provided

* Properties added to the ETJ after the adoption of this Future Land Use Map are designated as Neighborhood Residential

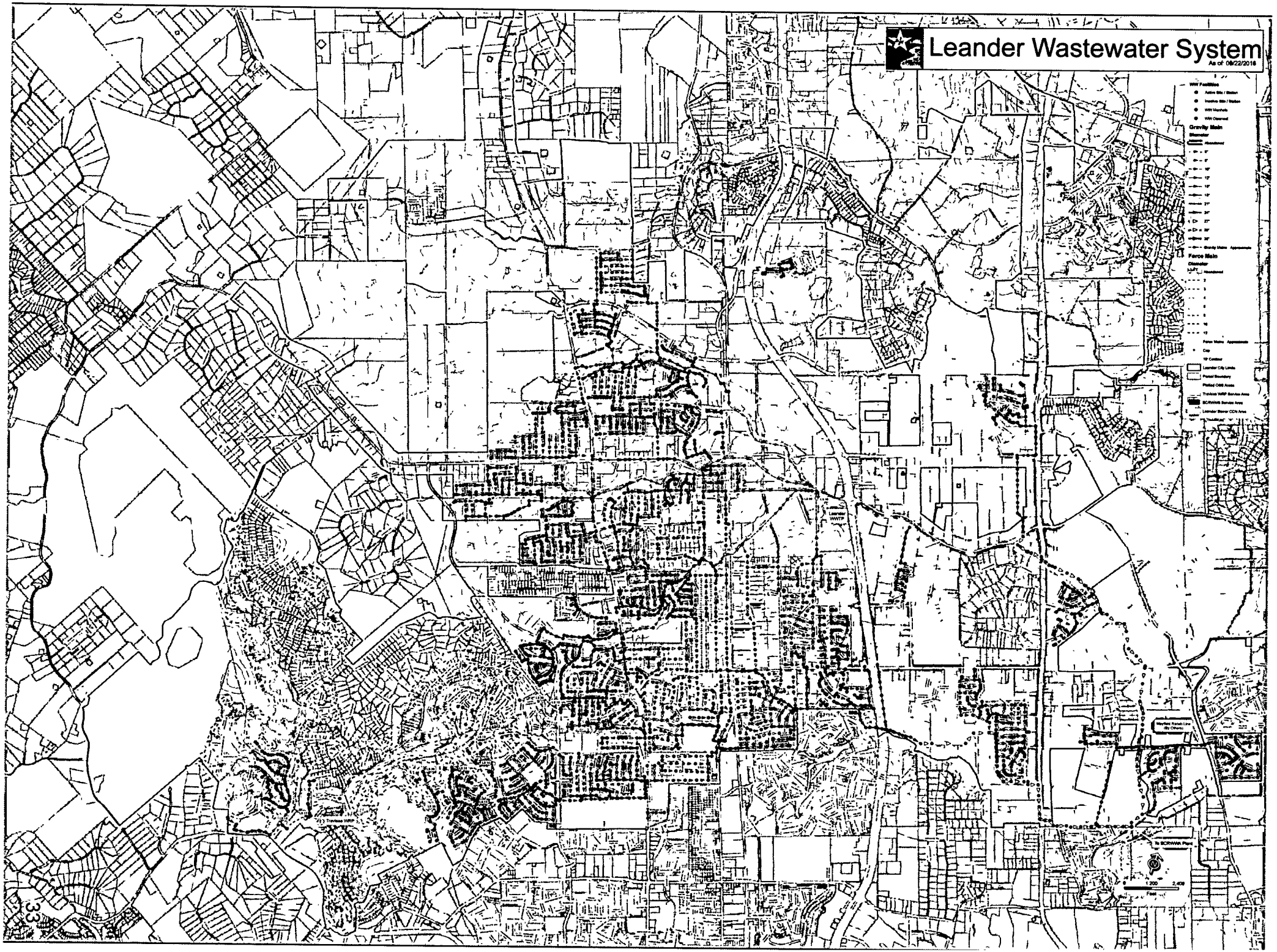
0 625 1,250 2,500 3,750 5,000
Feet

CITY OF LEANDER, TEXAS

Future Land Use Map
Effective October 15, 2015

FUTURE LAND USE

- Open Space
- Mixed Use Corridor
- Commercial Corridor
- Neighborhood Center
- Community Center
- Activity Center
- Transit Supportive Mixed Use
- Station Area Mixed Use
- Old Town Mixed Use
- Employment Mixed Use
- Industrial District
- Neighborhood Residential


Leander Wastewater System
As of 09/22/2016

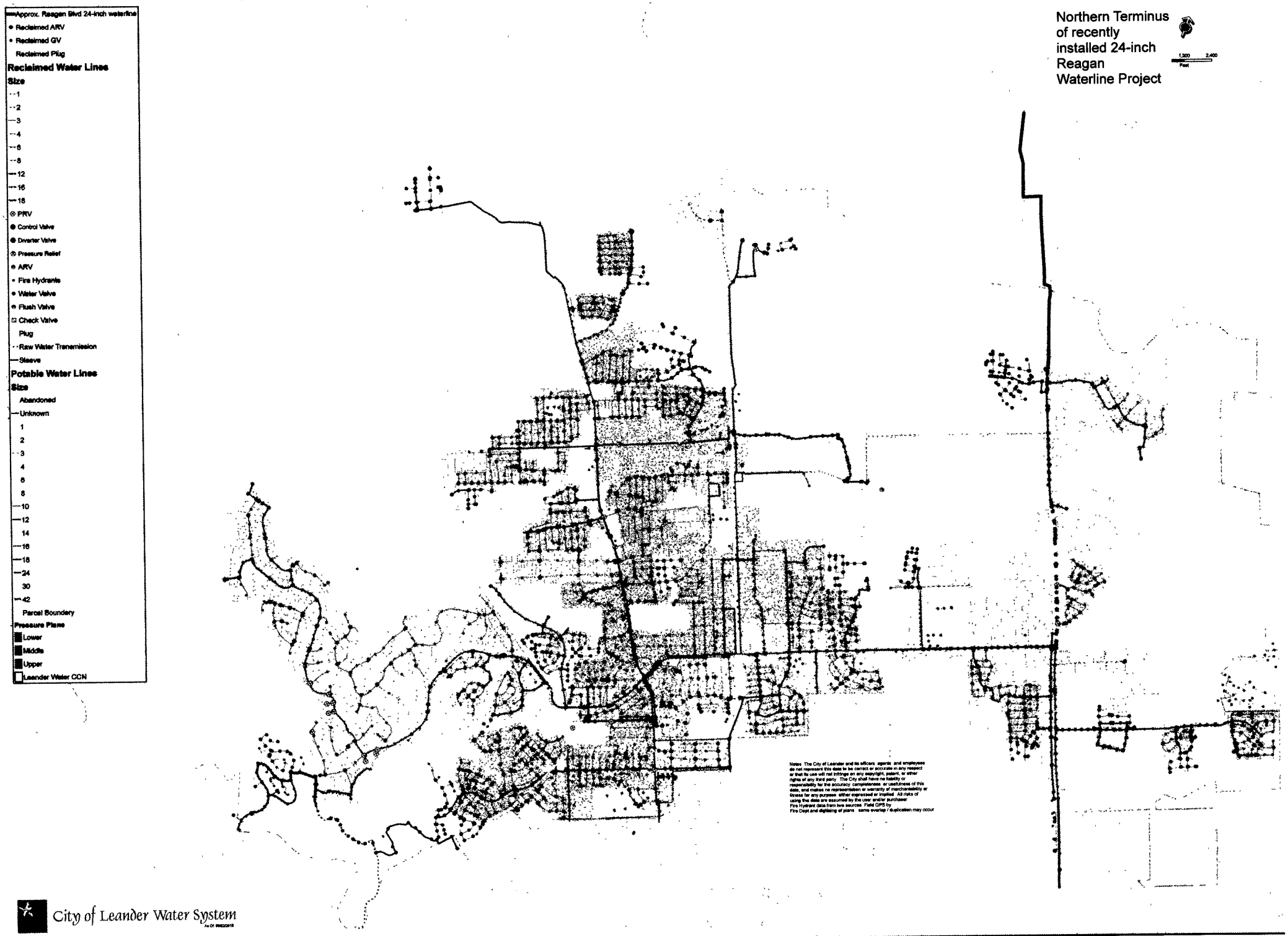
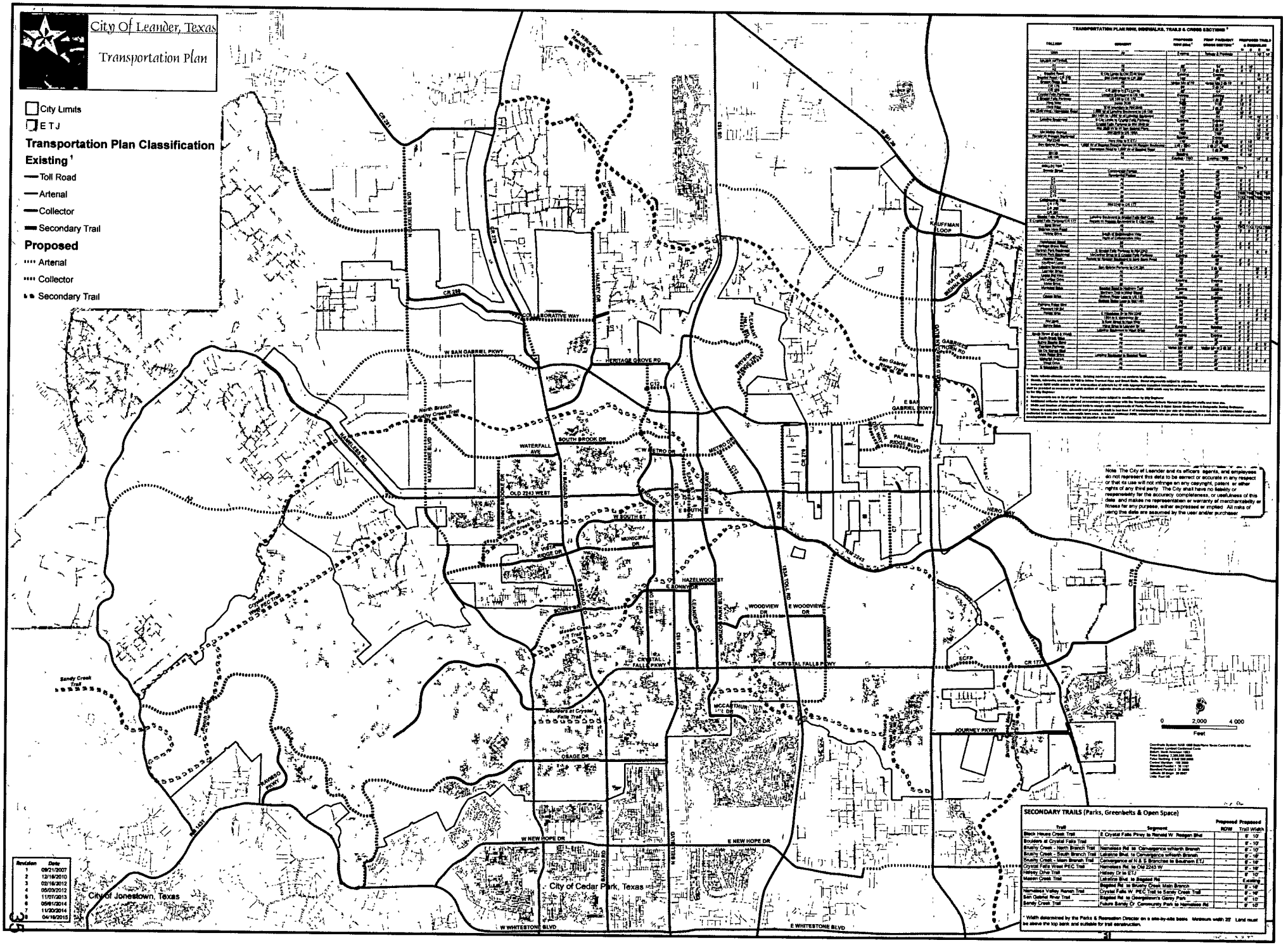
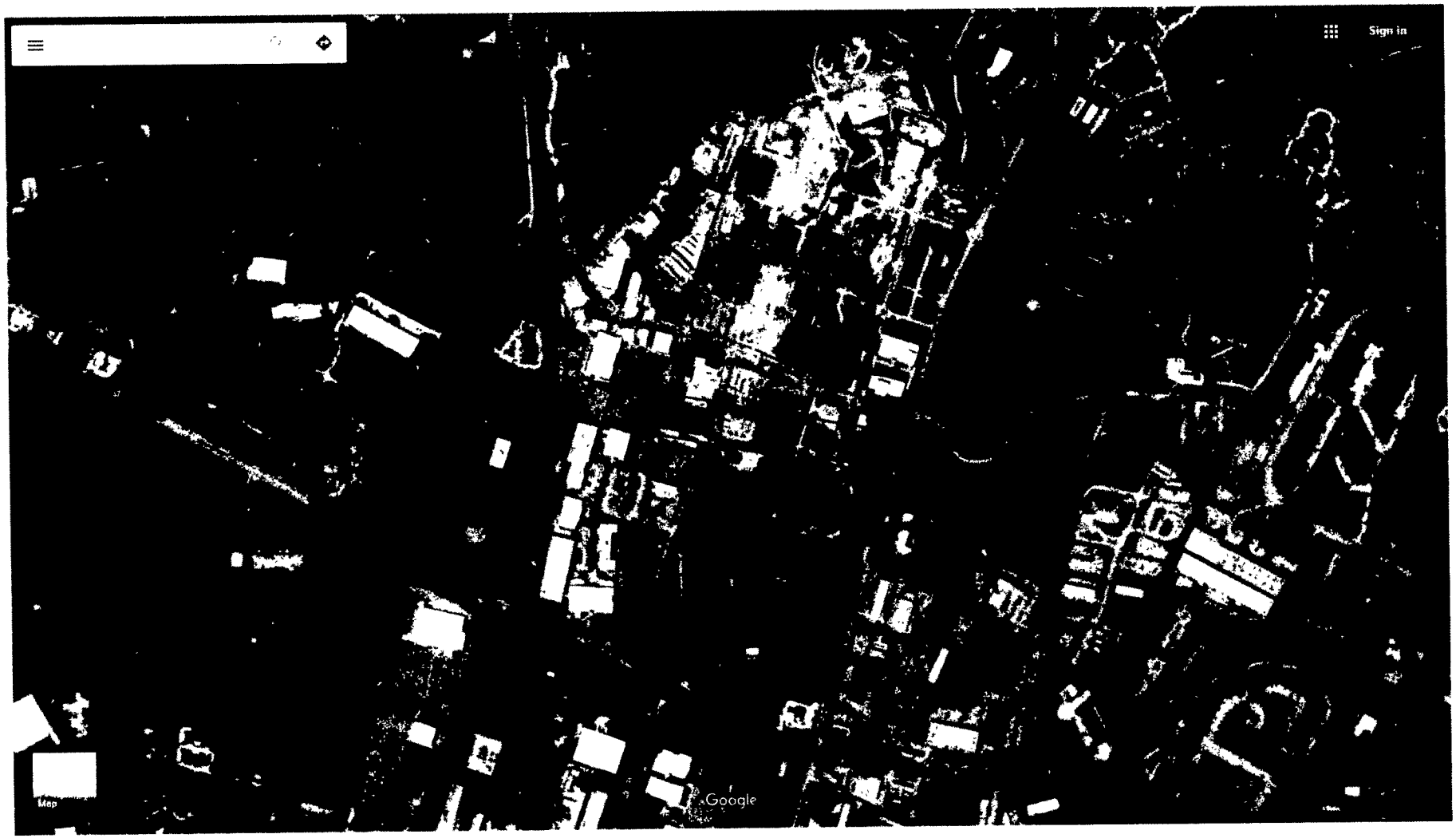


