# CALDWELL COUNTY TRANSPORTATION PLAN


March 2013

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# Chapter 1 – Introduction

## 1.1 What is a County Transportation Plan?

The Caldwell County Transportation Plan (CCTP) is the result of a seven-month collaborative effort between Caldwell County and Capital Area Metropolitan Planning Organization (CAMPO) to develop the first transportation plan for Caldwell County. The study was used to identify transportation needs for mobility, connectivity, and maintenance on both state and local roadways.

The CCTP is a blueprint for the future that looks at all modes of transportation, including roads, transit, aviation, rail, pedestrian and bicycle facilities. The CTTP allows local County officials to identify and preserve rights-of-way needed for expansion of existing facilities as well as future new location corridors to serve anticipated growth and development. The CCTP process assesses the future transportation needs based on the community's vision for maintaining and enhancing the quality of life and character of the community as growth occurs.

Texas House Bill (HB) 1857 has given counties more control over their growth and development if the county has an adopted transportation plan. In 1997, HB 1857 amended local government code to give authority to the County Commissioners Court and City Councils to refuse, partially or in whole, a plat that encroaches on a future transportation corridor.

The CCTP serves as a collective vision of how transportation needs will be addressed as growth occurs in the future. It is a guideline for Caldwell County, the cities within the county, and residents to consider in planning new residential, commercial, and industrial developments. The county will be able to share this plan with other entities, such as utility providers, school districts, economic development groups, TxDOT, and land developers. The CCTP will also be a reference during any general planning updates and will be instrumental as undeveloped land is converted to other uses or as property is redeveloped.

The CCTP was prepared using population and employment forecasts, land use and development patterns, and public input to develop a comprehensive plan for transportation needs through 2035. Beginning in early 2013, the results of the planning effort will be used by Caldwell County to submit candidate projects for the next update of the CAMPO 2035 Regional Transportation Plan. While the CAMPO plan primarily focuses on projects that provide improved mobility by adding travel lanes, build new roadways, enhance transit service, and/or improve pedestrian access, the CCTP has a large rehabilitation and maintenance component.

## 1.2 Study Background and Purpose

In 2010, the CAMPO boundary was expanded to include Bastrop and Caldwell Counties in large part due to the impact of commuters from these counties into Travis, Hays, and Williamson Counties, the previous CAMPO boundary. Since Caldwell County did not have a prioritized list of needs that could be considered for federal funding, the CAMPO Transportation Policy Board allocated $200,000 in federal funds for a transportation plan to be developed. The Austin District of the Texas Department of

Transportation (TxDOT) provided the required 20% local matching funds ($50,000) to provide a total budget of $250,000 to accomplish the work.

The need for the CCTP was driven by the continuing rapid population growth occurring in the five-county Austin-Round Rock Metropolitan Statistical Area (A-RRMSA). Moreover, the availability of developable property in rural Bastrop and Caldwell counties, located on the eastern side of the MPO area, has spurred significant development in these two counties since 1980.

## 1.3 Study Area

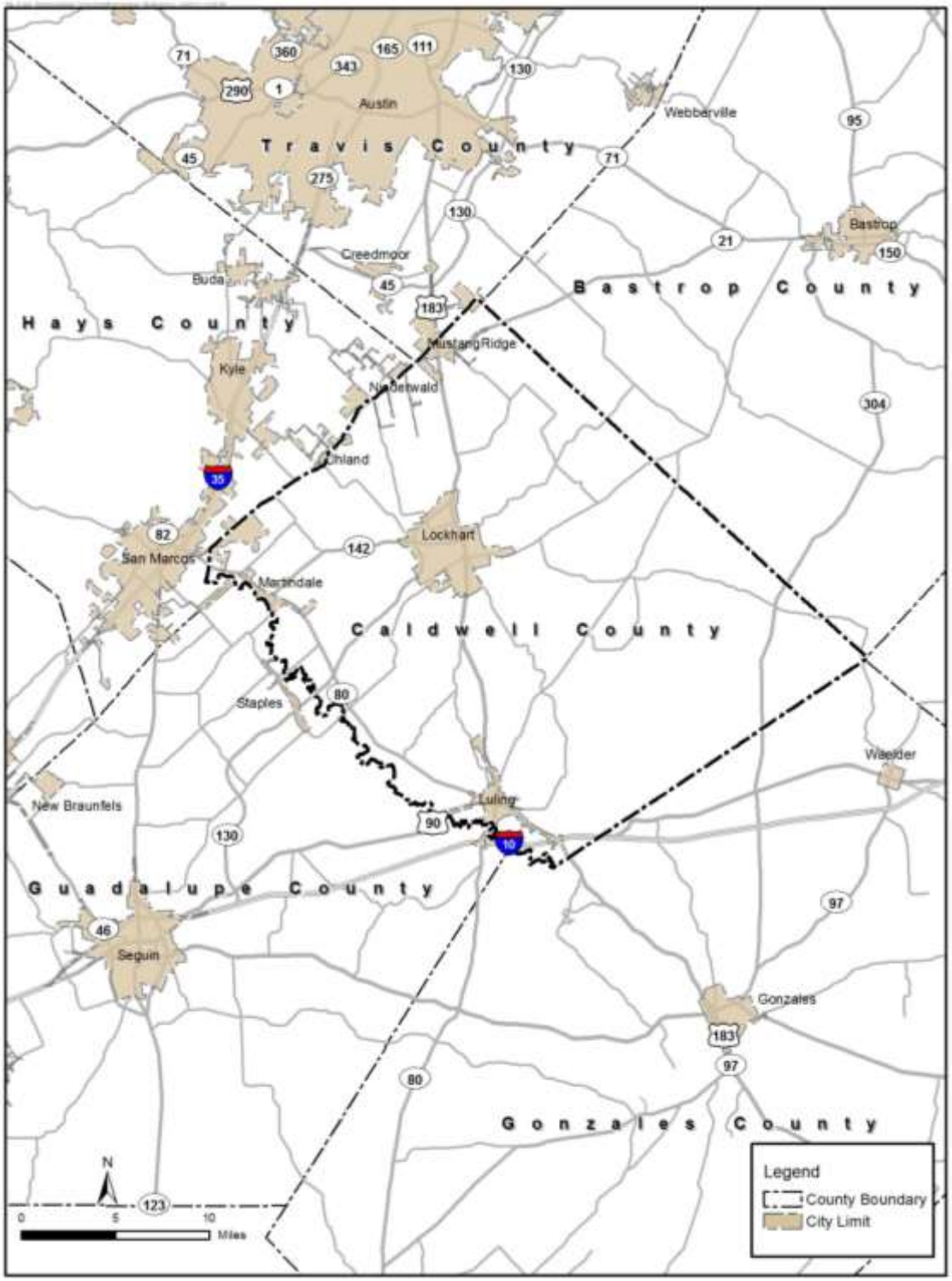
Caldwell County, one of five counties included in the Austin-Round Rock Metropolitan Statistical Area (A-RR MSA), is located east of Hays County (**Figure 1.3-1)**. The study area for the CCTP included all of Caldwell County and was developed considering transportation improvements in the adjacent counties.

Caldwell County is approximately 546 square miles of level to rolling land. The county seat is the City of Lockhart. Other major cities in the county include the City of Luling and the City of Martindale. Portions of the Cities of San Marcos, Mustang Ridge, Uhland, and Niederwald are also within the county boundary. The 2010 population of Caldwell County is 38,066 residents, with an average household size of 2.82 persons (US Census Bureau, 2010).

Seven public school districts serve Caldwell County residents: Gonzales, Hays Consolidated, Lockhart, Luling, Prairie Lea, San Marcos Consolidated, and Waelder Independent School Districts (ISD). Lockhart ISD is wholly within Caldwell County while the other districts include areas in neighboring counties.

Interstate Highway 10 (IH 10) traverses the very southern edge of the county south of Luling. The other major highways include SH 130 (a toll road opened in October 2012), US 183, US 90, SH 80, SH 21, SH 142, and SH 304. Farm-to-Market (FM) highways provide critical connections in this primarily agricultural county, with FM 20 connecting Seguin to Bastrop through Lockhart and FM 86 connecting Luling to Bastrop via FM 20.

**Figure 1.3-1 Vicinity Map**




Source: TxDOT, ESRI

## 1.4 Study Participants

Six groups or agencies participated in the CCTP planning process. The agencies and their responsibilities are listed below:

- **Caldwell County** – lead agency; served as the point of contact for the public; identified members for the Advisory Committee; had a county representative attend project management meetings; and provided all applicable county data for use.
- **CAMPO** – contracting entity; served as technical staff to support the county with this project; provided support to county and local officials; provided guidance for the public involvement activities; provided demographic forecasts for 2035; provided technical analysis for specific aspects of existing conditions; and assured that the planning process was consistent with the local and regional transportation planning processes.
- **CAPCOG** – performed existing conditions analysis for specific topics; provided a staff member to serve on the advisory committee to assure consistency with other regional planning efforts.
- **TxDOT** – provided financial support for the study; provided a staff member to serve on the Advisory Committee.
- **The Consultant (URS Corporation)** – in charge of the data collection effort and the data analyses; developed and implemented the public involvement outline and plan; coordinated and provided support of local public officials at meetings; and technical analysis of travel demand forecasting.
- **Texas A&M Transportation Institute** – compiled the draft existing conditions information.

In addition to the participants listed above, an advisory committee was established to assist in the CCTP process. The Advisory Committee (AC) included representatives from the county, local cities, TxDOT, CAPCOG, school districts, utility companies, and other appointed representatives as selected by the County Commissioners.

## 1.5 Project Goals

The goals of the CCTP were developed by the Advisory Committee and were adopted at the September 2012 committee meeting. These goals are addressed in the CCTP and guided the committee and the study team in their efforts. The goals of the CCTP are:

Improve transportation safety

- Analyze and address school transportation and safety
- Consider major event traffic
- Update Emergency and Evacuation Plan

Consider all modes of transportation in the planning process

- Plan should analyze and consider vehicular, freight, rail, bicycle, pedestrian, and public transportation
- Roadway improvements and new facilities should consider the Complete Street concepts

Identify and characterize the current and future needs of the county

- Identify priority routes
- Collect traffic data and incorporate into Plan
- Improve connections to major roads (SH 21, IH 35, SH 130, IH 10, US 183)
- Consider long range needs for loops at Luling and Lockhart
- Provide capacity for future growth

Support economic development

- Consider potential location for freight spurs in conjunction with freight rail relocation study
- Consider and plan infrastructure to support nodal development/activity centers
- Preserve right-of-way needed for future expansion and new facilities

Consider and incorporate tourism potential and impacts

- Review existing and consider future outdoor recreational uses (including canoeing and bicycle tours)
- Consider river use (coming from San Marcos area)

Preserve the Caldwell County quality of life

- Maintain Farm Access (Farm to Market Roads)
- Preserve and enhance county aesthetics (Context Sensitive Design, historic areas)
- Identify and designate corridor types (scenic, through local)

Provide adequate facilities for bicycle and pedestrian needs

- Comply with Americans with Disabilities Act (ADA)
- Improve safety (including motorized scooters)
- Review and address pedestrian route on SH 80 between Fentress and Prairie Lea
- Review existing bicycle tour and recreational routes for adequate facilities

Preserve and protect the environment

- Review and consider truck route designations (including oil and gas truck routes)
- Follow existing state, federal, and local environmental protection rules and regulations

Consider and incorporate future land use and development plans

- Consider future utility needs for land use projections (including water supply)
- Circuit of The Americas impact

Incorporate previous and ongoing planning efforts

- Capital Metropolitan Plans (CAMPO)
- Rail (Lone Star Rail District Plan, State Rail Plan)
- Aviation plans (San Marcos Airport)
- Regional transit coordination and connectivity (CARTS and San Marcos)
- Coordination with surrounding counties

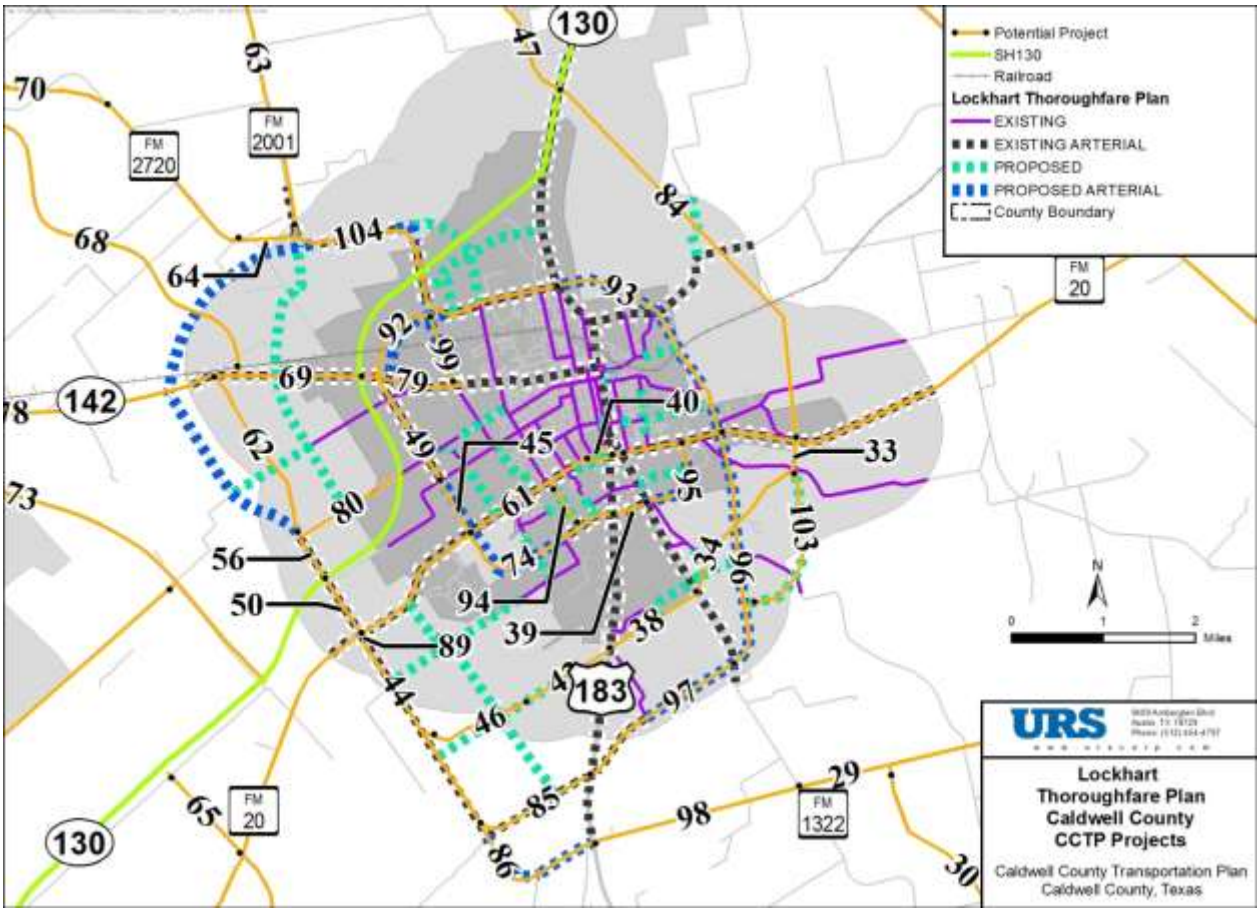
## 1.6 Previous Planning Efforts

Several planning studies have been undertaken by the cities, and some of the utilities, within Caldwell County in recent years. The City of San Marcos is currently in the process of updating its Comprehensive Plan. The Lone Star Rail District will be completing the evaluation of preliminary alternatives for the freight rail relocation project that is necessary to initiate passenger service on the existing Union Pacific Railroad (UPRR) line that parallels IH 35 between Georgetown and San Antonio. The CCTP study team reviewed these plans to gain an understanding of how the cities are currently planning for future growth.

**Lockhart 2020 Comprehensive Plan**

The county seat's comprehensive plan integrates land use, transportation and other issues through the year 2020. The Thoroughfare Plan identified several proposed arterial and collector streets, railroad grade separations, and a hike/running trail. The Thoroughfare Plan (**Figure 1.6-1**) and Future Land Use Plan were subsequently updated in 2011.

**Figure 1.6-1 Lockhart Thoroughfare Plan**




[City of Lockhart, 2012]

**Luling Master Plan**
Luling city council adopted the Luling Master Plan on July 27, 2012. Among the various elements of this planning effort, a high-level analysis for a relief route for US 183 traffic to remove through traffic from the downtown area was prepared. Both of the conceptual alternatives are included in the CCTP with the understanding that further analysis and public involvement will be needed to establish a preferred alternative that would be eligible for federal funds to construct the project.

**San Marcos Comprehensive Plan**
The City of San Marcos is in the process of developing a new comprehensive plan as an update to the current plan adopted in February 1996 and updated in 2004, along with a transportation master plan. It is anticipated a new thoroughfare plan will be included as part of this effort.

**Hays County Transportation Plan**
Hays County will adopt a new transportation plan in early 2013. The CCTP team met with Hays County representatives several times to coordinate improvements adjacent to the Hays/Caldwell County Line. Information on this planning effort is available at the County's website, www.co.hays.tx.us/transportationplan.

**Austin Area Freight Study**
A freight study for the five-county region was performed by MACTEC and Alliance Transportation Group in 2009, with support from the TXDOT and CAMPO. It utilized Transearch commodity flow data from 2003 to identify top freight intra-regional imports and exports for the region: gravel or sand, ready-mix concrete, asphalt paving blocks or mix, and primary forest materials (Austin Area Freight Study, 2009). Caldwell County principally imports much of the same materials from counties in this region, plus construction products such as plywood or veneer, miscellaneous wood products and sheet metal. Gross intra-regional exports are larger (115,182 tons) than imports (111,572 tons).

The study assumed build-out of the former CAMPO Mobility 2030 Plan, and identified segments with freight-specific deficiencies in the year 2035. Several of the top ten anticipated deficiencies were in Caldwell County:

- County View Rd, between FM 2720 and FM 2001,
- SH 80, between FM 1984 and SH 142,
- FM 2720, between SH 21 and County View Road, and
- FM 2001, between County View Rd and Stueve Lane.

The study also surveyed freight shippers and carriers in the five-county region, and found 30% of respondents shipping via truck could potentially shift shipments from road to rail. Slow speed and variability in delivery were the top reasons cited to not shift to rail (Austin Area Freight Study, 2009). Improvements to rail intermodal connections and reducing drayage costs could potentially better serve local companies and manufacturers while decreasing roadway congestion and air quality impacts associated with truck freight.

**CAMPO 2035 Regional Transportation Plan**
The current regional plan identified limited improvements to Caldwell County's roadway system apart from SH 130 (completed in October 2012). Expansion of SH 21 along the county's northwest border with Hays County was identified as a locally funded project to widen to a 4-lane divided major arterial with shoulders/hike and bike lanes. San Marcos' planned outer loop (FM 110) also extends into the western corner of the Caldwell County. Bicycle and pedestrian improvements are focused on the Lockhart and Luling Activity Centers, with policies ensuring regionally significant new and reconstructed roads include

appropriate bicycle and pedestrian accommodations through the Transportation Improvement Program. The freight system map identifies an opportunity for a freight activity cluster near Lockhart, providing efficient intermodal connections between rail and truck modes.

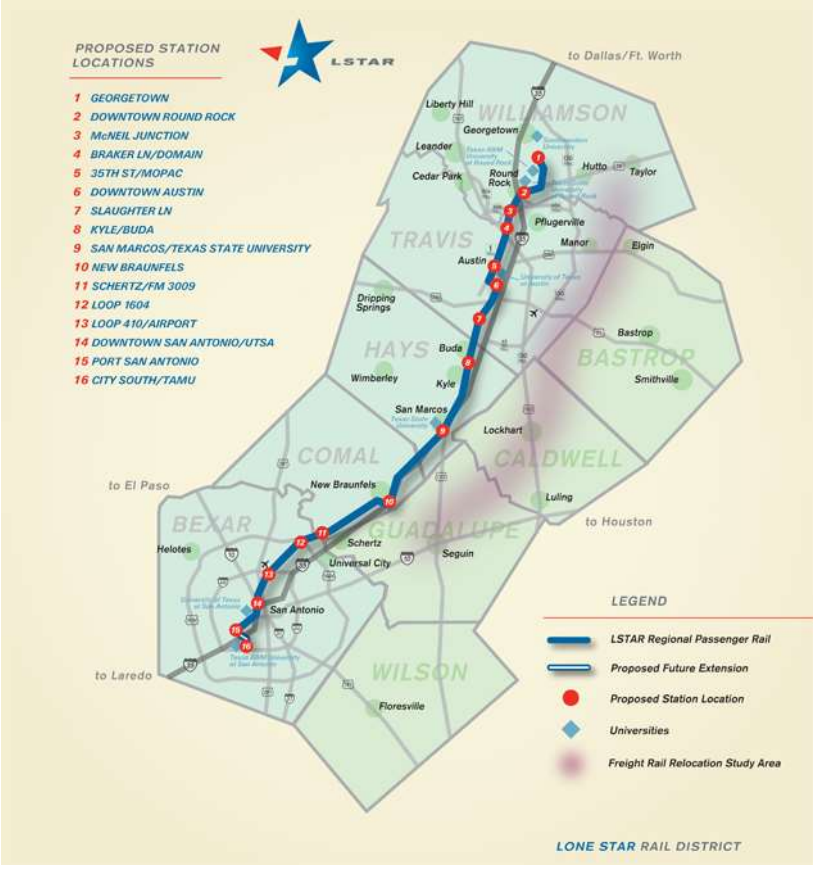
**Texas Rail Plan**

TxDOT's 2010 update for the statewide rail plan identified several unfunded rail system improvements that could affect Caldwell County. Many of the Austin District's identified needs call for grade separations and crossing closures near San Marcos, which could improve safety and speed for east-westbound freight on the Union Pacific Lockhart line through Caldwell County. It also estimates cost for a rail bypass of San Antonio and Austin that would add a new line through Caldwell County, but identified benefits not to exceed the costs, estimated over a 20-year study period (Texas State Rail Plan, 2010). Relocating the freight line "would significantly reduce the number of trains using the existing lines. This would create some capacity on the existing line that could possibly be used for passenger rail service between San Antonio and Austin" (Texas State Rail Plan, 2010).

**Lone Star Rail District**

Lone Star Rail District (LSRD) (Figure 1.6-2) will be completing the analysis of preliminary alignment alternatives for the freight rail bypass by early 2013. The outcome will be approximately three feasible alternatives that will be carried forward into the detailed preliminary engineering and environmental studies necessary to establish the preferred alignment. Subsequent updates of the CCTP should include the latest information on the rail relocation project as a new rail line may create a new barrier to east/west connectivity within Caldwell County.

**Figure 1.6-2 Freight Rail Relocation Study Area**




Source: Lone Star Rail District, 2012

**Guadalupe-Blanco River Authority**
The Guadalupe-Blanco River Authority (GBRA) will be completing the preliminary engineering work to determine the optimum configuration of the Mid-Basin Water Supply project that will provide water to potential customers in Hays, Caldwell, and Guadalupe Counties from a combination of groundwater and surface water supplies located in northern Gonzales and eastern Caldwell Counties. Coordination with GBRA is recommended during the development of roadway improvements along SH 80, US 183, US 90, FM 1979 and SH 21 so that potential impacts to future water transmission lines, ranging from 27-inches to 54-inches, are taken into consideration.

## 1.7 Public Involvement

The objective of the Public Involvement Plan (PIP) was to facilitate a process which engages the citizens in the planning process and provides a citizen driven plan for the future growth of Caldwell County. The primary methods used to involve the public were two public meetings, six meetings with the Advisory Committee, eleven community meetings (including three briefings to Commissioners Court), two questionnaires, comment cards, and the media. A thorough public involvement/outreach process assured the CCTP was developed in close collaboration with Caldwell County cities and residents to address the transportation needs of a growing population.

## 1.8 Study Process

The CCTP planning process was conducted on an accelerated schedule so that results would be available at the start of the CAMPO 2040 planning process in early 2013. A draft existing conditions assessment was provided to the consultant team to facilitate the accelerated schedule. This draft assessment was prepared from data provided by the Capital Area Council of Governments (CAPCOG), TxDOT, CAMPO, and Texas A&M Transportation Institute. The CCTP process maximized the use of existing public data from online sources and collaboration with various entities, and fully utilized the local expertise provided by the members of the Advisory Committee.

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# Chapter 2—Existing Conditions

In order to develop a plan for the future, the first step in the process is to gain an understanding of the existing conditions in Caldwell County. A variety of factors were considered in the assessment of transportation needs, including:

- Demographic and socioeconomic data, which help describe who is living/working in Caldwell County as well as lay the foundation for population and employment projections;
- Land use development that influences transportation needs as it relates to the location of residential, commercial, educational, and industrial developments;
- Natural environmental features;
- Updated air quality standards issued by the U.S. Environmental Protection Agency (EPA), which can impact the transportation planning activities; and
- Roadway data regarding safety statistics, pavement conditions, bridge ratings, and traffic counts.

The existing conditions in Caldwell County are described using the information from the following sources:

- Capital Area Metropolitan Planning Organization (CAMPO)
- Texas Department of Transportation (TxDOT)
- Texas Workforce Commission
- U.S. Census Bureau
- Capital Area Council of Governments
- Texas Historical Commission
- Texas State Historical Association
- Federal Highway Administration
- U.S. Fish and Wildlife Service
- Texas Department of Parks and Wildlife
- Capital Area Rural Transit Service
- City of Lockhart
- City of Luling
- City of San Marcos

## 2.1 Demographic Trends

Existing demographics of Caldwell County residents were analyzed to understand the activities of the people who live and work in the county. This analysis is based on the 1990, 2000, and 2010 US Census Survey data and the CAMPO 2035 Regional Transportation Plan (CAMPO, 2010) as amended on May 24, 2010. The results were used as an input to the travel demand model to determine future requirements for transportation facilities in the county.

### Population

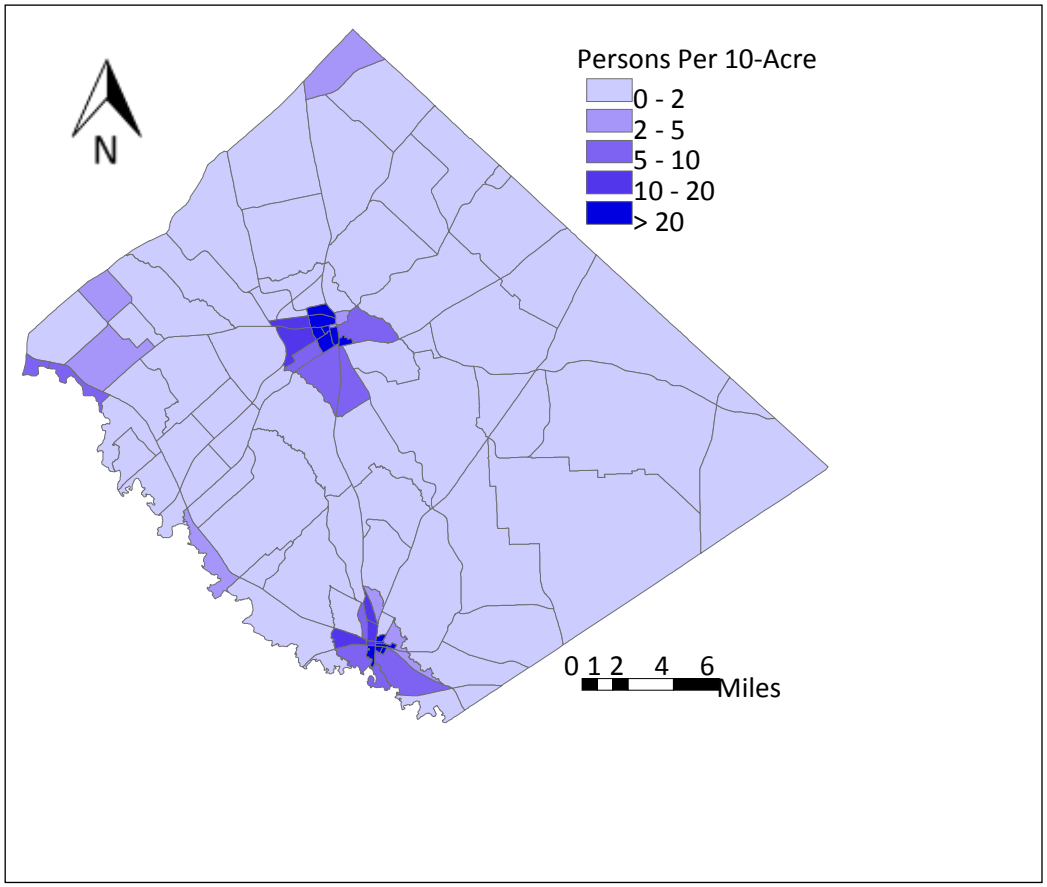
In 2010, Caldwell County had a total population of 38,066 based on data from the 2010 US Census Survey. Historically, Caldwell County has the smallest total population in the five-county CAMPO region. There were 12,301 households in the Caldwell County in 2010, and the average household size was 2.82 persons (US Census Bureau, 2010). **Table 2.1-1** shows the County's population in the past 20 years, and also a comparison to other counties in the CAMPO region. Caldwell County did not experience the same growth rate during the past 20 years as the other counties in the CAMPO region, but economic development efforts and mobility improvements such as the SH 130 Toll Road may induce substantial growth in the future.

**Table 2.1-1 County Population and Growth 1990-2010**

| | 1990 | 2000 | 2010 | 1990 – 2000 Change | 2000 – 2010 Change |
|---|---|---|---|---|---|
| Caldwell County | 26,392 | 32,194 | 38,066 | 18.0% | 18.2% |
| Bastrop County | 38,263 | 57,733 | 74,171 | 33.7% | 28.5% |
| Hays County | 65,614 | 97,589 | 157,107 | 32.8% | 61.0% |
| Travis County | 576,407 | 812,280 | 1,024,266 | 29.0% | 26.1% |
| Williamson | 139,551 | 249,967 | 422,679 | 44.2% | 69.1% |
| Region Total | 846,227 | 1,249,763 | 1,716,289 | 32.3% | 37.3% |

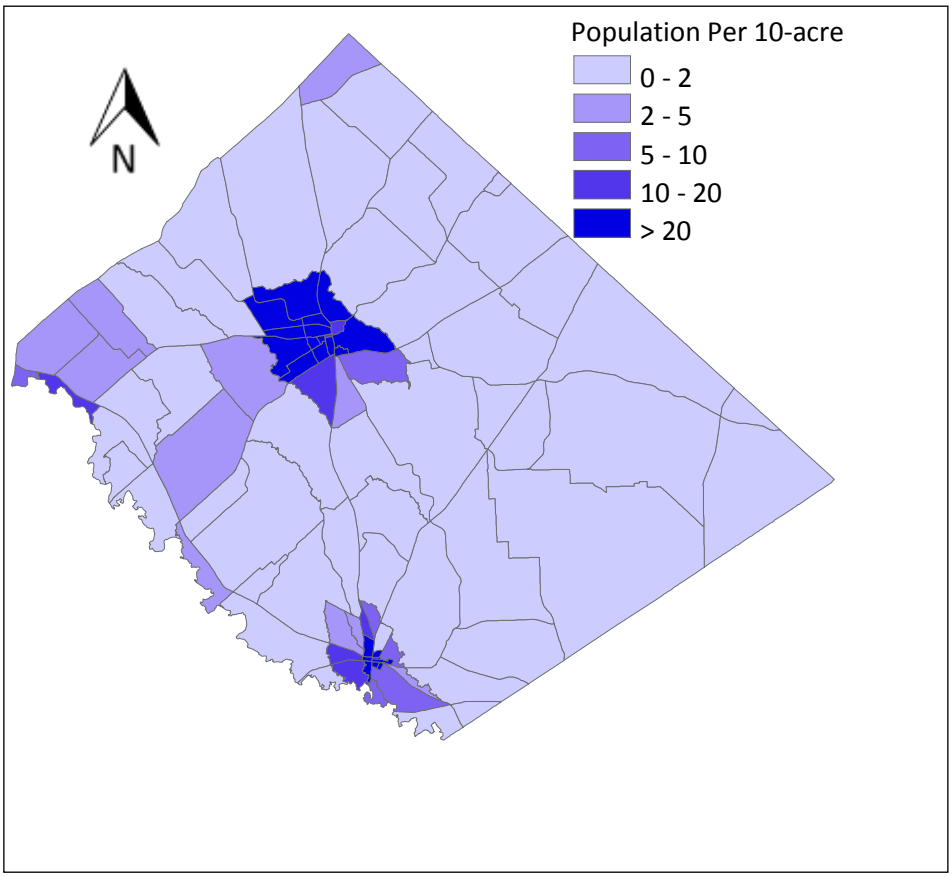
Source: US Census Bureau, 1990a; US Census Bureau, 2000a; US Census Bureau, 2010a

**Figure 2.1-1 Caldwell County Population Density in 2010**



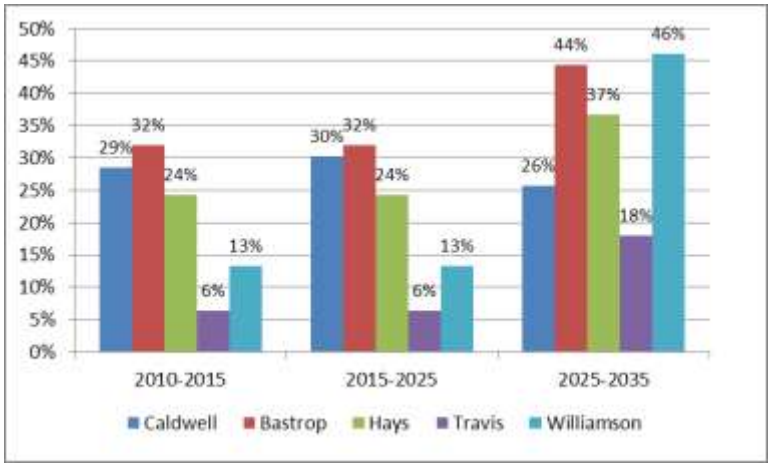

Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-2 Caldwell County Population Density in 2035**




Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-3 Forecasted Population Growth by County**




Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-3** shows the forecasted population growth by county based on the CAMPO 2035 Travel Demand Model which is associated with the 2035 Regional Transportation Plan. Caldwell County is expected to experience high, but consistent growth between 2010 and 2035. **Figure 2.1-3** shows the

population density of Caldwell County in 2035. Again, the most populated areas are in Lockhart and Luling, as shown in dark blue.

## Employment

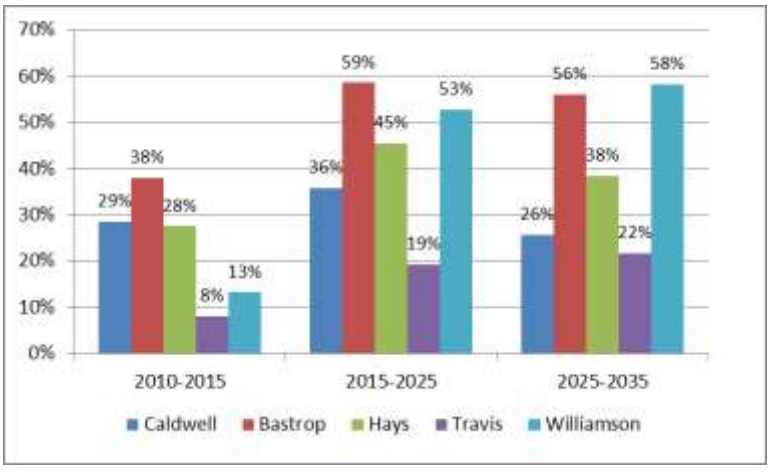
**Table 2.1-2** provides the employment in each major employment sector in Caldwell County in both 2010 and 2035. The CAMPO 2035 Regional Transportation Plan projects an annual growth factor of 4.3% from 2010 to 2035. The population/employment ratio has a consistent trend from 4.2 in 2010 to 4.0 in 2035. **Figures 2.1-4** and **2.1-5** show the employment by county and by type. Caldwell County is expected to experience a noticeable employment increase, especially during the 2015 to 2025 time period. Employment in the service sector is expected to experience the largest gains from 2010 to 2035. **Figures 2.1-6** and **2.1-7** illustrate the employment density in 2010 and 2035, respectively. The majority of the jobs are located in the most populated areas of Lockhart and Luling, as shown in dark orange.

**Table 2.1-2 Caldwell County Employment in 2010 and 2035**

| | Basic | Education | Retail | Service | Total Employment |
|---|---|---|---|---|---|
| Texas Workforce Commission Employment Estimates for 2010, 3rd Quarter | 1,557 | 1,045 | 1,660 | 2,818 | 7,080 |
| 2010 CAMPO Employment Estimates | 1,658 | 617 | 1,661 | 3,275 | 7,211 |
| 2035 CAMPO Employment Estimates | 4,132 | 1,383 | 6,442 | 8,560 | 20,517 |

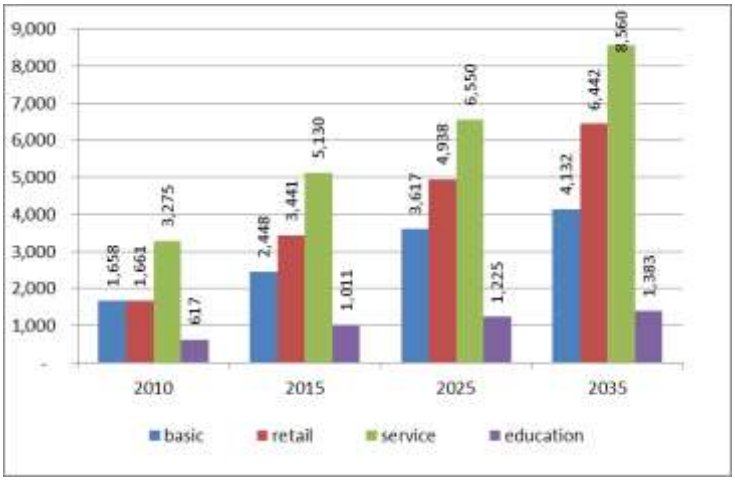
Source: Texas Workforce Commission, 2012; CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-4 Forecast Employment Growth by County**



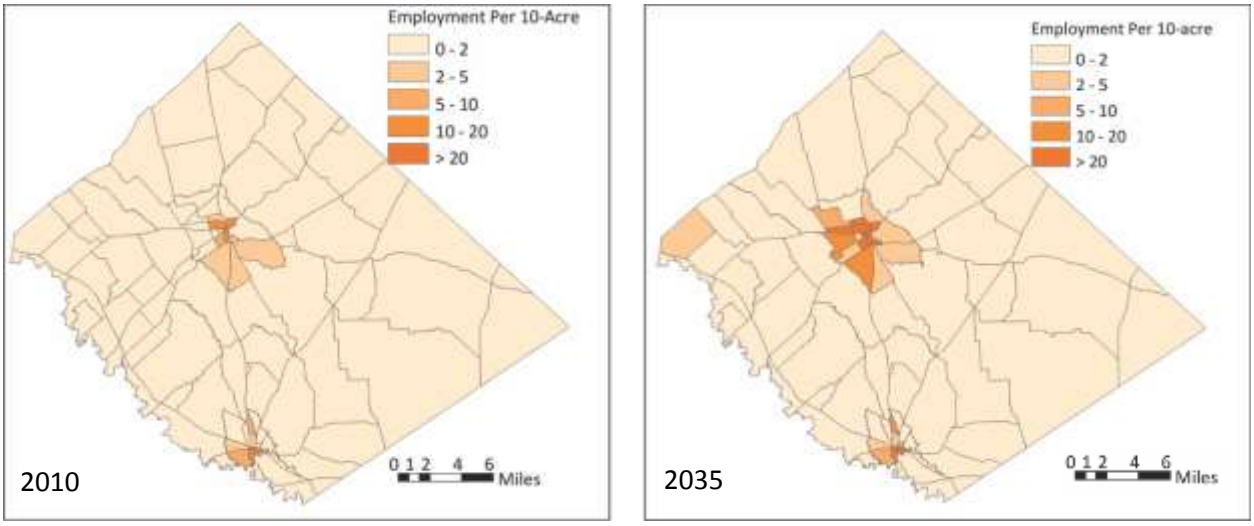

Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-5 Caldwell County Employment by Type**




Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 2.1-6 Caldwell County Employment Density in 2010 and 2035**




Source: CAMPO 2035 Travel Demand Model, 2012

## 2.2 Socioeconomic Conditions

### Income

Median income for the county rose at a faster pace than the state in the 1990's (due in part to the large increase in population), but that rate of growth slowed considerably between 2000 and 2010. Between 2000 and 2010 the median household income in Caldwell County increased by just over 13%, while the median household income in the State of Texas increased by 24%.

As noted in **Table 2.2-1**, median household income has doubled in Caldwell County from 1990 through 2010, but still lags behind median income for the State of Texas.

**Table 2.2-1 Caldwell County and State of Texas Change in Median Income**

| | 1990 | 2000 | 2010 |
|---|---|---|---|
| Median Household Income for Caldwell County | $20,169 | $36,573 | $41,594 |
| Change from 1990 | | 81.3% | 106.2% |
| Change from 2000 | | | 13.7% |
| Median Household Income for State of Texas | $27,016 | $39,927 | $49,646 |
| Change from 1990 | | 47.8% | 83.8% |
| Change from 2000 | | | 24.3% |

Source: US Census Bureau, 1990b; US Census Bureau, 2000b; US Census Bureau, 2010b

Based on US Census Survey data in 1990, over 30% of the county population lived at or under the poverty level, with 15% of the county population having an income of half (or less) of the poverty level. By 2000, only 14% of county residents lived at or below the poverty level and the number of residents with incomes of half (or less) than the poverty level decreased to 5%. However, by 2010, the percent of population living below the poverty level increased to 18%.

It should be noted that the poverty levels are set pursuant to U.S. Office of Management and Budget guidelines and can vary depending on various household characteristics, such as the number of children in the household and the age of the householder.

The number of Caldwell County residents living at or below the poverty level improved considerably between the 1990 and 2010 census, as shown in **Table 2.2-2**.

**Table 2.2-2 Ratio of Income to Poverty Level in Caldwell County**

| | Population | | | % of Population | | |
|---|---|---|---|---|---|---|
| Ratio | 1990 | 2000 | 2010 | 1990 | 2000 | 2010 |
| Under 0.50 | 3,950 | 1,511 | 2,670 | 15% | 5% | 8% |
| 0.50 to 0.74 | 1,976 | 1,064 | 1,220 | 8% | 4% | 4% |
| 0.75 to 0.99 | 2,084 | 1,396 | 1,992 | 8% | 5% | 6% |
| 1.00 to 1.24 | 1,553 | 1,826 | 1,723 | 6% | 6% | 5% |
| 1.25 to 1.49 | 1,604 | 1,869 | 2,192 | 6% | 6% | 6% |
| 1.50 to 1.74 | 1,964 | 1,959 | 2,166 | 8% | 6% | 6% |
| 1.75 to 1.84 | 392 | 559 | 457 | 2% | 2% | 1% |
| 1.85 to 1.99 | 876 | 1,330 | 1,549 | 3% | 4% | 4% |
| 2.00 and above | 11,506 | 18,872 | 20,556 | 44% | 62% | 60% |

Source: US Census Bureau, 1990c; US Census Bureau 2000c; US Census Bureau, 2010c

## Ethnicity

As noted in **Table 2.2-3**, minorities in Caldwell County accounted for a majority of the population in 1990, 2000, and 2010. Anglo populations accounted for 34% or less of the total population between 1990 and 2010.

**Table 2.2-3 Ethnicity in Caldwell County**

| | 1990 | 2000 | 2010 |
|---|---|---|---|
| Total Population | 26,392 | 32,194 | 38,066 |
| Anglo | 8,931 (33.8%) | 9,559 (29.7%) | 10,493 (27.7%) |
| Black | 2,825 (10.7%) | 2,735 (8.5%) | 2,585 (6.8%) |
| Hispanic | 9,988(37.9%) | 13,018 (40.4%) | 17,922 (47.1%) |
| Other | 4,648 (17.6%) | 6,882 (21.4%) | 6,616 (17.4%) |

Source: US Census Bureau, 1990d; US Census Bureau 2000d; US Census Bureau, 2010d

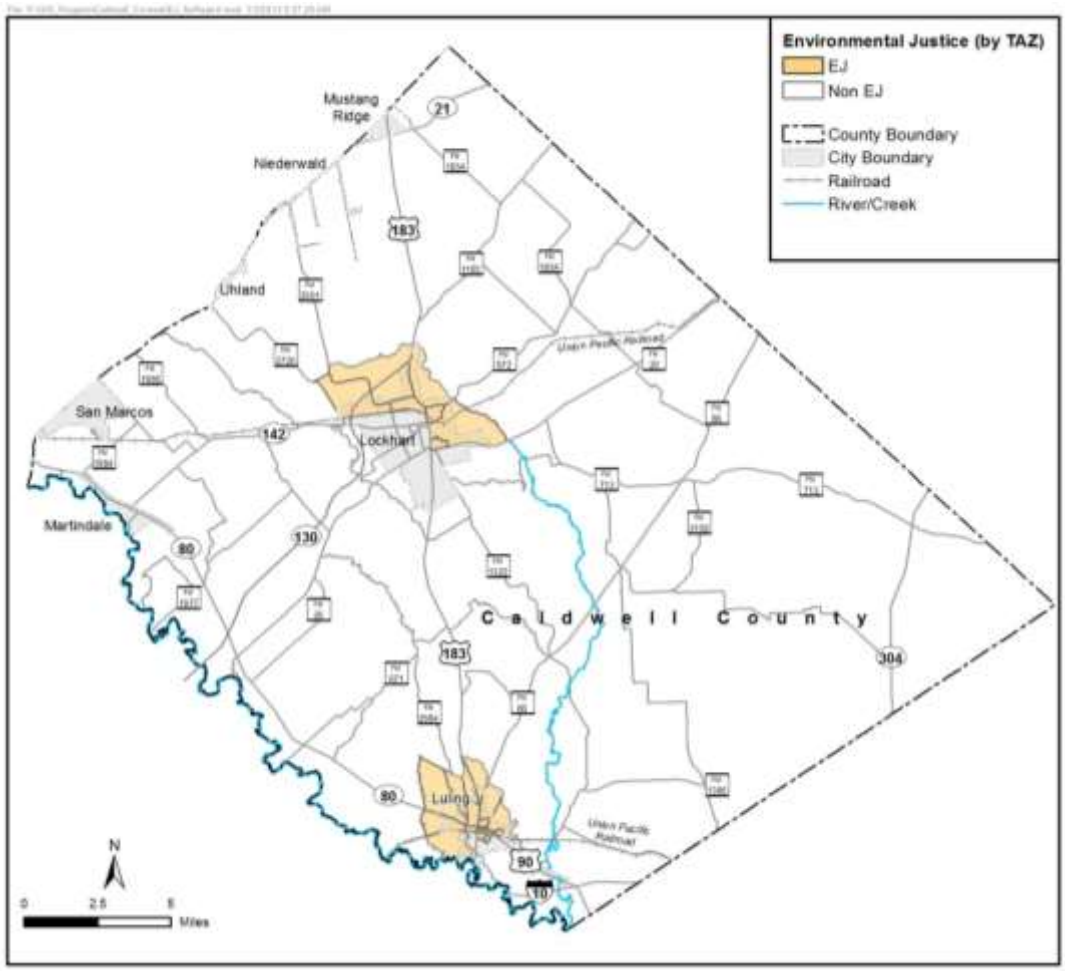
## Environmental Justice

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Executive Order 12898, Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, (White House, 1994) requires that each federal agency address disproportionately high and adverse health or environmental effects of its programs, policies, and activities on minority and low-income populations. EO 12898 supplemented Title VI of the Civil Rights Act of 1964. In addition, EO 12898 is supplemented by more than 30 federal statutes, regulations, executive orders, and directives regarding non-discrimination. In support of the EJ analysis, CAMPO used demographic data compiled by traffic analysis zone (TAZ), rather than census block group, to identify EJ areas. EJ TAZs must meet one or more of following thresholds:

- Low-income TAZs have at least 50% of the population earning less than 80% of the county median family income and/or have the income of at least 25% of the population falling below the federal poverty level for a family of 3 ($17,102 in 2009 census estimates).
- Minority TAZs have less than 50% of the population identifying themselves as White, non-Hispanic.

**Figure 2.2-1** shows the low-income TAZs based on CAPCOG data for 2005 median family income levels and 2008/2009 poverty data from the U.S. Census Bureau**. Figure 2.2-1** also shows minority TAZs based on 2000 census data ethnicity, with ratios applied from 2005 population data sets. The EJ areas are located near the populated areas of Lockhart and Luling, as shown in orange. There are seven EJ TAZs near Lockhart, and fifteen EJ TAZs near Luling.

**Figure 2.2-1 Caldwell County Environmental Justice Areas**

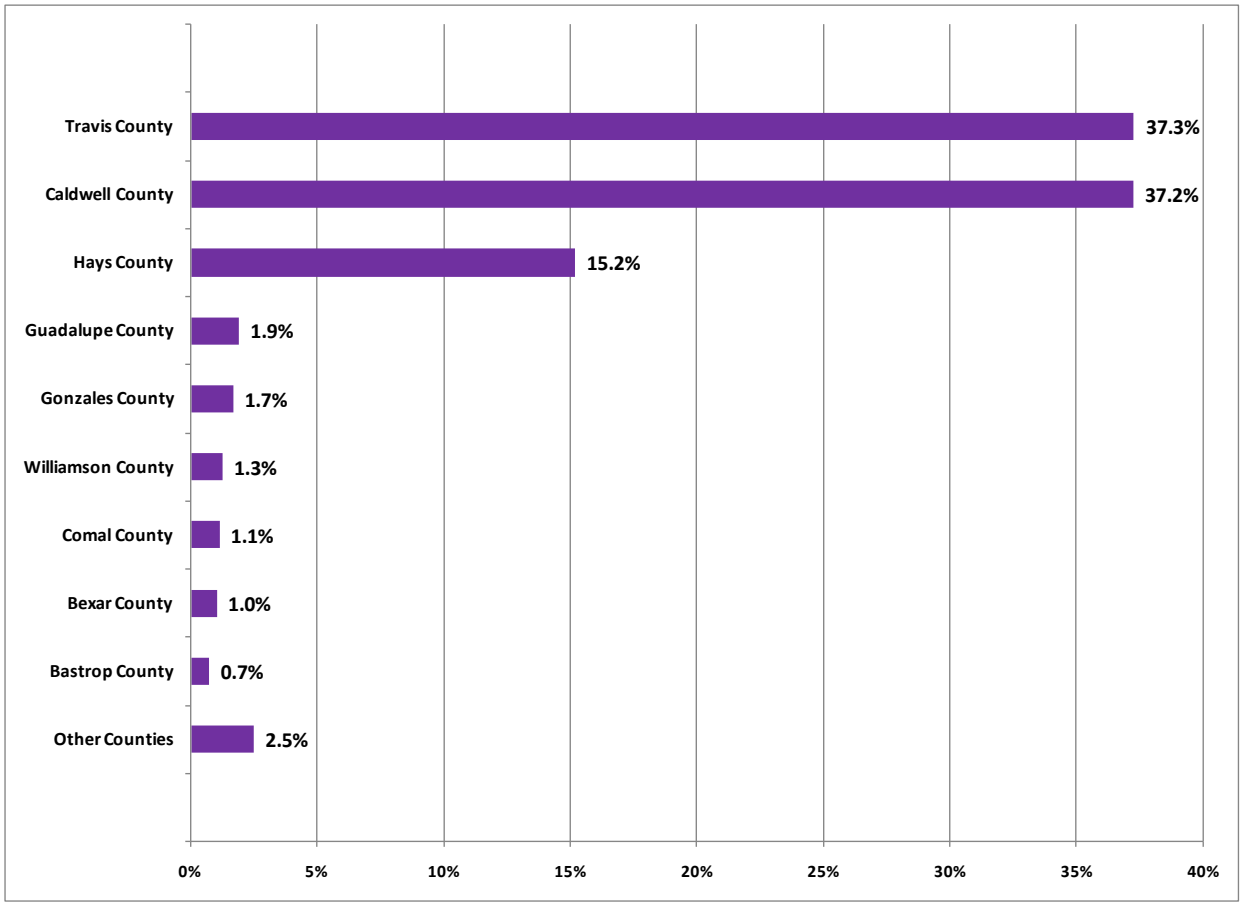



Source: CAMPO, 2012

## Travel to Work

In 2000, the majority (nearly 75%) of Caldwell County workers were employed in either Travis County or Caldwell County, as shown in **Figure 2.2-2**. The actual number of Caldwell County workers was evenly split between the two counties.

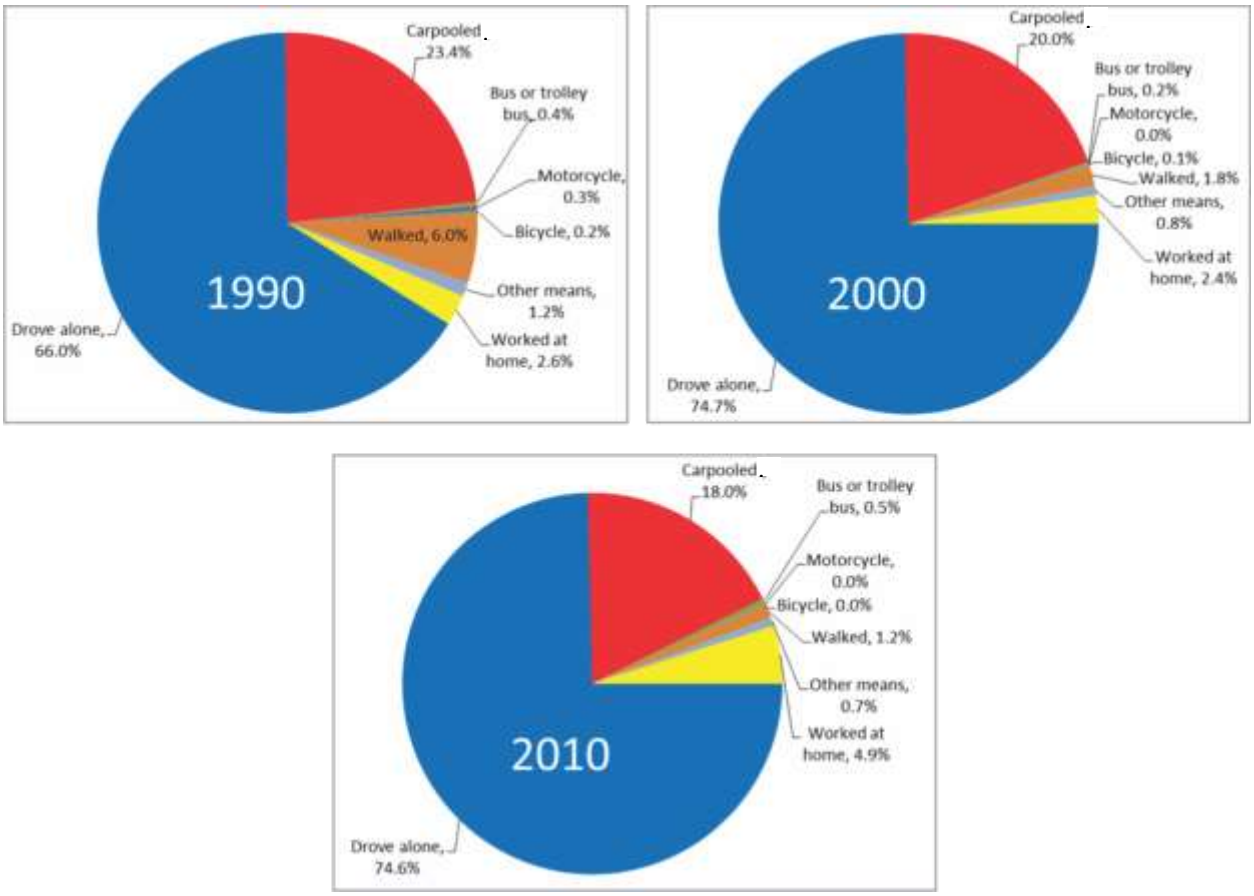
**Figure 2.2-2 Workplace Location for Caldwell County Workers**




Source: US Census Bureau, 2000e

Most Caldwell County workers commute to work as single occupants within a personal vehicle. This is a trend that has continued from 66% in 1990 to 75% in 2010. The second largest mode of travel to work is carpooling. More workers changed to work at home from 2.4% in 2000 to 4.9% in 2010. **Figure 2.2-3** indicates the means of travel to work for Caldwell County residents in 1990, 2000, and 2010.

**Figure 2.2-3 Means of Travel to Work for Caldwell County Workers - 1990, 2000, 2010**




## 2.3 Existing Land Use

### Type, Intensity, Density, and Connectivity

Like other counties in the Central Texas Region, Caldwell County has experienced steady growth since 1980. In light of this growth and its expected continuance, there is a profound need for balance between accommodating new development while preserving the county's natural resources. Land use is a term employed by planners and policy makers that simply describes how humans "use the land."

Land Use Terms Definitions

- Type – residential, commercial, industrial, agricultural, etc.;
- Intensity – a rural, exurban, suburban, or urban;
- Density – a referring to the number of persons or households per square mile; and
- Connectivity – transportation, water, wastewater, power, etc.

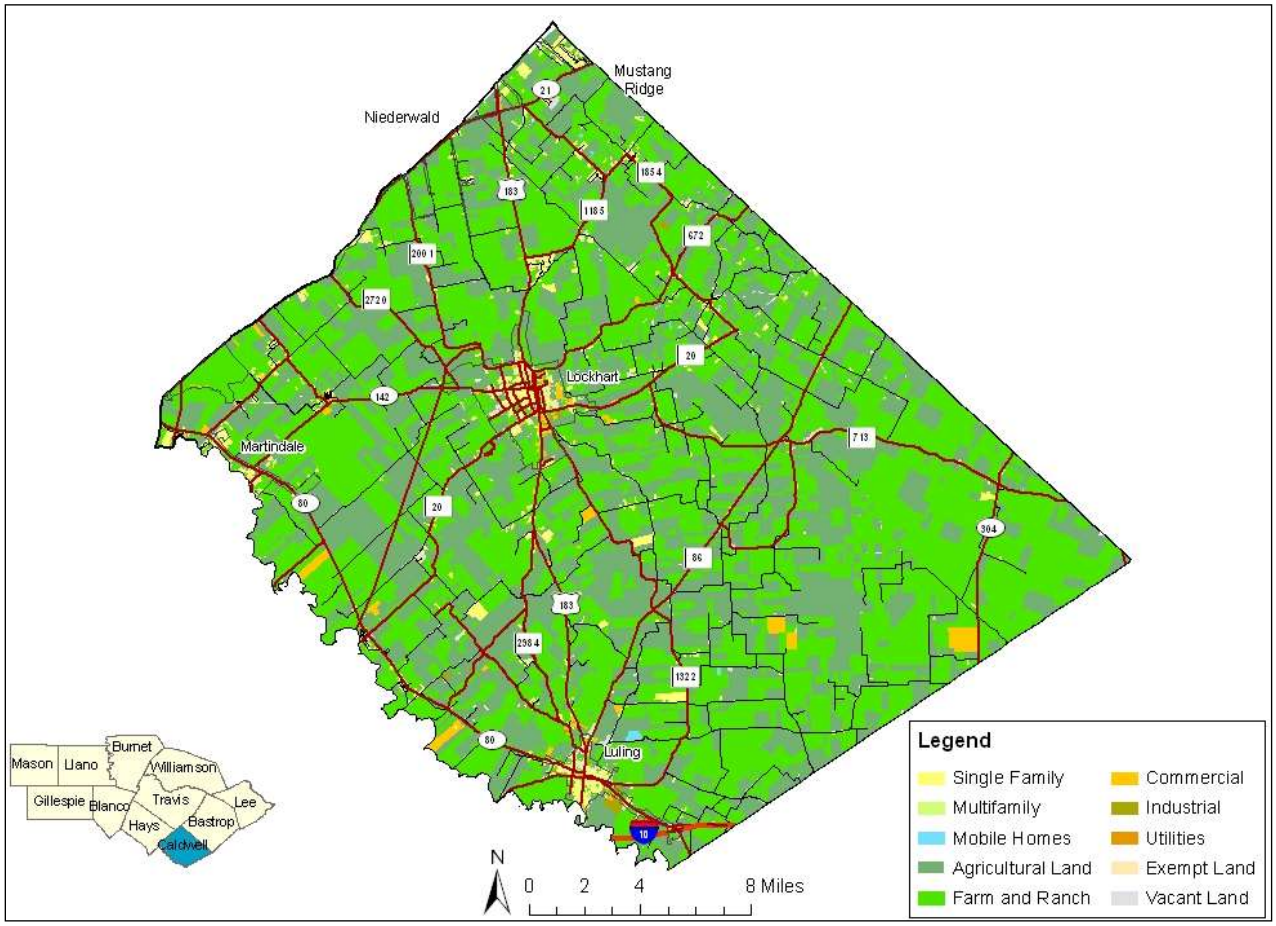
Through these terms, land use introduces a common language that provides a collective understanding of how development can impact a community.

The general perspective on land use in the past was that land use determines transportation needs. For example, the traffic associated with new development on a county road outside of a city or town creates demand for additional lanes. The new development is a catalyst for increased road capacity. However, many communities are finding that increasing roadway capacity to support existing development can actually spur additional residential and/or commercial growth that, in turn, increases traffic and demand for additional capacity. This experience illustrates that there is a much closer connection between land use and transportation.

Caldwell County's rural land use pattern has historically been supported by a network of local, county, farm-to-market (FM), and state arterial roadways that have satisfied county residents' transportation needs. However, growth in Austin and San Marcos has affected land use patterns in Caldwell County which, in turn, affects the transportation network. The extension SH 130 Toll Road through the county will greatly influence development in the future.

Note in **Figure 2.3-1**, that there are significant tracts of land dedicated to agricultural and ranching purposes throughout the entire county.

**Figure 2.3-1 Caldwell County Land Use**




Source: CAPCOG 2012a; TxDOT, 2012

## Major Traffic Generators

Existing land use is the main component of travel demand. Some land uses, such as retail and commercial, generate one type of traffic stream of certain duration, whereas others, such as a football stadium, generate special event volumes of traffic lasting different durations. For purposes of this document, major traffic generators are defined as businesses or employers that employ 40 or more people (at one specific location), and public school campuses. Interviews were conducted with either the chamber of commerce or economic development association for each incorporated city to either obtain this information or to confirm these data. **Tables 2.3-1** and **2.3-2** provide the names and locations of each identified business and school, respectively. **Figures 2.3-2** and **2.3-3** identify the location of each major traffic generator in Caldwell County.

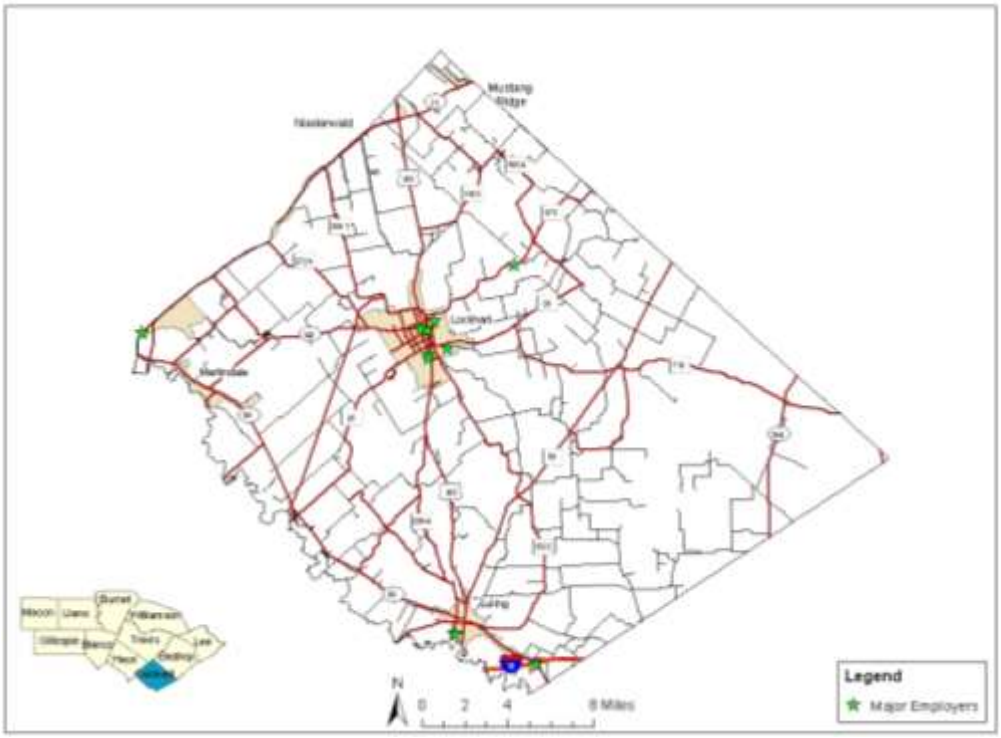
**Table 2.3-1 Major Employers in Caldwell County**

| Employer | City | Employees |
|---|---|---|
| Lockhart ISD | Lockhart | 661 |
| Caldwell County | Lockhart | 251 |
| Serta Mattress | Lockhart | 174 |
| GEO Group | Lockhart | 159 |
| Pegasus | Lockhart | 151 |
| HEB Food Store | Lockhart | 147 |
| City of Lockhart | Lockhart | 143 |
| Wal-Mart | Lockhart | 117 |
| Warm Springs Rehabilitation | Luling | 174 |
| Seton Health Care | Luling | 175 |
| City of Luling | Luling | 60 |
| Durol Western Manufacturing | Luling | 75 |
| Hillcrest Manor Nursing Home | Luling | 57 |
| Cartwheel Lodge Nursing Home | Luling | 57 |
| Smith Farms | Luling | 50 |
| Luling Care Center | Luling | 48 |
| Centex Pipe and Equipment | Luling | 40 |
| HEB | Luling | 40 |

**Table 2.3-2 School Campuses in Caldwell County**

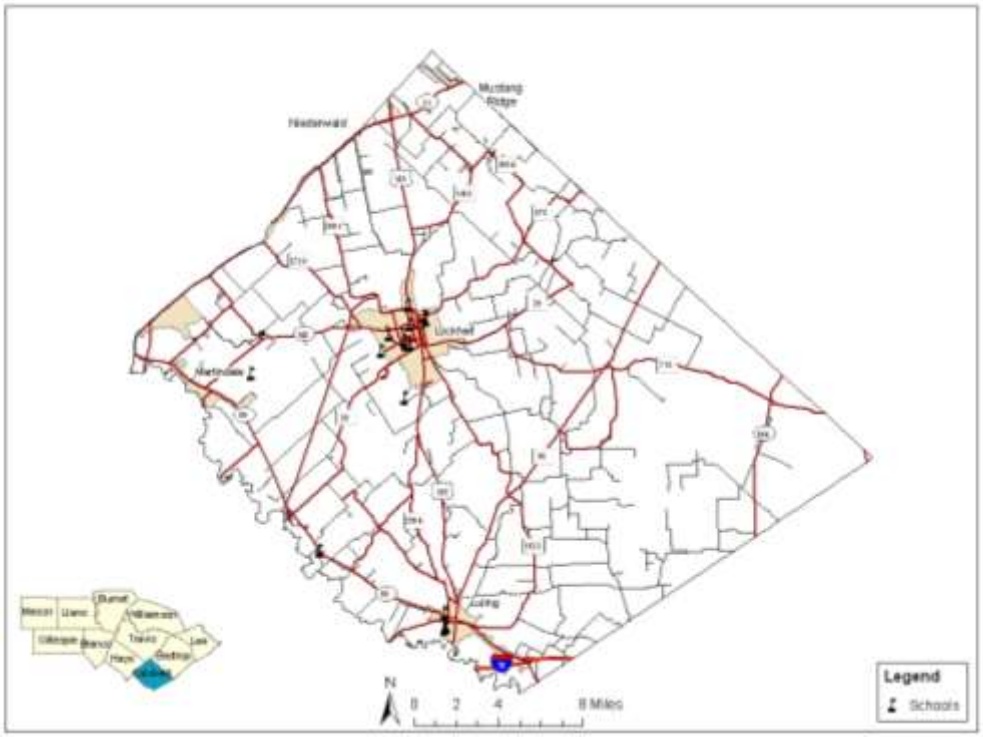
| School | Location | Students, 2009-2010 |
|---|---|---|
| Bluebonnet Elementary | Lockhart | 526 |
| Carver Kindergarten | Lockhart | 347 |
| Clear Fork Elementary | Lockhart | 409 |
| Lockhart High School | Lockhart | 962 |
| Lockhart Junior High School | Lockhart | 1039 |
| Lockhart Pride High School | Lockhart | 31 |
| M.L. Cisneros Freshman Campus | Lockhart | 327 |
| Navarro Elementary School | Lockhart | 417 |
| Plum Creek Elementary School | Lockhart | 441 |
| Luling Primary School | Luling | n/a |
| Leonard Shanklin Elementary School | Luling | 316 |
| Luling Junior High School | Luling | 296 |
| Luling High School | Luling | 395 |
| Prairie Lea School | Prairie Lea | 243 |

**Figure 2.3-2 Major Employers 2011**




Source: CAPCOG 2012b; TxDOT, 2012

**Figure 2.3-3 Caldwell County Schools 2011**



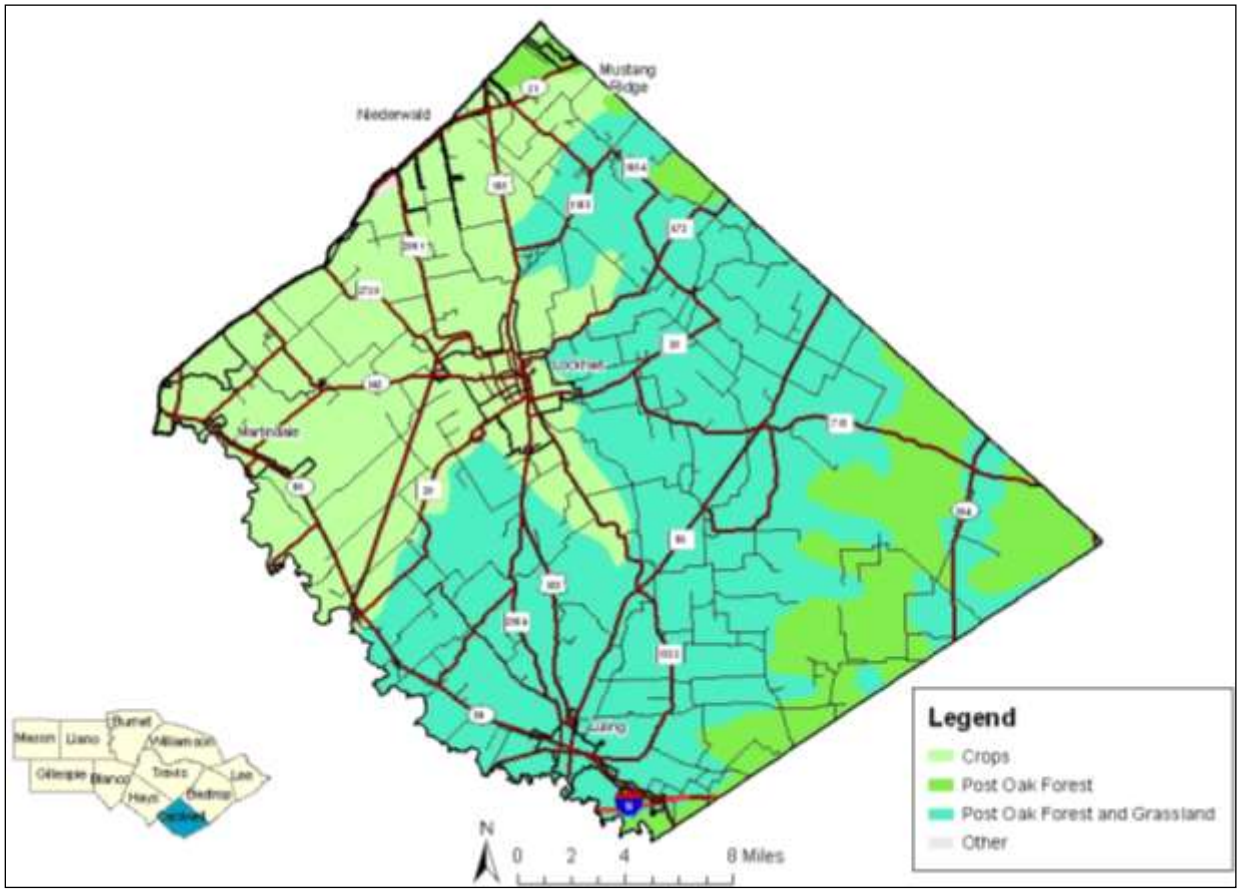

Source: CAPCOG 2012c; TxDOT, 2012

## 2.4 Natural Environment

### Ecology

Ecologically, Caldwell County is classified as being composed of Blackland Prairie, featuring low rolling to flat terrain, and Post Oak Savannah which is hillier with sandy soils that support a wider range of vegetation. Vegetation in Post Oak Savannah, which covers the eastern and southern portions of the county, includes blackjack oak, eastern red cedar, mesquite, black hickory, live oak, sandjack oak, cedar elm, hackberry, yaupon, poison oak, American beautyberry, hawthorn, supplejack, trumpet creeper, dewberry, coral-berry, little bluestem, sand lovegrass, beaked panicum, three-awn, sprangle-grass, and tick clover. Vegetation in the Blackland Prairies, which covers the northern and western portions of the county, include mesquite, post oak, woolly bucket bumelia, honey locust, coral-berry, pasture haw, elbow bush, Texas prickly pear, tasajillo, dewberry, silver bluestem, buffalo grass, western ragweed, giant ragweed, goldenrod, frostweed, ironweed, prairie parsley and broom snakeweed (Texas Parks and Wildlife Department, 2012a). Wildlife in the county includes deer, javelinas, coyotes, bobcats, beavers, otters, foxes, raccoons, skunks, turkeys, squirrels, and a variety of small birds, fish, and reptiles (Texas Parks and Wildlife Department, 2012). **Figure 2.4-1** illustrates the land cover in Caldwell County. The county is also home to the 264 acre Lockhart State Park, located in Lockhart.

**Figure 2.4-1 Caldwell County Land Cover 2011**

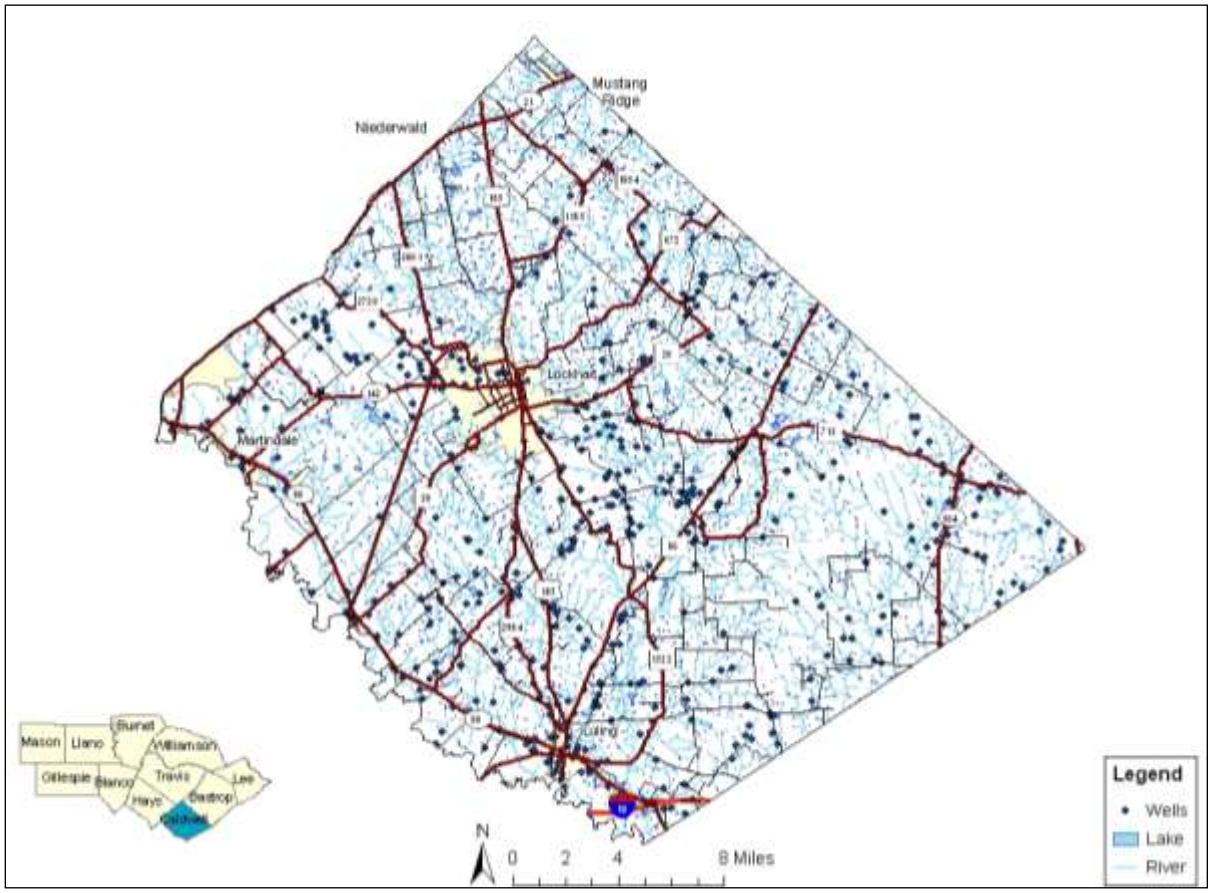



Source: CAPCOG 2012; Texas Parks and Wildlife Department, 2012

## Major Rivers and Streams

Caldwell County is almost wholly within the Guadalupe River basin, and is drained primarily by Plum Creek, its associated tributaries, and the San Marcos River, which forms the boundary with Guadalupe County to the southwest.

**Figure 2.4-2 Caldwell County Hydrological Features**




Source: CAPCOG 2012; TxDOT, 2012

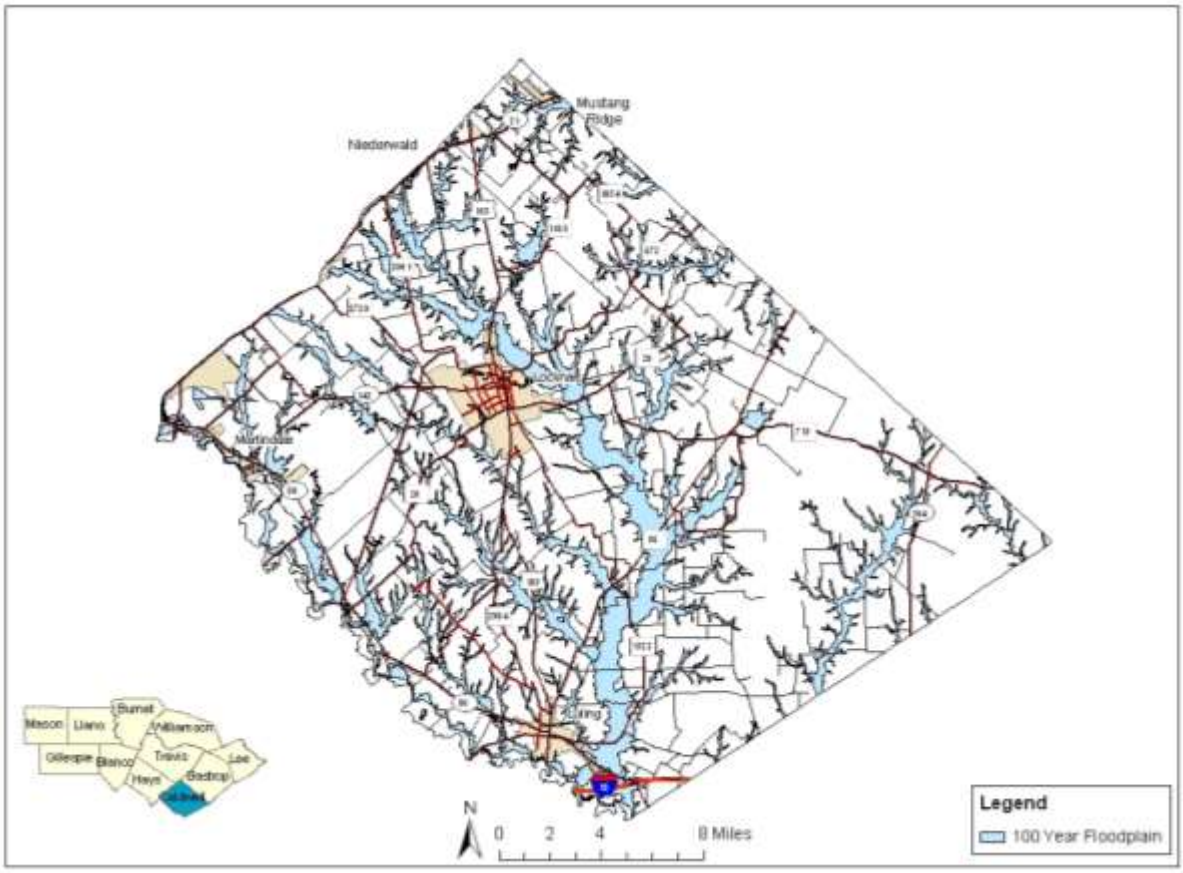
## Groundwater

The eastern portion of Caldwell County is in the Wilcox-Carrizo Aquifer. This is one of Texas' major aquifer systems. The aquifer contains fresh to slightly saline water in the subsurface. A very small portion of extreme east Caldwell County is also in the Queen City minor aquifer. The primary source of water for use in Caldwell County comes from the Guadalupe River Basin.

