

Master Transportation Plan

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CITATION

Parametrix. 2020. Master Transportation Plan. Prepared by
Parametrix, Salt Lake City, UT. April 2020.

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- A Additional Information

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
AADT	Average Annual Daily Traffic
CFP	Capital Facilities Plan
LOS	Level of Service
MAG	Mountainland Association of Governments
MPH	Miles Per Hour
MUTCD	Manual on Uniform Traffic Control Devices
TAZs	Traffic Analysis Zones
TRB	Transportation Research Board
UDOT	Utah Department of Transportation
UTA	Utah Transit Authority
WFRC	Wasatch Front Regional Council

1. INTRODUCTION

The purpose of the Santaquin City Master Transportation Plan is to create a transportation plan that upholds Santaquin’s ethos as “a community prospering in country living” while effectively managing an increasing need for transportation infrastructure. Santaquin has seen steady growth in the past decade and is projected to more than triple in population by 2050. This growth will ultimately exceed the capacity of the City’s existing transportation system. This plan responds to future demands on the City’s transportation system while retaining safe and active streets for non-motorized travel.

This plan has been organized into five sections which cover the components of the transportation plan. The first section reviews Santaquin City’s existing conditions and compares Santaquin to identified peer cities. This is followed by a section which summarizes short-term recommendations to improve the quality of transportation in Santaquin. Section three attempts to look at the future transportation conditions that Santaquin City will likely encounter. The fourth section presents the Master Transportation Plan and makes transportation implementation recommendations. Section five proposes funding and a Capital Facilities Plan.

A map of the proposed Santaquin Master Transportation Plan streets is shown in Figure 1 below.

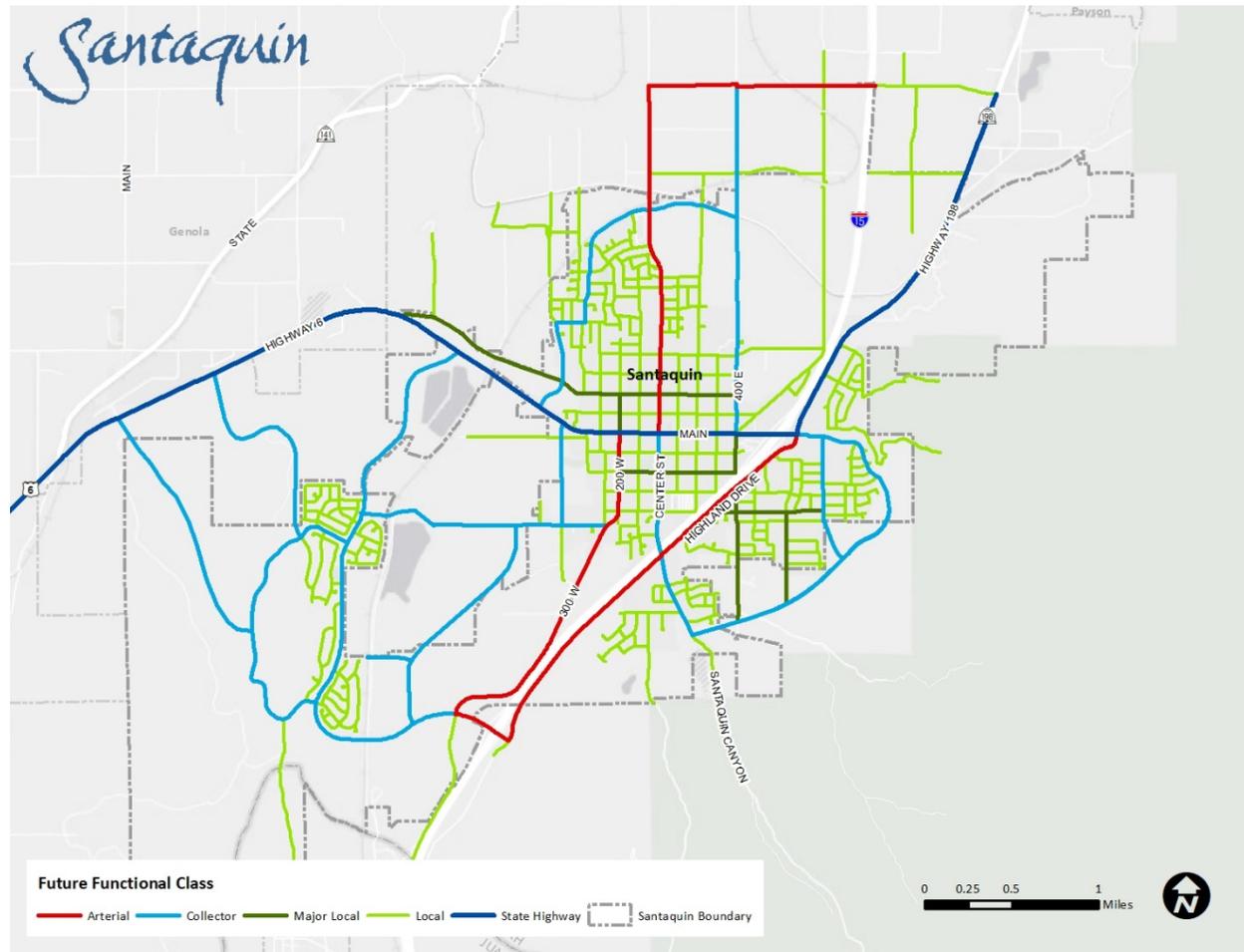


Figure 1. Santaquin Master Transportation Plan Map

1.1 Planning Process

Santaquin City contracted with Parametrix to update their existing, 2014 Transportation Master Plan. Major efforts to create this plan began in January of 2019. Parametrix relied on its master transportation planning experience, as well as the existing plan, to guide the update.