EXHIBIT TY-10


City Of Leander, Texas
Transportation Plan
City Limits
ETJ
Transportation Plan Classification
Existing
Toll Road
Arterial
Collector
Secondary Trail
Proposed
Arterial
Collector
Secondary Trail
TRANSPORTATION PLAN ROW, SIDEWALKS, TRAILS & CROSS SECTIONS
Note: The City of Leander and its officers, agents, and employees do not represent this data to be correct or accurate in any respect or that its use will not infringe on any copyright, patent or other rights of any third party. The City shall have no liability or responsibility for the accuracy, completeness, or usefulness of this data and makes no representation or warranty of merchantability or fitness for any purpose, either expressed or implied. All risks of using this data are assumed by the user and/or purchaser.
SECONDARY TRAILS (Parks, Greenbelts & Open Space)
Trail
Segment
Proposed ROW
Proposed Trail Width
Black House Creek Trail
E Crystal Falls Pkwy to Ronald W. Reagan Blvd
8' -10'
Boulders at Crystal Falls Trail
8' -10'
Brushy Creek - North Branch Trail
Hamilakes Rd. to Convergence w/North Branch
8' -10'
Brushy Creek - South Branch Trail
Lakeline Blvd. to Convergence w/North Branch
8' -10'
Brushy Creek - Main Branch Trail
Convergence of N & S Branches to Southern ETJ
8' -10'
Crystal Falls West PEC Trail
Hamilakes Rd. to Old 2243 W
8' -10'
Hensley Drive Trail
Halsey Dr to ETJ
8' -10'
Mason Creek Trail
Lakeline Blvd. to Bagdad Rd.
Existing
Hamilakes Valley Ranch Trail
Bagdad Rd. to Brushy Creek Main Branch
8' -10'
San Gabriel Bridal Trail
Crystal Falls W. PEC Trail to Sandy Creek Trail
8' -10'
Sandy Creek Trail
Bagdad Rd. to Greenbelt's Gentry Park
8' -10'
Future Sandy Dr. Community Park to Hamilakes Rd
8' -10'
Width determined by the Parks & Recreation Director on a site-by-site basis. Minimum width 25'. Land must be above the top bank and suitable for trail construction.
Revision Date
1 09/21/2007
2 12/16/2010
3 02/16/2012
4 05/03/2012
5 11/07/2013
6 05/01/2014
7 11/20/2014
8 04/16/2015
City of Jonestown, Texas
City of Cedar Park, Texas
0 2,000 4,000
Feet

The Domain - Austin



SOAH DOCKET NO. 473-16-4342
PUC DOCKET NO. 45866

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE PROPOSED LEANDER TO ROUND ROCK 138-KV TRANSMISSION LINE PROJECT IN WILLIAMSON COUNTY, TEXAS	§ § § § § § § § §	**BEFORE THE STATE OFFICE** **OF** **ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO REAGAN & FM 2243, LTD., NEC REAGAN & FM 2243, LP AND BEASLEY TRACT, LP'S FIRST REQUEST FOR INFORMATION

Question No. 1-1:

For Segment F6 which goes in and out of substation site 2-8, please describe the type of structures LCRA TSC would use and whether all the conductors into and out of the substation would be on common or separate structures. Also provide the required width of the ROW for Segment F6 to go into and out of the substation.

Response No. 1-1:

LCRA TSC has proposed to use single pole structures for Segment F6. Depending on the route configuration, Segment F6 does not always go in and out of Substation 2-8. When Segment F6 is used to both enter and exit Substation 2-8, LCRA TSC plans for the conductor along Segment F6 to be supported on common transmission line structures for the installation of the initial circuit. When the second circuit is installed in the future (if utilized for an in and out configuration), an additional set of single pole structures will be installed adjacent to the first set of poles. The total estimated ROW width for Segment F6 when used to enter and exit Substation 2-8 is 160 feet (80 feet for the initial installation and 80 feet for the second set of poles).

Prepared By: Jessica Melendez — Title: Sr. Engineer
Sponsored By: Jessica Melendez — Title: Sr. Engineer

SOAH DOCKET NO. 473-16-4342
PUC DOCKET NO. 45866

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE PROPOSED LEANDER TO ROUND ROCK 138-KV TRANSMISSION LINE PROJECT IN WILLIAMSON COUNTY, TEXAS	§ § § § § § § § §	**BEFORE THE STATE OFFICE** **OF** **ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO CITY OF LEANDER'S FIRST REQUEST FOR INFORMATION

Question No. 1-1:

For the following proposed alternative route, provide in Excel the data listed in Tables 1 through 6 of Attachment 4 to the Application, as amended, in a format that can be used to offer a side-by-side comparison of the following alternative route as compared to the routes included in the Application:

> **City of Leander Proposed Alternative (herein so called)**: D-E-K-L4-(2-6)-N4-R-Q4-V-W-T4-X-J1-A5-L1-P1-T1-V5-D2-(1-7)-K4-J2-Q2-S2-Y2-Z2-P5-B3-C3-E3-G3-I3-J4

Response No. 1-1:

LCRA TSC is referring to this route as CoL-1. The information requested has been made available to the requesting party and provides a comparison of all routes included in the Application and proposed by LHO of CR 175 and Riverside Resources to date.