## Floodplains

Plum Creek is the major water feature in Caldwell County, although there are numerous small lakes created by water conservation districts. Plum Creek is the dominant water feature through the central portion of the County and flows east of Lockhart and Luling.

**Figure 2.4-3 Caldwell County 100 Year Floodplain**




Source: CAPCOG 2012; TxDOT, 2012

## Threatened and Endangered Species

A “threatened” species is one that is likely to become endangered in the foreseeable future. An “endangered” species is on that that is in danger of extinction through a major portion of its range. Given these definitions, Caldwell County is home to several threatened species and two endangered species. **Table 1.4-1** below details the listing and habits of the listed species in Caldwell County from the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department (2012).

**Table 2.4-1 Special-Status Species in Caldwell County**

| Species | Listing | Description of Suitable Habitat |
|---|---|---|
| Federally Listed Species | | |
| bald eagle (Haliaeetus leucocephalus) | DM | found primarily near rivers & large lakes; nests in tall trees or in cliffs near water; communally roosts especially in winter; hunts live prey, scavenges, and pirates from other birds |
| whooping crane (Grus americana) | E, EXPN | potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, & Refugio counties |
| State Listed Species | | |
| American peregrine falcon (Falco peregrinus anatum) | T | year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands. |
| bald eagle (Haliaeetus leucocephalus) | T | found primarily near rivers & large lakes; nests in tall trees or in cliffs near water; communally roosts especially in winter; hunts live prey, scavenges, and pirates from other birds |
| whooping crane (Grus americana) | E | potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, & Refugio counties |
| wood stork (Mycteria americana) | T | forages in prairie ponds, flooded pastures or fields, ditches and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960 |
| blue sucker (Cycleptus elongatus) | T | Blue sucker is a fish that usually inhabits medium to large river systems throughout the Mississippi River basin with channels more than three feet deep and flowing pools with a moderate current. The channel bottom type usually consists of exposed bedrock, perhaps in combination with hard clay, sand, and gravel. Adults winter in deep pools and move upstream in spring to spawn in riffles. Gary P. Garrett, Ph.D. with TPWD has studied the occurrence of blue sucker in Texas. He has stated through personal communication with Austin District staff, "I know of no occurrences of blue sucker in Hays County. Their presence there would be unlikely in that it is a big river species |
| red wolf (Canus rufus) | E | extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal prairies |
| false spike mussel (Quincuncina mitchelli) | T | The false spike is known from only two disjunct populations, one in central Texas and the other in the Rio Grande drainage. Nearly all records of this mussel from the Rio Grande are of subfossil and fossil specimens. The only evidence that the species may still persist in Texas was the discovery of recently dead specimens in the lower San Marcos River in 2000. Several subsequent survey efforts have failed to produce additional evidence of live false spikes in the aforementioned river. |
| golden orb (Quadrula aurea) | T | The golden orb is endemic to the Guadalupe-San Antonio and Nueces-Frio systems. Only seven extant populations of this mussel have been noted from |

| Species | Listing | Description of Suitable Habitat |
|---|---|---|
| | | the upper and central Guadalupe River, central San Antonio River, lower San Marcos River, and Lake Corpus Christi. Surveys conducted over the past 20 years have failed to locate any additional populations of the golden orb. The species' limited distribution makes it particularly susceptible to decline as a result of habitat degradation and reduced flow levels. Four golden orb populations are downstream from a rapidly expanding urban center (San Antonio) with a fifth population dependent on an aquifer impacted by municipal water demands. NatureServe (an international network of biological inventories and conservation data centers operating in all 50 U.S. states, Canada, Latin America, and the Caribbean) ranks the golden orb as critically imperiled across its range. |
| Texas fatmucket (Lampsilis bracteata) | T | The Texas fatmucket historically occurred in the Colorado and Guadalupe basins of central Texas. Over the past thirty years, a combination of natural and human-induced stressors has led to the dramatic decline of this species in both river systems. Only six populations of the Texas fatmucket have been documented since 1992. Several of these populations have since declined or been eliminated completely. Recent surveys indicate that only four of the six known Texas fatmucket populations still survive. The populations that remain are at risk from scouring floods, dewatering, and incompatible land management practices. NatureServe (an international network of biological inventories and conservation data centers operating in all 50 U.S. states, Canada, Latin America, and the Caribbean) ranks the Texas fatmucket as critically imperiled across its range. |
| Texas pimpleback (Quadrula petrina) | T | This endemic mussel is restricted to the Colorado and Brazos River drainages. In the Colorado River, the smooth pimpleback's distribution has historically been restricted to the Highland Lakes area downriver to Colorado and Wharton Counties. Shell material has been documented in the Brazos basin as far upriver as Shackelford and Young Counties and downstream at least as far as Fort Bend County. Surveys conducted from 1980 to 2006 have noted steep declines in the number of extant populations in both river systems. Recent surveys of the Colorado River system failed to locate surviving populations of the smooth pimpleback. At present, the Brazos River drainage hosts the only surviving populations of this freshwater mussel. NatureServe (an international network of biological inventories and conservation data centers operating in all 50 U.S. states, Canada, Latin America, and the Caribbean) ranks the smooth pimpleback as imperiled across its range. |
| Texas horned lizard (Phrynosoma cornutum) | T | open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September |
| timber/canebrake rattlesnake (Crotalus horridus) | T | swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines and palmetto |

Notes: T = threatened, E = endangered, EXPN = experimental population, non-essential, DM = delisted monitoring
Source: USFWS Southwest Region County-by-County list, 2012; TPWD "Annotated County List of Rare Species" for Caldwell County, 2012

**Archaeological and Historical Resources**

Caldwell County has 269 known sites of historical interest listed in the Texas Historic Sites Atlas, a searchable online database provided by the Texas Historical Commission. The historic sites include a number of cemeteries and historic buildings, most of which are concentrated in and around the Cities of Lockhart and Luling. These sites include three National Register Properties and a National Register District, all within or near Lockhart. Numerous archaeological sites exist within the county, with many small investigations having been conducted. Results of many of these investigations can be obtained from universities and various archaeological societies.

The county was originally inhabited by the Tonkawa Indians, with Comanche Indians making occasionally hunting forays into the area. When the Spanish colonized Texas, they built El Camino Real (also known as Old San Antonio Road) through the county on the way to outposts in East Texas and Louisiana (Texas State Historical Association, Handbook of Texas Online). Today, traces of El Camino Real, a National Historic Trail, are still faintly visible along the Caldwell-Hays County line.

On August 12, 1840, the Tonkawa joined forces with settlers at the Battle of Plum Creek to permanently end raids conducted in the area by Comanche and Kiowa Indians. The battlegrounds are believed to include Lockhart State Park and the surrounding area, with skirmishes occurring as far away as San Marcos and Kyle, in Hays County, but archaeological surveys have yet to provide conclusive material evidence related to the battle. During the heyday of the cattle drives in Texas, from approximately 1868 through the late 1880's, two branches of the Chisholm Trail ran through the county, one running north from Lockhart, the other through the northwest corner of the county. Caldwell County experienced an oil boom with the discovery of the Luling Oil Field in 1922 by Edgar B. Davis, which resulted in 125 producing wells drilled within the city limits by the 1970s.

The State Highway 3-A Bridge at Plum Creek, built in 1930-31, is listed in the National Register of Historic Structures under Criterion C in the area of Engineering at a state level of significance The truss bridge was originally part of SH 3-A/SH 29, and, since the addition of a parallel bridge in 1956, currently serves as the eastbound lanes of US 90/US 183, between Luling and the Gonzales County line.

## 2.5 Air Quality

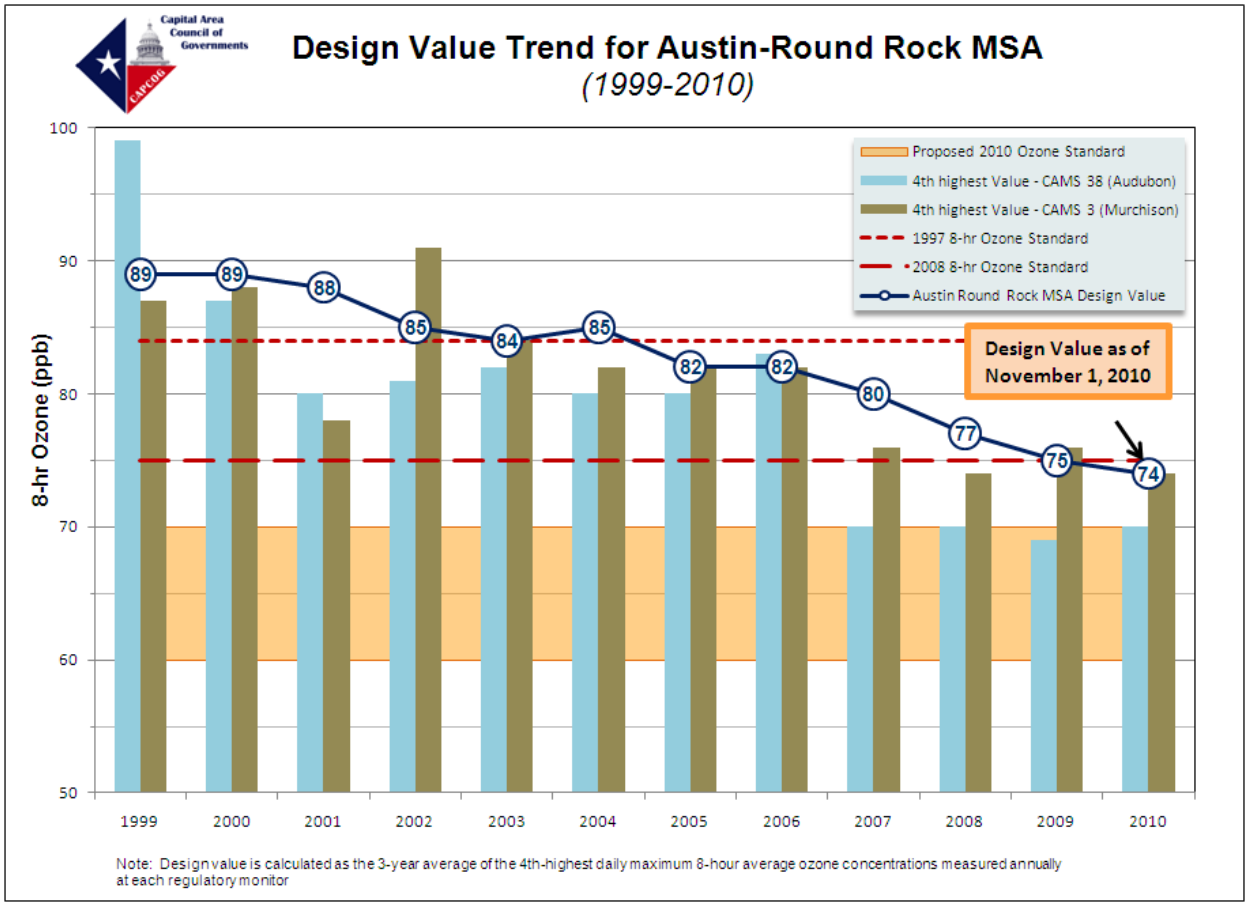
In addition to population growth, traffic, and weather, air quality is an important shared condition that affects life throughout the region. This is especially true because the Austin-Round Rock Metropolitan Statistical Area (MSA) is on the verge of becoming an EPA non-attainment area for ozone, a status that could have severe impacts upon regional transportation planning. Therefore, it is crucial that growth in the Austin-Round Rock MSA does not detract from the region's recent trend of improving air quality.

> Ozone is a form of oxygen with three atoms. At ground level, ozone is the main component of smog. Ground-level ozone is not emitted directly into the air but is formed through chemical reactions between natural and man-made emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of heat and sunlight. Vehicle emissions are a major source of both VOC and NOx emissions in the Austin-Round Rock MSA.

Federal and state transportation planning guidance requires that the air quality impact of transportation-related emissions be considered in the state air quality planning process. Ozone is the primary air pollutant of concern in the Austin-Round Rock MSA. Air quality readings taken from monitors within the Austin-Round Rock MSA indicate that ozone levels have exceeded federal standards on numerous occasions, though the area is not currently designated as being in non-attainment of air quality standards.

Attainment of the ozone National Ambient Air Quality Standards (NAAQS) is based on the 3-year average of the fourth highest daily maximum 8-hour average ozone concentrations measured annually at each regulatory monitor. The 3-year average is called the design value. The ozone season for the Austin-Round Rock MSA begins April 1 and ends October 31. The Austin-Round Rock MSA is currently designated in attainment of the 1997 and 2008 NAAQS for ozone. There are currently no monitoring stations in Caldwell County.

**Figure 2.5-1 Air Quality Standards for the Austin-Round Rock MSA**




Source: CAPCOG 2010

## 2.6 Existing Roadway Conditions

A variety of descriptive data were collected from numerous local, regional, state, and federal sources to document existing roadway conditions in the county. Transportation data included roadway characteristics, safety statistics, bridge inventory data, traffic counts, and pavement conditions.

**Roadway Network and Connectivity**

Connectivity is a term used to describe the ability to move from place to place within an area or region and, often, between modes of travel. Given the location of Caldwell County relative to Austin, Houston, and San Antonio, connectivity can also be used to assess the number and design characteristics of roads or highways that are used for traveling to these large urban areas.

The major traffic generation centers within the county are the Cities of Lockhart, Luling, and San Marcos. Outside the county, there are heavy traffic flows between the major cities of Austin, San Antonio, and Houston along Interstate Highway (IH) 35, IH 10, US 183, and SH 80. The extension of SH 130 Toll Road will facilitate access to IH 10 from the Austin area. The roadways described below are considered to be the main components of the roadway network in Caldwell County.

- IH 10 traverses the extreme southern portion of the county and provides access between San Antonio and Houston.
- US 183 runs north/south through the middle of the county providing mobility between Luling and Lockhart and extending north into Austin and south to IH 10.
- SH 80 traverses the southwest portion of the county and provides a connection between San Marcos and Luling.
- SH 142 runs from Martindale to Lockhart through the western portion of the county.
- Farm-to-market (FM) 20 connects Lockhart and Bastrop, while FM 86 provides a connection between Luling and FM 20.
- Other farm-to-market (FM) roads provide connectivity throughout the county.

The roadway network in Caldwell County is provided and maintained by the state, the county, and the Cities of Lockhart, Luling, and San Marcos. It provides a network for people and goods to move through and within the county. The functional classification of the roadways within the roadway network is presented first to facilitate the analysis and evaluation of the effectiveness of the roadways within the system. Secondly, existing roadway capacities (or level of service [LOS]) have been evaluated to serve as a benchmark against which the analysis of the future proposed improvements will be compared. Existing roadway conditions can be evaluated based on several performance measures to identify facilities in potential need of improvement.

Roadway Condition Performance Measures
- Congestion – historic traffic volume trends and LOS,
- Safety – vehicular crashes and traffic signals, and
- System preservation – bridge and pavement conditions.

## Functional Classification

Roadways can be described by the function that they serve, whether it is access to property or mobility for through passenger and truck traffic. On one end of the functional classification spectrum is the Interstate Highway System which provides for greater mobility while limiting access to both the highway and to adjacent land. At the other end of the spectrum are local roads that provide the greatest accessibility to adjacent property but restrict rapid through movement due to decreased speed limits, roadway design features, or the number of driveways.

The Federal Highway Administration provides guidelines by which TxDOT works with local governments to establish or verify roadway functional classifications of all public roadways. Table 2.6-1 provides descriptions for the various categories of roadways.

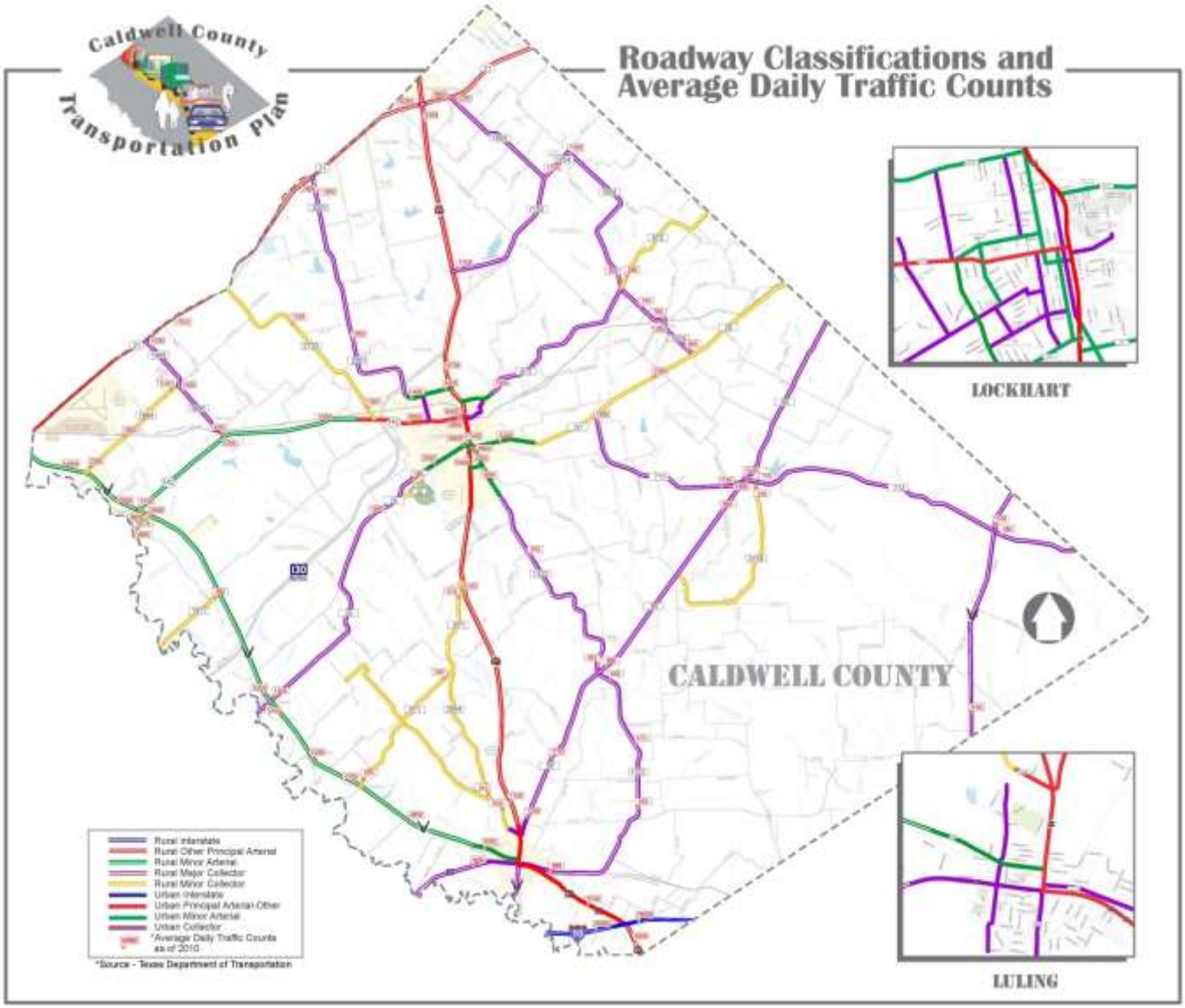
**Table 2.6-1 Roadway Functional Classification Description**

| Roadway Type | TxDOT Definition (Statewide Perspective) | Caldwell County Definition (Local Perspective) |
|---|---|---|
| Interstates and Expressways | Provide the greatest mobility because they permit high-speed movement with limited access at ramps. Access to these facilities is generally limited to defined interchanges. | Same |
| Principal Arterials | Connect activity centers and carry large volumes of traffic at moderate to high speeds. | Same |
| Major Arterials | Term not used by TxDOT | Provide for through vehicle traffic traveling at mid-level speeds. They provide connections to the local road system and allow for access to adjacent development. Major divided arterials are high-volume surface roadways with high priority at intersections with all lower-level facilities. Typically, signalization is provided at significant crossings. |
| Minor Arterials | Continuous routes through urban and rural areas, forming the backbone of the typical urban street and rural road network. They are primarily oriented toward community-level vehicle travel, connecting town centers, corridors, main streets, and neighborhoods. | Serve as secondary facilities that meet local access and circulation requirements in addition to providing through vehicle movement. Typically, full movement access (left and right turns) is permitted along the route. |
| Collector Streets | Accumulate traffic from local streets in residential and commercial areas and distribute it to the arterial system at low to moderate speeds. Collectors also serve as freight access routes. Typically, the FM highways in the rural areas serve this function | Accumulate traffic from local streets in residential and commercial areas and distribute it to the arterial system at low to moderate speeds. Collectors may restrict access movement and use traffic signs more than traffic signals. |

| Roadway Type | TxDOT Definition (Statewide Perspective) | Caldwell County Definition (Local Perspective) |
|---|---|---|
| Local Streets | Make up the majority of the roadway network and provide access to adjacent properties, carrying relatively low traffic volumes at low speeds. Local streets are often found in subdivisions and near non-residential land uses that do not depend on a high volume of walk-in business. | Same |

Source: TxDOT, 2011; CAMPO, 2011

**Figure 2.6-1 Functional Classification of Caldwell County Roadways**

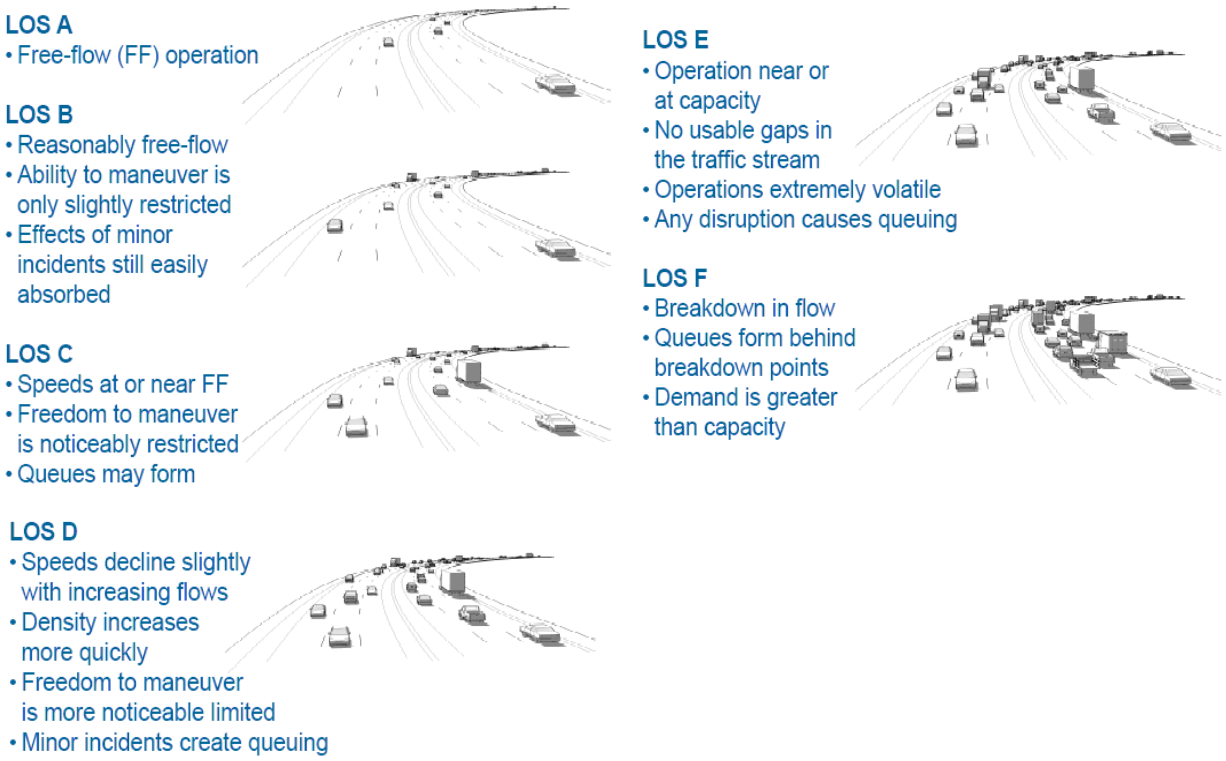



Source: TxDOT, 2012

## Level of Service

LOS is a qualitative term describing the density of traffic and relates travel speeds, delays, and other measures to performance on a roadway. LOS ranges from A to F. Definitions of each LOS and a graphic representation of each level are provided below in **Figure 2.6-2**.

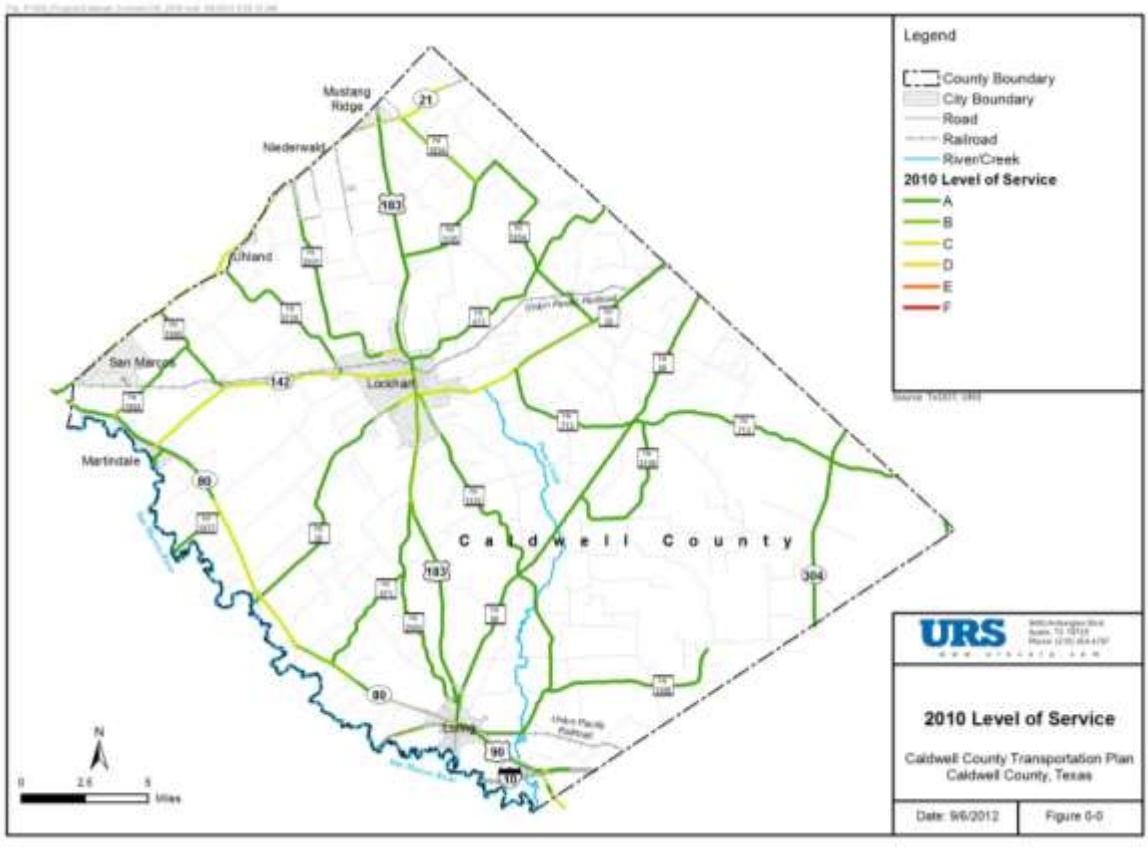
**Figure 2.6-2 Level of Service Description**




Source: Interstate 81 Corridor Improvement Study, Virginia Department of Transportation 2007

Automobile mobility is largely a function of roadway capacity. Congestion, which results when traffic volumes approach roadway capacity, has been reviewed using the CAMPO travel demand model run for the year 2010, which indicates LOS C or better on nearly all roadways in Caldwell County based on daily traffic volumes. The two exceptions are LOS D on SH 21 in Mustang Ridge and LOS D on US 183 in downtown Luling.

**Figure 2.6-3 Level of Service in Caldwell County 2010**




## Roadway Safety

Traffic safety is an important component in the transportation planning process and high priority for transportation agencies. A crash analysis was conducted to evaluate existing safety conditions and identify deficiencies on the county's roadway system. The analysis was performed based on crash data obtained from TxDOT for the last three years (2009-2011) and the results were compared to the statewide average. TxDOT crash data includes accident location, severity, light/weather condition, vehicle/bike/pedestrian involved, and a brief description of crash contributing factors.

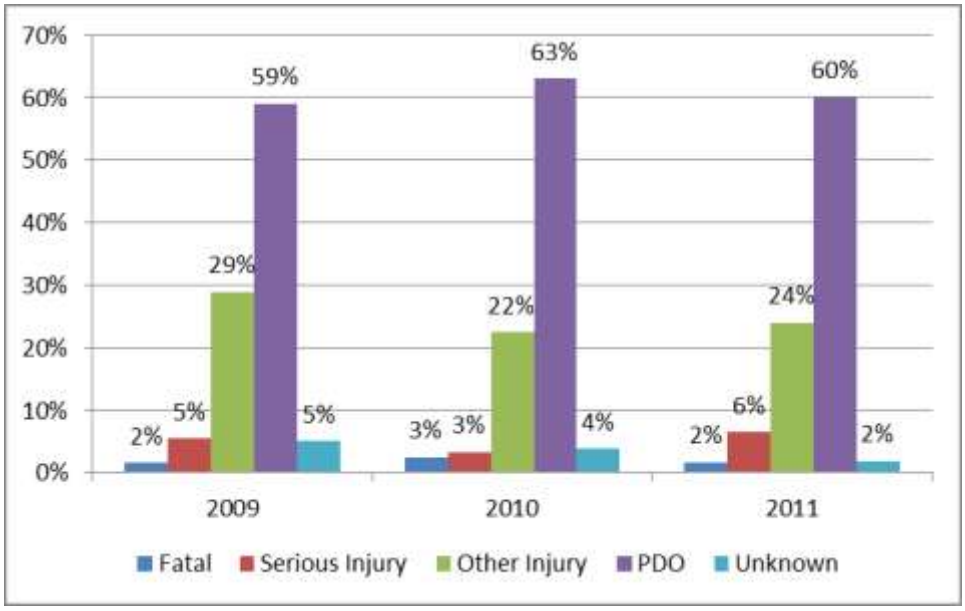
**Table 2.6-2** and **Figure 2.6-4** show that the number of crashes stayed stable or slightly decreased over the past three years, and the majority of crashes are property damage only (PDO). There was a slight increase in fatal accidents in 2010. Comparing to the Texas statewide average, as shown in **Figure 2.6-5**, Caldwell County has a slightly higher fatal crash rate but significantly lower serious injury rate. The PDO crashes experienced similar rates in Caldwell County and Texas.

**Table 2.6-2 Crashes by Severity in Caldwell County (2009-2011)**

| Year | Fatal | Serious Injury | Other Injury | Property Damage Only | Unknown Severity | Total |
|---|---|---|---|---|---|---|
| **2009** | 9 | 31 | 165 | 337 | 29 | 571 |
| **2010** | 12 | 19 | 128 | 301 | 18 | 478 |
| **2011** | 8 | 37 | 137 | 287 | 9 | 478 |

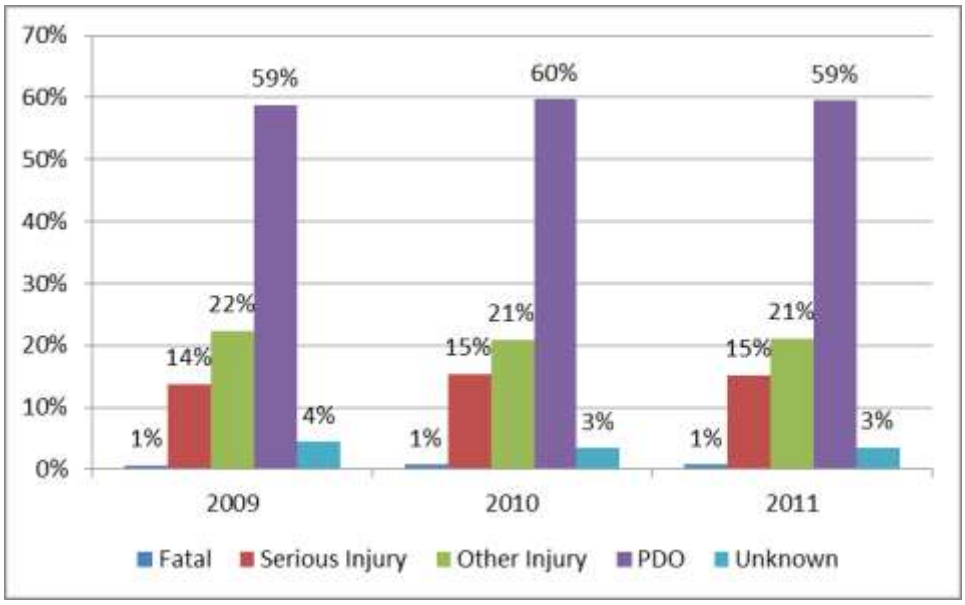
Source: TxDOT, 2012a

**Figure 2.6-4 Crash Percentage by Severity in Caldwell County (2009-2011)**




Source: TxDOT, 2012a

**Figure 1.6-5 Crash Percentage by Severity in Texas (2009-2011)**




Source: TxDOT, 2012a

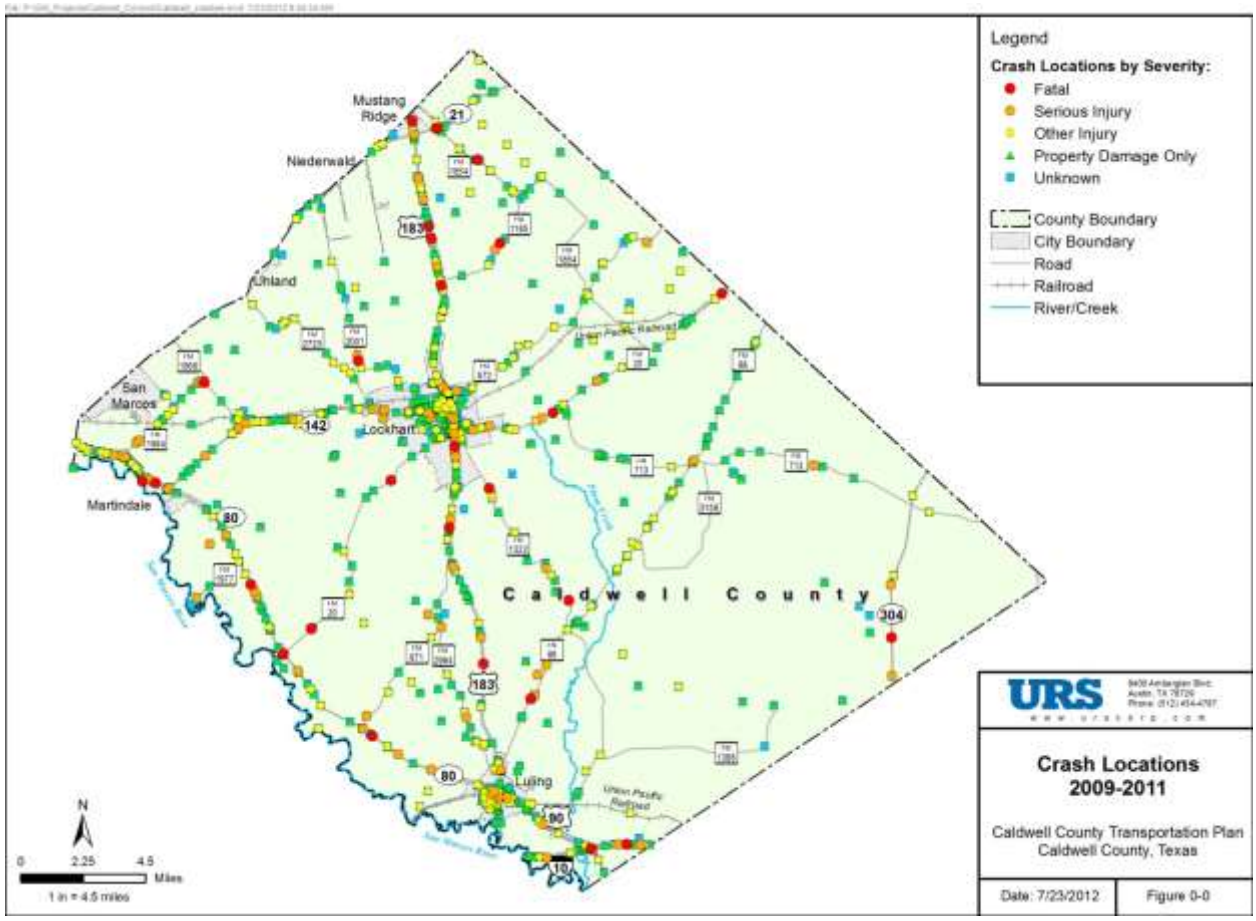
**Table 2.6-3** shows a significant amount of motor vehicle crashes (50%) occurring on high-speed US or state highways. In particular, a total of 397 crashes occurred on US 183, consisting of 26% of all crashes over the past three years (TxDOT, 2012). This situation may be improved by the completion of SH 130 Toll Road that runs parallel to US 183 and by improvements to US 183.

**Table 2.6-3 Crashes by Roadway Type in Caldwell County (2009-2011)**

| Roadway type | 2009 | 2010 | 2011 | Total | Total Percent |
|---|---|---|---|---|---|
| **Interstate** | 29 | 13 | 12 | 54 | 4% |
| **US & State Highway** | 280 | 230 | 256 | 766 | 50% |
| **Farm-to-Market** | 123 | 93 | 111 | 327 | 21% |
| **County Road** | 30 | 37 | 27 | 94 | 6% |
| **Other** | 109 | 105 | 72 | 286 | 19% |

Source: TxDOT, 2012a

**Figure 2.6-6 Crash Location by Severity in Caldwell County**




Source: TxDOT, 2012a

Two major factors that contribute to crashes are alcohol and speeding, accounting for 5% and 8% of the three-year total crashes in Caldwell County, respectively (TxDOT, 2012). **Table 2.6-4** compares the percent of alcohol involved crashes by severity in Caldwell County to the Texas statewide average. Alcohol-involved fatal crashes in Caldwell County are consistently higher than the Texas statewide average, but serious injury crashes were consistently lower.

**Table 2.6-4 Alcohol Involved Crashes by Severity in Caldwell County and Texas**

| Severity | 2009 | | 2010 | | 2011 | |
|---|---|---|---|---|---|---|
| | Caldwell | Texas | Caldwell | Texas | Caldwell | Texas |
| Fatal | 10% | 4% | 22% | 4% | 7% | 4% |
| Serious Injury | 7% | 25% | 19% | 28% | 30% | 28% |
| Other Injury | 38% | 18% | 37% | 16% | 37% | 17% |
| PDO | 41% | 50% | 22% | 49% | 26% | 48% |
| Unknown Severity | 3% | 4% | 0% | 3% | 0% | 4% |

Source: TxDOT, 2012a

**Table 2.6-5** compares the percent of speeding-related crashes by severity in Caldwell County to the Texas statewide average. Speeding-related fatal crashes in Caldwell County are generally consistent with the Texas statewide average, but serious injury crashes were consistently lower.

**Table 2.6-5 Speeding-Related Crashes by Severity in Caldwell County and Texas**

| Severity | 2009 | | 2010 | | 2011 | |
|---|---|---|---|---|---|---|
| | Caldwell | Texas | Caldwell | Texas | Caldwell | Texas |
| Fatal | 4% | 3% | 3% | 3% | 5% | 3% |
| Serious Injury | 11% | 24% | 3% | 24% | 18% | 24% |
| Other Injury | 16% | 16% | 27% | 16% | 26% | 16% |
| PDO | 49% | 50% | 57% | 52% | 42% | 52% |
| Unknown Severity | 20% | 7% | 11% | 6% | 8% | 6% |

Source: TxDOT, 2012a

Number of crashes involving bicycle and pedestrian traffic are considerably lower but significant while considering the overall county levels of such traffic. There were a total of 10 bicycle involved accidents with one fatal incident and 13 pedestrian involved accidents with two fatal incidents during the same three year period (TxDOT, 2012).

## Bridge Conditions

Maintaining the bridge network is important for safety, as well as to avoid delays created by detours when bridges are closed or have weight limit postings. Not only is the movement of goods and people

diverted and delayed, but also emergency vehicle response times can be greatly increased due to bridge restrictions. Bridge structures are important elements in the transportation system providing connectivity. TxDOT maintains the Bridge Inspection and Appraisal Program (BRINSAP) to inspect and assess each bridge condition. The BRINSAP database includes a comprehensive record of all bridges in the state and is the primary data source for any analysis of Texas bridges. All data is gathered and updated through bi-annual standardized field inspections.

As of July 2012, Caldwell County has 198 vehicular bridges in BRINSAP, including 152 on-system bridges and 46 off-system bridges (TxDOT Bridge Division, 2012). The on-system or off-system bridge designation is defined as follows:

- **On-system bridge**: Vehicular bridges that are located on the designated state highway system, are owned and maintained by TxDOT, and are typically funded with a combination of federal and state or state-only funds.
- **Off-system bridge**: Vehicular bridges that are not part of the designated state highway system and are under the direct jurisdiction of the local government such as a county, city, other political subdivision of the state, or special district with authority to finance a highway improvement project.

**Table 2.6-6** shows the number of bridges built or reconstructed in each decade in Caldwell County. A significant amount of on-system bridges were constructed after 2010, mostly due to the SH 130 Toll Road.

**Table 2.6-6 Bridges Built by Time Period in Caldwell County**

| | On-System Bridges | Off-System Bridges | Total | Percent |
|---|---|---|---|---|
| Before 1950 | 4 | 15 | 19 | 10% |
| 1950-1959 | 18 | 0 | 18 | 9% |
| 1960-1969 | 13 | 0 | 13 | 7% |
| 1970-1979 | 10 | 1 | 11 | 6% |
| 1980-1989 | 11 | 5 | 16 | 8% |
| 1990-1999 | 20 | 10 | 30 | 15% |
| After 2000 | 76 | 15 | 91 | 45% |
| Total | 152 | 46 | 198 | 100% |

Source: TxDOT, 2012b

Bridge replacements and rehabilitation are based on the correlation between the age of bridges and their need for special maintenance. On-system Texas bridges built after 1950 can be classified by significant changes in the design criteria that governed their construction:

**Built before 1950**: Bridges generally designed for less than the current state legal load.

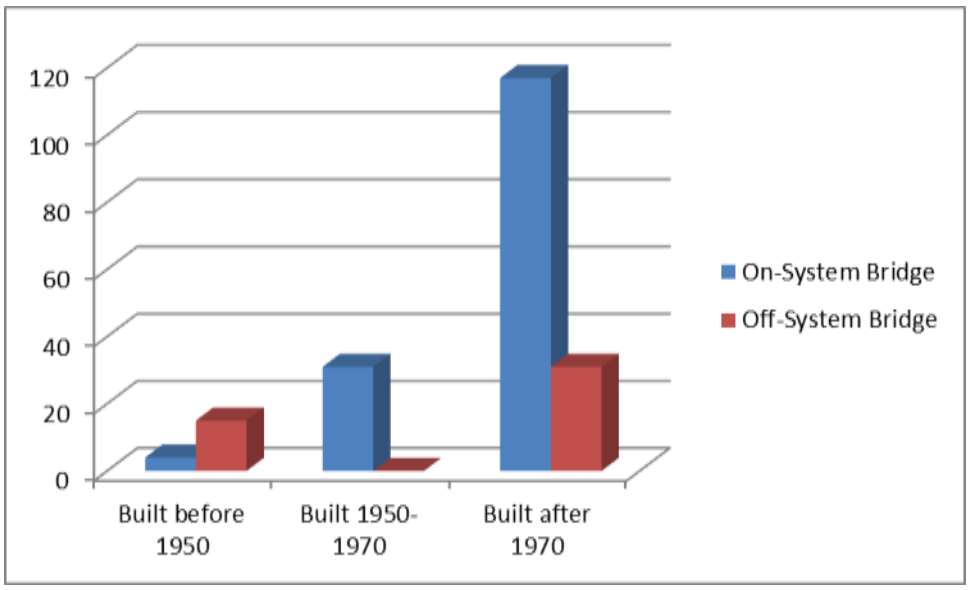
**Built between 1950 and 1970:** Bridges generally required to accommodate the minimum design load or higher recommended by the American Association of State Highway and Transportation Officials (AASHTO), but may be narrower than their roadway approaches. A number of these bridges are too

narrow to meet current requirements. The required bridge load capacity is described in detail in current TxDOT Bridge Inspection Manual.

**Built after 1970:** Bridges generally required to accommodate the minimum design load or higher recommended by AASHTO, and must be at least as wide as their roadway approaches.

**Figure 2.6-7** shows the number of bridges constructed during the time periods described above.

**Figure 2.6-7 Bridges Built by Time Period in Caldwell County**




Source: TxDOT, 2012b

The Federal Highway Administration uses the following standard definitions for condition of bridges to determine eligibility for rehabilitation and replacement funds:

**Structurally deficient:** Bridge is one with routine maintenance concerns that do not pose a safety risk or one that is frequently flooded. To remain open to traffic, structurally deficient bridges are often posted with reduced weight limits that restrict the gross weight of vehicles using the bridges.

**Functionally obsolete:** Bridge met current design standards when built, but over time has become obsolete due to an increase in traffic volume. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearance to serve current traffic demand or are occasionally flooded.

TxDOT uses the following definition support load limits on to identify bridges that cannot carry the state legal load.

**Substandard-for-load-only:** Used to designate bridges in relatively good condition that do not have specific maintenance concerns, but do have a load-carrying capacity less than the state legal limit for public roadways. Substandard-for-load-only bridges are posted with reduced weight limits. These bridges are not classified as structurally deficient or functionally obsolete under Federal Highway Administration definitions.

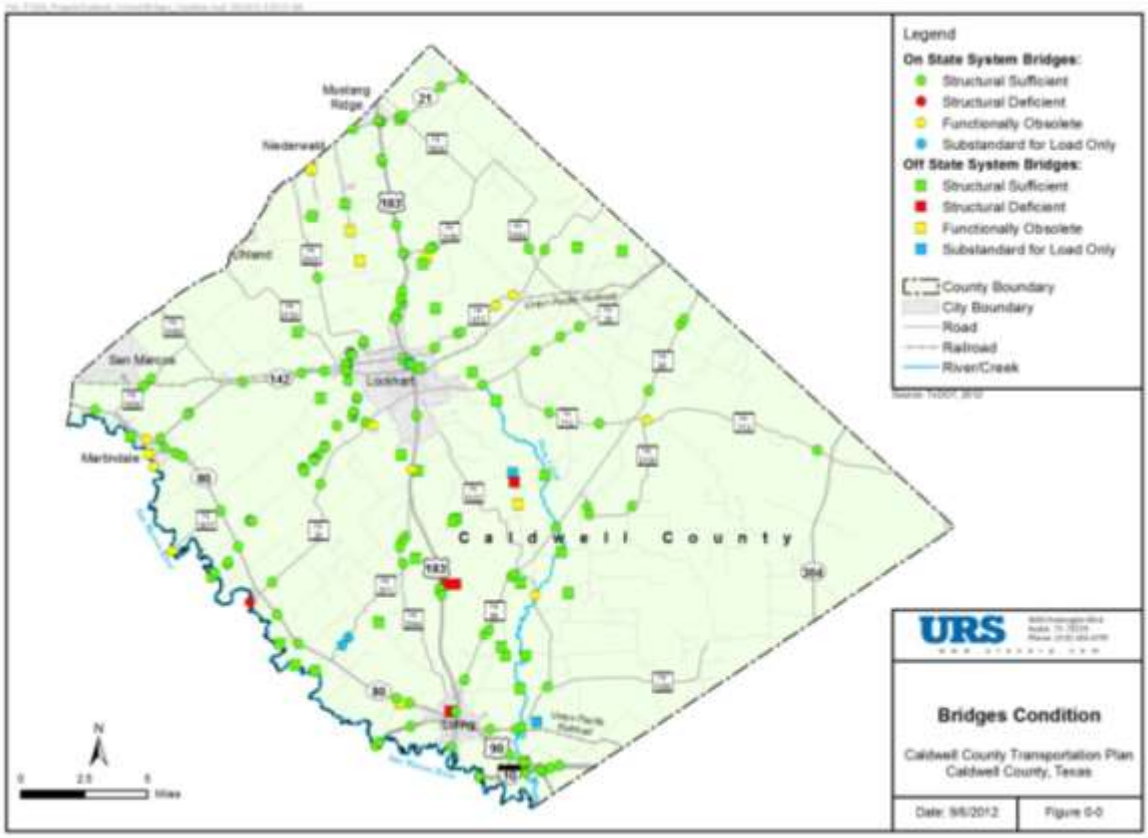
**Table 2.6-7 Bridge Conditions in Caldwell County and Texas July 2012**

| Condition | On-System Bridges | | On-System Bridges | | All Bridges | |
|---|---|---|---|---|---|---|
| | Bridges | Percent | Bridges | Percent | Bridges | Percent |
| Structurally Sufficient | 139 | 90% | 32 | 69% | 171 | 85% |
| Structurally Deficient | 1 | 1% | 4 | 9% | 5 | 3% |
| Functionally Obsolete | 10 | 7% | 7 | 15% | 17 | 9% |
| Sub-Standard-for-Load-Only | 2 | 1% | 3 | 7% | 5 | 3% |
| Total | 152 | 100% | 46 | 100% | 198 | 100% |

Source: TxDOT, 2012b

**Figure 2.6-8** shows the location of bridges and their conditions. There are two on-system bridges and three off-system bridges that are categorized as sub-standard for load only, as well as one on-system bridge and four off-system bridges that are categorized as structurally deficient.

**Figure 2.6-8 Bridge Conditions in Caldwell County**



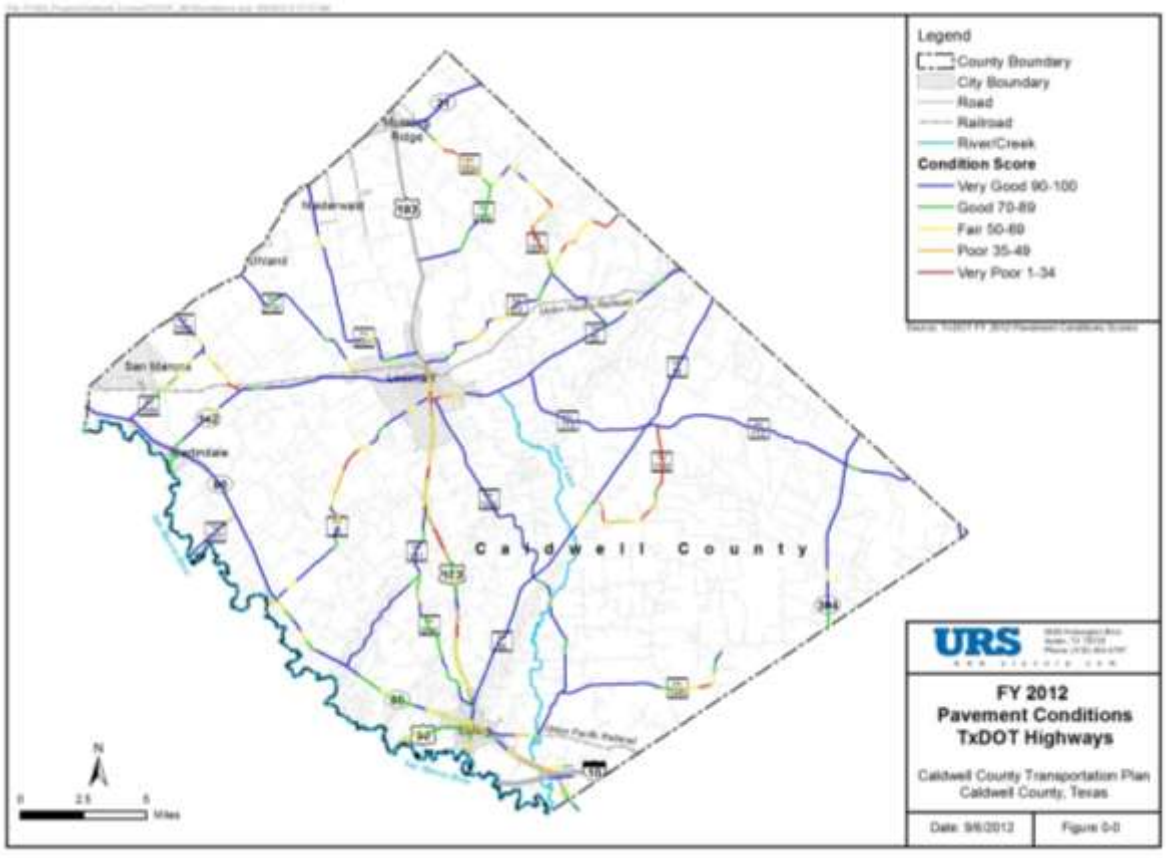

Source: TxDOT, 2012b

## Pavement Conditions

Rural counties, such as Caldwell County, often consist of a few US highways and SH roadways and a larger number of FM routes. Due to the higher volumes of traffic that are typically experienced on US highways and SH roadways compared to FM routes, maintenance dollars are used for the repairs of those higher traffic volume roadways. A similar situation also occurs with county and city road facilities. As a result, those lower traffic volume roadways can suffer from a lack of maintenance and repairs.

Pavement condition scores for state fiscal year 2012 were provided by TxDOT for the state maintained facilities in Caldwell County. As shown on **Figure 2.6-9**, the majority of the TxDOT maintained highways are in very good to fair condition. Those TxDOT maintained roadways that are considered to be in poor or very poor condition are located on FM 1854 and FM 672 in the northern part of the county; FM 3158 and FM 20 in the central part of the county; and FM 1386 in the southern part of the county. Note, the segment of US 183 between Lockhart south to FM 671 was repaved in late 2012 and has not been updated on the figure.

**Figure 2.6-9 TxDOT Highway Pavement Conditions in Caldwell County**




Source: TxDOT, 2012c

Doucet & Associates conducted a survey of roadway surface conditions on county roads in Caldwell County in late June of 2012, with follow-up field reviews on select roads over the next 90 days as questions arose through public comment or from county officials. The survey included a visual assessment of surface type and general roadway conditions for every road in the county system. Roads were divided into segments between major intersections, and each segment in the county was driven by the same two-person survey team to ensure consistency. A project manager from Doucet & Associates

conducted follow-up reviews where needed or requested. Each road segment was categorized based on its surface treatment, either: Unpaved (usually "gravel"), Chip Seal, or Hot Mix. Each segment was also graded on four criteria, and assigned a rating of 1-5 in each, resulting in an overall rating. The four criteria were 1) Edge Condition; 2) Surface Heaving or Depressions; 3) Surface Cracking (which was applied only to paved roads); and, 4) Potholes. Special issues were noted in a "comments" section, and approximately 400 photographs were taken to document conditions on road segments throughout the county. The three surface-type groupings are described below. Also below is an explanation of the four qualitative assessment criteria used to categorize the condition of each road segment.

**Roadway Surface Type**

**Unpaved** – This road segment has no "hard top" asphaltic or similar surface treatment and consists of gravel, open base material, shell, or dirt. The example shown is Crooked Road near County Line Road.

**Chip Seal** – A common wearing surface for rural county roads in Texas that combines one or two applications of asphaltic material, each combined with aggregate and installed on a prepared base course. The example below is from Skyline Road, June 29, 2012.

**Hot Mix Asphaltic Concrete (HMAC)** – A surface treatment composed of a compacted mixture of aggregate and asphaltic material installed on compacted base material, produced at elevated temperatures, usually between 300-350 degrees Fahrenheit. The first example below is from Winners Circle, showing Hot Mix, followed by a photograph of Gillis Street transitioning from Chip Seal to Hot Mix.

**Roadway Condition Ranking**

**Best Condition (1)** – This grouping includes road segments that are in better condition than most Caldwell County roads. The road surface is in generally good-to-excellent condition; there are few or no obvious drainage problems. If it is paved, there is no apparent surface cracking; if it is unpaved, the surface is compact and without obvious ruts. There is no heaving, potholes, or vegetative encroachment – or these problems are minor and isolated. The overall condition of the road surface indicates a high degree of safety and a comfortable ride at the posted speed limit, with no significant maintenance needed at this time. The example to the right is from a state road, Farm-to-Market 86, in Caldwell County, which would rate "1" in all categories.

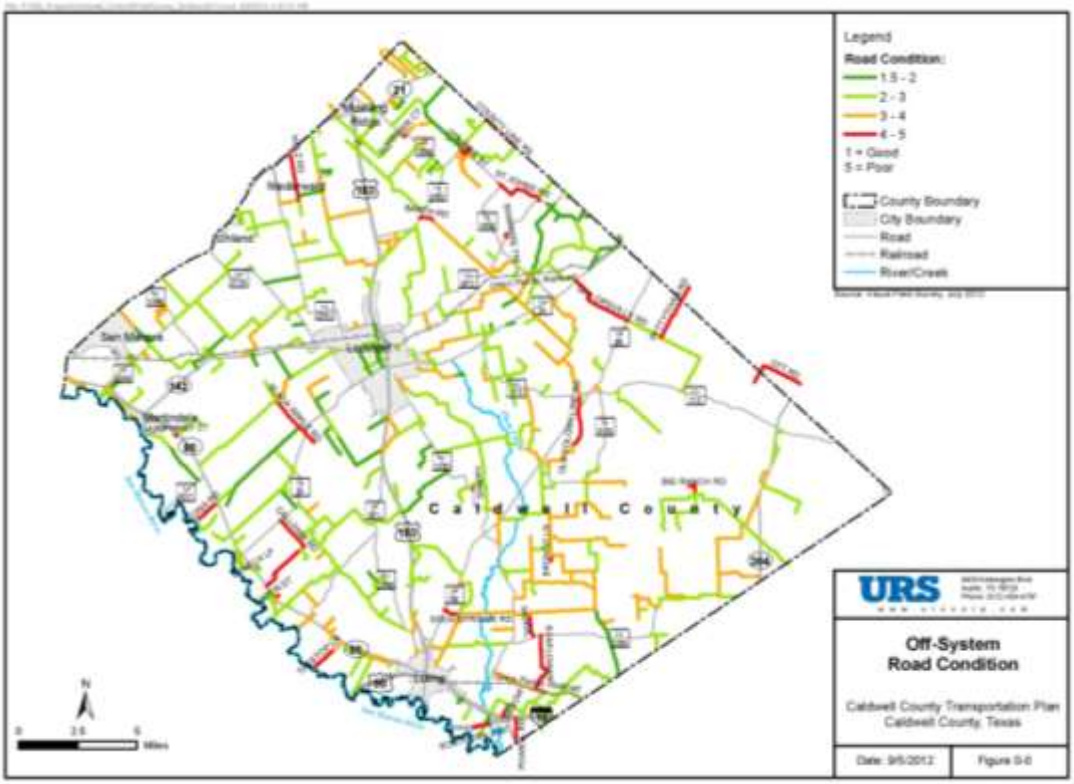
**Good (2)** – This category includes road segments that may need maintenance within a few years – or minor repairs and patching now – but continues to provide the traveling public with what should be a relatively comfortable ride and a safe and passable all-weather surface. The road surface may show signs of wear or occasional failures but the surface treatment remains serviceable. Potholes and other road failures are infrequent and/or readily fixable. Drivers should be able to maintain posted speed on most parts of this road segment without discomfort or fear of danger and damage to their vehicle. Preventive maintenance on this type of road surface is likely to pay dividends by delaying the need for more costly repairs. The first example below is of Lytton Lane, an Unpaved Road in Good Condition. The second example is from Track Road, with a Chip Seal surface treatment.

**Fair (3)** – This includes road segments that show obvious signs of stress and wear. Potholes or pothole patches are likely evident in several places. The road may be suffering from heaving, depressions, or other signs of underlying soil and moisture problems, but the effect is not yet severe. The roadway edge may show signs of unraveling, vegetative creep, or erosion but there is still a clearly defined travel lane or lanes. If the road is paved, it may show significant signs of surface cracking. This type of road segment needs maintenance and probably at least some more significant repair soon in order to keep it serviceable and defer even more costly improvements. The example to the right is from Fox Lane, with a Chip Seal surface treatment, June 30, 2012.

**Poor (4)** – This type of road segment is in bad enough shape that motorists must pay special attention to the road in order to be safe and/or prevent vehicle damage. Heaving and/or potholes are often severe in places – or else more moderate problems are constant. The ride is uneven and it is difficult to safely maintain the posted speed limit throughout the road segment; or other readily apparent obstacles exist, such as questionable bridges, and right-of-way, or drainage problems. Surface failures within the travel lanes often combine with poor edge condition to make driving difficult in several places along the segment. The example to the right is from Longhollow Road, June 29, 2012.

**Very Poor (5)** – These are among the worst road segments in the Caldwell County road system. The traveling public faces significant obstacles that may require "dodging" and/or change in speed. There is significant potential for vehicle damage. The road is an impediment to the free flow of traffic, especially if heavily traveled. Routine maintenance is not likely to solve these issues. This road segment is in need of significant repair if it is to operate efficiently. Some of these road segments carry low traffic volumes, so the county will have to weigh whether and when to invest, but significant investment will be needed to bring the road up to "standard." The example to the right is from Arrow Lane, with a Chip Seal surface treatment.

**Figure 2.6-10 County Road Pavement Conditions in Caldwell County**




Source: Doucet & Associates, 2012

The general objectives of roadway pavement maintenance are to provide a safe roadway surface, preserve the capital investments in the pavement, and to maintain a riding quality satisfactory to the traveling public. Maintenance of roadway pavement includes the restoration and repair of both surface and underlying layers. An effective maintenance program should include periodic application of preventive maintenance treatments. In order to be cost-effective, preventive maintenance should be performed before pavements display significant amounts of distress. Pavements with extensive cracking, potholes and patches or unstable asphalt concrete may not be good candidates for preventive maintenance, but may be considered for reconstruction (TxDOT Maintenance Operations Manual, 2010).

## 2.7 Alternative Transportation Modes

A variety of descriptive data were collected from numerous local, regional, and state sources to document existing alternative transportation modes in the county. Transportation data included an inventory of bicycle and pedestrian facilities, public transportation facilities and service characteristics, freight movement, and aviation information.

### Bicycle and Pedestrian

No bicycle facilities are provided by Caldwell County. Limited facilities are available within specific communities. Caldwell County has no countywide plan for the development of pedestrian facilities, but such facilities do exist within individual communities and state recreational facilities.

A sidewalk inventory was conducted by VTT Consulting in June 2012 to determine which roadways in the CAMPO 2035 Travel Demand Model have sidewalks on one or both sides of the roadway. One element of the sidewalk inventory was a review of October 2011 aerial images of the communities of Martindale, Niederwald, Fentress, Uhland, Mustang Ridge, Prairie Lea, and the portion of San Marcos within Caldwell County. Based on the aerials images examined, none of these communities have sidewalks. Another element of the sidewalk inventory was a reconnaissance visit to the communities of Lockhart and Luling in June 2012 to collect existing sidewalk information.

**Figure 2.7-1 City of Lockhart Existing Sidewalks**

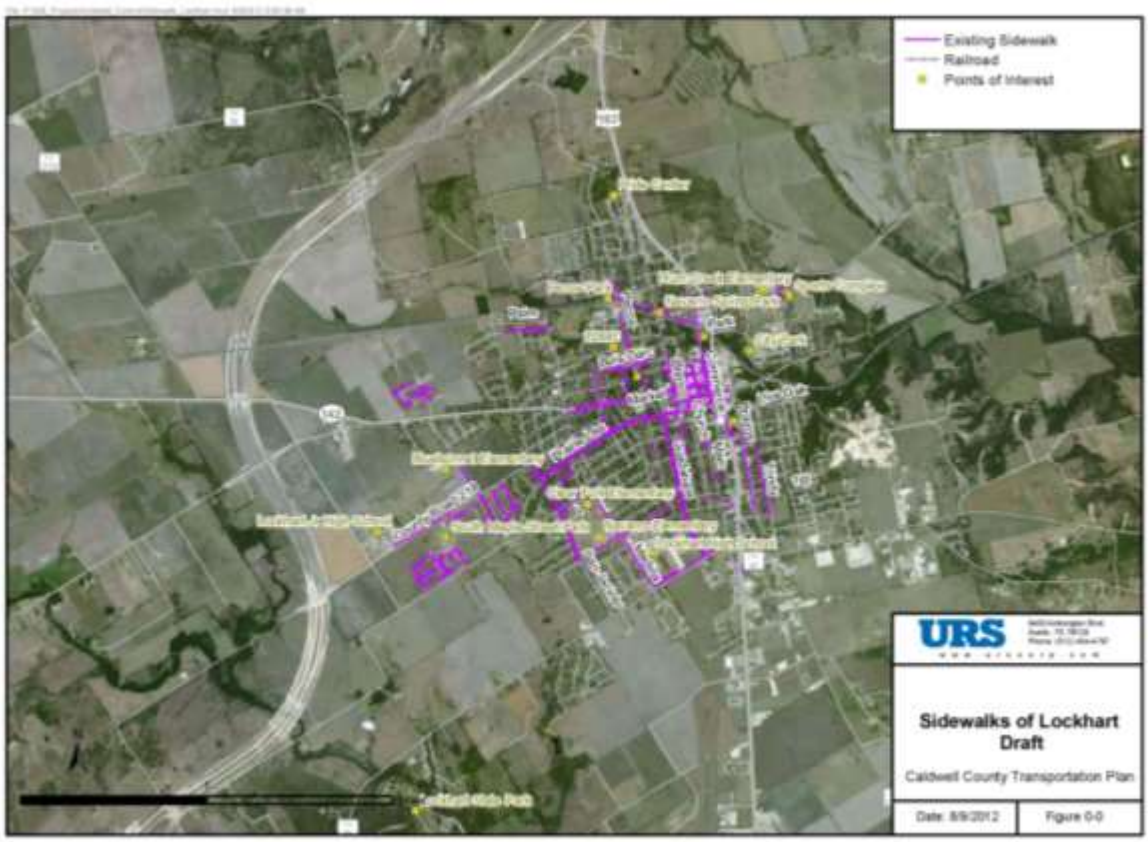
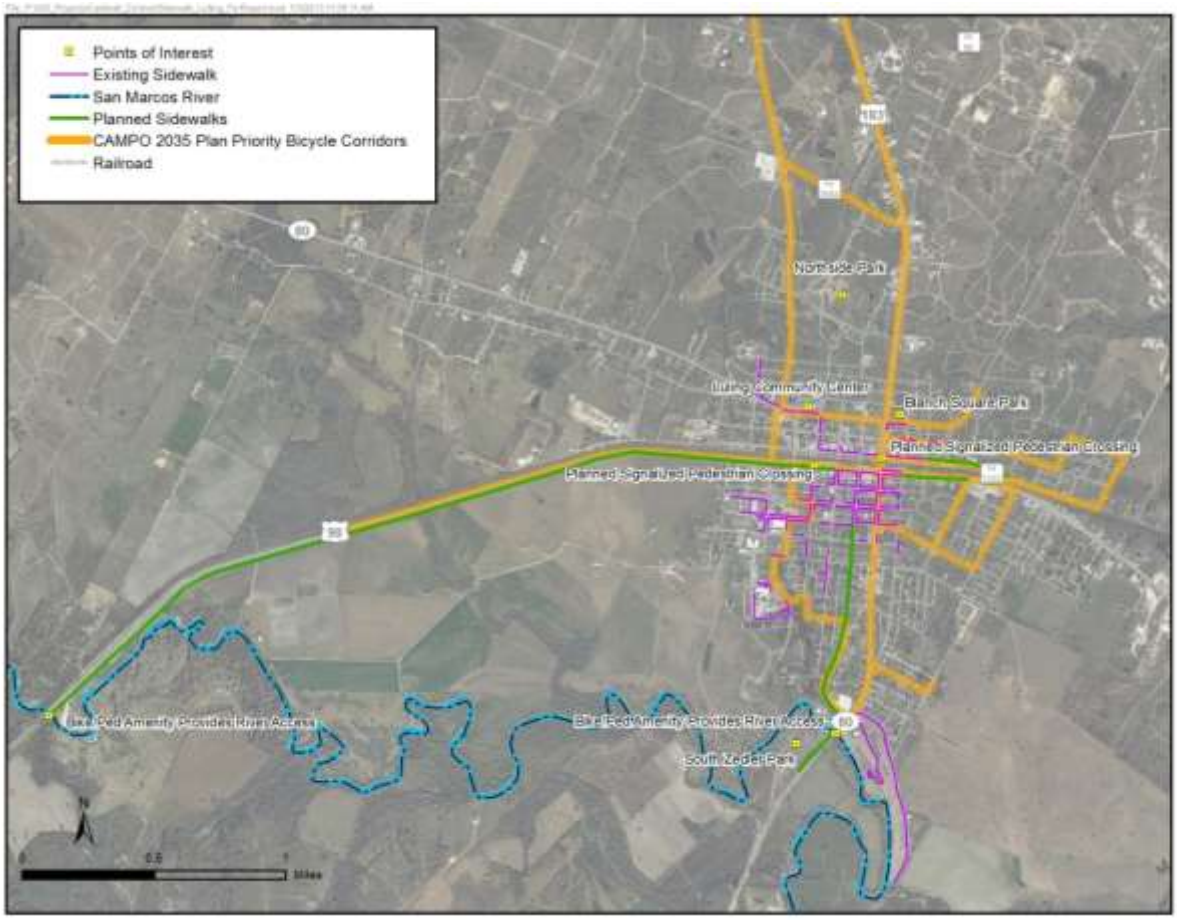


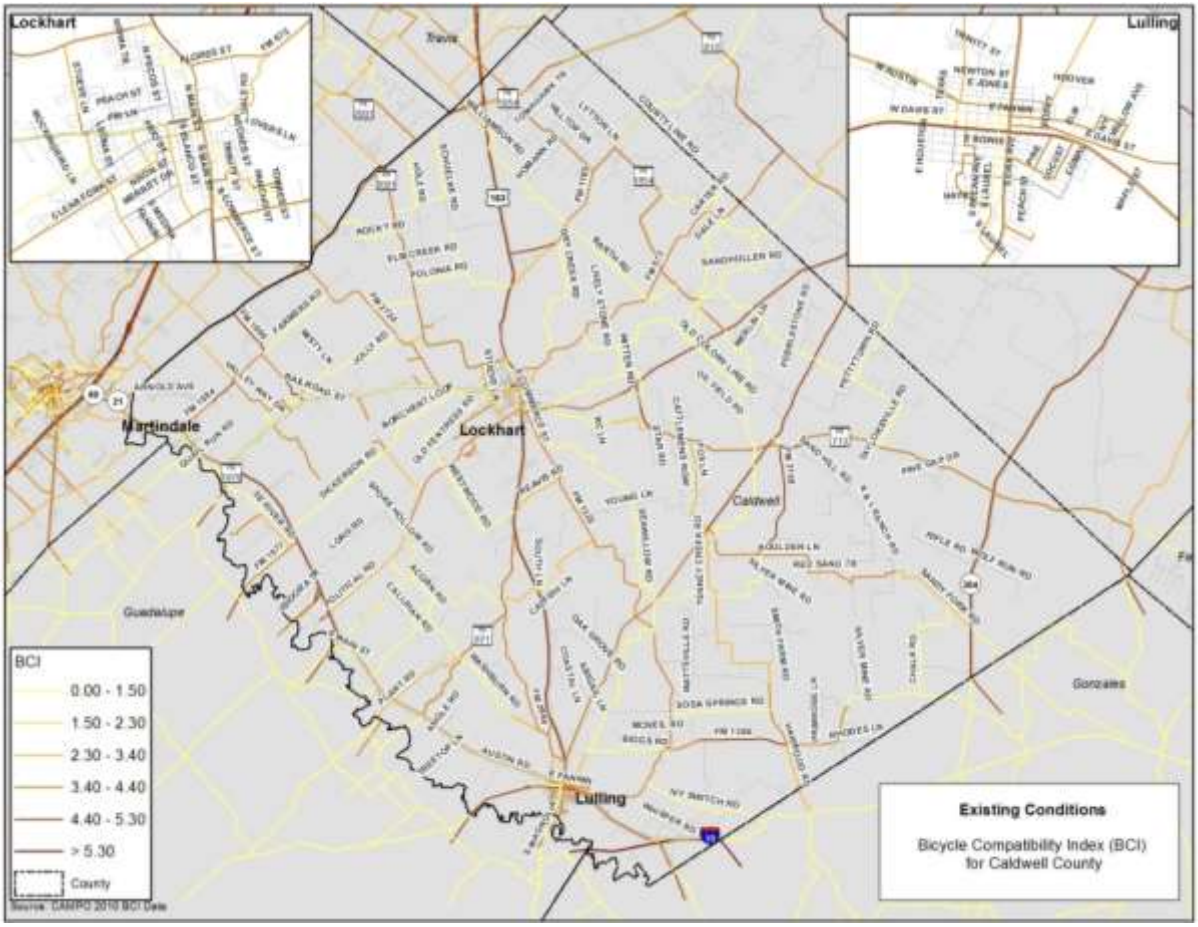
**Figure 2.7-2 City of Luling Existing Sidewalks**




Close examination of **Figures 2.7-1** and **2.7-2** show that the sidewalk networks in both Lockhart and Luling do not provide a high level of connectivity throughout the central business districts, commercial areas, and residential areas. Even though neither of the cities have a robust sidewalk system, both cities have plans to improve pedestrian connectivity through additional sidewalks and trails. The highlights of those plans are provided in **Chapter 3, Future Conditions**.

A bicycle trail inventory was also conducted by VTT Consulting in June 2012 to determine their locations. The key method of reviewing bicycle conditions was an examination of the CAMPO map of regional bicycle routes, which is included as **Figure 2.7-4**. In addition to reviewing the CAMPO map of regional bicycle routes, an investigation of the presence of designated bike routes was undertaken. The only identified bike route was along San Jacinto Street in Lockhart.

**Figure 2.7-3 CAMPO Bicycle Compatibility Index for Caldwell County**




Source: CAMPO, 2010

As seen on **Figure 2.7-3**, CAMPO categorizes bicycle routes according the bicycle compatibility index (BCI), which was developed by the Federal Highway Administration and is based upon the "comfort level" of cyclist on a particular roadway. A BCI that is near zero provides an extremely high level of comfort to cyclist, whereas a BCI above 5.3 provides an extremely low level of comfort. As one would expect, the rural FM highways experience a high comfort level with the major exceptions of FM 20 east of Lockhart and FM 86 east of Luling, and nearly all of US 183 and SH 80. One route that should improve in BCI based on planned improvements is US 183 through Lockhart. In 2013, US 183 will be widened to five lanes, with an 8-foot shared use-path on both sides of the roadway for bicyclists and pedestrians. (TxDOT Project Tracker, 2012d)

To determine the level of bicycle and pedestrian use in Caldwell County, bicycle and pedestrian counts for Lockhart and Luling were analyzed. A two-hour manual count of bicyclists and pedestrians was taken

on San Jacinto at Maple, which is the intersection of Lockhart's only designated bike route with a trail along the Maple Street corridor. The count was conducted between 3:00 and 5:00 p.m. during the last week of school (June 2012). During that time period, 4 bicyclists and 17 pedestrians passed by the location. In addition, a bicycle rack count was performed at Lockhart Junior High, Clear Fork Elementary, Navarro Elementary, and Lockhart High School. Two students at Clear Fork and three students at Lockhart High rode their bicycles to school that day. In addition to the aforementioned count, two more counts are planned in the fall of 2012. The first will be conducted in Luling at a high pedestrian crossing on US 183 at East Davis Street. The second will be in Lockhart at a yet to be determined location in the downtown area.

According to crash data provided by TxDOT, there were 13 pedestrian accidents (2 fatal) and 10 bicycle accidents (1 fatal) between 2009 and 2011. Details pertaining to the cause of these crashes have yet to be identified.

## Transit

Public transportation in Caldwell County is provided by CARTS (Capital Area Rural Transit Service). Service is at regularly scheduled times and is curb-to-curb, rather than fixed-route. CARTS service is available to any resident in the county. Regularly scheduled service is provided for residents in Brownsboro, Dale, Delhi, Fentress, Joliet, Lockhart, Luling, Lytton Springs, Martindale, Maxwell, McMahan, McNeil, Mendoza, Niederwald, Prairie Lea, Reedville, Stairtown, and Uhland. (CARTS, 2012)

Service levels vary depending on the size of the community. For example, Lockhart residents may schedule a ride with CARTS any day of the week within the city itself, while service to Austin, San Antonio, San Marcos, and Luling is only offered on certain days of the week. Service in the very small communities of Caldwell County is provided to Lockhart and/or Luling, and then to the larger cities of Austin, San Antonio, San Marcos and Seguin, depending on proximity to the larger cities. Costs to passengers for CARTS service range from $2.00 to $6.00 one-way, with discounted fares available for seniors, disabled citizens, and children under the age of 12.

As a participant in this planning process, CARTS provided boarding figures for Lockhart and Luling. Between June 2011 and June 2012, CARTS provided 24,331 trips to Lockhart residents and 7,254 trips to Luling residents. Of all transit trips taken in Caldwell County, roughly 50% were for trips within the county and 50% were for trips outside of the county. Yet, these ridership numbers do not accurately reflect the demand for transit, as increased service is needed to meet unmet demand to the new medical facility in Kyle and for extended hours for morning and evening commutes. The problem of transit demand exceeding capacity is exacerbated by the lack of fixed-route service and car ownership levels (5.6% of households do not own a car, 29% of households own only one car).

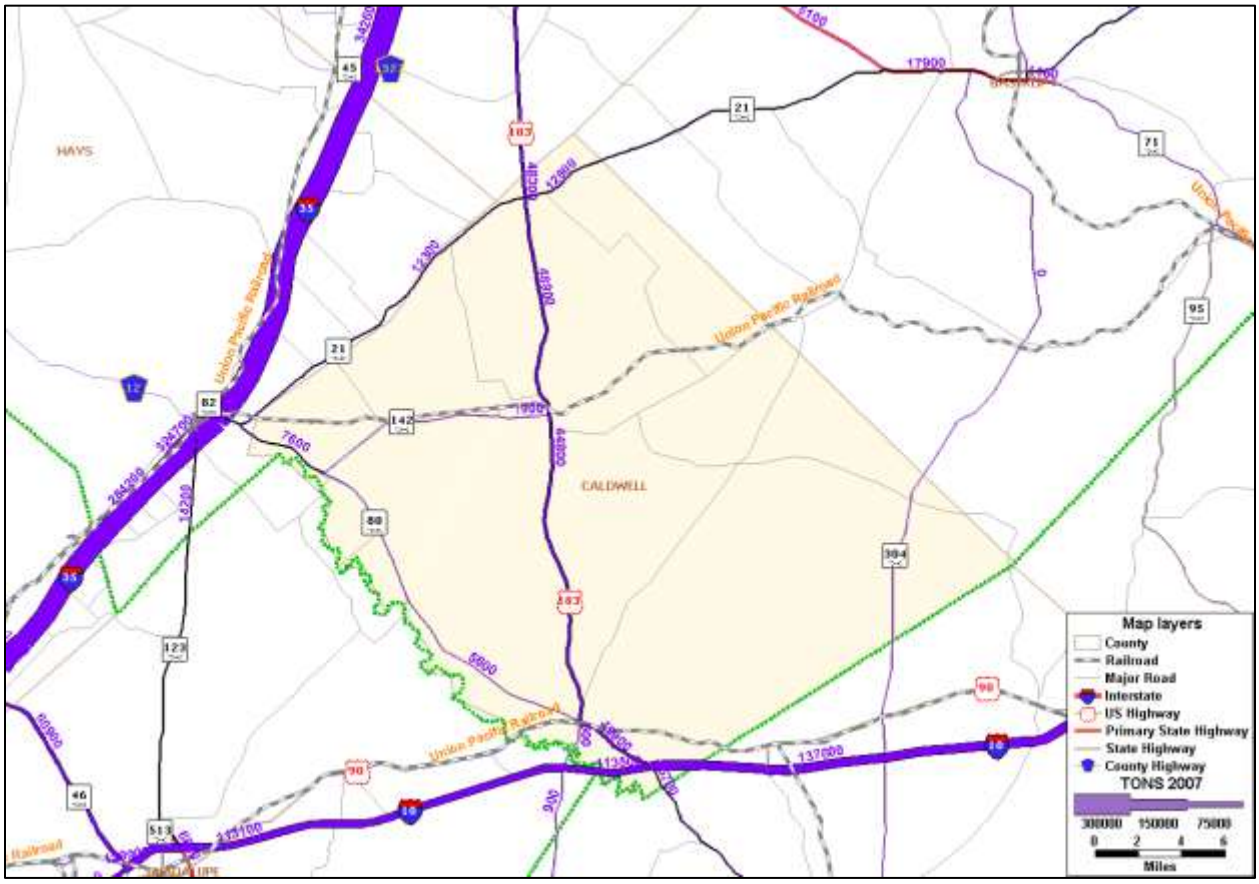
Passenger rail is not available in Caldwell County, but an Amtrak station is available in neighboring Hays County (San Marcos). The Texas Eagle route runs from San Antonio to Chicago, IL, with connections to other lines at both ends and in St. Louis, MO (Amtrak, 2012).