Coordination between city staff and Parametrix was key to the process. Frequent internal coordination meetings occurred as well as email and phone communication. This coordination was to ensure that the development of the plan was on course and on schedule. The meetings hosted key discussions on all aspects of the plan including: population and employment forecasts, street alignments and cross sections, maintenance and plan phasing.

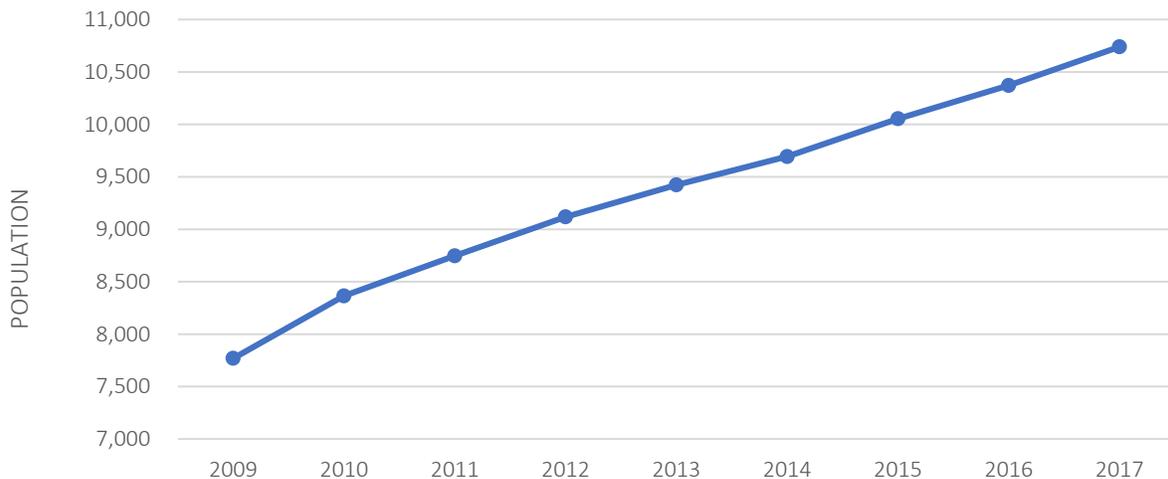
2. EXISTING CONDITIONS

2.1 Santaquin City

Santaquin’s General Plan, adopted 2007, states it is a “community prospering in country living - Agriculture, Equestrian, Recreation.” Santaquin is bisected by Interstate 15, running north/south and is also split east/west by U.S. 6 and S.R. 198. These two large transportation facilities connect Santaquin with the rest of Utah County. One freeway interchange, connecting U.S. 6 to I-15 is wholly within Santaquin’s boundaries. Another interchange is just outside the City to the south.

2.2 Demographics

Located south of Utah Lake in Utah County, Santaquin City has experienced a steady population growth over the past 10 years. Figure 2 shows Santaquin’s growth since 2009. Incorporated in 1932, Santaquin City began with a population of 1,115.



Source: U.S. Census, ACS 5-Year Estimates

Figure 2. Santaquin City Population

The household characteristics of Santaquin are unique from the county and the state. Compared to the state, Santaquin has an above average household size of 3.99 and a younger than average median age of 23.6. Dependency ratios are an age-population ratio for those typically too young (0-14, child dependency) or too old (65 and over, older adult dependency) to be in the labor force and are used as an indication of what portion of the population is dependent. In other words, higher dependency ratios indicate a higher percentage of the overall population that is not working, and thereby dependent. The older adult dependency ratio for Santaquin is less than the county and state, while the child dependency ratio is significantly higher. However, Santaquin trails both Utah County and Utah in terms of share of the population with a bachelor’s degree or higher. These household characteristics all point to a young population of large families.

Table 1. Household Characteristics

Household Characteristic	Santaquin	Utah County	State of Utah
Average Household Size	3.99	3.61	3.14
Median Age	23.6	24.5	30.5
Aged Dependency Ratio	10.6	12.4	17.3
Child Dependency Ratio	78.5	59.3	51.3
Bachelor's degree or higher	23.8%	39.4%	32.5%

Source: US Census, 2017 ACS 5-Year Estimates

Economically speaking, Santaquin is above average as compared to Utah County and the state. Table 2 shows several economic characteristics for Santaquin as well as county and state comparisons. Santaquin is doing very well with more workers, lower unemployment, higher median income and a lower poverty rate than both county and state averages.