Co-Prepared By: Jessica Melendez	Title: Sr. Engineer
Co-Prepared By: Sergio Garza	Title: VP, Transmission Design & Protection
Co-Sponsored By: Jessica Melendez	Title: Sr. Engineer
Co-Sponsored By: Sergio Garza	Title: VP, Transmission Design & Protection

Leander to Round Rock CCN Application, rev. 8/30/2016 to include all intervenor requested alternative routes
Estimated Costs for Transmission Line and Substation Facilities

Table 1: Transmission and Substation Facilities Total Estimated Costs

Route	Sub 1	Sub 2	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
1	1-7	2-3	14 97	**$88,414,200**	$33,774,000	$6,709,200	$682,000	$18,434,200	$4,347,800	$23,275,000	$1,192,000
2	1-8	2-5	13 85	**$78,546,000**	$24,803,000	$6,569,000	$680,000	$16,692,500	$4,816,500	$23,404,000	$1,581,000
3	1-6	2-8	20.01	**$92,697,500**	$29,029,800	$7,118,800	$722,000	$20,216,700	$4,480,200	$28,692,000	$2,438,000
4	1-6	2-6	21.44	**$85,711,500**	$23,817,900	$7,188,300	$734,000	$20,064,400	$5,019,900	$26,896,000	$1,991,000
5	1-8	2-2	19 67	**$95,185,000**	$34,999,000	$7,129,400	$693,000	$18,191,600	$4,833,000	$26,377,000	$2,962,000
6	1-4	2-4	21.27	**$98,480,800**	$36,026,600	$7,272,300	$742,000	$19,187,300	$4,836,600	$27,118,000	$3,298,000
7	1-6	2-1	16 12	**$85,258,500**	$32,360,000	$6,863,700	$702,000	$17,246,500	$4,723,300	$21,767,000	$1,596,000
8	1-3	2-6	12.85	**$73,954,300**	$24,362,900	$6,707,200	$668,000	$16,435,900	$5,187,300	$18,827,000	$1,766,000
9	1-5	2-7	13 48	**$76,223,300**	$25,470,300	$6,536,300	$672,000	$16,393,100	$4,666,600	$20,508,000	$1,977,000
10	1-5	2-7	12.55	**$78,798,300**	$25,121,300	$6,467,300	$675,000	$16,597,100	$4,666,600	$22,720,000	$2,551,000
11	1-8	2-5	12 04	**$74,361,000**	$23,258,000	$6,481,000	$666,000	$15,799,500	$4,816,500	$21,418,000	$1,922,000
12	1-8	2-5	11.93	**$76,791,000**	$25,267,000	$6,471,000	$663,000	$15,901,500	$4,816,500	$21,615,000	$2,057,000
13	1-2	2-4	14 65	**$69,243,000**	$20,968,600	$6,936,800	$684,000	$15,122,600	$4,847,000	$17,969,000	$2,715,000
14	1-2	2-4	14.47	**$80,384,000**	$31,542,600	$6,921,800	$677,000	$15,265,600	$4,847,000	$18,245,000	$2,885,000
15	1-1	2-4	13 83	**$82,068,000**	$29,781,600	$6,811,200	$656,000	$17,243,200	$4,893,000	$20,097,000	$2,586,000
16	1-5	2-2	16.22	**$93,889,300**	$36,461,000	$6,925,100	$728,000	$17,428,500	$4,767,700	$24,738,000	$2,841,000
17	1-3	2-2	12 88	**$80,786,300**	$27,979,000	$6,783,000	$660,000	$16,995,000	$4,984,300	$21,018,000	$2,367,000
18	1-8	2-6	15.12	**$68,548,000**	$17,828,900	$6,659,600	$698,000	$16,235,500	$5,036,000	$20,126,000	$1,964,000
19	1-8	2-6	15 02	**$75,869,000**	$24,957,900	$6,651,600	$694,000	$16,265,500	$5,036,000	$20,233,000	$2,031,000
20	1-8	2-6	14.45	**$77,154,000**	$25,692,900	$6,637,600	$687,000	$16,352,500	$5,036,000	$21,308,000	$1,440,000
21	1-8	2-6	15 53	**$77,604,000**	$24,778,900	$6,711,600	$696,000	$16,397,500	$5,036,000	$21,184,000	$2,800,000
22	1-8	2-6	15 66	**$80,612,000**	$24,040,900	$6,722,600	$692,000	$17,310,500	$5,036,000	$23,868,000	$2,942,000
23	1-3	2-7	14 83	**$87,471,300**	$28,373,300	$6,816,200	$700,000	$18,229,600	$4,883,200	$25,132,000	$3,337,000
24	1-3	2-7	14.92	**$82,832,300**	$24,608,300	$6,823,200	$698,000	$18,010,600	$4,883,200	$24,668,000	$3,141,000
25	1-7	2-6	14 63	**$66,655,200**	$16,113,900	$6,699,900	$677,000	$17,493,200	$4,567,200	$19,140,000	$1,964,000
26	1-7	2-6	14.53	**$73,976,200**	$23,242,900	$6,691,900	$673,000	$17,523,200	$4,567,200	$19,247,000	$2,031,000
27	1-7	2-6	14 88	**$73,706,200**	$21,347,900	$6,711,900	$694,000	$17,733,200	$4,567,200	$21,015,000	$1,637,000
28	1-7	2-6	14.78	**$81,027,200**	$28,476,900	$6,703,900	$690,000	$17,763,200	$4,567,200	$21,122,000	$1,704,000
29	1-7	2-6	15 38	**$81,110,200**	$30,490,900	$6,733,900	$694,000	$17,762,200	$4,567,200	$19,486,000	$1,376,000
30	1-7	2-6	15.50	**$89,510,200**	$36,421,900	$6,752,900	$694,000	$18,275,200	$4,567,200	$21,646,000	$1,153,000
31	1-7	2-8	13 74	**$71,074,200**	$21,445,800	$6,669,400	$684,000	$17,589,500	$4,027,500	$19,073,000	$1,585,000
LHO-1	1-4	2-8	14.76	**$74,423,900**	$24,390,800	$6,677,200	$687,000	$16,190,600	$4,428,300	$19,764,000	$2,286,000
LHO-2	1-4	2-2	14 82	**$78,387,900**	$27,163,000	$6,709,500	$683,000	$16,188,400	$4,765,000	$20,888,000	$1,991,000
LHO-3	1-4	2-8	12.80	**$78,104,900**	$28,854,800	$6,585,200	$670,000	$15,584,600	$4,428,300	$19,337,000	$2,645,000
LHO-4	1-4	2-2	12 86	**$82,068,900**	$31,627,000	$6,617,500	$666,000	$15,582,400	$4,765,000	$20,461,000	$2,350,000
CoL-1	1-7	2-6	13.77	**$69,062,200**	$19,783,900	$6,633,900	$671,000	$17,250,200	$4,567,200	$18,600,000	$1,556,000
RR-1	1-8	2-6	15 25	**$75,780,000**	$23,544,900	$6,705,600	$679,000	$16,342,500	$5,036,000	$20,671,000	$2,801,000

Table 2: Transmission and Substation Facilities Total Estimated Costs (Sorted Least to Most Expensive)

Route	Sub 1	Sub 2	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
25	1-7	2-6	14 63	**$66,655,200**	$16,113,900	$6,699,900	$677,000	$17,493,200	$4,567,200	$19,140,000	$1,964,000
18	**1-8**	**2-6**	**15.12**	**$68,548,000**	**$17,828,900**	**$6,659,600**	**$698,000**	**$16,235,500**	**$5,036,000**	**$20,126,000**	**$1,964,000**
CoL-1	1-7	2-6	13 77	**$69,062,200**	$19,783,900	$6,633,900	$671,000	$17,250,200	$4,567,200	$18,600,000	$1,556,000
13	**1-2**	**2-4**	**14.65**	**$69,243,000**	**$20,968,600**	**$6,936,800**	**$684,000**	**$15,122,600**	**$4,847,000**	**$17,969,000**	**$2,715,000**
31	1-7	2-8	13 74	**$71,074,200**	$21,445,800	$6,669,400	$684,000	$17,589,500	$4,027,500	$19,073,000	$1,585,000
27	**1-7**	**2-6**	**14.88**	**$73,706,200**	**$21,347,900**	**$6,711,900**	**$694,000**	**$17,733,200**	**$4,567,200**	**$21,015,000**	**$1,637,000**
8	1-3	2-6	12 85	**$73,954,300**	$24,362,900	$6,707,200	$668,000	$16,435,900	$5,187,300	$18,827,000	$1,766,000
26	**1-7**	**2-6**	**14.53**	**$73,976,200**	**$23,242,900**	**$6,691,900**	**$673,000**	**$17,523,200**	**$4,567,200**	**$19,247,000**	**$2,031,000**
11	1-8	2-5	12.04	**$74,361,000**	$23,258,000	$6,481,000	$666,000	$15,799,500	$4,816,500	$21,418,000	$1,922,000
LHO-1	**1-4**	**2-8**	**14.76**	**$74,423,900**	**$24,390,800**	**$6,677,200**	**$687,000**	**$16,190,600**	**$4,428,300**	**$19,764,000**	**$2,286,000**
RR-1	1-8	2-6	15 25	**$75,780,000**	$23,544,900	$6,705,600	$679,000	$16,342,500	$5,036,000	$20,671,000	$2,801,000
19	**1-8**	**2-6**	**15.02**	**$75,869,000**	**$24,957,900**	**$6,651,600**	**$694,000**	**$16,265,500**	**$5,036,000**	**$20,233,000**	**$2,031,000**
9	1-5	2-7	13 48	**$76,223,300**	$25,470,300	$6,536,300	$672,000	$16,393,100	$4,666,600	$20,508,000	$1,977,000
12	**1-8**	**2-5**	**11.93**	**$76,791,000**	**$25,267,000**	**$6,471,000**	**$663,000**	**$15,901,500**	**$4,816,500**	**$21,615,000**	**$2,057,000**
20	1-8	2-6	14 45	**$77,154,000**	$25,692,900	$6,637,600	$687,000	$16,352,500	$5,036,000	$21,308,000	$1,440,000
21	**1-8**	**2-6**	**15.53**	**$77,604,000**	**$24,778,900**	**$6,711,600**	**$696,000**	**$16,397,500**	**$5,036,000**	**$21,184,000**	**$2,800,000**
LHO-3	1-4	2-8	12 80	**$78,104,900**	$28,854,800	$6,585,200	$670,000	$15,584,600	$4,428,300	$19,337,000	$2,645,000
LHO-2	**1-4**	**2-2**	**14.82**	**$78,387,900**	**$27,163,000**	**$6,709,500**	**$683,000**	**$16,188,400**	**$4,765,000**	**$20,888,000**	**$1,991,000**
2	1-8	2-5	13 85	**$78,546,000**	$24,803,000	$6,569,000	$680,000	$16,692,500	$4,816,500	$23,404,000	$1,581,000
10	**1-5**	**2-7**	**12.55**	**$78,798,300**	**$25,121,300**	**$6,467,300**	**$675,000**	**$16,597,100**	**$4,666,600**	**$22,720,000**	**$2,551,000**
14	1-2	2-4	14.47	**$80,384,000**	$31,542,600	$6,921,800	$677,000	$15,265,600	$4,847,000	$18,245,000	$2,885,000
22	**1-8**	**2-6**	**15.66**	**$80,612,000**	**$24,040,900**	**$6,722,600**	**$692,000**	**$17,310,500**	**$5,036,000**	**$23,868,000**	**$2,942,000**
17	1-3	2-2	12 88	**$80,786,300**	$27,979,000	$6,783,000	$660,000	$16,995,000	$4,984,300	$21,018,000	$2,367,000
28	**1-7**	**2-6**	**14.78**	**$81,027,200**	**$28,476,900**	**$6,703,900**	**$690,000**	**$17,763,200**	**$4,567,200**	**$21,122,000**	**$1,704,000**
29	1-7	2-6	15 38	**$81,110,200**	$30,490,900	$6,733,900	$694,000	$17,762,200	$4,567,200	$19,486,000	$1,376,000
15	**1-1**	**2-4**	**13.83**	**$82,068,000**	**$29,781,600**	**$6,811,200**	**$656,000**	**$17,243,200**	**$4,893,000**	**$20,097,000**	**$2,586,000**
LHO-4	1-4	2-2	12 86	**$82,068,900**	$31,627,000	$6,617,500	$666,000	$15,582,400	$4,765,000	$20,461,000	$2,350,000
24	**1-3**	**2-7**	**14.92**	**$82,832,300**	**$24,608,300**	**$6,823,200**	**$698,000**	**$18,010,600**	**$4,883,200**	**$24,668,000**	**$3,141,000**
7	1-6	2-1	16 12	**$85,258,500**	$32,360,000	$6,863,700	$702,000	$17,246,500	$4,723,300	$21,767,000	$1,596,000
4	**1-6**	**2-6**	**21.44**	**$85,711,500**	**$23,817,900**	**$7,188,300**	**$734,000**	**$20,064,400**	**$5,019,900**	**$26,896,000**	**$1,991,000**
23	1-3	2-7	14 83	**$87,471,300**	$28,373,300	$6,816,200	$700,000	$18,229,600	$4,883,200	$25,132,000	$3,337,000
1	**1-7**	**2-3**	**14.97**	**$88,414,200**	**$33,774,000**	**$6,709,200**	**$682,000**	**$18,434,200**	**$4,347,800**	**$23,275,000**	**$1,192,000**
30	1-7	2-6	15 50	**$89,510,200**	$36,421,900	$6,752,900	$694,000	$18,275,200	$4,567,200	$21,646,000	$1,153,000
3	**1-6**	**2-8**	**20.01**	**$92,697,500**	**$29,029,800**	**$7,118,800**	**$722,000**	**$20,216,700**	**$4,480,200**	**$28,692,000**	**$2,438,000**
16	1-5	2-2	16 22	**$93,889,300**	$36,461,000	$6,925,100	$728,000	$17,428,500	$4,767,700	$24,738,000	$2,841,000
5	**1-8**	**2-2**	**19.67**	**$95,185,000**	**$34,999,000**	**$7,129,400**	**$693,000**	**$18,191,600**	**$4,833,000**	**$26,377,000**	**$2,962,000**
6	1-4	2-4	21 27	**$98,480,800**	$36,026,600	$7,272,300	$742,000	$19,187,300	$4,836,600	$27,118,000	$3,298,000