## Freight

Similar to passenger travel, freight movement is an important element in the transportation system. The Federal Highway Administration's Freight Analysis Framework (FAF) integrates data from a variety of sources to create a comprehensive picture of freight movements among states and major metropolitan areas by all modes of transportation. Using data from the 2007 Commodity Flow Survey and additional sources, FAF version 3 (FAF3) provides estimates for tonnage, value, and domestic ton-miles by region of origin and destination, commodity type, and mode for 2007, the most recent year, and forecasts

through 2040. It also includes state-to-state flows for the same years, summary statistics, and flows by truck assigned to the highway network for 2007 and 2040. FAF3 data covers the Austin-Round Rock MSA, which is identical to CAMPO's five county region. Based on FAF3, the assigned truck flow is shown in **Figure 2.7-5**. In Caldwell County, the major truck flows have been detected on IH 10 and US 183. Truck flows have also been observed on SH 21, SH 80, SH 142, and SH 304.

**Figure 2.7-5 FAF3 Assigned Truck Flow 2007**




Source: FHWA, 2007

In 2009, TxDOT and CAMPO conducted the Austin Area Freight Transportation Study, in which Global Insight's Transearch database of 2003 was used. The Transearch database provides detailed estimates of commodity flows at a much disaggregated level. The Transearch database commodity flows are reported at the county level and are available for several modes of transportation including truck, rail, air, and water. The overwhelming majority of freight in the CAMPO region is transported on the region's roadways by trucks. The Transearch dataset estimates that 18.2 million tons of freight was moved between the five counties of the CAMPO region during 2003.

**Truck Freight**

Truck freight can be classified as pass through, inter-region or intra-region. The major truck corridors adjacent to Caldwell County include IH 35 and IH 10, which contain most of the pass-through truck traffic. Both pass-through and inter-region traffic is typically via tractor trailer transport. Intra-region freight moves through the local road network via units ranging from tractor trailers to panel vans.

**Table 2.7-1** shows a summary of 2003 estimated intra-regional truck movements in the CAMPO region. This data accounts for the full truckloads and less-than-truckload cargo volumes. As stated above, according to the Transearch database 18.2 million tons of freight moved within the CAMPO region by trucks. The 2003 intra-county freight flow for Caldwell County was estimated at 30,273 tons. Travis County is both the origin and destination of the largest freight movement in exchange with Caldwell County. Caldwell also transfers large amount of freight to Bastrop and Hays Counties (see **Figure 2.7-6**).

The *2009 Austin Area Freight Transportation Study* describes the movement of freight in Caldwell County based on the volume of weight and trips, rather than value, because these measures are the most appropriate for studying freight's impact on transportation

**Table 2.7-1 CAMPO Region Intra-Regional Truck Patterns (Tons)**

| Destination | Origin | | | | | |
|---|---|---|---|---|---|---|
| | Bastrop | Caldwell | Hays | Travis | Williamson | Total |
| **Bastrop** | 25,534 | 37,842 | 5,797 | 224,385 | 16,017 | 309,575 |
| **Caldwell** | 10,343 | 30,273 | 14,221 | 80,388 | 6,619 | 141,844 |
| **Hays** | 4,167 | 35,786 | 80,783 | 477,759 | 318,167 | 916,752 |
| **Travis** | 321,278 | 39,628 | 156,133 | 9,401,036 | 5,411,341 | 15,329,416 |
| **Williamson** | 1,317 | 1,925 | 62,689 | 291,011 | 1,227,940 | 1,584,882 |
| **Total** | 362,639 | 145,454 | 319,713 | 10,474,579 | 6,980,084 | 18,282,469 |

Source: Austin Area Freight Transportation Study, 2009

**Figure 2.7-6 Caldwell County Freight Distribution**

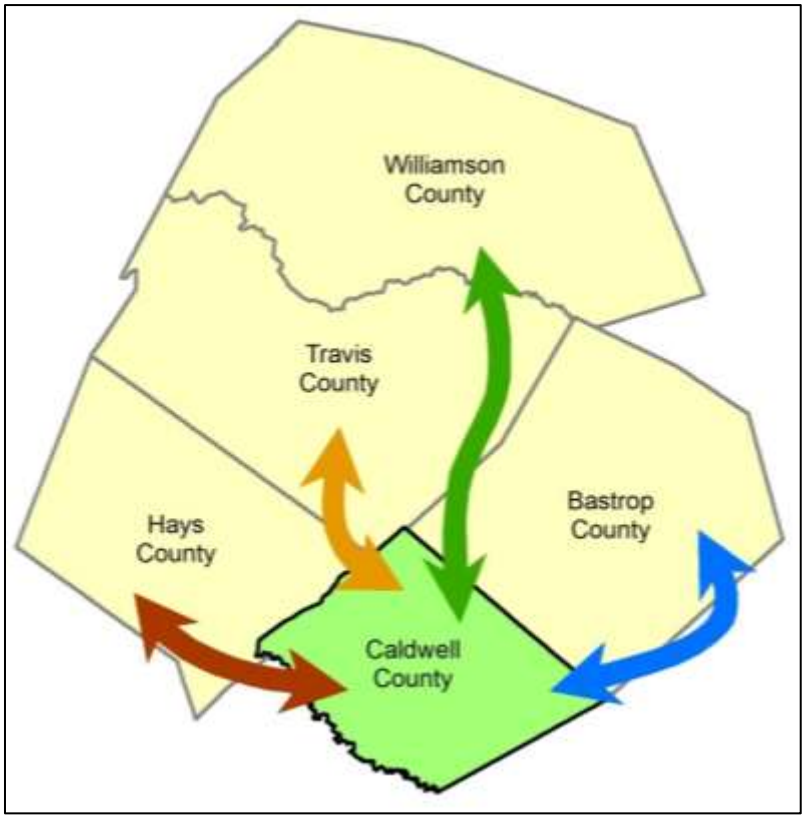


**Table 2.7-2** shows detailed data of intra-regional exports and imports for Caldwell County in 2003 ranked by tons of freight moved. The majority of export and import truck freights were gravel or sand, and ready-mix concrete.

**Table 2.7-2 Caldwell County Intra-Regional Exports and Imports 2003**

| Rank | Tons | Trucks | Destination | Commodity |
|---|---|---|---|---|
| Intra-Regional Exports | | | | |
| 1 | 34,444 | 1,554 | Bastrop | Gravel or Sand |
| 2 | 18,170 | 1,105 | Travis | Ready-Mix Concrete |
| 3 | 17,515 | 790 | Hays | Gravel or Sand |
| 4 | 10,511 | 639 | Hays | Ready-Mix Concrete |
| 5 | 10,323 | 466 | Travis | Gravel or Sand |
| 6 | 5,350 | 334 | Travis | Concrete Products |
| 7 | 4,498 | 184 | Hays | Asphalt Paving |
| 8 | 2,342 | 88 | Hays | Primary Forest |
| 9 | 1,853 | 70 | Bastrop | Primary Forest |
| 10 | 1,830 | 69 | Williamson | Primary Forest |
| Total* | 115,182 | 11,078 | Five County | All Commodities |
| Intra-Regional Imports | | | | |
| 1 | 26,854 | 1,212 | Travis | Gravel or Sand |
| 2 | 21,378 | 1,300 | Travis | Ready-Mix Concrete |
| 3 | 9,990 | 607 | Bastrop | Ready-Mix Concrete |
| 4 | 6,455 | 235 | Travis | Plywood or Veneer |
| 5 | 6,133 | 232 | Williamson | Primary Forest |
| 6 | 6,087 | 230 | Travis | Primary Forest |
| 7 | 5,542 | 195 | Travis | Wood Products |
| 8 | 4,436 | 270 | Hays | Ready-Mix Concrete |
| 9 | 3,491 | 180 | Hays | Sheet Metal |
| 10 | 3,038 | 107 | Travis | Wood Products |
| Total* | 111,572 | 8,158 | Five County | All Commodities |

Note *Totals include all commodities in addition to Top 10.
Source: Austin Area Freight Transportation Study, 2009

**Rail Freight**

The Surface Transportation Board classifies railroad lines by the amount of annual operating revenue generated by a given segment of track. The UPRR operates two rail lines in Caldwell County. The southern line through Luling is a Class I track, defined as annual carrier operating revenues over $250 million (Surface Transportation Board, 2012). This line connects San Antonio to Houston and is generally parallel to IH 10. This rail track has 15 roadway crossings in Caldwell County, 13 of which are at-grade, and two of which are railroad overpasses. The second UPRR line is a Class II track, or regional railroad, with annual operating revenues of over $20.5 million (Surface Transportation Board, 2012). This line connects San Marcos to Smithville, where UPRR extends north through Taylor to Dallas/Ft. Worth and east to La Grange, Sealy and Katy. The rail corridor is parallel to SH 142 from east of Martindale to Lockhart, then generally parallels FM 20 to Bastrop County. This rail line has 36 roadway crossings in Caldwell County, all of which are at-grade. There are no rail or switch yards located within county limits.

**Air Freight**
Austin-Bergstrom International Airport (ABIA) is the only airport handling air cargo freight in the CAMPO region.

## Aviation

ABIA is the largest source of commercial passenger and air freight service to the Central Texas service area. The next closest commercial airports are:

- San Antonio International Airport, located approximately 65 miles southwest of the city of Lockhart,
- Killeen/Ft. Hood Regional Airport, located approximately 110 miles northwest of Lockhart, or
- Easterwood Airport in Bryan/College Station, located approximately 115 miles northeast of Lockhart.

By comparison, ABIA is located approximately 25 miles north of Lockhart on US 183, a few miles north of the Travis-Caldwell county line.

Caldwell County is served by three local airports:

- San Marcos Municipal Airport, which is located in the portion of San Marcos contained within Caldwell County, sits between Reedville and the Hays County line, and is located on SH 21,
- Lockhart Municipal Airport sits two miles south of the downtown area and is accessed via U.S. 183, and
- Carter Memorial Airport is located along US 183, approximately 3 miles north of Luling.

**Figure 2.7-7 Airports Located in the Region**

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# Chapter 3 – Future Conditions

## 3.1 Future Population and Employment

Future demographics for Caldwell County were developed to evaluate activities of individuals who will be living and working in the County by year 2035. The projections were based on the latest demographic data as provided by CAMPO at the time of this study. The results were used as input to the approved CAMPO model for 2035 to determine future needs for transportation facilities.

### Population

By 2035, Caldwell County is projected to have a total population of 82,069 based on data from CAMPO. It is equivalent to a 3.1% annual growth rate from the 2010 population. As shown in **Table 3.1-1**, Caldwell County has the smallest total population in the five-county CAMPO region, and its annual growth rate is the second lowest.

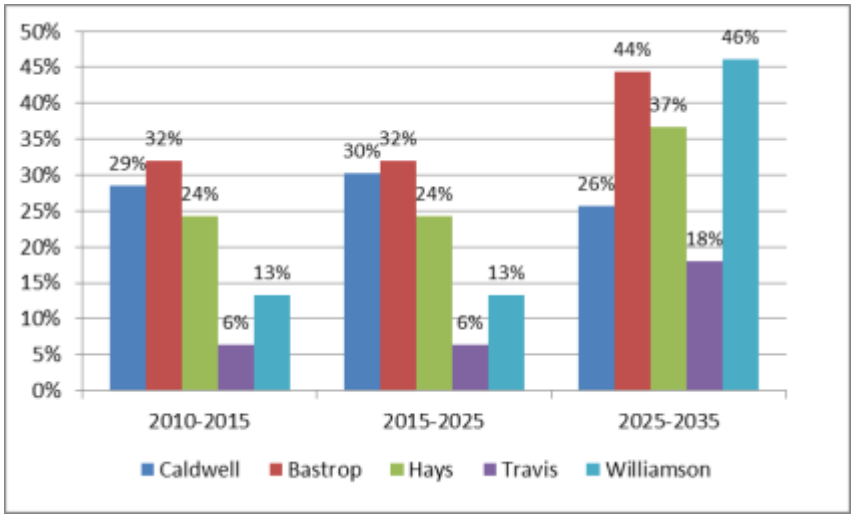
**Table 3.1-1: County Population and Growth 2010-2035**

| County | 2010 | 2015 | 2025 | 2035 | Annual Growth Rate (2010-2035) |
|---|---|---|---|---|---|
| Caldwell | 39,000 | 50,127 | 65,321 | 82,069 | 3.1% |
| Bastrop | 77,485 | 102,289 | 149,185 | 215,452 | 4.4% |
| Hays | 152,180 | 189,153 | 271,593 | 371,245 | 3.5% |
| Travis | 1,038,595 | 1,105,083 | 1,318,041 | 1,555,281 | 1.7% |
| Williamson | 418,000 | 473,316 | 702,694 | 1,026,484 | 3.6% |
| Region Total | 1,725,260 | 1,919,968 | 2,506,834 | 3,250,531 | 2.6% |

Source: CAMPO, 2012

**Figure 3.1-1** shows the forecasted population growth by county based on the CAMPO 2035 Travel Demand Model. Caldwell County is expected to experience consistent growth between 2010 and 2035.

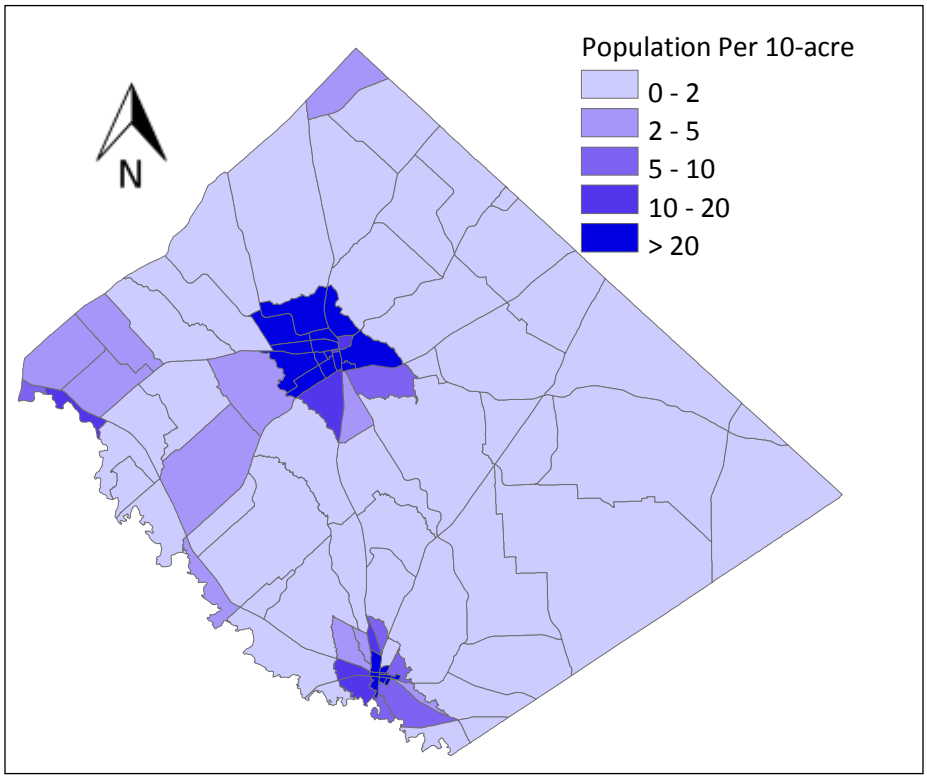
**Figure 3.1-1 Forecasted Population Growth by County**




Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 3.1-2** shows the population density of Caldwell County in 2035. The most populated areas are in Lockhart and Luling, as shown in dark blue.

**Figure 3.1-2 Caldwell County Population Density in 2035**




Source: CAMPO 2035 Travel Demand Model, 2012

## Households

The number of households in Caldwell County is also expected to grow at the similar pace to the population, and is expected to more than double by 2035. As shown in **Table 3.1-2**, it follows the same trend as the population growth. The average household size in Caldwell County is expected to slightly drop from 2.86 in 2010 to 2.82 in 2035, which is higher than the CAMPO regional average of 2.65 (CAMPO, 2012).

**Table 3.1-2: County Household and Growth 2010-2035**

| County | 2010 | 2015 | 2025 | 2035 | Annual Growth Rate (2010-2035) |
|---|---|---|---|---|---|
| Caldwell | 13,621 | 17,610 | 23,055 | 29,059 | 3.1% |
| Bastrop | 28,100 | 37,251 | 54,555 | 79,008 | 4.4% |
| Hays | 53,091 | 66,535 | 96,515 | 132,751 | 3.5% |
| Travis | 413,483 | 439,960 | 524,805 | 619,325 | 1.7% |
| Williamson | 149,324 | 169,149 | 251,363 | 367,415 | 3.6% |
| Region Total | 657,619 | 730,505 | 950,293 | 1,227,558 | 2.6% |

Source: CAMPO, 2012

## Employment

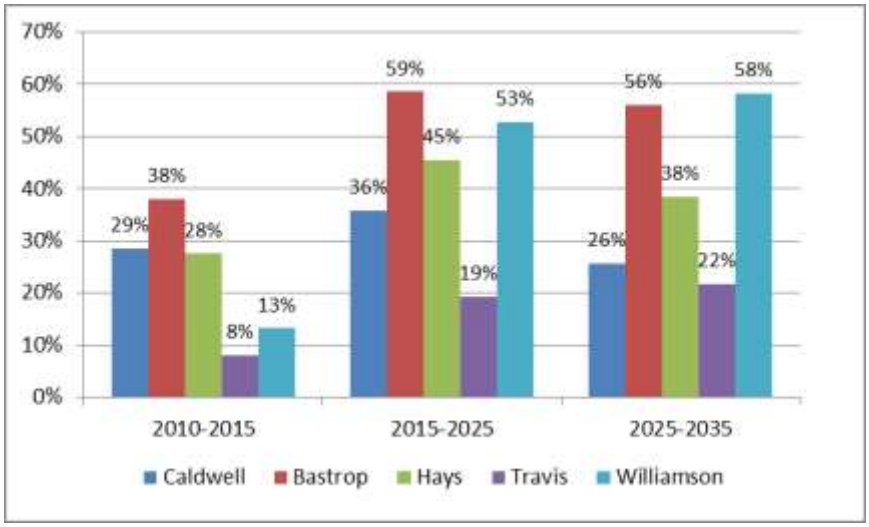
CAMPO projects job opportunities in Caldwell County will continue to expand. **Table 3.1-3** demonstrates the employment in each major employment sector in Caldwell County in both 2010 and 2035. The CAMPO data projects an annual growth factor of 4.3% from 2010 to 2035 (CAMPO, 2012). The population/employment ratio has a consistent trend from 4.2 in 2010 to 4.0 in 2035. **Figures 3.1-3** and **3.1-4** show the employment by county and by type. Caldwell County is expected to experience a noticeable employment increase, especially during the 2015 to 2025 time period. Employment in the service sector is expected to experience the largest gains from 2010 to 2035. **Figures 3.1-5** and **3.1-6** illustrate the employment density in 2010 and 2035, respectively. The majority of the jobs are located in the most populated areas of Lockhart and Luling, as shown in dark orange, and in the area adjacent to the San Marcos Municipal Airport and Gary Jobs Corps in western Caldwell County, as shown in medium orange.

**Table 3.1-3 Caldwell County Employment in 2010 and 2035**

| | Basic | Education | Retail | Service | Total Employment |
|---|---|---|---|---|---|
| Texas Workforce Commission Employment Estimates for 2010, 3rd Quarter | 1,557 | 1,045 | 1,660 | 2,818 | 7,080 |
| CAMPO Employment Estimates for 2010 | 1,658 | 617 | 1,661 | 3,275 | 7,211 |
| CAMPO Employment Estimates for 2035 | 4,132 | 1,383 | 6,442 | 8,560 | 20,517 |

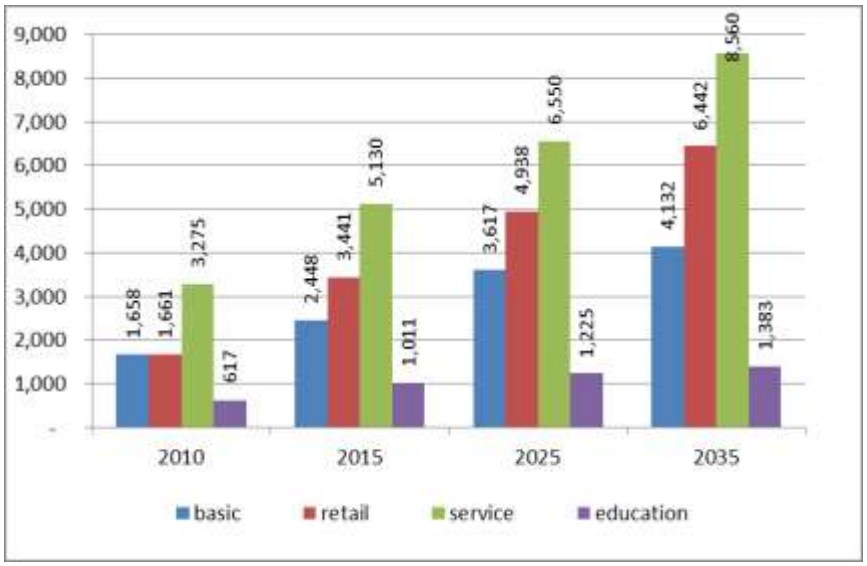
Source: CAMPO 2035 Travel Demand Model and Texas Workforce Commission, 2012

**Figure 3.1-3 Forecast Employment Growth by County**



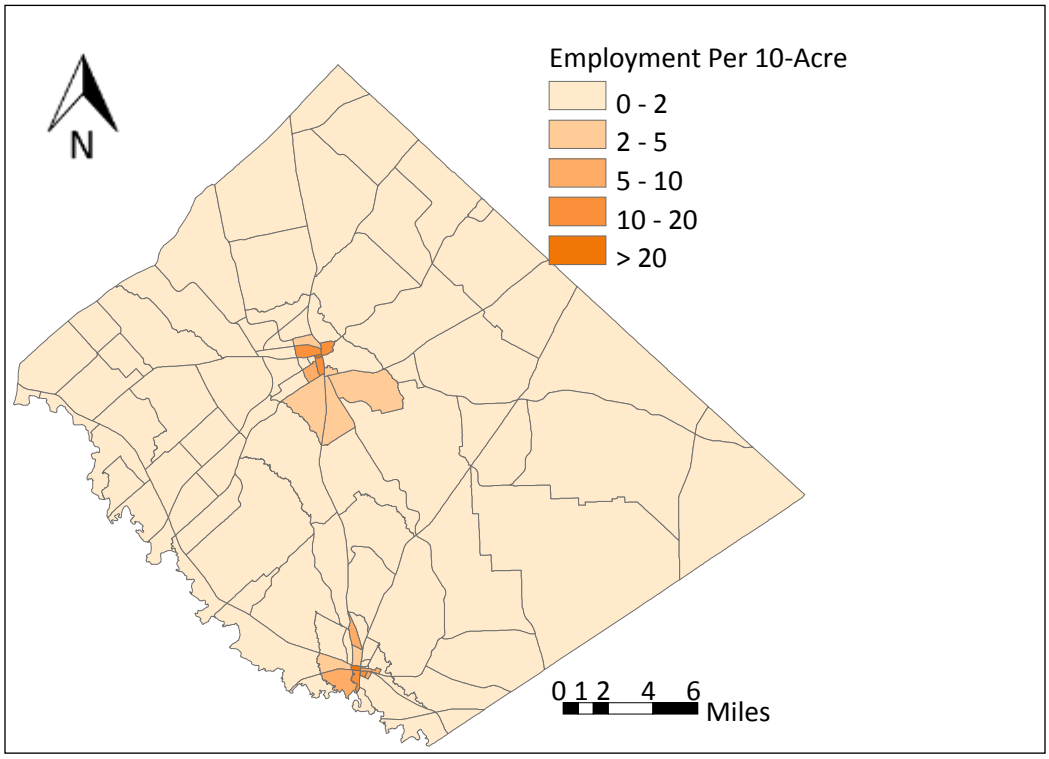

Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 3.1-4 Caldwell County Employment by Type**



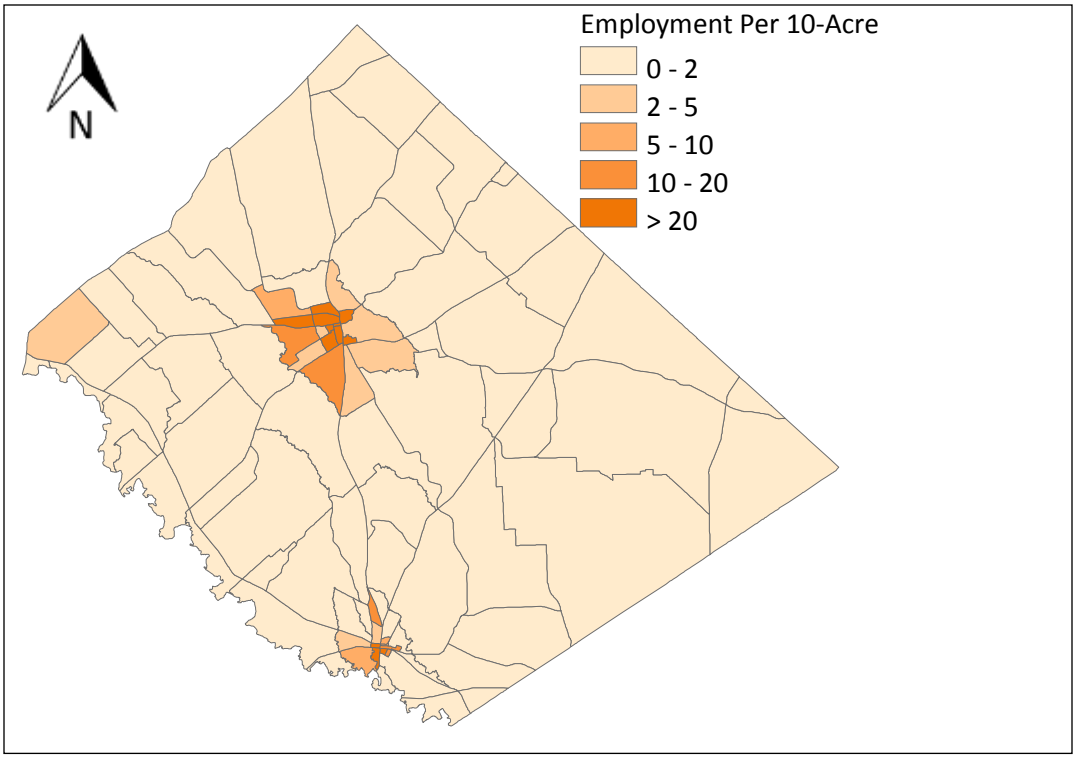

Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 3.1-5 Caldwell County Employment Density in 2010**




Source: CAMPO 2035 Travel Demand Model, 2012

**Figure 3.1-6 Caldwell County Employment Density in 2035**

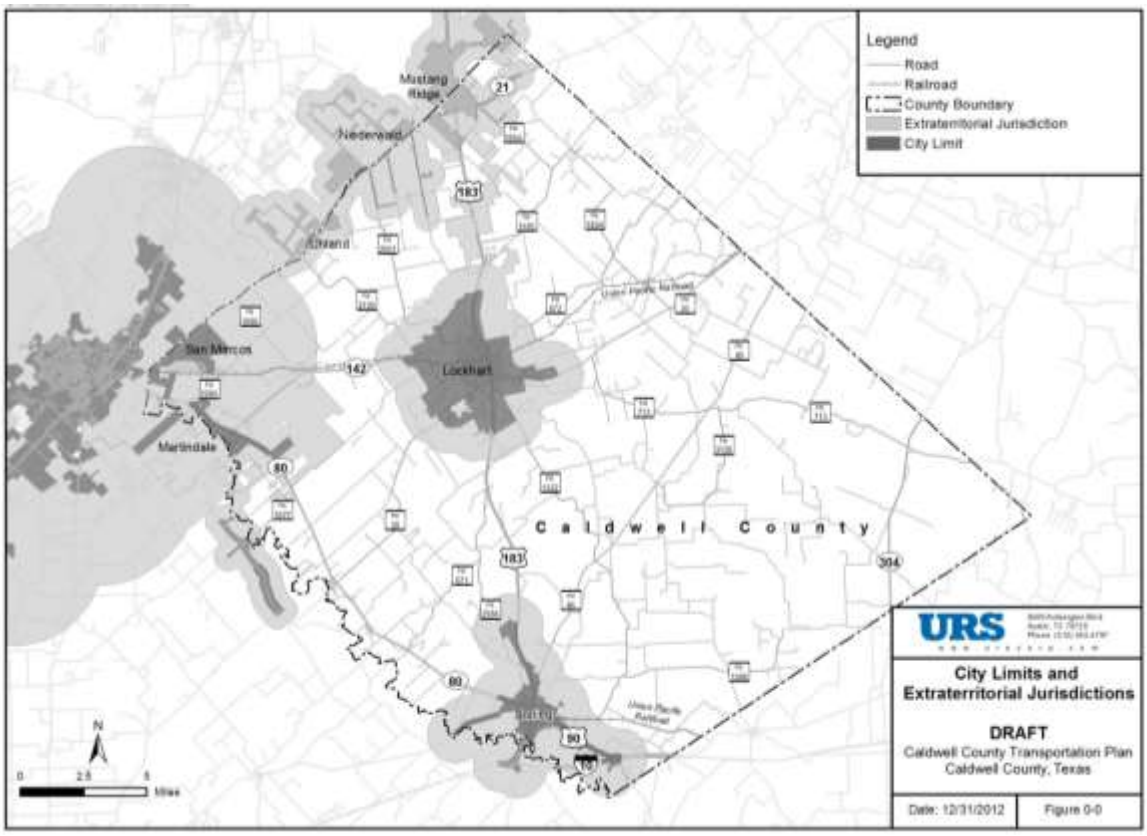



Source: CAMPO 2035 Travel Demand Model, 2012

## 3.2 Future Land Use

Texas counties do not have the authority to implement land use plans. Consequently, future land use in Caldwell County is guided by the comprehensive planning process for the incorporated cities, and their associated extra-territorial jurisdictions (ETJ) as shown in **Figure 3.2-1**. Smaller cities that do not have future land use plans control land use through zoning and development regulations.

**Figure 3.2-1 Caldwell County Cities and ETJs**



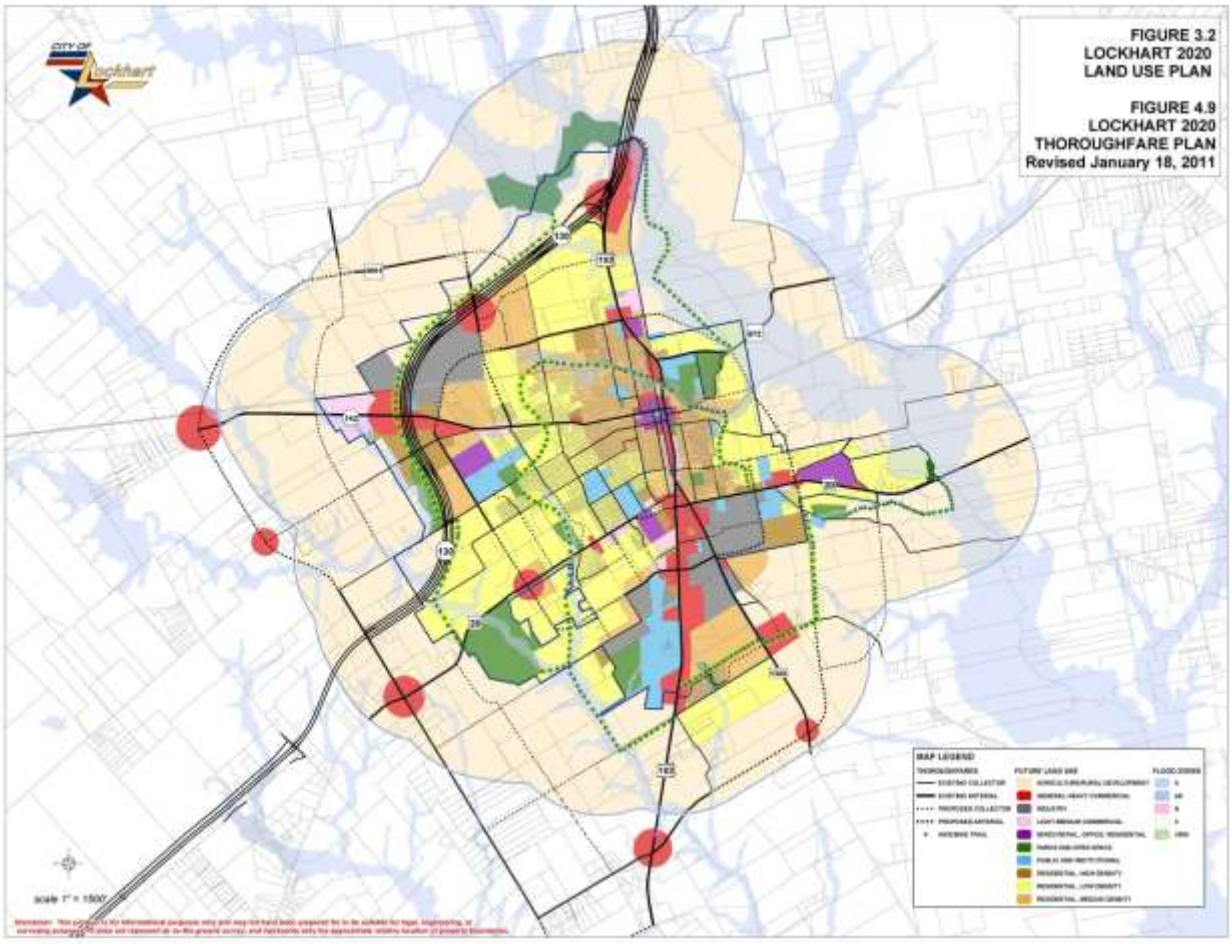

Source: Caldwell County Appraisal District, 2012

In addition to cities, developers of large tracts of land outside of city limits may create municipal utility districts (MUD) to finance and provide services that would otherwise be provided by a city. Generally, these services include streets, water and wastewater infrastructure. The following section provides the future land use plans for Lockhart and San Marcos, and a summary of planned MUDs and other planned developments within Caldwell County. As of this date, Luling does not have a future land use map, however, the current zoning map acts as guidance for land use.

**Lockhart**

Lockhart adopted the 2020 Comprehensive Plan on March 7, 2000. The thoroughfare plan and future land use plan were subsequently updated and adopted with a new sidewalk/trail plan effective January 18, 2011 as shown in **Figure 3.2-2**.

**Figure 3.2-2 Lockhart Future Land Use Plan**

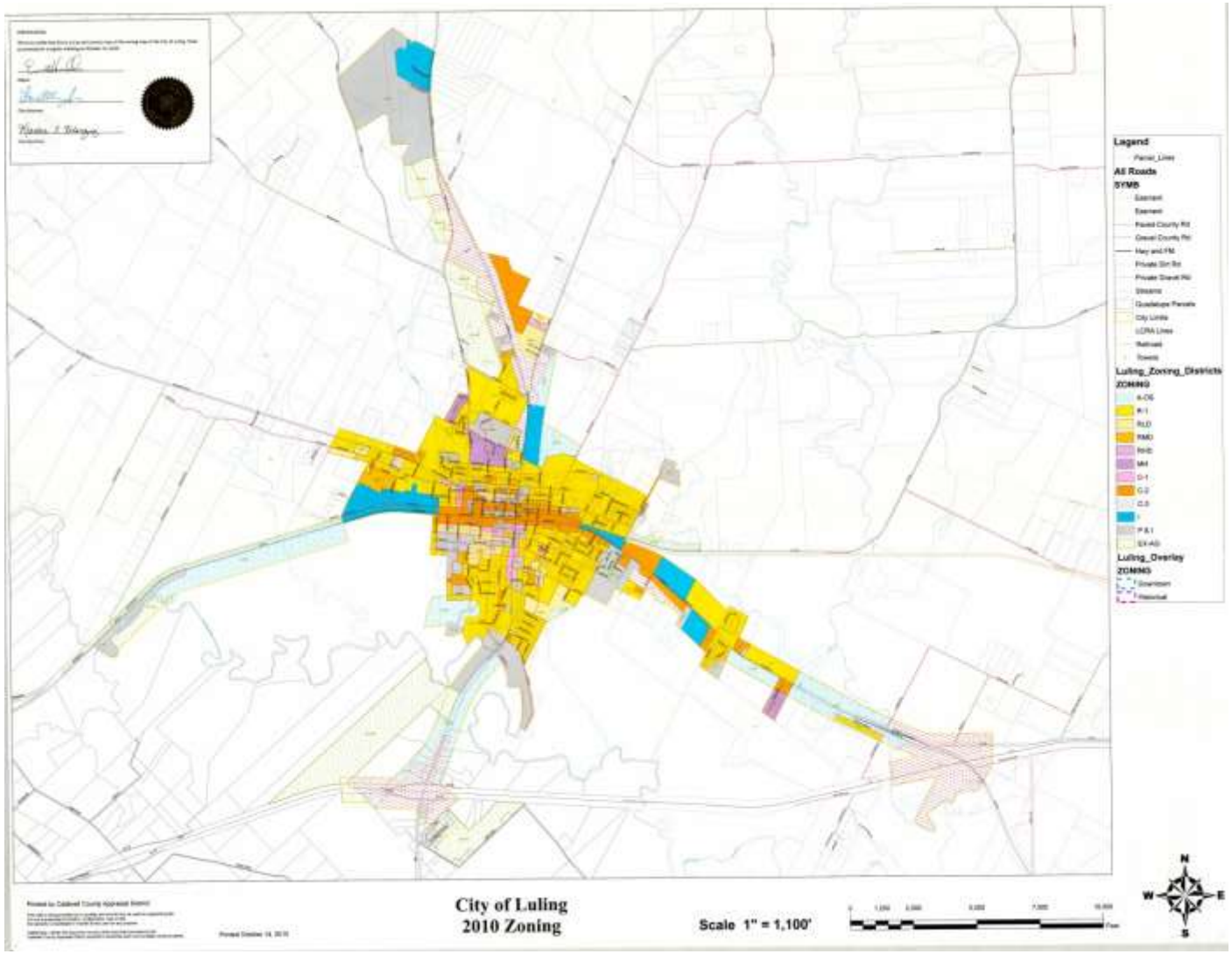



Source: City of Lockhart, 2011

**Luling**

Luling adopted the Luling Master Plan on June 26, 2012. Future land use scenarios were analyzed regarding growth in the city out to year 2032. The Luling Master Plan did not include a future land use map. It is assumed that future land use would be regulated by the city's existing land use map and zoning codes. See **Figure 3.2-3** for the current zoning map.

**Figure 3.2-3 Luling Zoning Map**

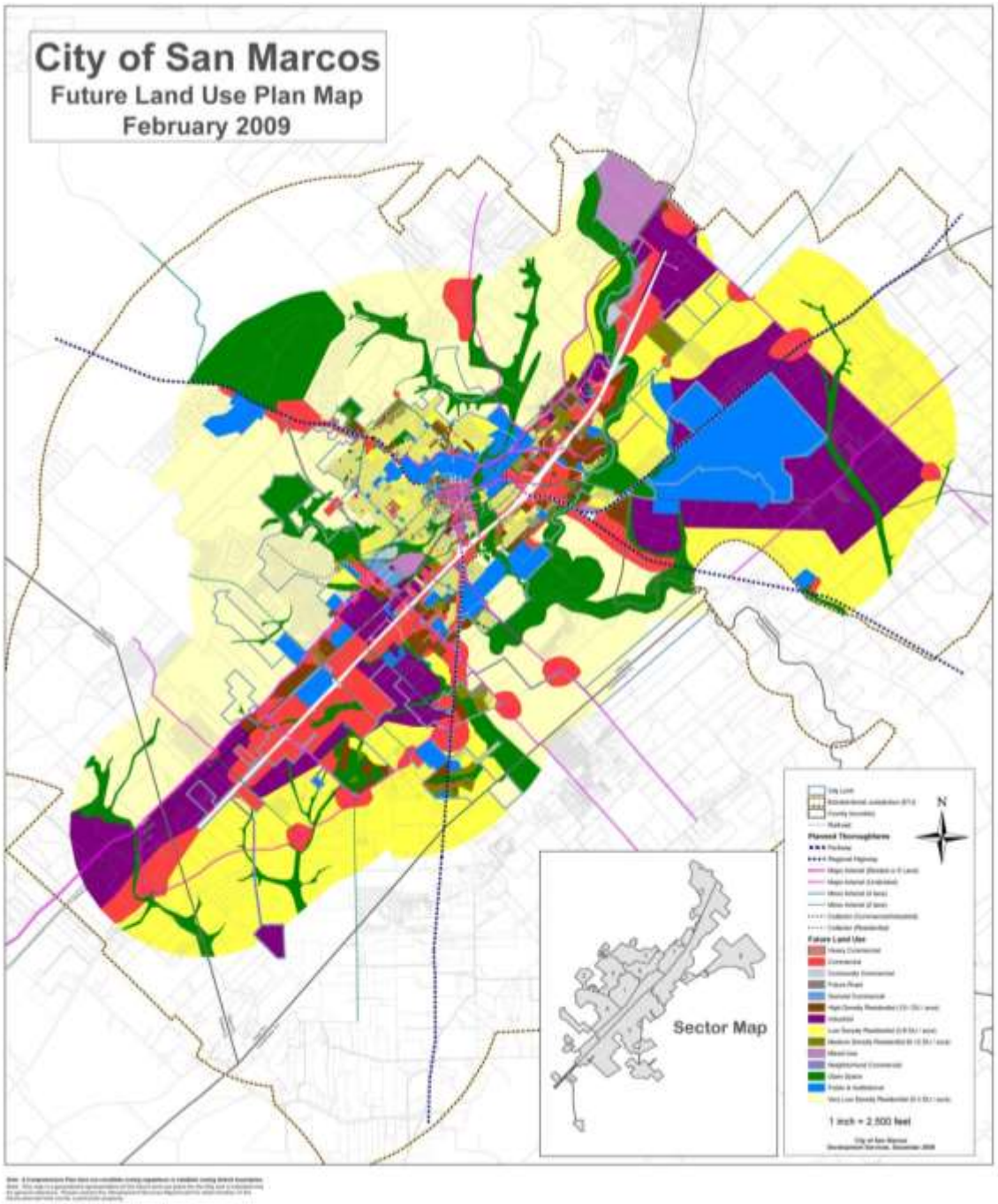



Source: City of Luling, 2010

**San Marcos**

San Marcos is in the process of updating their comprehensive plan at the time of this study. The new plan is anticipated to be complete in 2013. The San Marcos Municipal Airport is also in the process of updating its master plan, and the results of that effort may influence future land use adjacent to the airport located along SH 21 in Caldwell County. The current future land use plan for San Marcos was adopted in February 2009, and is provided in **Figure 3.2-4**. The city's ETJ extends into the western portion of Caldwell County and wraps around the Martindale ETJ.

**Figure 3.2-4 San Marcos Future Land Use Plan Map**

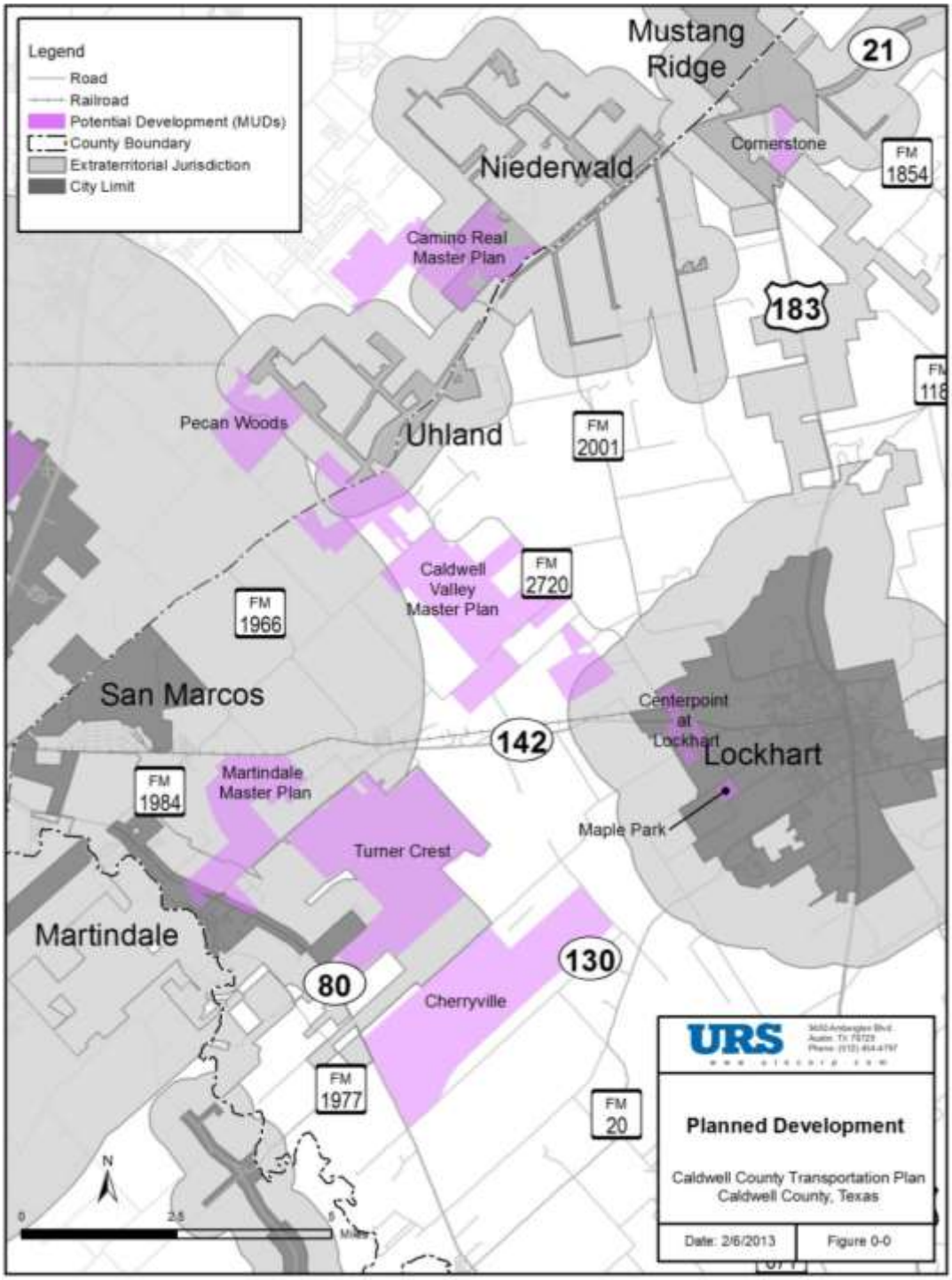


Source: City of San Marcos, 2009

**Planned Developments**

There are four MUDs located in western Caldwell County and two major developments near SH 130 on the west side of Lockhart, as shown in **Figure 3.2-5**. This section provides basic information about each of the planned developments.

**Figure 3.2-5 Planned Developments in Caldwell County**




Source: Basemap – Caldwell County Appraisal District, 2012

**Cherryville**
Cherryville is a master-planned community located along the west side of SH 130 and north of SH 80. This mixed-use development contains approximately 3,200 acres and includes residential, commercial, community/municipal, education, and industrial areas. The master plan indicates an ultimate build out of approximately 3,025 single-family lots, 3,904 multi-family units, and 1,270 senior living units.

**Turner Crest**
The conceptual plan for Turner Crest is a 3,800-acre golf course community with access from SH 142, north of Martindale. The development is located within the Martindale ETJ and the conceptual plan for 3,778 residential units was approved by the City of Martindale.

**Centerpoint at Lockhart**
Centerpoint at Lockhart covers 271 acres located at the intersection of SH 130 and SH 142 in western Lockhart. This planned mixed-use development includes 94 acres of heavy industrial, 59 acres of retail, and 122 acres of residential.

**Maple Park**
Maple Park is a proposed mixed-use development situated on approximately 55 acres of land located adjacent to the east side of SH 130, between Clear Fork Street and Maple Street. The development plan includes 22 acres of general commercial, 55 acres of light-medium commercial, 11 acres of office/warehouse, and 17 acres of high density residential.

**Caldwell Valley Master Plan**
Caldwell Valley encompasses approximately 3,635 acres extending from SH 21 at Uhland southward toward SH 142. The project is being developed under the City of Uhland development code. The project will have access to SH 21 and to FM 2720.

**Martindale Master Plan**
The Martindale Master Plan includes approximately 1,460 acres located within the City of Martindale and the ETJ. The project will have access to both SH 80 and SH 142.

**Cornerstone Master Plan**
Cornerstone Master Plan is a 195-acre project located in the southeast quadrant of the intersection of SH 130 and SH 21. The proposed land use is commercial and falls within the ETJ of the City of Mustang Ridge.

There are three planned developments in Hays County that will potentially impact traffic on Caldwell County roads.

**Pecan Woods**
Pecan Woods is a 763-acre residential development located southeast of Kyle at the intersection of FM 150 and CR 152/Heidenreich Lane. The development is located in the San Marcos ETJ. Primary access points will be on FM 150 and on CR 152/Heidenreich Lane.

**Camino Real Master Plan**
Camino Real is a 1,460-acre residential development located north of SH 21 in the Niederwald ETJ. Primary access will be provided to the relocated section of FM 2001 along CR 126/Rohde Road and to CR 127/High Road.

# 3.3 Mechanisms for Growth Planning

With rare exceptions, land use planning authority has not been granted to counties by the Texas Legislature. Consequently, landowners outside of city limits may develop their property without considering compatibility to adjacent properties, as long as the development meets the county's subdivision/development requirements, or if located in a city's ETJ, the city's subdivision/development requirements. These requirements may include water supply, floodplain impacts, wastewater treatment, and other utilities.

## Comprehensive Planning

Cities have the ability to perform comprehensive planning to set the vision and growth goals for a future time frame, generally 20 or 25 years in the future. From a transportation perspective, two key elements resulting from the comprehensive planning process are the proposed future land use map and the proposed thoroughfare plan. The future land use map generally indicates the desired future locations for different types of land uses, while the thoroughfare plan indicates the anticipated improvements to existing streets as well as location of future streets.

A comprehensive plan generally covers a wide range of topics that may include but is not limited to:

- Land use
- Utilities
- Economic development
- Emergency services
- Mobility/transportation
- Recreation
- Health services

## Zoning

Zoning is the mechanism that cities use to implement the future land use plan developed in a comprehensive plan. Zoning takes into account intensity of the land use and compatibility with adjacent land uses. In many smaller cities, the adopted zoning map is often used as the future land use map.

## County Planning

In 2001, the Texas Legislature granted some limited planning authorities to urban counties as provided in Texas Local Government Code, Subtitle B, Section 232, Subchapter E, Infrastructure Planning Provisions in Certain Urban Counties. This legislation is intended to promote the health, safety, or general welfare of the county and the safe, orderly, and healthful development of the unincorporated areas of a county. This legislation does not include land use regulating authority, but does address the ability of the county to identify right-of-way requirements for major thoroughfares, utility connections, developer agreements, and set-back requirements.

## Water Supply Planning

There are various water supply planning efforts underway in Caldwell County by private interests and public entities, including the Guadalupe-Blanco River Authority. The ability to provide safe drinking water in sufficient quantity is key to the implementation of the various planned developments. . The Hays-Caldwell Public Utility Agency was formed in 2007 to resolve long-term water needs for participating entities which include the cities of San Marcos, Kyle, and Buda along with the Canyon Regional Water Authority which represents County Line Special Utility District, Crystal Clear Water Supply Corporation, and Maxwell Water Supply Corporation.

## Regional Transportation Planning

As a member of CAMPO, Caldwell County will will participate in the update to the long range regional transportation plan every five years. The CCTP will form the starting point for the 2040 planning effort. The primary difference between the CCTP study and the CAMPO 2040 effort is that all projects included in the CAMPO 2040 Regional Transportation Plan must have a reasonably anticipated funding source.

The CAMPO plan is largely based on anticipated federal funding, but also needs to include regionally significant locally funded projects.

## 3.4 Travel Demand Model

A Travel Demand Model (TDM) is a computerized representation of the transportation system of a community or a region. These models can simulate the movement of users across the transportation system under various conditions. The models are used by transportation planners to display current conditions of the transportation system, and predict which changes to the system and the environment in which it operates, will affect the operation of the system. TDMs can be programmed to model all of the modes of travel (e.g., car, truck, or transit) that compose a regional transportation system. However, most TDMs only include the roadway network and the transit network because of the relatively small number of trips generated by bicycle and pedestrian travelers.

The basis for the CCTP study was the transportation model developed for the CAMPO 2035 Regional Transportation Plan (adopted May 24, 2010 and subsequent amendments). CAMPO's responsibilities include coordinating regional transportation planning with TxDOT, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and with local jurisdictions in the Metropolitan Planning Organization. The approved model for the CAMPO 2035 Regional Transportation Plan covers the five-county region of Bastrop, Caldwell, Hays, Travis, and Williamson Counties. Since updated 2035 demographic data was provided by CAMPO and the roadway network was expanded to include most of the county roads, a new run of the TDM was warranted for Caldwell County.

**Model Adjustments**

The input data for the TDM includes information on the transportation system to represent available "supply," while demographic data and land use data generate the "demand" for transportation that is expressed in terms of trips. Examples of data included for roadways include number of lanes, street type (e.g., collector, arterial), and capacity. TDM's generally do not include the local street system, but for this planning effort, most of the county roads were added to the model. The roadway network revisions included over 130 county roads and corrections to the lane configuration of SH 80 south of Martindale. Operational improvements, such as signal timing, speed limit changes, or turn bays, are not included in a TDM.

To allocate demographic data and land use data, the geographic region is subdivided into Traffic Analysis Zones (TAZs). TAZ boundaries are typically roadways or natural features, such as rivers and streams. Adjustments to TAZ boundaries should take into account any recently built roadways and the known land use development. In general terms, a larger number of TAZs will provide a better representation of the travel demand than a model with fewer TAZs for the same geographic region because this allows for a greater level of sensitivity for the data being evaluated. The number of TAZs for Caldwell County was increased from 92 to 101 in accordance with model updates for the upcoming 2040 CAMPO Regional Transportation Plan.

**Model Methodology**

The population and employment numbers for each TAZ generate traffic volumes during the trip generation step of the modeling process. These trips are then distributed by mode (e.g., car, truck, or transit) into and out of the various TAZs on the roadway network in the analysis area, and on

surrounding roadways. The traffic assignment process puts the traffic volumes onto the various roadways. Daily traffic volume forecasts for the roadway segments in the analysis area were used to calculate the levels of service (LOS) (i.e., levels of congestion) for each roadway segment. By comparing the level of demand for a roadway to its specific design capacity and safe driving conditions, the LOS can be determined to assess the relative service quality of the roadway within the overall transportation system.

**Existing + Committed Transportation Network**

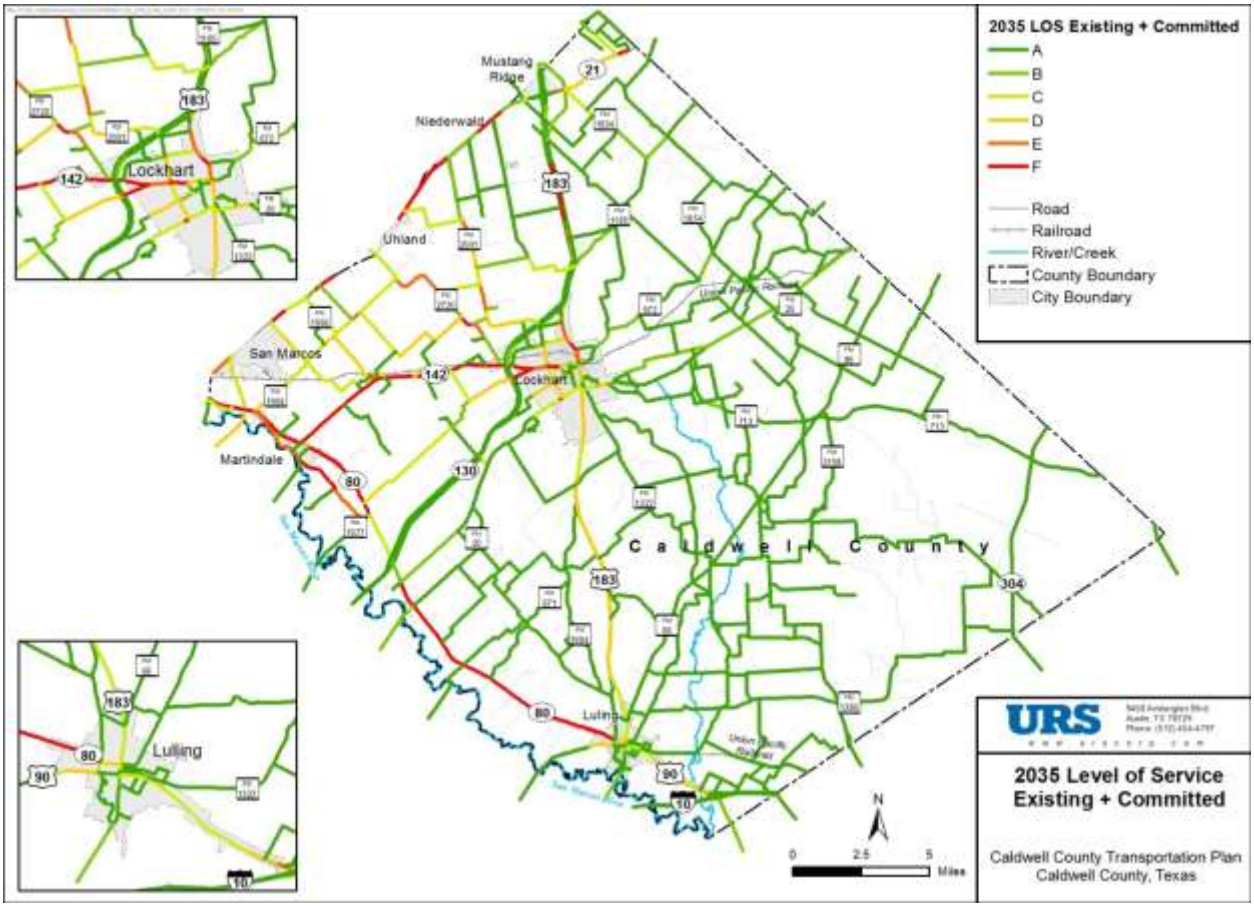
There are only two approved projects in the CAMPO 2035 Regional Transportation Plan that will add capacity to the state highway system in Caldwell County. US 183 in Lockhart will be widened to provide a continuous two-way left-turn lane between Pecan Street and FM 20 and from FM 20 to approximately one-quarter mile south of Martin Luther King/Industrial Boulevard in Lockhart. These two projects are currently in development by TxDOT, and are scheduled for construction in the fall of 2013.

Two new location projects were added to the CAMPO 2035 Regional Transportation Plan as illustrative projects, meaning funding has not yet been identified. The first project is an extension of Yarrington Road, which would provide an improved four-lane arterial between IH 35 in northern San Marcos and SH 130. The second project is an extension of FM 150 from SH 21 to SH 142 just west of SH 130. This project would provide an improved four-lane arterial between Kyle and SH 130.

All other projects (16 projects) approved for Caldwell County between fiscal years 2013 and 2016 are pavement rehabilitation, pavement repair, bridge replacement projects or the installation of a flashing beacon on the state highway system.

The LOS for the existing plus committed network in 2035 is shown in **Figure 3.4-1**. The forecasted traffic volumes will exceed roadway capacity on SH 80, SH 142, SH 21, FM 2720 and sections of US 183 and FM 2001, as indicated by the red, orange, and yellow colors.

**Figure 3.4-1 2035 Level of Service for Existing + Committed Network**




## Proposed Transportation Network

### Added Capacity Highway Projects

The anticipated growth in western Caldwell County creates the need for several projects to add travel lanes on the state highway system. The initial group of projects that were considered was generated through the early public involvement meetings as a part of the CCTP. Subsequent analysis of the TDM results for the 2035 existing plus committed network identified additional projects. Proposed projects near SH 21 were coordinated with the transportation planning efforts underway in Hays County.

Additionally, recent planning efforts in Lockhart have identified proposed new arterials in the Lockhart Thoroughfare Plan to augment the street system inside Lockhart and in the ETJ, as development occurs. As part of the Luling Master Plan, two alternatives were evaluated at the conceptual level to provide a relief route to US 183 from north of Luling to IH 10. All proposed city projects located within city limits include sidewalks and bicycle facilities.

### New Roadways

The proposed highway network includes projects that will improve connectivity across Caldwell County. New roadways include links between existing dead-end county roads, new location extensions of roads in Hays County that would provide connectivity between IH 35 and SH 130, and roads that would create

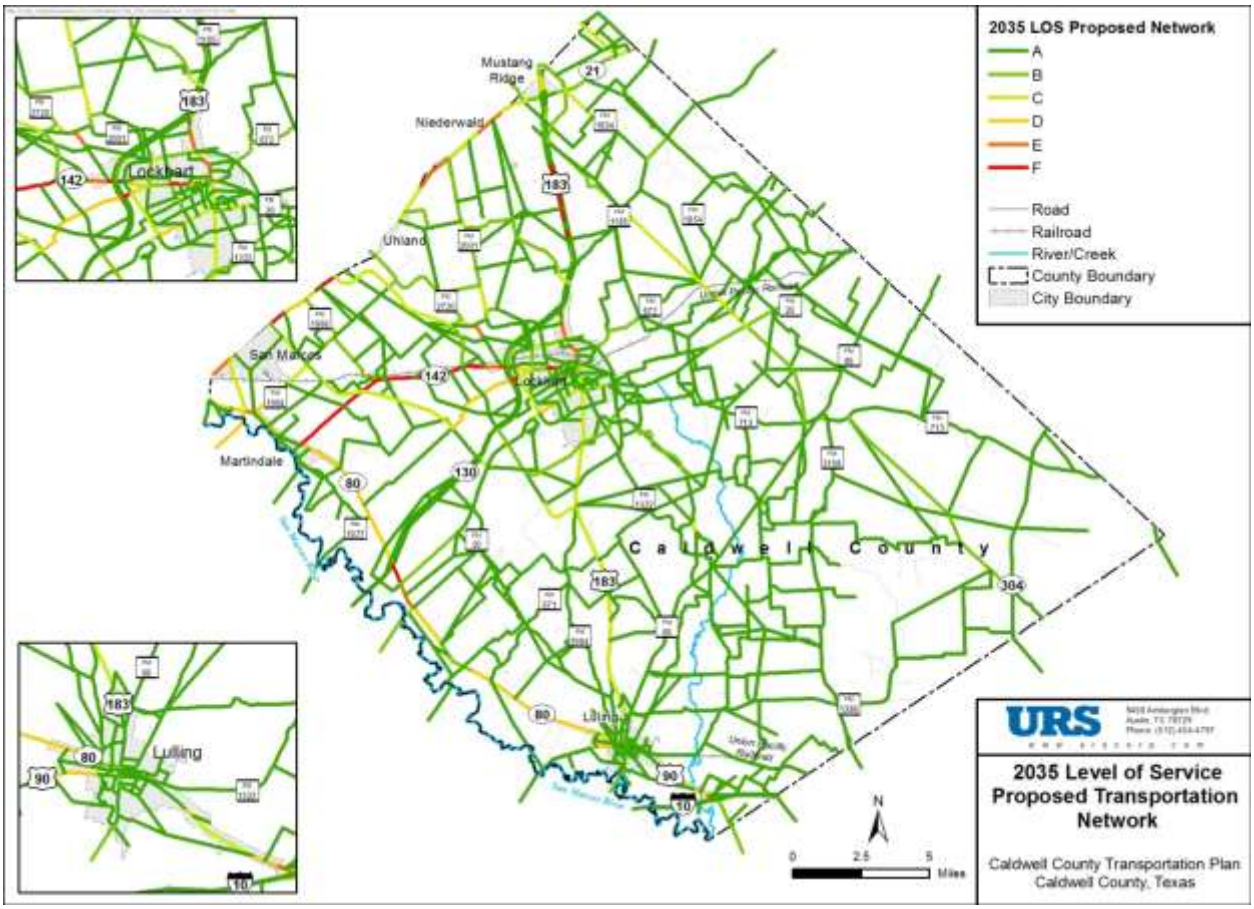
a loop around Lockhart. Appropriate bicycle and pedestrian facilities will be considered for each new roadway.

**Roadway Design Upgrades and Realignments**

The proposed highway network also includes upgrades to existing two-lane roads that would improve safety and travel speed. These improvements include widening pavement, adding shoulders, straightening curves, and paving county roads.

If all of the proposed improvements were built by year 2035, the roadway network LOS is projected to be as shown in **Figure 3.4-2**.

**Figure 3.4-2 2035 Level of Service for Proposed Network**




The following section describes the improvements to the various highways and county roads. It is important to note that even with expanding SH 142 to a four-lane highway, the LOS does not improve. With the increased capacity on SH 21 and SH 142, traffic will shift from other roads to use the improved facilities.

## 3.5 Future Transportation System Needs

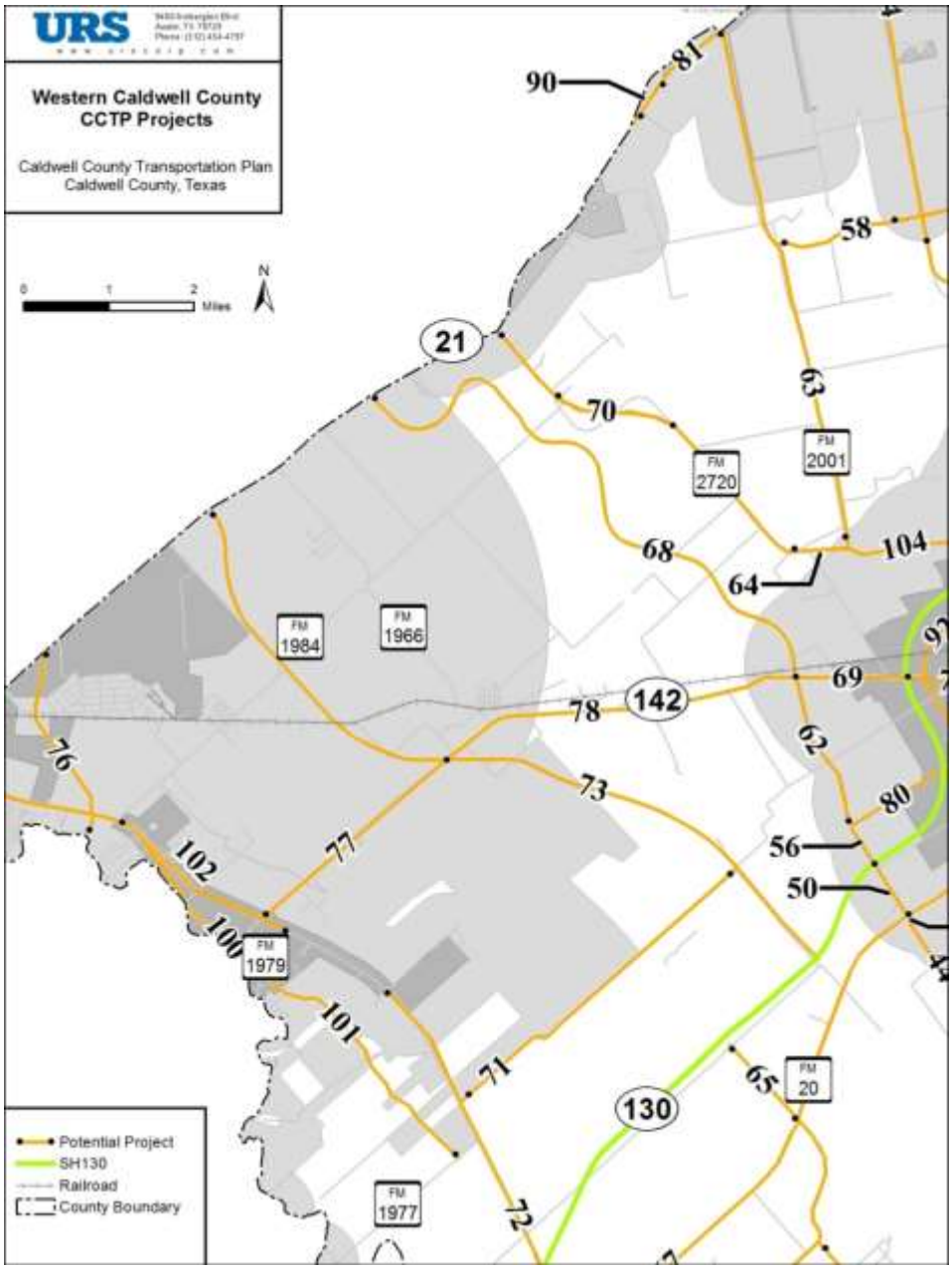
The CCTP planning process includes identifying transportation needs for both mobility and rehabilitation/maintenance projects on the state highway system, city streets, and county roads. Public

participation generated an initial group of projects that were evaluated and included in the TDM effort. A second group of projects were developed based on forecasted demand based on projected population and employment and based on proposed roadway improvements in Hays County, the City of Lockhart, City of Luling, and the City of San Marcos. Final adjustments to the TDM were then balanced between capacity needs and traffic diversions from other routes. The map of proposed projects with project identifiers is included in section 5.4 of this report and in Appendix B.

## State Highways – Additional Capacity Needs

Residential development in the western portion of Caldwell County will create the need for additional travel lanes on key corridors. **Figure 3.5-1** shows the location of the projects described below.

**Figure 3.5-1 Western Caldwell County and CCTP Projects**



**SH 21** – The proposed improvement is to widen SH 21 to a four-lane divided roadway (Project Map ID 81) in accordance with the Draft Hays County Transportation Plan. The projected 2035 LOS on SH 21 is not anticipated to improve due to traffic diverting to SH 21 from IH 35. Project Map ID 90 is a rehabilitation project to add paved shoulders to serve the increasing traffic volume until funding is available to widen the highway to four lanes.

**SH 142** – The proposed improvement is to widen SH 142 to a four-lane divided roadway between Lockhart (Borchert Loop east of SH 130) and Martindale (Project Map IDs 69, 77, 78, 79). The projected 2035 LOS on SH 142 is not anticipated to improve due to planned developments, and the strong commuter pattern between Lockhart and San Marcos. A six-lane option was tested in the TDM, but the LOS did not improve due to traffic diversion from other parallel roads.

**San Marcos/Caldwell County** – Improvements to Yarrington Road between IH 35 and SH 21 are planned in conjunction with the FM 110 loop project around San Marcos. A new location extension of Yarrington Road is proposed to extend from SH 21, north of the San Marcos Municipal Airport to Reedville, and then southeasterly to SH 130 (Project Map ID 73). This four-lane arterial project was added to the 2035 CAMPO Regional Transportation Plan in April 2012 as an illustrative project for improving connectivity between IH 35 and SH 130. The route would be within the San Marcos ETJ between SH 21 and SH 142 and then within the Martindale ETJ across the proposed Turner Crest development. The proposed alignment would connect to SH 130 along the northern boundary of Cherryville along Black Ankle Road.

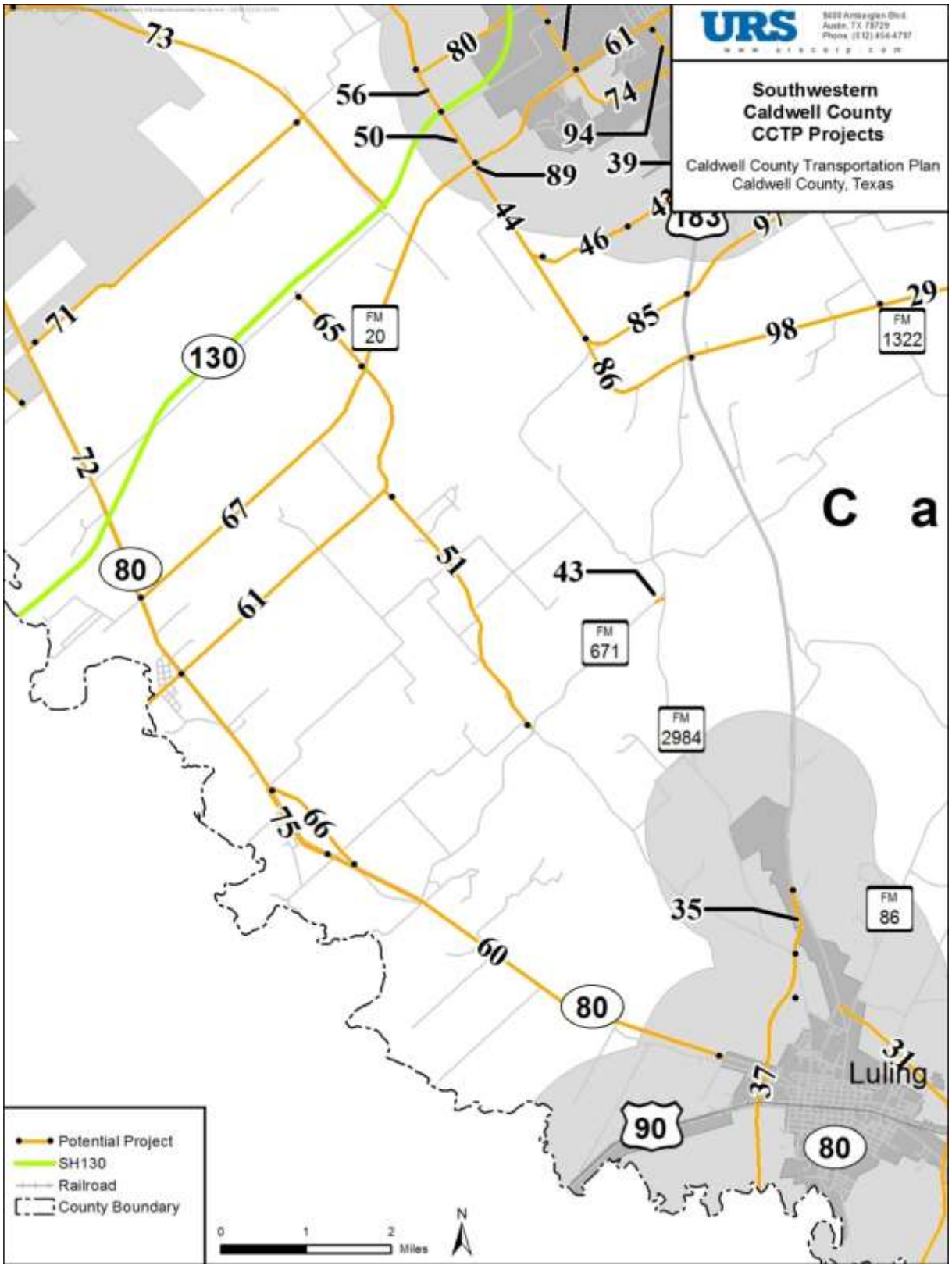
Another potential joint project between San Marcos and Caldwell County is the portion of FM 110 loop that falls within the San Marcos city limits and a portion of Caldwell County that is within the city's ETJ (Project Map ID 76). FM 110 is included in the CAMPO 2035 Regional Transportation Plan as a locally funded project. The segment of FM 110 that is currently under construction between McCarty Road and SH 123 is funded under a pass-through finance agreement between Hays County and TxDOT. Hays County will be reimbursed for a portion of the construction costs over a 15-year period based on the terms negotiated in the agreement.

**SH 80** – Proposed improvements for SH 80 include a six-lane arterial to match the proposed typical section in Hays County between the Hays County line and SH 142 (Project Map ID 102). From SH 142 to FM 1979, the proposed improvement is to widen the existing four-lane undivided roadway to a four-lane divided arterial. From FM 1979 to Luling, widen SH 80 to a four-lane divided arterial (Project Map ID 72) as shown in **Figure 3.5-2**. An alternative at Prairie Lea would be to construct a relief route (Project Map ID 66) to separate through traffic from local traffic, particularly adjacent to Prairie Lea School. An interim improvement would be to widen SH 80 in Prairie Lea to provide a two-way left-turn lane (Project Map ID 75) to reduce the conflicts between turning traffic and through traffic.

**FM 2720** – Based on the proposed extension of Kyle Parkway east to SH 21, and planned residential developments, FM 2720 will need to be widened to four lanes between SH 21 and SH 142. A new connection between FM 2720 and FM 2001, near CR 235 (County View Road), is proposed to encourage use of FM 2001 to Lockhart rather than FM 2720 to SH 142. The intersection of SH 142 and FM 2720 is less than 1,000 feet from the intersection of SH 142 and SH 130. As traffic increases on SH 142, it will become more difficult for drivers to turn onto SH 142 from FM 2720.

**FM 2001** – FM 2001 is proposed to be widened to four-lanes between the proposed connection to FM 2720 and US 183 (Project Map ID 63).

**Figure 3.5-2 Southwestern Caldwell County and CCTP Projects**



## State Highways – Design Upgrades

**FM 20** – FM 20 has an offset signalized intersection at US 183 in Lockhart. A realignment is proposed to reduce congestion on US 183 by eliminating one of the traffic signals. Paved shoulders are proposed throughout the county based on the accident data. The section east of US 183 is higher priority than west of US 183.

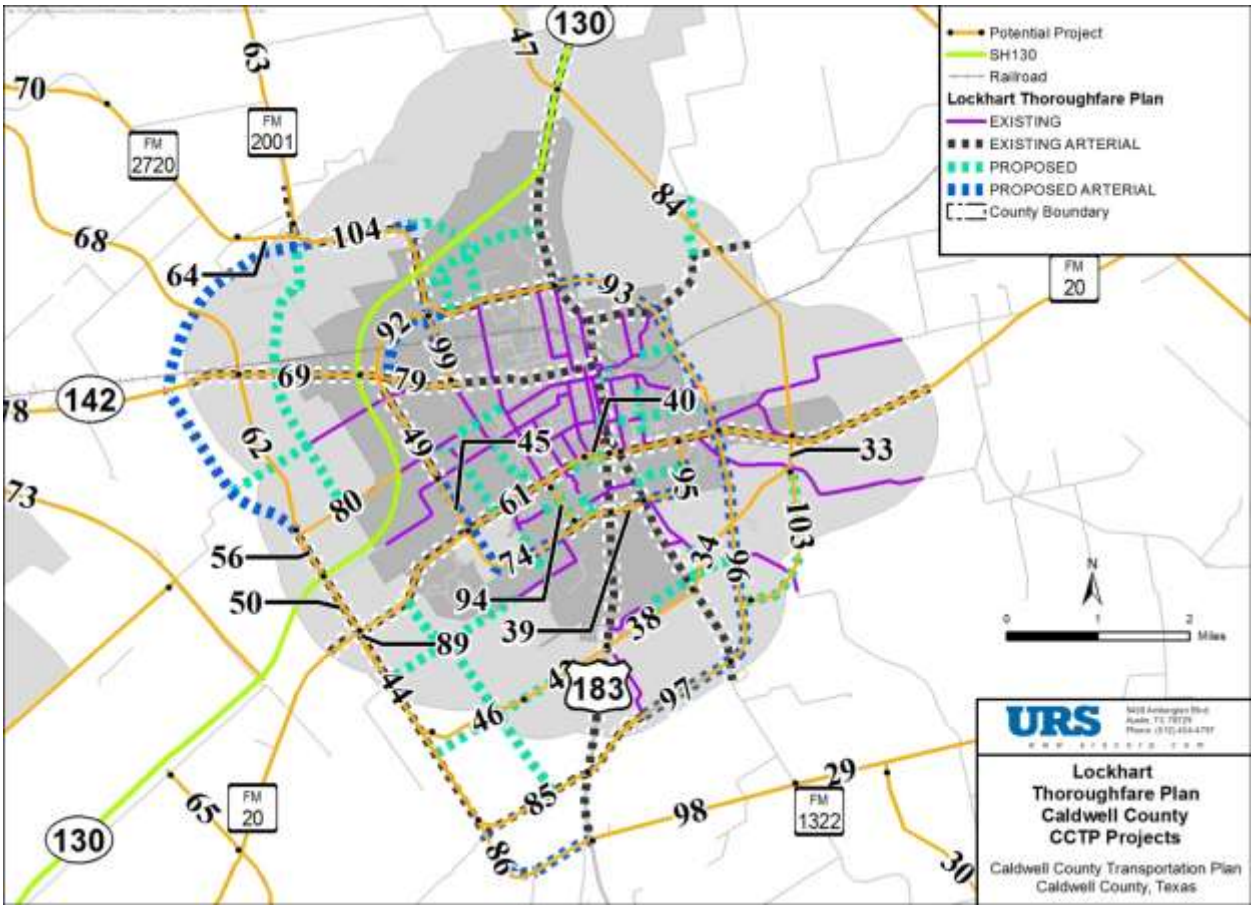
**Extend FM 1386** – FM 1386 ends approximately 3.1 miles west of FM 304 in southeast Caldwell County. This proposed project would extend FM 1386 generally along CR 150 (Kirk Corners Road) and Gonzales CR 442 to FM 304.