Table 2. Economic Characteristics

Economic Indicator	Santaquin	Utah County	State of Utah
In Labor Force	72.0%	67.9%	67.9%
Unemployed	3.4%	4.3%	4.4%
Median Household Income	\$69,712	\$67,042	\$ 65,325
People whose income in the past 12 months is below the poverty level	8.3%	11.8%	11.0%

Source: US Census, 2017 ACS 5-Year Estimates

2.3 Peer City Analysis

To contextualize Santaquin City for the purpose of this plan, a peer city analysis was conducted. Peer cities were chosen based on similarities to Santaquin in population size and geographic proximity to a major interstate highway. Based on these criteria, Mapleton, Pleasant View, Tremonton, West Point and Woods Cross were chosen (see Figure 3). These cities were then compared to Santaquin utilizing the most currently available 2017 American Community Survey (ACS) data on median age, place of work (relative to place of residence), mode of travel to work, and travel time to work.

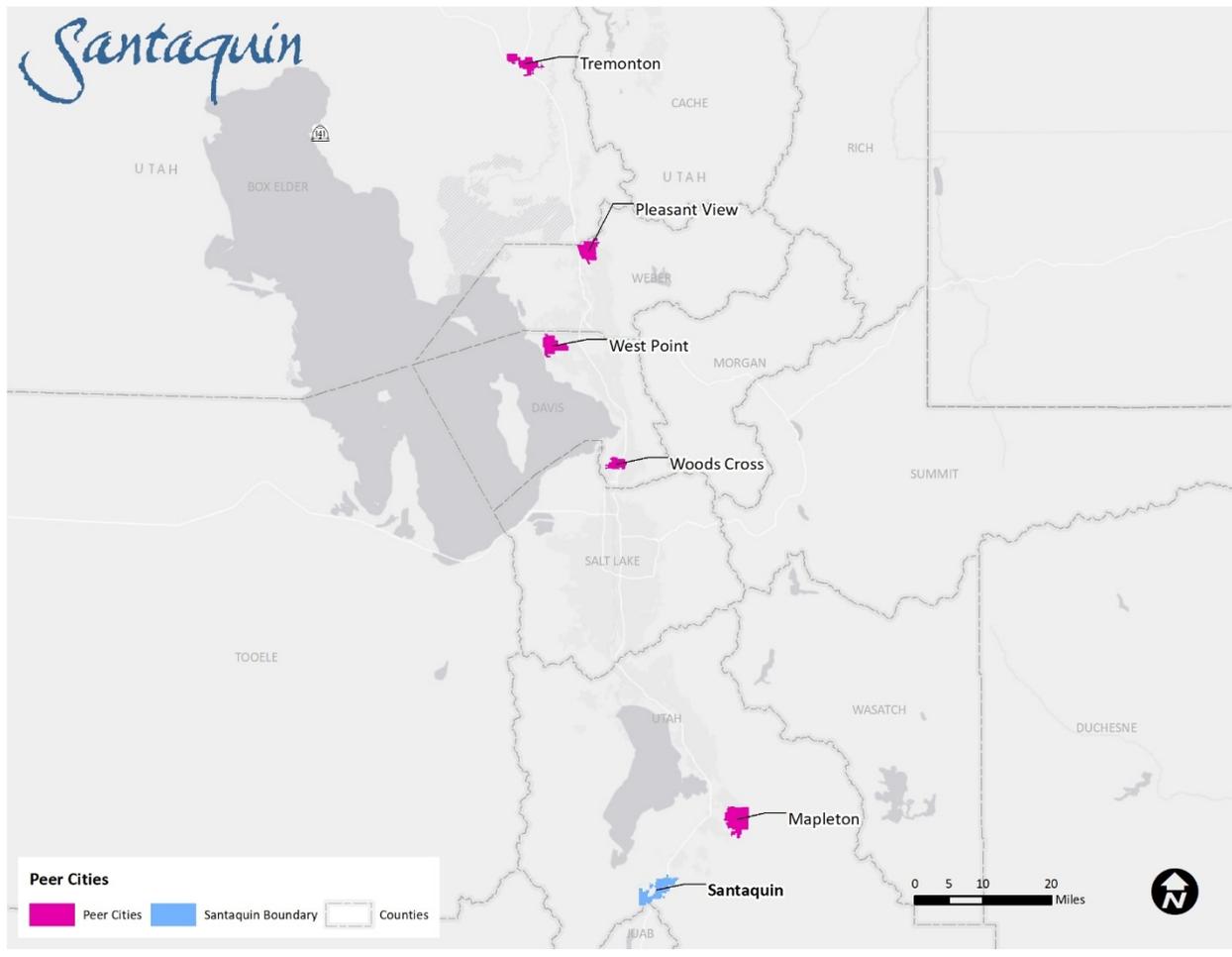
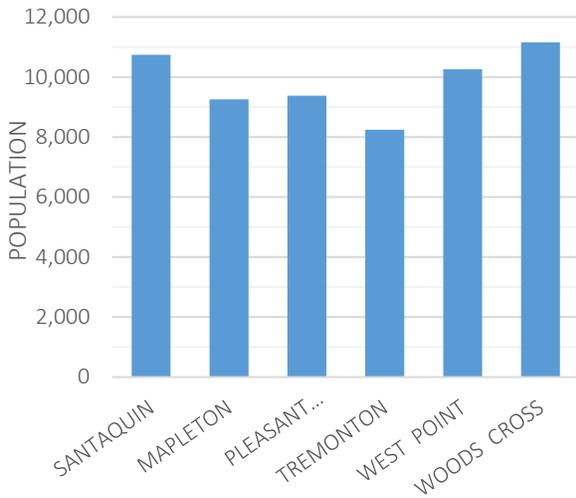