Table 3: Transmission Facilities Estimated Total Costs

Route	Sub 1	Sub 2	Length (miles)	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
1	1-7	2-3	14 97	**$70,645,000**	$31,524,000	$3,740,000	$682,000	$10,232,000	$0	$23,275,000	$1,192,000
2	1-8	2-5	13.85	**$61,580,000**	$22,300,000	$3,655,000	$680,000	$9,960,000	$0	$23,404,000	$1,581,000
3	1-6	2-8	20 01	**$75,524,000**	$26,795,000	$4,129,000	$722,000	$12,748,000	$0	$28,692,000	$2,438,000
4	1-6	2-6	21 44	**$68,607,000**	$21,818,000	$4,234,000	$734,000	$12,934,000	$0	$26,896,000	$1,991,000
5	1-8	2-2	19 67	**$77,926,000**	$32,496,000	$4,113,000	$693,000	$11,285,000	$0	$26,377,000	$2,962,000
6	1-4	2-4	21.27	**$81,492,000**	$33,676,000	$4,243,000	$742,000	$12,415,000	$0	$27,118,000	$3,298,000
7	1-6	2-1	16 12	**$68,119,000**	$29,857,000	$3,807,000	$702,000	$10,390,000	$0	$21,767,000	$1,596,000
8	1-3	2-6	12.85	**$56,079,000**	$22,363,000	$3,636,000	$668,000	$8,819,000	$0	$18,827,000	$1,766,000
9	1-5	2-7	13 48	**$60,537,000**	$23,882,000	$3,683,000	$672,000	$9,815,000	$0	$20,508,000	$1,977,000
10	1-5	2-7	12.55	**$63,112,000**	$23,533,000	$3,614,000	$675,000	$10,019,000	$0	$22,720,000	$2,551,000
11	1-8	2-5	12 04	**$57,395,000**	$20,755,000	$3,567,000	$666,000	$9,067,000	$0	$21,418,000	$1,922,000
12	1-8	2-5	11.93	**$59,825,000**	$22,764,000	$3,557,000	$663,000	$9,169,000	$0	$21,615,000	$2,057,000
13	1-2	2-4	14 65	**$51,944,000**	$18,618,000	$3,718,000	$684,000	$8,240,000	$0	$17,969,000	$2,715,000
14	1-2	2-4	14.47	**$63,085,000**	$29,192,000	$3,703,000	$677,000	$8,383,000	$0	$18,245,000	$2,885,000
15	1-1	2-4	13 83	**$64,839,000**	$27,431,000	$3,684,000	$656,000	$10,385,000	$0	$20,097,000	$2,586,000
16	1-5	2-2	16.22	**$76,768,000**	$33,958,000	$3,920,000	$728,000	$10,583,000	$0	$24,738,000	$2,841,000
17	1-3	2-2	12 88	**$62,615,000**	$25,476,000	$3,630,000	$660,000	$9,464,000	$0	$21,018,000	$2,367,000
18	1-8	2-6	15.12	**$51,585,000**	$15,829,000	$3,725,000	$698,000	$9,243,000	$0	$20,126,000	$1,964,000
19	1-8	2-6	15 02	**$58,906,000**	$22,958,000	$3,717,000	$694,000	$9,273,000	$0	$20,233,000	$2,031,000
20	1-8	2-6	14.45	**$60,191,000**	$23,693,000	$3,703,000	$687,000	$9,360,000	$0	$21,308,000	$1,440,000
21	1-8	2-6	15 53	**$60,641,000**	$22,779,000	$3,777,000	$696,000	$9,405,000	$0	$21,184,000	$2,800,000
22	1-8	2-6	15.66	**$63,649,000**	$22,041,000	$3,788,000	$692,000	$10,318,000	$0	$23,868,000	$2,942,000
23	1-3	2-7	14 83	**$70,735,000**	$26,785,000	$3,815,000	$700,000	$10,966,000	$0	$25,132,000	$3,337,000
24	1-3	2-7	14.92	**$66,096,000**	$23,020,000	$3,822,000	$698,000	$10,747,000	$0	$24,668,000	$3,141,000
25	1-7	2-6	14 63	**$48,889,000**	$14,367,000	$3,710,000	$677,000	$9,031,000	$0	$19,140,000	$1,964,000
26	1-7	2-6	14.53	**$56,210,000**	$21,496,000	$3,702,000	$673,000	$9,061,000	$0	$19,247,000	$2,031,000
27	1-7	2-6	14.88	**$55,940,000**	$19,601,000	$3,722,000	$694,000	$9,271,000	$0	$21,015,000	$1,637,000
28	1-7	2-6	14.78	**$63,261,000**	$26,730,000	$3,714,000	$690,000	$9,301,000	$0	$21,122,000	$1,704,000
29	1-7	2-6	15 38	**$63,344,000**	$28,744,000	$3,744,000	$694,000	$9,300,000	$0	$19,486,000	$1,376,000
30	1-7	2-6	15.50	**$71,744,000**	$34,675,000	$3,763,000	$694,000	$9,813,000	$0	$21,646,000	$1,153,000
31	1-7	2-8	13 74	**$53,239,000**	$19,464,000	$3,644,000	$684,000	$8,789,000	$0	$19,073,000	$1,585,000
LHO-1	1-4	2-8	14.76	**$57,566,000**	$22,156,000	$3,723,000	$687,000	$8,950,000	$0	$19,764,000	$2,286,000
LHO-2	1-4	2-2	14 82	**$61,303,000**	$24,660,000	$3,709,000	$683,000	$9,372,000	$0	$20,888,000	$1,991,000
LHO-3	1-4	2-8	12.80	**$61,247,000**	$26,620,000	$3,631,000	$670,000	$8,344,000	$0	$19,337,000	$2,645,000
LHO-4	1-4	2-2	12 86	**$64,984,000**	$29,124,000	$3,617,000	$666,000	$8,766,000	$0	$20,461,000	$2,350,000
CoL-1	1-7	2-6	13.77	**$51,296,000**	$18,037,000	$3,644,000	$671,000	$8,788,000	$0	$18,600,000	$1,556,000
RR-1	1-8	2-6	15 25	**$58,817,000**	$21,545,000	$3,771,000	$679,000	$9,350,000	$0	$20,671,000	$2,801,000

Table 4: Substation 1 Facilities Estimated Total Costs

Sub Site	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
1-1	**$9,257,500**	$1,251,500	$1,502,300		$3,896,500	$2,607,200		
1-2	**$9,327,500**	$1,251,500	$1,593,900		$3,920,900	$2,561,200		
1-3	**$10,103,700**	$1,251,500	$1,556,900		$4,525,200	$2,770,100		
1-4	**$9,017,300**	$1,251,500	$1,404,400		$3,810,600	$2,550,800		
1-5	**$9,053,700**	$1,251,500	$1,409,000		$3,839,700	$2,553,500		
1-6	**$9,332,900**	$1,251,500	$1,440,000		$4,038,700	$2,602,700		
1-7	**$9,994,600**	$998,500	$1,475,600		$5,370,500	$2,150,000		
1-8	**$9,191,400**	$1,251,500	$1,420,300		$3,900,800	$2,618,800		

Table 5: Substation 2 Facilities Estimated Total Costs

Sub Site	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
2-1	**$7,036,800**	$1,251,500	$1,369,500		$2,569,300	$1,846,500		
2-2	**$7,297,800**	$1,251,500	$1,348,900		$2,757,300	$1,940,100		
2-3	**$7,004,800**	$1,251,500	$1,246,400		$2,583,200	$1,923,700		
2-4	**$7,201,700**	$1,099,100	$1,377,700		$2,713,200	$2,011,700		
2-5	**$7,004,800**	$1,251,500	$1,246,500		$2,583,200	$1,923,600		
2-6	**$7,001,800**	$748,400	$1,267,100		$2,843,200	$2,143,100		
2-7	**$5,862,800**	$336,800	$1,197,100		$2,489,900	$1,839,000		
2-8	**$7,070,800**	$983,300	$1,302,600		$3,181,500	$1,603,400		

Table 6: Existing Substation Facilities Estimated Total Costs

Sub Site	Estimated Total Cost	Right-of-Way & Land Acquisition	Engineering & Design (Utility)	Engineering & Design (Contract)	Procurement of Material & Equipment	Construction of Facilities (Utility)	Construction of Facilities (Contract)	Other
Leander	**$712,400**		$207,400		$239,300	$265,700		
Round Rock	**$57,400**		$39,800		$9,200	$8,400		

* The costs above reflect LCRA TSC estimated costs. Costs to be incurred by PEC and Oncor at these substations are not included

SOAH DOCKET NO. 473-16-4342
PUC DOCKET NO. 45866

APPLICATION OF LCRA TRANSMISSION SERVICES CORPORATION TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE PROPOSED LEANDER TO ROUND ROCK 138-KV TRANSMISSION LINE PROJECT IN WILLIAMSON COUNTY, TEXAS	§ § § § § § § § §	**BEFORE THE STATE OFFICE** **OF** **ADMINISTRATIVE HEARINGS**

LCRA TRANSMISSION SERVICES CORPORATION'S RESPONSE TO CITY OF LEANDER'S FIRST REQUEST FOR INFORMATION

Question No. 1-2:

Provide in Excel the data listed in Table 5-1 of the Environmental Assessment, as amended, for the City of Leander Proposed Alternative Route, in a format that can be used to offer a side-by-side comparison of the City of Leander Proposed Alternative Route as compared to the routes included in the Application.