**US 183 Relief Route at Luling** – The TDM includes both the east and west alternatives as a relief route for downtown Luling. Additional studies are needed to compare LOS and environmental impacts before an alternative is recommended. Upon completion of the preliminary engineering, environmental analysis, and public involvement required to determine the preferred alternative, the CCTP will be updated. The alternatives are assumed to be a four-lane divided roadway with grade separations at the UPRR. It is anticipated that the roadway would be designated as a state maintained highway.

## City Streets – Additional Capacity and Rehabilitation Highlights

**Lockhart** –The TDM includes most of the arterials proposed in the Lockhart Thoroughfare Plan in the ETJ, and key connections inside the city limits that would relieve downtown traffic. As shown in **Figure 3.5-3**, a loop around Lockhart is created by connecting the roadways on the southwest, south and east to SH 130. The proposed projects in and around Lockhart create a loop inside of SH 130 using City Line Road and FM 2001 as well as an outer loop using SH 130, Westwood Road and new roads southeast and northeast of Lockhart. Additional studies will be needed to determine which project northeast of Lockhart (Project Map ID 84 and 93) would provide the best option for both traffic service and environmental impacts.

**Figure 3.5-3 Lockhart Thoroughfare Plan**




Source: City of Lockhart, 2011 and CCTP

## County Roads – Highlights

The proposed CCTP includes numerous improvements to county roads that range from routine maintenance, to surfacing gravel roads, to full reconstruction, and new roads to improve connectivity across the county. This section describes a few of these projects.

**FM 150 Extension** – A proposed extension of FM 150 between SH 21 and SH 142 was added to the 2035 CAMPO Regional Transportation Plan in April 2012 as an illustrative four-lane arterial for improving connectivity between IH 35 and SH 130 (Project Map ID 68). The route falls largely within the Caldwell Valley Master Plan development. The route has been identified in the conceptual master plan for the new community, and is being designed in accordance with City of Uhland requirements. The project has been identified as "FM 150 Extension" but there is no commitment by TxDOT at this time to participate in the cost of the project, nor to accept the roadway onto the state highway system.

During the development of the Draft Hays County Transportation Plan, the concept of widening FM 150 to a four-lane arterial between IH 35 to SH 21 raised some concerns due the potential conflict between increased through traffic and local traffic for the three Hays County Independent School District campuses located on FM 150. The location for the four-lane arterial is now proposed to be an extension of Kyle Parkway, which would intersect SH 21 close to FM 2720. The proposed improvement in Hays

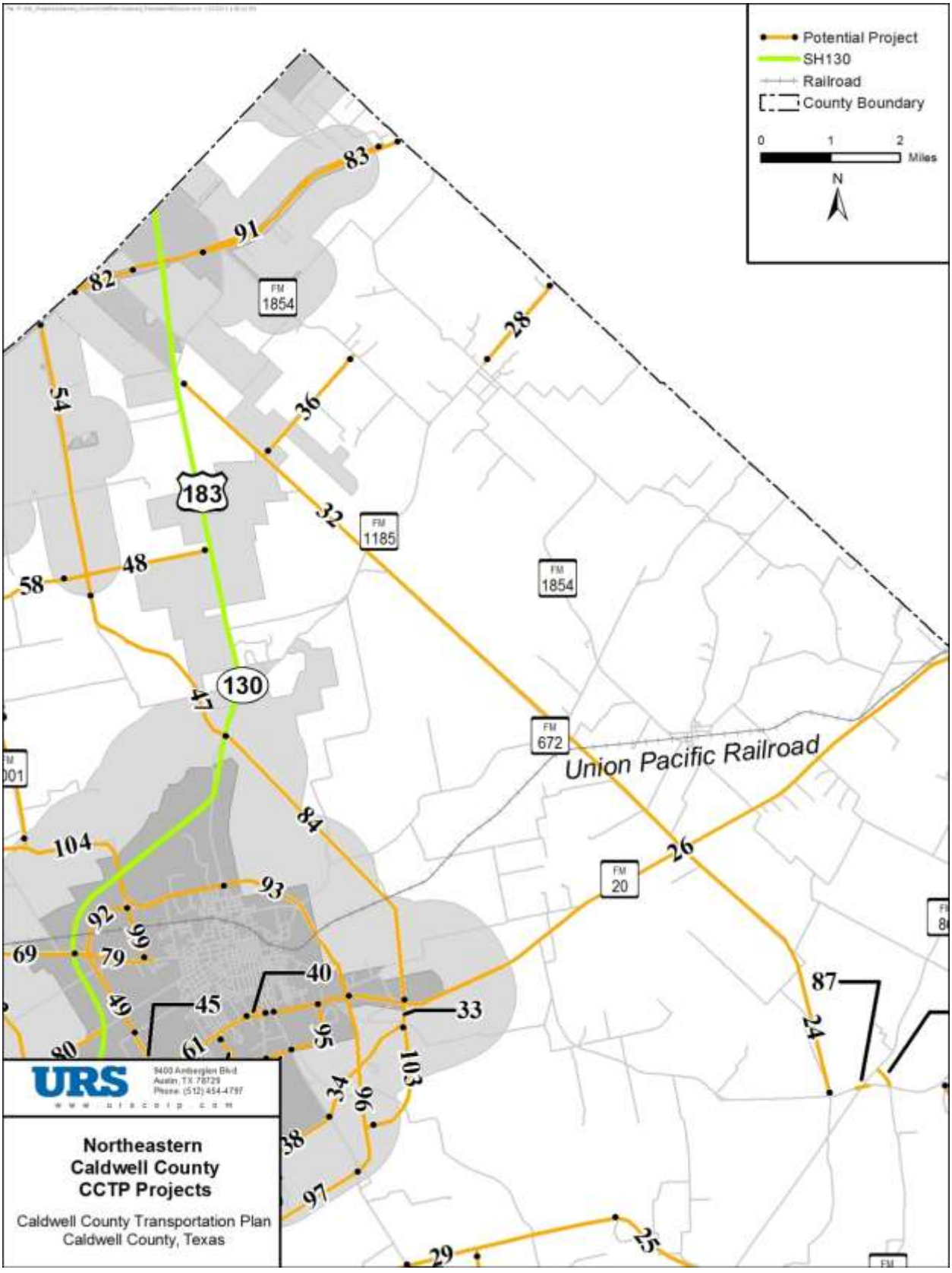
County would create the need for a companion project in Caldwell County to widen FM 2720 four lanes, as described above.

Even with shifting the emphasis for inter-county travel to FM 2720/Kyle Parkway, the extension of FM 150 still warrants a four-lane facility due to the size of the planned development.

**Martindale** – Reconstruction of Northwest River Road (Project Map ID 100) and Southeast River Road (Project Map ID 101) in Martindale is proposed. When SH 80 is closed due to serious crashes, traffic is diverted to Northwest River Road. The road is narrow and in poor condition.

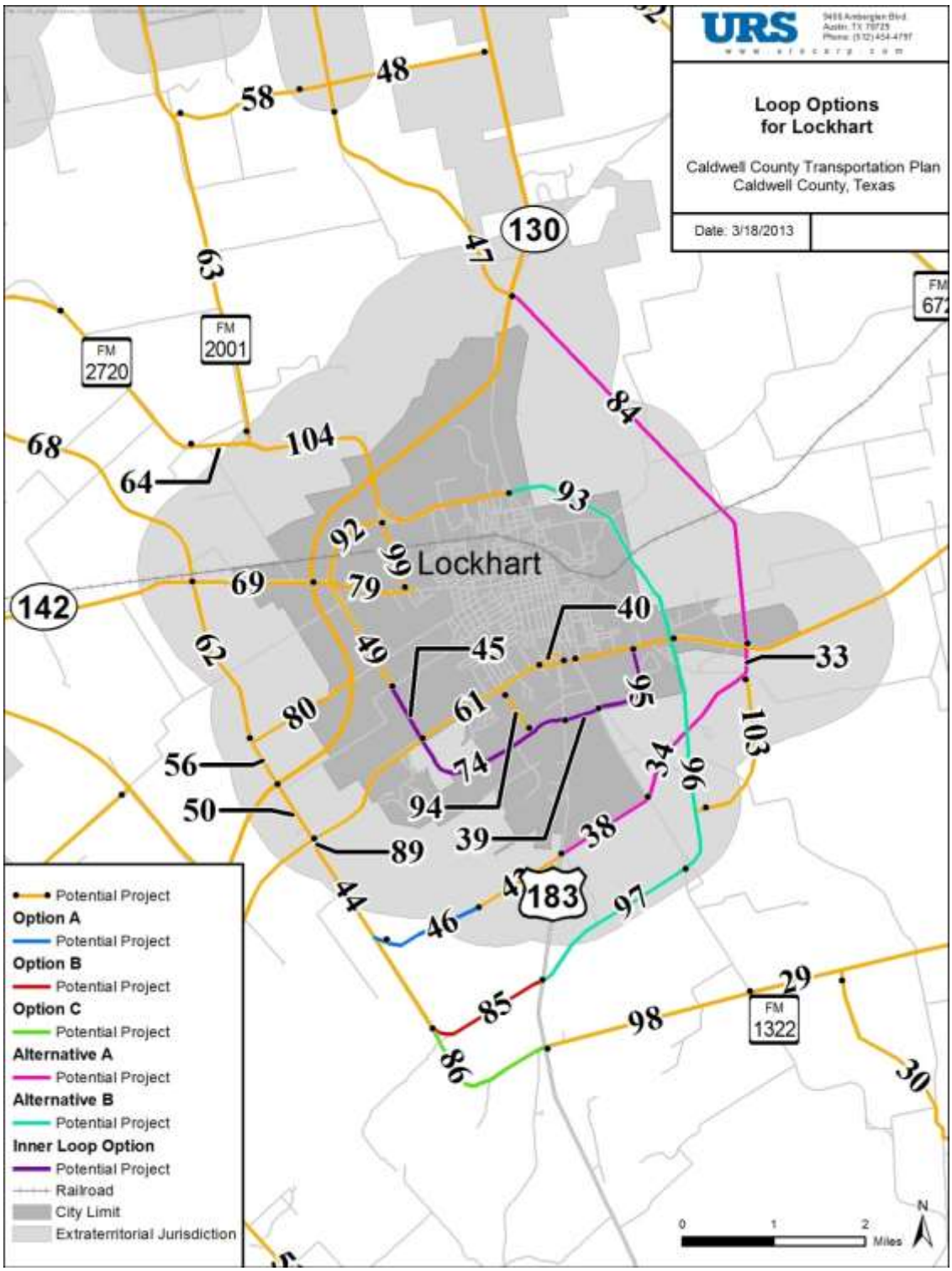
**CR 179/CR 164/CR 160 Corridor, US 183 to FM 86** – The proposed plan includes upgrading this corridor to a paved two-lane roadway to improve mobility and safety in the northeastern portion of Caldwell County as shown in **Figure 3.5-4**. The road changes name from Hommanville Trail to Barth Road at FM 1185. The proposal includes adjusting Barth Road to align with the intersection of Hommanville Trail at FM 1185. The proposal also includes a new at-grade intersection with the UPRR to eliminate the northeasterly jog in the Barth Road alignment between FM 672 and FM 1854 northwest of Dale. Improvements would extend south of FM 20 along CR 160/Old Colony Line Road to FM 713, west of FM 86. By extending Barth Road across the UPRR to CR 164 and then along CR 160, this corridor will create a second paved and more direct route between the eastern portion of Caldwell County at McMahan and US 183/SH 130 at Mustang Ridge.

**Figure 3.5-4 Northeastern Caldwell County and CCTP Projects**



**Lockhart Loop** – The proposed 2035 CCTP map includes several alternatives to create a loop on the west, south, and eastern portions of the city. Further engineering and environmental analysis, as well as public outreach, is needed prior to determining the best location for the Lockhart Loop. A summary of the conceptual alternatives is provided below and shown in **Figure 3.5-5**.

**Figure 3.5-5 Loop Options for Lockhart**



**West and South**
To maximize the use of SH 130, two alternatives use CR 217/Old Fentress Road (Project Map ID 50) and CR 215/Westwood Road (Project Map ID 44) as the western segment. There are three options for connecting to US 183:

- **Option A** – Extend CR 213/Robin Ranch Road (Project Map ID 46) to CR 215 and improve CR 213 to US 183, or
- **Option B** – Use existing CR 215 (Project Map ID 85). This alternative would need to include a safety analysis of the intersection with US 183. CR 215 may need to be shifted southward to match the high point on US 183.
  (Each of these alternatives has companion projects east of US 183 that extend easterly and north to FM 20.)
- **Option C –** Project Map ID 86 which would provide a connection between CR 215/Westwood Road and CR 214/Graham Road and intersect US 183 at FM 671. This option is included on the approved Lockhart Thoroughfare Plan to mitigate the sight distance concerns at the current intersection of CR 215 and US 183. However this option does not provide for connections on the southeast and east sides of Lockhart.

**Southeast and East**
Alternative A (Project Map ID 38) would extend east of US 183 along the south side of Summerside Subdivision, and on the city limit line to FM 1322. This is slightly different from the approved Thoroughfare Plan which would extend Thunderstorm Avenue from its current end, which appears to be a stub out for the next phase of the subdivision. Additional engineering and environmental analysis and public outreach is needed to determine if the proposed street would serve as a collector street built by the developer or as a loop road with higher traffic volumes. East of FM 1322, the corridor would extend on new location to FM 20. Project Map ID 34 would connect FM 1322 to CR 202/Old McMahan Road at CR 203/Shady Hollow Road (Project Map ID 33). This alignment was developed to connect to the outer location of the northeast loop (Project Map ID 84) at FM 20.

Alternative B would extend along CR 213/Old Luling Road and CR 212/Reavis Road (Project Map ID 97) to FM 1322. The corridor would then turn north as Project Map ID 96 and intersect FM 20 near Lovers Lane and be aligned with the City's northeast loop segment (Project Map ID 93).

**Northeast**
Project Map ID 93 mimics Lockhart's approved Thoroughfare Plan to provide a four-lane arterial option for FM 20 traffic that would remove northbound traffic from US 183/Colorado Avenue. This corridor skirts the eastern city limit, and would intersect US 183 at FM 2001, which would serve as the northern segment of the Lockhart Loop. This option would not cross the floodplain of Plum Creek.

Project Map ID 84 is an alternative for the northeast segment of the loop that is further from Lockhart, crosses Plum Creek and connects to US 183/SH 130 at the bridge over SH 130 that provides U-turns for local traffic. In addition to the longer roadway length, this option would be more expensive to construct due to the crossing of Plum Creek, particularly if the bridges were to span the 100-year floodplain.

**Northwest and West**
The approved Lockhart Thoroughfare Plan includes proposed improvements that would provide a four-lane arterial parallel to and east of SH 130 between FM 2001 and Maple Street. Project Map ID 92 would extend City Line Road north and northeast to intersect FM 2001 at the proposed extension of Mockingbird Lane, thereby creating a traditional four-legged intersection. These improvements are

compatible with the widening of FM 2001 to four-lanes. The City envisions these improvements to be funded by future development.

**Inner Loop Option**

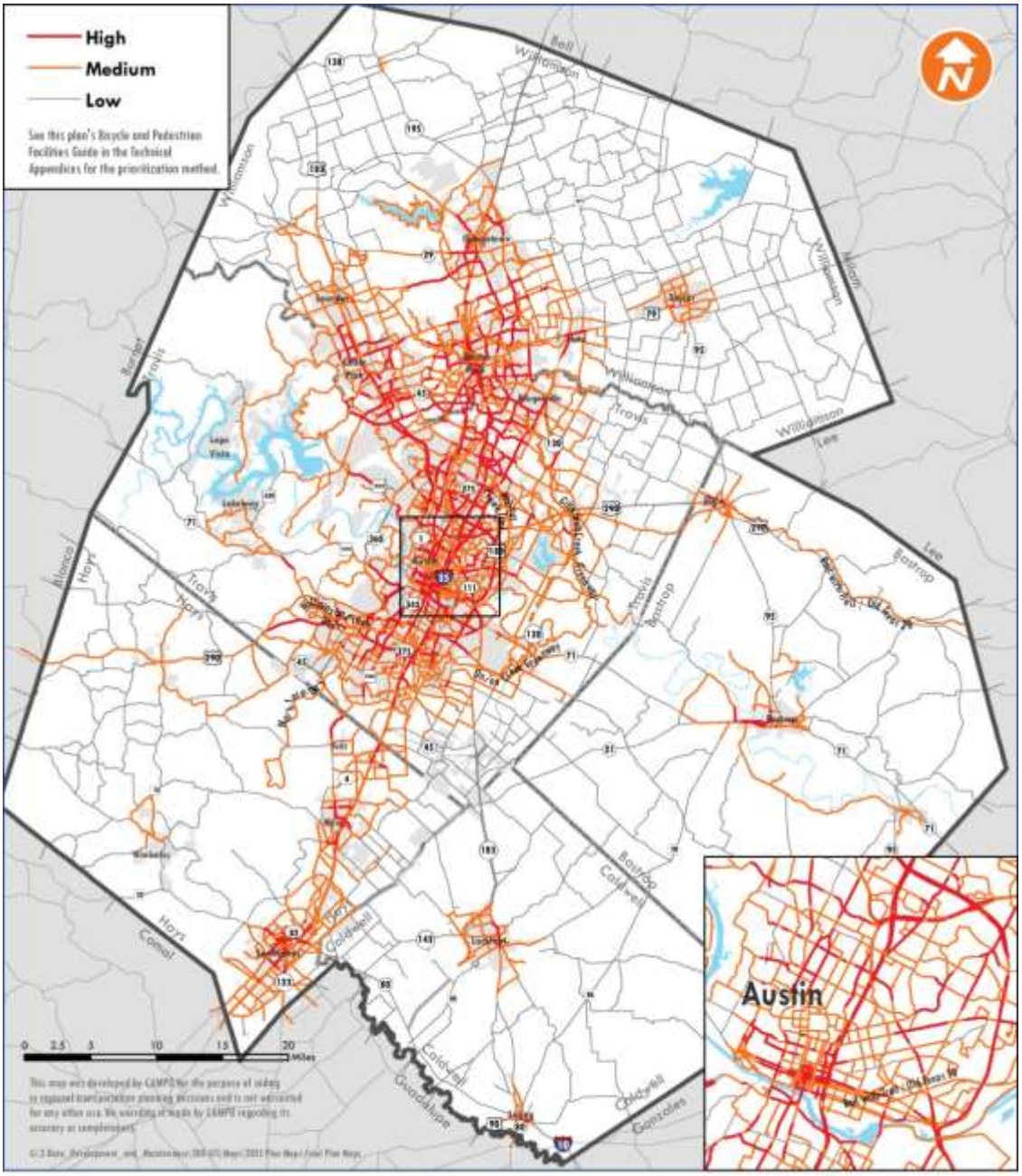
An Inner Loop Option on the west and south side of the city is provided in the approved Lockhart Thoroughfare Plan by extending City Line Road south from Clear Fork Street to FM 20 (Project Map ID 45), then approximately 1/2 –mile south of FM 20 before turning easterly to US 183 (Project Map ID 74) along Martin Luther King/Industrial Boulevard. The existing segment of East Martin Luther King/Industrial Boulevard could be restriped to four lanes (Project Map ID 39) and be extended east of FM 1322 to East Martin Luther King/Industrial Boulevard at FM 20 (Project Map ID 95). This configuration would provide an alternative for through traffic from SH 142 to avoid downtown, and for FM 20 traffic to avoid the congested intersection of FM 20 and US 183.

## Bicycle Needs

**Urban Roadways**

Roadway improvements proposed for highways on the 2035 CAMPO Regional Bicycle Route system will need to include the bicycle facility recommended for current and projected average daily traffic and speeds. **Figure 3.5-6** shows the regional priority bicycle corridors from the CAMPO 2035 Regional Transportation Plan.

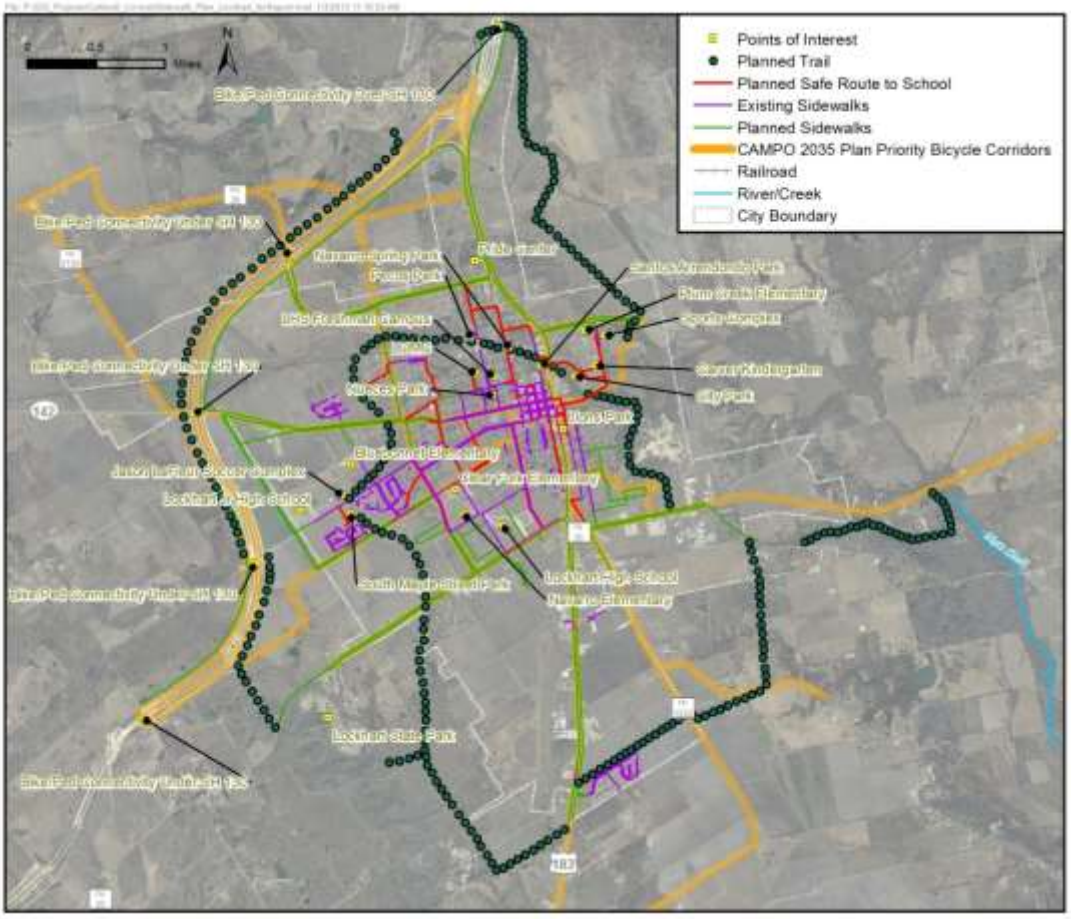
**3.5-6 CAMPO 2035 Priority Bicycle Corridors**




Source: CAMPO 2035 Regional Transportation Plan, May 2010

Both Lockhart and Luling have identified bicycle and pedestrian improvements to improve connectivity to schools, in commercial areas and downtown, and for recreation. The highlights of these plans are provided below.

**Figure 3.5-7 City of Lockhart Sidewalk and Trail Map**




Source: City of Lockhart

Lockhart Sidewalk and Trail Map

- Planned to construct more sidewalks through the state's Safe Routes To Schools grant program (as shown in red).
- Has identified several priority streets to receive new sidewalks when funding becomes available (as shown in green).
- Created a plan for shared-use trails (as shown in green).
- Completed a key segment of the Town Branch Creek Trail, a trail which will eventually form an important connection to City Park, joining the west and east sides of Lockhart under the U.S. 183 overpass (as shown in green).
- Planned Maple Street trail corridor, which will connect Lockhart Junior High with San Jacinto Street (as shown in green).

Luling Planned Bicycle and Pedestrian Improvements

- Added sidewalks as part of Safe Routes to Schools program.
- Planned shared-use path connecting Northside and Southside Parks.
- Planned signalized pedestrian crossing of Magnolia/US 183 at Pierce Street or Davis Street.
- Planned completion of sidewalks on both sides of Pierce Street and Davis Street, which will have sidewalks extending east of Magnolia.
- Passed a city ordinance requiring all new developments to construct sidewalks.

In Caldwell County, the priority bicycle corridors are located in and adjacent to Lockhart and Luling. **Tables 3.5-1** and **3.5-2** provide a summary of the regional bicycle corridors in shown in **Figure 3.5-6**.

**Table 3.5-1 CAMPO 2035 Regional Bicycle Corridors in Lockhart**

| Roadway Name | From | To |
|---|---|---|
| Colorado St./US 183 | SH 130 | Old Luling Rd./CR 212 |
| SH 130 frontage roads | US 183 | Boggy Creek Rd/CR 218 |
| Silent Valley/FM 2001 | Colorado St./US 183 | County View Rd./CR 235 |
| Stueve Lane | FM 2001 | San Antonio St./SH 142 |
| Planned roadway | Stueve Lane | Colorado St./US 183 |
| Flores St./FM 672 | Colorado St./US 183 | E. Market St. |
| San Antonio St./SH 142 | FM 2720 | Colorado St. /US 183 |
| San Jacinto St. | San Antonio St./SH 142 | State Park Rd./FM 20 |
| E. Market St. | Flores St./FM 672 | Colorado St./US 183 |
| Prairie Lea St. | Colorado St./US 183 | Guadalupe St. |
| Guadalupe | San Antonio St./SH 142 | State Park/FM 20 |
| Clear Fork St. | SH 130 frontage road | Guadalupe St. |
| Blackjack St./FM 20 | Colorado St./US 183 | FM 713 |
| S. Commerce St./FM 1322 | Colorado St./US 183 | Old Luling Rd,/CR 212 |
| Seawillow Rd. | S. Commerce/FM 1322 | .75 miles east |

Source: CAMP0 2035 Regional Transportation Plan

**Table 3.5-2 CAMPO 2035 Regional Bicycle Corridors in Luling**

| Roadway Name | From | To |
|---|---|---|
| N. Magnolia Ave./US 183 | Bridal Path Rd./CR 309 | Pierce St./US 90 |
| S. Magnolia Ave./SH 80 | Pierce St./US 90 | San Marcos River |
| Bridal Path Rd./CR 309 | US 183 | N. Hackberry Ave./FM 2984 |
| N. Hackberry Ave./FM 2984 | Bridal Path Rd./CR 309 | Travis St. |
| Austin St./SH 80 | N. Hackberry Ave./FM 2984 | Spruce Ave. |
| Pierce St./US 90 | River Park Dr./CR 105 | Elm Ave. |
| Davis St. | N. Magnolia Ave./US 183 | Elm Ave. |
| S. Laurel Ave./Sycamore St. | S. Magnolia Ave./SH 80 | North of San Marcos River |

Source: CAMP0 2035 Regional Transportation Plan

**Table 3.5-3** provides the bicycle facility selection guide for urban roadways. Cities may adopt standards that are different from the recommended treatments.

**Table 3.5-3 CAMPO Bicycle Facility Guide for Urban Section Roadways**

| Average Motor Vehicle Speed (mph) | Average Annual Daily Traffic Volume (AADT) | | |
|---|---|---|---|
| | Less than 2,000 | 2,000 - 10,000 | Over 10,000 |
| Less than 30 | Shared Lane or Bicycle Boulevard | Shared Lane Marking or Bicycle Boulevard | Shared Lane Marking |
| 30 - 40 | Bike Lane 5’ | Bike Lane 5’ | Bike Lane 5’ or Shared-Use Path |
| 41 - 50 | Bike Lane 6’ | Bike Lane 6’ | Bike Lane 6’ |
| Over 50 | Bike Lane 6’ | Bike Lane 6’ or Shared-Use Path | Bike Lane 6’ or Shared-Use Path |

Source: CAMPO 2035 Regional Transportation Plan

## Rural Roadways

The majority of rural section roadways will not require a sidewalk except where the road passes through a community with some pedestrian activity, such as Prairie Lea, Fentress, Uhland, and Niederwald. In these communities a short segment of typical section for urban roadways would apply where the pedestrian volumes are greatest. Bicycle accommodations for rural roadways are shown in **Table 3.5-4**.

**Table 3.5-4 CAMPO Bicycle Facility Guide for Rural Section Roadways**

| Average Motor Vehicle Speed (mph) | Average Annual Daily Traffic Volume (AADT) | | |
|---|---|---|---|
| | Less than 2,000 | 2,000 - 10,000 | over 10,000 |
| Less than 30 | Shoulder 4’ | Shoulder 4’ | Shoulder 4’ |
| 30 - 40 | Shoulder 4’ | Shoulder 4’ | Shoulder 6’ |
| 41 - 50 | Shoulder 6’ | Shoulder 6’ | Shoulder 6’ |
| Over 50 | Shoulder 6’ | Shoulder 8’ | Shoulder 8’ |

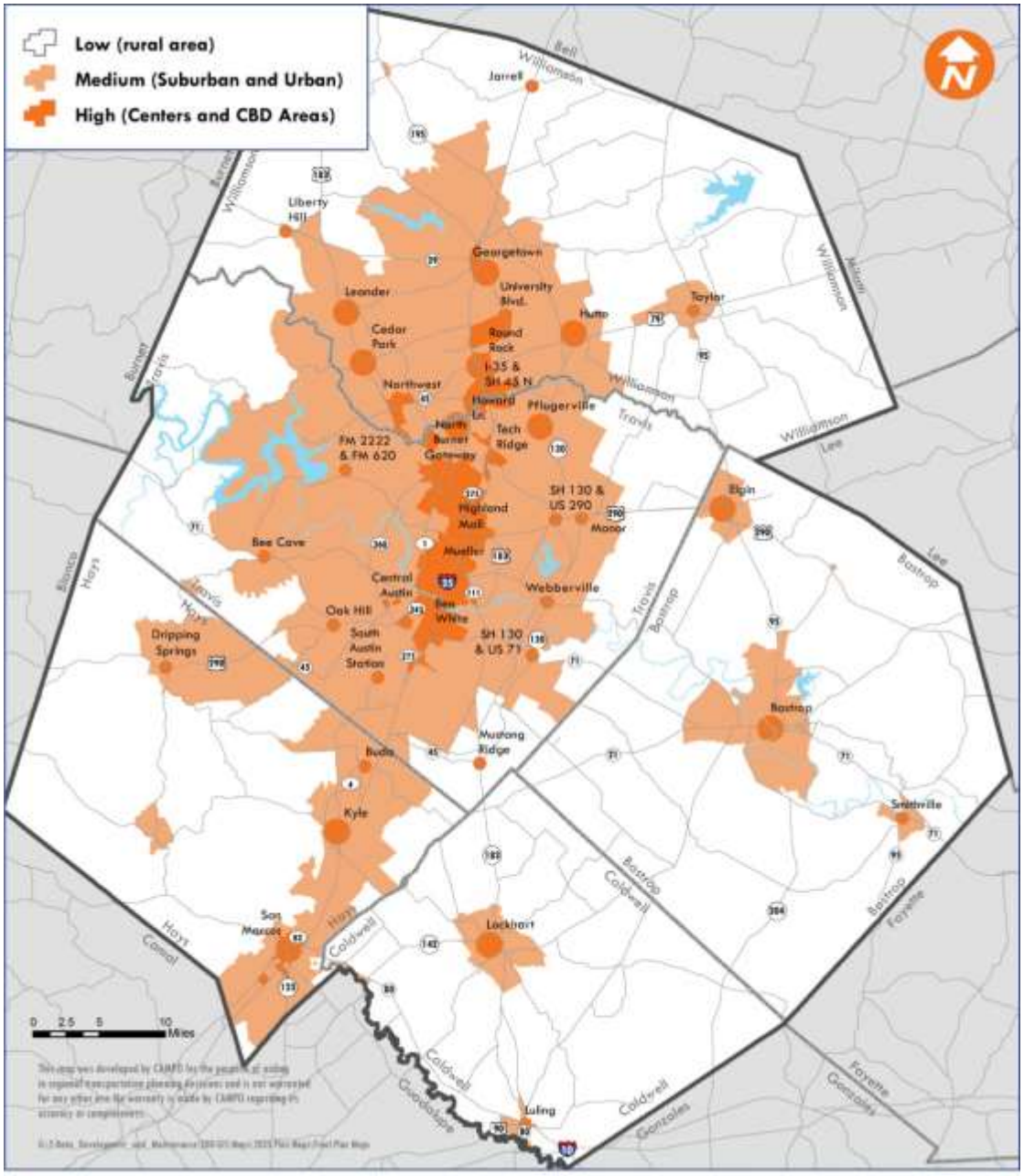
Source: CAMPO 2035 Regional Transportation Plan

## Pedestrian Needs

A vision of the ideal pedestrian environment for any urbanized area includes a connected network of Americans with Disability Act (ADA)-compliant sidewalks, on both sides of every street where people live, work, shop, and attend school. In addition to sidewalks, safe crossings of key roadways marked by crosswalks or signals, spaced at reasonable intervals are essential to pedestrian mobility and connectivity. This vision is part of a “Complete Streets” concept many cities in the U.S. are working to achieve. Caldwell County communities are no exception.

CAMPO's 2035 Regional Transportation Plan acknowledges the need for pedestrian infrastructure throughout the region, but stresses the need to prioritize investments in existing urban and suburban areas where a greater number of potential users would be served. The 2035 Regional Transportation Plan has identified areas of Lockhart, Luling, and Martindale as Pedestrian Priority Districts as shown in **Figure 3.5-8**.

**Figure 3.5-8 CAMPO 2035 Pedestrian Priority Districts**




Source: CAMPO 2035 Regional Transportation Plan, May 2010

Both Lockhart and Luling have recently been awarded funding to install sidewalks and trail sections, and each has established formal plans to continue improving pedestrian networks. In addition, the communities of Martindale, Fentress, and Prairie Lea have expressed the need for sidewalks, trails, and

bicycle accommodations. Any of Caldwell County's smaller communities may need pedestrian accommodations in the centers of town as population growth throughout the region results in increased traffic volumes in and through these towns.

## Bridges

As mentioned in **Section 2.6, Existing Roadway Conditions**, TxDOT performs bridge inspections every two years. On-system bridges will be programmed for replacement as the need arises. Off-system replacement projects will be programmed in coordination with the local jurisdiction responsible for the bridge so that local match requirements can be considered in the jurisdiction's budgeting process.

## Transit

The Capital Area Rural Transportation System (CARTS) currently provides on-demand, curb-to-curb bus service for Caldwell County residents, transporting customers from all communities and areas of the County to destinations in Austin, San Marcus, San Antonio and Seguin, plus intra-county service to Lockhart and Luling. Should projected population growth scenarios come to fruition, CARTS will transition to a fixed route, regularly scheduled express bus service into Austin and San Marcos from key Caldwell County communities.


Another change on horizon for transit service in Caldwell County is the addition of Martindale into the San Marcos Urbanized Area, which will be served by a new transit district, CARTS Combined Urban-Rural Transit District. Details of service area and levels will be determined during the planning process for this new system, continuing through 2014.

**Table 3.5-5** provides the location and type of bus service planned by CARTS for the CAMPO 2035 regional transportation plan.

**Table 3.5-5 Projected Future Rural Transit Service**

| Year | Service Areas | Type of Service |
|---|---|---|
| 2020 | Lockhart to Austin | Express Bus |
| 2020 | Luling to San Marcos | Express Bus |
| 2035 | Luling to Lockhart | Express Bus |
| 2035 | Lockhart to San Marcus | Express Bus |

Source: CAMPO 2035 Regional Transportation Plan

## Freight Railroad

The Lone Star Rail District will complete a feasibility analysis in early 2013 that will identify up to three conceptual corridors for relocating the UPRR mainline freight tracks between Georgetown and San Antonio so that the existing rail tracks can be used for commuter rail service between Georgetown and San Antonio. All of the preliminary alternatives are located east of IH 35 and traverse Caldwell County.

## 3.6 Needs Assessment

The assessment of transportation needs for 2035 was based on a combination of public comments, safety analysis, discussions with transportation providers and local governments, condition data for pavements and bridges, and travel forecasting based on projected demographics.

Based on the forecasted distribution of population and employment in the areas in and around Caldwell County, additional travel lanes will be needed in the western half of the county by 2035, as noted in **Section 3.5, Future Transportation System Needs**. The timing of the projects will be determined by the rate at which the new developments are constructed and the availability of federal, state and local funding. Local roads, such as those identified in the city thoroughfare plans, will be constructed by developers as the cities grow. Once the CCTP is adopted by Caldwell County, the Commissioners Court will have an improved basis to negotiate roadway improvements in future subdivisions and master planned communities. Additional analysis will be required to evaluate the alternatives described for a loop around Lockhart and a relief route for Luling.

Maintenance and rehabilitation projects will continue to be a priority for Caldwell County residents to provide access to jobs, to ranches, to schools, and to shopping. Funding for these types of projects may include federal and/or state funds for interstate, state, US and FM highways. Funding for local roads is typically provided by the local government using property taxes, sales tax, and/or bond programs. Bridge projects are prioritized on a statewide basis, and typically include a mix of federal and local funds for structures owned by local governments.

The proposed projects are provided in summary tables in **Chapter 5, County Transportation Plan Implementation** and in Appendix B. The funding and timeline to implement the various projects will be determined by the Commissioners Court.

## 3.7 Conclusions

The assessment of transportation needs for 2035 was based on a combination of public comments, safety analysis, discussions with transportation providers and local governments, condition data for pavements and bridges, and travel forecasting based on projected demographics.

As funding is identified, each project will be evaluated with respect to safety issues as well as pedestrian and cycling usage to adequately program the necessary funds to advance projects into the preliminary engineering phase.

**Roadways**

For the purpose of evaluating roadway projects against the CCTP goals, the projects were sorted into two groups - mobility and maintenance. Some roadway projects were included based on an anticipated need to connect dead-end county roads to improve response time of emergency vehicles.

Mobility projects may:

- Add lanes to existing roadways,
- Construct new roadways,
- Provide connections between existing county roads
- Augment the pedestrian or bicycle facilities, or
- Reconstruct a county road to improve connectivity across a large area of the county.

Maintenance projects may:

- Rehabilitate travel lanes,
- Add paved shoulders,
- Add pedestrian or bicycle facilities,
- Recondition county roads,
- Replace bridges, or
- Pave county roads.

Overall, there were 261 miles of roadway mobility projects and 163 miles of roadway maintenance projects that were identified and evaluated as shown in **Table 3.7-1**. **Table 3.7-2** shows the number and length of mobility projects by facility owner.

**Table 3.7-1 CCTP Roadway Summary**

| Project Type | No. of Projects | Length (miles) |
|---|---|---|
| Mobility | 100 | 261 |
| Maintenance | 157 | 163 |
| Total | 257 | 424 |

**Table 3.7-2 Mobility Summary**

| Roadway Owner | No. of Projects | Length (miles) |
|---|---|---|
| County/City | 73 | 148 |
| State Route | 27 | 114 |
| Total | 100 | 261 |

## Bicycle and Pedestrian

Both Luling and Lockhart have adopted plans for improving pedestrian and bicycle facilities. These adopted plans are included in the CCTP as information and as reference material for evaluating proposed roadway projects within the cities for bicycle and pedestrian elements. Since smaller communities have expressed a need for these types of improvements, Caldwell County may consider the need for stand-alone bicycle and pedestrian facilities in unincorporated communities.

Major roadways, multi-lane highways and toll road or freeway interchanges can be insurmountable barriers to safe, connected bicycle and pedestrian networks, as well as to vehicular traffic on county roads. Caldwell County is in an excellent position to plan and mitigate potential barriers by including bicycle and pedestrian facilities in this and subsequent transportation plans as the population grows. SH 130 is the main barrier in the region by virtue of its control of access and limited number of interchanges. As development occurs along SH130, bicycle and pedestrian access should be engineered into any intersecting roadway expansions. Lockhart has included shared-use bicycle and pedestrian

paths along the frontage roads of SH 130 where the road passes through its jurisdiction to mitigate the barrier effect.

## Transit

The need for additional transit service will increase over time. The CAMPO 2035 Regional Transportation Plan includes an expanded rural bus service in 2035 that would improve connections between communities to medical services and shopping areas in Austin and San Marcos.

## Freight Rail

The Lone Star Rail District will continue work to determine the location of a freight rail bypass to reduce the number of trains on the UPRR along IH 35 between Georgetown and San Antonio. The Lone Star Rail District plans to announce the alternatives that will be taken though the full environmental analysis in the spring of 2013. Caldwell County will need to be an active stakeholder in this process to ensure that impacts to the road network, including accessibility for school buses and emergency service providers, are adequately considered.

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# Chapter 4 – Public Involvement

## 4.1 Public Involvement Plan

The Caldwell County Transportation Plan (CCTP) is being developed through a process which includes not only technical data and assessments, but input from the citizens who live here. To facilitate a process which engages the citizens, the team developed a Public Involvement Plan (PIP). The PIP includes tools, methods, and techniques designed to create opportunities for citizens to provide input on transportation issues in the County. This PIP is a combined effort between the Caldwell County Commissioners Court, the Capital Area Metropolitan Planning Organization (CAMPO), and the Texas Department of Transportation TxDOT.

Goals of the PIP:

- Promote the collaborative effort of Caldwell County, CAMPO, and TxDOT in this planning effort
- Educate citizens on the importance of having a transportation plan and highlight the advantages of having such a plan ready during periods of County growth
- Create a community driven plan for future transportation planning in the County
- Provide a transparent process that informs the public of the purpose, process, timeframe, and progress of this planning effort
- Conduct inclusive outreach by engaging all geographic areas and reaching and receiving input from a diverse representation of the County population
- Generate input that will be useful to the planning process including:
    - Identifying improvements to the transportation system that will help citizens meet their mobility needs
    - Identifying and documenting community support or concerns with planned transportation improvements, and carrying that information forward for consideration in project development decisions
    - Prioritizing proposed improvements and commenting on which should be moved forward in the project development process
- Inform and educate stakeholders about the planning process, how the public can participate, and how the public's input will be used
- Build understanding and support for the final Plan among the citizens of Caldwell County

## 4.2 Advisory Committee

In the very early stages of the project, the County and project team developed an Advisory Committee to steer the planning process. This group was made up of technical experts, city entities, independent school districts, utility service providers, county representatives, transportation providers, and citizens appointed by the County Commissioners Court.

Roles of the Advisory Committee:

- Steer and guide the planning process
- Share information for representative area or agency
- Serve as a liaison for representative area or agency
- Provide background information on Caldwell County and existing transportation
- Assist team in public outreach
- Assist in developing and approving of final transportation plan

**Table 4.2-1 Advisory Committee Meeting Summary**

| Advisory Committee Meetings | Topics and Tasks |
|---|---|
| August 16, 2012 | • Project Overview and Need for Transportation Plan<br>• Review of Advisory Committee Roles<br>• Exercise to Develop Project Goals<br>• Overview of Public Outreach<br>• Presentation of Existing Conditions (Mobility, Bridges, Crash Data, Bike Facilities, Sidewalks, Freight, Pavement Conditions)<br>• Mapping Exercise to Identify Potential Areas of Concern |
| September 6, 2012 | • Additional Information Regarding Existing Conditions (County Pavement Conditions, State System Level of Service, County Road Volumes and County Road Level of Service)<br>• Connectivity Needs Discussion<br>• Freight Considerations<br>• Review and Finalization of Goals and Objectives<br>• Public Meeting Overview and Review of Materials and Exhibits<br>• Additional Mapping Input |
| October 4, 2012 | • Review of Public Input Received at September 20, 2012 Public Meeting and via Questionnaire<br>• Discussion on Additional Outreach Opportunities<br>• Review Bicycle and Pedestrian Facilities and Transit<br>• Discussion of Evaluation Criteria<br>• Mapping Connections |
| November 7, 2012 | • Final Summary of Public Input from First Round of Outreach<br>• Review of Evaluation Criteria<br>• Review of Preliminary Draft Roadway Plan<br>• Public Meeting Overview |
| December 13, 2012 | • Public Meeting Recap<br>• Community Meeting Overview<br>• Review of Public Comments Received<br>• Railroad Crossing Coordination<br>• Review of Project Evaluation and Ranking |
| February 25, 2013 | • To discuss final plan, project ranking, and final report |

The Advisory Committee was very helpful in providing background information and reviewing all materials prior to public involvement activities. After each Advisory Committee meeting, all materials were distributed to all members via email and posted on the project website.

**Table 4.2-2 Advisory Committee Representation**

| Participants | Representatives |
|---|---|
| Local and Regional Agencies | TxDOT Area Office<br>Blue Bonnet Electric Cooperative<br>CAPCOG<br>CARTS<br>SH 130 Concession Company<br>Union Pacific Railroad Company<br>GBRA<br>County Engineer<br>Caldwell County Sheriff<br>Caldwell County Emergency Management<br>Aging Advisory Council |
| Cities | Lockhart<br>Luling<br>City of Luling<br>Martindale<br>Niederwald<br>Uhland<br>Mustang Ridge<br>San Marcos |
| School Districts | Lockhart ISD<br>Luling ISD Administrative Offices<br>Prairie Lea ISD |
| Appointed Public Members | County Wide Member<br>County Wide Member<br>Precinct 1 Member<br>Precinct 1 Member<br>Precinct 2 Member<br>Precinct 2 Member<br>Precinct 3 Member<br>Precinct 3 Member<br>Precinct 4 Member<br>Precinct 4 Member |

## 4.3 Public Involvement Activities

The project team developed a public involvement process to inform the public, seek public input, and provide meaningful feedback to be considered in development of the CCTP. The project team used several tools to notify the community of the opportunities to participate through public meeting attendance, questionnaires, or by submitting comments or questions.

## Tools and Methods

### Database

The project team developed a stakeholder database with contacts for the County, cities, local community groups and contacts, businesses, schools, and other community contacts. Citizens were added to the database throughout the process and email addresses were added when possible. This database contains over 200 stakeholders, and includes an email distribution list of over 180 people to which information has been distributed.

### Email Notification

Emails were sent to the project database to notify citizens of each public meeting, and of public input opportunities such as the questionnaire. Emails included project updates, contact information, a website link, and encouraged those interested to send questions or comments.

### Flyer Distribution

Flyers were created in English and Spanish to advertise the public meetings and the online questionnaires, and circulated via email, posted around the community, and distributed by Advisory Committee members. An additional flyer was provided to the Capital Area Rural Transportation System (CARTS) to post in their transportation vehicles to encourage participation of their customers.


Caldwell County
Transportation Plan
Open House

Thursday, Nov. 29, 2012
4:30-7:30 p.m.

First Lockhart Baptist Church
315 W. Prairie Lea
Lockhart, TX 78644

*For more information:*
(512) 533-9100, ext. 12
www.caldwelltransportation.com

### Media

The project team contacted several local newspapers to generate interest in the project and created and distributed a media release to the Luling Newsboy, the Lockhart Post Register, the Gonzales Inquirer, and the Austin American Statesman. The project team also purchased two advertisements in the Lockhart Post Register and one in the Luling Newsboy to announce the second public meeting.

### Phone and Email Outreach

Project team members made personal calls and emailed city offices, community groups, schools, chambers of commerce, major employers, and other citizen and community organizations to share information about the project, the meetings, and the opportunities to give input on the planning process. Those groups were asked to share the information with their own membership and contacts and post the flyer in their offices and meeting locations.

**Project Website**

A project website was created to post information about the planning process. The website was updated regularly and contained project materials including technical information gathered by the project team, materials shared at the public meetings, materials shared at the Advisory Committee meetings, public participation information such as the public meeting notifications, and information about contacting the project team for questions or comments.


**Inclusive Outreach**

Special effort was made to involve those that do not speak English as their first language. The first public meeting flyer was created in both English and Spanish and distributed to over 85 email addresses to inform the community of the project and meeting. The Hispanic Chamber of Commerce was approached multiple times during the project to keep them updated on the planning process, and asked them to distribute information to their members. The Chamber posted meeting and questionnaire information on their website throughout the project. A Spanish Translator was available at our first public meeting on September 20, 2012.

The project team recognized that the elderly community may have limited access to the internet, may not feel comfortable taking a questionnaire online, and may not be able to attend public meetings. To facilitate their involvement, the team coordinated with the Lockhart Senior Citizens Center and hand delivered paper copies of the questionnaire with stamped return envelopes.

A member of the Advisory Committee arranged for the project team to make a presentation to the Luling Senior Citizens Activity Center, where an overview of the process was provided, questions were answered, and paper copies of the questionnaire were distributed.

The project team heard comments on the need for more public transportation: "Lockhart needs a better public transportation system. CARTS is doing an excellent job, but it is sometimes hard to schedule places that you may need to go, or how long you may be there."

Caldwell County is a large area that is primarily agricultural with a number of small unincorporated communities. The project team wanted to make sure the entire area was aware of and invited to participate in the planning process. To that end, cities and countywide service providers (such as Independent School Districts, Emergency management Service, etc.) were invited to participate on the Advisory Committee. The project team worked closely with the Advisory Committee to gain an understanding of conditions and needs in the rural communities. Extra calls were made to cities in the rural areas of the county to distribute the questionnaire and inform of them of opportunities to participate. The project team also attended one of the monthly meetings of the volunteer and city fire departments to gather information on rural areas and needs.

**Table 4.3-1 Summary of Outreach**

| Outreach at a Glance | |
|---|---|
| Email Addresses | 196 |
| Outreach Calls and Emails | 97 |
| 1st Public Meeting Attendance | 23 |
| 1st Questionnaire Responses | 146 |
| 2nd Public Meeting Attendance | 40 |
| 2nd Questionnaire Responses | 29 |
| 1st Round Comments | 87 |
| 2nd Round Comments | 99 |
| Final Comments | 9 |

## Public Meetings

Two public meetings were held during the course of the project to both share information about the planning process and the data being collected, and to gather information and input from the community.

**Public Meeting, September 20, 2012**
The goals of the first public meeting were to share information on the planning process and existing conditions, and obtain input from the public on transportation needs, concerns, and priorities. This meeting was held at the First Lockhart Baptist Church and was an open house format. No formal presentation was given and attendees were invited to attend when most convenient. The following materials were shared and project team members were available to answer any questions or concerns in a one-on-one format.

Meeting Materials:

- Bicycle Conditions
- Bridge Conditions
- Crash Locations
- 2010 Level of Service and Traffic Volumes
- County Road Pavement Conditions
- TxDOT Highway Pavement Conditions
- Classifications and Average Daily Traffic Counts
- Project Fact Sheet

The questionnaire was available to attendees in both print and electronic formats. Maps of the roads in the County were displayed and attendees were invited attendees to mark their concerns or needs on the maps dots and log their corresponding comments on a comment card.

**Public Meeting, November 29, 2012**
The second public meeting gave citizens an opportunity to review the draft plan Proposed Roadway Network and Proposed Maintenance Projects maps and list of projects. Information on how the projects would be evaluated and scored for inclusion in the final plan was also shared. This meeting was also held at the First Lockhart Baptist Church and was an open house format. No formal presentation was given and attendees were again invited to attend at their convenience. The following materials were shared and team members were available to answer any questions or concerns in a one-on-one format.

Meeting Materials:

- Proposed Roadway Network Map and List of Projects Handout
- Maintenance Projects Map and List of Projects Handout
- Typical 2 and 4 Lane Cross Section Illustrations
- Bicycle and Pedestrian Conditions
- Evaluation Criteria Handouts
- Project Fact Sheet

## Community Meetings

The project team attended several smaller meetings held in the community after each formal public meeting, to provide additional opportunities for the public to engage in the process. These meetings allowed for a presentation of information and opportunity to collect further comments from both citizens at large, and specific groups. The team attended the following community meetings:

- Luling Senior Center
- Martindale City Council
- Luling Chamber of Commerce
- Lockhart Economic Development Board
- Capital Area Regional Transportation Planning Organization (CARTPO)
- Caldwell County Commissioners Court (three times)
- Lockhart Kiwanis Club
- Lockhart Planning and Zoning Commission
- Area Fire Chiefs Meeting
- Lockhart Independent School District

## Community Input

The project team provided multiple opportunities for the public to share their input and feedback on transportation issues, priorities, preferences, and the planning process. Comments collected have been recorded and reviewed by the project team and have provided necessary insight into how citizens of Caldwell County want to develop their transportation system future. The project team accepted input and comments in the following ways:

- Verbal and written comments at any time during the planning process
- Mapped comments at the first public meeting
- Via email at info@caldwelltransportation.com
- Via phone
- Via two questionnaires distributed at meetings, through email, and accessible from the website

An initial questionnaire was created to collect a general picture of how Caldwell County citizens use the existing transportation system, perceptions of the existing system, and preferences for transportation in general. The questionnaire was open from September 20 to October 20, 2012. The project team received 146 responses representing all but two small communities in the County. Results of this questionnaire are included in Appendix C.

Common Themes in Responses:

- Poor traffic conditions of major highways during rush hours
- Poor Maintenance of roadways
- Limited availability of public transportation

A second round of input collection included direct prompts for feedback concerning the project maps and input or suggestions of any additional projects or roadways citizens think should be included in the Maintenance Projects or Proposed Roadway Network. The questionnaire was open from November 29 to December 20, 2012. 29 respondents provided almost 100 comments during this round of input collection.

Common Themes in Responses:

- The speed limit on 183 should be reset to 65 and safety concerns of SH130
- CR 103/SE River Road should be paved
- Paving of other gravel roads should be included

In February the project team presented the updated Draft Transportation Plan including the New Facilities Map, Existing Facilities Map, and Maintenance Map, and a list of projects that have been ranked for each map, and the accompanying report with information on the planning process and background data. This information was presented in Commissioners Court on February 18th and to the Advisory Committee on February 25th. These materials were also posted on the project website and a link to the materials was posted on the County's website. Advertisements that the materials were posted and that the team was collecting public comment through March 8th were placed in the Lockhart Post-Register and the Luling Newsboy and two email updates were sent to the stakeholder database. Eight comments were collected and incorporated into the final Plan to be presented to Commissioners Court for adoption on March 25, 2013.

Additionally, advertisements noting the intent to present the Plan to Commissioners Court on March 25th were placed in the Lockhart Post-Register and the Luling Newsboy for the two preceding weeks. The ads also noted that a hard copy of the plan would be posted on March 20th at the County Courthouse for public review.

## 4.4 Conclusions

The project team is grateful for all those that took the time to participate in this process. Advisory Committee members were instrumental in sharing background information and assisting with public outreach. Those that sent their comments and attended public meetings shared useful information that made this planning effort more successful.

The project team made several changes to the final CCTP based on the comments heard from the public and the Advisory Committee. Some examples of this are:

- From the first questionnaire, maintenance of roadways was determined to be very important to citizens. The project team developed a separate tool for ranking Maintenance Projects.
- The project team heard several concerns on the condition and maintenance of SE River Road (CR 103). The project team evaluated this road, the County inspected it and it is now included in the Plan
- Added NW River Road and SE River Road to the list of maintenance projects.
- Additional projects from the Lockhart Thoroughfare Plan were added to the group of mobility projects.
- Alignment of FM 150 extension revised.
- Clarified that additional studies are needed to determine the preferred alternative for the Luling relief route.

- Clarified that the project maps represent a combination of needs based on travel demand and projects that address safety, rehabilitation, and maintenance needs.
- Clarified that funding for any of the proposed projects shown has not yet been identified.

Based on comments received on the Final Draft Plan, the following changes were made:

- The Top 10 mobility and enhancement project maps were modified to identify the near term projects and included at the end of Chapter 5.
- The Top 20 maintenance project map was included in Chapter 5.
- The discussion of identified sidewalk and pedestrian needs was moved from Chapter 2 to Chapter 3.
- Maps were revised to show an improved intersection of Project Map ID 62 at SH 142.
- The western conceptual alternative for a Luling relief route was removed from the project list and maps.
- Project Map IDs 44, 50 and 85 on Old Fentress Road and Westwood Road were combined into one project and re-evaluated as Project Map ID 50-A.
- Project Map IDs 44, 50 and 85 on Old Fentress Road, Westwood Road, new location, Graham Road were combined and re-evaluated as Project Map ID 50-B.
- Text relating to the mobility and enhancement projects includes a reference to the typical section in Chapter 5.

# Thank you to all that participated.

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# Chapter 5 – County Transportation Plan Implementation

## 5.1 Funding Sources

Traditional federal, state, and local funding sources are among the most attractive alternatives for financing a variety of transportation projects. These funding sources generally provide a definable, predictable flow of financial resources as well as a clearly defined set of rules, requirements, and how-to manuals to secure the funds; and they provide established institutional forums with clear lines of authority for achieving and carrying out stakeholder consensus.

The federal transportation funding program administered by CAMPO requires that proposed federally funded projects be included in a financially constrained long-range transportation plan that defines the anticipated federal funding over a 25-year planning horizon. Any locally-funded projects that are of regional significance, such as FM 110 around San Marcos or a proposed four-lane arterial between IH 35 and SH 130, are also required to be included in the long-range plan.

To a similar extent, certain local funding resources, such as bond offerings, may also be limited constraints as most jurisdictions have bond caps or are limited by bond ratings that can make general obligation bond financing for large projects difficult.

Traditional funding sources for transportation projects include federal funding from the U.S. Department of Transportation (USDOT), state and local sources. The following sections provide an overview of the various funding sources that are most applicable for projects included in the CCTP.

### U.S. Department of Transportation Funding Sources

There are various federal transportation resources available for the funding of street and highway, public transit, and bicycle and pedestrian improvements. The USDOT channels financial assistance for roadway projects through Federal Highway Administration (FHWA), while funding for transit flows through the Federal Transit Administration (FTA). Generally speaking, most FHWA and FTA funded projects require an 80% federal share and 20% non-federal match. Allocating the distribution of federal transportation funds for roadway and transit projects is the responsibility of CAMPO Transportation Policy Board, which is composed of elected officials from the member jurisdictions as well as TxDOT and Capital Metro.

**Requirements**

- **Long-Range Plan (LRP)** – An important aspect of the LRP process is evaluating and prioritizing projects. The LRP is updated every five years by CAMPO; however, amendments may be made as additional federal funding becomes available or as local priorities change.

- **Transportation Improvement Program (TIP)** – The TIP a four-year plan that includes all federal projects and locally-funded projects of regional significance that will be developed (preliminary engineering, environmental analysis, design, and construction) over a four-year period. An

amendment process provides flexibility to make revisions in response to funding adjustments from TxDOT and/or changes in local priorities.

- **Functional Classification** - FHWA funding can only be used for projects on roadways functionally classified as a major collector, minor arterial, principal arterial, or interstate. All US, State and FM roadways (except for FM 1386 east of Luling) meet the requirement for functional classification.

TxDOT will be working with Caldwell County as well as the incorporated cities of Lockhart and Luling to update the functional classification of all public roadways during the spring of 2013.

- **Environmental Analysis and Design** – As a part of the environmental analysis, preliminary roadway/transit design information is created to assess for environmental impacts. Federal funding for projects requires a full environmental evaluation under the National Environmental Policy Act of 1969 (NEPA). There are different levels of analysis dependent upon the scope of the project and anticipated impacts. Major projects, such as a relief route at Luling, could require 24 to 36 months to complete the process. Coordination with federal resource agencies, including the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, is also a requirement.

- **Right-of-Way (ROW) Acquisition** – Any real estate that is needed for a federally funded transportation project must be acquired in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and subsequent amendments and regulations developed to implement the act. This requirement includes, but it not limited to, use of independent fee appraisers, compensation for displaced persons in rental property, and relocation assistance for displaced homeowners and businesses.

**Figure 5.1-1** provides a simplistic flow diagram that follows a project from creation to implementation. Project development includes preliminary engineering, environmental studies, final design, ROW acquisition, and utility adjustments.

**Figure 5.1-1 Project Planning and Implementation**


**Federal Highway Administration**

Federal and state roadways in Caldwell County are maintained by TxDOT. Federal funds are allocated to CAMPO to address regional transportation priorities, including city streets and county roads that meet certain criteria (i.e. roadways classified as major collector facilities or higher). TxDOT receives additional federal funds on a formula basis for rehabilitation or on a project-specific basis for programs where projects are prioritized on a statewide basis for federal safety and bridge programs.

Bicycle/pedestrian facilities in Caldwell County are maintained by a combination of state and local entities depending upon their location and use. Funding for regional bicycle/pedestrian facilities can also come from CAMPO through the federal Surface Transportation Program and MAP-21 Transportation Alternatives program, while funding for local facilities are typically associated with cities and/or counties. **Appendix F** provides additional detail regarding the available funding options for bicycle/pedestrian facilities.

**Federal Transit Administration**

**Rural Transit** – The Capital Area Rural Transportation System (CARTS) provides bus service in the rural areas of the region, and also operates a number of routes that connect small towns with each other. CARTS connects residents with medical centers and other services through several different types of programs. FTA provides transportation planning assistance, financial assistance to transit operators in urban communities and rural areas, as well as capital improvement funding.

**Urbanized Area** – The Urbanized Area Formula Funding Program (FTA Section 5307) makes federal resources available to urbanized areas for transit planning, transit capital and operating assistance in urbanized areas with a population of 50,000 or more (FTA, 2011a). The Urbanized Area boundaries for San Marcos were created by the U.S. Census in March 2012 and extend slightly into Caldwell County along SH 80, including parts of the Martindale area because the city's population exceeded 50,000. San Marcos is working with CARTS to transition its transit service in this area to an urban operation from the previous system that was operated under the rural program.

**Elderly and Disabled** – FTA Section 5310 provides support the special transportation needs of elderly individuals and individuals with disabilities. MAP-21 merges this program with New Freedom (FTA Section 5317) and increases the funding levels compared to current levels.

## State Funding Sources

**State Fuel Taxes**

State funds for transportation projects are generated primarily by the state tax on gasoline and diesel fuel. The state gasoline tax is $0.20 per gallon on both types of fuel and has not been increased since 1991.

State funding through TxDOT for highway projects is used primarily as match for federal funding. Highway projects that are built with 100% state funds are generally preventative maintenance and rehabilitation projects.

**Vehicle Registration Fees**

Vehicle registration fees in Texas were simplified in September 2011 to be based on vehicle type and weight. Prior to September 1, 2011, vehicle registration for passenger vehicles was based on age. Currently, annual fees for passenger vehicles and light trucks are $50.75, while vehicles between 6,001 and 10,000 pounds (including half-ton pickup trucks) cost $54. The fee for heavy trucks ranges from $110.00 to $840.00 or more if over 80,000 pounds.

There are two $1.00 fees added to the vehicle registration to cover automation costs and for the Department of Public Safety's electronic insurance verification program. An additional diesel fee is imposed on commercial vehicles.

Local county fees are added to cover the cost of collection of the fee through the County Tax Assessor-Collector's office. In Caldwell County, the local cost is $10.00.

**Economically Disadvantaged Counties Program**

The Economically Disadvantaged Counties Program (EDCP) was created under Senate Bill 370 in 1997 to help reduce the burden of transportation projects on those counties that would have problems in providing the local match. Under this program, disadvantaged counties can have the local match requirements for on-state system improvements and eligible off-state system improvements reduced.

To be eligible for the program, a county must meet all three of the following criteria based on a comparison to other counties in Texas.

- Below average per capita taxable property value,
- Below average per capita income, and,
- Above average unemployment.

Caldwell County has been an EDCP participant for several years, and the current reduction in the local match requirement is 81%. In other words, the typical federal match requirement of 20% is reduced to 3.8%, with TxDOT paying the difference in the required match. Eligibility for the program is determined every year.

Both on-state system and off-state system projects that are proposed for EDCP consideration must be approved by the Texas Transportation Commission. The exceptions to the use of these funds for off-state system projects are:

- ROW and utility adjustment costs, and
- Non-roadway items.

## Local Funding Sources

Any costs for street and highway, public transit, and bicycle and pedestrian improvements not covered by federal and/or state programs are the responsibility of the local governmental jurisdictions. Local funding can come from a variety of sources including property taxes, sales taxes, user fees, special assessments, and impact fees. The most common potential sources are discussed below.

**Property Taxes** – Property taxation has historically been the primary source of revenue for local governments in the U.S. Property is not subject to federal government taxation, and state governments have, in recent years, shown an increasing willingness to leave this important source of funding to local governments.

**General Sales Taxes** – The general sales tax is also an important revenue source for local governments. The most commonly known form of the general sales tax is the retail sales tax, which is imposed on a wide range of commodities. The rate is usually a uniform percentage of the selling price. In Texas, not all counties have access to the sales tax. Most of those that do have a sales tax, including Caldwell County, impose a one-half cent tax on sales for property tax relief.

**User Fees** – User fees are fees collected from those who utilize a service or facility. The fees are collected to pay for the cost of a facility, finance the cost of operations, and/or generate revenue for other uses. User fees are commonly charged for public parks, water and sewer services, transit systems, and solid waste facilities.

**Special Assessments** – Special assessment is a method of generating funds for public improvements, whereby the cost of a public improvement is collected from those who directly benefit from it. In many instances, new streets are financed by special assessment. The owners of property located adjacent to the new streets are assessed a portion of the cost of the roadway, based on the amount of footage they own adjacent to the transportation improvement.

**Impact Fees** – Development impact fees have been generally well received in other states and municipalities in the U.S. New developments create increased traffic volumes on the streets around them. Development impact fees are a way of attempting to place a portion of the financial burden on

developers who are creating or adding to the need for improvements. The Texas Legislature has granted cities but not counties the authority to impose impact fees.

**Obligation Bonds**–General obligation bonds are issued by local governments upon approval of the voting public and are backed by the taxing authority of the jurisdiction. Revenue bonds are backed by revenue forecasts, such as projected revenue from utility service. A third type of bond financing, certificates of obligation, do not require voter approval.

## Innovative Financing

One way to combine federal funding with revenue bonds or other financing is through the use of various innovative finance strategies. Revenue bonds hold some promise for financing transportation projects, but they require a predictable revenue stream that can be used to underwrite the repayment over time.

**Integration of Anticipated Federal Funds with Debt Instruments**
The USDOT has authorized various innovative finance strategies that can be used to leverage federal program funds. Although attractive in concept, it should be noted that, except in limited cases, these techniques do not provide additional funds; they primarily provide leverage to existing funds by allowing federal program dollars to be integrated in some way with debt instruments.

An example of this type of funding program is the State Infrastructure Bank (SIB), a revolving loan fund administered by TxDOT. The SIB operates as a revolving loan fund, where the account balance grows through the monthly interest earned and repaid principal and interest payments.

SIB financial assistance can be granted to any public or private entity authorized to construct, maintain, or finance an eligible transportation project. Projects must be eligible for funding under the existing federal highway rules to comply with SIB requirements. This usually requires a project to be on a state's highway system and included in the statewide Transportation Improvement Plan.

Work eligible for the program's funding in Texas includes planning and preliminary studies; feasibility, and environmental studies; right of way acquisition; surveying; appraisal and testing; utility relocation; engineering and design; construction; inspection and construction engineering.

## Pass-Through Financing

There are many on-state system projects that are priorities for local jurisdictions that TxDOT does not have funding to build in the short term. Local jurisdictions have the option to pay for the preliminary engineering and construction of a project and get reimbursement by TxDOT over a negotiated time frame. This funding mechanism is called a pass-through finance agreement, where per vehicle payments are made to TxDOT by a third party, such as a sponsoring local government, and not by facility users. Hays, Travis, and Williamson Counties have executed pass-through finance agreements with TxDOT to advance locally important projects on the state-maintained system that would otherwise not be funded by TxDOT for many years.

## 5.2 Conceptual Cost Estimates

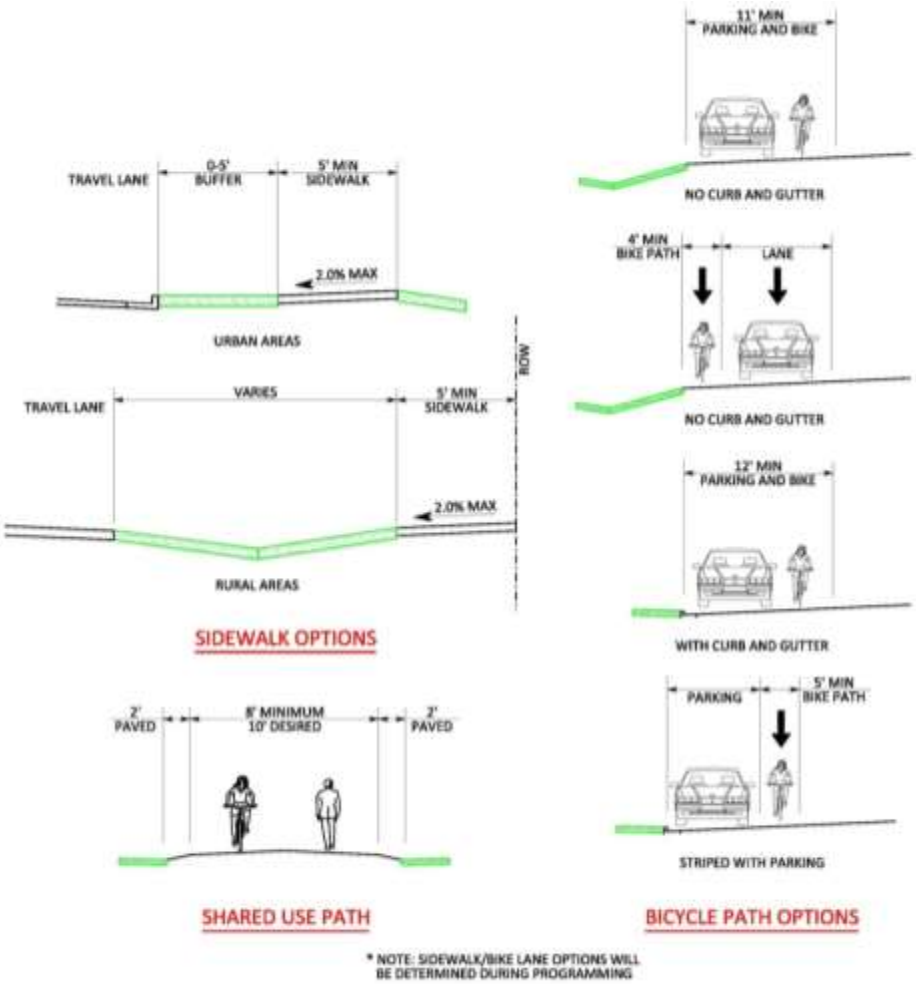
The CCTP was developed at the countywide network or system level. Field verification of constraints was not performed and the engineering effort was the conceptual level. All of the locations for new roadways are approximate and need additional engineering and environmental evaluation to determine the exact location. Similarly, the projects for pavement rehabilitation, widening for shoulders and/or additional travel lanes, or surfacing of gravel roads need additional analyses to determine the specific details of each project.

Conceptual-level cost estimates were prepared for the CCTP projects by developing a typical roadway cross-section for each type of improvement. These typical sections were then used to generate construction quantities on a per-mile basis. Recent construction prices for the TxDOT Austin District were used to develop unit costs for paving, base material, bridges, sidewalks, curb and gutter, striping and signage. Several items were estimated as a cost of construction, such as mobilization, small drainage structures, traffic control, contingency, and construction engineering and inspection. Details of the estimating process are included in **Appendix D**.

**Typical Sections**

Typical sections provide a graphical representation of how the roadway will generally look, including the number and widths of travel lanes, shoulder widths, median widths, bicycle and pedestrian facilities, and ROW widths based on TxDOT design standards and American Association of State Highway and Transportation Officials requirements. A separate set of typical sections for bicycle and pedestrian facilities is provided in **Figure 5.2-1** to show various options. The decision on which, if any, of these typical sections to use will be made during detailed development of a project. For cost estimating purposes, sidewalks and bicycle lanes are included on all projects within the city limits of Lockhart and Luling. **Figures 5.2-2** through **5.2-5** depict the typical sections created for the CCTP.

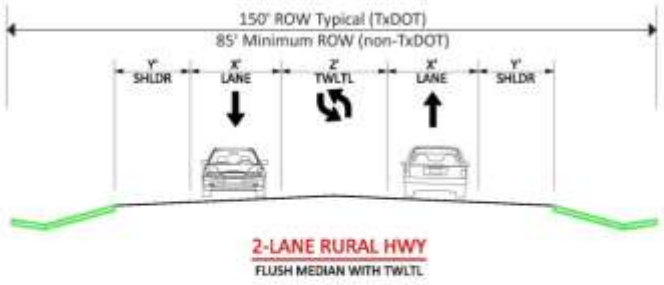
**Figure 5.2-1 Bicycle and Pedestrian Facilities**

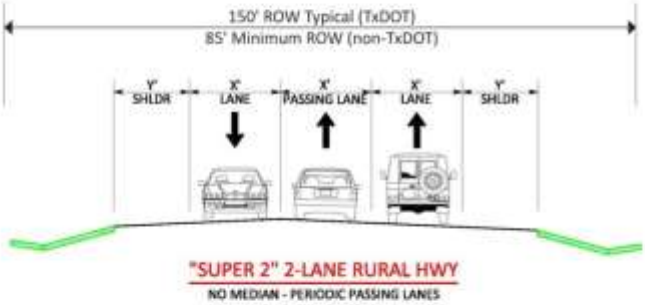


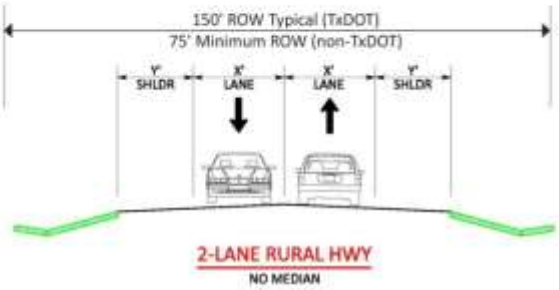

NOT TO SCALE

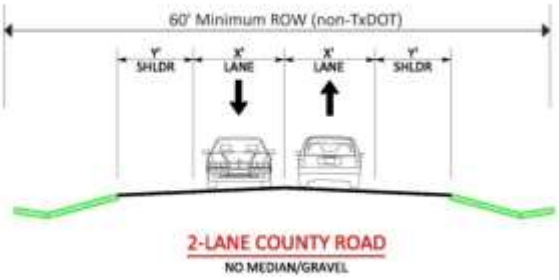
**Figure 5.2-2** shows typical section options for two-lane roadways in rural settings. Lane and shoulder widths may vary depending upon the functional classification of the roadway and the traffic volume. The "Super 2" design is a recent TxDOT designation that provides long passing lanes (up to one-mile long) at intervals of every four to five miles. This design is generally used where there is heavy truck traffic or agricultural equipment, but not enough traffic volume to justify widening the roadway to four lanes.

**Figure 5.2-2 Typical Section Options for Two-Lane Rural Highways**




NOT TO SCALE

| Design Speed (mph) | Width (ft) of TWLTL "Z" | |
|---|---|---|
| - | Desirable | Minimum |
| ≤ 40 | 12-14 | 11 |
| 45-50 | 14 | 12 |
| >50 | 16 | 14 |

NOTE: TWO-WAY LEFT TURN LANE (TWLTL) WIDTHS BASED ON URBAN STREET DESIGN. NO SET STANDARD FOR TWLTL ON RURAL ROADS IS DEFINED IN THE LATEST TXDOT ROADWAY DESIGN MANUAL. SEE TABLE 3-2 IN THE ROADWAY DESIGN MANUAL 2018 FOR DETAILS.

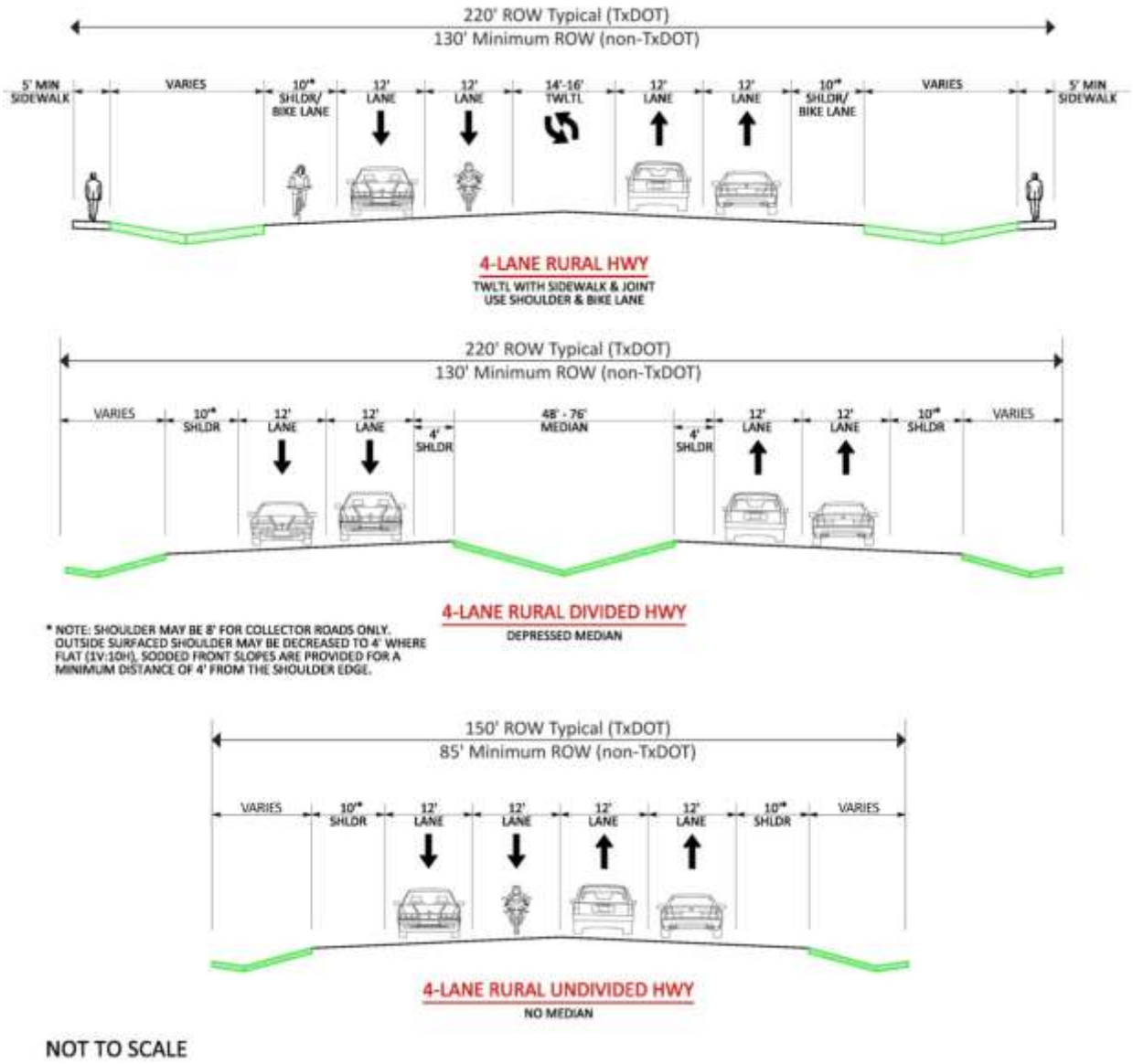
| Functional Class | Design Speed (mph) | Minimum Width (ft) for future ADT of: | | | |
|---|---|---|---|---|---|
| - | - | < 400 | 400 - 1500 | 1500 - 2000 | > 2000 |
| Arterial | | LANES "X" (ft) | | | |
| - | All | 12 | | | |
| - | | SHOULDERS "Y" (ft) | | | |
| - | All | 4 | 4 or 8 | 8 | 8 - 10 |
| Collector | | LANES "X" (ft) | | | |
| - | 30 - 45 | 10 | 10 | 11 | 12 |
| - | 50 - 55 | 10 | 10 | 12 | 12 |
| - | 60 - 70 | 11 | 11 | 12 | 12 |
| - | 75 - 80 | 11 | 12 | 12 | 12 |
| - | | SHOULDERS "Y" (ft) | | | |
| - | All | 2 | 4 | 8 | 8 - 10 |
| Local | | LANES "X" (ft) | | | |
| - | 30 - 50 | 10 | 10 | 11 | 12 |
| - | | SHOULDERS "Y" (ft) | | | |
| - | All | 2 | 4 | 4 | 8 |

SOURCE: TXDOT ROADWAY DESIGN MANUAL 2018, SEE TABLE 3-8 FOR ADDITIONAL PAVEMENT DETAILS.