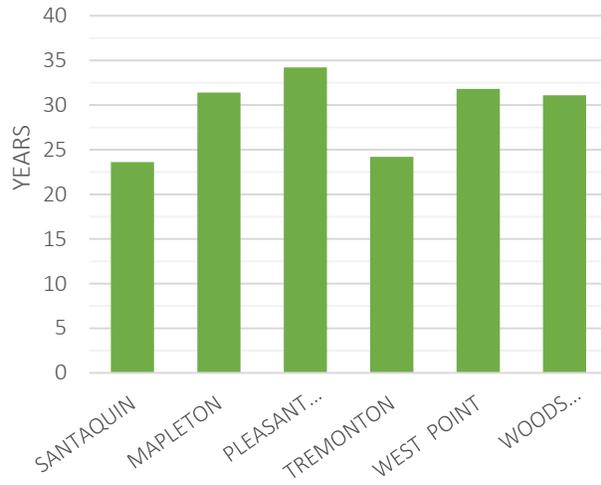
Figure 3. Peer City Locations

Santaquin has the second largest population out of the comparison group, with approximately 10,740 residents in 2017 (see Figure 4), according to the ACS. Santaquin has a median age of 23.6 years old, which is the youngest compared to the group, which has a maximum of 34.2 and a mean of 29.4 (see Figure 5).



Source: US Census, 2017 ACS 5-Year Estimates

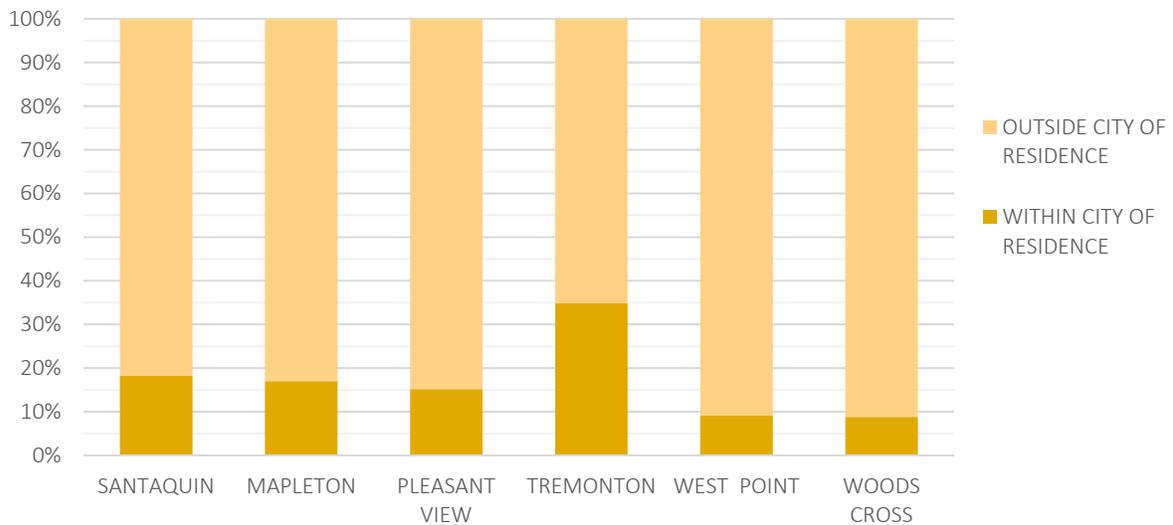
Figure 4. Peer City Population



Source: US Census, 2017 ACS 5-Year Estimates

Figure 5. Peer City Median Age

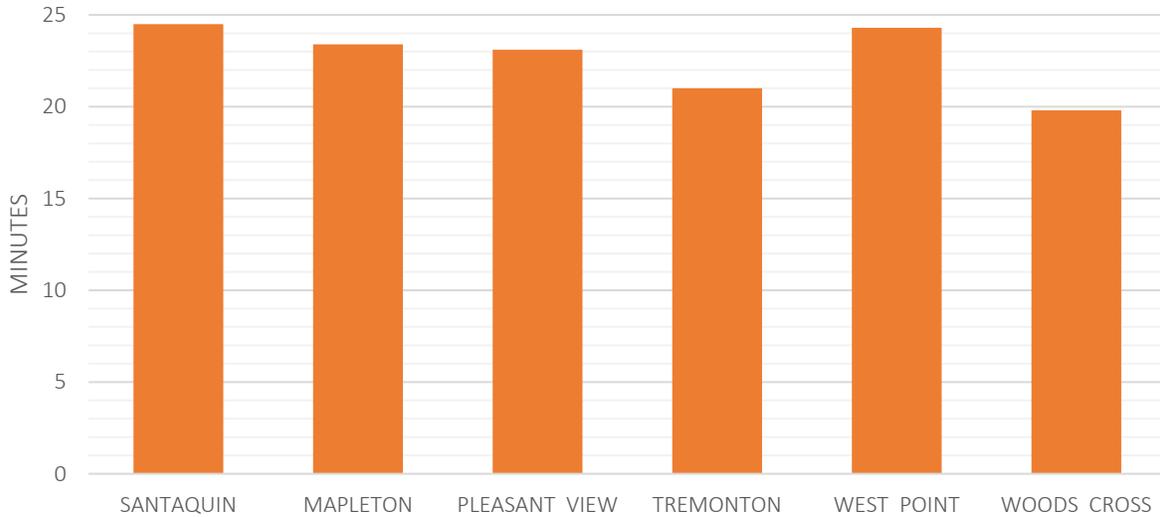
Approximately 18% of Santaquin residents work in Santaquin, while the remainder leaves the City to work. This is higher than in Mapleton, Pleasant View, West Point and Woods Cross, but much lower than Tremonton (see Figure 6). The higher rates in Tremonton can largely be explained by its relative isolation from a major metropolitan area.