Response No. 1-2:

The information requested has been made available to the requesting party and provides a comparison of all routes included in the Application and proposed by LHO of CR 175 and Riverside Resources to date.

Prepared By: Lisa Barko Meaux — Title: Project Manager, Power Engineers, Inc.
Sponsored By: Lisa Barko Meaux — Title: Project Manager, Power Engineers, Inc.

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

	Evaluation Criteria	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	Land Use																			
1	Length of primary alternative route (miles)	0.4	0.2	0.7	0.0	0.9	0.3	0.7	2.5	0.4	0.3	0.9	1.0	0.1	0.2	0.6	0.2	0.1	0.0	1.9
2	Number of habitable structures[1] within 300 feet of ROW centerline	3	1	0	0	4	1	1	33	2	3	4	2	1	1	4	1	0	0	4
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	0	1	0	0	4	1	1	33	2	3	4	2	1	1	4	1	0	0	4
4	Length of ROW using existing transmission line ROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)	0.0	0.0	0.0	0.0	0.7	0.2	0.0	2.2	0.4	0.0	0.9	1.0	0.1	0.2	0.6	0.2	0.1	0.0	1.7
7	Sum of evaluation criteria 4, 5, and 6	0.3	0.0	0.4	0.0	0.7	0.2	0.0	2.2	0.4	0.0	0.9	1.0	0.1	0.2	0.6	0.2	0.1	0.0	1.7
8	Percent of evaluation criteria 4, 5, and 6	87%	0%	60%	0%	77%	65%	0%	86%	100%	0%	90%	100%	100%	100%	100%	100%	100%	100%	90%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Length of ROW parallel and adjacent to future planned roadways	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	Percent ROW parallel and adjacent to apparent property lines[3]	0%	0%	40%	51%	9%	0%	0%	7%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15	Length of ROW across parks/recreational areas[4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	1
17	Length of ROW through cropland	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	Length of ROW through pasture/rangeland	0.0	0.1	0.3	0.0	0.4	0.3	0.3	0.9	0.4	0.2	0.4	0.6	0.0	0.0	0.0	0.1	0.1	0.0	0.2
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Number of pipeline crossings	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0
21	Number of transmission line crossings	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of U.S. and State highway crossings	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U.S. and State highways	0.4	0.2	0.7	0.0	0.8	0.3	0.6	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	1.0	0.1	0.2	0.0	0.2	0.1	0.0	1.9
33	Estimated length of ROW within foreground visual zone[5] of parks/recreational areas[4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.4	0.1	0.2	0.5	0.2	0.1	0.0	1.4
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0.3	0.1	0.4	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.4	0.3	0.0	0.1	0.5	0.1	0.0	0.0	1.7
35	Length of ROW through bottomland/riparian woodlands	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Length of ROW across NWI mapped wetlands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.2
39	Length across Karst Zones 1 and 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Length across potential habitat for threatened salamander species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
44	Length of ROW across open water (lakes, ponds)	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
45	Number of stream crossings	1	1	3	0	0	0	4	2	1	0	3	2	0	0	1	1	0	0	1
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
48	Length of ROW across 100-year floodplain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	1	0	0	1	1	1	1	1	0	0	1	3	2	3	1	2	0	0	1
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0.3	0.2	0.4	0.0	0.0	0.0	0.7	0.2	0.1	0.0	0.6	1.0	0.0	0.1	0.1	0.1	0.0	0.0	1.7

[1] Single-family and multi-family dwellings and related structures: mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less.

Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line.

[3] Property lines created by existing roads, highway, or railroad ROW are not double-counted in the length of ROW parallel to apparent property boundaries criteria. Property boundarie

ational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.

unobstructed. Lengths of ROW within the visual foreground zone of Interstates, U.S. and State Highways criteria are not double-counted in the length of ROW within th

nd zone of FM Roads criteria.

unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone

nterstates, U.S. and State Highways criteria and/or with the total length of ROW within the visua

und zone of FM Roads criteria.

Note: All length measurements in miles unless noted otherwise. All linear measurements were

from aerial photography flown September 2015 with the exception of high

probability areas for archeological/historical/resources which were measured from the USGS To

Quadrangles. The aerial photography was orthorectified to National Map

Accuracy Standards of +/- 5 feet.

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

Evaluation Criteria																				
	Land Use	T	U	V	W	X	Y	Z	A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1	L1
1	Length of primary alternative route (miles)	0.3	0.3	0.5	0.3	0.1	1.6	1.1	2.7	1.6	0.1	0.1	0.1	0.3	0.6	0.3	0.3	0.6	0.7	0.3
2	Number of habitable structures[1] within 300 feet of ROW centerline	2	3	1	2	0	3	1	2	5	2	6	1	3	1	2	0	0	0	1
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	2	3	1	2	0	3	1	2	5	2	6	1	3	1	2	0	0	0	1
4	Length of ROW using existing transmission line ROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)	0.2	0.0	0.5	0.3	0.0	0.0	1.1	2.1	0.0	0.0	0.1	0.0	0.1	0.6	0.0	0.0	0.5	0.0	0.3
7	Sum of evaluation criteria 4, 5, and 6	0.2	0.0	0.5	0.3	0.0	0.0	1.1	2.1	0.0	0.0	0.1	0.0	0.1	0.6	0.0	0.0	0.5	0.0	0.3
8	Percent of evaluation criteria 4, 5, and 6	68%	0%	100%	100%	0%	0%	96%	79%	0%	0%	100%	0%	43%	100%	0%	0%	81%	0%	100%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	Length of ROW parallel and adjacent to future planned roadways	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0.1	0.2	0.0	0.0	0.0	1.2	0.0	0.0	0.9	0.1	0.0	0.1	0.1	0.0	0.3	0.2	0.0	0.5	0.0
14	Percent ROW parallel and adjacent to apparent property lines[3]	32%	51%	0%	0%	0%	73%	0%	0%	54%	100%	0%	100%	21%	0%	100%	63%	0%	62%	0%
15	Length of ROW across parks/recreational areas[4]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	1
17	Length of ROW through cropland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
18	Length of ROW through pasture/rangeland	0.1	0.1	0.1	0.3	0.0	0.4	0.7	0.7	0.2	0.0	0.0	0.0	0.0	0.4	0.0	0.2	0.1	0.5	0.3
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Number of pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of U.S. and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	1	1	1	1	1	4	0	1	0	0	0	0	0	0	0	0	0	0	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U.S. and State highways	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0.3	0.3	0.5	0.0	0.0	1.4	1.1	2.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	0.3	0.3	0.5	0.3	0.1	1.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.3	0.3	0.4	0.3
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0.2	0.2	0.3	0.0	0.1	1.4	1.0	2.4	1.6	0.1	0.1	0.1	0.1	0.0	0.3	0.1	0.4	0.2	0.0
35	Length of ROW through bottomland/riparian woodlands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Length of ROW across NWI mapped wetlands	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0.0	0.0	0.0	0.0	0.0	0.6	0.0	1.3	0.8	0.7	0.0	0.2	0.0	0.0	0.3	0.9	0.0	0.0	0.0
39	Length across Karst Zones 1 and 2	0.0	0.0	0.0	0.0	0.0	1.3	1.1	2.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Length across potential habitat for threatened salamander species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Length of ROW across open water (lakes, ponds)	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	Number of stream crossings	1	3	2	0	1	1	0	1	3	1	0	0	0	1	0	2	1	2	1
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Length of ROW across 100-year floodplain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	1	5	2	1	1	1	1	2	1	1	0	0	0
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0.1	0.3	0.0	0.1	0.1	0.2	0.4	1.5	1.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.1

[1] Single-family and multi-family dwellings, and related structures: mobile homes; apartment buildings; commercial structures; industrial structures; business structures; churches; hospitals; nursing homes; schools; or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less.

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line.

[3] Property lines created by existing roads, highway, or railroad ROW are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria. Property boundaries provided by LCRA TSC.

[4] Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.

[5] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of Interstates, U.S. and State Highways criteria are not "double-counted" in the length of ROW within the visual foreground zone of FM Roads criteria.

[6] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone of Interstates, U.S. and State Highways criteria and/or with the total length of ROW within the visual foreground zone of FM Roads criteria.

Note: All length measurements in miles unless noted otherwise. All linear measurements were obtained from aerial photography flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS Topographic Quadrangles. The aerial photography was orthorectified to National Map Accuracy Standards of +/- 5 feet.

Table 5-2
Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)
Primary Alternative Segments 9/10/2016

Evaluation Criteria																				
	Land Use	**M1**	**N1**	**O1**	**P1**	**Q1**	**R1**	**S1**	**T1**	**U1**	**U1a**	**V1**	**V1a**	**W1**	**X1**	**Y1**	**Z1**	**A2**	**B2**	**C2**
1	Length of primary alternative route (miles)	0 4	0 2	0 2	0 2	0 3	0 6	0 6	0 3	0 3	0 3	0 4	0 4	0 1	0 2	0 2	0 3	0 5	0 8	0 5
2	Number of habitable structures[1] within 300 feet of ROW centerline	14	4	14	7	3	0	1	4	13	1	19	0	1	4	0	1	5	8	1
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	14	4	14	7	3	0	1	4	13	1	19	0	1	4	0	1	5	8	1
4	Length of ROW using existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)	0 4	0 2	0 0	0 2	0 0	0 6	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 6	0 0
7	Sum of evaluation criteria 4, 5, and 6	0 4	0 2	0 0	0 2	0 0	0 6	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 6	0 0
8	Percent of evaluation criteria 4, 5, and 6	100%	100%	0%	100%	0%	100%	0%	48%	2%	0%	0%	0%	0%	0%	0%	0%	62%	73%	0%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 4	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	0%	75%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0 0	0 0	0 0	0 2	0 0	0 0	0 0	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
12	Length of ROW parallel and adjacent to future planned roadways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0 0	0 0	0 2	0 0	0 0	0 0	0 5	0 0	0 1	0 0	0 0	0 0	0 0	0 2	0 0	0 0	0 1	0 2	0 4
14	Percent ROW parallel and adjacent to apparent property lines[3]	0%	0%	100%	0%	0%	0%	71%	0%	23%	0%	0%	0%	0%	73%	0%	0%	11%	21%	86%
15	Length of ROW across parks/recreational areas[4]	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
17	Length of ROW through cropland	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
18	Length of ROW through pasture/rangeland	0 1	0 1	0 2	0 0	0 1	0 0	0 2	0 1	0 0	0 1	0 4	0 4	0 0	0 0	0 0	0 0	0 1	0 0	0 0
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
20	Number of pipeline crossings	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of U.S. and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0	0	1	0	1	0	1	0	0	0	1	1	1	1	1	1	1	1	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U.S. and State highways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
33	Estimated length of ROW within foreground visual zone[5] of parks/recreational areas[4]	0 4	0 2	0 2	0 2	0 3	0 6	0 6	0 3	0 3	0 3	0 4	0 4	0 1	0 2	0 2	0 2	0 5	0 8	0 5
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0 0	0 1	0 0	0 2	0 1	0 5	0 4	0 2	0 2	0 2	0 3	0 2	0 0	0 1	0 2	0 3	0 3	0 4	0 5
35	Length of ROW through bottomland/riparian woodlands	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
36	Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0 0	0 0	0 0	0 0	0 0	1 4	0 7	0 0	0 1	1 9	0 0	0 0	0 5	0 8	2 2	2 7	0 7	0 1	4 5
39	Length across Karst Zones 1 and 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 5	0 0	0 0
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
43	Length across potential habitat for threatened salamander species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
44	Length of ROW across open water (lakes, ponds)	0 01	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 01	0 00	0 00	0 00	0 00	0 00	0 00
45	Number of stream crossings	1	1	1	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	1
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0
48	Length of ROW across 100-year floodplain	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 1	0 0	0 0	0 0	0 0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	0	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	0	0	0	0	0	3	2	0	3	2	2	2	1	2	3	2	0	4	4
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0 2	0 2	0 2	0 1	0 1	0 4	0 3	0 1	0 2	0 2	0 2	0 2	0 1	0 2	0 2	0 1	0 0	0 5	0 5