** CALDWELL COUNTY PREFERS MINIMUM 11' ON COUNTY ROADS

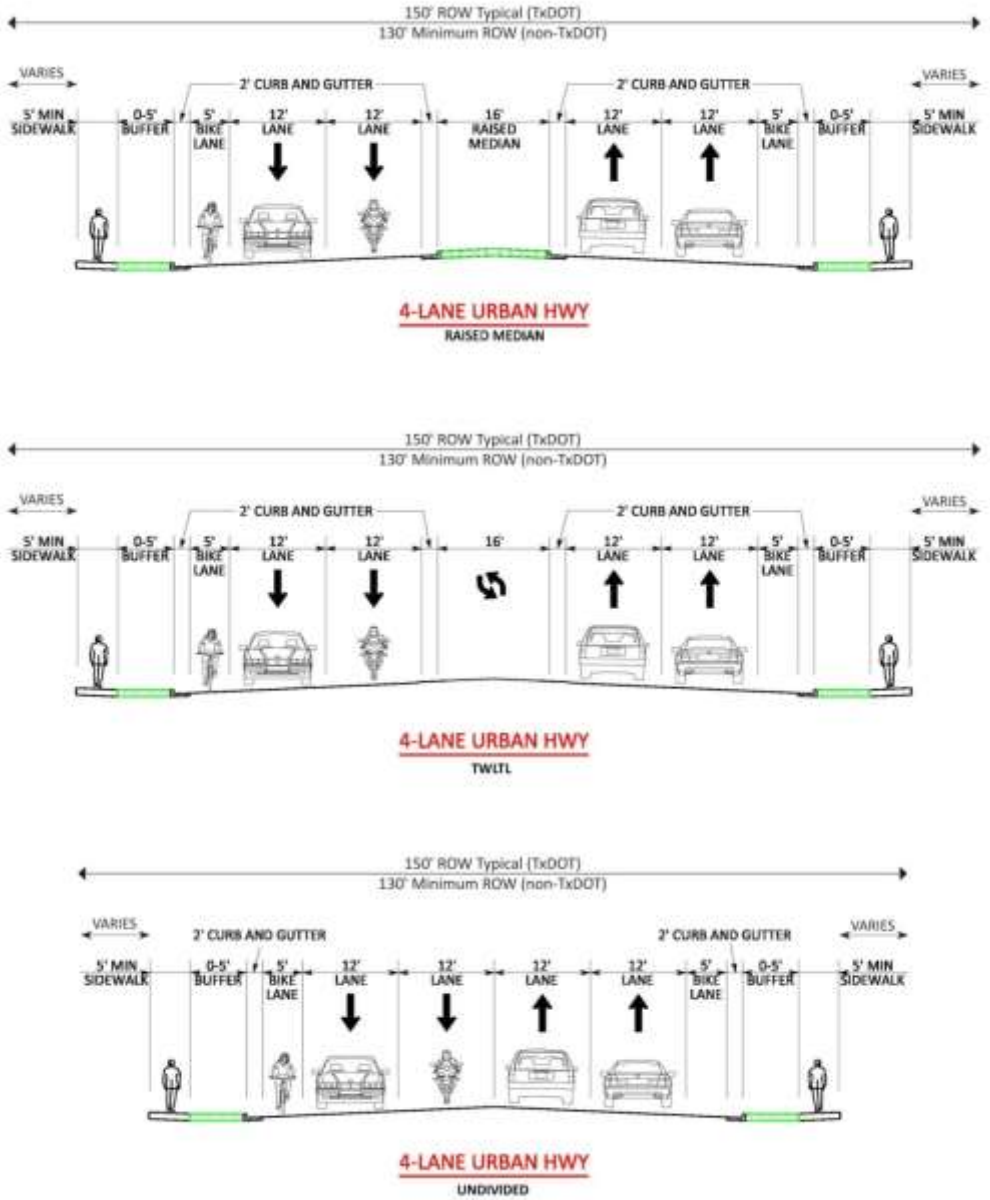
**Figure 5.2-3** shows typical section options for four-lane roadways in rural settings. As with two-lane roadways discussed above, the appropriate bicycle and pedestrian facilities will be determined during detailed project development. ROW width will be determined on applicable design standards, bicycle and pedestrian facilities, and terrain.

**Figure 5.2-3 Typical Section Options for Four-Lane Rural Highways**



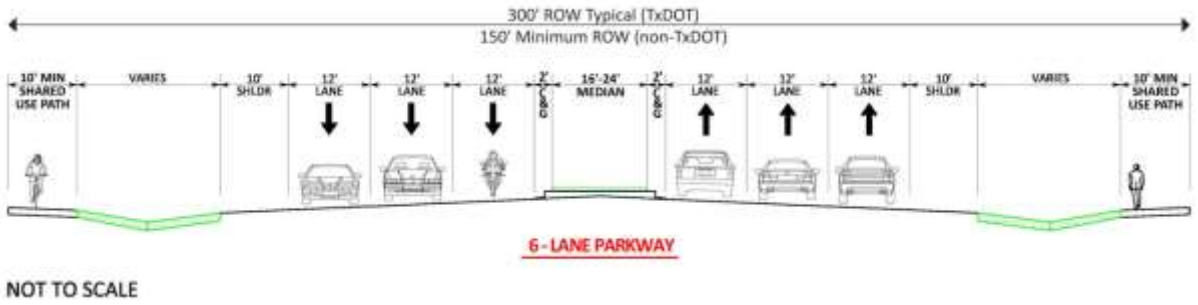
Urban 4-lane roadways, shown in **Figure 5.2-4**, should provide features for bicyclists and pedestrians since this is area of emphasis for both CAMPO and FHWA.

**Figure 5.2-4 Typical Section for Four-Lane Urban Highway**




Where there is a need for loop highways or relief routes, such as the FM 110 Loop around San Marcos, the typical section may be much larger to preserve room for future frontage roads if the sponsoring agency chooses to control access to the travel lanes. Loop highways in suburban areas may be built as a parkway, with either a raised or depressed median. Amenities for bicyclists and pedestrians should be provided within the roadway typical section, even if construction of these elements is not included in the initial construction phase. **Figure 5.2-5** shows the ultimate typical section for FM 110.

**Figure 5.2-5 - Typical Section for Six-Lane Parkway**




## Cost Estimating Methodology

Since the CCTP is a system plan and does not have specific details for each identified project, the cost estimates are based on the proposed typical section, location, floodplain crossing width, and if a railroad grade separation is included. Roadway costs were based on the proposed typical sections using recent TxDOT Austin District bid information. Assumptions used in developing cost estimates include:

- Floodplain maps were used to estimate bridge length needed to span the 100-year floodplain for mobility projects. This assumption provides a conservative design and higher cost than may be determined necessary during project development.
- Improvements to existing drainage structures crossing intermittent streams and 100-year floodplains were not included in cost estimates for the maintenance projects.
- Lengths for linear items, such as sidewalks, curb and gutter, concrete medians, signage and pavement markings, etc., are based on the full project length, without any deductions for driveways or intersections.
- Pavement options include:
    - Construct 12-inch flexible base course with 2-inch asphaltic concrete pavement (ACP) overlay
    - Full depth asphalt construction (excavate 12 inches and construct 10 inches ACP base course and 2-inch ACP surface)
    - Rework of 12 inches of existing gravel road and add surface treatment (i.e., chip seal)
    - New gravel road (rework existing base material and add surface treatment)
    - Notch and Widen Options: full depth asphalt construction (excavate and construct 10 inches of ACP base course and 2-inch ACP surface) for the new pavement area with 2-inch ACP overlay on existing travel lanes

While the roadway items can be easily determined from the length of each project and the bridge costs can be estimated from the floodplain crossings, there was not sufficient detail to estimate the other items that are provided in a detailed construction cost estimate. Therefore, cost assumptions based as a percentage of quantifiable roadway and bridge costs, include:

- Preparing ROW – 1%
- Small Drainage Structures – 7%
- Contingency – 20%
- Mobilization – 10%
- Traffic Control – 5%
- Construction Engineering & Inspection – 10%

The resulting construction cost estimates will need to be refined once projects are selected for implementation and details specific to individual projects are available.
**Table 5.2-1** provides the summary of estimated construction costs for the different types of mobility and enhancement options on a cost-per-mile basis. Additional information on cost estimates is provided in **Appendix D**. The cost estimates are for construction only. Costs for preliminary engineering, detail design, environmental analysis, ROW acquisition, relocation assistance, and utility adjustments are not included.

**Table 5.2-1 Estimated Roadway Costs per Mile**

| Typical Section | $ Million/ mile* |
|---|---|
| 4-Lane Urban w/16'median, sidewalks | $ 5.29 |
| 6-Lane Urban w/16' median, sidewalks | $ 6.94 |
| 6-Lane Parkway, 20' raised median, 1-10' Shared Use Paths | $ 7.44 |
| 4-Lane Rural w/ TWLTL(w/ sidewalks) | $ 5.82 |
| 4-Lane Rural Divided | $ 4.78 |
| 4-Lane Rural Undivided | $ 4.22 |
| 4-Lane Rural w/ TWLTL (no sidewalks) | $ 5.21 |
| 2-Lane Rural w/ TWLTL | $ 3.24 |
| Super 2 - 2 Lane Rural | $ 2.75 |
| 2-Lane Rural (no median) | $ 2.49 |
| 2-Lane County Road | $ 0.82 |
| Notch & Widen for 8-foot Paved Shoulders | $ 1.27 |
| Notch & widen 2 lane highway to add 10-foot paved shoulders | $ 1.51 |
| Notch & widen 4-lane undivided to 6-lane divided, rural, 1 shared use path | $ 3.36 |
| Notch & widen 4-lane undivided to 6-lane divided, urban w/sidewalks | $ 4.44 |

*Costs do not include bridges

## 5.3 Project Evaluation Criteria

In order to rank the various projects, an evaluation matrix was created to compare projects. Preliminary criteria measures that related to the overall goals for the CCTP were discussed with the Advisory Committee, and reduced to those that provided measurable and distinct results. Since many of the criteria would not be applicable to maintenance projects, they were scored separately from the mobility and enhancement projects. An overview of the evaluation criteria by CCTP goal for projects is provided below. Criteria for maintenance projects were limited to pavement condition, crash history, environmental, and connectivity (i.e., is the road a dead end). Additional information on each evaluation matrix is provided in **Appendix E.**

**Maintain the Existing Roadways**
The two elements included under this criteria were the pavement condition and if the road needed to be paved. Pavement condition score was based on TxDOT pavement condition scores for state highways and a visual inspection of all county roads as part of the CCTP effort. This assessment also categorized roads as paved or gravel so that estimates would include a surface treatment to pave the gravel roads.

**Improve Connectivity**
As growth occurs in the future, new roads will be needed as well as additional capacity on several of the existing roadways. The two elements included under this criteria were "New or Existing Roadway" and "Connections between Major Corridors" as defined below.

- "New or Existing Roadway" provided points based on the type of improvement, with new roadways scoring maximum points, and in descending order adding lanes scoring second best, adding shoulders and then rehabilitation of existing roadway scoring least.
- "Connections between Major Corridors", such as between IH 35, SH 130, US 183, and/or IH 10 were scored with IH 35 to SH 130 as maximum points, SH 130 to US 183 as the next highest, between US 183 and IH 10 as next to lowest ,and no connections scored least.

**Improve Safety**
The safety criteria was evaluated using crash history for the preceding three complete calendar years, proximity to a school, if the project was adding paved shoulders, and the percent truck traffic based on TxDOT traffic data.

- Crash data for 2009, 2010, and 2011 were obtained from the TxDOT Crash Records Information System. Since the proposed projects are of varying lengths, the number crashes was divided by project length to provide a score in terms of crashes per mile. The maximum points were scored if a project had an average of over three crashes during the three-year period.
- Proximity to schools was score with "adjacent" receiving the maximum score to "over 0.5 mile" receiving zero points.
- "Providing paved shoulders" was considered on a yes/no basis only. The width of the proposed shoulder was not considered.
- Percent truck traffic was ranked with "over 20%" receiving the maximum points, down to "less than 10%" scoring the least points.

**Consider All Modes**
The first iterations for this criteria included criteria that measured a proposed project for bicycle and pedestrian facilities, compatibility for transit, and freight rail. Once the evaluation process began, it was decided that compatibility for transit could be eliminated because there are no fixed routes in the cities that could be evaluated design issues related to transit.

- Bicycle and pedestrian accommodation was scored on four items:
    - Does the project include bicycle and pedestrian features?
    - Does the project include work to bring existing sidewalks into compliance with Americans with Disabilities Act (ADA)?
    - Does the project complete or partially complete a gap in an identified bicycle or pedestrian network or trail?
- Does the project cross a railroad? If the answer is yes, by which method (grade separation, new crossing or existing crossing.

**Support Economic Development**
The economic development criteria were initially considered using three criteria: nodal development, future land use, and industrial growth. Access to future rail spurs was considered but not used since the alternatives for the freight railroad relocation had not been released at the time of this report.

- Nodal development measured how many existing or planned activity centers would be served by the proposed project. Projects were deemed to as serving existing or planned activity centers based on city limit boundaries with any project crossing or directly feeding areas within the city limit. Large planned residential and mixed-use developments were classified as "activity centers".
- Future land use criteria included service to planned developments, measured as how many new developments would be served by the proposed project, and potential for donation of ROW by developers, as a percent of the total ROW needs.
- Industrial growth was evaluated by the proximity of the proposed project to either of the two existing industrial parks in Lockhart and Luling, as well as to the planned industrial land use in the Centerpoint development in west Lockhart. After the initial scoring of the projects, less than 12 projects received points under this measure, so was removed from the matrix.

The CCTP process recognized that Lone Star Rail District is evaluating corridors for relocating freight rail to the east of IH 35. As that study moves into the next phase, preliminary engineering and environmental, access to future rail spurs may be an additional criteria to be considered in the update to the CCTP.

**Support Tourism**
Tourism is an important aspect of the local economy. Weekend activities include floating or canoeing on the San Marcos River, bicycling, and shopping in the historic downtowns and other destinations. Initial discussions on evaluation criteria included "access to destinations" and "safety for tourism". Applying "access to destinations" to proposed projects was dependent upon the definition of a destination, which was determined to be more applicable for this report. Similarly, "safety for tourism" was generating the same scores as bicycle and pedestrian facilities inside city limits or the same scores as adding paved shoulders outside of the cities. Consequently, "safety for tourism" was determined to be a duplicate criteria and eliminated from the matrix.

**Preserve Quality of Life**
Although Caldwell County is poised for the anticipated growth because of its proximity to Austin and San Marcos, the Advisory Committee included this goal to recognize the historic and cultural value of agriculture. Points for "farm access" were granted if the proposed project was an FM highway or county road as scored determined based on the project's designation as an FM or county road. AADT data was collected when available but not used in project evaluation. A project was categorized as "enhancing downtown area" if it went through or connected to downtown areas, thereby improving traffic flow to downtown. Since the cities will be responsible for projects located inside of city limits, this criterion was removed from the evaluation matrix. Historic locations were determined based on the state's historic location database including historic houses, churches, and cemeteries. "Minimize impacts to historic/scenic areas" was included in the initial criteria, but later eliminated as the definition of "scenic" is subject to interpretation and there were less than 10 projects that were near historic properties.

**Preserve and Protect the Environment**
While there are numerous environmental considerations that are evaluated at the project level, the length of roadway crossing 100-year floodplains and bottomland hardwoods were the two best measures for comparing projects at the network level for the CCTP. The scoring for this criterion was

determined by taking into account the total floodplain width in linear feet a project crossed, as well as the length of hardwoods impacted by the construction of a new road. Hardwoods were deemed most significant to and characteristic of ecological growth and included evergreens, live oaks, shin oaks, post oak, and red cedars.

**Compatibility with Other Plans**
This criteria awarded points to projects that were identified in previous plans including but not limited to:

- Luling Master Plan
- Lockhart Thoroughfare Plan
- CAMPO 2035 Regional Transportation Plan
- CAMPO Regional Bike Plan
- San Marcos Thoroughfare Plan
- Envision Central Texas
- Lockhart Sidewalk and Trail Map
- Luling 2012 Economic Development Plan
- Austin Regional Freight Transportation Plan
- Lone Star Rail District Rail Relocation Feasibility Study

## 5.4 Project Priorities

**Mobility and Enhancement Projects**
**Figure 5.4-1** shows the locations of the proposed mobility and enhancement projects. Because new location roadway projects did not have data for several of the criteria, the projects were sorted into two groups, new roadways and existing roadways. This grouping made it easier to compare similar types of projects. **Table 5.4-1** shows the prioritized list of projects for existing roadways and their estimated construction costs, and **Table 5.4-2** shows the same information for new roadways. The ranking indicates how well a project meets the goals established for the CCTP and how a project compares with the others in its category. The ranking process does not necessarily indicate the order in which projects will move to construction since other factors, such as the availability of funding and rate of construction in the new residential developments, will need to be considered. **Appendix B** includes the project list sorted by road number or name.

Revisions to the project tables and maps made in response to comments on the draft report include:

- Combining segments to make a complete project from SH 130 to US 183 along Westwood Road.
- Removing the western alternative for the Luling relief route from the ranking and travel model.
- Inclusion of a proposed timeframe for implementing projects.

**Maintenance Projects**
**Figure 5.4-2** shows the locations of the proposed county maintenance projects and the pavement condition scores. **Table 5.4-3** provides the prioritized list of maintenance projects for county roads based on the following criteria: pavement condition, crash history, environmental, and connectivity. The list includes only those county roads that were rated as poor or very poor. Additional information may be needed to develop a specific program of work for these roads, such as traffic volumes and oil and gas activity. **Appendix B** includes the project list sorted by road number.

**Figure 5.4-1 Proposed Mobility and Enhancement Projects**

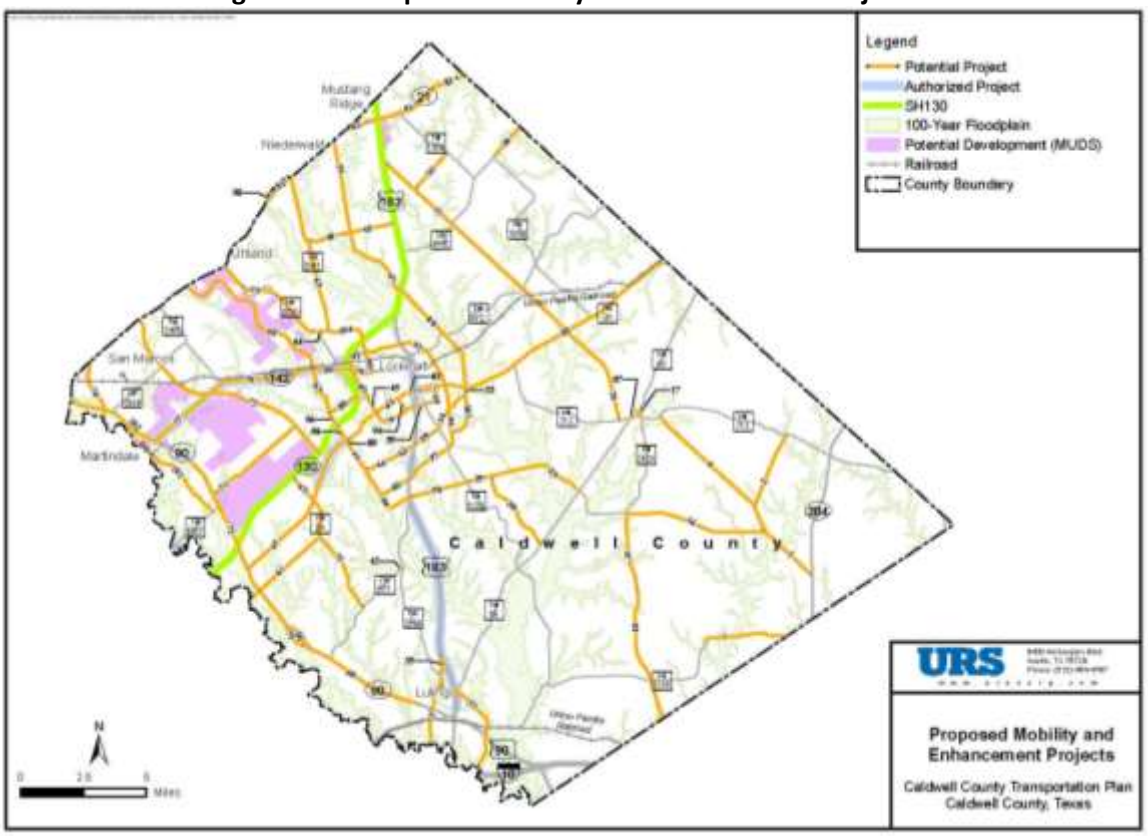
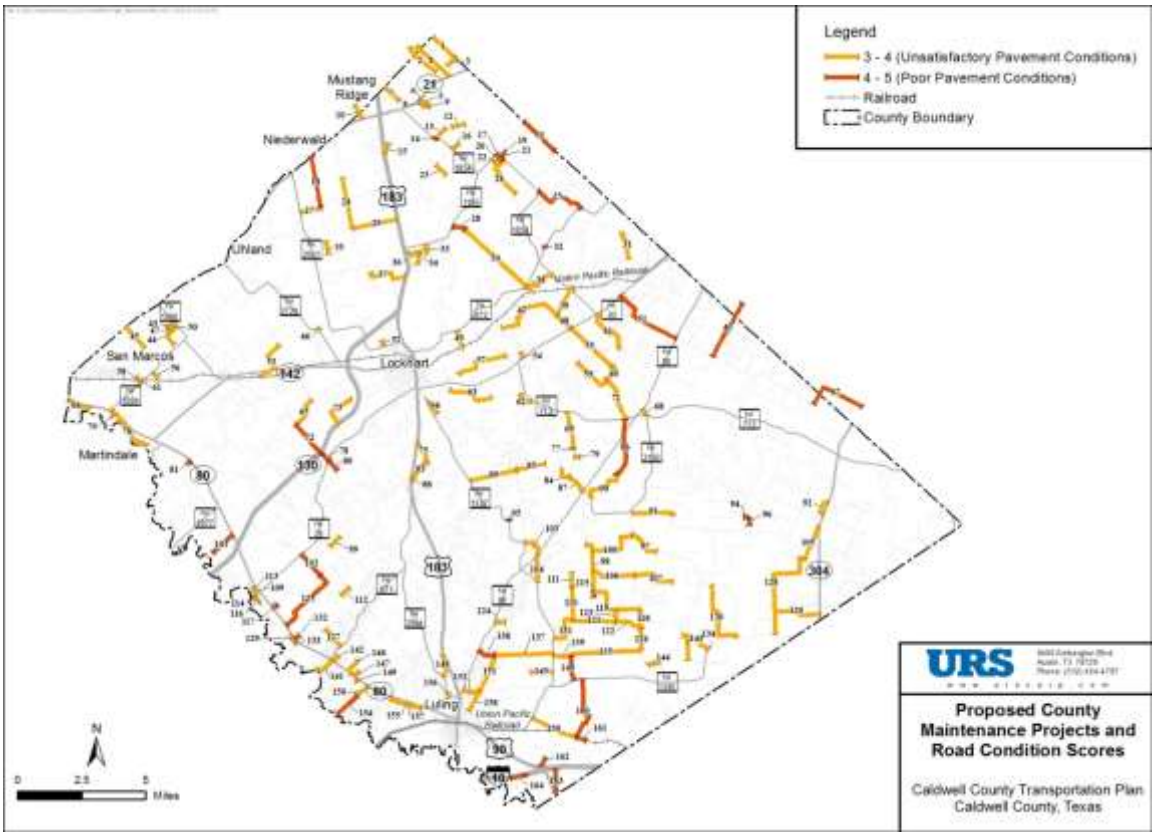



**Figure 5.4-2 Proposed Maintenance Projects**



**Top 10 Roadway Projects**

**Figure 5.4-3** shows the top 10 existing roadway improvements, while **Figure 5.4-4** shows the top 10 new location roadway improvements to assist Caldwell County with prioritization.

**Figure 5.4-3 Top 10 Existing Road Improvements**

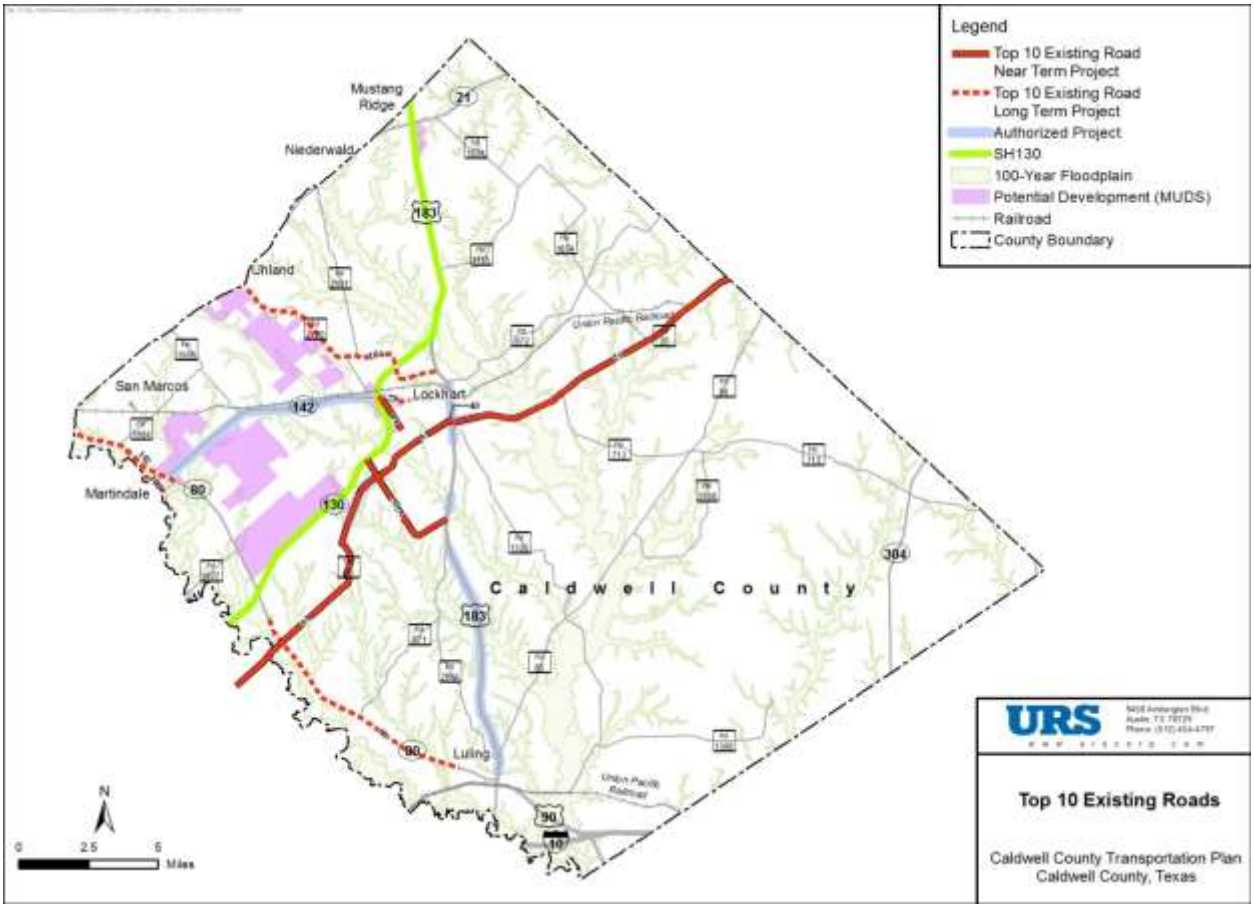
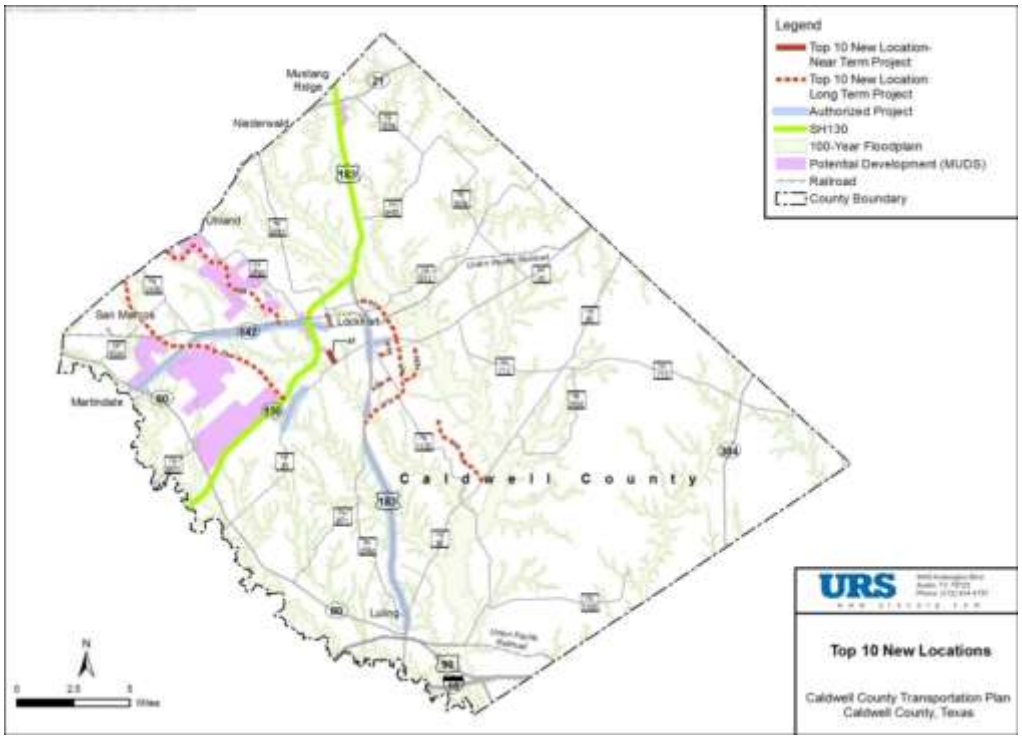


**Figure 5.4-4 Top 10 New Location Improvements**




**Top 20 Maintenance Projects**

**Figure 5.4-5** shows the top 20 maintenance projects to assist Caldwell County with prioritization.

**Figure 5.4-5 Top 20 Maintenance Projects**

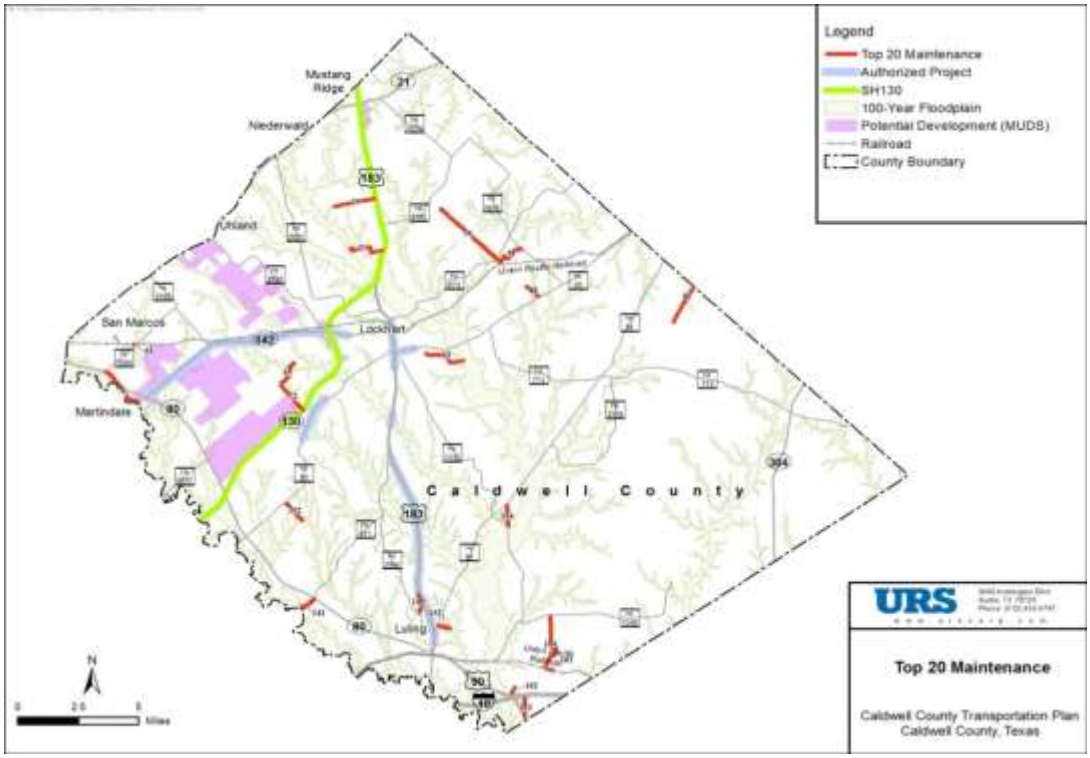


**Table 5.4-1 Existing Roadway Projects by Rank**

| Map ID | Road Number | Road Name | Limits | Improvement (See Section 5.2 for Typical Section Options) | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 102 | SH 80 | | County Line Road to FM 1979 | Widen to 6 lane w/raised median | TxDOT | 4.13 | $45.83 | | 44 | 1 | Long Term |
| 79 | SH 142 | | SH 130 to Hummingbird Road | Widen to four lanes | TxDOT | 1.15 | $6.09 | | 43 | 2 | Long Term |
| 60 | SH 80 | | CR 111/Political Rd to Luling City Limit | Widen to four lanes | TxDOT | 13.36 | $18.51 | | 41 | 3 | Long Term |
| 61 | FM 20 | State Park Road | US 183 to SH 80 | Add paved shoulders | TxDOT | 13.36 | $57.16 | | 39 | 4 | Near Term |
| 40 | FM 20 | | Realign FM 20 at US 183 intersection | Realign FM 20 to eliminate a traffic signal | TxDOT/Lockhart | 0.43 | $0.36 | | 37 | 5 | Long Term |
| 26b | FM 20 | | US 183 to Bastrop County Line | Widen to four lanes | TxDOT | 11.48 | $92.70 | | 36 | 6 | Long Term |
| 104 | FM 2720/ FM 2001 | | SH 21 along FM 2720, then to FM 2001 along County View Rd to US 183 | Provide 4 lanes as continuation of the proposed Kyle Pkwy Extension in Hays County | TxDOT | 8.68 | $44.92 | | 36 | 6 | Long Term |
| 26a | FM 20 | | US 183 to Bastrop County Line | Add paved shoulders | TxDOT | 11.48 | $17.91 | | 34 | 8 | Long Term |
| 100 | CR 103 | NW River Road | SH 80 near FM 1984 to Main Street | Upgrade two lane road to current standards | Martindale | 2.47 | $17.35 | | 34 | 8 | Long Term |
| 49 | | City Line Road | SH 142 to Clear Fork Road | Rehab and widen to 4 lanes | Lockhart | 1.32 | $6.98 | | 34 | 8 | Near Term |
| 72 | SH 80 | | W. Ridge Road to Political Road (CR 111) | Widen to four lanes | TxDOT | 4.83 | $39.01 | | 33 | 11 | Long Term |
| 63 | FM 2001 | Silent Valley Road | Widen shoulder and realign at SH 21 | Realign at SH 21 intersection and widen shoulders | TxDOT | 8.00 | $11.67 | | 33 | 11 | Long Term |
| 101 | CR 103 | SE River Road | Main Street to FM 1977 | Upgrade two lane road to current standard and pave gravel portion | Martindale/County | 3.40 | $16.75 | | 33 | 11 | Long Term |
| 77 | SH 142 | | SH 80 to Yarrington Road Extension | Widen to four lanes | TxDOT | 2.89 | $27.71 | | 31 | 14 | Long Term |
| 89 | FM 20 | | FM 20 and Westbrook Intersection | Address safety issues/ sight distance problem | County/TxDOT | 0.31 | $0.85 | | 31 | 14 | Long Term |
| 69 | SH 142 | | FM 150 Extension to SH 130 | Widen to four lanes | TxDOT | 1.55 | $13.15 | | 30 | 16 | Long Term |
| 56 | CR 218 | Boggy Creek Road | 0.5 mi N of SH 130 to SH 130 | Upgrade and pave road | County | 0.52 | $0.44 | | 28 | 17 | Long Term |
| 35 | CR 309 / US 183 | | US 183 to FM 2984, begin Luling West Relief Route Alternative | Upgrade to 4-lane divided (not the preferred conceptual alternative) | County | 0.86 | $0.72 | | 28 | Not Ranked | Long Term |
| 42 | CR 643 | | CR 643 | Upgrade and pave road | County | 1.06 | $3.76 | | 28 | 17 | Long Term |
| 50-A | CR 215 | Old Fentress Road/ Westwood Road | SH 130 to US 183 (Combines Project Map IDs 44, 50 and 85) | Surface and widen to four lanes | County | 4.43 | $4.89 | | 28 | 17 | Near Term (Potential Concession Funding) |
| 83 | SH 21 | | East of SH 130 to Bastrop County Line | Widen to four lanes | TxDOT | 3.43 | $30.88 | | 27 | 20 | Long Term |
| 80 | CR 218 | Boggy Creek Road | SH 130, southwest to Project Map ID 56 | Upgrade and pave road | County | 1.28 | $5.59 | | 27 | 20 | Long Term |
| 82 | SH 21 | | Hays County Line west of Mustang Ridge to existing 4-lane section | Widen to four lanes | TxDOT | 0.96 | $10.18 | | 26 | 22 | Long Term |
| 50 | CR 215 | Old Fentress Road | SH 130 to FM 20 | Improve and add surface | County | 0.69 | $0.58 | | 25 | See Project 50-A | |
| 85 | CR 215 | Westwood Road | CR 215 to US 183 option | Long term planned, existing, upgrade, paved | County | 1.41 | $1.18 | | 24 | See Project 50-A | |

| Map ID | Road Number | Road Name | Limits | Improvement (See Section 5.2 for Typical Section Options) | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50-B | CR 215/ CR 214 | Old Fentress Road/ Westwood Road/ Graham Road | SH 130 to US 183 via new location between CR 215 and CR 214 | Surface and widen to four lanes; partial new location | County | 4.74 | $6.30 | | 24 | 23 | Near Term (Alternative to 50-A) |
| 81 | SH 21 | | FM 2001 to Caldwell/Hays County Line | Widen to four lanes | TxDOT | 1.59 | $16.63 | | 23 | 25 | Long Term |
| 78 | SH 142 | | Yarrington Road Extension to FM 150 Extension | Widen to four lanes | TxDOT | 4.03 | $27.74 | | 23 | 25 | Long Term |
| 44 | CR 2125 | | FM 20 to US 183 | Long-term Planned, Existing, upgrade, Paved | County | 2.33 | $3.13 | | 23 | See Project 50-A | |
| 65 | CR 244 | Spoke Hollow Road | CR 110/Long Rd. to CR 111/Political Rd. | Upgrade and pave road | County | 1.21 | $1.02 | | 23 | 25 | Long Term |
| 71 | CR 107 | Dickerson Road | SH 80 to CR 109/CR 109A (Tower Rd/ Black Ankle Rd intersection | Upgrade to 2-lane paved road | County | 4.30 | $13.18 | | 22 | 29 | Long Term |
| 32 | CR 179 / CR 164 | Hommanville Trail/ Barth Road / Tumbleweed Trail/ Old Colony Line Road | US 183/ SH 130 to FM 20 | Upgrade and pave road with new at-grade RR crossing | TxDOT | 9.92 | $15.15 | | 22 | 29 | Long Term |
| 91 | SH 21 | | East of SH 130 to Bastrop C/L | Add shoulders | TxDOT | 4.11 | $9.71 | | 20 | 32 | Long Term |
| 36 | CR 178 | | FM 1854 to CR 179 | Improve and add surface | County | 1.94 | $1.63 | | 20 | 32 | Long Term |
| 33 | CR 203 | Shady Hollow Road | FM 20 to Old McMahan Rd | Upgrade and add surface | County | 0.27 | $0.66 | | 20 | 32 | Long Term |
| 90 | SH 21 | | Hays C/L to east 3,170 ft. | Add shoulders | TxDOT | 0.60 | $1.26 | | 19 | 35 | Long Term |
| 1 | CR 151 | Sandy Fork Road | SH 304 to proposed Project Map ID 2 | Improve and add surface | County | 3.49 | $6.83 | | 19 | 35 | Long Term |
| 54 | CR 221 / CR 222 | Schulke Road | SH 21 to Rolling Ridge Rd | Upgrade and pave road | County | 4.02 | $16.17 | | 18 | 37 | Long Term |
| 64 | CR 235 | County View Road | FM 2720 and FM 2001 | Realign CR between FM 2720 and FM 2001, possibly redesignate as FM 2720 | County | 0.76 | $0.64 | | 18 | 37 | Long Term |
| 39 | | MLK Industrial Blvd | US 183 to FM 1322 | Add striping and redesignate as FM 1322 | Lockhart | 0.40 | $0.33 | | 18 | 37 | Long Term |
| 70 | FM 2720 | | Cottonwood Trail to Bobwhite Road | Proposed realignment of curves | TxDOT | 1.57 | $3.91 | | 17 | 40 | Long Term |
| 67 | CR 111 | Political Road | SH 80 to FM 20 | Upgrade to 2-lane paved road | County | 3.83 | $10.28 | | 17 | 40 | Long Term |
| 18 | CR 139 | Harwood Road/ Tenney Creek Road/ Smith Farm Road | Gonzalez County Line to Pearl Trail | Realignment of existing road | County | 5.30 | $6.69 | | 17 | 40 | Long Term |
| 7 | CR 150 | Kirk Corners | FM 1386 to Gonzalez County Line (then to SH 304) | Realignment of existing road, add surface | County | 3.49 | $8.66 | | 17 | 40 | Long Term |
| 24 | CR 160 | Old Colony Line Road | FM 20 to FM 713 | Proposed realignment | County | 4.18 | $8.11 | | 17 | 40 | Long Term |
| 48 | CR 222 | Schulke Road | CR 221/ Rolling Ridge Road to SH 130 | Upgrade and pave road | County | 2.14 | $2.04 | | 17 | 40 | Long Term |
| 75 | SH 80 | | SH 80 at Prairie Lea | Add two-way left-turn lane in Prairie Lea | TxDOT | 1.18 | $3.79 | | 16 | 46 | Long Term |
| 43 | FM 671 | | FM 671 / FM 2984 | Reconfigure/Reconstruct intersection | TxDOT | 0.13 | $0.11 | | 16 | 46 | Long Term |
| 87 | FM 86 | | FM 86 and FM 713 intersection | Realignment for safety | TxDOT | 0.22 | $0.61 | | 15 | 48 | Long Term |
| 28 | CR 172 | County Line Road | FM 1854 at Lytton Road to Bastrop C/L and Bastrop CR 250 from C/L to FM 812 | Upgrade and realignment | County | 5.18 | $5.02 | | 13 | 49 | Long Term |
| 25 | CR 198 | Fox Lane/Young Lane | CR 197 to FM 86 | Proposed realignment and add surface | County | 1.88 | $6.95 | | 13 | 49 | Long Term |
| 29 | CR 197 | Young Lane | FM 1322, east to ProjectMap No. 25 | Upgrade roadway | County | 3.09 | $7.83 | | 12 | 51 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement (See Section 5.2 for Typical Section Options) | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | CR 253 | | Extend FM 3158 along CR 253 to FM 86 | Rehab pavement | TxDOT | 0.32 | $0.27 | | 12 | 51 | Long Term |

**Table 5.4-2 New Roadway Projects By Rank**

| Map ID | Road Number | Road Name | Limits | Improvement (See Section 5.2 for Typical Section Options) | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | CR 109 and New Location | Yarrington Road Extension | SH 21 to SH 130 at Black Ankle Road | Proposed 4-lane divided highway | County | 9.65 | $61.25 | Y | 35 | 1 | Long Term |
| 68 | FM 150 Extension | | SH 21 to SH 142 | Construct 4-lane roadway in phases with participation by developer | Developer/County | 6.89 | $38.07 | Y | 30 | 2 | Long Term |
| 45 | | City Line Road | Extend City Line Rd from Clear Fork St to FM 20 | Proposed new roadway | Lockhart | 0.67 | $3.56 | | 30 | 2 | Near Term |
| 93 | N/A | N/A | From FM 2001/US 183 intersection to FM 20 | Proposed 4-lane arterial between US 183 at FM 2001 and FM 20 (NE Lockhart Loop option) | Lockhart | 2.68 | $44.99 | Y | 30 | 2 | Long Term |
| 96 | N/A | N/A | FM 20 and CR 186/ Old Kelley Rd to FM 1322 at Center Point Rd | Proposed new roadway | County/Lockhart | 2.60 | $2.44 | Y | 30 | 2 | Long Term |
| 103 | N/A | N/A | From Project Map ID 96, approx. 2 miles south of FM 20 to Shady Hollow Rd | Proposed new roadway | County/Lockhart | 1.83 | $1.96 | Y | 30 | 2 | Long Term |
| 38 | CR 220 | | Extend CR 220 to FM 1322 | Proposed new roadway | County | 1.11 | $1.49 | | 29 | 7 | Long Term |
| 30 | NA | N/A | US 183 at Westwood Dr and FM 86 as alternative to FM 1322 in flood events | Proposed alternative to FM 1322 | County | 6.40 | $5.38 | | 29 | 7 | Long Term |
| 97 | N/A | N/A | FM 1322 at Center Point Rd to US 183 and Old Luling Rd | Proposed new roadway | County/Lockhart | 2.01 | $4.39 | Y | 28 | 9 | Long Term |
| 99 | | Mockingbird Lane | Extend Mockingbird Lane north to Horseshoe Rd | Proposed new roadway | Lockhart | 0.77 | $4.06 | Y | 27 | 10 | Long Term |
| 95 | N/A | N/A | FM 1322 at Lay Rd to FM 20/Blackjack St | Proposed new roadway | Lockhart | 1.03 | $0.86 | Y | 27 | 10 | Long Term |
| 94 | | San Jacinto Street | FM 20 to MLK Jr. Industrial Blvd. | Proposed new roadway | Lockhart | 0.61 | $1.51 | Y | 26 | 12 | Near Term |
| 37 | US 183 | | Luling West Relief Route Alternative | Proposed 4-lane divided highway (not preferred conceptual alternative) | TBD | 3.65 | $66.99 | Y | 25 | Not Ranked | |
| 76 | FM 110 | | Guadalupe County Line to Hays County Line | Proposed 4-lane divided highway | County/San Marcos | 2.45 | $23.32 | Y | 25 | 13 | Near Term |
| 98 | N/A | N/A | US 183 at Graham Rd to FM 1322 and Young Ln | Proposed new roadway | County | 2.32 | $6.98 | Y | 25 | 13 | Long Term |
| 31 | US 183 | | Luling East Relief Route Alternative | Proposed 4-lane divided highway | TBD | 4.66 | $71.81 | Y | 24 | 15 | Long Term |
| 66 | SH 80 | | SH 80 bypass at Prairie Lea | Proposed 4-lane divided highway | TxDOT/County | 1.45 | $6.92 | | 24 | 15 | Long Term |
| 86 | CR 214 | Graham Road | Connect CR 215 to US 183 via CR 214 | Alternate to Project Map ID. 85 (Included in Project Map ID 50-B on Existing Roadway list) | County | 1.73 | $2.59 | | 23 | Not Ranked | |
| 74 | | City Line Road | Extend City Line Rd south and southeast from FM 20 to and along MLK Jr. Industrial Blvd. to US 183 | Proposed 4-lane arterial | Lockhart | 1.87 | $7.45 | Y | 23 | 17 | Long Term |
| 84 | N/A | N/A | NE Lockhart bypass | Proposed 4-lane divided highway between SH 130 and FM 20 | TBD | 4.77 | $46.16 | Y | 23 | 17 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement (See Section 5.2 for Typical Section Options) | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | N/A | N/A | New location connection between CR 221 and SH 130 at Plum Creek U-turn bridge | Proposed new roadway | County | 2.99 | $5.00 | | 23 | 17 | Long Term |
| 34 | N/A | N/A | New road between FM 1322 and CR 203 | Proposed new roadway | County | 1.79 | $1.77 | | 23 | 17 | Long Term |
| 46 | N/A | N/A | New location connection between CR 215 and CR 213/Robin Ranch Rd | Proposed new roadway | County | 1.26 | $1.60 | | 22 | 21 | Long Term |
| 92 | N/A | N/A | From FM 2001/Silent Valley Rd to SH 142 at City Line Road | Proposed new roadway | Lockhart | 1.03 | $5.42 | Y | 21 | 22 | Long Term |
| 62 | N/A | N/A | SH 142 near intersection with Project Map ID 68 to CR 218 | Proposed new roadway | County | 2.02 | $5.50 | | 19 | 23 | Long Term |
| 9 | CR 161 | Sand Hill Road | FM 713 to end of road, and extend on new location to the intersection of Project Map IDs 1 and 2 | Reconstruct and extend on new location | County | 5.34 | $1.48 | | 18 | 24 | Long Term |
| 2 | N/A | N/A | FM 713 at Pine Gap Road to Extension of Sandy Fork Road | Construct road generally along property lines | County | 3.14 | $2.61 | | 17 | 25 | Long Term |
| 51 | CR 126 / CR 115 | Acorn Road and Bugtussle Lane | FM 20 to FM 671 | Improve and realign portions of road | County | 3.44 | $3.56 | | 16 | 26 | Long Term |
| 20 | CR 145 | Vine Hill Road | FM 3158 to Pearl Trail | Pave and extend on new location | County | 3.33 | $5.69 | | 16 | 26 | Long Term |
| 16 | CR 313 | Boulder Lane | FM 3158 to Red Sand Trail, then on new location to Sandy Fork Road. | Rehab and pave road, realign | County | 5.64 | $3.86 | | 16 | 26 | Long Term |
| 58 | N/A | N/A | FM 2001 at CR 227/Rocky Road to Schuelke Rd | New roadway connecting FM 2001 to SH 130 | County | 1.46 | $5.84 | | 15 | 30 | Long Term |

**Table 5.4-3 Maintenance Projects By Rank**

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 72 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 1.53 | $1.11 | 1 |
| 148 | CR 309 | BRIDLE PATH RD | CHIP | 3.5 | 0.86 | $0.62 | 1 |
| 48 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.75 | $0.54 | 3 |
| 29 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 1.81 | $1.32 | 4 |
| 76 | CR 103 | NW RIVER RD | CHIP | 3.5 | 2.11 | $1.53 | 5 |
| 65 | CR 109 | BLACK ANKLE RD | CHIP | 4.0 | 1.35 | $0.98 | 5 |
| 161 | CR 133 | IVY SWITCH RD | CHIP | 4.5 | 0.43 | $0.31 | 5 |
| 30 | CR 179 | BARTH RD | UNPAVED | 3.3 | 3.30 | $2.39 | 5 |
| 163 | CR 243 | POWELL RD | CHIP | 4.3 | 0.92 | $0.67 | 5 |
| 102 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 1.10 | $0.80 | 10 |
| 141 | CR 119 | STAIRTOWN RD | CHIP | 3.3 | 0.79 | $0.58 | 10 |
| 152 | CR 132 | DERRICK RD | CHIP | 3.3 | 0.64 | $0.46 | 10 |
| 162 | CR 136 | ARROW LN | CHIP | 4.8 | 0.43 | $0.31 | 10 |
| 160 | CR 137 | SUNFLOWER TR | CHIP | 4.5 | 2.66 | $1.93 | 10 |
| 40 | CR 159 | PETTYTOWN RD | CHIP | 5.0 | 2.46 | $1.78 | 10 |
| 38 | CR 179 | BARTH RD | CHIP | 3.3 | 1.47 | $1.07 | 10 |
| 104 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.02 | $0.74 | 10 |
| 63 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 1.88 | $1.37 | 10 |
| 37 | CR 221 | ROLLING RIDGE RD | CHIP | 3.3 | 1.73 | $1.26 | 10 |
| 61 | CR 67 | BIRCH ST | CHIP | 3.8 | 0.19 | $0.14 | 10 |
| 127 | CR 117 | MERIDIAN LN | CHIP | 4.0 | 0.91 | $0.66 | 21 |
| 55 | CR 160 | OLD COLONY LINE RD | CHIP | 3.8 | 2.18 | $1.58 | 21 |
| 15 | CR 176 | OLD LOCKHART RD | CHIP | 4.0 | 0.46 | $0.33 | 21 |
| 24 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 2.04 | $1.48 | 21 |
| 27 | CR 223 | ROGERS RANCH RD | CHIP | 3.8 | 0.83 | $0.60 | 21 |
| 68 | CR 253 | WHIZZERVILLE RD | CHIP | 3.3 | 0.32 | $0.23 | 21 |
| 109 | CR 268 | GILLIS ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 21 |
| 91 | CR 313 | BOULDER LN | UNPAVED | 3.7 | 1.75 | $1.27 | 21 |
| 44 | CR 36 | GARRETT TR | CHIP | 4.0 | 1.00 | $0.72 | 21 |
| 125 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 2.83 | $2.06 | 30 |

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 137 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 2.27 | $1.65 | 30 |
| 138 | CR 130 | SODA SPRINGS RD | CHIP | 4.3 | 0.72 | $0.52 | 30 |
| 42 | CR 164 | TUMBLEWEED TR | UNPAVED | 3.3 | 3.12 | $2.26 | 30 |
| 25 | CR 169 | ST JOHNS RD | CHIP | 5.0 | 2.14 | $1.56 | 30 |
| 4 | CR 192 | CALDER RD | CHIP | 3.5 | 1.77 | $1.28 | 30 |
| 75 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.93 | $0.68 | 30 |
| 64 | CR 102 | MARTINDALE RD | CHIP | 3.3 | 1.01 | $0.74 | 37 |
| 151 | CR 128 | SALT FLAT RD | CHIP | 3.3 | 1.52 | $1.10 | 37 |
| 140 | CR 138 | McNEIL CREEK RD | CHIP | 4.5 | 0.98 | $0.72 | 37 |
| 121 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.74 | $1.27 | 37 |
| 110 | CR 140 | WATTSVILLE RD | CHIP | 3.5 | 1.30 | $0.94 | 37 |
| 41 | CR 159 | PETTYTOWN RD | UNPAVED | 3.7 | 2.05 | $1.49 | 37 |
| 11 | CR 172 | COUNTY LINE RD | CHIP | 5.0 | 1.69 | $1.23 | 37 |
| 10 | CR 177 | WILLIAMSON RD | CHIP | 4.0 | 0.65 | $0.47 | 37 |
| 28 | CR 179 | BARTH RD | CHIP | 4.5 | 0.58 | $0.42 | 37 |
| 57 | CR 186 | OLD KELLEY RD | CHIP | 4.0 | 2.24 | $1.63 | 37 |
| 103 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.04 | $0.75 | 37 |
| 89 | CR 197 | YOUNG LN | HOTMIX | 3.3 | 1.88 | $1.37 | 37 |
| 87 | CR 198 | FOX LN | UNPAVED | 3.3 | 0.83 | $0.60 | 37 |
| 45 | CR 238 | WILLIAM PETTUS RD | CHIP | 4.0 | 1.11 | $0.81 | 37 |
| 114 | CR 275 | LUCKETT ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 37 |
| 129 | CR 281 | CHURCH AVE | CHIP | 3.3 | 0.16 | $0.11 | 37 |
| 33 | CR 402 | ALAMO DR | CHIP | 4.0 | 0.44 | $0.32 | 37 |
| 156 | | N HACKBERRY ST | CHIP | 3.5 | 0.28 | $0.20 | 54 |
| 78 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.41 | $0.30 | 54 |
| 124 | CR 129 | PUMPER RD | UNPAVED | 3.7 | 0.44 | $0.32 | 54 |
| 159 | CR 133 | IVY SWITCH RD | CHIP | 3.5 | 1.92 | $1.39 | 54 |
| 131 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.49 | $1.08 | 54 |
| 119 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.7 | 2.50 | $1.82 | 54 |
| 106 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.74 | $1.26 | 54 |
| 100 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.10 | $1.52 | 54 |
| 105 | CR 155-A | BLUEJAY RD | UNPAVED | 3.3 | 1.46 | $1.06 | 54 |
| 92 | CR 155-B | ORIOLE LP | UNPAVED | 3.3 | 0.78 | $0.57 | 54 |

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 51 | CR 158 | TAYLORSVILLE RD | CHIP | 5.0 | 2.99 | $2.17 | 54 |
| 60 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.73 | $0.53 | 54 |
| 71 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.7 | 1.80 | $1.31 | 54 |
| 90 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.3 | 1.83 | $1.33 | 54 |
| 31 | CR 168 | SANDY CREEK RD | CHIP | 3.3 | 1.15 | $0.83 | 54 |
| 1 | CR 191 | LONGHOLLOW RD | CHIP | 4.0 | 1.18 | $0.86 | 54 |
| 3 | CR 191 | PRAIRIE HILL DR | CHIP | 4.0 | 0.44 | $0.32 | 54 |
| 84 | CR 197 | YOUNG LN | UNPAVED | 4.0 | 0.64 | $0.46 | 54 |
| 69 | CR 198 | FOX LN | CHIP | 4.0 | 1.45 | $1.05 | 54 |
| 77 | CR 198 | FOX LN | CHIP | 4.0 | 0.10 | $0.07 | 54 |
| 62 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 0.73 | $0.53 | 54 |
| 66 | CR 206 | LAY RD | CHIP | 3.5 | 0.63 | $0.46 | 54 |
| 54 | CR 210 | BRITE RD | CHIP | 3.3 | 0.27 | $0.19 | 54 |
| 83 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.86 | $0.62 | 54 |
| 46 | CR 235A | COUNTY LN | CHIP | 3.5 | 0.14 | $0.10 | 54 |
| 22 | CR 291 | MEMORIAL DR | CHIP | 3.8 | 0.38 | $0.28 | 54 |
| 20 | CR 292 | HANGING OAK RD | CHIP | 4.0 | 0.34 | $0.24 | 54 |
| 157 | CR 299 | YELLOW STONE RD | CHIP | 4.0 | 0.11 | $0.08 | 54 |
| 134 | CR 301 | LONGHORN RD | UNPAVED | 3.3 | 1.12 | $0.81 | 54 |
| 120 | CR 305 | REED CREEK DR | UNPAVED | 3.3 | 1.85 | $1.34 | 54 |
| 17 | CR 312 | SUNRISE ST | CHIP | 4.3 | 0.39 | $0.29 | 54 |
| 36 | CR 400 | OAK TRAIL DR | UNPAVED | 3.3 | 0.97 | $0.70 | 54 |
| 6 | CR 76 | BRIDAL BIT LN | CHIP | 4.0 | 0.12 | $0.08 | 54 |
| 8 | CR 76 | ARABIAN STALLION RUN | CHIP | 4.0 | 0.30 | $0.22 | 54 |
| 13 | CR 96-A | COYOTE RUN RD | UNPAVED | 3.7 | 0.56 | $0.41 | 54 |
| 16 | CR 99 | QUAIL RIDGE DR | CHIP | 4.0 | 0.37 | $0.27 | 54 |
| 56 | CR 100 | COUNTRY LN | CHIP | 3.8 | 0.31 | $0.22 | 90 |
| 155 | CR 122 | AUSTIN RD | CHIP/HOTMIX | 3.5 | 1.36 | $0.99 | 90 |
| 135 | CR 130 | SODA SPRINGS RD | CHIP | 3.8 | 2.84 | $2.06 | 90 |
| 139 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 0.71 | $0.51 | 90 |
| 122 | CR 139 | HARWOOD RD | UNPAVED | 3.7 | 1.04 | $0.76 | 90 |
| 126 | CR 139 | HARWOOD RD | CHIP | 4.0 | 0.86 | $0.62 | 90 |

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 118 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 0.76 | $0.55 | 90 |
| 39 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 1.29 | $0.94 | 90 |
| 58 | CR 173 | MILL RD | CHIP | 3.3 | 0.31 | $0.22 | 90 |
| 18 | CR 224 | HOLZ RD | CHIP | 4.5 | 2.08 | $1.51 | 90 |
| 133 | CR 284 | MILL ST | CHIP | 3.5 | 0.17 | $0.13 | 90 |
| 128 | CR 152 | CHALK RD | UNPAVED | 3.3 | 4.03 | $2.92 | 101 |
| 96 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.34 | $0.25 | 101 |
| 86 | CR 160 | OLD COLONY LINE RD | CHIP | 5.0 | 2.31 | $1.68 | 101 |
| 85 | CR 197 | YOUNG LN | CHIP | 3.3 | 1.20 | $0.87 | 101 |
| 73 | CR 218 | BOGGY CREEK RD | UNPAVED | 3.5 | 1.58 | $1.15 | 101 |
| 116 | CR 276 | MUNK ST | CHIP | 3.8 | 0.08 | $0.06 | 101 |
| 19 | CR 293 | CLENDENNEN LN | CHIP | 5.0 | 0.28 | $0.20 | 101 |
| 143 | CR 301 | PRIMROSE LN | UNPAVED | 3.3 | 1.22 | $0.89 | 101 |
| 81 | CR 66 | HUMPHREY CT | CHIP | 5.0 | 0.20 | $0.14 | 101 |
| 32 | CR 87 | SHAWNEE TRL | UNPAVED | 5.0 | 0.14 | $0.10 | 101 |
| 14 | CR 96 | SCHRIBER CT | UNPAVED | 5.0 | 0.10 | $0.07 | 101 |
| 5 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.37 | $0.27 | 112 |
| 9 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.17 | $0.13 | 112 |
| 101 | CR 110 | LONG RD | UNPAVED | 4.3 | 1.08 | $0.78 | 112 |
| 158 | CR 128 | SALT FLAT RD | CHIP | 3.5 | 0.92 | $0.67 | 112 |
| 164 | CR 135A | SOUTHERN WAY | CHIP | 4.3 | 0.63 | $0.46 | 112 |
| 97 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 1.36 | $0.99 | 112 |
| 130 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.96 | $2.15 | 112 |
| 7 | CR 176 | LONE STAR DR | CHIP | 4.0 | 0.81 | $0.59 | 112 |
| 79 | CR 199 | LAKE RD | UNPAVED | 3.3 | 0.29 | $0.21 | 112 |
| 53 | CR 230 | JOLLY RD | UNPAVED | 3.3 | 1.86 | $1.35 | 112 |
| 154 | CR 248 | TREETOP LN | UNPAVED | 4.3 | 1.06 | $0.77 | 112 |
| 21 | CR 292 | HANGING OAK RD | CHIP | 5.0 | 0.18 | $0.13 | 112 |
| 147 | CR 30 | RUDOLPH LN | UNPAVED | 3.3 | 0.26 | $0.19 | 112 |
| 149 | CR 31 | RAWHIDE LN | UNPAVED | 3.3 | 0.14 | $0.10 | 112 |
| 146 | CR 32 | ANGLE RD | UNPAVED | 3.3 | 0.83 | $0.60 | 112 |
| 50 | CR 37 | CITY VIEW DR | CHIP | 3.5 | 0.40 | $0.29 | 112 |

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 43 | CR 38 | KOEGLAR DR | CHIP | 3.5 | 0.39 | $0.29 | 112 |
| 12 | CR 96 | SAGE HOLLOW RD | UNPAVED | 3.7 | 0.59 | $0.43 | 112 |
| 23 | CR 97 | GRANDPA RD | UNPAVED | 3.3 | 0.60 | $0.43 | 112 |
| 52 | PR | MEADOW LAKE DR | CHIP | 3.5 | 0.26 | $0.19 | 112 |
| 99 | PR 3005 | PAINTBRUSH TR | UNPAVED | 4.0 | 0.58 | $0.42 | 112 |
| 112 | PR-3020 | MOCKINGBIRD LN | UNPAVED | 3.7 | 0.45 | $0.33 | 112 |
| 98 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 2.11 | $1.53 | 134 |
| 123 | CR 142 | HALL RD | CHIP | 3.5 | 0.47 | $0.34 | 134 |
| 94 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 49 | CR 184 | PEGASUS RD | CHIP | 3.8 | 0.75 | $0.54 | 134 |
| 95 | CR 196-A | HARRIS CT | UNPAVED | 4.3 | 0.10 | $0.07 | 134 |
| 88 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.18 | $0.13 | 134 |
| 150 | CR 248 | TREETOP LN | CHIP/HOTMIX | 4.0 | 0.56 | $0.41 | 134 |
| 113 | CR 269 | CONSTANCIO ST | CHIP/HOT | 3.3 | 0.14 | $0.10 | 134 |
| 132 | CR 282 | WATER ST | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 47 | CR 39 | COTTON FIELD DR | CHIP | 3.5 | 0.20 | $0.15 | 134 |
| 70 | CR 65 | WILLOWBROOK CT | CHIP | 3.3 | 0.11 | $0.08 | 134 |
| 34 |  | OAK CV | CHIP | 3.8 | 0.19 | $0.14 | 145 |
| 111 | CR 140A | PASTURE RD | UNPAVED | 3.3 | 0.61 | $0.44 | 145 |
| 115 | CR 141A | BRONCO LN | UNPAVED | 4.3 | 0.23 | $0.17 | 145 |
| 2 | CR 193 | AVIS RD | CHIP | 3.3 | 1.48 | $1.08 | 145 |
| 117 | CR 277 | SENECA LP | CHIP | 4.3 | 0.23 | $0.17 | 145 |
| 145 | CR 302 | McNEIL RD | CHIP | 4.0 | 0.91 | $0.66 | 145 |
| 80 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.51 | $0.37 | 151 |
| 144 | CR 139-A | LOST RD | UNPAVED | 3.3 | 0.56 | $0.41 | 151 |
| 26 | CR 171 | SEMINOLE TR | UNPAVED | 3.3 | 1.92 | $1.40 | 151 |
| 67 | CR 288 BAS | OTT RD | UNPAVED | 5.0 | 2.53 | $1.84 | 151 |
| 142 | CR 33 | HAWK RD | UNPAVED | 3.3 | 0.29 | $0.21 | 151 |
| 107 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.76 | $1.28 | 156 |
| 59 | CR 162 | OIL FIELD RD | UNPAVED | 3.7 | 1.61 | $1.17 | 156 |
| 35 | CR 226 | HOBBY HORSE RD | UNPAVED | 3.3 | 0.54 | $0.39 | 156 |

## 5.5 Potential Impacts on Environmental Justice Populations

As mentioned in Section 2.2, Socioeconomic Conditions, EJ areas in Caldwell County were provided by CAMPO at the TAZ level. **Figure 5.5-1** and **Table 5.5-1** below show and describe those TAZ's in Caldwell County that qualify as EJ areas.

**Figure 5.5-1 Environmental Justice Areas in Caldwell County (by TAZ)**

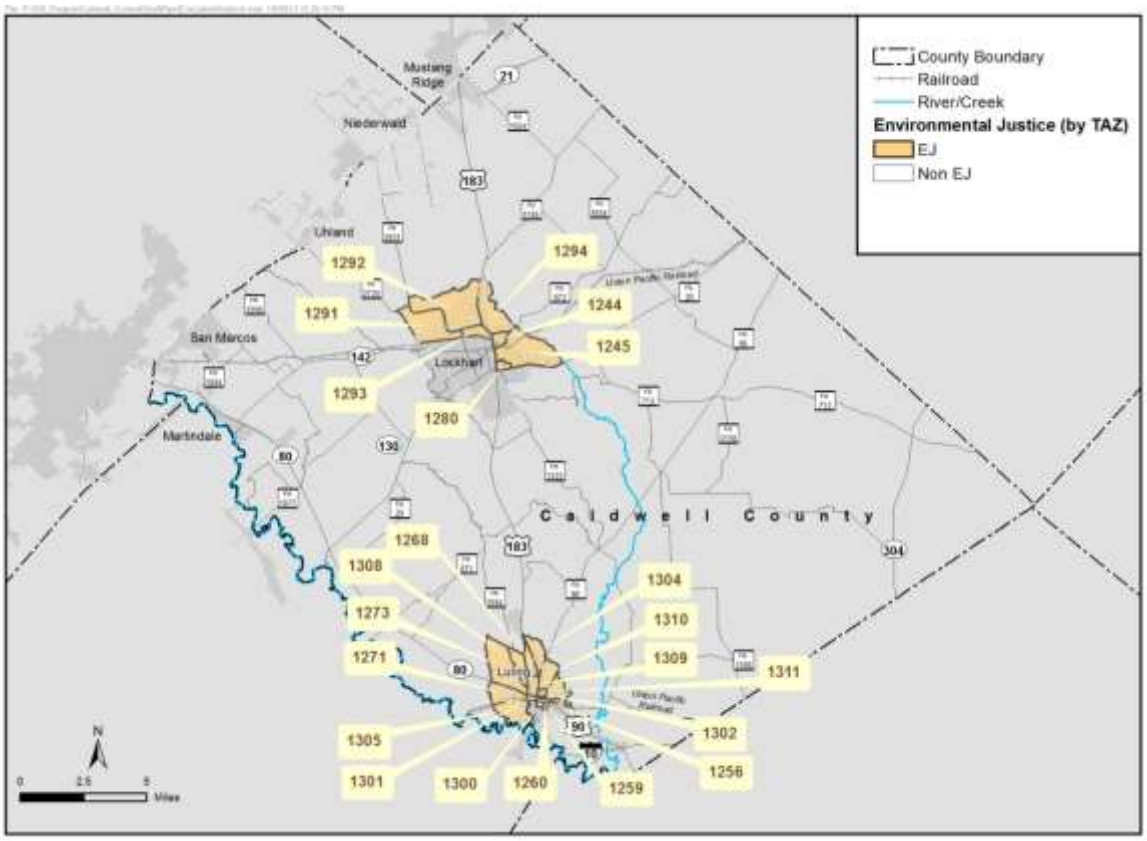


**Table 5.5-1 TAZ Size and Location**

| TAZ # | Acreage | Associated City |
|---|---|---|
| 1292 | 1,968 | Lockhart |
| 1291 | 1,304 | Lockhart |
| 1293 | 290 | Lockhart |
| 1280 | 118 | Lockhart |
| 1245 | 1,666 | Lockhart |
| 1244 | 192 | Lockhart |
| 1294 | 1,023 | Lockhart |

Source: CAMPO, 2012

| TAZ # | Acreage | Associated City |
|---|---|---|
| 1268 | 259 | Luling |
| 1308 | 387 | Luling |
| 1273 | 1,192 | Luling |
| 1271 | 515 | Luling |
| 1305 | 765 | Luling |
| 1301 | 51 | Luling |
| 1300 | 43 | Luling |
| 1260 | 35 | Luling |
| 1259 | 17 | Luling |
| 1256 | 79 | Luling |
| 1302 | 62 | Luling |
| 1311 | 448 | Luling |
| 1309 | 224 | Luling |
| 1310 | 404 | Luling |
| 1304 | 408 | Luling |

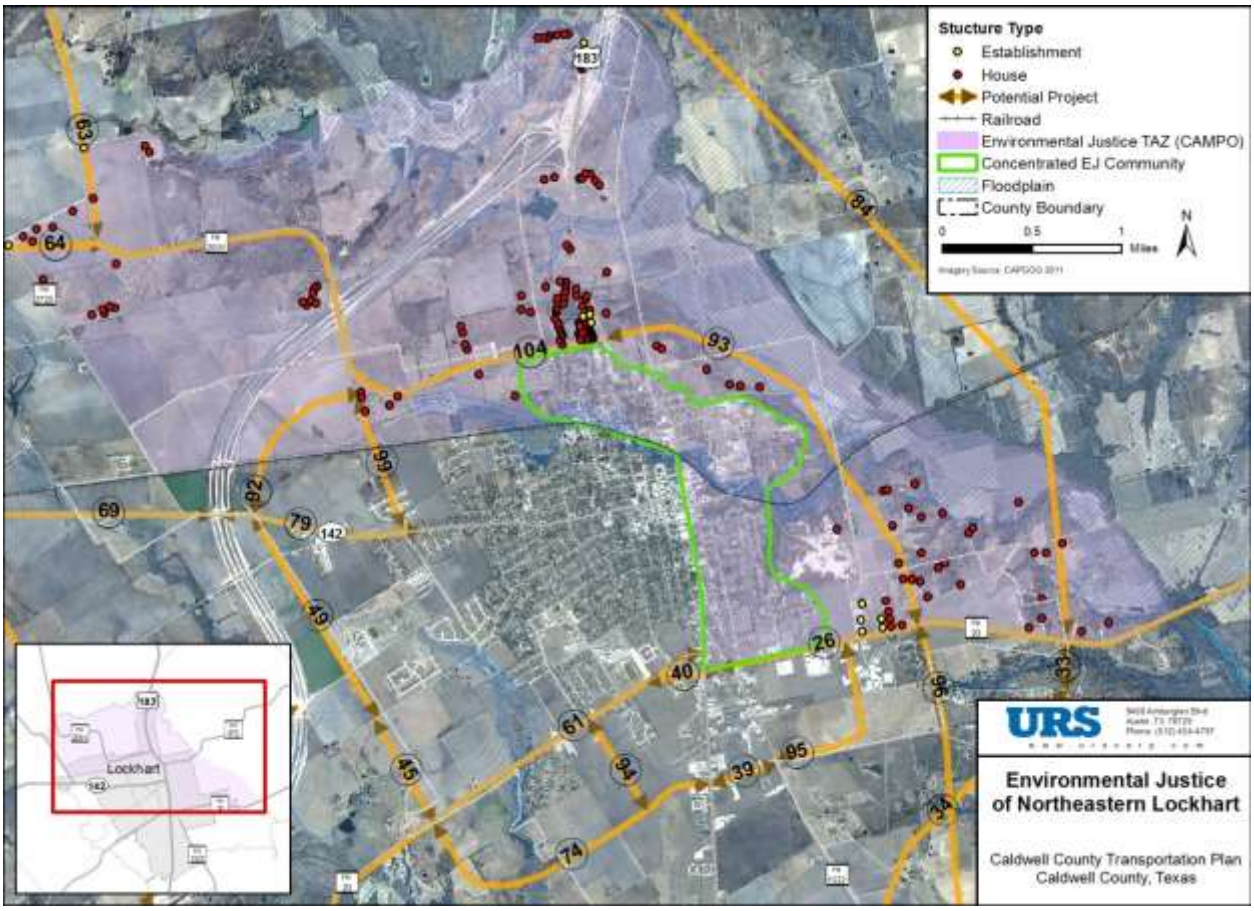
Source: CAMPO, 2012

The demographic data provided by CAMPO was used as the basis for EJ analysis on future impacts of potential projects (i.e. potential new roadways through EJ areas). When combined with 1-meter 2011 CAMPO imagery, it was easy to confirm that the housing density varied from TAZ to TAZ and even within the same TAZ.

**Lockhart Environmental Justice Areas**

**Figure 5.5-2** provides a closer look at EJ areas and associated residential density in Lockhart to assess potential impacts of future roadways that may pass through or be in close proximity to EJ areas.

**Figure 5.5-2 Environmental Justice Areas, Northeast Lockhart**




The typical urban fabric of gridded streets in the older part of the city within the EJ TAZ is indicated in **Figure 5.5-2** by the green shape. In the less densely developed areas, 2011 aerial imagery from CAPCOG was used to locate houses (red dots) and businesses (yellow dots). There are no potential future projects that bisect the older neighborhoods in Lockhart. However, there are two potential new roadway projects shown above (Project Map ID 93 and 84) that bisect the EJ areas where the residential density is lower.

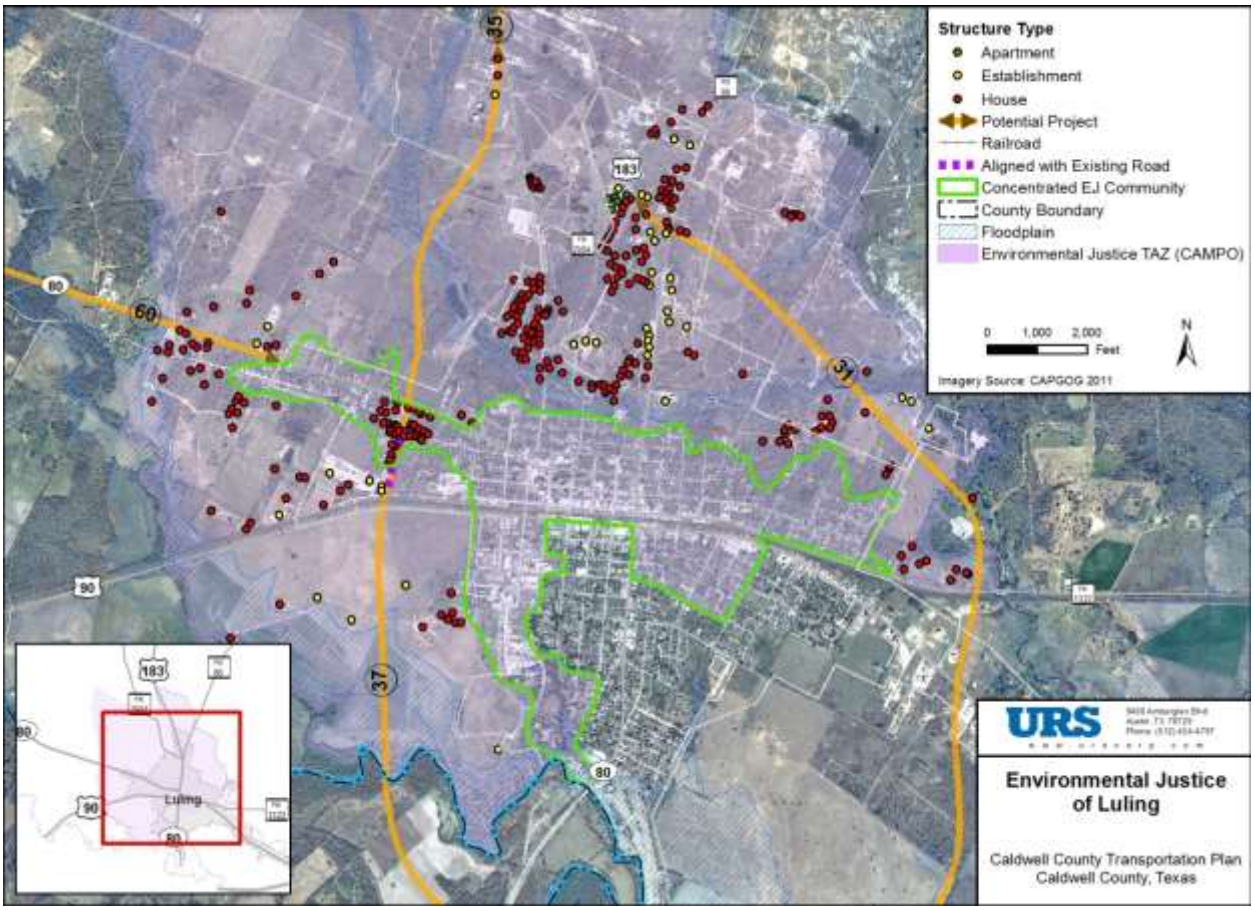
These projects are alternative locations for a potential loop around Lockhart. Project Map ID 93 is a 4-lane arterial proposed in the Lockhart Thoroughfare Plan and Project 84 is an alternative alignment for a 4-lane divided highway that would connect to SH 130/US 183 at U-turn bridge north of Plum Creek. It is not expected that existing EJ communities would be adversely affected by either alternative.

Preliminary engineering, environmental analysis, and public involvement will be needed to refine the preliminary corridors to provide appropriate access to the nearby neighborhoods as well as to minimize adverse impacts to the neighborhoods. Consideration should be given to bicycle and pedestrian facilities through these areas.

**Luling Environmental Justice Areas**

**Figure 5.5-3** provides a closer look at EJ areas and associated density in Luling to assess potential impacts of future roadways that may pass through or be in close proximity to EJ areas.

**Figure 5.5-3 Environmental Justice Areas, Luling**




Similar to the analysis given to Lockhart EJ, the typical urban fabric of gridded streets in the older part of the city within the EJ TAZs is indicated in **Figure 5.5-3** by the green shape. There are two potential new road projects that intersect EJ areas, Project Map ID s 31 and 37, alternative alignment concepts for relief route for US 183.

Unlike Lockhart, Project Map ID 37 does potentially fragment the westernmost Luling neighborhood that has considerable concentration. However, some of this same proposed roadway follows existing roadway just south of HWY 80, as it approaches HWY 90. Project Map ID 31 does not contend with as much urban fabric as Project Map ID 37, but there is a potentially impacted area based on this preliminary corridor alignment as it approaches US 183.

Preliminary engineering, environmental analysis, and public involvement will be needed to refine the preliminary corridors to minimize adverse impacts to neighborhoods. Consideration should be given to bicycle and pedestrian facilities through these areas.