Source: US Census, 2017 ACS 5-Year Estimates

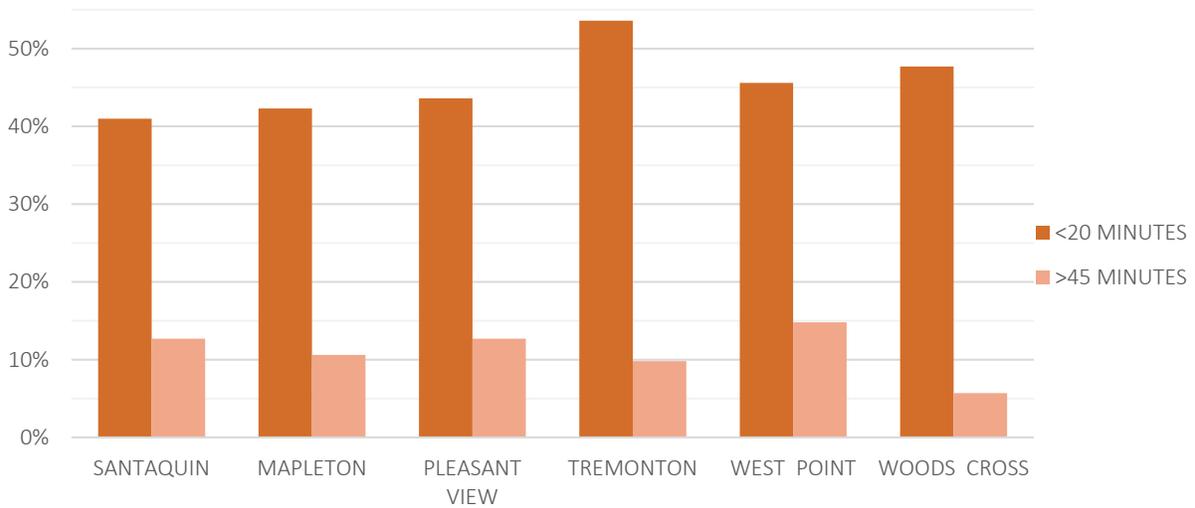
Figure 6. Peer City Place of Work

41% of Santaquin commuters have a travel time to work of less than 20 minutes, which is lower than the group. In Santaquin, the mean travel time to work is 24.5 minutes and the highest out of the peer city group (see Figure 7), 13% of residents having a commute of over 45 minutes (see Figure 8).



Source: US Census, 2017 ACS 5-Year Estimates

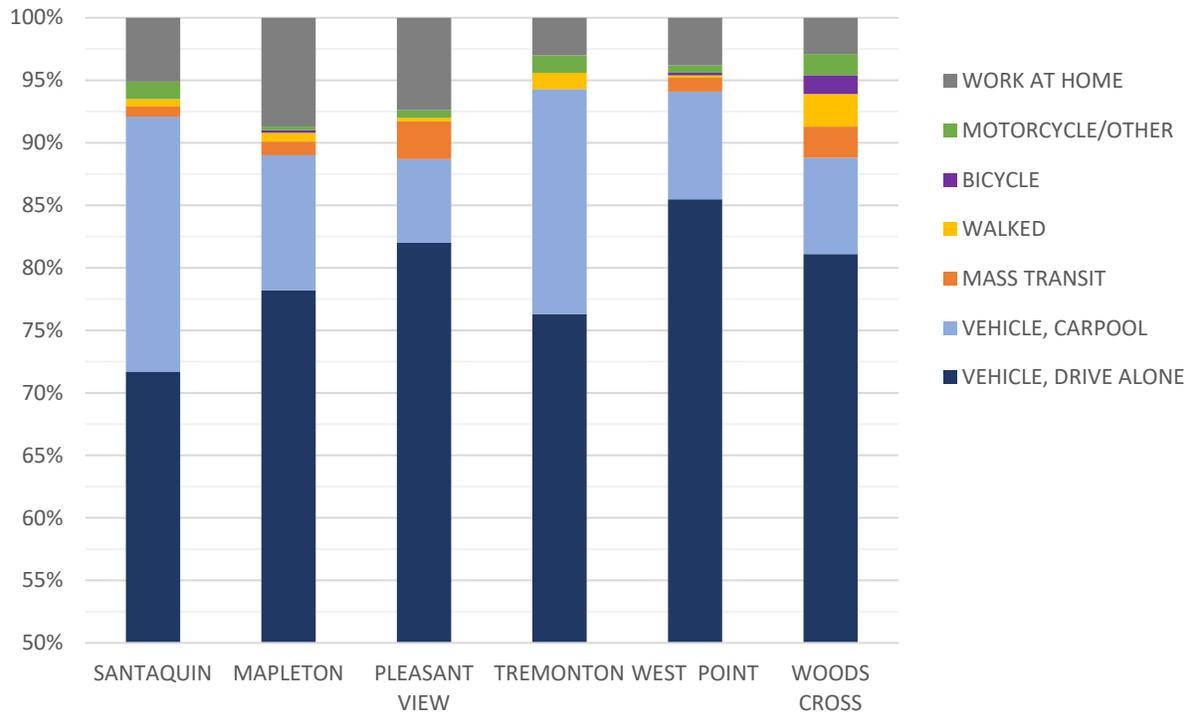
Figure 7. Peer City Mean Commute Duration (Minutes)