[1] Single-family and multi-family dwellings and related structures mobile homes apartment buildings commercial structures industrial structures business structures churches hospitals, nursing homes schools or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads highway or railroad ROW are not 'double-counted' in the length of ROW parallel to apparent property boundaries criteria Property boundarie provided by LCRA T

[4] Defined as parks a tional areas owned by a governmental body or an organized group club or church within 1 000 feet of the centerline of the project

[5] One-half mile unobstructed Lengths of ROW within the visual foreground zone of Interstates U S and State Highways critena are not 'double-counted' in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile unobstructed Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone Interstates U S and State Highways criteria and/or with the total length of ROW within the visua criteria

Note All length measurements in miles unless noted otherwise All linear measurements were flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS To al photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

	Evaluation Criteria	D2	E2	F2	G2	H2	I2	J2	K2	L2	M2	N2	O2	P2	Q2	R2	S2	T2	U2	V2
	Land Use																			
1	Length of primary alternative route (miles)	0 3	0 5	0 2	0 1	0 2	0 6	0 0	0 8	0 5	0 1	0 1	0 4	0 1	0 5	0 6	0 1	1 7	0 6	1 1
2	Number of habitable structures[1] within 300 feet of ROW centerline	5	1	1	0	0	11	6	1	10	3	0	2	2	21	3	1	174	55	1
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	5	1	1	0	0	11	6	1	10	3	0	2	2	21	3	1	174	55	1
4	Length of ROW using existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 7	0 0	0 0	0 0	0 0	0 0	0 3	0 6	0 1	0 5	0 0	0 0
7	Sum of evaluation criteria 4, 5, and 6	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 7	0 0	0 0	0 0	0 0	0 0	0 3	0 6	0 1	0 5	0 0	0 0
8	Percent of evaluation criteria 4, 5, and 6	100%	0%	0%	0%	0%	0%	100%	88%	0%	0%	0%	0%	0%	60%	100%	100%	30%	0%	0%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0 0	0 5	0 1	0 1	0 2	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	91%	51%	100%	100%	51%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 5	0 0	0 1	0 0	0 0	0 0
12	Length of ROW parallel and adjacent to future planned roadways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 8	0 0	0 0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 0	0 5	0 1	0 0	0 4	0 0	0 0	0 0	0 0	0 3	0 6	0 1
14	Percent ROW parallel and adjacent to apparent property lines[3]	0%	0%	0%	0%	0%	28%	0%	0%	95%	51%	61%	100%	21%	0%	0%	0%	20%	98%	8%
15	Length of ROW across parks/recreational areas[4]	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 5	0 0	0 0
16	Number of additional parks/recreational areas[4] within 1 000 feet of ROW centerline	1	0	0	0	0	1	1	1	0	1	0	0	0	3	2	2	6	4	0
17	Length of ROW through cropland	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
18	Length of ROW through pasture/rangeland	0 0	0 2	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 1	0 0	0 0	0 0	0 1	0 4	0 0	0 0	0 0	0 1
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
20	Number of pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of U S. and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10 000 feet of the ROW centerline	0	1	1	1	1	0	0	1	1	1	1	1	1	0	1	0	0	1	1
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	1	1	1	0	0	2	2	1	0	0	0	0	0	2	1	1	2	0	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U S. and State highways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0 0	0 0	0 0	0 0	0 0	0 3	0 0	0 6	0 4	0 1	0 0	0 4	0 1	0 5	0 6	0 1	0 0	0 0	0 0
33	Estimated length of ROW within foreground visual zone[5] of parks/recreational areas[4]	0 3	0 5	0 2	0 1	0 0	0 5	0 0	0 4	0 3	0 1	0 0	0 1	0 1	0 5	0 6	0 1	1 7	0 6	0 0
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0 2	0 4	0 1	0 1	0 2	0 5	0 0	0 4	0 3	0 0	0 0	0 3	0 0	0 3	0 3	0 0	1 2	0 5	0 9
35	Length of ROW through bottomland/riparian woodlands	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
36	Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0 0	3 1	0 1	1 3	1 1	0 0	0 0	1 7	0 8	0 0	0 0	0 0	0 0	0 0	0 0	0 0	7 2	0 0	0 0
39	Length across Karst Zones 1 and 2	0 3	0 0	0 0	0 0	0 2	0 6	0 0	0 0	0 1	0 0	0 1	0 1	0 0	0 5	0 4	0 1	1 7	0 6	1 1
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
43	Length across potential habitat for threatened salamander species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
44	Length of ROW across open water (lakes, ponds)	0 00	0 00	0 01	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
45	Number of stream crossings	1	1	1	0	0	1	0	2	1	0	0	0	0	1	0	0	2	0	1
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
48	Length of ROW across 100-year floodplain	0 0	0 0	0 1	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 1	0 0	0 0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	0	1	0	2	1	1	0	4	2	1	1	1	0	0	0	0	1	0	1
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0 2	0 4	0 2	0 1	0 1	0 3	0 0	0 6	0 1	0 1	0 1	0 1	0 0	0 4	0 0	0 1	0 8	0 0	0 7

[1] Single-family and multi-family dwellings, and related structures, mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads, highway, or railroad ROW are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria. Property boundarie provided by LCRA TSC

[4] Defined as parks and recreational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project

[5] One-half mile unobstructed. Lengths of ROW within the visual foreground zone of Interstates, U S. and State Highways criteria are not "double-counted" in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone Interstates, U S. and State Highways criteria and/or with the total length of ROW within the visua und zone of FM Roads criteria

Note: All length measurements in miles unless noted otherwise. All linear measurements were from aerial photography flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS To c Quadrangles. The aerial photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

Evaluation Criteria																				
	Land Use	**W2**	**W2a**	**X2**	**Y2**	**Z2**	**A3**	**A3a**	**B3**	**C3**	**D3**	**D3a**	**E3**	**F3**	**G3**	**H3**	**I3**	**J3**	**K3**	**L3**
1	Length of primary alternative route (miles)	11	11	13	20	01	15	15	18	06	07	07	02	12	10	11	09	06	02	09
2	Number of habitable structures[1] within 300 feet of ROW centerline	87	1	2	74	1	101	0	0	5	64	7	25	3	115	63	184	13	0	12
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	87	1	0	74	1	101	0	0	0	54	0	0	3	0	16	2	13	0	12
4	Length of ROW using existing transmission line ROW	00	00	13	00	00	00	00	00	06	00	00	02	00	10	00	08	00	00	00
5	Length of ROW parallel and adjacent to existing transmission line ROW	00	00	00	00	00	00	00	00	00	00	00	00	00	00	09	01	00	00	00
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc)	00	00	00	19	00	00	00	17	00	00	00	00	01	00	02	00	06	02	02
7	Sum of evaluation criteria 4, 5, and 6	00	00	13	19	00	00	00	17	06	00	00	02	01	10	10	09	06	02	02
8	Percent of evaluation criteria 4, 5, and 6	0%	0%	100%	97%	0%	0%	0%	92%	100%	0%	0%	100%	10%	100%	90%	100%	100%	100%	23%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	00	00	09	09	00	00	00	18	06	00	00	00	00	00	09	00	00	00	00
12	Length of ROW parallel and adjacent to future planned roadways	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
13	Length of ROW parallel and adjacent to apparent property lines[3]	11	00	00	00	00	12	00	00	00	06	00	00	00	00	00	00	00	00	01
14	Percent ROW parallel and adjacent to apparent property lines[3]	99%	0%	0%	0%	20%	78%	0%	0%	0%	85%	0%	0%	0%	0%	0%	0%	0%	0%	8%
15	Length of ROW across parks/recreational areas[4]	00	00	00	11	00	00	00	00	00	00	00	00	12	09	01	03	01	00	00
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	7	7	0	8	2	3	3	1	1	3	3	2	0	6	5	5	0	1	1
17	Length of ROW through cropland	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
18	Length of ROW through pasture/rangeland	00	00	11	01	00	04	04	05	03	02	02	02	00	00	02	00	00	01	03
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
20	Number of pipeline crossings	0	0	1	1	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0
22	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3 200 feet in length located within 10 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10 000 feet of the ROW centerline	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0	0	0	2	0	0	0	0	1	0	0	1	1	1	2	1	0	0	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of interstate, U S and State highways	00	00	13	00	00	00	00	01	06	00	00	01	00	00	10	00	00	00	00
32	Estimated length of ROW within foreground visual zone[5] of FM roads	05	05	00	20	01	05	05	17	00	00	00	00	09	05	01	05	06	02	09
33	Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	11	11	01	20	01	15	15	05	06	07	07	02	12	10	11	09	06	02	09
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	10	09	00	12	00	15	15	18	03	07	07	00	12	02	06	02	01	01	07
35	Length of ROW through bottomland/riparian woodlands	00	00	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
36	Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37	Length of ROW across known habitat of federally listed endangered or threatened species	00	00	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	12	18	00	00	00	17	18	00	00	43	35	00	00	00	00	00	00	00	00
39	Length across Karst Zones 1 and 2	11	11	13	19	01	15	15	18	06	07	07	02	12	10	11	09	00	00	00
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
43	Length across potential habitat for threatened salamander species	00	00	00	01	00	00	00	00	00	00	00	00	01	01	00	00	00	00	00
44	Length of ROW across open water (lakes ponds)	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 01	0 00	0 00
45	Number of stream crossings	0	0	1	4	0	0	0	2	0	1	1	0	1	2	1	2	1	1	1
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	02	00	00	00
48	Length of ROW across 100 year floodplain	00	00	01	05	00	00	00	00	00	01	01	00	10	02	01	02	01	00	00
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0
50	Number of additional recorded historic or prehistoric sites within 1 000 feet of ROW centerline	2	3	0	1	1	1	1	1	0	0	0	0	3	2	3	8	4	1	1
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	10	09	00	15	01	09	08	11	00	04	04	00	08	00	00	00	06	01	02

[1] Single-family and multi-family dwellings and related structures mobile homes, apartment buildings commercial structures industrial structures business structures churches hospitals nursing homes schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads highway, or railroad ROW are not double-counted in the length of ROW parallel to apparent property boundaries criteria Property boundaries provided by LCRA T

[4] Defined as parks a ational areas owned by a governmental body or an organized group club or church within 1 000 feet of the centerline of the project