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# Chapter 6 – SH 130 and US 183 Transportation Corridor Plan

## 6.1 Corridor Descriptions

SH 130 and US 183 are the two primary north/south transportation corridors in Caldwell County, serving traffic from north of Austin to South Texas. Between southeast Travis County and Lockhart, SH 130 and US 183 are located in the same corridor, with SH 130 providing four tolled express lanes and US 183 functioning as a frontage road. At Lockhart, SH 130 turns southwesterly, entering Guadalupe County and proceeding toward the Seguin area and IH 10, while US 183 continues in a southerly direction toward Luling and IH 10. SH 130 is concurrent with IH 10 between Seguin and San Antonio, while US 183 continues in a southerly direction toward the Corpus Christi area. These two corridors provide essential connectivity not only within Caldwell County, but outside of Caldwell County.

SH 130, which is a new transportation corridor through Caldwell County, was opened to traffic in mid-October 2012 and toll collection began in early November 2012. The speed limit on SH 130 is 85 mph, the highest legal speed limit in the U.S. The speed limit on US 183 between Mustang Ridge and Lockhart is 55 mph.

Through the cities of Lockhart and Luling, US 183 maintains four travel lanes. The speed limit is reduced for safety due to the mix of local and through traffic and varies between 35 mph and 55 mph inside the city limits. Continuous two-way left-turn lanes (TWLTLs) are provided at specific locations. Between Lockhart and Luling and south of Luling, the roadway has four, undivided travel lanes and a speed limit of 65 mph.

### Land Use

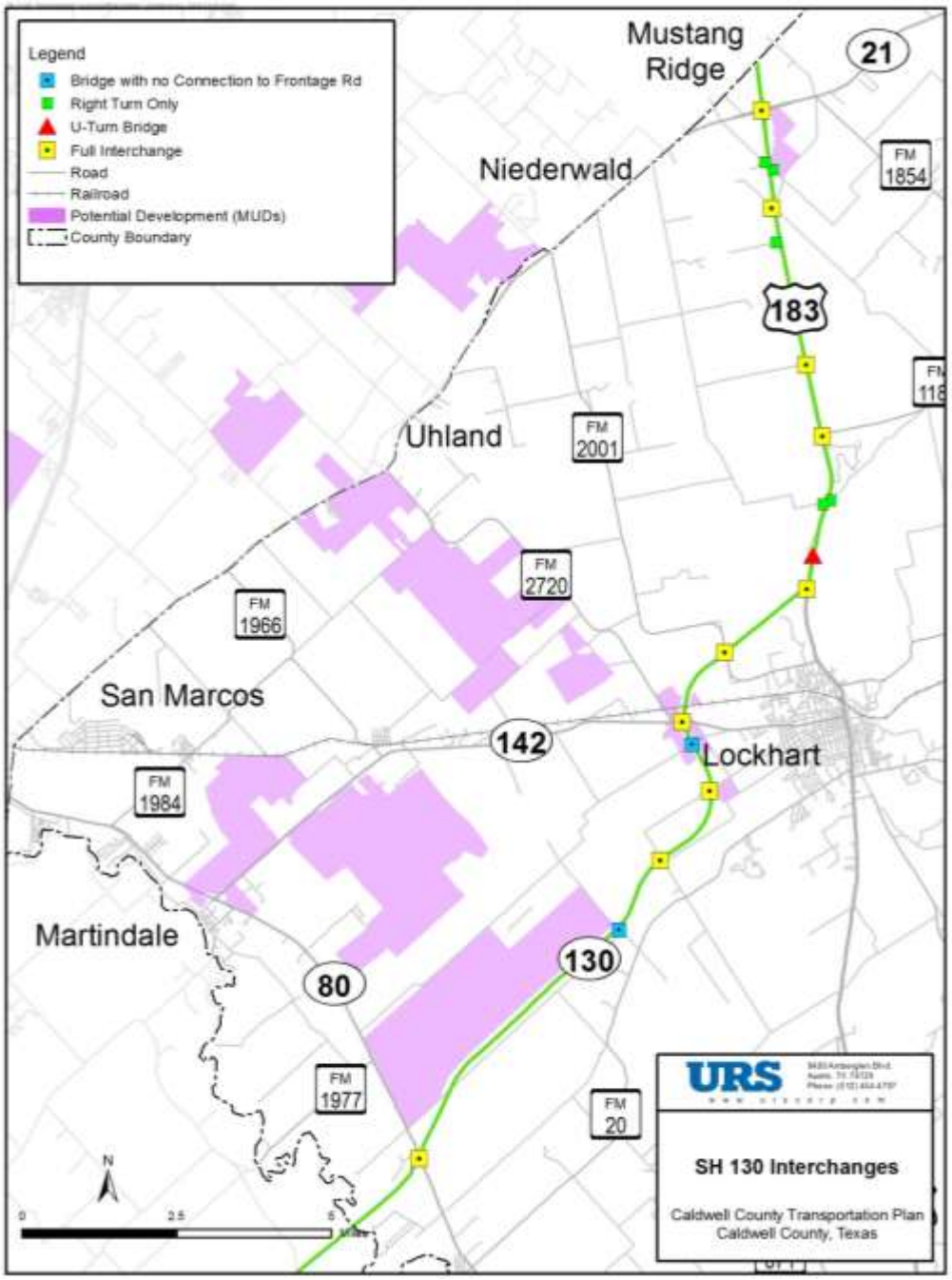
Current land uses along these corridors are generally agricultural and rural residential outside of the cities with intermittent commercial and industrial properties. Oil and gas activity is located in the southern portion of the county.

As indicated in **Chapter 3, Future Conditions**, major developments are planned between SH 130 and San Marcos. Two of the two mixed-use developments are located in west Lockhart adjacent to SH 130 (Centerpoint at Lockhart and Maple Park). A third mixed use development is Cherryville, located west of SH 130 and north of SH 80, while a fourth development is Walton Cornerstone, located in the southeast quadrant of the intersection of SH 130/US 183 with SH 21 (see **Figure 3.2-4**). As these future development projects are constructed, the need for commercial land uses will increase. The likely location for a portion of commercial land uses will be situated along SH 130 and at US 183, as these two corridors will be the major gateways into and out of the future development projects.

## 6.2 Traffic Needs

### Traffic Circulation

The introduction of a controlled access facility into the transportation system can change the way in which local residents travel, where future land use development occurs, and how emergency service




providers respond. Travel patterns may be affected by the number of interchanges, and their spacing, to get to/from one side of the controlled access highway to the other side. Between SH 21 (near the Caldwell County line) and Lockhart, the maximum interchange spacing on the SH 130/US 183 corridor is approximately 3 miles. The longest distance between interchanges southwest of Lockhart is approximately six miles between CR 217 (Old Fentress Road)/CR 218 (Boggy Creek) and SH 80. A bridge on CR 109 (Black Ankle Road), located approximately one mile south of CR 218 allow residents to cross the SH 130 corridor. Traffic circulation is further challenged by the relatively few county roads that intersect and/or run parallel to SH 130. **Figure 6.2-1** shows the interchange locations along SH 130.

**Figure 6.2-1 SH 130 Interchange Locations**

Where SH 130 is located along US 183 north of Lockhart, access to abutting properties was maintained by the one-way frontage roads which are signed as US 183. County roads that were "T" intersections with US 183 remain as "T" intersections, with the restriction that vehicles must turn right onto US 183. Approximately one mile north of FM 2001 in northern Lockhart, SH 130 turns westward while US 183 proceeds south into Lockhart. Frontage roads are provided on SH 130 between US 183 and the interchange at CR 217 (Old Fentress Road)/CR 218 (Boggy Creek Road). SH 130 does not have any frontage roads south of this interchange, all the way to IH 10. Between SH 80 and CR 109 (Black Ankle Road), SH 130 was located just west of CR 110 (Long Road). Consequently, there are now two CR 110s, one on either side of SH 130, to reinstate access to a public road for those property owners located west of SH 130.

### Connectivity

Controlled access facilities are primarily designed and maintained for the purpose of moving high volumes of traffic from one location to another, which is also called the through movement of traffic. Controlled access facilities have a reduced number of locations available to cross any given corridor, such as SH 130, to maintain higher vehicle speeds for the traveling public. Because the corridor crossing locations are limited to a few, the potential for future development to occur at interchanges increases. While US 183 south of Lockhart is not a controlled access facility, care should be given to future land use development and how that development accesses US 183. Below are few recommendations regarding connectivity across SH 130 and US 183 to improve traffic circulation and increase safety.

It will be important for Caldwell County's land development regulations to consider the possibility of large commercial developments that would require alternative property access parallel to SH 130, commonly called "backage roads". Backage roads would provide the opportunity for vehicles to easily return to the intersecting highway to have access in either direction to SH 130.

Similarly for large residential subdivisions that will develop along US 183, additional access should be provided to one or more existing or proposed public roads. Multiple access points help disperse traffic entering and exiting the subdivision. Multiple access points also provide options for emergency responders in the event of a fire or medical emergency.

Connectivity across SH 130 should include facilities for bicyclists and pedestrians. While there may not be an immediate need, projects should be designed so that sidewalks or shared use paths can be easily added whenever the need arises in the future.

## 6.3 Access Management

Access management encompasses the physical improvements, ordinances, and policies that control access to a roadway facility. Generally, an access management program includes a combination of tools that can be applied onto existing and future roadways. These tools assist in reducing conflict points within the roadway system, thereby increasing safety and improving traffic flow.

### Connection Points

TxDOT's *Access Management Manual* (2011) provides guidance for the spacing of access points to the state highway system for both frontage roads along controlled access highways and for traditional highways. The spacing between access points, either side streets or driveways, depends upon the speed limit of the highway. **Table 6.3-1** provides the required connection spacing along frontage roads.

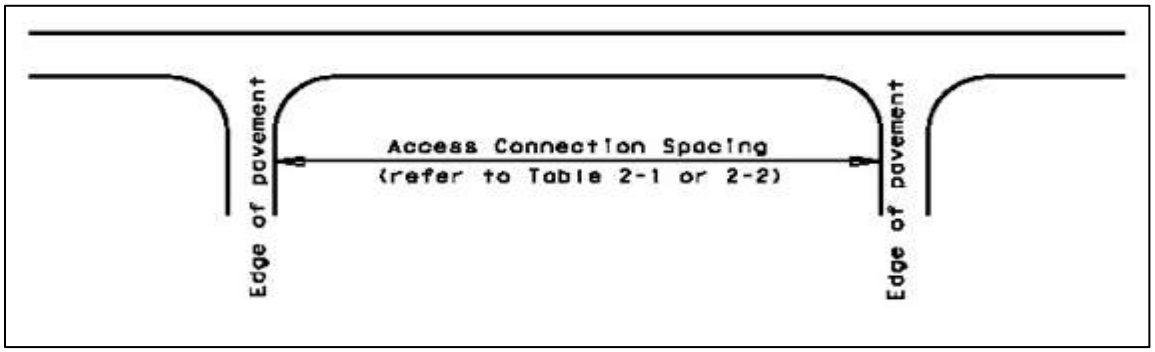
**Table 6.3-1: Frontage Road Connection Spacing Criteria**

| Minimum Connection Spacing Criteria for Frontage Roads [1,2] | | |
|---|---|---|
| | Minimum Connection Spacing (feet) | |
| Posted Speed (mph) | One-Way Frontage Roads | Two-Way Frontage Roads |
| 30 | 200 | 200 |
| 35 | 250 | 300 |
| 40 | 305 | 360 |
| 45 | 360 | 435 |
| > 50 | 425 | 510 |
| Notes: 1 Distances are for passenger cars on level grade. These distances may be adjusted for downgrades and/or significant truck traffic. Where present or projected traffic operations indicate specific needs, consideration may be given to intersection sight distance and operational gap acceptance measurement adjustments. 2 When these values are not attainable, refer to the variance process as described in Chapter 2, Section 5 (Variance Process) of the *Access Management Manual*. | | |

Source: TxDOT, 2011

**Figure 6.3-1** shows how the distance between access connections is measured.

**Figure 6.3-1: Access Connection Spacing Diagram**




Source: TxDOT, 2011

**Table 6.3-2** provides the minimum connection spacing for state highways that are not freeways or frontage roads. The *Access Management Manual* does provide for instances where a lesser spacing is requested by a property owner.

**Table 6.3-2: Other State Highway Connection Spacing Criteria**

| Other State Highways Minimum Connection Spacing[1,2,3] | |
|---|---|
| **Posted Speed (mph)** | **Distance (feet)** |
| 30 | 200 |
| 35 | 250 |
| 40 | 305 |
| 45 | 360 |
| ≥ 50 | 425 |
| Notes: 1 Distances are for passenger cars on level grade. These distances may be adjusted for downgrades and/or significant truck traffic. Where present or projected traffic operations indicate specific needs, consideration may be given to intersection sight distance and operational gap acceptance measurement adjustments. 2 When these values are not attainable, refer to the variance process as described in Chapter 2, Section 5 (Variance) of the *Access Management Manual.* 3 Access spacing values shown in this table do not apply to rural highways outside of metropolitan planning organization boundaries where there is little, if any, potential for development with current ADT levels below 2000. Access connection spacing below the values shown in this table may be approved based on safety and operational considerations as determined by TxDOT. | |

Source: TxDOT, 2011)

### Raised Medians

Raised medians provide a physical barrier between opposing directions of travel to channel turning traffic to intersections or to locations where turning movements are allowed. Raised medians reduce the number of conflict points by eliminating turns from driveways. The TxDOT *Roadway Design Manual* suggests using raised medians rather than TWLTLs where the average traffic volume exceeds or is anticipated to exceed 20,000 vehicles per day (VPD).

### Ordinances and Policies

Access management strategies may be incorporated into subdivision regulations to inform developers of any local requirements that the cities or county may choose to implement on the local road network.

## 6.4. Roadside Design

The City of Lockhart completed the *Colorado Street Corridor Improvement Plan* (December 2012) that encompasses the topics discussed in this chapter and is available on the city's website at http://www.lockhart-tx.org/web98/planningcolorad.asp. The corridor limits extend from SH 130 on the

north to the south city limits, located just south of the Summerside subdivision, a distance of approximately 5.25 miles. The *Colorado Street Corridor Improvement Plan* also includes recommendations for streetscaping and landscaping to improve the visual experience of drivers, pedestrians, and bicyclists. The process of working with the community to develop the aesthetic theme for a transportation project is called Context Sensitive Solutions (CSS).

To date, no corridor improvement plan has been developed for US 183 within the Luling city limits.

> If the county chooses to create development regulations specific to the SH 130 and/or US 183 corridors, the inclusion CSS standards relative to entrances and public streets should be considered. The process to develop CSS relies on active participation by the community with the planners and landscape architects to establish the "look and feel" appropriate for the corridor.
>
> The CSS process will need to be in accordance with TxDOT's *Landscape and Aesthetics Design Manual* (October 2012) and is available online at www.txdot.gov. The manual provides guidance ranging from developing a landscape master plan for a highway project to treatments for specific elements, such as traffic signals, streetlights, sidewalks, medians, and traffic islands.

# Appendix A

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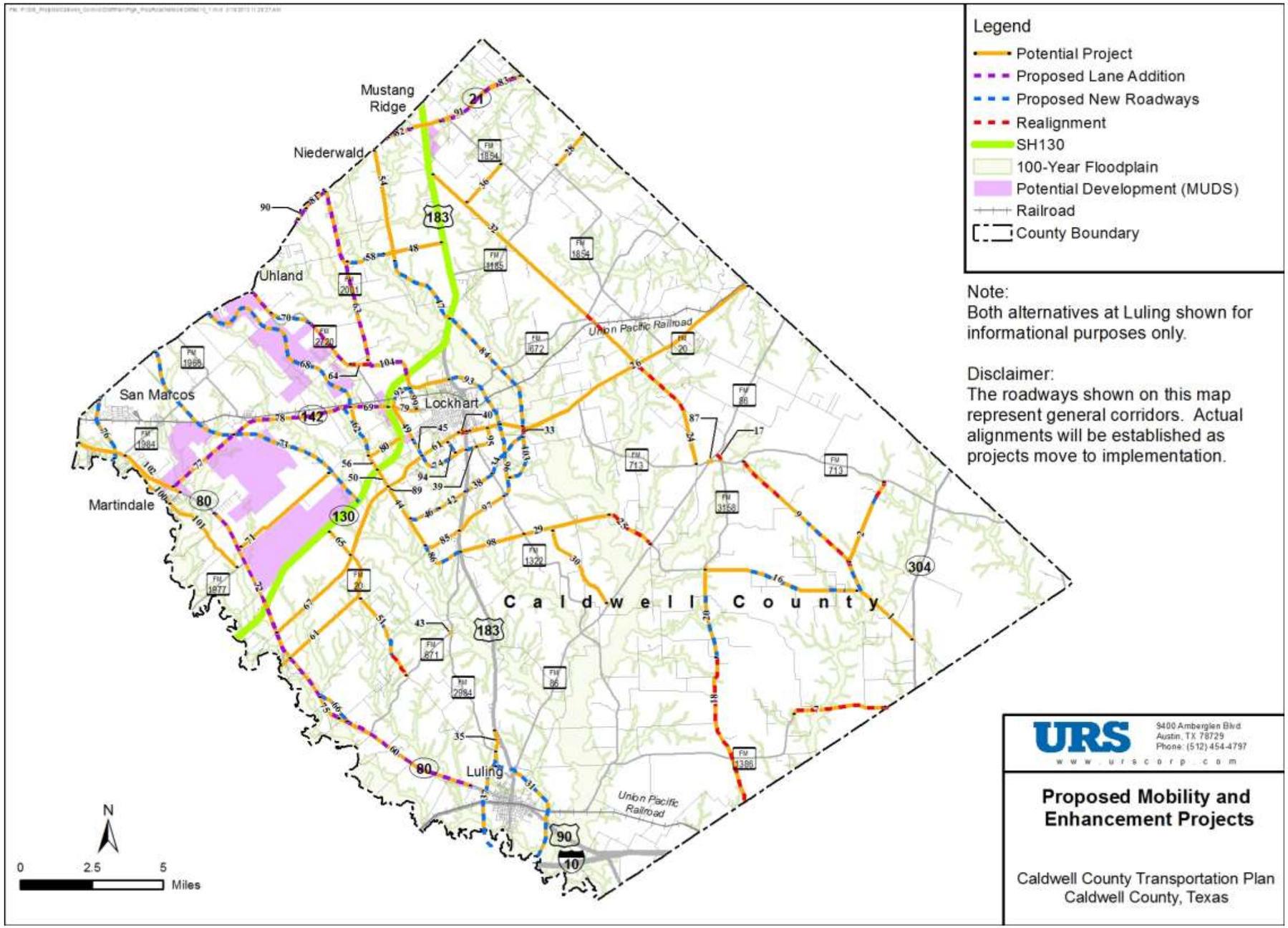
# Appendix B
# Proposed Project Maps and Lists

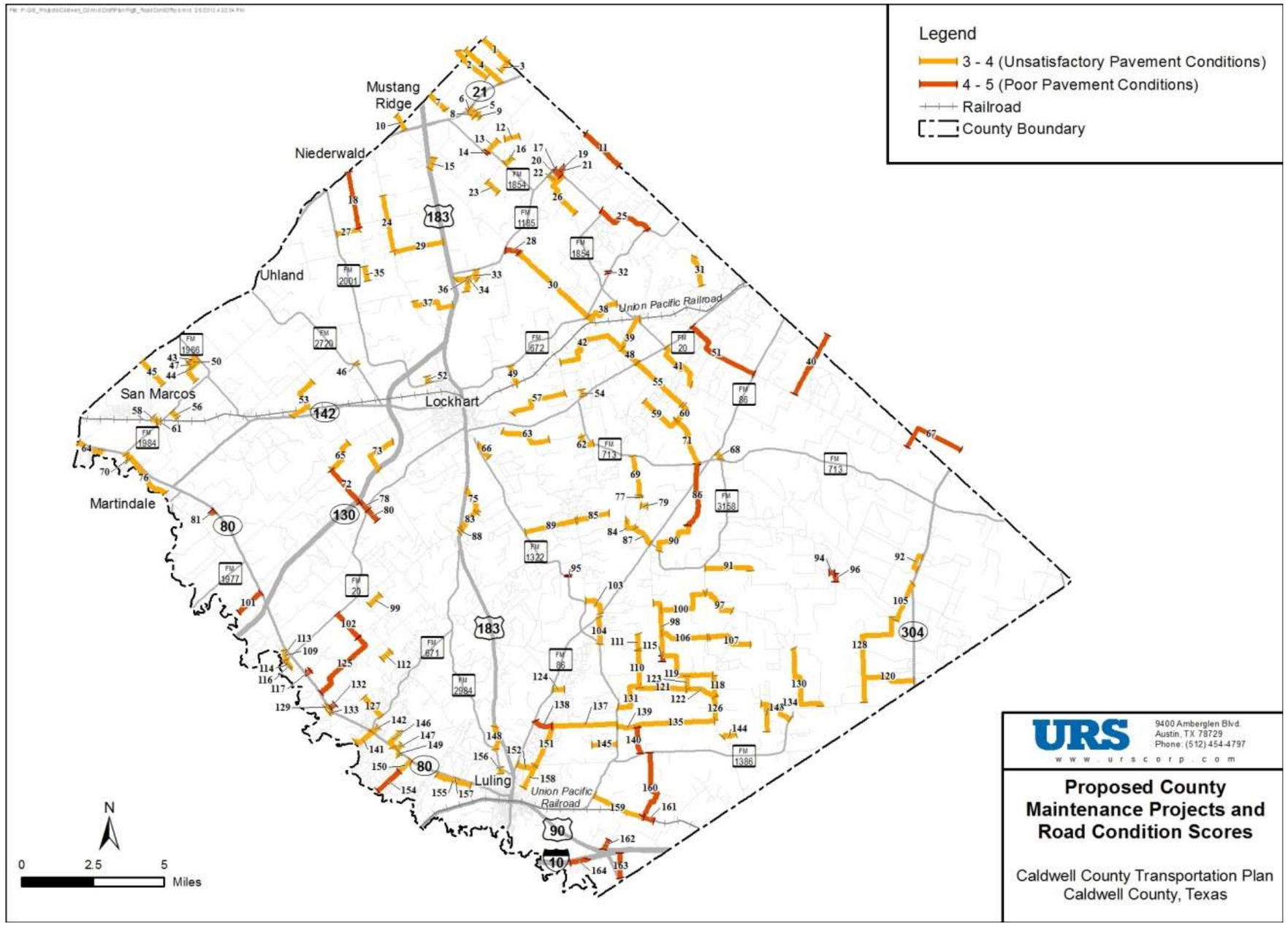
**Project Descriptions**

The descriptions of the proposed work in the following project lists are based on the typical sections included in **Section 5.2, Conceptual Cost Estimates**. Projects located within existing city limits include pedestrian and bicycle facilities. The various assumptions for each project have been provided to the county in electronic spreadsheet format to update as future conditions change.

## Proposed Mobility and Enhancement Projects



## Proposed Maintenance Projects



## Existing Roadway Projects by Highway Number

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 90 | SH 21 | | Hays C/L to east 3,170 ft. | Add shoulders | TxDOT | 0.60 | $1.26 | | 19 | 32 | Long Term |
| 81 | SH 21 | | FM 2001 to Caldwell/Hays County Line | Widen to four lanes | TxDOT | 1.59 | $16.63 | | 23 | 24 | Long Term |
| 82 | SH 21 | | Hays County Line west of Mustang Ridge to existing 4-lane section | Widen to four lanes | TxDOT | 0.96 | $10.18 | | 26 | 22 | Long Term |
| 83 | SH 21 | | East of SH 130 to Bastrop County Line | Widen to four lanes | TxDOT | 3.43 | $30.88 | | 27 | 20 | Long Term |
| 91 | SH 21 | | East of SH 130 to Bastrop C/L | Add shoulders | TxDOT | 4.11 | $9.71 | | 20 | 29 | Long Term |
| 102 | SH 80 | | County Line Road to FM 1979 | Widen to 6 lane w/raised median | TxDOT | 4.13 | $45.83 | | 44 | 1 | Long Term |
| 72 | SH 80 | | W. Ridge Road to Political Road (CR 111) | Widen to four lanes | TxDOT | 4.83 | $39.01 | | 33 | 11 | Long Term |
| 60 | SH 80 | | CR 111/Political Rd to Luling City Limit | Widen to four lanes | TxDOT | 13.36 | $18.51 | | 41 | 3 | Long Term |
| 75 | SH 80 | | SH 80 at Prairie Lea | Add two-way left-turn lane in Prairie Lea | TxDOT | 1.18 | $3.79 | | 16 | 43 | Long Term |
| 77 | SH 142 | | SH 80 to Yarrington Road Extension | Widen to four lanes | TxDOT | 2.89 | $27.71 | | 31 | 14 | Long Term |
| 78 | SH 142 | | Yarrington Road Extension to FM 150 Extension | Widen to four lanes | TxDOT | 4.03 | $27.74 | | 23 | 24 | Long Term |
| 69 | SH 142 | | FM 150 Extension to SH 130 | Widen to four lanes | TxDOT | 1.55 | $13.15 | | 30 | 16 | Long Term |
| 79 | SH 142 | | SH 130 to Hummingbird Road | Widen to four lanes | TxDOT | 1.15 | $6.09 | | 43 | 2 | Long Term |
| 61 | FM 20 | State Park Road | US 183 to SH 80 | Add paved shoulders | TxDOT | 13.36 | $57.16 | | 39 | 4 | Near Term |
| 89 | FM 20 | | FM 20 and Westwood Intersection | Address safety issues/ sight distance problem | County/TxDOT | 0.31 | $0.85 | | 31 | 14 | Long Term |
| 40 | FM 20 | | Realign FM 20 at US 183 intersection | Realign FM 20 to eliminate a traffic signal | TxDOT/ Lockhart | 0.43 | $0.36 | | 37 | 5 | Long Term |
| 26b | FM 20 | | US 183 to Bastrop County Line | Widen to four lanes | TxDOT | 11.48 | $92.70 | | 36 | 6 | Long Term |
| 26a | FM 20 | | US 183 to Bastrop County Line | Add paved shoulders | TxDOT | 11.48 | $17.91 | | 34 | 8 | Long Term |
| 87 | FM 86 | | FM 86 and FM 713 intersection | Realignment for safety | TxDOT | 0.22 | $0.61 | | 15 | 45 | Long Term |
| 43 | FM 671 | | FM 671 / FM 2984 | Reconfigure/Reconstruct intersection | TxDOT | 0.13 | $0.11 | | 16 | 43 | Long Term |
| 63 | FM 2001 | Silent Valley Road | Widen shoulder and realign at SH 21 | Realign at SH 21 intersection and widen shoulders | TxDOT | 8.00 | $11.67 | | 33 | 11 | Long Term |
| 104 | FM 2720/ FM 2001 | | SH 21 along FM 2720, then to FM 2001 along County View Rd to US 183 | Provide 4 lanes as continuation of the proposed Kyle Pkwy Extension in Hays County | TxDOT | 8.68 | $44.92 | | 36 | 6 | Long Term |
| 70 | FM 2720 | | Cottonwood Trail to Bobwhite Road | Proposed realignment of curves | TxDOT | 1.57 | $3.91 | | 17 | 37 | Long Term |
| 100 | CR 103 | NW River Road | SH 80 near FM 1984 to Main Street | Upgrade two lane road to current standards | Martindale | 2.47 | $17.35 | | 34 | 8 | Long Term |
| 101 | CR 103 | SE River Road | Main Street to FM 1977 | Upgrade two lane road to current standard and pave gravel portion | Martindale/County | 3.40 | $16.75 | | 33 | 11 | Long Term |
| 71 | CR 107 | Dickerson Road | SH 80 to CR 109/CR 109A (Tower Rd/ Black Ankle Rd intersection | Upgrade to 2-lane paved road | County | 4.30 | $13.18 | | 22 | 27 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 67 | CR 111 | Political Road | SH 80 to FM 20 | Upgrade to 2-lane paved road | County | 3.83 | $10.28 | | 17 | 37 | Long Term |
| 18 | CR 139 | Harwood Road/ Tenney Creek Road/ Smith Farm Road | Gonzalez County Line to Pearl Trail | Realignment of existing road | County | 5.30 | $6.69 | | 17 | 37 | Long Term |
| 7 | CR 150 | Kirk Corners | FM 1386 to Gonzalez County Line (then to SH 304) | Realignment of existing road, add surface | County | 3.49 | $8.66 | | 17 | 37 | Long Term |
| 1 | CR 151 | Sandy Fork Road | SH 304 to proposed Project ID 2 | Improve and add surface | County | 3.49 | $6.83 | | 19 | 32 | Long Term |
| 24 | CR 160 | Old Colony Line Road | FM 20 to FM 713 | Proposed realignment | County | 4.18 | $8.11 | | 17 | 37 | Long Term |
| 28 | CR 172 | County Line Road | FM 1854 at Lytton Road to Bastrop C/L and Bastrop CR 250 from C/L to FM 812 | Upgrade and realignment | County | 5.18 | $5.02 | | 13 | 46 | Long Term |
| 36 | CR 178 | | FM 1854 to CR 179 | Improve and add surface | County | 1.94 | $1.63 | | 20 | 29 | Long Term |
| 32 | CR 179 / CR 164 | Hommanville Trail/ Barth Road / Tumbleweed Trail/ Old Colony Line Road | US 183/ SH 130 to FM 20 | Upgrade and pave road with new at-grade RR crossing | TxDOT | 9.92 | $15.15 | | 22 | 27 | Long Term |
| 29 | CR 197 | Young Lane | FM 1322, east to Project Map No. 25 | Upgrade roadway | County | 3.09 | $7.83 | | 12 | 48 | Long Term |
| 25 | CR 198 | Fox Lane/Young Lane | CR 197 to FM 86 | Proposed realignment and add surface | County | 1.88 | $6.95 | | 13 | 46 | Long Term |
| 33 | CR 203 | Shady Hollow Road | FM 20 to Old McMahan Rd | Upgrade and add surface | County | 0.27 | $0.66 | | 20 | 29 | Long Term |
| 44 | CR 215 | Westwood Road | FM 20 to 1.4 miles west of US 183 | Surface and construct 2 lanes of ultimate 4 lane section | County | 2.33 | $3.13 | | 23 | See Project ID 50-A/ 50-B | |
| 50 | CR 215 | Old Fentress Road | SH 130 to FM 20 | Construct 2 lanes of ultimate 4 lane section | County | 0.69 | $0.58 | | 25 | See Project ID 50-A/ 50-B | |
| 85 | CR 215 | Westwood Road | 1.4 miles west of US 183 to US 183 | Surface and construct 2 lanes of ultimate 4 lane section | County | 1.41 | $1.18 | | 24 | See Project ID 50-A | |
| 50-A | CR 215 | Old Fentress Road/ Westwood Road | SH 130 to US 183 (Combines Project Map IDs 50, 44, 85) | Surface and construct 2 lanes of ultimate 4 lane section (Alternative 1) | County | 4.43 | $4.89 | | 28 | 17 | Near Term (Potential Concession Payment Funding) |
| 50-B | CR 215 | Old Fentress Road/ Westwood Road/ Graham Road | SH 130 to US 183 via Graham Road (Combines Project IDs 50, 44, 86) | Surface and construct 2 lanes of ultimate 4 lane section (Alternative 2) | County | 4.74 | $6.30 | | 24 | 23 | Near Term (Potential Concession Payment Funding) |
| 56 | CR 218 | Boggy Creek Road | 0.5 mi N of SH 130 to SH 130 | Upgrade and pave road | County | 0.52 | $0.44 | | 28 | 17 | Long Term |
| 80 | CR 218 | Boggy Creek Road | SH 130, southwest to Project ID 56 | Upgrade and pave road | County | 1.28 | $5.59 | | 27 | 20 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | CR 221 / CR 222 | Schulke Road | SH 21 to Rolling Ridge Rd | Upgrade and pave road | County | 4.02 | $16.17 | | 18 | 34 | Long Term |
| 48 | CR 222 | Schulke Road | CR 221/ Rolling Ridge Road to SH 130 | Upgrade and pave road | County | 2.14 | $2.04 | | 17 | 37 | Long Term |
| 64 | CR 235 | County View Road | FM 2720 and FM 2001 | Realign CR between FM 2720 and FM 2001, possibly redesignate as FM 2720 | County | 0.76 | $0.64 | | 18 | 34 | Long Term |
| 65 | CR 244 | Spoke Hollow Road | CR 110/Long Rd. to CR 111/Political Rd. | Upgrade and pave road | County | 1.21 | $1.02 | | 23 | 24 | Long Term |
| 17 | CR 253 | | Extend FM 3158 along CR 253 to FM 86 | Rehab pavement | TxDOT | 0.32 | $0.27 | | 12 | 48 | Long Term |
| 35 | CR 309 / US 183 | | US 183 to FM 2984, begin Luling West Relief Route Alternative | Upgrade to 4-lane divided (not the preferred conceptual alternative) | County | 0.86 | $0.72 | | 28 | Not Ranked | |
| 42 | CR 643 | | CR 643 | Upgrade and pave road | County | 1.06 | $3.76 | | 28 | 17 | Long Term |
| 49 | | City Line Road | SH 142 to Clear Fork Road | Rehab and widen to 4 lanes | Lockhart | 1.32 | $6.98 | | 34 | 8 | Near Term |
| 39 | | MLK Industrial Blvd | US 183 to FM 1322 | Add striping and redesignate as FM 1322 | Lockhart | 0.40 | $0.33 | | 18 | 34 | Long Term |

## Existing Roadway Projects by Rank

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 102 | SH 80 | | County Line Road to FM 1979 | Widen to 6 lane w/raised median | TxDOT | 4.13 | $45.83 | | 44 | 1 | Long Term |
| 79 | SH 142 | | SH 130 to Hummingbird Road | Widen to four lanes | TxDOT | 1.15 | $6.09 | | 43 | 2 | Long Term |
| 60 | SH 80 | | CR 111/Political Rd to Luling City Limit | Widen to four lanes | TxDOT | 13.36 | $18.51 | | 41 | 3 | Long Term |
| 61 | FM 20 | State Park Road | US 183 to SH 80 | Add paved shoulders | TxDOT | 13.36 | $57.16 | | 39 | 4 | Near Term |
| 40 | FM 20 | | Realign FM 20 at US 183 intersection | Realign FM 20 to eliminate a traffic signal | TxDOT/Lockhart | 0.43 | $0.36 | | 37 | 5 | Long Term |
| 26b | FM 20 | | US 183 to Bastrop County Line | Widen to four lanes | TxDOT | 11.48 | $92.70 | | 36 | 6 | Long Term |
| 104 | FM 2720/ FM 2001 | | SH 21 along FM 2720, then to FM 2001 along County View Rd to US 183 | Provide 4 lanes as continuation of the proposed Kyle Pkwy Extension in Hays County | TxDOT | 8.68 | $44.92 | | 36 | 6 | Long Term |
| 26a | FM 20 | | US 183 to Bastrop County Line | Add paved shoulders | TxDOT | 11.48 | $17.91 | | 34 | 8 | Near Term |
| 100 | CR 103 | NW River Road | SH 80 near FM 1984 to Main Street | Upgrade two lane road to current standards | Martindale | 2.47 | $17.35 | | 34 | 8 | Long Term |
| 49 | | City Line Road | SH 142 to Clear Fork Road | Rehab and widen to 4 lanes | Lockhart | 1.32 | $6.98 | | 34 | 8 | Near Term |
| 72 | SH 80 | | W. Ridge Road to Political Road (CR 111) | Widen to four lanes | TxDOT | 4.83 | $39.01 | | 33 | 11 | Long Term |
| 63 | FM 2001 | Silent Valley Road | Widen shoulder and realign at SH 21 | Realign at SH 21 intersection and widen shoulders | TxDOT | 8.00 | $11.67 | | 33 | 11 | Long Term |
| 101 | CR 103 | SE River Road | Main Street to FM 1977 | Upgrade two lane road to current standard and pave gravel portion | Martindale/County | 3.40 | $16.75 | | 33 | 11 | Long Term |
| 77 | SH 142 | | SH 80 to Yarrington Road Extension | Widen to four lanes | TxDOT | 2.89 | $27.71 | | 31 | 14 | Long Term |
| 89 | FM 20 | | FM 20 and Westwood Intersection | Address safety issues/ sight distance problem | County/TxDOT | 0.31 | $0.85 | | 31 | 14 | Long Term |
| 69 | SH 142 | | FM 150 Extension to SH 130 | Widen to four lanes | TxDOT | 1.55 | $13.15 | | 30 | 16 | Long Term |
| 50-A | CR 215 | Old Fentress Road/ Westwood Road | SH 130 to US 183 | Surface and construct 2 lanes of ultimate 4 lane section (Alternative 1) | County | 4.43 | $4.89 | | 28 | 17 | Near Term (Potential Concession Payment Funding |
| 56 | CR 218 | Boggy Creek Road | 0.5 mi N of SH 130 to SH 130 | Upgrade and pave road | County | 0.52 | $0.44 | | 28 | 17 | Long Term |
| 35 | CR 309 / US 183 | | US 183 to FM 2984, begin Luling West Relief Route Alternative | Upgrade to 4-lane divided (not the preferred conceptual alternative) | County | 0.86 | $0.72 | | 28 | Not Ranked | |
| 42 | CR 643 | | CR 643 | Upgrade and pave road | County | 1.06 | $3.76 | | 28 | 17 | Long Term |
| 83 | SH 21 | | East of SH 130 to Bastrop County Line | Widen to four lanes | TxDOT | 3.43 | $30.88 | | 27 | 20 | Long Term |
| 80 | CR 218 | Boggy Creek Road | SH 130, southwest to Project ID 56 | Upgrade and pave road | County | 1.28 | $5.59 | | 27 | 20 | Long Term |
| 82 | SH 21 | | Hays County Line west of Mustang Ridge to existing 4-lane section | Widen to four lanes | TxDOT | 0.96 | $10.18 | | 26 | 22 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | CR 215 | Old Fentress Road | SH 130 to FM 20 | Improve and widen to four lanes | County | 0.69 | $0.58 | | 25 | See Project Map ID 50-A/50-B | |
| 85 | CR 215 | Westwood Road | 1.4 miles west of US 183 to US 183 | Surface and widen to four lanes | County | 1.41 | $1.18 | | 24 | See Project Map ID 50-A | |
| 50-B | CR 215/ CR 214 | Old Fentress Road/ Westwood Road/ Graham Road | SH 130 to US 183 via new location between C R 215 and CR 214 | Surface and construct 2 lanes of ultimate 4 lane section (Alternative 2) | County | 4.74 | $6.30 | | 24 | 23 | Near Term (Potential Concession Payment Funding |
| 81 | SH 21 | | FM 2001 to Caldwell/Hays County Line | Widen to four lanes | TxDOT | 1.59 | $16.63 | | 23 | 24 | Long Term |
| 78 | SH 142 | | Yarrington Road Extension to FM 150 Extension | Widen to four lanes | TxDOT | 4.03 | $27.74 | | 23 | 24 | Long Term |
| 44 | CR 215 | Westwood Road | FM 20 to 1.4 miles west of US 183 | Widen to four lanes | County | 2.33 | $3.13 | | 23 | 24 | Long Term |
| 65 | CR 244 | Spoke Hollow Road | CR 110/Long Rd. to CR 111/Political Rd. | Upgrade and pave road | County | 1.21 | $1.02 | | 23 | 24 | Long Term |
| 71 | CR 107 | Dickerson Road | SH 80 to CR 109/CR 109A (Tower Rd/ Black Ankle Rd intersection | Upgrade to 2-lane paved road | County | 4.30 | $13.18 | | 22 | 27 | Long Term |
| 32 | CR 179 / CR 164 | Hommanville Trail/ Barth Road / Tumbleweed Trail/ Old Colony Line Road | US 183/ SH 130 to FM 20 | Upgrade and pave road with new at-grade RR crossing | TxDOT | 9.92 | $15.15 | | 22 | 27 | Long Term |
| 91 | SH 21 | | East of SH 130 to Bastrop C/L | Add shoulders | TxDOT | 4.11 | $9.71 | | 20 | 29 | Long Term |
| 36 | CR 178 | | FM 1854 to CR 179 | Improve and add surface | County | 1.94 | $1.63 | | 20 | 29 | Long Term |
| 33 | CR 203 | Shady Hollow Road | FM 20 to Old McMahan Rd | Upgrade and add surface | County | 0.27 | $0.66 | | 20 | 29 | Long Term |
| 90 | SH 21 | | Hays C/L to east 3,170 ft. | Add shoulders | TxDOT | 0.60 | $1.26 | | 19 | 32 | Long Term |
| 1 | CR 151 | Sandy Fork Road | SH 304 to proposed Project ID 2 | Improve and add surface | County | 3.49 | $6.83 | | 19 | 32 | Long Term |
| 54 | CR 221 / CR 222 | Schulke Road | SH 21 to Rolling Ridge Rd | Upgrade and pave road | County | 4.02 | $16.17 | | 18 | 34 | Long Term |
| 64 | CR 235 | County View Road | FM 2720 and FM 2001 | Realign CR between FM 2720 and FM 2001, possibly redesignate as FM 2720 | County | 0.76 | $0.64 | | 18 | 34 | Long Term |
| 39 | | MLK Industrial Blvd | US 183 to FM 1322 | Add striping and redesignate as FM 1322 | Lockhart | 0.40 | $0.33 | | 18 | 34 | Long Term |
| 70 | FM 2720 | | Cottonwood Trail to Bobwhite Road | Proposed realignment of curves | TxDOT | 1.57 | $3.91 | | 17 | 37 | Long Term |
| 67 | CR 111 | Political Road | SH 80 to FM 20 | Upgrade to 2-lane paved road | County | 3.83 | $10.28 | | 17 | 37 | Long Term |
| 18 | CR 139 | Harwood Road/ Tenney Creek Road/ Smith Farm Road | Gonzalez County Line to Pearl Trail | Realignment of existing road | County | 5.30 | $6.69 | | 17 | 37 | Long Term |
| 7 | CR 150 | Kirk Corners | FM 1386 to Gonzalez County Line (then to SH 304) | Realignment of existing road, add surface | County | 3.49 | $8.66 | | 17 | 37 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | CR 160 | Old Colony Line Road | FM 20 to FM 713 | Proposed realignment | County | 4.18 | $8.11 | | 17 | 37 | Long Term |
| 48 | CR 222 | Schulke Road | CR 221/ Rolling Ridge Road to SH 130 | Upgrade and pave road | County | 2.14 | $2.04 | | 17 | 37 | Long Term |
| 75 | SH 80 | | SH 80 at Prairie Lea | Add two-way left-turn lane in Prairie Lea | TxDOT | 1.18 | $3.79 | | 16 | 43 | Long Term |
| 43 | FM 671 | | FM 671 / FM 2984 | Reconfigure/Reconstruct intersection | TxDOT | 0.13 | $0.11 | | 16 | 43 | Long Term |
| 87 | FM 86 | | FM 86 and FM 713 intersection | Realignment for safety | TxDOT | 0.22 | $0.61 | | 15 | 45 | Long Term |
| 28 | CR 172 | County Line Road | FM 1854 at Lytton Road to Bastrop C/L and Bastrop CR 250 from C/L to FM 812 | Upgrade and realignment | County | 5.18 | $5.02 | | 13 | 46 | Long Term |
| 25 | CR 198 | Fox Lane/Young Lane | CR 197 to FM 86 | Proposed realignment and add surface | County | 1.88 | $6.95 | | 13 | 46 | Long Term |
| 29 | CR 197 | Young Lane | FM 1322, east to Project Map No. 25 | Upgrade roadway | County | 3.09 | $7.83 | | 12 | 48 | Long Term |
| 17 | CR 253 | | Extend FM 3158 along CR 253 to FM 86 | Rehab pavement | TxDOT | 0.32 | $0.27 | | 12 | 48 | Long Term |

## New Roadway Projects by Highway Number

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | US 183 | | Luling West Relief Route Alternative | Proposed 4-lane divided highway (not preferred conceptual alternative) | TBD | 3.65 | $66.99 | Y | 25 | Not Ranked | |
| 31 | US 183 | | Luling East Relief Route Alternative | Proposed 4-lane divided highway | TBD | 4.66 | $71.81 | Y | 24 | 15 | Long Term |
| 66 | SH 80 | | SH 80 bypass at Prairie Lea | Proposed 4-lane divided highway | TxDOT/County | 1.45 | $6.92 | | 24 | 15 | Long Term |
| 76 | FM 110 | | Guadalupe County Line to Hays County Line | Proposed 4-lane divided highway | County/San Marcos | 2.45 | $23.32 | Y | 25 | 13 | Near Term |
| 68 | FM 150 Extension | | SH 21 to SH 142 | Construct 4-lane roadway in phases with participation by developer. | Developer/County | 6.89 | $38.07 | Y | 30 | 2 | Long Term |
| 73 | CR 109 and New Location | Yarrington Road Extension | SH 21 to SH 130 at Black Ankle Road | Proposed 4-lane divided highway | County | 9.65 | $61.25 | Y | 35 | 1 | Long Term |
| 51 | CR 126 / CR 115 | Acorn Road and Bugtussle Lane | FM 20 to FM 671 | Improve and realign portions of road | County | 3.44 | $3.56 | | 16 | 26 | Long Term |
| 20 | CR 145 | Vine Hill Road | FM 3158 to Pearl Trail | Pave and extend on new location | County | 3.33 | $5.69 | | 16 | 26 | Long Term |
| 9 | CR 161 | Sand Hill Road | FM 713 to end of road, and extend on new location to the intersection of Project Map Is 1 and 2 | Reconstruct and extend on new location | County | 5.34 | $1.48 | | 18 | 24 | Long Term |
| 86 | CR 214 | Graham Road | Connect CR 215 to US 183 via CR 214 | Alternate to Project Map No. 85 (included in Project Map ID 50-B on Existing Roads list) | County | 1.73 | $2.59 | | 23 | Not Ranked | |
| 38 | CR 220 | | Extend CR 220 to FM 1322 | Proposed new roadway | County | 1.11 | $1.49 | | 29 | 7 | Long Term |
| 16 | CR 313 | Boulder Lane | FM 3158 to Red Sand Trail, then on new location to Sandy Fork Road. | Rehab and pave road, realign | County | 5.64 | $3.86 | | 16 | 26 | Long Term |
| 45 | | City Line Road | Extend City Line Rd from Clear Fork St to FM 20 | Proposed new roadway | Lockhart | 0.67 | $3.56 | | 30 | 2 | NearTerm |
| 74 | | City Line Road | Extend City Line Rd south and southeast from FM 20 to and along MLK Jr. Industrial Blvd. to US 183 | Proposed 4-lane arterial | Lockhart | 1.87 | $7.45 | Y | 23 | 17 | Long Term |
| 99 | | Mockingbird Lane | Extend Mockingbird Lane north to Horseshoe Rd | Proposed new roadway | Lockhart | 0.77 | $4.06 | Y | 27 | 10 | Long Term |
| 94 | | San Jacinto Street | FM 20 to MLK Jr. Industrial Blvd. | Proposed new roadway | Lockhart | 0.61 | $1.51 | Y | 26 | 12 | Near Term |
| 84 | N/A | N/A | NE Lockhart bypass | Proposed 4-lane divided highway between SH 130 and FM 20 | TBD | 4.77 | $46.16 | Y | 23 | 17 | Long Term |
| 93 | N/A | N/A | From FM 2001/US 183 intersection to FM 20 | Proposed 4-lane arterial between US 183 at FM 2001 and FM 20 (NE Lockhart Loop option) | Lockhart | 2.68 | $44.99 | Y | 30 | 2 | Long Term |
| 96 | N/A | N/A | FM 20 and CR 186/ Old Kelley Rd to FM 1322 at Center Point Rd | Proposed new roadway | County/Lockhart | 2.60 | $2.44 | Y | 30 | 2 | Long Term |
| 103 | N/A | N/A | From Project Map ID 96, approx. 2 miles south of FM 20 to Shady Hollow Rd | Proposed new roadway | County/Lockhart | 1.83 | $1.96 | Y | 30 | 2 | Long Term |
| 30 | NA | N/A | US 183 at Westwood Dr and FM 86 as alternative to FM 1322 in flood events | Proposed alternative to FM 1322 | County | 6.40 | $5.38 | | 29 | 7 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 97 | N/A | N/A | FM 1322 at Center Point Rd to US 183 and Old Luling Rd | Proposed new roadway | County/Lockhart | 2.01 | $4.39 | Y | 28 | 9 | Long Term |
| 95 | N/A | N/A | FM 1322 at Lay Rd to FM 20/Blackjack St | Proposed new roadway | Lockhart | 1.03 | $0.86 | Y | 27 | 10 | Long Term |
| 98 | N/A | N/A | US 183 at Graham Rd to FM 1322 and Young Ln | Proposed new roadway | County | 2.32 | $6.98 | Y | 25 | 13 | Long Term |
| 47 | N/A | N/A | New location connection between CR 221 and SH 130 at Plum Creek U-turn bridge | Proposed new roadway | County | 2.99 | $5.00 | | 23 | 17 | Long Term |
| 34 | N/A | N/A | New road between FM 1322 and CR 203 | Proposed new roadway | County | 1.79 | $1.77 | | 23 | 17 | Long Term |
| 46 | N/A | N/A | New location connection between CR 215 and CR 213/Robin Ranch Rd | Proposed new roadway | County | 1.26 | $1.60 | | 22 | 21 | Long Term |
| 92 | N/A | N/A | From FM 2001/Silent Valley Rd to SH 142 at City Line Road | Proposed new roadway | Lockhart | 1.03 | $5.42 | Y | 21 | 22 | Long Term |
| 62 | N/A | N/A | SH 142 near intersection with Project Map ID 68 to CR 218 | Proposed new roadway | County | 2.02 | $5.50 | | 19 | 23 | Long Term |
| 2 | N/A | N/A | FM 713 at Pine Gap Road to Extension of Sandy Fork Road | Construct road generally along property lines | County | 3.14 | $2.61 | | 17 | 25 | Long Term |
| 58 | N/A | N/A | FM 2001 at CR 227/Rocky Road to Schuelke Rd | New roadway connecting FM 2001 to SH 130 | County | 1.46 | $5.84 | | 15 | 29 | Long Term |

## New Roadway Projects by Rank

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | CR 109 and New Location | Yarrington Road Extension | SH 21 to SH 130 at Black Ankle Road | Proposed 4-lane divided highway | County | 9.65 | $61.25 | Y | 35 | 1 | Long Term |
| 68 | FM 150 Extension | | SH 21 to SH 142 | Construct 4-lane roadway in phases with participation by developer. | Developer/County | 6.89 | $38.07 | Y | 30 | 2 | Long Term |
| 45 | | City Line Road | Extend City Line Rd from Clear Fork St to FM 20 | Proposed new roadway | Lockhart | 0.67 | $3.56 | | 30 | 2 | Near Term |
| 93 | N/A | N/A | From FM 2001/US 183 intersection to FM 20 | Proposed 4-lane arterial between US 183 at FM 2001 and FM 20 (NE Lockhart Loop option) | Lockhart | 2.68 | $44.99 | Y | 30 | 2 | Long Term |
| 96 | N/A | N/A | FM 20 and CR 186/ Old Kelley Rd to FM 1322 at Center Point Rd | Proposed new roadway | County/Lockhart | 2.60 | $2.44 | Y | 30 | 2 | Long Term |
| 103 | N/A | N/A | From Project Map ID 96, approx. 2 miles south of FM 20 to Shady Hollow Rd | Proposed new roadway | County/Lockhart | 1.83 | $1.96 | Y | 30 | 2 | Long Term |
| 38 | CR 220 | | Extend CR 220 to FM 1322 | Proposed new roadway | County | 1.11 | $1.49 | | 29 | 7 | Long Term |
| 30 | NA | N/A | US 183 at Westwood Dr and FM 86 as alternative to FM 1322 in flood events | Proposed alternative to FM 1322 | County | 6.40 | $5.38 | | 29 | 7 | Long Term |
| 97 | N/A | N/A | FM 1322 at Center Point Rd to US 183 and Old Luling Rd | Proposed new roadway | County/Lockhart | 2.01 | $4.39 | Y | 28 | 9 | Long Term |
| 99 | | Mockingbird Lane | Extend Mockingbird Lane north to Horseshoe Rd | Proposed new roadway | Lockhart | 0.77 | $4.06 | Y | 27 | 10 | Long Term |
| 95 | N/A | N/A | FM 1322 at Lay Rd to FM 20/Blackjack St | Proposed new roadway | Lockhart | 1.03 | $0.86 | Y | 27 | 10 | Long Term |
| 94 | | San Jacinto Street | FM 20 to MLK Jr. Industrial Blvd. | Proposed new roadway | Lockhart | 0.61 | $1.51 | Y | 26 | 12 | Near Term |
| 37 | US 183 | | Luling West Relief Route Alternative | Proposed 4-lane divided highway (not preferred conceptual alternative) | TBD | 3.65 | $66.99 | Y | 25 | Not Ranked | |
| 76 | FM 110 | | Guadalupe County Line to Hays County Line | Proposed 4-lane divided highway | Hays County/San Marcos/ Caldwell County | 2.45 | $23.32 | Y | 25 | 13 | Near Term |
| 98 | N/A | N/A | US 183 at Graham Rd to FM 1322 and Young Ln | Proposed new roadway | County | 2.32 | $6.98 | Y | 25 | 13 | Long Term |
| 31 | US 183 | | Luling East Relief Route Alternative | Proposed 4-lane divided highway | TBD | 4.66 | $71.81 | Y | 24 | 15 | Long Term |
| 66 | SH 80 | | SH 80 bypass at Prairie Lea | Proposed 4-lane divided highway | TxDOT/County | 1.45 | $6.92 | | 24 | 15 | Long Term |
| 86 | CR 214 | Graham Road | Connect CR 215 to US 183 via CR 214 | Alternate to Project Map No. 85 (included in Project Map ID 50-B on Existing Roads list) | County | 1.73 | $2.59 | | 23 | Not Ranked | |
| 74 | | City Line Road | Extend City Line Rd south and southeast from FM 20 to and along MLK Jr. Industrial Blvd. to US 183 | Proposed 4-lane arterial | Lockhart | 1.87 | $7.45 | Y | 23 | 17 | Long Term |
| 84 | N/A | N/A | NE Lockhart bypass | Proposed 4-lane divided highway between SH 130 and FM 20 | TBD | 4.77 | $46.16 | Y | 23 | 17 | Long Term |

| Map ID | Road Number | Road Name | Limits | Improvement | Jurisdiction | Length (Miles) | Estimated Construction Cost (Millions) | Potential Developer Participation (Y/N) | Cumulative Score | Rank | Proposed Timeframe |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | N/A | N/A | New location connection between CR 221 and SH 130 at Plum Creek U-turn bridge | Proposed new roadway | County | 2.99 | $5.00 | | 23 | 17 | Long Term |
| 34 | N/A | N/A | New road between FM 1322 and CR 203 | Proposed new roadway | County | 1.79 | $1.77 | | 23 | 17 | Long Term |
| 46 | N/A | N/A | New location connection between CR 215 and CR 213/Robin Ranch Rd | Proposed new roadway | County | 1.26 | $1.60 | | 22 | 21 | Long Term |
| 92 | N/A | N/A | From FM 2001/Silent Valley Rd to SH 142 at City Line Road | Proposed new roadway | Lockhart | 1.03 | $5.42 | Y | 21 | 22 | Long Term |
| 62 | N/A | N/A | SH 142 near intersection with Project Map ID 68 to CR 218 | Proposed new roadway | County | 2.02 | $5.50 | | 19 | 23 | Long Term |
| 9 | CR 161 | Sand Hill Road | FM 713 to end of road, and extend on new location to the intersection of Project Map IDs 1 and 2 | Reconstruct and extend on new location | County | 5.34 | $1.48 | | 18 | 24 | Long Term |
| 2 | N/A | N/A | FM 713 at Pine Gap Road to Extension of Sandy Fork Road | Construct road generally along property lines | County | 3.14 | $2.61 | | 17 | 25 | Long Term |
| 51 | CR 126 / CR 115 | Acorn Road and Bugtussle Lane | FM 20 to FM 671 | Improve and realign portions of road | County | 3.44 | $3.56 | | 16 | 26 | Long Term |
| 20 | CR 145 | Vine Hill Road | FM 3158 to Pearl Trail | Pave and extend on new location | County | 3.33 | $5.69 | | 16 | 26 | Long Term |
| 16 | CR 313 | Boulder Lane | FM 3158 to Red Sand Trail, then on new location to Sandy Fork Road. | Rehab and pave road, realign | County | 5.64 | $3.86 | | 16 | 26 | Long Term |
| 58 | N/A | N/A | FM 2001 at CR 227/Rocky Road to Schuelke Rd | New roadway connecting FM 2001 to SH 130 | County | 1.46 | $5.84 | | 15 | 29 | Long Term |

## Proposed Maintenance Projects by Highway Number

| Map ID # | Road Number | Road Name | Surface | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 156 | | N HACKBERRY ST | CHIP | 3.5 | 0.28 | $0.20 | 54 |
| 34 | | OAK CV | CHIP | 3.8 | 0.19 | $0.14 | 145 |
| 5 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.37 | $0.27 | 112 |
| 9 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.17 | $0.13 | 112 |
| 56 | CR 100 | COUNTRY LN | CHIP | 3.8 | 0.31 | $0.22 | 90 |
| 64 | CR 102 | MARTINDALE RD | CHIP | 3.3 | 1.01 | $0.74 | 37 |
| 76 | CR 103 | NW RIVER RD | CHIP | 3.5 | 2.11 | $1.53 | 5 |
| 65 | CR 109 | BLACK ANKLE RD | CHIP | 4.0 | 1.35 | $0.98 | 5 |
| 72 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 1.53 | $1.11 | 1 |
| 78 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.41 | $0.30 | 54 |
| 80 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.51 | $0.37 | 151 |
| 101 | CR 110 | LONG RD | UNPAVED | 4.3 | 1.08 | $0.78 | 112 |
| 102 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 1.10 | $0.80 | 10 |
| 125 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 2.83 | $2.06 | 30 |
| 127 | CR 117 | MERIDIAN LN | CHIP | 4.0 | 0.91 | $0.66 | 21 |
| 141 | CR 119 | STAIRTOWN RD | CHIP | 3.3 | 0.79 | $0.58 | 10 |
| 155 | CR 122 | AUSTIN RD | CHIP/HOTMIX | 3.5 | 1.36 | $0.99 | 90 |
| 151 | CR 128 | SALT FLAT RD | CHIP | 3.3 | 1.52 | $1.10 | 37 |
| 158 | CR 128 | SALT FLAT RD | CHIP | 3.5 | 0.92 | $0.67 | 112 |
| 124 | CR 129 | PUMPER RD | UNPAVED | 3.7 | 0.44 | $0.32 | 54 |
| 135 | CR 130 | SODA SPRINGS RD | CHIP | 3.8 | 2.84 | $2.06 | 90 |
| 137 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 2.27 | $1.65 | 30 |
| 138 | CR 130 | SODA SPRINGS RD | CHIP | 4.3 | 0.72 | $0.52 | 30 |
| 139 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 0.71 | $0.51 | 90 |
| 152 | CR 132 | DERRICK RD | CHIP | 3.3 | 0.64 | $0.46 | 10 |
| 159 | CR 133 | IVY SWITCH RD | CHIP | 3.5 | 1.92 | $1.39 | 54 |
| 161 | CR 133 | IVY SWITCH RD | CHIP | 4.5 | 0.43 | $0.31 | 5 |
| 164 | CR 135A | SOUTHERN WAY | CHIP | 4.3 | 0.63 | $0.46 | 112 |
| 162 | CR 136 | ARROW LN | CHIP | 4.8 | 0.43 | $0.31 | 10 |
| 160 | CR 137 | SUNFLOWER TR | CHIP | 4.5 | 2.66 | $1.93 | 10 |
| 140 | CR 138 | McNEIL CREEK RD | CHIP | 4.5 | 0.98 | $0.72 | 37 |

| Map ID # | Road Number | Road Name | Surface | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 121 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.74 | $1.27 | 37 |
| 122 | CR 139 | HARWOOD RD | UNPAVED | 3.7 | 1.04 | $0.76 | 90 |
| 126 | CR 139 | HARWOOD RD | CHIP | 4.0 | 0.86 | $0.62 | 90 |
| 131 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.49 | $1.08 | 54 |
| 144 | CR 139-A | LOST RD | UNPAVED | 3.3 | 0.56 | $0.41 | 151 |
| 110 | CR 140 | WATTSVILLE RD | CHIP | 3.5 | 1.30 | $0.94 | 37 |
| 111 | CR 140A | PASTURE RD | UNPAVED | 3.3 | 0.61 | $0.44 | 145 |
| 98 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 2.11 | $1.53 | 134 |
| 118 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 0.76 | $0.55 | 90 |
| 119 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.7 | 2.50 | $1.82 | 54 |
| 115 | CR 141A | BRONCO LN | UNPAVED | 4.3 | 0.23 | $0.17 | 145 |
| 123 | CR 142 | HALL RD | CHIP | 3.5 | 0.47 | $0.34 | 134 |
| 106 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.74 | $1.26 | 54 |
| 107 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.76 | $1.28 | 156 |
| 128 | CR 152 | CHALK RD | UNPAVED | 3.3 | 4.03 | $2.92 | 101 |
| 94 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 96 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.34 | $0.25 | 101 |
| 97 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 1.36 | $0.99 | 112 |
| 100 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.10 | $1.52 | 54 |
| 130 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.96 | $2.15 | 112 |
| 105 | CR 155-A | BLUEJAY RD | UNPAVED | 3.3 | 1.46 | $1.06 | 54 |
| 92 | CR 155-B | ORIOLE LP | UNPAVED | 3.3 | 0.78 | $0.57 | 54 |
| 51 | CR 158 | TAYLORSVILLE RD | CHIP | 5.0 | 2.99 | $2.17 | 54 |
| 40 | CR 159 | PETTYTOWN RD | CHIP | 5.0 | 2.46 | $1.78 | 10 |
| 41 | CR 159 | PETTYTOWN RD | UNPAVED | 3.7 | 2.05 | $1.49 | 37 |
| 39 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 1.29 | $0.94 | 90 |
| 48 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.75 | $0.54 | 3 |
| 55 | CR 160 | OLD COLONY LINE RD | CHIP | 3.8 | 2.18 | $1.58 | 21 |
| 60 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.73 | $0.53 | 54 |
| 71 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.7 | 1.80 | $1.31 | 54 |
| 86 | CR 160 | OLD COLONY LINE RD | CHIP | 5.0 | 2.31 | $1.68 | 101 |
| 90 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.3 | 1.83 | $1.33 | 54 |

| Map ID # | Road Number | Road Name | Surface | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 59 | CR 162 | OIL FIELD RD | UNPAVED | 3.7 | 1.61 | $1.17 | 156 |
| 42 | CR 164 | TUMBLEWEED TR | UNPAVED | 3.3 | 3.12 | $2.26 | 30 |
| 31 | CR 168 | SANDY CREEK RD | CHIP | 3.3 | 1.15 | $0.83 | 54 |
| 25 | CR 169 | ST JOHNS RD | CHIP | 5.0 | 2.14 | $1.56 | 30 |
| 26 | CR 171 | SEMINOLE TR | UNPAVED | 3.3 | 1.92 | $1.40 | 151 |
| 11 | CR 172 | COUNTY LINE RD | CHIP | 5.0 | 1.69 | $1.23 | 37 |
| 58 | CR 173 | MILL RD | CHIP | 3.3 | 0.31 | $0.22 | 90 |
| 7 | CR 176 | LONE STAR DR | CHIP | 4.0 | 0.81 | $0.59 | 112 |
| 15 | CR 176 | OLD LOCKHART RD | CHIP | 4.0 | 0.46 | $0.33 | 21 |
| 10 | CR 177 | WILLIAMSON RD | CHIP | 4.0 | 0.65 | $0.47 | 37 |
| 28 | CR 179 | BARTH RD | CHIP | 4.5 | 0.58 | $0.42 | 37 |
| 30 | CR 179 | BARTH RD | UNPAVED | 3.3 | 3.30 | $2.39 | 5 |
| 38 | CR 179 | BARTH RD | CHIP | 3.3 | 1.47 | $1.07 | 10 |
| 49 | CR 184 | PEGASUS RD | CHIP | 3.8 | 0.75 | $0.54 | 134 |
| 57 | CR 186 | OLD KELLEY RD | CHIP | 4.0 | 2.24 | $1.63 | 37 |
| 1 | CR 191 | LONGHOLLOW RD | CHIP | 4.0 | 1.18 | $0.86 | 54 |
| 3 | CR 191 | PRAIRIE HILL DR | CHIP | 4.0 | 0.44 | $0.32 | 54 |
| 4 | CR 192 | CALDER RD | CHIP | 3.5 | 1.77 | $1.28 | 30 |
| 2 | CR 193 | AVIS RD | CHIP | 3.3 | 1.48 | $1.08 | 145 |
| 103 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.04 | $0.75 | 37 |
| 104 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.02 | $0.74 | 10 |
| 95 | CR 196-A | HARRIS CT | UNPAVED | 4.3 | 0.10 | $0.07 | 134 |
| 84 | CR 197 | YOUNG LN | UNPAVED | 4.0 | 0.64 | $0.46 | 54 |
| 85 | CR 197 | YOUNG LN | CHIP | 3.3 | 1.20 | $0.87 | 101 |
| 89 | CR 197 | YOUNG LN | HOTMIX | 3.3 | 1.88 | $1.37 | 37 |
| 69 | CR 198 | FOX LN | CHIP | 4.0 | 1.45 | $1.05 | 54 |
| 77 | CR 198 | FOX LN | CHIP | 4.0 | 0.10 | $0.07 | 54 |
| 87 | CR 198 | FOX LN | UNPAVED | 3.3 | 0.83 | $0.60 | 37 |
| 79 | CR 199 | LAKE RD | UNPAVED | 3.3 | 0.29 | $0.21 | 112 |
| 62 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 0.73 | $0.53 | 54 |
| 63 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 1.88 | $1.37 | 10 |
| 66 | CR 206 | LAY RD | CHIP | 3.5 | 0.63 | $0.46 | 54 |

| Map ID # | Road Number | Road Name | Surface | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 54 | CR 210 | BRITE RD | CHIP | 3.3 | 0.27 | $0.19 | 54 |
| 75 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.93 | $0.68 | 30 |
| 83 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.86 | $0.62 | 54 |
| 88 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.18 | $0.13 | 134 |
| 73 | CR 218 | BOGGY CREEK RD | UNPAVED | 3.5 | 1.58 | $1.15 | 101 |
| 37 | CR 221 | ROLLING RIDGE RD | CHIP | 3.3 | 1.73 | $1.26 | 10 |
| 24 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 2.04 | $1.48 | 21 |
| 29 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 1.81 | $1.32 | 4 |
| 27 | CR 223 | ROGERS RANCH RD | CHIP | 3.8 | 0.83 | $0.60 | 21 |
| 18 | CR 224 | HOLZ RD | CHIP | 4.5 | 2.08 | $1.51 | 90 |
| 35 | CR 226 | HOBBY HORSE RD | UNPAVED | 3.3 | 0.54 | $0.39 | 156 |
| 53 | CR 230 | JOLLY RD | UNPAVED | 3.3 | 1.86 | $1.35 | 112 |
| 46 | CR 235A | COUNTY LN | CHIP | 3.5 | 0.14 | $0.10 | 54 |
| 45 | CR 238 | WILLIAM PETTUS RD | CHIP | 4.0 | 1.11 | $0.81 | 37 |
| 163 | CR 243 | POWELL RD | CHIP | 4.3 | 0.92 | $0.67 | 5 |
| 150 | CR 248 | TREETOP LN | CHIP/HOTMIX | 4.0 | 0.56 | $0.41 | 134 |
| 154 | CR 248 | TREETOP LN | UNPAVED | 4.3 | 1.06 | $0.77 | 112 |
| 68 | CR 253 | WHIZZERVILLE RD | CHIP | 3.3 | 0.32 | $0.23 | 21 |
| 109 | CR 268 | GILLIS ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 21 |
| 113 | CR 269 | CONSTANCIO ST | CHIP/HOT | 3.3 | 0.14 | $0.10 | 134 |
| 114 | CR 275 | LUCKETT ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 37 |
| 116 | CR 276 | MUNK ST | CHIP | 3.8 | 0.08 | $0.06 | 101 |
| 117 | CR 277 | SENECA LP | CHIP | 4.3 | 0.23 | $0.17 | 145 |
| 129 | CR 281 | CHURCH AVE | CHIP | 3.3 | 0.16 | $0.11 | 37 |
| 132 | CR 282 | WATER ST | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 133 | CR 284 | MILL ST | CHIP | 3.5 | 0.17 | $0.13 | 90 |
| 67 | CR 288 BAS | OTT RD | UNPAVED | 5.0 | 2.53 | $1.84 | 151 |
| 22 | CR 291 | MEMORIAL DR | CHIP | 3.8 | 0.38 | $0.28 | 54 |
| 20 | CR 292 | HANGING OAK RD | CHIP | 4.0 | 0.34 | $0.24 | 54 |
| 21 | CR 292 | HANGING OAK RD | CHIP | 5.0 | 0.18 | $0.13 | 112 |
| 19 | CR 293 | CLENDENNEN LN | CHIP | 5.0 | 0.28 | $0.20 | 101 |
| 157 | CR 299 | YELLOW STONE RD | CHIP | 4.0 | 0.11 | $0.08 | 54 |

| Map ID # | Road Number | Road Name | Surface | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 147 | CR 30 | RUDOLPH LN | UNPAVED | 3.3 | 0.26 | $0.19 | 112 |
| 134 | CR 301 | LONGHORN RD | UNPAVED | 3.3 | 1.12 | $0.81 | 54 |
| 143 | CR 301 | PRIMROSE LN | UNPAVED | 3.3 | 1.22 | $0.89 | 101 |
| 145 | CR 302 | McNEIL RD | CHIP | 4.0 | 0.91 | $0.66 | 145 |
| 120 | CR 305 | REED CREEK DR | UNPAVED | 3.3 | 1.85 | $1.34 | 54 |
| 148 | CR 309 | BRIDLE PATH RD | CHIP | 3.5 | 0.86 | $0.62 | 1 |
| 149 | CR 31 | RAWHIDE LN | UNPAVED | 3.3 | 0.14 | $0.10 | 112 |
| 17 | CR 312 | SUNRISE ST | CHIP | 4.3 | 0.39 | $0.29 | 54 |
| 91 | CR 313 | BOULDER LN | UNPAVED | 3.7 | 1.75 | $1.27 | 21 |
| 146 | CR 32 | ANGLE RD | UNPAVED | 3.3 | 0.83 | $0.60 | 112 |
| 142 | CR 33 | HAWK RD | UNPAVED | 3.3 | 0.29 | $0.21 | 151 |
| 44 | CR 36 | GARRETT TR | CHIP | 4.0 | 1.00 | $0.72 | 21 |
| 50 | CR 37 | CITY VIEW DR | CHIP | 3.5 | 0.40 | $0.29 | 112 |
| 43 | CR 38 | KOEGLAR DR | CHIP | 3.5 | 0.39 | $0.29 | 112 |
| 47 | CR 39 | COTTON FIELD DR | CHIP | 3.5 | 0.20 | $0.15 | 134 |
| 36 | CR 400 | OAK TRAIL DR | UNPAVED | 3.3 | 0.97 | $0.70 | 54 |
| 33 | CR 402 | ALAMO DR | CHIP | 4.0 | 0.44 | $0.32 | 37 |
| 70 | CR 65 | WILLOWBROOK CT | CHIP | 3.3 | 0.11 | $0.08 | 134 |
| 81 | CR 66 | HUMPHREY CT | CHIP | 5.0 | 0.20 | $0.14 | 101 |
| 61 | CR 67 | BIRCH ST | CHIP | 3.8 | 0.19 | $0.14 | 10 |
| 8 | CR 76 | ARABIAN STALLION RUN | CHIP | 4.0 | 0.30 | $0.22 | 54 |
| 6 | CR 76 | BRIDAL BIT LN | CHIP | 4.0 | 0.12 | $0.08 | 54 |
| 32 | CR 87 | SHAWNEE TRL | UNPAVED | 5.0 | 0.14 | $0.10 | 101 |
| 12 | CR 96 | SAGE HOLLOW RD | UNPAVED | 3.7 | 0.59 | $0.43 | 112 |
| 14 | CR 96 | SCHRIBER CT | UNPAVED | 5.0 | 0.10 | $0.07 | 101 |
| 13 | CR 96-A | COYOTE RUN RD | UNPAVED | 3.7 | 0.56 | $0.41 | 54 |
| 23 | CR 97 | GRANDPA RD | UNPAVED | 3.3 | 0.60 | $0.43 | 112 |
| 16 | CR 99 | QUAIL RIDGE DR | CHIP | 4.0 | 0.37 | $0.27 | 54 |
| 52 | PR | MEADOW LAKE DR | CHIP | 3.5 | 0.26 | $0.19 | 112 |
| 99 | PR 3005 | PAINTBRUSH TR | UNPAVED | 4.0 | 0.58 | $0.42 | 112 |
| 112 | PR-3020 | MOCKINGBIRD LN | UNPAVED | 3.7 | 0.45 | $0.33 | 112 |

# Proposed Maintenance Projects by Rank

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 72 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 1.53 | $1.11 | 1 |
| 148 | CR 309 | BRIDLE PATH RD | CHIP | 3.5 | 0.86 | $0.62 | 1 |
| 48 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.75 | $0.54 | 3 |
| 29 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 1.81 | $1.32 | 4 |
| 76 | CR 103 | NW RIVER RD | CHIP | 3.5 | 2.11 | $1.53 | 5 |
| 65 | CR 109 | BLACK ANKLE RD | CHIP | 4.0 | 1.35 | $0.98 | 5 |
| 161 | CR 133 | IVY SWITCH RD | CHIP | 4.5 | 0.43 | $0.31 | 5 |
| 30 | CR 179 | BARTH RD | UNPAVED | 3.3 | 3.30 | $2.39 | 5 |
| 163 | CR 243 | POWELL RD | CHIP | 4.3 | 0.92 | $0.67 | 5 |
| 102 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 1.10 | $0.80 | 10 |
| 141 | CR 119 | STAIRTOWN RD | CHIP | 3.3 | 0.79 | $0.58 | 10 |
| 152 | CR 132 | DERRICK RD | CHIP | 3.3 | 0.64 | $0.46 | 10 |
| 162 | CR 136 | ARROW LN | CHIP | 4.8 | 0.43 | $0.31 | 10 |
| 160 | CR 137 | SUNFLOWER TR | CHIP | 4.5 | 2.66 | $1.93 | 10 |
| 40 | CR 159 | PETTYTOWN RD | CHIP | 5.0 | 2.46 | $1.78 | 10 |
| 38 | CR 179 | BARTH RD | CHIP | 3.3 | 1.47 | $1.07 | 10 |
| 104 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.02 | $0.74 | 10 |
| 63 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 1.88 | $1.37 | 10 |
| 37 | CR 221 | ROLLING RIDGE RD | CHIP | 3.3 | 1.73 | $1.26 | 10 |
| 61 | CR 67 | BIRCH ST | CHIP | 3.8 | 0.19 | $0.14 | 10 |
| 127 | CR 117 | MERIDIAN LN | CHIP | 4.0 | 0.91 | $0.66 | 21 |
| 55 | CR 160 | OLD COLONY LINE RD | CHIP | 3.8 | 2.18 | $1.58 | 21 |
| 15 | CR 176 | OLD LOCKHART RD | CHIP | 4.0 | 0.46 | $0.33 | 21 |
| 24 | CR 222 | SCHUELKE RD | CHIP | 3.5 | 2.04 | $1.48 | 21 |
| 27 | CR 223 | ROGERS RANCH RD | CHIP | 3.8 | 0.83 | $0.60 | 21 |
| 68 | CR 253 | WHIZZERVILLE RD | CHIP | 3.3 | 0.32 | $0.23 | 21 |
| 109 | CR 268 | GILLIS ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 21 |
| 91 | CR 313 | BOULDER LN | UNPAVED | 3.7 | 1.75 | $1.27 | 21 |
| 44 | CR 36 | GARRETT TR | CHIP | 4.0 | 1.00 | $0.72 | 21 |
| 125 | CR 112 | CALLIHAN RD | CHIP | 4.3 | 2.83 | $2.06 | 30 |
| 137 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 2.27 | $1.65 | 30 |

| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 138 | CR 130 | SODA SPRINGS RD | CHIP | 4.3 | 0.72 | $0.52 | 30 |
| 42 | CR 164 | TUMBLEWEED TR | UNPAVED | 3.3 | 3.12 | $2.26 | 30 |
| 25 | CR 169 | ST JOHNS RD | CHIP | 5.0 | 2.14 | $1.56 | 30 |
| 4 | CR 192 | CALDER RD | CHIP | 3.5 | 1.77 | $1.28 | 30 |
| 75 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.93 | $0.68 | 30 |
| 64 | CR 102 | MARTINDALE RD | CHIP | 3.3 | 1.01 | $0.74 | 37 |
| 151 | CR 128 | SALT FLAT RD | CHIP | 3.3 | 1.52 | $1.10 | 37 |
| 140 | CR 138 | McNEIL CREEK RD | CHIP | 4.5 | 0.98 | $0.72 | 37 |
| 121 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.74 | $1.27 | 37 |
| 110 | CR 140 | WATTSVILLE RD | CHIP | 3.5 | 1.30 | $0.94 | 37 |
| 41 | CR 159 | PETTYTOWN RD | UNPAVED | 3.7 | 2.05 | $1.49 | 37 |
| 11 | CR 172 | COUNTY LINE RD | CHIP | 5.0 | 1.69 | $1.23 | 37 |
| 10 | CR 177 | WILLIAMSON RD | CHIP | 4.0 | 0.65 | $0.47 | 37 |
| 28 | CR 179 | BARTH RD | CHIP | 4.5 | 0.58 | $0.42 | 37 |
| 57 | CR 186 | OLD KELLEY RD | CHIP | 4.0 | 2.24 | $1.63 | 37 |
| 103 | CR 194 | CLEARFORK RD | CHIP | 3.5 | 1.04 | $0.75 | 37 |
| 89 | CR 197 | YOUNG LN | HOTMIX | 3.3 | 1.88 | $1.37 | 37 |
| 87 | CR 198 | FOX LN | UNPAVED | 3.3 | 0.83 | $0.60 | 37 |
| 45 | CR 238 | WILLIAM PETTUS RD | CHIP | 4.0 | 1.11 | $0.81 | 37 |
| 114 | CR 275 | LUCKETT ST | CHIP/HOT | 3.3 | 0.37 | $0.27 | 37 |
| 129 | CR 281 | CHURCH AVE | CHIP | 3.3 | 0.16 | $0.11 | 37 |
| 33 | CR 402 | ALAMO DR | CHIP | 4.0 | 0.44 | $0.32 | 37 |
| 156 | | N HACKBERRY ST | CHIP | 3.5 | 0.28 | $0.20 | 54 |
| 78 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.41 | $0.30 | 54 |
| 124 | CR 129 | PUMPER RD | UNPAVED | 3.7 | 0.44 | $0.32 | 54 |
| 159 | CR 133 | IVY SWITCH RD | CHIP | 3.5 | 1.92 | $1.39 | 54 |
| 131 | CR 139 | HARWOOD RD | CHIP | 4.0 | 1.49 | $1.08 | 54 |
| 119 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.7 | 2.50 | $1.82 | 54 |
| 106 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.74 | $1.26 | 54 |
| 100 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.10 | $1.52 | 54 |
| 105 | CR 155-A | BLUEJAY RD | UNPAVED | 3.3 | 1.46 | $1.06 | 54 |
| 92 | CR 155-B | ORIOLE LP | UNPAVED | 3.3 | 0.78 | $0.57 | 54 |