Source: US Census, 2017 ACS 5-Year Estimates

Figure 8. Peer City Commute Duration

The method by which residents get to work is shown in Figure 9. In Santaquin 71.7% of people drive alone to work, which is below average for the group. For carpooling the rate for Santaquin residents is 20%, which is higher than all other peer cities. No one reported using a bicycle as a means to travel to work, while 0.6% walk and 0.8% use public transportation. 5.1% work from home, which is about average for the group. This auto-dominated mode split can largely be explained by long distances to major employment centers and a lack of regular and extensive public transit service.



Source: US Census, 2017 ACS 5-Year Estimates

Figure 9. Peer City Mode of Transportation to Work

2.4 Existing Land Use

The existing land use of Santaquin is typical of a small, bedroom community, with a commercial core along Main Street, emanating with a residential grid. Southern and eastern Santaquin consists of new and developing residential neighborhoods, with characteristics typical to the suburban norm in the area.

Transportation planning depends on estimating land uses in addition to demographic changes. This information is used in a computer modeling tool, known as the Travel Demand Model, which forecasts trips to and from destinations based on smaller regions known as traffic analysis zones (TAZs). The TAZs are geographically smaller than a municipality and are similar in size to census block groups. Traffic analysis zones are defined by the Wasatch Front Regional Council (WFRC) and Mountainland Association of Governments (MAG). The existing land use by TAZ was used to generate 2014 population and employment numbers for each TAZ within Santaquin City by city staff. Figure 10 shows the TAZs within Santaquin.