[5] One-half mile unobstructed Lengths of ROW within the visual foreground zone of Interstates U S and State Highways criteria are not "double counted in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile unobstructed Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone Interstates U S and State Highways criteria and/or with the total length of ROW within the visual foreground zone of FM Roads criteria

Note All length measurements in miles unless noted otherwise All linear measurements were obtained from aerial photography flown September 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS Topographic Quadrangles al photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

	Evaluation Criteria	M3	N3	O3	U3	A4	B4	B4a	D4	E4	F4	F4a	G4	H4	I4	J4	K4	L4	M4	N4
	Land Use																			
1	Length of primary alternative route (miles)	0 4	5 0	2 3	0 3	1 1	1 1	1 1	0 3	0 3	0 5	0 4	0 1	0 1	0 1	0 0	0 3	0 7	0 0	0 2
2	Number of habitable structures[1] within 300 feet of ROW centerline	5	166	110	5	45	71	1	11	36	67	8	25	7	8	11	8	4	0	0
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	5	166	110	5	45	71	1	11	35	60	3	12	5	1	2	8	4	0	0
4	Length of ROW using existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc)	0 3	3 3	2 1	0 0	0 8	0 0	0 0	0 0	0 3	0 0	0 0	0 1	0 1	0 0	0 0	0 3	0 0	0 0	0 2
7	Sum of evaluation criteria 4, 5 and 6	0 3	3 3	2 1	0 0	0 8	0 0	0 0	0 0	0 3	0 0	0 0	0 1	0 1	0 1	0 0	0 3	0 0	0 0	0 2
8	Percent of evaluation criteria 4, 5, and 6	82%	66%	93%	0%	77%	0%	0%	0%	100%	4%	0%	78%	100%	100%	100%	100%	2%	0%	100%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 0	0 0	0 0
12	Length of ROW parallel and adjacent to future planned roadways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 5	0 0	0 0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0 0	0 1	0 0	0 3	0 0	1 0	0 0	0 1	0 0	0 2	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 0
14	Percent ROW parallel and adjacent to apparent property lines[3]	12%	2%	0%	100%	0%	94%	0%	57%	0%	37%	0%	22%	0%	0%	0%	0%	23%	26%	0%
15	Length of ROW across parks/recreational areas[4]	0 0	1 7	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	2	4	5	3	4	6	6	3	5	3	3	4	3	3	3	1	0	0	0
17	Length of ROW through cropland	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
18	Length of ROW through pasture/rangeland	0 0	0 5	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 0	0 0
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
20	Number of pipeline crossings	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
22	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	1	3	1	1	2	2	2	1	1	1	1	1	1	1	1	2	0	0	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U S and State highways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0 4	2 4	0 7	0 3	0 5	0 2	0 2	0 0	0 0	0 3	0 2	0 0	0 0	0 0	0 0	0 0	0 5	0 0	0 2
33	Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	0 4	5 0	2 3	0 3	1 1	1 1	1 1	0 3	0 3	0 5	0 4	0 1	0 1	0 1	0 0	0 3	0 4	0 0	0 2
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0 1	2 9	1 4	0 3	0 8	1 0	1 0	0 2	0 2	0 4	0 4	0 0	0 1	0 0	0 0	0 2	0 5	0 0	0 2
35	Length of ROW through bottomland/riparian woodlands	0 0	0 4	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
36	Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 02	0 02	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0 0	0 4	0 0	0 0	1 0	1 8	9 4	0 3	0 0	0 0	2 4	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
39	Length across Karst Zones 1 and 2	0 1	2 3	2 2	0 3	1 1	1 1	1 1	0 3	0 3	0 5	0 4	0 1	0 1	0 1	0 0	0 3	0 2	0 0	0 0
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 4	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
43	Length across potential habitat for threatened salamander species	0 0	0 2	1 1	0 1	0 7	0 0	0 0	0 1	0 0	0 1	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
44	Length of ROW across open water (lakes, ponds)	0 00	0 01	0 00	0 00	0 03	0 01	0 01	0 01	0 00	0 01	0 01	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
45	Number of stream crossings	0	12	1	1	4	3	3	1	0	1	1	0	0	0	0	0	1	0	0
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0 0	0 5	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0
48	Length of ROW across 100-year floodplain	0 0	1 3	0 1	0 1	0 4	0 0	0 1	0 1	0 0	0 1	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	1	0	1	1	2	2	1	0	2	2	0	0	0	0	0	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1 000 feet of ROW centerline	0	16	2	3	5	4	5	3	5	2	2	3	3	3	2	0	1	0	0
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0 2	2 7	0 4	0 1	0 7	0 8	0 8	0 2	0 3	0 5	0 4	0 1	0 1	0 0	0 0	0 2	0 3	0 0	0 0

[1] Single-family and multi-family dwellings, and related structures, mobile homes apartment buildings commercial structures industrial structures business structures, churches hospitals nursing homes schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads highway or railroad ROW are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria Property boundarie provided by LCRA TSC

[4] Defined as parks and ational areas owned by a governmental body or an organized group, club or church within 1 000 feet of the centerline of the project

[5] One-half mile, unobstructed Lengths of ROW within the visual foreground zone of Interstates, U S and State Highways criteria are not "double-counted" in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile unobstructed Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone o Interstates, U S and State Highways criteria and/or with the total length of ROW within the visual foreground zone of FM Roads criteria

Note All length measurements in miles unless noted otherwise All linear measurements were obtained from aerial photography flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS Topographic Quadran al photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

Evaluation Criteria Land Use	O4	P4	Q4	R4	S4	T4	U4	V4	W4	X4	Y4	Z4	A5	B5	C5	D5	E5	F5	G5
1 Length of primary alternative route (miles)	0 0	0 0	0 0	0 2	0 4	0 1	0 2	0 8	0 2	0 5	0 2	0 1	0 4	0 4	0 3	0 0	0 6	0 8	0 1
2 Number of habitable structures[1] within 300 feet of ROW centerline	0	0	0	0	1	0	0	2	0	1	0	1	4	3	0	0	0	2	0
3 Number of newly affected habitable structures[2] within 300 feet of ROW centerline	0	0	0	0	1	0	0	2	0	1	0	1	4	3	0	0	0	2	0
4 Length of ROW using existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
5 Length of ROW parallel and adjacent to existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
6 Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc)	0 0	0 0	0 0	0 2	0 4	0 0	0 2	0 0	0 0	0 0	0 2	0 0	0 4	0 0	0 0	0 0	0 0	0 8	0 0
7 Sum of evaluation criteria 4, 5, and 6	0 0	0 0	0 0	0 2	0 4	0 0	0 2	0 0	0 0	0 0	0 2	0 0	0 4	0 0	0 0	0 0	0 0	0 8	0 0
8 Percent of evaluation criteria 4 5 and 6	67%	100%	30%	100%	100%	0%	100%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	100%	0%
9 Length of ROW parallel and adjacent to water/wastewater pipelines	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 8	0 0	0 5	0 0	0 1	0 0	0 0	0 3	0 0	0 6	0 0	0 0
10 Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%	0%	0%	100%	100%	100%	0%	0%
11 Length of ROW parallel and adjacent to natural gas pipelines	0 0	0 0	0 0	0 0	0 4	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 8	0 0
12 Length of ROW parallel and adjacent to future planned roadways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
13 Length of ROW parallel and adjacent to apparent property lines[3]	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 4	0 0	0 0	0 0	0 0	0 0
14 Percent ROW parallel and adjacent to apparent property lines[3]	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%
15 Length of ROW across parks/recreational areas[4]	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
16 Number of additional parks/recreational areas[4] within 1 000 feet of ROW centerline	0	0	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	1	0
17 Length of ROW through cropland	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0	0 0	0 0
18 Length of ROW through pasture/rangeland	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 4	0 1	0 5	0 1	0 0	0 3	0 3	0 0	0 0	0 0	0 3	0 0
19 Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
20 Number of pipeline crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
21 Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22 Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23 Number of farm-to-market (FM) crossings	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26 Number of FAA registered public/military airports having no runway more than 3 200 feet in length located within 10 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27 Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Number of heliports within 5 000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29 Number of commercial AM radio transmitters within 10 000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 Number of FM radio transmitters microwave towers, and other electronic installations within 2 000 feet of ROW centerline	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
Aesthetics																			
31 Estimated length of ROW within foreground visual zone[5] of Interstate, U S and State highways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
32 Estimated length of ROW within foreground visual zone[5] of FM roads	0 0	0 0	0 0	0 2	0 3	0 0	0 2	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
33 Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	0 0	0 0	0 0	0 2	0 0	0 1	0 2	0 8	0 2	0 4	0 1	0 0	0 4	0 4	0 3	0 0	0 6	0 8	0 1
Ecology																			
34 Length of ROW through upland woodlands/brushlands	0 0	0 0	0 0	0 2	0 2	0 0	0 2	0 5	0 2	0 1	0 1	0 0	0 1	0 0	0 2	0 0	0 6	0 2	0 1
35 Length of ROW through bottomland/riparian woodlands	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
36 Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37 Length of ROW across known habitat of federally listed endangered or threatened species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
38 Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 5
39 Length across Karst Zones 1 and 2	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
40 Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
41 Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
42 Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
43 Length across potential habitat for threatened salamander species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
44 Length of ROW across open water (lakes, ponds)	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 01
45 Number of stream crossings	0	0	0	0	0	0	1	2	0	1	0	0	1	1	0	0	0	1	1
46 Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47 Length of ROW parallel (within 100 feet) to streams or rivers	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0
48 Length of ROW across 100-year floodplain	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0	0 0	0 0	0 1
Cultural Resources																			
49 Number of recorded historic or prehistoric sites crossed by ROW	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
50 Number of additional recorded historic or prehistoric sites within 1 000 feet of ROW centerline	0	0	0	0	2	0	1	3	1	1	0	0	0	0	0	0	2	1	2
51 Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52 Number of additional National Register-listed sites within 1 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53 Length of ROW through areas of high archaeological/historic site potential	0 0	0 0	0 0	0 0	0 4	0 0	0 0	0 5	0 2	0 5	0 2	0 1	0 3	0 3	0 0	0 0	0 5	0 4	0 1

[1] Single-family and multi-family dwellings, and related structures mobile homes apartment buildings commercial structures industrial structures business structures, churches hospitals nursing homes schools or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads highway, or railroad ROW are not 'double-counted in the length of ROW parallel to apparent property boundaries criteria Property boundarie provided by LCRA TSC

[4] Defined as parks and re ational areas owned by a governmental body or an organized group club or church within 1 000 feet of the centerline of the project

[5] One-half mile unobstructed Lengths of ROW within the visual foreground zone of Interstates U S and State Highways criteria are not double-counted in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile unobstructed Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone Interstates U S and State Highways criteria and/or with the total length of ROW within the visua Roads criteria

Note All length measurements in miles unless noted otherwise All linear measurements were tography flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS To al photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