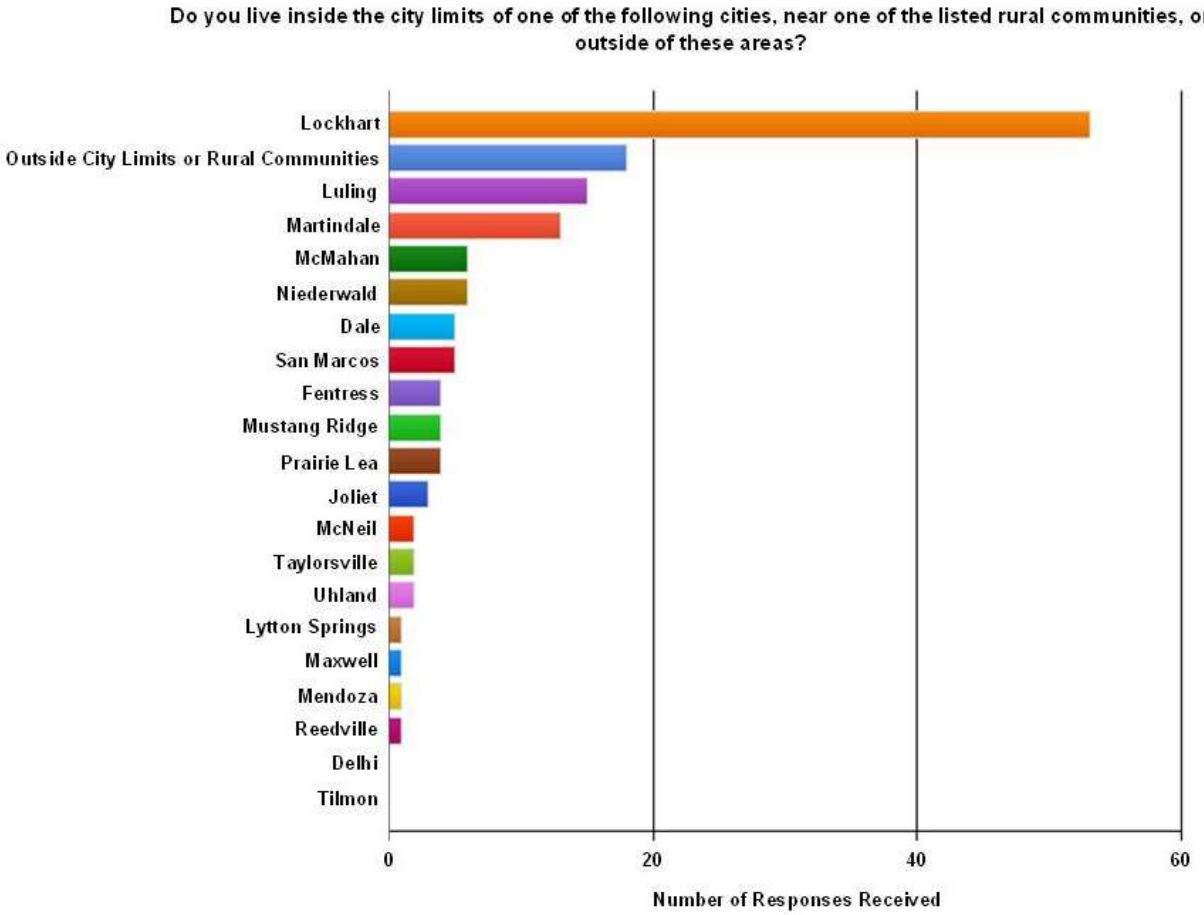
| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 51 | CR 158 | TAYLORSVILLE RD | CHIP | 5.0 | 2.99 | $2.17 | 54 |
| 60 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 0.73 | $0.53 | 54 |
| 71 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.7 | 1.80 | $1.31 | 54 |
| 90 | CR 160 | OLD COLONY LINE RD | UNPAVED | 3.3 | 1.83 | $1.33 | 54 |
| 31 | CR 168 | SANDY CREEK RD | CHIP | 3.3 | 1.15 | $0.83 | 54 |
| 1 | CR 191 | LONGHOLLOW RD | CHIP | 4.0 | 1.18 | $0.86 | 54 |
| 3 | CR 191 | PRAIRIE HILL DR | CHIP | 4.0 | 0.44 | $0.32 | 54 |
| 84 | CR 197 | YOUNG LN | UNPAVED | 4.0 | 0.64 | $0.46 | 54 |
| 69 | CR 198 | FOX LN | CHIP | 4.0 | 1.45 | $1.05 | 54 |
| 77 | CR 198 | FOX LN | CHIP | 4.0 | 0.10 | $0.07 | 54 |
| 62 | CR 202 | OLD McMAHAN RD | CHIP | 4.0 | 0.73 | $0.53 | 54 |
| 66 | CR 206 | LAY RD | CHIP | 3.5 | 0.63 | $0.46 | 54 |
| 54 | CR 210 | BRITE RD | CHIP | 3.3 | 0.27 | $0.19 | 54 |
| 83 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.86 | $0.62 | 54 |
| 46 | CR 235A | COUNTY LN | CHIP | 3.5 | 0.14 | $0.10 | 54 |
| 22 | CR 291 | MEMORIAL DR | CHIP | 3.8 | 0.38 | $0.28 | 54 |
| 20 | CR 292 | HANGING OAK RD | CHIP | 4.0 | 0.34 | $0.24 | 54 |
| 157 | CR 299 | YELLOW STONE RD | CHIP | 4.0 | 0.11 | $0.08 | 54 |
| 134 | CR 301 | LONGHORN RD | UNPAVED | 3.3 | 1.12 | $0.81 | 54 |
| 120 | CR 305 | REED CREEK DR | UNPAVED | 3.3 | 1.85 | $1.34 | 54 |
| 17 | CR 312 | SUNRISE ST | CHIP | 4.3 | 0.39 | $0.29 | 54 |
| 36 | CR 400 | OAK TRAIL DR | UNPAVED | 3.3 | 0.97 | $0.70 | 54 |
| 6 | CR 76 | BRIDAL BIT LN | CHIP | 4.0 | 0.12 | $0.08 | 54 |
| 8 | CR 76 | ARABIAN STALLION RUN | CHIP | 4.0 | 0.30 | $0.22 | 54 |
| 13 | CR 96-A | COYOTE RUN RD | UNPAVED | 3.7 | 0.56 | $0.41 | 54 |
| 16 | CR 99 | QUAIL RIDGE DR | CHIP | 4.0 | 0.37 | $0.27 | 54 |
| 56 | CR 100 | COUNTRY LN | CHIP | 3.8 | 0.31 | $0.22 | 90 |
| 155 | CR 122 | AUSTIN RD | CHIP/HOTMIX | 3.5 | 1.36 | $0.99 | 90 |
| 135 | CR 130 | SODA SPRINGS RD | CHIP | 3.8 | 2.84 | $2.06 | 90 |
| 139 | CR 130 | SODA SPRINGS RD | CHIP | 3.3 | 0.71 | $0.51 | 90 |
| 122 | CR 139 | HARWOOD RD | UNPAVED | 3.7 | 1.04 | $0.76 | 90 |
| 126 | CR 139 | HARWOOD RD | CHIP | 4.0 | 0.86 | $0.62 | 90 |

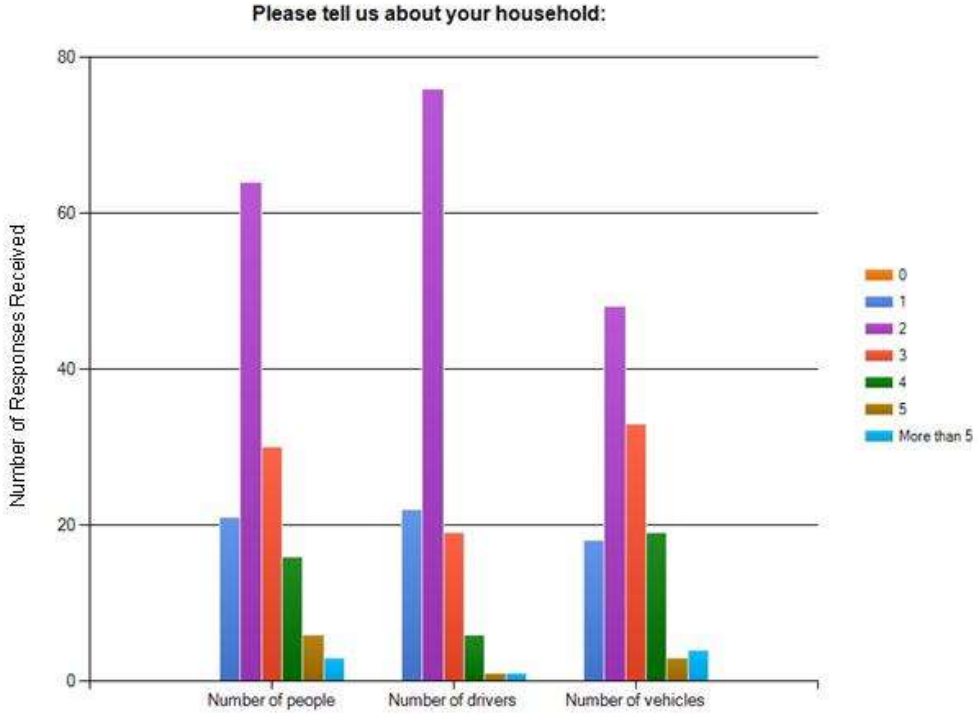
| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 118 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 0.76 | $0.55 | 90 |
| 39 | CR 160 | OLD COLONY LINE RD | CHIP | 3.5 | 1.29 | $0.94 | 90 |
| 58 | CR 173 | MILL RD | CHIP | 3.3 | 0.31 | $0.22 | 90 |
| 18 | CR 224 | HOLZ RD | CHIP | 4.5 | 2.08 | $1.51 | 90 |
| 133 | CR 284 | MILL ST | CHIP | 3.5 | 0.17 | $0.13 | 90 |
| 128 | CR 152 | CHALK RD | UNPAVED | 3.3 | 4.03 | $2.92 | 101 |
| 96 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.34 | $0.25 | 101 |
| 86 | CR 160 | OLD COLONY LINE RD | CHIP | 5.0 | 2.31 | $1.68 | 101 |
| 85 | CR 197 | YOUNG LN | CHIP | 3.3 | 1.20 | $0.87 | 101 |
| 73 | CR 218 | BOGGY CREEK RD | UNPAVED | 3.5 | 1.58 | $1.15 | 101 |
| 116 | CR 276 | MUNK ST | CHIP | 3.8 | 0.08 | $0.06 | 101 |
| 19 | CR 293 | CLENDENNEN LN | CHIP | 5.0 | 0.28 | $0.20 | 101 |
| 143 | CR 301 | PRIMROSE LN | UNPAVED | 3.3 | 1.22 | $0.89 | 101 |
| 81 | CR 66 | HUMPHREY CT | CHIP | 5.0 | 0.20 | $0.14 | 101 |
| 32 | CR 87 | SHAWNEE TRL | UNPAVED | 5.0 | 0.14 | $0.10 | 101 |
| 14 | CR 96 | SCHRIBER CT | UNPAVED | 5.0 | 0.10 | $0.07 | 101 |
| 5 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.37 | $0.27 | 112 |
| 9 | CR | MUSTANG MEADOW RUN | 3/4 CHIP, 1/4 HOTMIX | 3.5 | 0.17 | $0.13 | 112 |
| 101 | CR 110 | LONG RD | UNPAVED | 4.3 | 1.08 | $0.78 | 112 |
| 158 | CR 128 | SALT FLAT RD | CHIP | 3.5 | 0.92 | $0.67 | 112 |
| 164 | CR 135A | SOUTHERN WAY | CHIP | 4.3 | 0.63 | $0.46 | 112 |
| 97 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 1.36 | $0.99 | 112 |
| 130 | CR 154 | SILVER MINE RD | UNPAVED | 3.7 | 2.96 | $2.15 | 112 |
| 7 | CR 176 | LONE STAR DR | CHIP | 4.0 | 0.81 | $0.59 | 112 |
| 79 | CR 199 | LAKE RD | UNPAVED | 3.3 | 0.29 | $0.21 | 112 |
| 53 | CR 230 | JOLLY RD | UNPAVED | 3.3 | 1.86 | $1.35 | 112 |
| 154 | CR 248 | TREETOP LN | UNPAVED | 4.3 | 1.06 | $0.77 | 112 |
| 21 | CR 292 | HANGING OAK RD | CHIP | 5.0 | 0.18 | $0.13 | 112 |
| 147 | CR 30 | RUDOLPH LN | UNPAVED | 3.3 | 0.26 | $0.19 | 112 |
| 149 | CR 31 | RAWHIDE LN | UNPAVED | 3.3 | 0.14 | $0.10 | 112 |
| 146 | CR 32 | ANGLE RD | UNPAVED | 3.3 | 0.83 | $0.60 | 112 |
| 50 | CR 37 | CITY VIEW DR | CHIP | 3.5 | 0.40 | $0.29 | 112 |

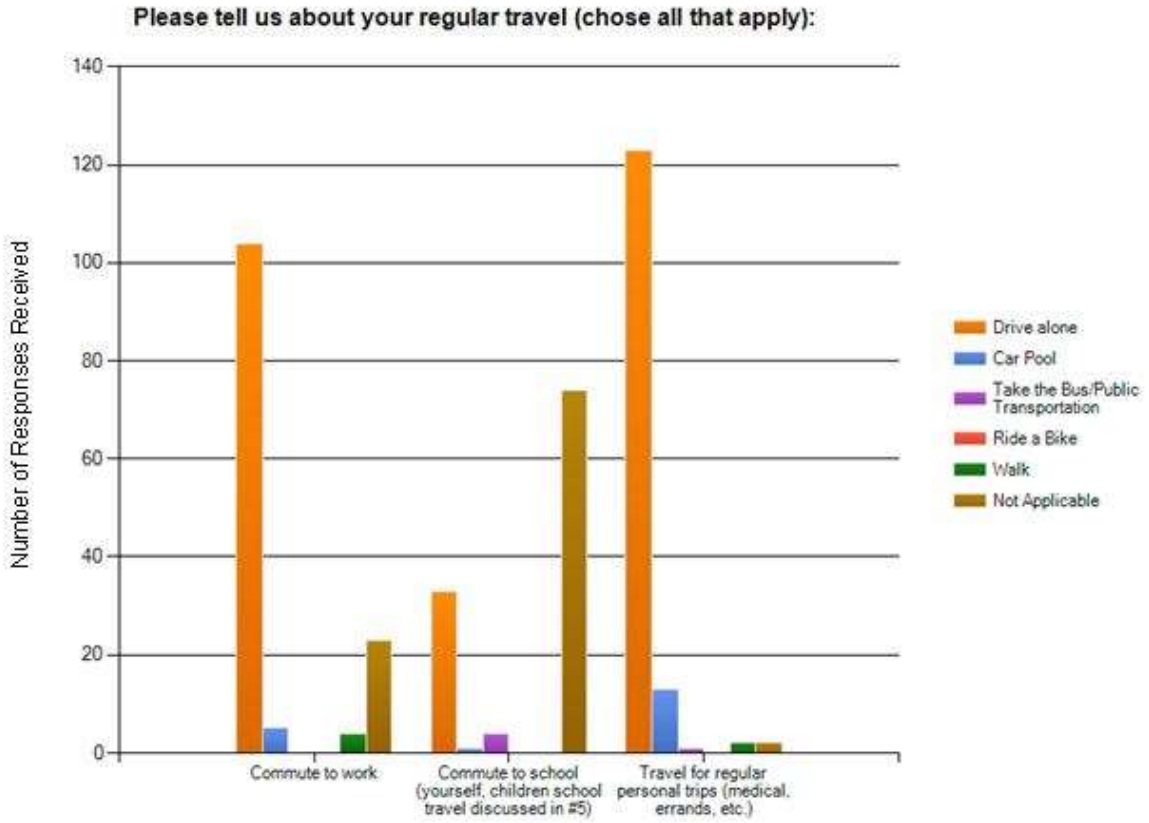
| Map ID # | Road Number | Road Name | Surface Type | Score | Length (Miles) | Estimated Cost (Millions) | Rank |
|---|---|---|---|---|---|---|---|
| 43 | CR 38 | KOEGLAR DR | CHIP | 3.5 | 0.39 | $0.29 | 112 |
| 12 | CR 96 | SAGE HOLLOW RD | UNPAVED | 3.7 | 0.59 | $0.43 | 112 |
| 23 | CR 97 | GRANDPA RD | UNPAVED | 3.3 | 0.60 | $0.43 | 112 |
| 52 | PR | MEADOW LAKE DR | CHIP | 3.5 | 0.26 | $0.19 | 112 |
| 99 | PR 3005 | PAINTBRUSH TR | UNPAVED | 4.0 | 0.58 | $0.42 | 112 |
| 112 | PR-3020 | MOCKINGBIRD LN | UNPAVED | 3.7 | 0.45 | $0.33 | 112 |
| 98 | CR 141 | TENNEY CREEK RD | UNPAVED | 3.3 | 2.11 | $1.53 | 134 |
| 123 | CR 142 | HALL RD | CHIP | 3.5 | 0.47 | $0.34 | 134 |
| 94 | CR 153-A | BIG RANCH RD | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 49 | CR 184 | PEGASUS RD | CHIP | 3.8 | 0.75 | $0.54 | 134 |
| 95 | CR 196-A | HARRIS CT | UNPAVED | 4.3 | 0.10 | $0.07 | 134 |
| 88 | CR 213 | OLD LULING RD | CHIP | 3.3 | 0.18 | $0.13 | 134 |
| 150 | CR 248 | TREETOP LN | CHIP/HOTMIX | 4.0 | 0.56 | $0.41 | 134 |
| 113 | CR 269 | CONSTANCIO ST | CHIP/HOT | 3.3 | 0.14 | $0.10 | 134 |
| 132 | CR 282 | WATER ST | UNPAVED | 5.0 | 0.24 | $0.17 | 134 |
| 47 | CR 39 | COTTON FIELD DR | CHIP | 3.5 | 0.20 | $0.15 | 134 |
| 70 | CR 65 | WILLOWBROOK CT | CHIP | 3.3 | 0.11 | $0.08 | 134 |
| 34 |  | OAK CV | CHIP | 3.8 | 0.19 | $0.14 | 145 |
| 111 | CR 140A | PASTURE RD | UNPAVED | 3.3 | 0.61 | $0.44 | 145 |
| 115 | CR 141A | BRONCO LN | UNPAVED | 4.3 | 0.23 | $0.17 | 145 |
| 2 | CR 193 | AVIS RD | CHIP | 3.3 | 1.48 | $1.08 | 145 |
| 117 | CR 277 | SENECA LP | CHIP | 4.3 | 0.23 | $0.17 | 145 |
| 145 | CR 302 | McNEIL RD | CHIP | 4.0 | 0.91 | $0.66 | 145 |
| 80 | CR 109 | BLACK ANKLE RD | CHIP | 5.0 | 0.51 | $0.37 | 151 |
| 144 | CR 139-A | LOST RD | UNPAVED | 3.3 | 0.56 | $0.41 | 151 |
| 26 | CR 171 | SEMINOLE TR | UNPAVED | 3.3 | 1.92 | $1.40 | 151 |
| 67 | CR 288 BAS | OTT RD | UNPAVED | 5.0 | 2.53 | $1.84 | 151 |
| 142 | CR 33 | HAWK RD | UNPAVED | 3.3 | 0.29 | $0.21 | 151 |
| 107 | CR 143 | CHUCKWAGON RD | UNPAVED | 3.3 | 1.76 | $1.28 | 156 |
| 59 | CR 162 | OIL FIELD RD | UNPAVED | 3.7 | 1.61 | $1.17 | 156 |
| 35 | CR 226 | HOBBY HORSE RD | UNPAVED | 3.3 | 0.54 | $0.39 | 156 |

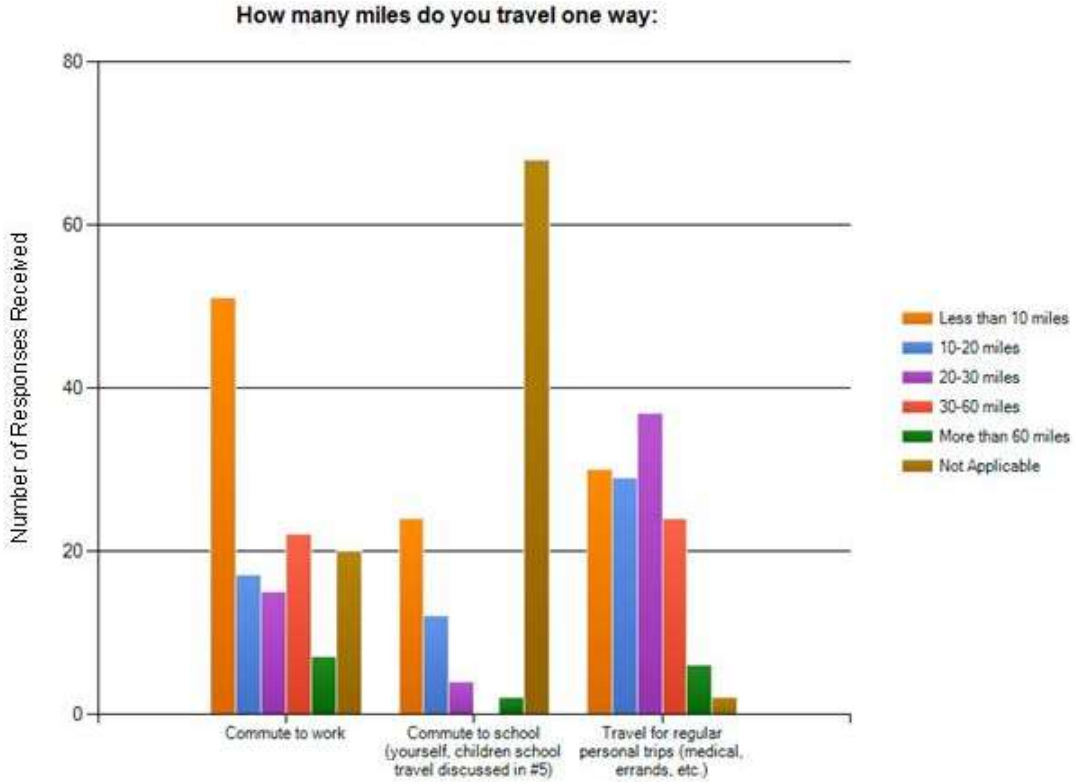
# Appendix C
# Public Input

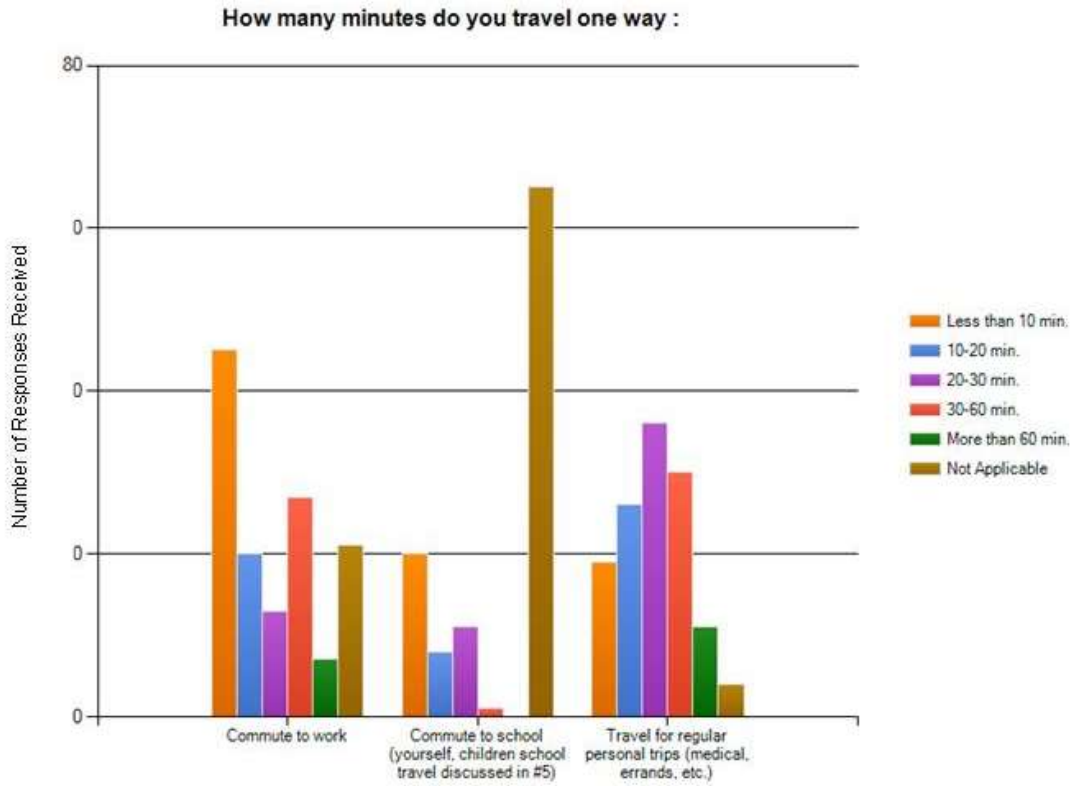
# Transportation Questionnaire: September – October 2012



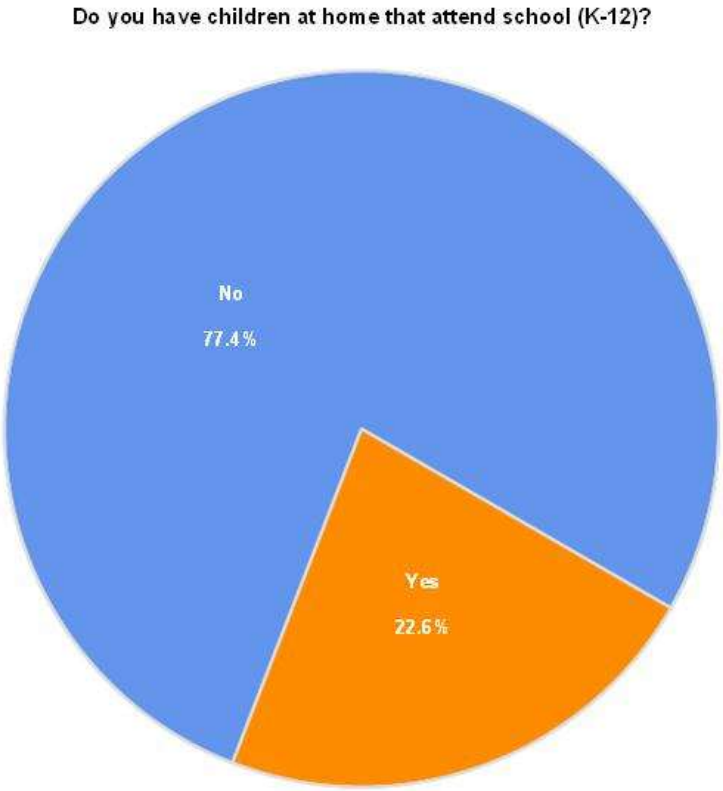



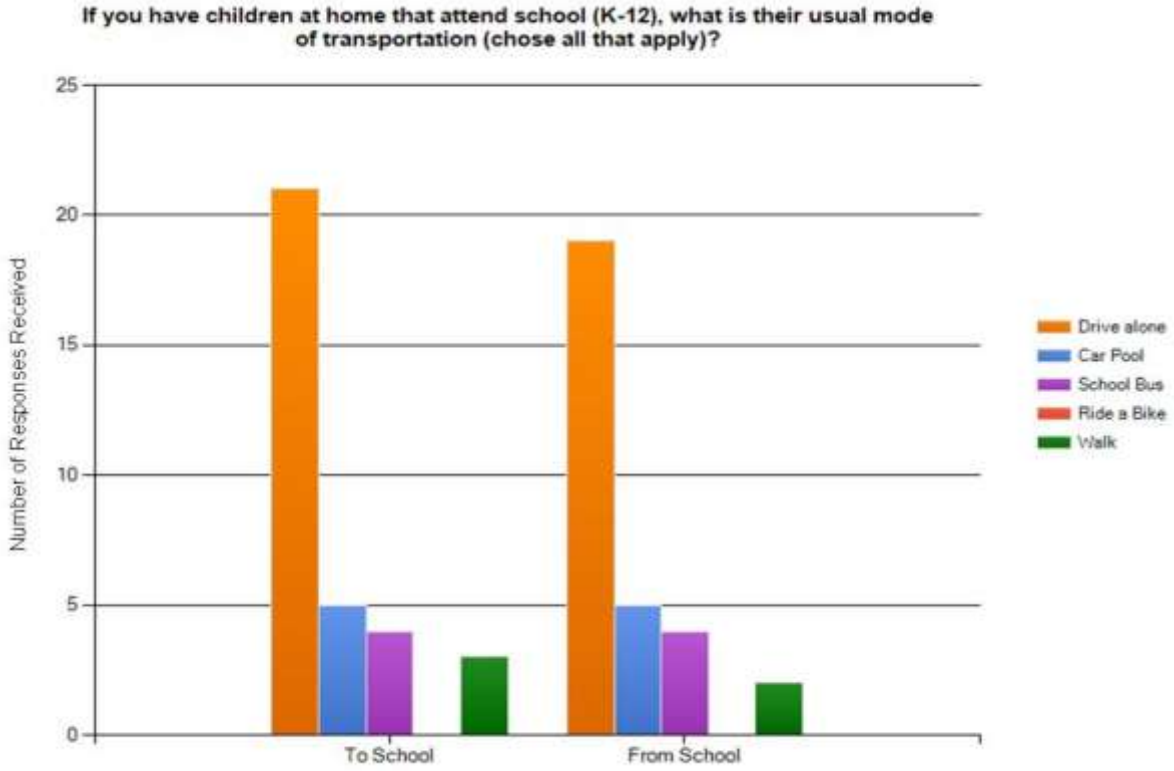

Please tell us about your regular travel (chose all that apply):
Number of Responses Received
140
120
100
80
60
40
20
0
Commute to work
Commute to school (yourself, children school travel discussed in #5)
Travel for regular personal trips (medical, errands, etc.)
Drive alone
Car Pool
Take the Bus/Public Transportation
Ride a Bike
Walk
Not Applicable

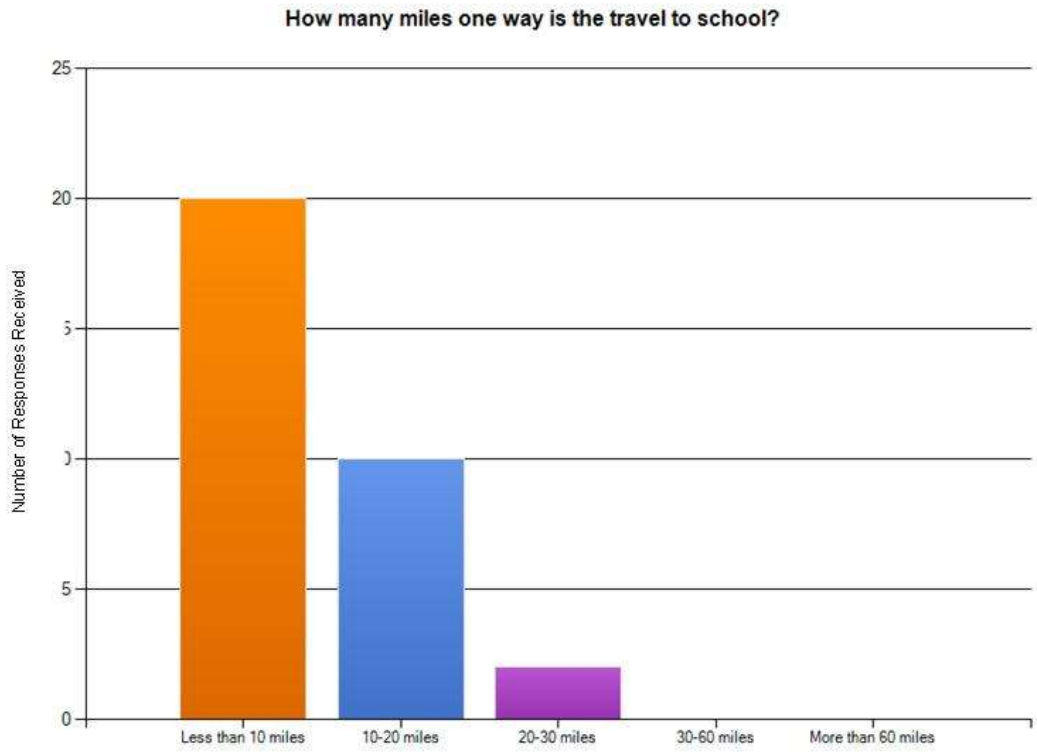

How many miles do you travel one way:
Number of Responses Received
80
60
40
20
0
Commute to work
Commute to school (yourself, children school travel discussed in #5)
Travel for regular personal trips (medical, errands, etc.)
Less than 10 miles
10-20 miles
20-30 miles
30-60 miles
More than 60 miles
Not Applicable

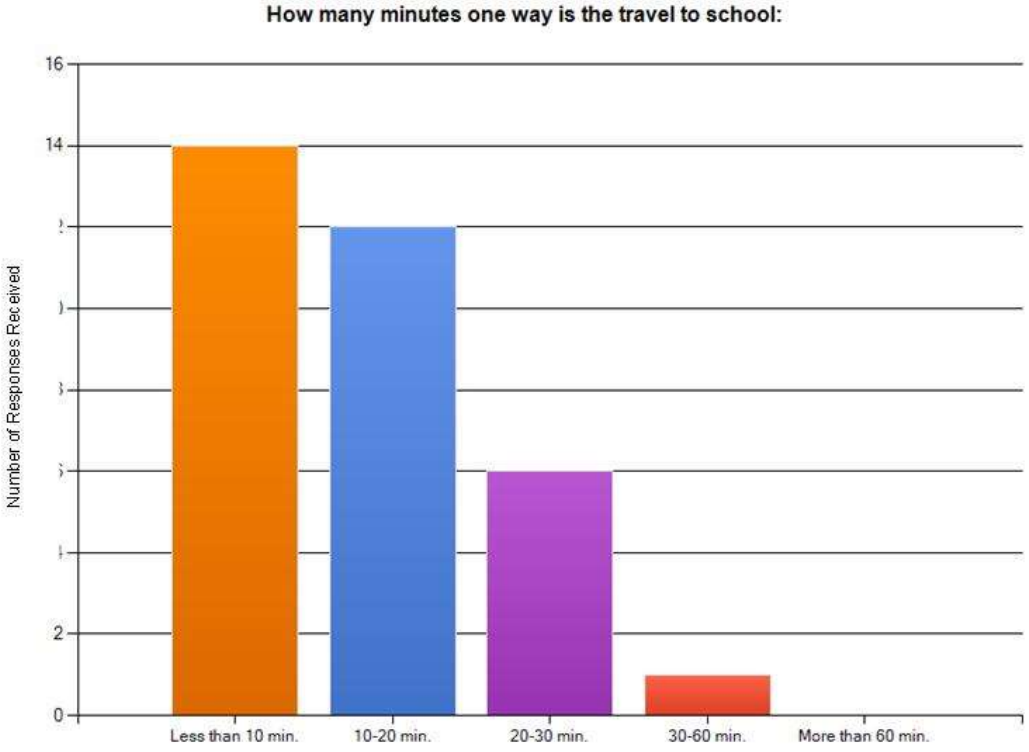


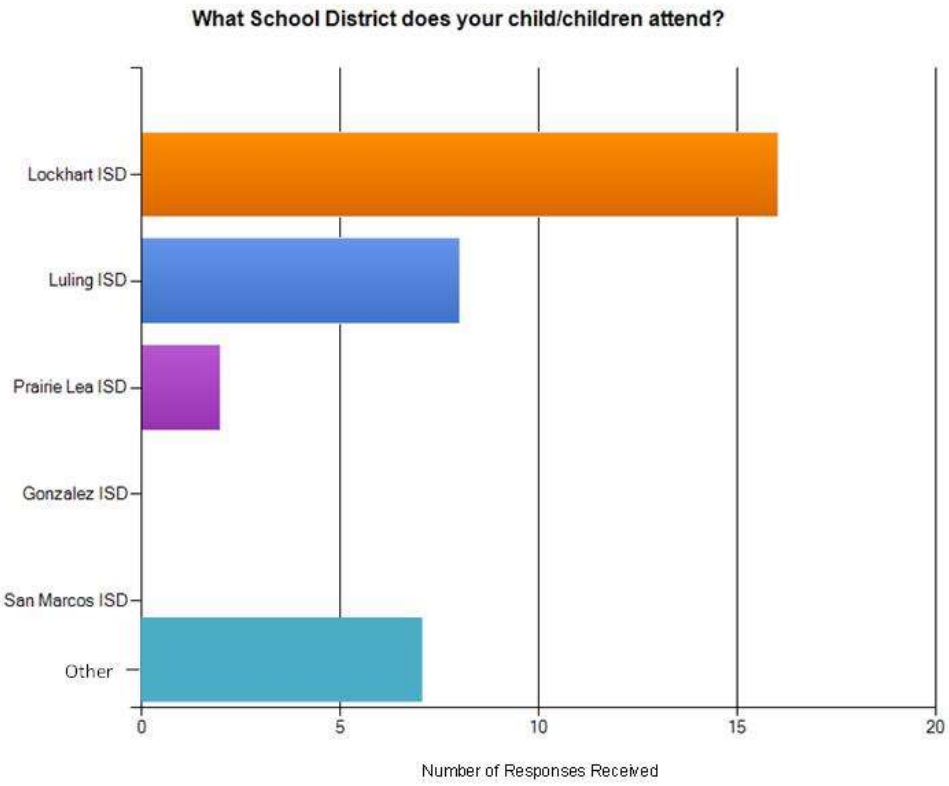

| Zip Code | Number of Responses | Zip Code | Number of Responses |
|---|---|---|---|
| 78130 | 1 | 78702 | 1 |
| 78212 | 1 | 78704 | 1 |
| 78218 | 1 | 78705 | 2 |
| 78249 | 1 | 78711 | 1 |
| 78602 | 1 | 78722 | 1 |
| 78610 | 2 | 78731 | 1 |
| 78616 | 2 | 78732 | 1 |
| 78619 | 1 | 78735 | 1 |
| 78622 | 2 | 78744 | 3 |
| 78629 | 1 | 78745 | 1 |
| 78632 | 1 | 78746 | 2 |
| 78640 | 3 | 78749 | 9 |
| 78644 | 46 | 78751 | 4 |
| 78648 | 18 | 78752 | 2 |
| 78652 | 1 | 78753 | 1 |
| 78655 | 4 | 78754 | 1 |
| 78656 | 2 | 78758 | 1 |
| 78661 | 1 | 78759 | 1 |
| 78666 | 14 | 78945 | 1 |
| 78701 | 4 | | |

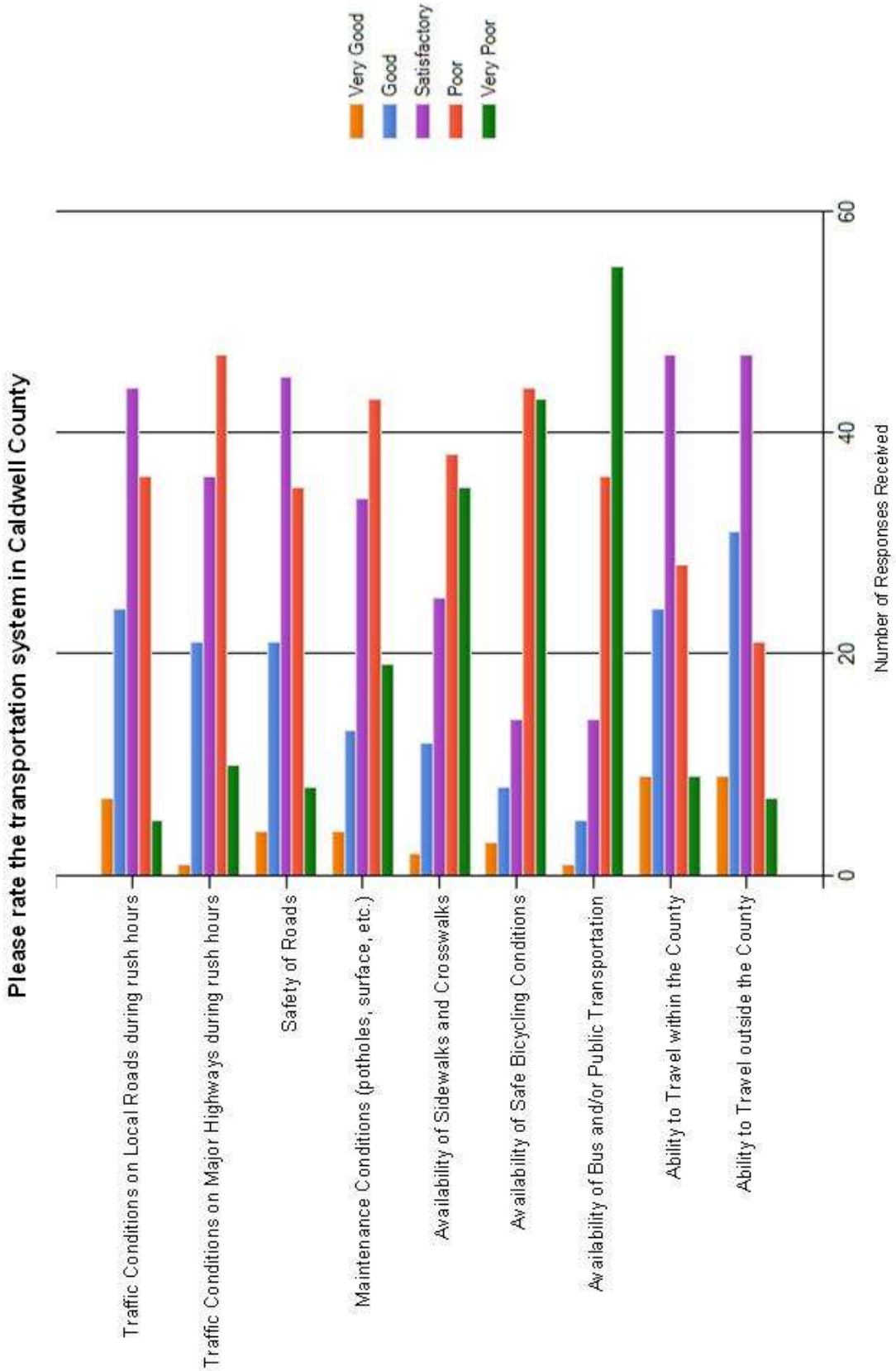

Do you have children at home that attend school (K-12)?
No
77.4%
Yes
22.6%

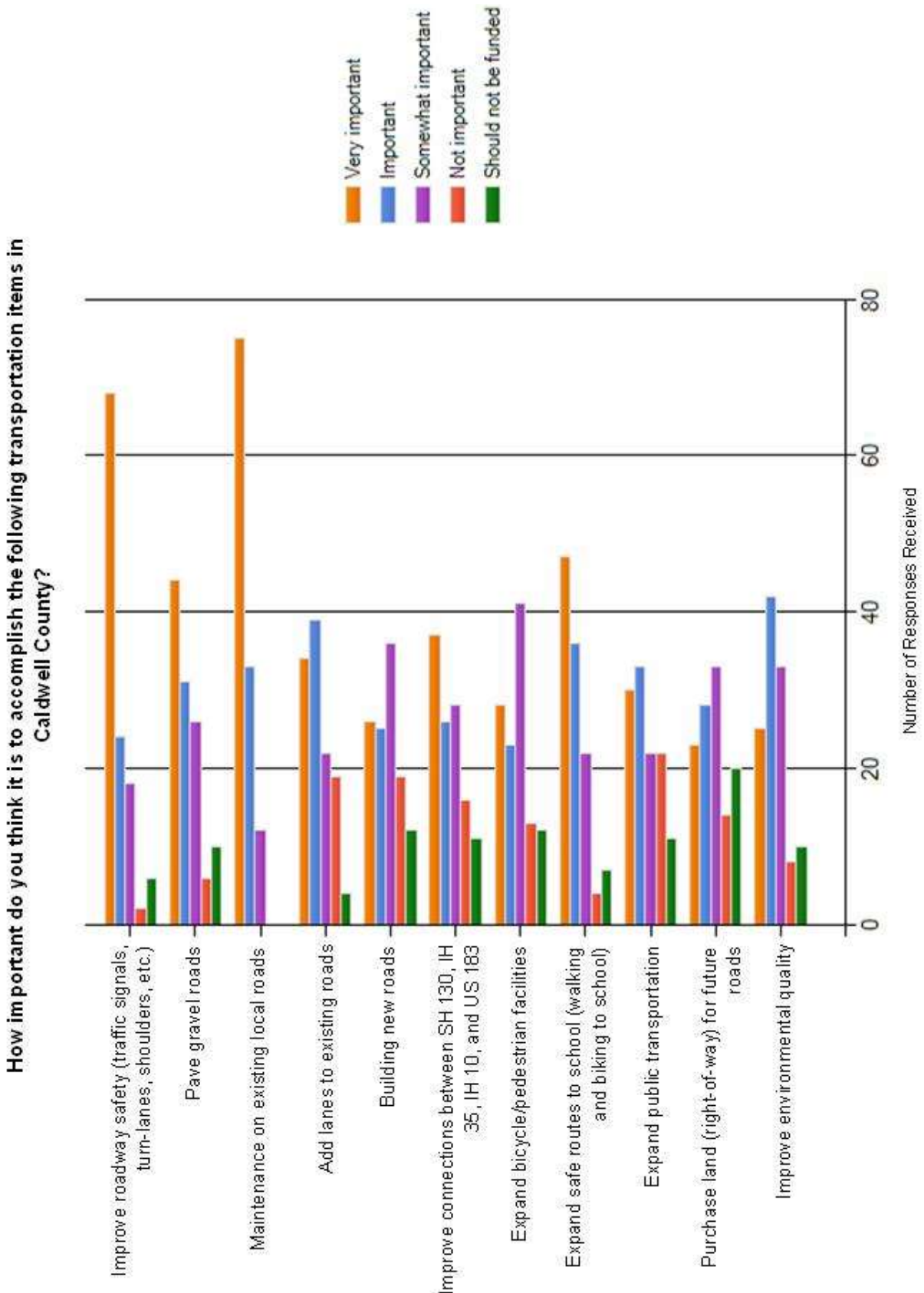

If you have children at home that attend school (K-12), what is their usual mode of transportation (chose all that apply)?
Number of Responses Received
25
20
15
10
5
0
To School
From School
Drive alone
Car Pool
School Bus
Ride a Bike
Walk

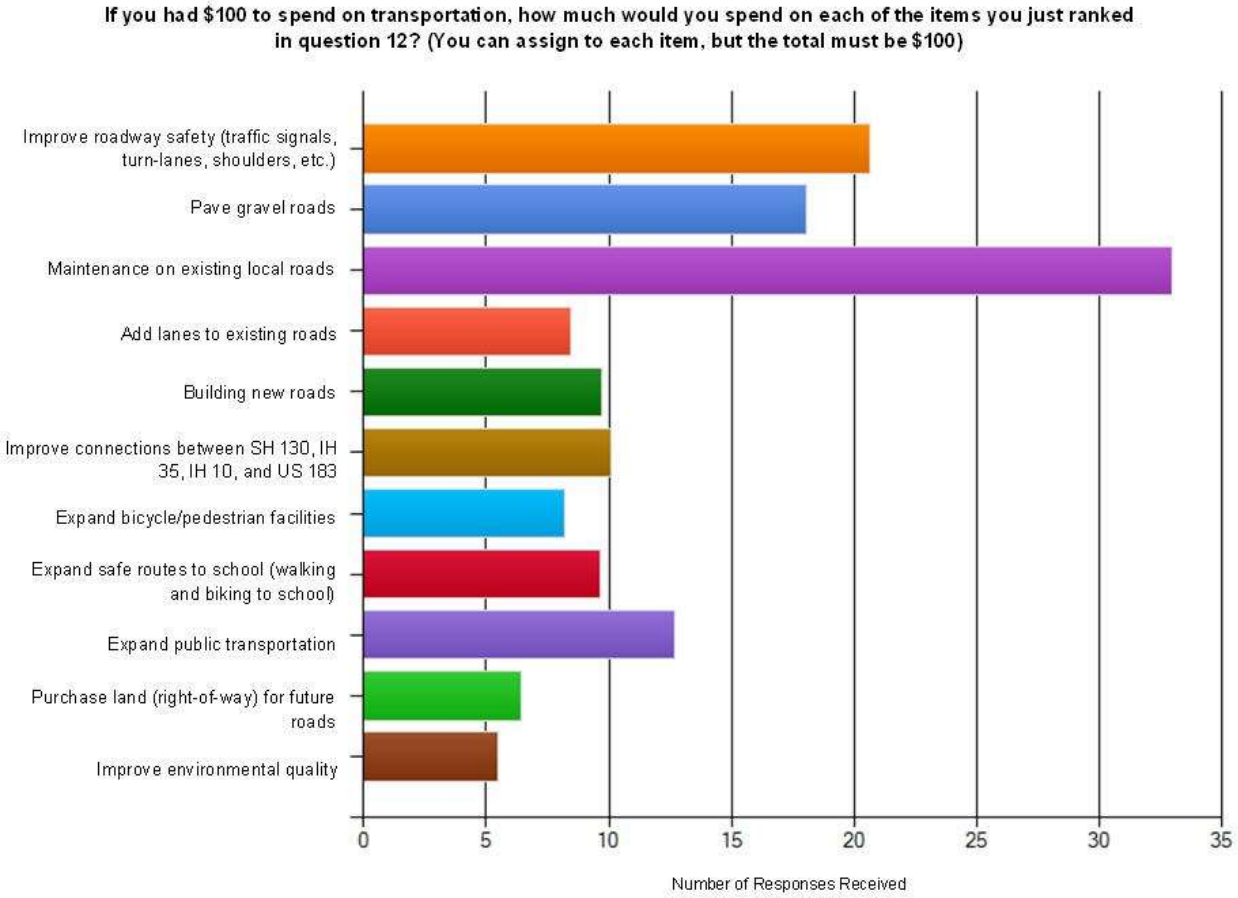

How many miles one way is the travel to school?
Number of Responses Received
25
20
5
0
Less than 10 miles
10-20 miles
20-30 miles
30-60 miles
More than 60 miles

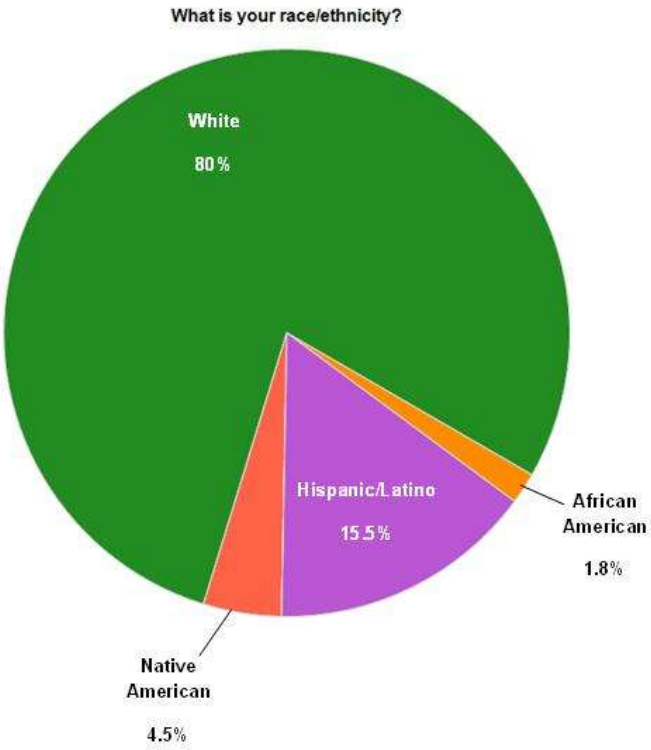

How many minutes one way is the travel to school:
Number of Responses Received
16
14
2
0
Less than 10 min.
10-20 min.
20-30 min.
30-60 min.
More than 60 min.

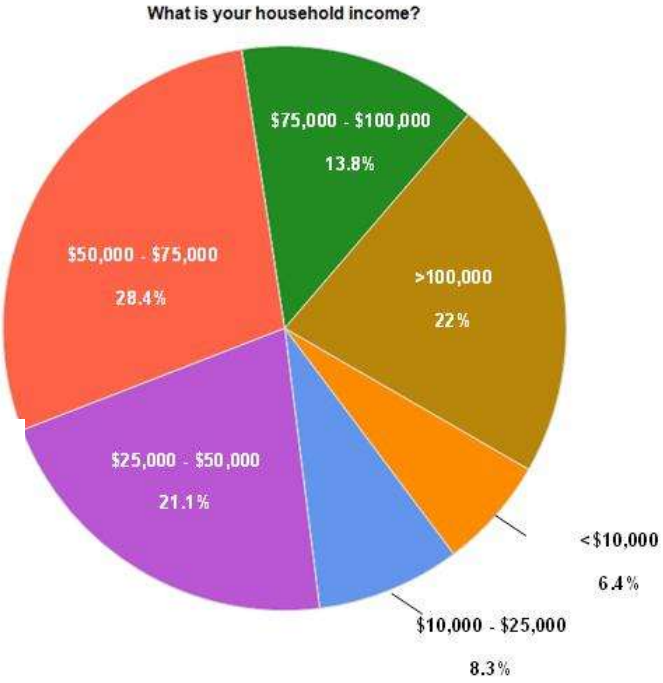

What School District does your child/children attend?
Lockhart ISD
Luling ISD
Prairie Lea ISD
Gonzalez ISD
San Marcos ISD
Other
0
5
10
15
20
Number of Responses Received

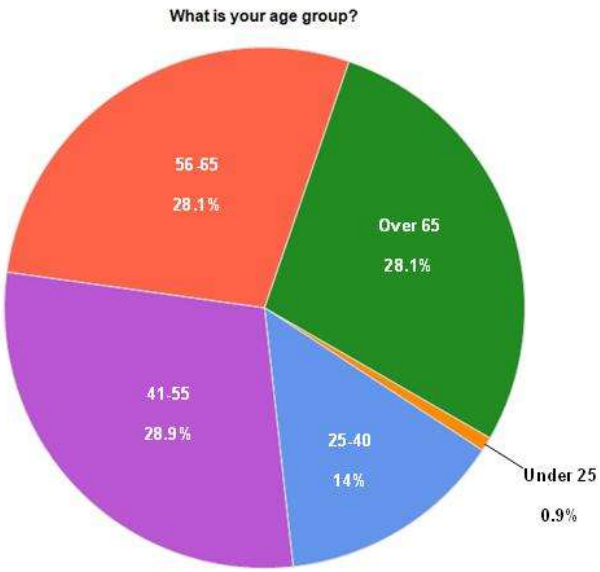

Please rate the transportation system in Caldwell County
Very Good
Good
Satisfactory
Poor
Very Poor
Traffic Conditions on Local Roads during rush hours
Traffic Conditions on Major Highways during rush hours
Safety of Roads
Maintenance Conditions (potholes, surface, etc.)
Availability of Sidewalks and Crosswalks
Availability of Safe Bicycling Conditions
Availability of Bus and/or Public Transportation
Ability to Travel within the County
Ability to Travel outside the County
0
20
40
60
Number of Responses Received

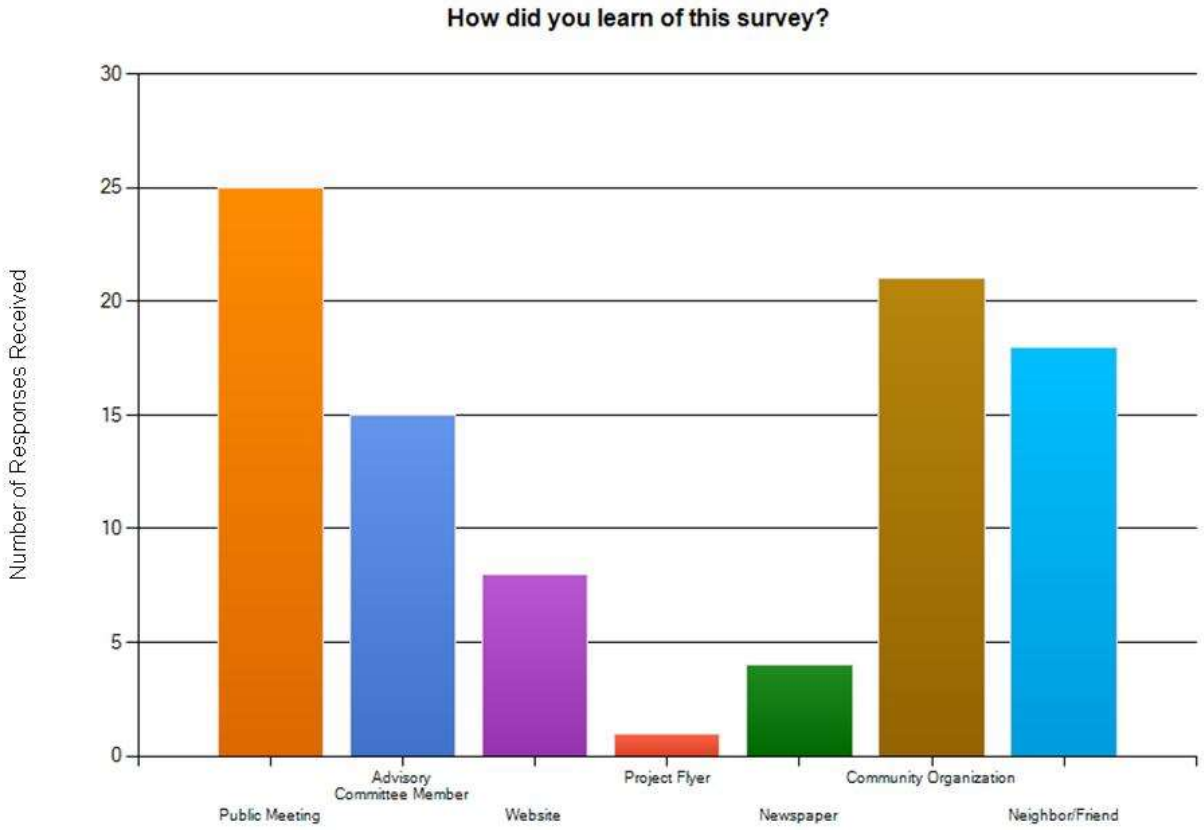

How important do you think it is to accomplish the following transportation items in Caldwell County?
Very important
Important
Somewhat important
Not important
Should not be funded
Improve roadway safety (traffic signals, turn-lanes, shoulders, etc.)
Pave gravel roads
Maintenance on existing local roads
Add lanes to existing roads
Building new roads
Improve connections between SH 130, IH 35, IH 10, and US 183
Expand bicycle/pedestrian facilities
Expand safe routes to school (walking and biking to school)
Expand public transportation
Purchase land (right-of-way) for future roads
Improve environmental quality
0
20
40
60
80
Number of Responses Received


If you had $100 to spend on transportation, how much would you spend on each of the items you just ranked in question 12? (You can assign to each item, but the total must be $100)
Improve roadway safety (traffic signals, turn-lanes, shoulders, etc.)
Pave gravel roads
Maintenance on existing local roads
Add lanes to existing roads
Building new roads
Improve connections between SH 130, IH 35, IH 10, and US 183
Expand bicycle/pedestrian facilities
Expand safe routes to school (walking and biking to school)
Expand public transportation
Purchase land (right-of-way) for future roads
Improve environmental quality
0
5
10
15
20
25
30
35
Number of Responses Received


What is your race/ethnicity?
White
80%
Hispanic/Latino
15.5%
African American
1.8%
Native American
4.5%


What is your household income?
$75,000 - $100,000
13.8%
$50,000 - $75,000
28.4%
>100,000
22%
$25,000 - $50,000
21.1%
<$10,000
6.4%
$10,000 - $25,000
8.3%


What is your age group?
56-65
28.1%
Over 65
28.1%
41-55
28.9%
25-40
14%
Under 25
0.9%


How did you learn of this survey?
Number of Responses Received
30
25
20
15
10
5
0
Public Meeting
Advisory Committee Member
Website
Project Flyer
Newspaper
Community Organization
Neighbor/Friend

# Public Comments on Existing Conditions and Priorities

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| Questionnaire 1 | Lockhart | Suggest improvements for citizens that want to walk or ride a bike from the east side of Lockhart to the west side. Crossing Hwy 183 or walking along Hwy 183 is very dangerous. I would like to and I believe that the residents on the east side would like to walk or ride their bike more often to run errands in town but it is merely impossible because the dangerous crossing of Hwy 183. Also, walking to a "store" on the east side is dangerous due to the lack of safe sidewalks or crossing of Live Oak to a store such as Walgreens. | Bicycle and Pedestrian Facilities |
| Mapping Exercise - AC Meeting | SH 142, SH 130 | It is extremely dangerous running or riding a bicycle between downtown Lockhart and SH130 or SH142. Likewise this would be a good place for long distance bicyclists. | Bicycle and Pedestrian Facilities |
| Questionnaire 1 | Countywide | Bicyclists need to be licensed and trained how to best use their mode of transportation; Bicyclists should have to pass a test; so many do not stop at stops signs | Bicycle Concerns |
| Comment Card | Countywide | You can't safely get to Luling from Lockhart on a bike | Bicycle Facilities |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - San Jacinto/SH142 | San Jacinto and SH 142 congested at times | Congestion |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - US 183 | Left turn backs up traffic on 183 | Congestion |
| Luling Meeting | Luling | Concerned about holiday traffic near train | Congestion |
| Luling Meeting | Luling | Truck traffic on Highway 80 is heavy | Congestion |
| Luling Meeting | SH 80 | Hwy 80 from Luling to San Marcos is busy with heavy traffic throughout the day | Congestion |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - Old Fentress Rd | Need connection here | Connectivity |
| Mapping Exercise - Public Meeting 9/20/12 | US 183/FM 671 | Loop from US 183 and FM 671 to SH 130 | Connectivity |
| Mapping Exercise - AC Meeting | US 183 – FM 132 | Provide public access to homeowners. Without public access, utilities, public services, safety issues come in to play. | Connectivity |
| Mapping Exercise - AC Meeting | Westwood / US 183 | Connectivity from 130 to west Lockhart to 183 South | Connectivity |
| Mapping Exercise - AC Meeting | FM 1966 –FM 2720 to IH 35 | Caldwell County connections to I-35 | Connectivity |
| Mapping Exercise - AC Meeting | State Park Rd / Hwy 183 / FM 1322 / FM 20 | East/West Connectivity | Connectivity |

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| Questionnaire 1 | Northwest County, SH 21, SH 130, FM 2001 | Thank you for addressing this! Here in the NW side of the county we appreciate the work on HWY 21 and plead for continuing the expansion connecting SH 130, FM 2001 and HWY 21. A lot of big trucks and thru traffic use these roads to connect Lockhart with Buda, Austin and San Marcos. | Connectivity, road expansion; |
| Mapping Exercise - Public Meeting 9/20/12 | Outside City Limits - Mustang Ridge, SH 21, FM 1854, Lonestar Drive, Old Lockhart Rd. | This is an intersection of 5 streets. If you just dead end Old Lockhart Rd, it is going to be very difficult for those who live close to Hwy 21 to go N on Hwy 183 towards Austin. To keep everyone happy, why not just have a cross street between Old Lockhart Rd and FM 1854? | Connectivity; New Roads |
| Questionnaire 1 | Schuelke Road, Roger Ranch Road, SH 130, FM 2001 | I live on Schuelke Road. It is a difficult road to drive on. It really is like a roller coaster. Also, It would be nice to have Roger Ranch Road paved. Especially to connect SH 130 to 2001. | Connectivity; Paving Roads |
| Mapping Exercise - AC Meeting | FM 20 / Camino Real | Eastern and Northern County routes to schools | Connectivity; School Traffic |
| Comment Card | SH 130 | I think 130 is great, because I will be able to get to San Antonio Much quicker by going from Reedville where I live through Seguin instead of taking I-35 the entire way. | Connectivity; Toll roads |
| Questionnaire 1 | Martindale | Without grocery store or other needed facilities we must drive almost daily 10-25 miles for necessities | Development |
| Questionnaire 1 | Countywide | Air quality - engine idling is a huge issue with so many drive-up service windows. | Environmental |
| Mapping Exercise - Public Meeting 9/20/12 | Cypress Rd/FM 2001 | Cemetery located here | Environmental/ Cultural Considerations |
| Questionnaire 1 | Countywide | The demographics of Caldwell County are changing, and the transportation needs to change along with it. We are a bedroom community (I commute over 100 miles a day for work), and a community of active, educated people who want more amenities like bike paths and pedestrian options. | Expansion to meet Capacity Needs; Bicycle Facilities |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - FM 672 | Culvert bridge floods too frequently - needs more culverts on 672 | Flooding |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart-Old Luling Rd/Reavis Rd | Low water crossing improved to provide access during flood conditions | Flooding |
| Mapping Exercise - Public Meeting 9/20/12 | North County - CR 179 | Creeks flood the roads in several places on Barth | Flooding |
| Mapping Exercise - Public Meeting 9/20/12 | North County - CR 179 | Creeks flood the roads in several places | Flooding |

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| Questionnaire 1 | Countywide/ Rural | Need to consider how regularly heavy trucks travel the county roads. Some residents have heavy trucks they drive to and from home routinely. Please consider paving versus gravel when having to deal with washed out roads. Low water crossings invite washouts as well. | Flooding; Maintenance |
| Questionnaire 1 | Countywide | [redacted] | General |
| Questionnaire 1 | Countywide | Good | General |
| Mapping Exercise - AC Meeting | Lockhart and Luling | Impact of non-local through traffic on Historic City Centers | General |
| Questionnaire 1 | | New to county, new to Texas, daughter drives me on errands | General |
| Questionnaire 1 | Countywide | county road conditions need to be upgraded asap they have out grown the traffic conditions | Improvements |
| Mapping Exercise - Public Meeting 9/20/12 | FM 150 /Yarrington Rd | We would like to be involved and provide input regarding the FM 150 and Yarrington Rd re-alignments. Thank you | Improvements |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - US 183 | 183 service road north out of town looks to be only 1 lane. There is two lanes but the inside lane will either take you to San Antonio or north to Austin (to the toll 130) therefore leaving one as the service road north | Improvements |
| Email | SH 80 | I travel on highway 80 from Luling to San Marcos regularly. The issue is that 80 used to be 4 lanes from Prairie Lea to San Marcos. The road was repaired a few years back and the four lanes were reduced down to single lanes and shoulders until you get to Martindale. I'm sure TXDOT has there reasons and budget limitations for altering highway. I feel like the move was a step away from progress. I understand that they could have been buying time to see how 130 alters travel patterns before they spend limited tax dollars on 80. Please look into the expansion of highway 80 to a four lane highway from at least 130 to San Marcos | Improvements |
| Mapping Exercise - AC Meeting | Camino Real, FM 2720 – FM 2001 | SH 21 needs shoulders - not yet funded by TxDOT | Improvements |
| Questionnaire 1 | Countywide | More width on roads and improved road surface conditions for cyclists. | Improvements; Bicycle Facilities |
| Questionnaire 1 | Lockhart | Need a loop to the East, you have 130 to the west and then connect them. | Improvements; New Facilities |
| Questionnaire 1 | Countywide | county roads are of inferior quality and dangerous and do not support the increased traffic load | Maintenance |
| Questionnaire 1 | Countywide | I think that the county roads are in worse shape than the city & hwy 183 | Maintenance |
| Questionnaire 1 | Countywide | Fix our roads | Maintenance |
| Questionnaire 1 | Countywide | When roads are contracted, the whole roads need to be leveled not bits and pieces, it looks bad on TxDOT | Maintenance |
| Questionnaire 1 | Countywide | Fix street name signs | Maintenance |

| Means Captured | Location of Issue | Comment | Category |
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| Questionnaire 1 | Countywide | county roads need more attention, potholes | Maintenance |
| Questionnaire 1 | Countywide | Caldwell County needs to do something with the county roads. I just find it hard to believe that this county is so clueless as to what it takes to maintain a road system. | Maintenance |
| Questionnaire 1 | Countywide | mow right of ways and fix potholes | Maintenance |
| Mapping Exercise - Public Meeting 9/20/12 | North County - Reata Ranch Rd/ CR 179/Barth | Paved road is cracking - needs some sealing or water will destroy paved road - Reata Ranch Rd | Maintenance |
| Questionnaire 1 | Countywide | County employees need a lot of training in how to repair roads. Caldwell County does not spend the money that it has very wisely. The Unit Road System needs a capable Administrator. | Maintenance; Fiscal issues |
| Questionnaire 1 | Countywide | regular road maintenance such as mowing of grass, cleaning, increase lighting at intersections | Maintenance; Intersection Lighting |
| Questionnaire 1 | Countywide | As a firefighter and businessman in the county, I would like to see the surfaces of existing road receive much more attention. Also, your calculator does not add correctly - it appears to be very confused by partial dollars which will skew your results and cause some to lose their tempers. | Maintenance; Questionnaire |
| Questionnaire 1 | US 183 near CR176 | I'm furious with the decision to change the speed limit of 183 to 55mph. We aren't stupid. We know you are trying to force us to drive the toll road. Not going to happen. I will drive 55 all day long to keep from paying the outrageous fees charge on the toll road. I've been driving on this mess for over 2 yrs and I'm sick to death of all the paving of 183, tearing it up and repaving, scraping it again and then repaving. It is now being repaved again for about the 4th time. Its a waste of tax payers money. I live off of CR176 (What used to be Old Lockhart Road) the 1st road past 21 heading North on 183. That road goes from 183 and meets back up at 21 across from where 1854 begins. Its in horrible shape. The pot holes are huge and the road is so uneven it makes you car sick to drive on it. People have gone and filled in the holes with gravel themselves just to make it a little easier. Just because we are on the extreme north end of Caldwell County doesn't mean we don't deserve good roads as well. Its still Caldwell County's responsibility to make the roads safe for all citizens of the county. Instead of letting all these men sit around on the big machines with their feet propped up relaxing in the shade maybe you could send them over to do their job on our roads. | Maintenance; Toll roads |

| Means Captured | Location of Issue | Comment | Category |
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| Questionnaire 1 | Countywide | I wouldn't pave gravel roads. There are already many roads in the county that used to be gravel and are now paved that are not maintained and are in HORRIBLE condition (Soda Springs Road as an example) | Paving |
| Questionnaire 1 | Countywide | I think gravel roads are great. They are inexpensive to maintain, naturally curb urban sprawl, speeding, traffic etc. I wouldn't hesitate to return all local roads to gravel in due time. | Paving |
| Questionnaire 1 | Countywide | This is a very poor rural community. We don't need your master plans. Just deal with the existing and use tax dollars wisely. [redacted] | Planning process |
| Questionnaire 1 | Countywide | This is regional planning and it should not be pursued. Caldwell County can decide what is best for Caldwell County. Treating all counties within a region as the same, ignores the unique needs of each region. We of Caldwell County are not the same as the surrounding counties and we do not want to be lumped into one big plan. The regional planners are insulated from the local citizen input and we do not have a way of holding them accountable or input on who these people are. Central planning has shown not to work in such countries as Cuba, Russia and China. WE DO NOT WANT IT!! | Planning process |
| Questionnaire 1 | Countywide | Keep it local! Quit promoting agenda 21 via these plans and the sustainable places project. | Planning process |
| Questionnaire 1 | Countywide | Please take your regional plans to take over our county and go home! | Planning process |
| Questionnaire 1 | Countywide | Please take your urban plans and leave Caldwell County. | Planning process |
| Questionnaire 1 | Countywide | This and any transportation upgrade plan should benefit the ENTIRE county | Planning process |
| Questionnaire 1 | Countywide | You have not addressed the issue of private roads. Equitable, safe roads for all in the county is essential. | Private Roads |
| Questionnaire 1 | Countywide | many private roads need to be converted to county roads, thereby providing access to residents and increasing tax base. | Private Roads |
| Questionnaire 1 | Countywide | More transportation for elder residents in the county. | Public Transportation |
| Luling Meeting | Luling | Desire a local bus that travels through town (thought Lockhart had one of these) | Public Transportation |

| Means Captured | Location of Issue | Comment | Category |
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| Questionnaire 1 | Lockhart | Lockhart needs a better public transportation system. A small cabstand may do well here with the right advertising. CARTS is doing an excellent job, but it is sometimes hard to SCHEDULE places that you may need to go, or how long you may be there. Also bicycle safety is a concern, but mostly because the people riding the bikes here DO NOT obey the laws & rules assigned for bikes. Many time I have seen bikes on the wrong side of the road or cutting in front of cars. They obey pedestrian rule instead of the law of the road. | Public Transportation; Bicycle Facilities |
| Questionnaire 1 | San Marcos | It would be nice to have some kind of public transportation besides CARTS or a taxi from San Marcos or Austin. I think bike paths would be a great idea as well. It might motivate more people to get out for exercise if they have some place safe to ride. I would ride for just that reason. I've tried riding a bike in Lockhart and it was awful. Constantly afraid I was going to get run over. | Public Transportation; Bicycle Facilities |
| Mapping Exercise - Public Meeting 9/20/12 | Lockhart - Live Oak | Sight on live oak at stop sign | Safety |
| Mapping Exercise - Public Meeting 9/20/12 | North County - CR 179/FM 672 | Very dangerous intersection | Safety |
| Email | US 183 | The speed limit on 183 needs to be returned to 65 mph. No logical explanation exists for maintaining the 55 mph speed limit. As long as the ridiculous low limit is maintained, I personally will not only NOT use 130, I will advocate for others to boycott it as well.<br><br>This smacks of cronyism at its worst. It is an embarrassment that officials have so obviously been bought by the owners of 130. I would like to see every person on TXDOT who supports the 55 mph limit publicly identified and investigated for collusion. | Speed Limit |
| Email | US 183 | Definitely need to raise the speed limit on 183 | Speed Limit |
| Questionnaire 1 | SH 130/US 183 | Why is the speed limit on the new 183access roads being considered lowering to 55mph??? It should stay as it was at 65-70mph. No money should be spent on any county road improvements unless and until all drainage/grading problems are fixed first. Otherwise it is a huge waste of time and effort. | Speed Limit; Drainage |
| Questionnaire 1 | Countywide | Too many big trucks on Hwy and City Roads Driving way too fast! | Speed Limits; Bypass |

| Means Captured | Location of Issue | Comment | Category |
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| Questionnaire 1 | US 183 | HW 183 must be 65 MPH NOT 55; $$$ Speak - Greed built Toll 30 and $% - people didn't matter; Also - Gas tax has not kept up with inflation - if it had at least 50% - we would have money for roads and bridges. Why not put a inflation factor in the gas tax? I'm a conservative, but practical solutions should be considered. | Speed Limits; Fiscal Issues |
| Questionnaire 1 | Countywide | Help reduce the speed of all traffic especially through school zones, maintenance, current roads, patch pothole, mowing | Speed Limits; maintenance |
| Questionnaire 1 | SH 130 | Take advantage of SH 130 as much as possible. | Toll Roads |
| Questionnaire 1 | Countywide | Toll companies should be required to assist with budget | Toll Roads; Fiscal issues |
| Questionnaire 1 | SH 130/US 183 | I am very concerned that 183 will be required to yield to exiting 130 traffic in Caldwell County. The exit lanes are longer in Travis and don't require a yield. Poor road planning especially for the Hwy 21 exit. I expect to see a lot of accidents and fatalities as a result of SH130 exiting too fast and Hwy 183 vehicles not being able to slow down fast enough. | Toll Roads; Safety |
| Mapping Exercise - Public Meeting 9/20/12 | US 183/SH 21 | Going N on 183, then exiting to turn right or east on Hwy 21: there is a yield sign that is turned so far to the right that you almost have to be able to turn your head backwards to be able to look over your left shoulder to see if there is any oncoming traffic. This is the new construction just finished in the last few weeks. Old people can't turn their heads around that far. | Toll Roads; Safety |
| Questionnaire 1 | SH 130/US 183 | We do not need any further roads or on roads or off ramps for 130. We need the 183 bumped back up to 65 mph! People in Caldwell cannot afford to take a toll road to Austin everyday! | Toll Roads; Speed Limit |
| Questionnaire 1 | Luling | A truck route by-pass is desperately needed in Luling and an over/under pass to keep the traffic flowing at railroad crossings. | Traffic Flow/Bypass |
| Mapping Exercise - Public Meeting 9/20/12 | FM 713/FM 20 | FM 713 and 20 needs a caution blinking light and blinking red light - bad news | Traffic Signals |
| Email | SH 130 | The lights at the toll road are terrible as well as the one closer to town on 142. Some sensor on it would be helpful, recognizing when cars are or aren't there. | Traffic Signals |
| Email | SH 130 | The new toll road light on hwy 142 is pointless | Traffic Signals |
| Mapping Exercise - Public Meeting 9/20/12 | US 183/FM 671 | Traffic control signal light US 183 & FM 671 | Traffic Signals |
| Luling Meeting | Luling | Wish train didn’t honk through town | Train |
| Luling Meeting | US 183/Pierce | Train bypass is needed at 183 & Pierce (traffic backs up regularly) | Train Bypass |