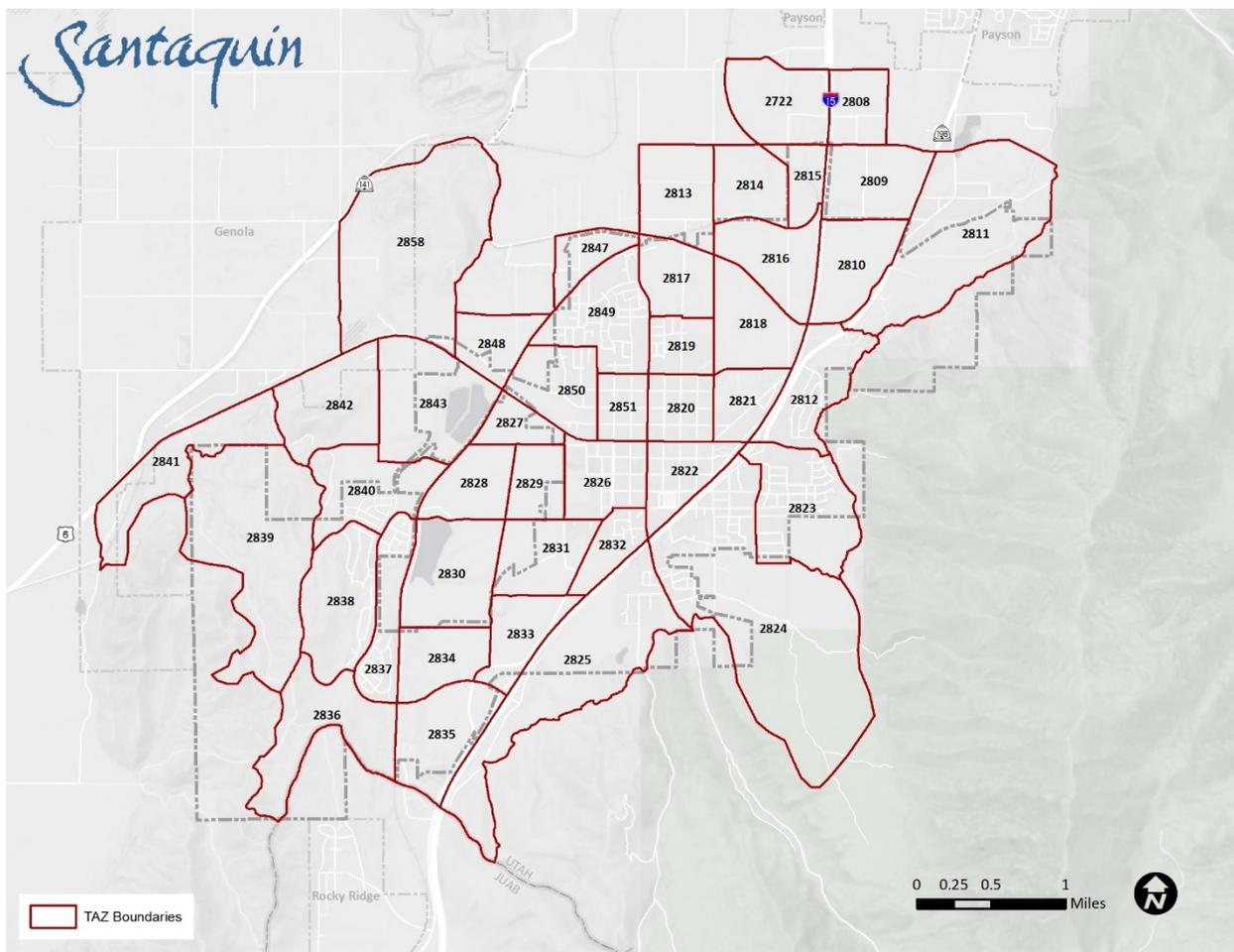


Figure 10. Santaquin Area Traffic Analysis Zones (TAZs)

Figure 11 shows the current number of households by TAZ. The highest number of households are found in the central and southwestern portions of the City. Adjacent to the Main Street corridor are smaller lot, single family land uses. In the southwestern portion of the City, the new and growing Summit Ridge development creates many households.