Evaluation Criteria																				
	Land Use	**H5**	**I5**	**J5**	**K5**	**L5**	**M5**	**N5**	**O5**	**P5**	**Q5**	**R5**	**S5**	**T5**	**U5**	**V5**	**W5**	**X5**	**Y5**	**Z5**
1	Length of primary alternative route (miles)	0 0	1 1	0 7	2 1	0 0	1 0	1 2	0 0	0 0	0 1	0 0	0 0	0 1	1 0	0 3	0 1	0 7	0 2	0 1
2	Number of habitable structures[1] within 300 feet of ROW centerline	1	21	0	3	0	0	0	0	1	0	0	7	6	10	6	2	9	2	3
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	1	21	0	0	0	0	0	0	1	0	0	7	1	10	6	2	9	2	3
4	Length of ROW using existing transmission line ROW	0 0	0 0	0 0	1 7	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 0	0 0	0 2	0 0
7	Sum of evaluation criteria 4, 5, and 6	0 0	0 0	0 0	1 7	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 2	0 0	0 0	0 2	0 0
8	Percent of evaluation criteria 4, 5 and 6	0%	0%	0%	83%	100%	0%	0%	100%	100%	0%	0%	0%	100%	0%	75%	0%	1%	100%	0%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0 0	0 9	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 0	0 0	0 0	0 0
12	Length of ROW parallel and adjacent to future planned roadways	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 0	0 0	0 0	0 6	0 0	0 1
14	Percent ROW parallel and adjacent to apparent property lines[3]	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	86%	0%	100%
15	Length of ROW across parks/recreational areas[4]	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0
16	Number of additional parks/recreational areas[4] within 1 000 feet of ROW centerline	0	4	1	0	0	2	2	2	1	1	1	1	3	2	1	0	0	0	0
17	Length of ROW through cropland	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
18	Length of ROW through pasture/rangeland	0 0	1 1	0 7	0 9	0 0	0 4	0 5	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 2	0 0	0 1
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
20	Number of pipeline crossings	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Number of U S and State highway crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10 000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	0	2	2	2	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10 000 feet of the ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2 000 feet of ROW centerline	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
	Aesthetics																			
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U S and State highways	0 0	0 0	0 0	1 7	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 6	0 2	0 0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0 0	1 0	0 6	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 1
33	Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	0 0	1 1	0 7	0 0	0 0	0 5	0 5	0 0	0 0	0 1	0 0	0 0	0 1	0 6	0 3	0 1	0 0	0 0	0 0
	Ecology																			
34	Length of ROW through upland woodlands/brushlands	0 0	1 1	0 7	0 2	0 0	0 2	0 8	0 0	0 0	0 0	0 0	0 0	0 1	0 4	0 0	0 0	0 0	0 0	0 0
35	Length of ROW through bottomland/riparian woodlands	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
36	Length of ROW across NWI mapped wetlands	0 00	0 00	0 00	0 04	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0 0	1 1	0 7	0 8	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0 0	0 0	2 9	0 9	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 4	0 0	0 1	0 0	0 0	0 0	0 0	0 0
39	Length across Karst Zones 1 and 2	0 0	1 1	0 7	1 4	0 0	1 0	1 2	0 0	0 0	0 1	0 0	0 0	0 1	1 0	0 3	0 1	0 0	0 0	0 0
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
43	Length across potential habitat for threatened salamander species	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
44	Length of ROW across open water (lakes, ponds)	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 01
45	Number of stream crossings	0	1	1	2	0	1	4	0	0	0	0	0	0	0	0	0	0	1	0
46	Number of river crossings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0 0	0 0	0 0	0 2	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
48	Length of ROW across 100-year floodplain	0 0	0 0	0 0	0 0	0 0	0 3	0 3	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
	Cultural Resources																			
49	Number of recorded historic or prehistoric sites crossed by ROW	0	2	2	2	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	2	7	5	2	2	0	0	1	1	1	0	1	2	0	0	0	0	0	1
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0 0	1 1	0 7	1 2	0 0	0 4	0 6	0 0	0 0	0 1	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 1	0 0

[1] Single-family and multi-family dwellings and related structures mobile homes apartment buildings, commercial structures industrial structures business structures, churches hospitals nursing homes schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line

[3] Property lines created by existing roads highway, or railroad ROW are not "double-counted" in the length of ROW parallel to apparent property boundaries criteria Property boundarie provided by LCRA TSC

[4] Defined as parks and recr ational areas owned by a governmental body or an organized group, club or church within 1 000 feet of the centerline of the project

[5] One-half mile, unobstructed Lengths of ROW within the visual foreground zone of Interstates U S and State Highways critena are not "double-counted" in the length of ROW within th visual foreground zone of FM Roads criteria

[6] One-half mile, unobstructed Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone o Interstates, U S and State Highways criteria and/or with the total length of ROW within the visual foreground zone of FM Roads criteria

Note All length measurements in miles unless noted otherwise All linear measurements were obtained from aerial photography flown September, 2015 with the exception of high probability areas for archeological historical/resources which were measured from the USGS Topographic Quadrangles ~ al photography was orthorectified to National Map Accuracy Standards of +/- 5 feet

Table 5-2

Land Use and Environmental Data For Primary Route Evaluation (Primary Segments)

Primary Alternative Segments 9/10/2016

Evaluation Criteria									
	Land Use	**A6**	**B6**	**C6**	**D6**	**E6**	**F6**	**G6**	**H6**
1	Length of primary alternative route (miles)	0.9	0.2	0.2	0.3	2.2	0.2	0.1	0.1
2	Number of habitable structures[1] within 300 feet of ROW centerline	6	3	2	1	5	4	0	0
3	Number of newly affected habitable structures[2] within 300 feet of ROW centerline	6	3	2	1	5	4	0	0
4	Length of ROW using existing transmission line ROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Length of ROW parallel and adjacent to existing transmission line ROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Length of ROW parallel and adjacent to other existing ROW (roadways, railways, etc.)	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.1
7	Sum of evaluation criteria 4, 5, and 6	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.1
8	Percent of evaluation criteria 4, 5, and 6	1%	10%	100%	0%	0%	100%	0%	100%
9	Length of ROW parallel and adjacent to water/wastewater pipelines	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
10	Percent of ROW parallel and adjacent to water/wastewater pipelines	0%	0%	0%	100%	0%	0%	0%	0%
11	Length of ROW parallel and adjacent to natural gas pipelines	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0
12	Length of ROW parallel and adjacent to future planned roadways	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	Length of ROW parallel and adjacent to apparent property lines[3]	0.4	0.2	0.0	0.0	1.5	0.0	0.0	0.0
14	Percent ROW parallel and adjacent to apparent property lines[3]	47%	90%	0%	0%	69%	0%	0%	0%
15	Length of ROW across parks/recreational areas[4]	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
16	Number of additional parks/recreational areas[4] within 1,000 feet of ROW centerline	0	0	0	0	0	1	1	1
17	Length of ROW through cropland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	Length of ROW through pasture/rangeland	0.7	0.2	0.1	0.3	0.0	0.0	0.0	0.0
19	Length of ROW through land irrigated by traveling systems (rolling or pivot type)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	Number of pipeline crossings	0	0	0	0	0	0	1	0
21	Number of transmission line crossings	0	0	0	0	0	0	0	0
22	Number of U.S. and State highway crossings	0	0	0	0	0	0	0	0
23	Number of farm-to-market (FM) crossings	0	0	0	0	0	1	0	0
24	Number of cemeteries within 1,000 feet of the ROW centerline	1	1	0	0	0	0	0	0
25	Number of FAA registered public/military airports with at least one runway more than 3,200 feet in length located within 20,000 feet of ROW centerline	0	0	0	0	0	0	0	0
26	Number of FAA registered public/military airports having no runway more than 3,200 feet in length located within 10,000 feet of ROW centerline	0	0	0	0	0	0	0	0
27	Number of private airstrips within 10,000 feet of the ROW centerline	0	0	0	0	1	0	0	0
28	Number of heliports within 5,000 feet of the ROW centerline	0	0	0	0	0	0	0	0
29	Number of commercial AM radio transmitters within 10,000 feet of the ROW centerline	0	0	0	0	0	0	0	0
30	Number of FM radio transmitters, microwave towers, and other electronic installations within 2,000 feet of ROW centerline	0	0	0	0	0	0	0	0
	Aesthetics								
31	Estimated length of ROW within foreground visual zone[5] of Interstate, U.S. and State highways	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Estimated length of ROW within foreground visual zone[5] of FM roads	0.9	0.2	0.2	0.0	0.0	0.2	0.1	0.1
33	Estimated length of ROW within foreground visual zone[6] of parks/recreational areas[4]	0.0	0.0	0.2	0.2	2.2	0.2	0.1	0.1
	Ecology								
34	Length of ROW through upland woodlands/brushlands	0.3	0.0	0.1	0.0	2.2	0.0	0.0	0.1
35	Length of ROW through bottomland/riparian woodlands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	Length of ROW across NWI mapped wetlands	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	Length of ROW across known habitat of federally listed endangered or threatened species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	Area of ROW across golden-cheeked warbler modeled habitat where three models agree (acres)	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0
39	Length across Karst Zones 1 and 2	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0
40	Area of ROW across Bone Cave Harvestman recovery preserve (acres)	0.0	0.0	0.0	0.0	6.6	0.0	0.0	0.0
41	Length across USFWS surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	Length across USFWS sub-surface critical habitat for Jollyville Plateau Salamander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	Length across potential habitat for threatened salamander species	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	Length of ROW across open water (lakes, ponds)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	Number of stream crossings	2	0	0	1	1	0	0	0
46	Number of river crossings	0	0	0	0	0	0	0	0
47	Length of ROW parallel (within 100 feet) to streams or rivers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	Length of ROW across 100-year floodplain	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Cultural Resources								
49	Number of recorded historic or prehistoric sites crossed by ROW	0	0	0	0	1	0	0	0
50	Number of additional recorded historic or prehistoric sites within 1,000 feet of ROW centerline	2	1	2	0	1	3	2	2
51	Number of National Register-listed sites crossed by ROW	0	0	0	0	0	0	0	0
52	Number of additional National Register-listed sites within 1,000 feet of ROW centerline	0	0	0	0	0	0	0	0
53	Length of ROW through areas of high archaeological/historic site potential	0.6	0.2	0.2	0.2	0.8	0.1	0.1	0.1

[1] Single-family and multi-family dwellings, and related structures: mobile homes, apartment buildings, commercial structures, industrial structures, business structures, churches, hospitals, nursing homes, schools, or other structures normally inhabited by humans or intended to be inhabited by humans on a daily or regular basis within 300 feet of the centerline of a transmission project of 230-kV or less.

[2] Newly affected habitable structures are habitable structures within 300 feet of an alternative route that are currently not already within 300 feet of an existing transmission line.

[3] Property lines created by existing roads, highway, or railroad ROW are not 'double-counted' in the length of ROW parallel to apparent property boundaries criteria. Property boundaries provided by LCRA T

[4] Defined as parks a ational areas owned by a governmental body or an organized group, club, or church within 1,000 feet of the centerline of the project.

[5] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of Interstates, U.S. and State Highways criteria are not 'double-counted' in the length of ROW within th visual foreground zone of FM Roads criteria.

[6] One-half mile, unobstructed. Lengths of ROW within the visual foreground zone of parks/recreational areas may overlap with the total length of ROW within the visual foreground zone o Interstates, U.S. and State Highways criteria and/or with the total length of ROW within the visua ria.

Note: All length measurements in miles unless noted otherwise. All linear measurements were wn September, 2015 with the exception of high probability areas for archeological/historical/resources which were measured from the USGS To photography was orthorectified to National Map Accuracy Standards of +/- 5 feet.