Public Comments on the Draft Plan

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| Questionnaire 2 | SH 142 | 4 lanes on 142 | Add Lanes |
| Questionnaire 2 | SH 142 | 4 lanes on 142 | Add Lanes |
| Questionnaire 2 | CR 103 | CR 103 | Add to Pavement Improvements List |
| Questionnaire 2 | CR 103 | SE County Road 103 (it is currently not completely paved) | Add to Pavement Improvements List |
| Questionnaire 2 | CR 103 | As county resident living on CR 103/ SE River Rd., outside of Martindale, we urgently need a permanent dust control remedy to the road, especially from the City of Martindale line south down to FM 1977. The creek crossing is dangerous, and the road is in very poor condition. | Add to Pavement Improvements List |
| Questionnaire 2 | CR 103 | County Road 103 aka SE River Road in Martindale | Add to Pavement Improvements List |
| Questionnaire 2 | CR 103 | SE River Rd needs improvement | Add to Pavement Improvements List |
| Questionnaire 2 | CR 103 | Yes. It is unbelievable that SE River Road is not in the list of worst roads. Go drive it. The part that is paved is terrible, the unsaved part is a dust pit, and the crossing at Morrison Creek is unsatisfactory. We pay taxes too! | Add to Pavement Improvements List |
| Questionnaire 2 | CR 160 | The section on CR 160 needs improvement between hwy 20 and 713. The road floods very easily and leaves us trapped. | Add to Pavement Improvements List |
| Questionnaire 2 | CR 176 | CR 176 between the frontage of SH130 and SH 21 | Add to Pavement Improvements List |
| Questionnaire 2 | CR 176 | Please pave CR 176 between 21 & 183/130 | Add to Pavement Improvements List |
| Questionnaire 2 | CR 671 | What about improving CR 671? This cross over to Lockhart is heavy traffic and in poor condition. | Add to Pavement Improvements List |
| Questionnaire 2 | Lockhart | Willow, Ash, Pecos and Bois ' Arc Streets | Add to Pavement Improvements List |
| Questionnaire 2 | SH 142 | SH 142 | Add to Pavement Improvements List |
| Questionnaire 2 | SH 142 | SH 142 | Add to Pavement Improvements List |
| Questionnaire 2 | Skyline Road | Skyline Road (County Road 190) - specifically the short section between Hwy 21 and the sharp left turn in the road | Add to Pavement Improvements List |
| Questionnaire 2 | West Cedar Street | Yes, West Cedar Street | Add to Pavement Improvements List |
| Questionnaire 2 | Barth Rd | Barth Rd or CR179 - The traffic on this road (between FM 1185 and CR 672) is FAR greater than those living along the road. MANY use this (Barth) as a quick route between Hwy 20, Dale, and Hwy 183. Sheriff cars, UPS, gravel trucks, FedEx...It's a shortcut between 183 and 20 greatly used. | Add to Plan |

| Means Captured | Location of Issue | Comment | Category |
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| Questionnaire 2 | CR 103 | CR103 | Add to Plan |
| Questionnaire 2 | CR 103 | Pave South East County Road 103 (Links 1979 (Martindale) to 1977 (Staples Road) | Add to Plan |
| Questionnaire 2 | CR 103 | pave Co Road 103 aka SE River Road in Martindale | Add to Plan |
| Questionnaire 2 | CR 103 | SE River RD | Add to Plan |
| Questionnaire 2 | CR 103 | only that it omitted any planning for SE River Rd | Add to Plan |
| Questionnaire 2 | CR 176 | CR 176 between the NB SH 130/HWY 183 frontage and SH 21 | Add to Plan |
| Public Meeting 2 - Verbal | River Crossings | Would liked to have seen more attention paid to river crossings between Caldwell county and the new development areas in San Marcos area, existing crossings are in sensible locations, however there may need to be additional crossings or improvements to existing. | Add to Plan |
| Questionnaire 2 | Skyline Road | I appreciate 1, 2, 3, & 4 but you should also include the short section of Skyline Road (Co Rd 190) from Hwy 21 to the sharp forced turn to the left | Add to Plan |
| Questionnaire 2 | Skyline Road | You should also include the short section of Skyline Road (Co Rd 190) from Hwy 21 to the sharp forced turn to the left | Add to Plan |
| Email | CR 103 | I have owned/lived land on CR103 for approximately 15 years. I too wonder why Caldwell County can't seem to improve the road. If it was just the residents, OK, but there are many cars passing through daily - the cloud of dust is immense and it just hangs in the air; each passing vehicle adds to it. The occasional oiling of the road does little after 2-3 days. Please consider surfacing this important road. If anything, are understating the problem - it is bad. | Add to Plan; Pavement Condition |
| Email | CR 103 | My husband and I recently purchased property about two miles down SE River Road (County Road 103). While we are pleased with our purchase and like where we live, we are somewhat disappointed in the condition of CR 103. In the very short time we have lived here, the road quickly went from passable to downright unacceptable. The paved portion deteriorates as soon as holes are patched, dust control is non-existent, and the gravel surface has become incredibly rough. We also have heard from neighbors that periodic maintenance is spread out so much that it might as well not happen.<br><br>It is our understanding that CR 103 was not mentioned for maintenance or improvements in the Draft Plan presented to the public in a meeting 29 November. We ask that you | Add to Plan; Pavement Condition |

| Means Captured | Location of Issue | Comment | Category |
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| | | reconsider, and include this road for more frequent and cost-effective maintenance, as well as eventual hard surfacing. We understand there are incredible costs of running a county such as ours, but we also know that Caldwell County is reaping the benefit of a renewed oil and gas business, as well as new housing and businesses. We truly hope the elected officials take great care in how that revenue is spent, and we believe that good roads are essential to the quality of life here in the county, and to attracting more tax-paying citizens. | |
| Email | CR 103 | On SE River Road near Martindale, pavement upgrade is needed and dust control as a temporary fix is needed. Improvements are also needed at the low water crossing at Morrison Creek on SE River Road. | Add to Plan; Pavement Condition |
| Email | CR 103 | My family has lived on SE County Road 103 since 1973 and operated a 139 acre farm that borders it since the 1960s. We have faithfully paid thousands and thousands of dollars in property taxes to Caldwell County for almost fifty years.<br><br>Because we live adjacent to the road we suffer from the dust carried by prevailing winds blowing south to north over the county's unpaved gravel surface. Traffic has increased tenfold since we first arrived. This traffic now includes heavy trucks moving back and forth from a gravel pit on the outskirts of Martindale. Large semi trucks and trailers now move large machinery from another business on 103 that repairs large earth moving vehicles. Cotton and wheat farms and cattle operations bring crop harvesting machinery, trucks, trailers, and tractors past our home on a daily basis. | Add to Plan; Pavement Condition |
| Email Continued | CR 103 | **Continued:** Add to that a large increase in private residences that bring the back and forth commuting traffic to and from Lockhart and San Marcos. These changes have transformed what was once a sleepy, rarely used little road to one that is busy with through traffic.<br><br>When the San Marcos River floods we have been trapped for days between a submerged low water crossing at Morrison Creek and an underwater road on the edge of Martindale.<br><br>We weren't surprised to find out we had once again been left off the county's upcoming Draft | Add to Plan; Pavement Condition |

| Means Captured | Location of Issue | Comment | Category |
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| | | Plan. We were dismayed to see that the chronic neglect Caldwell County has shown over the last 45 years continues. SE County Road 103 needs more than a sporadic oil spraying and occasional grading. Those actions might have worked in the 1960s but don't work for the upcoming year 2013.<br><br>It's time for paving our road. Thank you for your attention to this matter. | |
| Email | CR 103 | It has been brought to my attention that yet again SE River Road is being overlooked in the upcoming work program. I have lived on this road for almost 12 years and have been driving to this property for<br>over 17. I have noticed over the years the attention the county pays to SE River Road seems to continually decline. It has gotten to the point that the extreme minimal is being done to maintain the road while the number of people that live on this road has steadily increased. For example, after a heavy rain, yes I know that has been SOME time ago, I had to call in and request more gravel be put in at the low water crossing due to the fact that the road on that particular curve was down to the black mud making it extremely dangerous to drive. Another example to the lack of any maintenance on SE River Road would be the fact that a curve sign was knocked down towards the beginning of the year. Since then the sign has been shredded over by the county and still lays in a sad heap on the side of the road.<br><br>I feel that for what we pay in taxes and the amount of people that have moved to this road it is way past due for frequent maintaining and dust control if you won't consider paving it. | Add to Plan; Pavement Condition |
| Questionnaire 2 | Maxwell | Why do you not have more proposed projects in the Maxwell area. Fifth& Misty dirt roads are traveled a lot! Fifth, Misty, Farmers Market and Valley Way in the Maxwell area. These roads are all dirt. In poor shape and highly traveled short cuts to major FM roads. I rate them 1. | Add to Plan; Pavement Condition |
| Email | CR 103 | Upon attending the Public Meeting November 29, 2012 and viewing the Draft Plan, we were dismayed to notice that the greater portion of SE River Road was not even mentioned for any maintenance or improvements.<br>Having owned property here for the 7th year now, we have observed that only minimum amounts of maintenance are performed: just enough to keep | Add to Plan; Pavement Condition; Low Water Crossing |

| Means Captured | Location of Issue | Comment | Category |
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| | | the road passable. Being on the fringe of the County, seems to generate some sort of apathy. For instance, early in the year a curve sign had fallen to the ground. It was never picked up or replaced and this October when the mowing operation went by, the sign (and post) went through the mower. The mangled mess still lays by the road.<br><br>There has not been any dust control for some time. A pall of dust hangs in the air at times, effecting visibility and the health and cleanliness of those who live close to the road. Maintenance people in other jurisdictions recognize the value of dust control and it has been stated that it pays for itself by retaining the fine material in the road surface and reduces the amount of grading required. | |
| Email | CR 103 | **Continued:** Periodic grading is only a short term fix when there is no dust control. As this is a "through" road the volume of traffic quickly deteriorates the road surface back to washboard and potholes.<br><br>The low-water crossing at Morrison Creek remains in unacceptable condition.<br><br>Caldwell County cannot be considered a poor county when there are rising revenues from the oil industry, new housing and business. Considering the amount of tax we pay to the County, it is felt that we are being shortchanged.<br><br>All those concerned in the planning process are requested to drive this road (don't bother to slow down for the low-water crossing, just have 911 on speed dial).<br><br>Please consider this section of road for some sort of hard surfacing in the future. | Add to Plan; Pavement Condition; Low Water Crossing |
| Questionnaire 2 | 1322 | I think the bridges on 1322 at Plum Creek (marked YELLOW) and on Creekside Drive (marked GREEN) are swapped. The Creekside Drive bridge is a wooden structure with reinforced lanes while the one on Plum Creek is reinforced concrete on piers. Also, there are a lot of bridges and low-water crossings in the East side of the county that are not evaluated. | Bridges |
| Public Meeting 2 - Comment Card | Lockhart - SH 142 | Widen 142 at Mockingbird Lane so traffic doesn't back up there so bad, deactivate light during non | Congestion |

| Means Captured | Location of Issue | Comment | Category |
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| | | school hours | |
| Public Meeting 2 - Comment Card | Lockhart - MLK | Put a priority on extension of San Jacinto St to Industrial Drive or MLK so you can get to Walmart and New County complex without getting on 183 | Connectivity |
| Questionnaire 2 | Southeastern County | I have heard some criticism of Projects 7, 18, 20 from people who say they are residents. These are poorly thought out. These projects are essential to bring emergency services to these areas. Especially since project 7 must provide emergency vehicle access for stations almost 20 miles away and currently requiring 30-45 minutes for fire and ambulance service. | Emergency Access |
| Questionnaire 2 | Ivy Switch/I-10 | Upgrade is needed to all roads between Ivy Switch Rd and Interstate 10. This area is mislabeled category 2-3 when it is category 3-4, gravel surface. It is the only emergency service entrance and exit for 30 to 40 families during flooding on Plum Creek, emergencies like traffic accidents and acute problems like heart attacks. I had a very good family friend who died because EMS could not reach him for over 45 minutes when he had a heart attack in his residence on Soda Springs Road. | Emergency Access; Pavement Conditions |
| Email Continued | Cityline/FM 2001; MLK Industrial Blvd/FM 20; FM 20/CR212 | **Continued:**<br>• CCTP does not appear to include the City's future planned connection between the northernmost portion of Cityline Road and FM2001.<br>• CCTP does not appear to include the City's future planned extension of MLK Industrial Blvd east and north to FM20<br>• It also does not appear to include the City's future planned connection from CR212 (Reavis Road) to FM20, and its continuation north and west to complete the loop to FM2001. This could be re-aligned to conform with CCTP proposed projects 33/84 but that eliminates an important element to the future development/re-development of Lockhart's east side. | Existing Plans (Lockhart) |
| Email | FM 150/SH142 | • Proposed Project 62 is the FM150 extension to SH142. Although the City's plan does not anticipate the FM150 connection, it does take into account a more complete connectivity between existing roadways (from SH130 north of town to US183 south of town) and has some feasibility advantages. The route shown on the CCTP does not match Lockhart's plan, which was moved to the west in the most recent version to avoid difficult geography and to align with existing Borchert Loop. The only advantage I can see with the CCTP version is that it runs across an existing | Existing Plans (Lockhart) |

| Means Captured | Location of Issue | Comment | Category |
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| | | at grade RR crossing. However, that crossing is in such proximity to SH142 it would be extremely difficult to engineer the intersection. The City's route appears to include sufficient space between the RR and SH142 that a future overpass would be possible. An additional benefit of the City's plan is the connection between planned FM150, and existing FMs 2720 and 2001. Some realignment on each plan would be required to reconcile the differences, but the CCTP should at least include the completion of that northwestern portion of this "loop." | |
| Questionnaire 2 | Countywide | I appreciate that you have a good mix of roads selected from all over the county. | General |
| Questionnaire 2 | Countywide | Simple and easily understood. I believe gravel roads with grass encroachment should have been rated lower, but that is not easily quantifiable. | General |
| Questionnaire 2 | Countywide | Leave rural Caldwell County rural, we are a county of 38,000 people, not a big city. | General |
| Public Meeting 2 - Verbal | SH 80 | SH 80 should have it's functional classification upgraded - there are more 18-wheelers on it than on SH21. 80 is a cut through from I-10 to I-35p; SH 80 near Martindale is a high accident area | General |
| Questionnaire 2 | | No, I think you have done a good job in your selection. | General |
| Questionnaire 2 | | Looks pretty accurate. | General |
| Questionnaire 2 | | It is important to find compromise that provides transportation projects the best opportunity for success moving forward. Minor modifications to roadway alignments can save money by utilizing willing landowners ability to provide roadway row. | General |
| Questionnaire 2 | | Good job. | General |
| Questionnaire 2 | | Thank you for taking the time to do it! | General |
| Questionnaire 2 | | the word transportation is miss leading indicating provide transport for citizens of the communities involved as in transport to and from not county road work and improvements. | General |
| Questionnaire 2 | Countywide | I support a program of maintaining the county road network. | Maintenance |
| Questionnaire 2 | Countywide | I question why both an east and west loop around Luling, when the East would tie into both major highways going N and W (183 & 80) | New Roads |
| Questionnaire 2 | Southeastern County | Who is trying to develop the ranch land in the southeastern part of the county that you want to build roads to accommodate? Project 1,2,7,9,16,18 & 20 need to be scrapped. | New Roads |
| Questionnaire 2 | Countywide | Unfortunately our county officials have let all the roads go unless they run in front of their | Pavement Condition |

| Means Captured | Location of Issue | Comment | Category |
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| | | properties | |
| Public Meeting 2 - Comment Card | Lockhart/SH 130 | Finish paving and improve access to 130 on Clear Fork | Pavement Condition |
| Questionnaire 2 | Skyline Road | Skyline Rd (County Rd 190) is more of a 3-4 than a 2-3. We have hills and valleys in the road that prevent us from going much faster than 20 MPH | Pavement Condition |
| Questionnaire 2 | | I believe that the County residents will greatly appreciate the upgrade or even paving of their roads. I live in the city limits of Lockhart but at times do travel on some County roads that are horrible. | Pavement Condition |
| Verbal | 183 | Luling ISD is concerned with traffic on 183 which does not stop for buses. Traveling on gravel roads is tough on buses | Pavement Condition; Safety |
| Questionnaire 2 | Countywide | I'm so glad that y'all are working on overall plan with participation from the people that live here | Planning Process |
| Questionnaire 2 | | I want to be on the committee. I'm [redacted]. I've been a registered Professional Engineer for years. Retired now, but I own 40 acres and live on Barth Rd. | Planning Process |
| Questionnaire 2 | | who develops or composes the data | Planning Process |
| Questionnaire 2 | | Would have liked to seen a more diverse group on advisory board instead of just City officials (Mayor and City Mgr.) | Planning Process |
| Questionnaire 2 | | The public input was great. Reaching out to those affected at the earliest possible dates, is important to ongoing success of these plans. | Planning Process |
| Questionnaire 2 | | No, I have been afforded the opportunity for citizen input at the various stages. | Planning Process |
| Questionnaire 2 | | You've done an excellent job in asking for community input. I went to one of the meetings at 1st Baptist church and have seen announcements in the newspaper and on faceBook. thank you for being so thorough. | Planning Process |
| Questionnaire 2 | | Do out reach to the rural areas if you think you want to know what the rural area needs are - otherwise stick to the city if that is the only place your are going to reach out to individuals. | Planning Process |
| Questionnaire 2 | | More advertising the public meetings---I was not aware of the public meetings, even though I read the local papers. Perhaps signs posted at some of the area convenience stores, etc. | Planning Process |
| Questionnaire 2 | | I only just learned of this and have not seen any scoring | Planning Process |
| Questionnaire 2 | | Find a better way to publicize what you do, as I am just learning about this plan. | Planning Process |
| Public Meeting 2 - Comment Card | Lockhart | The road going through the new Caldwell Valley development should not be so curvy. Especially if the road is to upgraded to a regional road. Also it | Preferred Alignment |

| Means Captured | Location of Issue | Comment | Category |
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| | | should follow the path in the South section that has been planned to be on the other side of flood zone | |
| Questionnaire 2 | Countywide | Roads that are in the worst condition or projects that impact the greatest number of people. | Priority |
| Questionnaire 2 | Countywide | Prioritize projects that involve short cut to major thoroughfares. | Priority |
| Questionnaire 2 | CR 176 | CR 176. Big trucks and many more vehicles use that road as a shortcut between HWY183 and HWY 21 and have torn it up. | Priority |
| Questionnaire 2 | Mustang Ridge | Mustang Ridge | Priority |
| Questionnaire 2 | Yarrington Road | RM150 and Yarrington Road | Priority |
| Questionnaire 2 | Lockhart | Walking and/or bike safety for those walking or biking from the east side of US 183 to the other side of the City of Lockhart. | Priority; Bike/Ped |
| Questionnaire 2 | Countywide | Paving gravel roads | Priority; Paving |
| Questionnaire 2 | Countywide | public access to homeowners. You have many people living in this county, that do not have mail, school bus and other utility access to their properties because the road is not a county road, but instead a private easement. the county needs to pursue these easements to give equitable emergency and utility services to these residents. | Priority; Private Roads |
| Questionnaire 2 | Countywide | Safety in and around schools. | Priority; Schools |
| Questionnaire 2 | Countywide | yes, the multitude of "private roads" in the county. There is huge inequity in public access to households in this county. This must be addressed. | Private Roads |
| Questionnaire 2 | | Yes, why do you show a private road on my ranch as a paved non-contiguous road? Why do you even show a private road that is only used by me on your map? And if you can give me a good reason for showing a private road on your map, why would you show it as paved when it is gravel? Did you actually drive these road or where did you get your information? | Private Roads |
| Questionnaire 2 | | the key of your map is so ridiculously small, it is illegible. | Project Materials |
| Questionnaire 2 | | Again, the key to your map is illegible, due to size. not clear. | Project Materials |
| Questionnaire 2 | | I was unable to view the map | Project Materials |
| Questionnaire 2 | Martindale | political RD. basically private road why waste money for 3-4 residents | Remove from Pavement Improvements List |
| Public Meeting 2 - Verbal | SH130/US183 | The exit ramps are too close to the intersections on the frontage roads; any exit that causes a backup could be a potential bad wreck; some exits are too close to hills and the abrupt slowdown/no | Safety |

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| | | visibility is dangerous | |
| Questionnaire 2 | SH130/US183 | I am convinced we are ignoring the biggest hazard in the County. The new Toll Road is a deathtrap on which 4 people died in the first month of opening. It is unsafe to enter, to exit, to drive the main lanes, and to drive the Hwy 183 access roads. It is specifically designed to be a death trap having inadequate entrance and exit ramps without acceleration, deceleration, and merge lanes on the main and access roads. Further, it has been specifically engineered to kill people with the cross-under areas designed to slow traffic and require stoplights in order to force people onto the inadequate toll lanes. Further, the exit ramps are improperly marked with speeds in excess of the access lanes and no slow-down areas. I hope the toll authority and the toll road company is sued with class action and wrongful death actions, but it will not bring back the 1 to 2 people per week who are going to die on this section of road! | Safety |
| Email | SH 130/183 | When headed southbound on 130/183, people are missing cutoff to 21 and getting on 177/Williamson Road and speeding through there. It is tearing up the road and causing a lot of dust. May need more speed limit signs on Williamson Road and more signage marking the exit to 21<br>At the southwest corner of 21 and 130 the drainage needs improvement. When it rains water is pooling and standing there. | Safety; Drainage |
| Verbal | Hwy 20 | Lockhart ISD buses can't use Hwy 20 because there is no shoulder and support the proposed project | School; Improvements to Existing |
| Public Meeting 2 - Verbal | SH130/US183 | 55 mph is too slow for frontage; 30 mph difference between highway and frontage is dangerous; dangerous where the southbound road narrows from 4 to 3 lanes north of Lockhart; the traffic lights on the frontage road are unnecessary - when will they be turned on? They should have sensors when they are activated - we didn't need that improvement. | Speed Limit |
| Questionnaire 2 | SH130/US183 | The access roads owned by the taxpayers that was Hwy 183 paid for with tax money and then SH 130 stole our land and did not keep the promise of keeping the "free" lanes paid by tax dollars at the 65 mph speed limit. Fix that road first so we can travel at 65 mph again. | Speed Limit |
| Questionnaire 2 | SH130/US183 | Yes, upgrade the tax payer owned lanes where 183 runs next to SH 130 to accommodate the 65 mph speed limit as promises - LIKE THEY WERE BEFORE SH 130 | Speed Limit |

| Means Captured | Location of Issue | Comment | Category |
|---|---|---|---|
| Questionnaire 2 | Countywide | They seem well thought out, after all they won't be funded until they are needed. | Support for Plan |
| Questionnaire 2 | Yarrington Road | The extension to Yarrington Road and RM150 are important connections linking IH35 and SH130. | Support for Plan |
| Questionnaire 2 | SH 80/FM 20 | Should be stop light with turn signal at SH 80 & FM 20 due to increased deaths Bypass around school makes no sense waste of money? Turn lane into school is good idea? | Traffic Signals; Turn Lanes; School |
| Questionnaire 2 | SH 80 | It would be good to add turning lanes at some critical areas on SH 80 | Turn Lanes |
| Questionnaire 2 | SH 80/FM 20 | The Prairie Lea School Turn Lanes and Stop Lights at sh80& FM 20 to slow down traffic in preparation to coming to | Turn Lanes |
| Questionnaire 2 | Borchert Loop | Borchert Loop needs to be redone & widened. | Widen Facility |
| Community Meeting | Lockhart and ETJ | Received comments from Lockhart Planning and Zoning Commission regarding inclusion of the complete Lockhart Thoroughfare Plan in the CCTP. | |
| Verbal | Countywide | Received input from Union Pacific Railroad on potential new crossings. For any new at-grade crossing, UPRR would like to see 3 existing at-grade crossings (with about the same amount of traffic) closed. UPRR and FRA prefers that new crossings to be grade separated. An upgrade to an existing at-grade crossing is fine with UPRR. | |

**Comments on the Draft Report**

| Means Captured | Location of Issue | Comment | Category | Comment Response |
|---|---|---|---|---|
| Email | US 183 Lockhart | One Page 69, it states that the Colorado Street (US 183) widening project will extend to a southern limit at MLK Jr. Industrial Blvd. (there is no slash between “King” and “Industrial”). The project will actually extend further south approximately another quarter mile to just north of the new Walmart. | Improvement Projects in Development | The limits will be corrected on page 69. |
| Email | Countywide | Proposed improvements to various highways are explained on Page 73. I question proposed highways that are listed with an even number of lanes without a mention of a TWLTL or dedicated left-turn lanes at least at intersections. In particular, SH 80 from the Hays County line and SH 142 is proposed to be six lanes wide. Left turns are already a hazard. The last time that SH 80 was repaved by TxDOT, I begged them to put dedicated left-turn lanes at the County Road 101 intersection, which has been the site of both fatal and serious nonfatal accidents, but they didn’t. Six lanes will carry more traffic, but won’t be any safer without either a TWLTL or left-turn lanes at most intersections. Please review existing conditions and projected LOS data for all highways, along with the potential for new left turn opportunities where large developments are proposed, and recommend TWLTL’s or intersection left-turn lanes where appropriate. I travel on SH 80 and SH 142 every weekday and frequently encounter dangerous situations where vehicles waiting to turn left obstruct traffic behind them. | Safety | Text will be clarified to refer reader to typical scections provided in section 5.2 Cost Estimates and/or to a new section on typical sections. |
| Email | SH 142 Lockhart | As I have previously noted, Project ID 62 deviates from the adopted Lockhart Thoroughfare Plan map, but even if the Project ID 62 alignment is used as proposed, why can’t it align with Project ID 68 at SH 142 instead of being off-set as shown on Page 79 and other places? This appears to be a no-brainer. One or the other should be shifted in order to make a complete and safer four-way intersection. | Coordination with Cities/City Planning | Project 62 has been realigned to match up with Project 68 at SH 142. The lines that are shown as 'projects' should be considered as conceptual locations and subject to change pending preliminary engineering and environmental analysis. |
| Email | Loop south of Lockhart | Project ID’s 50, 44, and 86 (or 85) shown on Page 79 and other places are a HIGH practical and political priority, as they form a much-needed southwest loop connecting SH 130 to US 183 which has always been a critical component of the Lockhart Thoroughfare Plan map. | Coordination with Cities/City Planning | Based on comments received at the Commissionsers Court workshop and the |

| Means Captured | Location of Issue | Comment | Category | Comment Response |
|---|---|---|---|---|
| | | | | Advisory Committee, the selection of the higher priority projects has been reevaluated to take into account the anticipated timing of potential developer participation. |
| Email | Lockhart | In the Pedestrian Needs section, starting on Page 84, I did not see any reference to the Lockhart Sidewalk/Trail Plan map, which was adopted with updates to the Land Use Plan and Thoroughfare Plan maps on January 18, 2011. This map existing and propose future locations for sidewalks and hike/bike trails. | Pedestrian Facilities | The Lockhart Sidewalk and Trail Plan Map and discussion is included in Chapter 2, Existing Conditions. The section regarding sidewalks plans for both Lockhart and Luling have been moved to Chapter 3. |
| Email | | On Page 130, the link listed to the Colorado Street Corridor Improvement Plan works, but it's not the best one to use in this context. http://www.lockhart-tx.org/images/website98/colorado_street_corridor_improvement_plan.pdf#zoom=75 is better and potentially less confusing than the other one, which is a page intended to focus on the results of a survey that was done during the planning process. | Documentation Edit | The reference has been changed to the suggested web link. |
| Email | SH 21 | The Hays County plan was approved with a late change to SH 21 from a MAD 4 to a MAD 6. The Caldwell County plan should be updated to reflect SH 21 as a MAD 6 in the future. There is also a reference to the Hays County plan / SH 21 "four-lane" which should be changed to "six-lane" on page 73. | Coordination with neighboring Counties/County Planning | The plan has been updated to show SH 21 as a six-lane divided roadway. |
| Email | Uhland | On the ETJ maps on page 65 – you should check with the City of Uhland to make sure their ETJ is being depicted correctly. I have seen different maps recently. | Coordination with Cities/City Planning | The source for the map on page 65 was the Caldwell Co. CAD accessed in May 2012 and the map was dated October 29,2008. The appraisal district website was |

| Means Captured | Location of Issue | Comment | Category | Comment Response |
|---|---|---|---|---|
| | | | | accessed March 15, 2013 and an update ETJ map dated July 18, 2012 was posted. The map includes a statement of limitation that the information is to be used only as a general guide. |
| Email | Dovehill Ct; Dovehill Dr | I noticed that county road 222 is on the list for repairs, but county road 61 is not on the list. It is a gravel road in a subdivision of 25+ families and gets very dusty most of the year due to the high volume of community traffic. It is oiled from time to time, but that doesn't last more than a few days. When we get a heavy rain the road washes out where the creek goes under/over the road. The county did beef it up more the last time around. We are on a hill side so the rain also washes gullies in the gravel streets as it washes down the hill. | Add to Pavement Improvments List | All of the county roads were driven in July 2012 and given a visual rating by engineers for each of the following categories: edge condition, surface heaving or depressions, and potholes. Both Dovehill Ct and Dovehill Dr scored a 2 in each category on a scale of 1 – 5 with 1 being the highest rating. The maintenance plan only considered those county roads rated as unsatisfactory and poor. |

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# Appendix D

# Cost Estimating

# Cost Estimating Methodology:

The following five-step methodology was used to develop the conceptual cost estimates for each proposed project considered under the CCTP.

**STEP 1:** Define the type of typical section for each proposed project. Establish widths of lanes and additional features based on American Association of State Highway and Transportation Officials policy and TxDOT Roadway Design Manual. The following types of typical sections have been identified:

- 2-Lane: County Road, Rural, Super 2, Rural with TWLTL
- 4-Lane: Urban, Rural Divided, Rural Undivided, Rural with TWLTL
- 6-Lane: Urban Divided, Parkway, Rural Divided
- Notch & Widen to 6 Lanes: Urban Divided, Rural Undivided
- Notch & Widen to add paved shoulders with 2 inch ACP overlay: 8-foot shoulders, 10-foot shoulders

**STEP 2:** For each proposed project, establish the length of roadway pavement and the length of structures (bridges) based on floodplains. For those proposed projects that include a railroad overpass, estimate length of structure and retaining wall. Add the two structure lengths together. Use a cost per square feet basis to calculate estimated structural costs.

**STEP 3:** Identify the type of pavement work needed and use a cost per square feet basis to determine the price for roadway pavements based on the following options:

- Addition of 12 inch flexible base with 2 inch ACP overlay
- Full depth asphalt construction (excavate and apply 12 inch depth ACP base course and surface)
- Rework of 12 inch of existing gravel road and add surface treatment
- New gravel road (Rework existing base material and add surface treatment)
- 2 inch ACP overlay

**STEP 4:** Add the following, as applicable, for the length of the planned improvement:

- Sidewalks
- Concrete raised medians
- Curb and gutter
- Topsoil and seeding
- Signing and pavement markings

**STEP 5:** Apply the following additional costs to the subtotal of paving and length-base items:

- Preparing ROW – 1%
- Contingency – 20%
- Small Drainage Structures – 7%
- Mobilization – 10%
- Traffic Control – 5%
- Construction Engineering and Inspection – 10%

**Table D-1** provides the cost comparison for the roadway items described above between the different typical sections.

**Table D-1 Estimated Roadway Costs per Mile**

| Typical Section | $ Million/mile* |
|---|---|
| 4-Lane Urban with 16 foot raised median, sidewalks | $5.28 |
| 6-Lane Urban with 16 foot raised median, sidewalks | $6.89 |
| 6-Lane Parkway, 20 foot raised median, 1 10-foot shared use path | $8.04 |
| 4-Lane Rural with TWLTL (with sidewalks) | $5.81 |
| 4-Lane Rural Divided | $4.78 |
| 4-Lane Rural Undivided | $4.21 |
| 4-Lane Rural with TWLTL (no sidewalks) | $5.20 |
| 2-Lane Rural with TWLTL | $3.24 |
| Super 2 - 2 Lane Rural | $2.75 |
| 2-Lane Rural (no median) | $2.49 |
| 2-Lane County Road with 4-foot shoulders | $0.83 |
| 2-Lane County Road with 2-foot shoulders (maintenance) | $0.73 |
| Notch and widen 2-lane highway to add 8-foot paved shoulders | $1.25 |
| Notch and widen 2-lane highway to add 10-foot paved shoulders | $1.51 |
| Notch and Widen 4-lane undivided to 6-lane divided, rural, 1 10-foot shared use path | $3.36 |
| Notch and widen 4-lane undivided to 6-lane divided, urban, with sidewalks | $4.44 |

Note: *Costs are generalized and do not include bridges , traffic signals, illumination, nor railroad overpasses.

**Table D-2** provides the unit cost assumptions to develop the cost estimates using TxDOT Standard Specifications and recent bid prices in the Austin District.

**Table D-2 Cost Estimate Unit Price Assumptions**

| TxDOT Item No. | Description | Quantity Per 1 Square Foot of Area | | TxDOT Average Low Bid Price | | Cost/Square Foot | |
|---|---|---|---|---|---|---|---|
| **100s-300s** | **12 inch Flex Base with 2 inch ACP Overlay** | | | | | **$4.26** | |
| 110 | Excavation (14 inch) | 0.0432 | CY | $6.00 | /CY | $0.26 | */SF* |
| 247 | Flexible Base (12 inch) | 0.1111 | SY | $25.00 | /SY | $2.78 | */SF* |
| 340 | Dense-Graded Hot Mix Asphalt (2 inch) | 0.0122 | TON | $100.00 | /TON | $1.22 | */SF* |
| **300s** | **2 inch ACP Overlay** | | | | | **$1.22** | |
| 340 | Dense Graded Hot Mix Asphalt (2 inch) | 0.0122 | TON | $100.00 | /TON | $1.22 | */SF* |
| **100s-300s** | **Full Depth Asphalt Reconstruction** | | | | | **$7.55** | |
| 110 | Excavation | 0.0370 | CY | $6.00 | /CY | $0.22 | */SF* |
| 340 | Dense-Graded Hot Mix Asphalt (12 inch) | 0.0733 | TON | $100.00 | /TON | $7.33 | */SF* |
| **200s-300s** | **Rework Gravel Road and Add Surface Treatment/ Paving** | | | | | **$0.49** | |
| 251 | Unit Area of Rework Base Material (TY D) 12 inch deep | 0.1111 | SY | $2.00 | /SY | $0.22 | */SF* |
| 316 | Aggregate Surface Treatment | 0.0011 | CY | $80.00 | /CY | $0.09 | */SF* |
| 316 | Asphalt Surface Treatment | 0.0444 | GAL | $4.00 | /GAL | $0.18 | */SF* |
| **200s-300s** | **New Gravel Road and Add Surface Treatment/ Paving** | | | | | **$3.27** | |
| 251 | Unit Area of Rework Base Material (TY D) 12 inch deep | 0.1111 | SY | $2.00 | /SY | $0.22 | */SF* |
| 247 | Flexible Base (12 inch) | 0.1111 | SY | $25.00 | /SY | $2.78 | */SF* |
| 316 | Aggregate Surface Treatment | 0.0011 | CY | $80.00 | /CY | $0.09 | */SF* |
| 316 | Asphalt Surface Treatment | 0.0444 | GAL | $4.00 | /GAL | $0.18 | */SF* |
| **100s** | **Topsoil & Seeding** | | | | | **$0.12** | |
| 160 | Furnishing and placing topsoil (4 inch) | 0.1111 | SY | $1.00 | /SY | $0.11 | */SF* |
| 164 | Seeding | 0.1111 | SY | $0.11 | /SY | $0.01 | */SF* |
| **400s** | **Bridge Structures** | 1.000 | SF | | | **$50.00** | **/SF** |
| **536** | **Concrete Raised Median** | 0.1111 | SY | $50.00 | /SY | **$5.56** | **/SF** |

| TxDOT Item No. | Description | Quantity Per 1 Linear Foot | | TxDOT Average Low Bid Price | | Cost/LF | |
|---|---|---|---|---|---|---|---|
| **644** | **Small Roadside Signs (1 every 500 feet)** | 0.0020 | EA | $500.00 | /EA | **$1.00** | **/LF** |
| **529** | **Curb & Gutter** | 1.0000 | LF | $15.00 | /LF | **$15.00** | **/LF** |
| **531** | **Concrete Sidewalks (4 feet wide) + 6 inch deep** | 1.0000 | LF | $30.00 | /LF | **$30.00** | **/LF** |
| **666/672** | **Pavement Markings** | 1.0000 | LF | $1.00 | /LF | **$1.00** | **/LF** |

# Appendix E

# Project Evaluation Categories and Scoring

# Mobility and Enhancement Projects

## Category: Current and Future Roadway Needs

| Goal | Measure | Qualitative Ratings | Score |
|---|---|---|---|
| Maintain the System | Pavement Condition Score | Bad | 5 |
| | | Poor | 4 |
| | | Fair | 2 |
| | | Good | 1 |
| | Proposed Paving of Gravel Road | Yes | 3 |
| | | No | 0 |
| Improve Connectivity | New or existing roadway | New Road | 5 |
| | | Add Lanes to Exist. Rd. or Add Pavement to Gravel Road | 4 |
| | | Add Shoulders to Exist. Rd. | 2 |
| | | Rehab Existing Road | 1 |
| | Provides connection or improves connection between IH 35/IH 10/SH 130/ US 183 | High (IH 35 to SH 130) | 5 |
| | | Moderate (SH 130 to US 183) | 4 |
| | | Least (to IH 10) | 2 |
| | | No | 1 |
| Improve Safety | 3 year crash history (per mile) | >3.0 crashes | 5 |
| | | 2.0 to 3.0 crashes | 4 |
| | | 1.0 to 2.0 crashes | |
| | | 0.5 to 1.0 crashes | 2 |
| | | <0.5 crashes | 1 |
| | | 0 crashes | 0 |
| | Adjacent to school | Yes | 5 |
| | | Near School (within 0.25 mile) | 4 |
| | | Between 0.25 and 0.5 miles | 2 |
| | | No, over 0.5 mile from school | 0 |
| | Adds/provides paved shoulders | Yes | 3 |
| | | No | 0 |
| | Proposed project on road with high truck traffic | Yes, over 20% trucks | 5 |
| | | Yes, 15-20% trucks | 4 |
| | | No, 10-14% trucks | 2 |
| | | No, less than 10% trucks | 1 |

## Category: Consider All Modes of Transportation

| | | | |
|---|---|---|---|
| Bicycle and Pedestrian | Proposed project includes bike/ped amenities | Yes | 2 |
| | | Partial | 1 |
| | | No | 0 |
| | **Proposed Project for ADA retrofit (only applies to 7 projects - Eliminated)** | Yes | 2 |
| | | No | 0 |
| | Completes a gap in bike/ped/trail network | Yes, fully completes gap | 3 |
| | | Partially completes gap | 2 |
| | | Connects to existing sidewalk or trail | 1 |
| | | No | 0 |
| Freight Rail | **Railroad crossing (Only applies to 7 projects - Eliminated)** | Grade separation | 5 |
| | | Use existing crossing | 4 |
| | | New Crossing | 2 |
| | | N/A | 0 |

## Category: Support Economic Development

| | | | |
|---|---|---|---|
| Nodal Development/Activity Centers | Serves existing or planned activity centers | >1 | 5 |
| | | 1 | 3 |
| | | No | 0 |
| Future Land Use | Serves proposed developments | >1 | 5 |
| | | 1 | 3 |
| | | No | 0 |
| | **Potential for ROW donation(% of total need) (Only applies to 5 projects - Eliminated)** | Over 90% | 5 |
| | | 90% to 61% | 4 |
| | | 30% to 60% | 2 |
| | | 1% to 30% | 1 |
| | | Percent Donated | |
| Industrial Growth | **Serves industrial parks (only applies to 4 projects - Eliminated)** | Yes, adjacent | 5 |
| | | Yes, within 0.25 mile | 4 |
| | | Yes, within 0.25 - 0.5 mile | 2 |
| | | More than 0.5 mile | 0 |

## Category: Preserve the Quality of Life

| | | | |
|---|---|---|---|
| Farm Access | Proposed project is on a County Road or FM system | Yes | 3 |
| | | No | 0 |
| | | AADT 2010 | |
| Preserve County Context | **Proposed project enhances downtown area (only applies to 6 projects - Eliminated)** | High | 5 |
| | | Medium | 3 |
| | | Low | 1 |
| | | No | 0 |
| | **Proposed project minimizes impacts to historic/scenic areas (not enough information available to rate - Eliminated)** | High | 5 |
| | | Medium | 3 |
| | | Low | 1 |
| | | No | 0 |

## Category: Preserve and Protect the Environment

| | | | |
|---|---|---|---|
| Environmental Compliance | Floodplain Crossed | No Floodplains Crossed | 5 |
| | | Floodplain Crossed but no New Hardwoods Destroyed | 4 |
| | New Hardwoods Crossed | Low 0-500 LF | 3 |
| | | Medium 500-1000 LF | 2 |
| | | High > 1000 LF | 1 |
| | | New Roads, Linear Feet of Hardwoods Crossed | |
| | | Linear Feet of Floodplain Crossed | |

## Category: Coordinate with Other Planning Effort

| | | | |
|---|---|---|---|
| Compatibility | Identified in an existing plan | >1 | 5 |
| | | 1 | 3 |
| | | No | 0 |

**Maximum Score = 64**

# Maintenance Projects

## Category: Current and Future Roadway Needs

| Goal | Measure | Qualitative Ratings | Score |
|---|---|---|---|
| Maintain the System | Pavement Condition Score | Bad | 5 |
| | | Poor | 4 |
| | | Fair | 2 |
| | | Good | 1 |
| Improve Safety | 3 year crash history (per mile) | >3.0 crashes | 5 |
| | | 2.- to 3.0 crashes | 4 |
| | | 1.0 to 2.0 crashes | |
| | | 0.5 to 1.0 crashes | 2 |
| | | < 0.5 crashes | 1 |
| | | 0 crashes | 0 |

## Category: Preserve and Protect the Environment

| | | | |
|---|---|---|---|
| Environmental Compliance | Floodplain Crossed | No Floodplains Crossed | 5 |
| | | Low 0-500 LF | 3 |
| | | Medium 500-1000 LF | 2 |
| | | High > 1000 LF | 1 |
| | | Linear Feet of Floodplain Crossed | -- |

## Category: Improve Connectivity

| | | | |
|---|---|---|---|
| Serve Traffic Flow | Road is Continuous | Continuous | 3 |
| | | Dead End | 0 |

## Category: Safety

| | | | |
|---|---|---|---|
| Bicycle and Pedestrian Safety | Improves Paved Condition of Bicycle Network | High | 3 |
| | | Low | 1 |
| | | None | 0 |

## Category: Other Planning Efforts

| | | | |
|---|---|---|---|
| Compatibility | Identified in an existing plan | >1 | 5 |
| | | 1 | 3 |
| | | No | 0 |

**Maximum Score = 26**

# Appendix F

# Alternative Transportation

This appendix provides additional detailed information about bicycle, pedestrian, and transit modes in Caldwell County that was collected for the CCTP. The last section of this appendix discusses the potential funding options for alternative modes of transportation.

# Bicycle and Pedestrian Modes

## Background

Bicycling and walking as transportation modes have grown more prevalent and popular throughout the CAMPO region over the past 15 years. Like cities all over the U.S., the Central Texas region has been investing in bicycle and pedestrian infrastructure to further the goals of livability, transportation equity and sustainability, and to help encourage healthy lifestyles for both adults and children.

> Often referred to as the concept of "Complete Streets", integrating bicycling and walking into roadways and streets is expressed in the CAMPO 2035 Regional Transportation Plan as follows:
> "The CAMPO 2035 Regional Transportation Plan provides a vision for how the region can meet the transportation needs of all its citizens by implementing a comprehensive multi-modal transportation system, of which bicycling and walking are essential elements."

The following are compelling reasons to integrate bicycling and walking into Caldwell County's transportation system:

**Transportation Equity**

Throughout the U.S. and Texas, roughly 30% of all people do not have access to an automobile for transportation, because they are:

- children and teens under driving age;
- elderly who are no longer physically capable of driving;
- physically or cognitively disabled citizens;
- low-income citizens or those temporarily unable to purchase or operate a car.

Bicycling and walking, particularly combined with public transportation, can provide this group of citizens access to jobs, school, shopping, medical appointments, social life and other key needs. A transportation system that focuses on the single-occupant vehicle mode to the exclusion of other modes is not serving a significant portion of citizens.

**Physical Activity and Public Health**

The alarming trend in the past several decades toward greater levels of obesity, diabetes, and cardiovascular disease in the U.S. correlates to falling rates of bicycling and walking over the same time period. Both national and international data show that countries and communities with better bicycle and pedestrian infrastructure are also healthier, contributing to productivity and helping reduce health care costs. The link between transportation and public health is so strong that the American Public Health Association has become actively involved in public policy and programs that encourage investment in bicycling and walking infrastructure. Similarly, major health insurance companies such as Blue Cross Blue Shield and Humana have invested in bicycling and walking initiatives.

**Livability and Economic Development**

The concept of "livability" has become a common element in walking and bicycling. Federal Transportation Enhancements funding goes to rural areas at almost twice the per capita rate as urban areas, demonstrating strong demand for walkable, bikeable communities across the landscape. *Beyond Urban Centers; Active Transportation in Rural America* by the Rails to Trails Conservancy includes real stories from rural communities across the country where people are walking and biking their way to strong local economies, and the towns are boosting their attractiveness to young families and business development.

**Tourism**

Caldwell County's natural beauty, rural roads, world-famous barbecue businesses, and the San Marcos River all contribute to the area's healthy tourist economy. As expressed in the comprehensives plans of both Lockhart and Luling, Caldwell County leaders believe increasing walkability of the two towns will help draw more visitors to the area. The county is already a popular recreational bicycling destination for people from Austin, San Antonio and San Marcos, and the county's leaders seek to increase tourism dollars by promoting bicycling.

**Environmental Justice**

Significant numbers of Lockhart and Luling residents live in environmental justice areas as defined by CAMPO. As part of its 2035 planning process, CAMPO sponsored two region-wide surveys designed to gather environmental justice community opinions related to transportation. The "Transportation Needs Survey for Environmental Justice Populations in the CAMPO Area" focused on concerns, safety issues and solutions. Of the top three concerns, #2 was "not enough bicycle and pedestrian facilities." Of the top three safety issues, "not enough sidewalks" and "not enough bicycle lanes" headed the list. When asked for solutions, survey respondents chose more transit options, bicycle lanes, and sidewalks as their top picks. Since 5% of Caldwell County households do not have access to a car and 29% of households have only one car according to the 2010 decennial census data from the U.S. Census Bureau, improving bicycle and pedestrian infrastructure, is a necessary strategy for addressing environmental justice in transportation.

**Future Transit Connections**

Public transportation in Caldwell County is provided by CARTS, the Capital Area Rural Transportation System, which currently offers only curb-to-curb, on-demand service. At present, transit demand exceeds CARTS' current service capability, and is only expected to increase as the county population grows. CARTS projects that as the county population grows, Lockhart and perhaps Luling will support expansion to a station-to-station system for service into Austin and San Marcos. At such time, bicycle and pedestrian access to transit stops will need to increase, requiring infrastructure improvements.

**The Timing is Right**

With the western and northwestern portions of Caldwell County poised for growth, now is the ideal time to commit to improving bicycling and walking infrastructure. As growth generates increases in traffic volumes and demand on intersections, it is never too early to preserve right-of-way and plan funding needs to build sidewalks and bicycle facilities for future need. Lockhart in particular can optimize its potential for becoming a walkable and bikeable city by incorporating bicycle and pedestrian planning best practices to ensure these two modes are fully integrated into the roadway network before rapid growth starts to occur.

## Bicycling Facilities

A guiding assumption in any effort to offer transportation options to people and improve bicycle and pedestrian access, is that most places in an urbanized area that people drive to, will also be places that people need or want to bicycle or walk to. Employment sites, schools, transit stops, parks and recreation facilities, and shopping are common attractors for non-motorized travel.

Many roadways and streets in Caldwell County are suitable for bicycle travel due to low automobile volumes and speeds. However, there is a wide range of suitability, or "bicycle compatibility" according to both the conditions of the roadway and the comfort level and bicycling skill of the rider. Following are characteristics that affect bicycle compatibility:

- Automobile volumes
- Truck volumes
- Vehicular SpeedsPresence of bike lane, shoulder, harrow or bike route designation
- Automobile lane width
- Pavement condition
- Parking
- Land use
- Intersection design and crossing conditions

CAMPO has created a map of regional bicycle routes to designate and recommend roadways for bicycling. Many of these regional routes also serve as local routes within city or town boundaries. This network utilizes the Federal Highway Administration's Bicycle Compatibility Index (CAMPO, 2010) to identify those roadways suitable for bicycling. See **Figure 2.7-4**.

The compatibility ratings are expressed on the CAMPO map with a color-coded key representing "comfort level" for cyclists. Shared-use and separated paths are shown in green, and are assumed to be comfortable for any level of cyclist from very young children to advanced-level adults. Comfort ratings for roadways in Caldwell County are High Comfort, Medium Comfort, Low Comfort and Extremely Low Comfort. In addition, the many unimproved gravel roads bear the designation "dirt roads" and as such may be suitable only for off-road bicycles.

While the Bicycle Compatibility Index is a good indicator of current bicycle suitability, particularly for adult bicyclists on rural roads, communities that are serious about making bicycling a viable mode of transportation may consider a recently evolved practice in bicycle infrastructure planning based on Level of Traffic Stress (LTS). This practice utilizes a scheme developed by the City of Portland, Oregon for classifying riders based on self-reported attitudes toward bicycling on urban streets (Geller).

A study by the Mineta Transportation Institute (Maaza, et al, 2012) incorporated this scheme into LTS as follows:

- LTS 1 is meant to be a level that most children can tolerate;
- LTS 2 is meant to be a the level that will be tolerated by the mainstream adult population identified as "interested but concerned";
- LTS 3 is meant to be a the level tolerated by American cyclists who are "enthused and confident" but still prefer having their own dedicated space for riding;
- LTS 4 is meant to be a a level tolerated only by those characterized as "strong and fearless."

Current thinking among U.S bicycle network planners and designers is that the greatest gains in bicycling mode split will be accomplished by designing for LTS 2 and LTS 3. While high-volume urban streets often require physically separated bike lanes or cycle tracks to achieve LTS 2 or LTS 3, Caldwell County communities may be able to significantly increase bicycling levels with lower levels of design such as shared-use lanes, bike route signage, or traditional striped bike lanes.

An important element of planning bicycle route networks is that creating access to destinations will attract bicycle travel. Lockhart in particular may consider creating a more detailed bicycle master plan in the next several years, as a stand-alone effort or within an update to its comprehensive plan. At such time, more detailed engineering analysis will be required to scope facilities for key streets and intersections.

There are several excellent resources for planners and designers to utilize when creating safe bicycle networks, including:

- AASHTO Guide for the Development of Bicycle Facilities, Fourth Edition, 2012
- Institute of Transportation Engineers Recommended Practice: Designing Walkable Thoroughfares; A Context-Sensitive Approach, 2010
- Model Design Manual for Living Streets, 2012. Los Angeles County
- Urban Bikeway Design Guide, National Association of City Transportation Officials, 2012

In the CAMPO 2035 Regional Transportation Plan, it has designated key roadways throughout the region as priority bicycle corridors for travel both within communities and regionally. In Caldwell County, this designation can represent those roadways that should be preserved for bicycle improvements as growth occurs in the area and the need for multi-modal transportation increases.

CAMPO has provided a facility selection guide for these corridors, based on Federal Highway Administration guidance, which is designed as broad guidance for implementing successful bicycle facility choices and are not intended to replace context-sensitive engineering judgment.

**Table F-1** applies to urban roadways, while **Table F-2** applies to rural roadways.

**Table F-1 CAMPO Bicycle Facility Guide for Urban Roadways**

| Average Motor Vehicle Speed (mph) | Average Annual Daily Traffic Volume (AADT) | | |
|---|---|---|---|
| | Less than 2,000 | 2,000 - 10,000 | Over 10,000 |
| Less than 30 | Shared Lane or Bicycle Boulevard | Shared Lane Marking or Bicycle Boulevard | Shared Lane Marking |
| 30 - 40 | Bike Lane 5 feet | Bike Lane 5 feet | Bike Lane 5 feet or Shared-Use Path |
| 41 - 50 | Bike Lane 6 feet | Bike Lane 6 feet | Bike Lane 6 feet |
| Over 50 | Bike Lane 6 feet | Bike Lane 6 feet or Shared-Use Path | Bike Lane 6 feet or Shared-Use Path |

**Table F-2 CAMPO Bicycle Facility Guide for Rural Roadways**

| Average Motor Vehicle Speed (mph) | Average Annual Daily Traffic Volume (AADT) | | |
|---|---|---|---|
| | Less than 2,000 | 2,000 - 10,000 | over 10,000 |
| Less than 30 | Shoulder 4 feet | Shoulder 4 feet | Shoulder 4 feet |
| 30 - 40 | Shoulder 4 feet | Shoulder 4 feet | Shoulder 6 feet |
| 41 - 50 | Shoulder 6 feet | Shoulder 6 feet | Shoulder 6 feet |
| Over 50 | Shoulder 6 feet | Shoulder 8 feet | Shoulder 8 feet |

In addition, CAMPO's 2035 plan sets forth specific policies to address the need for bicycle and pedestrian transportation networks throughout the region. These are the Regional Transportation Policies 19 through 22, beginning on page 110 of the plan document.

## Pedestrian Facilities

A vision of the ideal pedestrian environment for any urbanized area includes a connected network of ADA-compliant sidewalks, on both sides of every street where people live, work, shop, and attend school. In addition to sidewalks, safe crossings of key roadways marked by crosswalks or signals, spaced at reasonable intervals are essential to pedestrian mobility and connectivity. This vision is part of a "Complete Streets" concept many cities in the U.S. are working to achieve. Caldwell County communities are no exception.

The CAMPO 2035 Regional Transportation Plan acknowledges the need for pedestrian infrastructure throughout the region, but stresses the need to prioritize investments in existing urban and suburban areas where a greater number of potential users would be served. The Plan has identified areas of Lockhart, Luling, and Martindale as Pedestrian Priority Districts.

Both Lockhart and Luling have recently won funding to install sidewalks and trail sections, and each has established formal plans to continue improving pedestrian networks. In addition, the communities of Martindale, Fentress, and Prairie Lea have expressed the need for sidewalks, trails and bicycle accommodations. Any of Caldwell County's smaller communities may need pedestrian accommodations in the centers of town as population growth throughout the region results in increased traffic volumes in and through these towns.

## Barriers to Bicycle and Pedestrian Mobility

Major roadways, multi-lane highways, and toll road or freeway interchanges can be insurmountable barriers to safe, connected bicycle and pedestrian networks. Caldwell County is in an excellent position to plan and design for potential barriers by including bicycle and pedestrian facilities in transportation plans as it grows. SH 130 is the main barrier to east/west bicycle and pedestrian mobility in the region due to it limited access points. As development occurs along the SH 130 corridor, bicycle and pedestrian access should be engineered into any intersecting roadway expansions. Lockhart has included shared use bicycle/pedestrian paths along the frontage roads of SH 130 where the toll road passes through its jurisdiction.

## Lockhart

Lockhart's goals to increase walkability and bikeability are evident in the city's 2020 Comprehensive Plan. Following is the City's Transportation Vision as stated in the plan:

"Lockhart's transportation system shall provide residents and visitors safe, efficient and convenient access to all areas of the City and surrounding region, accommodate current and future demand for movement of people and goods, and allow travelers choices of destinations, routes and modes of travel."

The Plan includes the following goals:

- Establish and maintain a network of new and existing sidewalks as a component of improved standards for City streets.
- Provide residents of Lockhart hike/bike trails for recreation opportunities and as alternative transportation.

Lockhart has added several sidewalks in recent years through the Safe Routes To Schools grant program, and has a robust plan to build more in years to come. In addition the city has identified several priority streets to receive new sidewalks when funding becomes available. Lockhart's trails plan includes segments in the northern part of the city, the Town Branch Creek Trail, which currently runs close to the UP rail corridor west of Pecos Park to Commerce Street. Eventually, this trail will form an important connection to City Park, joining the west and east sides of Lockhart under the U.S. 183 overpass. See **Section 2.7, Alternative Transportation Modes**, for additional information.

Lockhart has further committed to a walkable and livable city through its subdivision ordinance, which requires all new developments to construct sidewalks as part of approved development. Two planned developments adjacent to SH 130 will be held to this ordinance, one of which will construct a trail segment along the west side of the toll road.

The Colorado Street Corridor Improvement Plan demonstrates Lockhart's commitment to improving bicycling and walking by accommodating both modes in its design, and securing Proposition 12 funding to accomplish a "Complete Street" concept. Bicycle and pedestrian facilities include an 8-foot wide shared-use path on both sides of the roadway, a bridge structure adjacent to the existing roadway bridge at the railroad overpass, and pedestrian signalization and crosswalks at key locations.

## Luling

In its Economic Development Plan released in 2012, the City of Luling features pedestrian and bicycle improvements as key elements for helping revitalize the central business district, for attracting visitors to town, and for elevating quality of life for all residents.

As stated in the plan:
"...quality of schools, downtown, sidewalks, churches and parks...are small intangibles where Luling can differentiate itself from other communities, and it can be the determining factor into attracting more businesses and industries. Making Luling into a walkable community could be a start."

The city has recently built new sidewalks under the Safe Routes to School grant program, and has plans to seek funding for additional sidewalk segments. Sidewalks, pedestrian signals, and crosswalks are needed throughout the downtown area as well, both for safer access for locals, and to encourage tourists and visitors to spend time downtown.

In addition to sidewalks, crosswalks and pedestrian signals are needed in the vicinity of Davis Street/FM 1322, Pierce Street, and the railroad crossings of Magnolia Avenue/US 183/SH 80/US 90. The intersection of Davis Street and Magnolia Avenue should be considered for a pedestrian hybrid beacon, to allow visitors and barbecue fans to cross Magnolia Avenue/US 183 without having to make the unreasonable detour south to the signal at Pierce Street. In addition to the Pierce Street signal being an excessive distance for a pedestrian to detour, there are other hazards, including 1) no sidewalks on either side of US 183, 2) no developed pedestrian crossing of the railroad tracks, and 3) excessive gas and oil truck traffic at the intersection of Pierce Street/US 90 and US 183/SH 80. Davis Street /FM 1322 has new sidewalks and curb ramps on either side of US 183, but currently has no crosswalk, pedestrian warning signs, or any other treatments to draw attention. According to Luling officials, pedestrian traffic is particularly high on Saturdays when in addition to the hundreds of barbecue tourists, the farmer's market on the east side of Magnolia Avenue/US 183 draws large numbers of pedestrians.

Luling is anchored at its north and south ends by parks, but neither end of the city has sidewalks leading to these parks. The Zedler Mill Park on the south side of town is a beautiful property adjacent to the San Marcos River, and the city has plans to build trails and other amenities there. A top priority for the city is to build a sidewalk on Laurel Avenue to allow safe access for adults and children to the Zedler Mill Park area. Since a portion of this park is located on the south bank of the San Marcos River, a pedestrian/bicycle crossing is needed within the SH 80 corridor, either as a separate, stand-alone structure, or added to the roadway bridge.

## Martindale

Given its inclusion in the San Marcos Urbanized Area, as well as its beautiful location along the San Marcos River, Martindale is poised for significant growth within the next two decades. The City of Martindale has identified several locations for pedestrian and bicycle facilities, both to improve safety and connectivity for locals between housing, parks, and businesses, and also to enhance recreation opportunities for residents and visitors.

The community is currently improving its historic downtown, and planning improvements to the San Marcos river recreation sites. Following are among the proposed projects to improve pedestrian and bicycle safety, as well as general livability for the community:

- **Lockhart Street –** sidewalk from SH 80 to Main Street to access housing, post office, and businesses on SH 80.
- **Main Street –** sidewalk or shared-use path from Lockhart Street to FM 1979 to access the historic downtown area and a city park with river access.
- **FM 1979 –** shared-use path from Bachus Street to Spencer's Campground just south of river crossing to connect housing in the downtown area and a city park and river access.
- **SH 80 lane reconfiguration –** convert from current 4-lanes without shoulders to 2-lanes plus TWLTL with shoulders to provide continuous bicycle accommodation by joining existing shoulders on either end of Martindale, and it may help reduce vehicular speed on SH80 through the community. .
- **SH 80 bicycle/pedestrian route –** connecting Martindale to nearby San Marcos with a wide, buffered bike lane or shared-use path to encourage both transportation and recreation trips between the two cities.

**Prairie Lea and Fentress**

Prairie Lea has its own independent school district that draws students from Fentress, Lockhart, Luling, and Prairie Lea as well as the county. The school buildings are located on SH 80 and there are no sidewalks fronting the properties. Members of the CCTP Advisory Committee have stated the need for sidewalks along SH 80 in Prairie Lea, plus a shared-use path to connect Fentress to Prairie Lea I.S.D.

# Transit Modes

CARTS currently provides on-demand, curb-to-curb bus service for Caldwell County, transporting customers from all communities and areas of the County to destinations in Austin, San Marcus, San Antonio and Seguin, plus intra-county service to Lockhart and Luling. Should projected population growth scenarios come to fruition, CARTS will transition to a fixed route, regularly scheduled express bus service into Austin and San Marcos from key Caldwell County communities.

Another change on horizon for transit service in Caldwell County is the addition of Martindale into the San Marcos Urbanized Area, which will be served by a new transit district, the CARTS Combined Urban-Rural Transit District. Details of service area and levels will be determined during the planning process for this new system that will continue through 2014.

The CAMPO 2035 Regional Transportation Plan shows CARTS planned express bus service upgrades as seen in **Table F-3**.

**Table F-3 Projected Express Bus Service in Caldwell County**

| Year | Service Areas | Type of Service |
|---|---|---|
| 2020 | Lockhart to Austin | Express Bus |
| 2020 | Luling to San Marcos | Express Bus |
| 2035 | Luling to Lockhart | Express Bus |
| 2035 | Lockhart to San Marcus | Express Bus |

# Funding

**Local Funding Opportunities for Bicycle and Pedestrian Facilities**

Communities across the U.S. utilize a wide range of funding sources and implementation methods for improving bicycle and pedestrian mobility. Caldwell County and its communities are fortunate to be part of the CAMPO region, as the agency has long been a leader in supporting and funding bicycle and pedestrian infrastructure and programs. The following are common sources and methods of implementing bicycle and pedestrian facilities:

**Require bicycle/pedestrian infrastructure in all new development –** Many communities codify bicycle and pedestrian facilities in transportation elements of new subdivisions and developments.

**Include bicycle and pedestrian facilities in new roadway construction and reconstruction/ maintenance of existing roads –** These efforts can range from the low cost improvements--striping bike lanes when a street is resurfaced--to full build-out of a new corridor with sidewalks, street furniture and trees, separated cycle tracks or buffered bike lanes.

**Local bond funds, sales taxes, hotel occupancy taxes –** Communities are making a strong commitment to a multi-modal transportation system and livability by asking citizens and visitors to fund improvements through taxes.

**Work with TxDOT to include bicycle/pedestrian facilities in on-system roadway projects –** The Colorado Street Corridor Improvement Project in Lockhart is an outstanding example a partnering with TxDOT to build bicycle and pedestrian facilities as part of a state highway project.

## Federal Funding Opportunities for Bicycle and Pedestrian Facilities

**Surface Transportation Program-Metropolitan Mobility 15% bicycle/pedestrian set-aside** – CAMPO is an innovator throughout the U.S. with its commitment of 15% of Metropolitan Mobility funds to bicycle and pedestrian improvements, for which all of its member jurisdictions may compete. There is a local match requirement of 20%, which is reduced to 3.8% due to Caldwell County's designation by TxDOT as an economically disadvantaged county (see **Section 5.1 Funding Sources**, for additional information).

**Surface Transportation Program-Metropolitan Mobility "Centers" funding** – CAMPO's Centers initiative commits a percentage of Metropolitan Mobility funds to specific transportation studies and improvements that support sustainability initiatives in selected areas. Within Caldwell County, Lockhart is designated a "medium" center while Luling is a "small" center; both would be eligible for this funding category.

**MAP-21 Transportation Alternatives Funding** – In the new federal transportation legislation enacted in July 2012, two popular funding programs for bicycle and pedestrian improvement, Transportation Enhancements and Safe Routes to School will now be under the umbrella of "Transportation Alternatives". Specific guidance on new funding formulas are expected to be released by winter 2012-2013, and CAMPO will facilitate a competitive selection process for funding among each of its member entities.

## Additional Funding Opportunities

**Recreational Trails** – This funding category is administered by the Texas Parks and Wildlife Department and can be used for a range of off-street trail types, including hard-surface trails intended for both transportation and recreation.

**Centers for Disease Control and Prevention Community Transformation Grants** – Community Transformation Grants supports state and local government agencies, Tribes and territories, nonprofit organizations, and communities across the country. Awardees are engaging partners from multiple sectors, such as education, transportation, and business improve the health of their communities' approximately 120 million residents.

**Community Challenge Grants, U.S. Dept. of Housing and Urban Development** – This program fosters reform and reduces barriers to achieving affordable, economically vital, and sustainable communities. Planning and implementing multi-modal transportation is part of this effort.

**Smart Growth Implementation Assistance, Environmental Protection Agency** –The Smart Growth Implementation Assistance program is an annual, competitive solicitation open to state, local, regional, and tribal governments (and non-profits that have partnered with a governmental entity) that want to incorporate smart growth techniques into their future development.

# Appendix G

# List of Acronyms

# LIST OF ACRONYMS

AADT – Annual Average Daily Traffic
ADA – Americans with Disabilities Act
AASHTO – American Association of State Highway and Transportation Officials
CFR – Code of Federal Regulations
EIS – Environmental Impact Statement
ETJ – Extra Territorial Jurisdiction
FAA – Federal Aviation Administration
FHWA – Federal Highway Administration
FM – Farm-to-Market
FRA – Federal Railroad Administration
FTA – Federal Transit Administration
FY – Fiscal Year
IH – Interstate Highway
LOS – Level of Service
MAP-21 – Moving Ahead for Progress in the 21st Century
MPH – Miles Per Hour
MPO – Metropolitan Planning Organization
NHS – National Highway System
RDM – Roadway Design Manual
ROW – Right-of-Way
RTP – Regional Transportation Plan
SAFETEA-LU – Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users
SH – State Highway
SRTS – Safe Routes to School
STEP – Surface Transportation Program
STP – Surface Transportation Program
TAZ – Traffic Analysis Zone
TDM – Travel Demand Model
TIP – Transportation Improvement Program
TWLTL – Two-Way Left-Turn Lane
TxDOT – Texas Department of Transportation
UP – Union Pacific Railroad
U.S. – United States
USACE – United States Army Corps of Engineers
USC – United States Code
USDOT – United States Department of Transportation
V/C – Volume to Capacity
VHT – Vehicle Hours Traveled
VMT – Vehicle Miles Traveled
VPD – Vehicles Per Day

# Appendix H

# Glossary of Terms

# Glossary of Terms

**Accessibility:** The ability to reach a location; a ways or means of approach.

**Access Management:** Methods to preserve efficient and safe operations of roads through application of design approaches, land use control measures, and coordination of transportation and land use planning.

**Air Quality Conformity:** A process in which transportation plans and spending programs (i.e., Regional Transportation Plans and Transportation Improvement Programs) are reviewed to ensure that they are consistent with federal clean air requirements and contribute to attainment of air quality standards.

**Alternative Mode:** Loosely defined term generally used to identify any form of travel other than driving alone in a single occupant vehicle (SOV), including carpooling, transit, walking and bicycling.

**Americans with Disabilities Act of 1990 (ADA):** A federal law mandating sweeping changes in building codes, transportation, and hiring practices to prevent discrimination against persons with disabilities, not just in projects involving federal dollars, but all new public places, conveyances and employers. The significance of ADA in transportation is mainly felt in terms of transit operations, capital improvements and hiring.

**Arterial:** Functional classification for roadway facilities which are major thoroughfares vital for moving people and goods longer distances. Arterials often provide connectivity with the interstate and freeway systems.

**Attainment Area:** An area considered to have air quality at least as good as the U.S. Environmental Protection Agency (EPA) health standards used in the Clean Air Act. An area may be an Attainment Area for one pollutant and a Non-Attainment Area for others.

**Average Daily Traffic (ADT):** The average number of vehicles passing a fixed point in a 24-hour timeframe; a convention for measuring traffic volume.

**Base Year:** An analysis or study's baseline or lead off year. The year to which other years are compared.

**Bicycle Lane:** A designated portion of the roadway cross-section reserved for the use of bicyclists, accompanied by appropriate signing and marking. Bicycle lanes are one-way facilities in the same direction as motor vehicle traffic and are generally located to the outside edge of the roadway.

**Bicycle Route:** A street or overall route which has been determined as preferable for use by bicyclists and is generally signed to alert motorists of the presence of bicyclists. Infrastructure improvements are commonly made along the route to improve safety, but bicyclists are expected to share travel lanes with motor vehicles.

**Bikeway:** A facility intended to accommodate bicycle travel for recreational or commuting purposes. Bikeways are not necessarily separate facilities; they may be designed and operated to be shared with other travel modes.

**CAMPO:** Capital Area Metropolitan Planning Organization is the Metropolitan Planning Organization (MPO) for Williamson, Travis and Hays Counties in Central Texas. CAMPO was established in 1973 and is comprised of state, regional and local officials.

**Capacity:** The maximum achievable throughput for a transportation facility consistent with the safe operation of the facility. Capacity is usually measured in vehicles per hour.

**CAPCOG:** The Capital Area Planning Council of Governments was organized in 1970 to serve local governments in its ten-county region. CAPCOG is a regional planning commission organized under Chapter 391, Local Government Code, whose primary focus is to serve as advocate, planner and coordinator of initiatives that, when undertaken on a regional basis, can be more effective and efficient.

**Capital Metro:** The Capital Metropolitan Transportation Authority was created in 1985 when voters approved its creation and approved a one percent sales tax for funding. Ten capital-area jurisdictions originally participated in CapMetro, which expanded bus service and called for the development of a light rail system to serve the area.

**CARTPO:** The Capital Area Regional Transportation Planning Organization serves as a forum for elected officials to come together on transportation issues to recommend changes in policy and practice, advocate for legislation, recommend regional priorities, direct certain planning and data initiatives, oversee the federally-prescribed local consultation process, and collaborate with the Capital Area Metropolitan Planning Organization (CAMPO).

**CARTS:** The Capital Area Rural Transportation System is a Rural Transit District formed through interlocal agreement by nine county governments in the seventy-five hundred square mile region surrounding Austin. CARTS delivers transportation tailored specifically for each of the one hundred and sixty-nine communities it serves.

**Census Tract:** Census tracts are small, relatively permanent subdivisions of a county which are delineated for all metropolitan areas and other densely populated counties by local census statistical area committees following Census Bureau guidelines.

**Central Business District (CBD):** The most intensely commercial sector of a city.

**Clean Air Act Amendment of 1990 (CAAA):** Federal legislation that establishes acceptable levels of certain criteria pollutants. Regional Transportation Plans and Transportation Improvement Programs must demonstrate conformity to the air quality attainment plans that serve as a blueprint outlining how a region will demonstrate attainment of the air quality standards by a particular year.

**Collector Street:** Functional classification for roadway facilities intended to balance access and mobility considerations by serving through movement as well as access to land. Collectors serve as the link between arterials (highways) and local streets (neighborhood streets).

**Commuter Rail:** Transit service that utilizes a multi-car system along an existing rail corridor (mainly, freight lines). Commuter rail usually connects cities and does not have a large amount of stops. Commuter rail runs along or next to existing freight lines. The trains typically reach speeds of 80-90 MPH and connect suburban metropolitan areas to an urban core.

**Congestion Mitigation and Air Quality Improvement Program (CMAQ):** Federal funding category used to fund transportation projects or programs that will contribute to attainment or maintenance of the national ambient air quality standards for ozone and carbon monoxide. SAFETEA-LU also allows CMAQ funding to be expended in the particulate matter non-attainment and maintenance areas.

**Connectivity:** Measure of how much an area is interconnected; an important determinant of travel patterns and the likely use of alternative modes.

**Demography:** Characteristics of a total population. Characteristics can include, but are not restricted to: ethnic makeup, age distribution, education levels, and occupation patterns.

**Emissions:** Pollutants which result in decreased air quality. For the purposes of transportation planning, emissions is generally defined as being those pollutants generated by vehicle internal combustion engines.

**Employment Density:** The number of jobs within a defined geographical area.

**Environmental Impact Statement (EIS**): Documentation required by the National Environmental Policy Act of 1969 whenever federal funds are used on transportation projects. The purpose of an EIS is to review and study all impacts the project will have on its surroundings. The EIS must also identify mitigation strategies for the generated impacts. For lower impact projects, an Environmental Assessment (a less detailed environmental document) may be required instead.

**Environmental Justice (EJ):** The concept which prohibits recipients of federal funds (including transportation agencies) from discriminating against or creating disproportionate impacts to minority and/or low-income communities in their programs or activities.

**Environmental Protection Agency (EPA):** EPA is the source agency of air quality control regulations affecting transportation.

**Envision Central Texas (ECT):** Envision Central Texas is a non-profit organization composed of a diverse group of citizens, including neighborhood, environmental, business leaders and policy makers, who share the common goal of addressing growth sensibly with the interests of the region's citizens in mind.

**Expressway:** A divided highway facility usually having two or more lanes for the exclusive use of traffic in each direction and partial control of access.

**Facility:** The means by which a transportation mode is provided. For example, sidewalks are a facility serving the walking mode, a roadway is a facility serving the driving mode and a heavy rail line is a facility serving the transit mode.

**Federal Functional Class:** Federal classification of streets and highways into functional highways into functional operating characteristics. Categories are: Interstate, Other Urban Freeways and Expressways, Other Principal Arterial, Minor Arterial, Urban Collectors and Rural Major Collectors, Rural Minor Collectors, Urban and Rural Local Streets and Roads.

**Federal Highway Administration (FHWA):** Arm of the U.S. Department of Transportation which provides federal financial and technical assistance in planning, constructing and upgrading the nation's network of highways, roads and bridges.

**Federal Transit Administration (FTA):** Arm of the U.S. Department of Transportation which provides federal financial and technical assistance in planning, constructing and upgrading transit systems at the local, regional and national levels.

**Fixed-Route:** Term applied to transit service that is regularly scheduled and operating over a set route. Usually refers to bus service.

**Freight Rail:** The commercial transport of goods or cargo by train.

**Freeway:** A divided highway having two or more lanes for the exclusive use of traffic in each direction and full control of access (accessible only via interchanges). The freeway is the only type of highway intended to provide complete "uninterrupted" flow.

**Frontage Road:** A roadway that parallels a major transportation facility such as a freeway. It serves to collect and distribute traffic along the freeway corridor between interchanges. A frontage road differs from a collector/distributor facility in that it provides at-grade intersection access to other roadways in the corridor.

**Functional Classification:** Hierarchical ranking based on the degree of mobility and accessibility that a street provides to the traveler. Streets are generally classified as arterials, collectors and local streets.

**GIS:** Geographic Information System is a system for capturing, storing, analyzing and managing data and associated attributes which are spatially referenced to the earth.

**Highway:** Term applies to roads, streets, and parkways, and also includes rights-of-way, bridges, railroad crossings, drainage tunnels, drainage structures, signs, guardrails, and protective structures in connection with highways.

**Household Density:** The number of households within a defined geographical area.

**Infrastructure:** A term connoting the physical underpinnings of society at large, including, but not limited to, roads, bridges, transit, waste system, public housing, sidewalks, utility installations, parks, public buildings, and communication networks.

**Intelligent Transportation System (ITS):** Collective term for technologies which improve the flow of traffic on the transportation network without the addition of physical capacity. Most commonly seen on highways, these technologies include changeable message signs, surveillance cameras and loop detectors. ITS can also be applied to vehicles in the form of in-vehicle navigation systems, global positioning trackers and communications equipment. The term ITS is commonly interchanged with ATMS.

**Intermodal:** Interconnectivity between various types (modes) of transportation.

**Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA):** A federal mandate signed into law December 18, 1991, ISTEA proposed broad changes to the way transportation decisions are made by emphasizing diversity and balance of modes and preservation of existing systems over construction of new facilities, especially roads, and by proposing a series of social, environmental and energy factors which must be considered in transportation planning, programming and project selection.

**Interstate System:** That system of highways which connects the principal metropolitan areas, cities, and industrial centers of the United States. The interstate system also connects at suitable border points with routes of continental importance in Canada and Mexico. The routes of the interstate system were selected by joint action of the state highway department of each state and the adjoining states, subject to the approval of the U.S. Secretary of Transportation.

**Land Use:** The way that parcels of land are used currently or envisioned as being used in the future.

**Level of Service (LOS):** A qualitative measure on a scale of "A" to "F" describing operational conditions within a traffic stream and motorists' perceptions of those conditions. LOS "A" is described as free flow conditions with low volumes and high speeds. Motorists perceive traffic conditions as "excellent" at this LOS. Conditions deteriorate across the scale, with LOS "F" characterized by frequent stops and starts and very unstable flow. Motorists perceive LOS "F" conditions as "completely unsatisfactory".

**Local Street:** Functional classification for a roadway facility which emphasizes access to land, such as streets within a neighborhood, and are generally characterized by relatively low speeds and low volumes.

**Long-Range:** Refers in transportation planning to a time span of more than five years. The Transportation Improvement Program (TIP) is typically regarded as a short-range program.

**Metropolitan Planning Organization (MPO**): A federally required planning body responsible for the transportation planning and project selection in its region. The governor designates an MPO in every urbanized area with a population of over 50,000 people. An MPO is responsible for developing the TIP and RTP for the urbanized area it represents. CAMPO is the MPO for the 3-county Austin region.

**Metropolitan Statistical Area (MSA):** The census classifications for areas having a population over 50,000. The MSA may contain several urbanized areas, but contains one or more central city or cities.

**Metropolitan Utility District (MUD):** A political subdivision of the State authorized by the Texas Commission of Environmental Quality (TCEQ) to provide water, sewage, drainage and other services within the MUD boundaries.

**Mobility:** The ease with which desired destinations can be reached.

**Mode:** A particular form of travel such as walking, bicycling, traveling by automobile, traveling by bus or traveling by train.

**Model:** A mathematical and geometric projection of activity and the interactions in the transportation system in an area. This projection must be able to be evaluated according to a given set of criteria which typically include criteria pertaining to land use, economics, social values, and travel patterns.

**Moving Ahead for Progress in the 21st Century:** The current federal mandate signed into law July 6, 2012, MAP-21 proposed consolidation or elimination of approximately 60 programs to streamline funding and provide increased flexibility to the states and MPOs in selecting projects. The bill only covers two years

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**Multimodal:** The availability of multiple transportation options, especially within a system or corridor. A concept embraced in federal transportation legislation; a multimodal approach to transportation

planning focuses on the most efficient way of getting people or goods from place to place, be it by truck, train, bicycle, automobile, airplane, bus, boat or foot.

**National Ambient Air Quality Standards (NAAQS):** Federal standards defined in the Clean Air Act that define maximum allowable concentrations and exposure limits for a number of pollutants.

**Network:** A graphic and/or mathematical representation of multimodal paths in a transportation system.

**Non-Attainment Area:** A designation by the Environmental Protection Agency of any place in the United States failing to meet national air quality standards (NAAQS).

**Non-Motorized Travel:** Travel accomplished by bicycling, walking or any other mode which does not use a vehicle with an engine.

**Origin:** The point of locale where a trip begins.

**Ozone:** A colorless gas that is one of the primary components of smog. There are two types of ozone. "Good" ozone protects the Earth from the sun's harmful ultraviolet rays and is found in the upper atmosphere. "Bad" ozone usually lingers at ground level and can cause respiratory problems, especially with children and the elderly. The EPA sets standards for the maximum allowable concentration and associated exposure limit of ground level ozone.

**Paratransit:** Alternatively known as special transportation when applied to social services systems. Applies to a variety of smaller, often flexibly scheduled and routed non-profit oriented transportation services using low capacity vehicles to operate within normal urban transit corridors or rural areas. These services usually serve the needs of persons whom standard mass transit services would serve with difficulty or not at all. Common patrons are the elderly and persons with disabilities.

**Particulate Matter:** Solid or liquid particles found in the air which can cause respiratory problems, especially with children and the elderly. The EPA sets standards for the maximum allowable concentration and associated exposure limit of particulate matter of 10 micrometers or less in diameter.

**Peak Hour:** The 60 minute period in the morning or evening in which the largest volume of travel is experienced.

**Peak Period:** Times of the day when traffic volumes are typically heaviest. The peak period is commonly referred to as "rush hour". In travel demand modeling, the term has a more precise definition, with various time intervals over the course of a day being defined as peak periods.

**Performance Measures:** Indicators of how well the transportation system is performing in terms of accessibility between origins and destinations, the mobility and reliability of travel and the characteristics of the system itself.

**Person-Trip:** A trip made by one person from origin to one destination.

**Preliminary Engineering (PE):** The first stage of project development, as defined by the TIP. The PE stage includes the development of all concept plans and engineering design drawings, as well as any planning or environmental studies preceding the final definition of a project.

**Program:** A system of funding for implementing transportation projects of policies.

**Programmed Funds:** Funds associated with a specific project in the TIP. No federal funds may be used on any phase of any transportation project without being included in an approved TIP.

**Public Participation:** The active involvement of the public in the development of plans and improvement programs. Federal transportation legislation requires that citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation and other interested parties have an opportunity to comment on the regional long range transportation plan and transportation improvement program.

**Right of Way (ROW):** The second phase of project development, following preliminary engineering and preceding construction, as defined by the TIP. Within the context of the TIP, ROW is the acquisition of property required to implement a project. In more general terms, ROW is an area which usually holds the public utilities (both overhead and underground) and acts as a buffer between transportation infrastructure (for example – road or rail) and private property.

**SAFETEA-LU:** The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009.

**Shared Use Path:** A transportation corridor along separate right-of-way designated for the exclusive use of bicycles, pedestrians and other non-motorized modes of transportation. Paths are commonly constructed along abandoned rail lines, utility easements or parallel to roadways. Also commonly referred to as a multi-use trail or facility.

**Single Occupant Vehicle (SOV):** A private vehicle, such as an automobile, SUV or light truck, which contains only the driver.

**Stakeholder:** An individual or organization involved in or affected by the transportation planning process. In a broad sense, everybody is a transportation stakeholder.

**Statewide Transportation Improvement Program (STIP):** Document prepared by the Texas Department of Transportation which incorporates the individual Transportation Improvement Programs prepared for each urbanized area.

**Surface Transportation Program (STP):** Federal funding category which can be used to fund virtually any type of transportation project or program, including highways and bridges, bicycle and pedestrian facilities, transit services and facilities, and studies.

**Telecommuting:** Using a home computer or a neighborhood work center for work, effectively eliminating the need to travel to a conventional workplace.

**Texas Commission of Environmental Quality (TCEQ):** The environmental agency for the state whose mission statement is to protect the state's human and natural resources consistent with sustainable economic development. TCEQ's goal is clean air, clean water, and the safe management of waste.

**Traffic Analysis Zone (TAZ):** The unit of geographic area, generally of small size (several blocks in dense urban areas to a few square miles in semi-rural areas) and of similar development characteristics, used in travel demand modeling.

**Transit:** Transportation mode which moves larger numbers of people than does a single automobile. Generally renders to passenger service provided to the general public along established routes with fixed or variable schedules at published fares.

**Transit Dependent:** Persons who must rely on public transit or para-transit services for most of their transportation. Typically refers to individuals without access to personal vehicles.

**Transportation Demand Management (TDM):** Low cost ways to reduce demand by automobiles on the transportation system, such as programs to promote telecommuting, flextime and ridesharing.

**Transportation Enhancement Activities (TEA):** A funding category created in ISTEA. Ten percent of STP monies must be set aside for projects that enhance the compatibility of transportation facilities with their surroundings.

**Transportation Efficiency Act For The 21st Century (TEA-21):** The reauthorization bill for ISTEA designed to support transportation across the nation.

**Transportation Improvement Program (TIP):** A multimodal set of short-range transportation projects and initiatives developed by an MPO for its urbanized area. It is required by the federal government and must cover a minimum of three years and be updated at least every other year. The program must be financially balanced (costs equal anticipated revenues) and be drawn from a conforming RTP.

**Transportation System Management (TSM):** Actions that control or improve the movement of cars and trucks on the highway system and buses on the transit system. It includes the coordination of the available transportation systems for more efficient operations.

**Travel Demand Model**: A computer application which uses travel and land use data to determine how a transportation network will function in the future. It is a planning tool that is used to develop and test numerous scenarios. The modeling process used by CAMPO has four essential steps: 1) trip generation, 2) trip distribution, 3) mode split and 4) trip assignment.

**Travel Time:** Customarily calculated as the time it takes to travel from "door-to-door". For transit service measures of travel time include time spent accessing, waiting, and transferring between vehicles, as well as that time spent on board.

**Trip:** A one-direction movement from an origin to destination.

**Trip End:** Origin or destination of a trip.

**Trip Purpose:** Reason for a trip.

**Trunk System:** The Texas Trunk System is a plan designed to connect parts of the state and integrate rural communities with a high quality highway network. The goals and objectives of the system are provide a rural four-lane divided (or better) highway network to improve mobility, connect major activity centers within Texas and to provide access to major points of entry to Texas.

**TxDOT:** The Texas Department of Transportation is responsible for planning, designing, building, operating and maintaining the state's transportation system. TxDOT's goals are to reduce congestion, enhance safety, expand economic opportunity, improve air quality and increase the value of transportation assets.

**United States Department of Transportation (USDOT):** The federal agency which sets national policy and provides funding and technical assistance to state and local transportation agencies for all transportation modes. The USDOT is comprised of several modally oriented (such as highways, transit, railroad or aviation) administrations.

**Volume to Capacity Ratio (v/c):** The relationship between the amount of traffic being served by a transportation facility to its theoretical capacity, expressed as a decimal. Under congested conditions, the v/c ration can exceed 1.0. The v/c ratio is related to the concept of level of service.