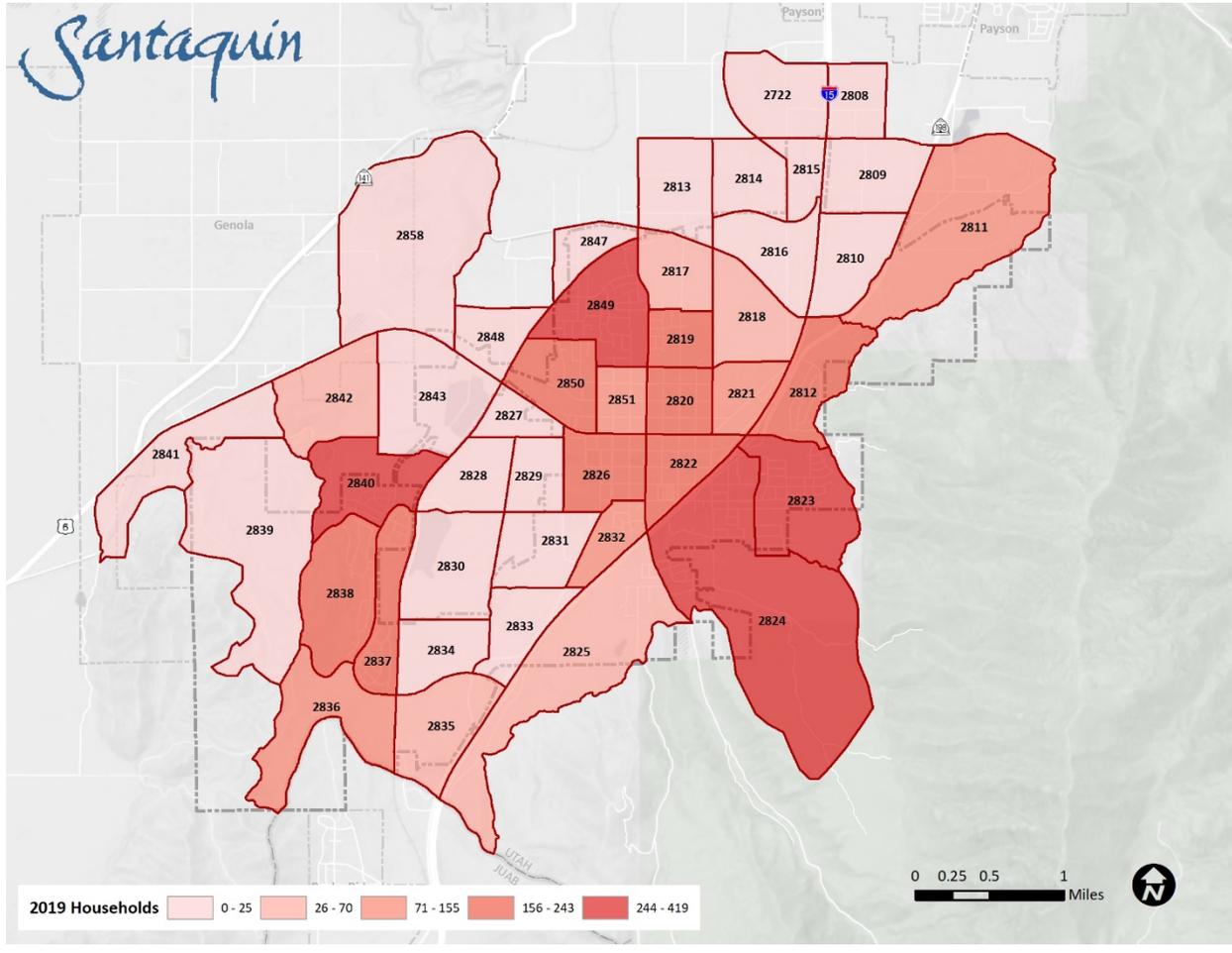


Figure 11. Households by TAZ

Figure 12 shows the employment, as a number of jobs, in Santaquin by TAZ. Here you will notice employment is concentrated along Main Street in the central portion of the City. Away from the Main Street corridor there are very low concentrations of employment, as these areas are residential in composition. While TAZ 2823 shows a large amount of employment this is misleading, in that the jobs are concentrated near the I-15 interchange and the remainder of the area has residential single family land uses.

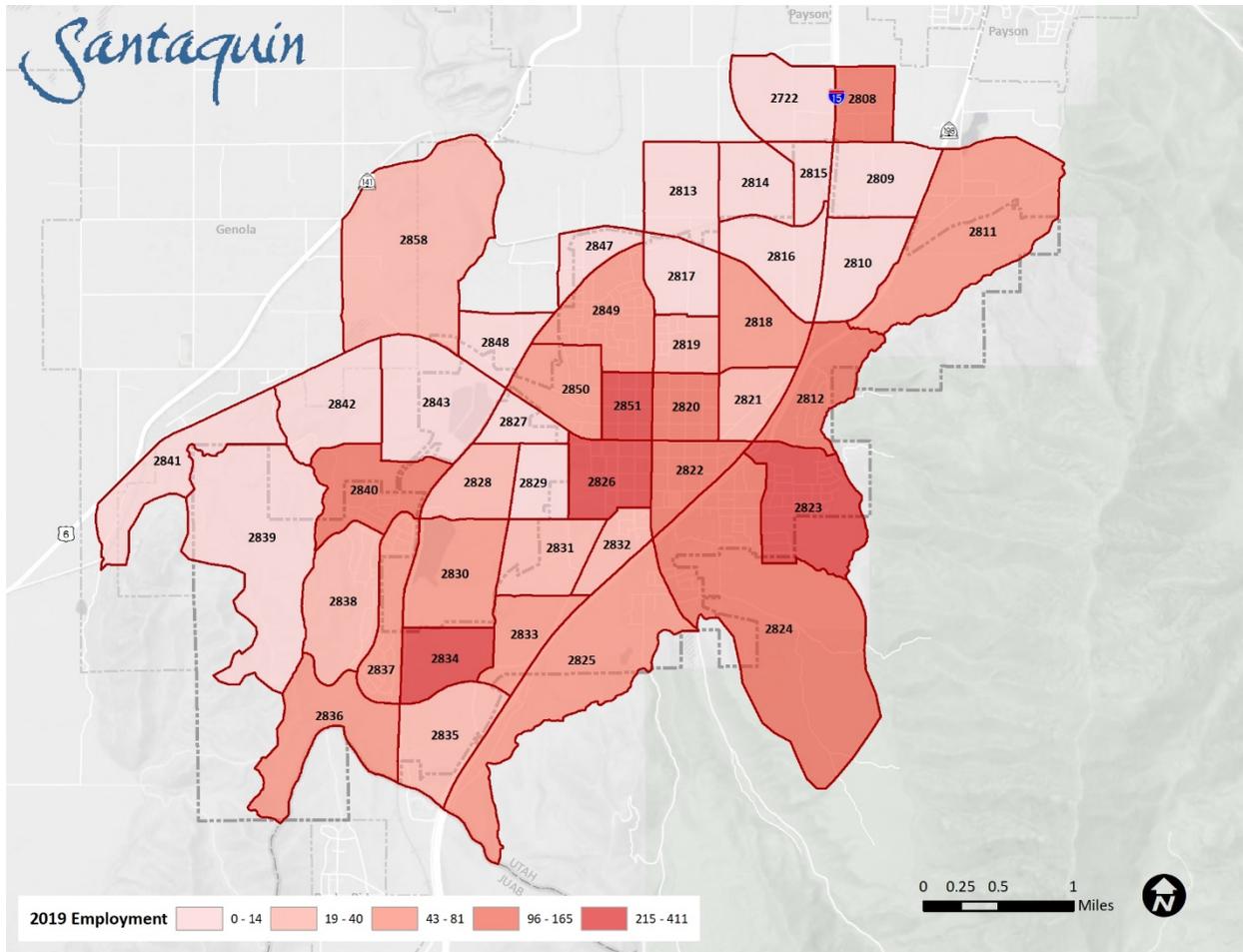


Figure 12. Employment by TAZ

Figure 13 shows the current official zoning map for Santaquin. Zoning mainly echoes the existing land uses in the City. A central commercial core along the Main Street corridor is sandwiched with residential zones. Future aspirations are evidenced by commercial and residential zones to the south over currently undeveloped land.

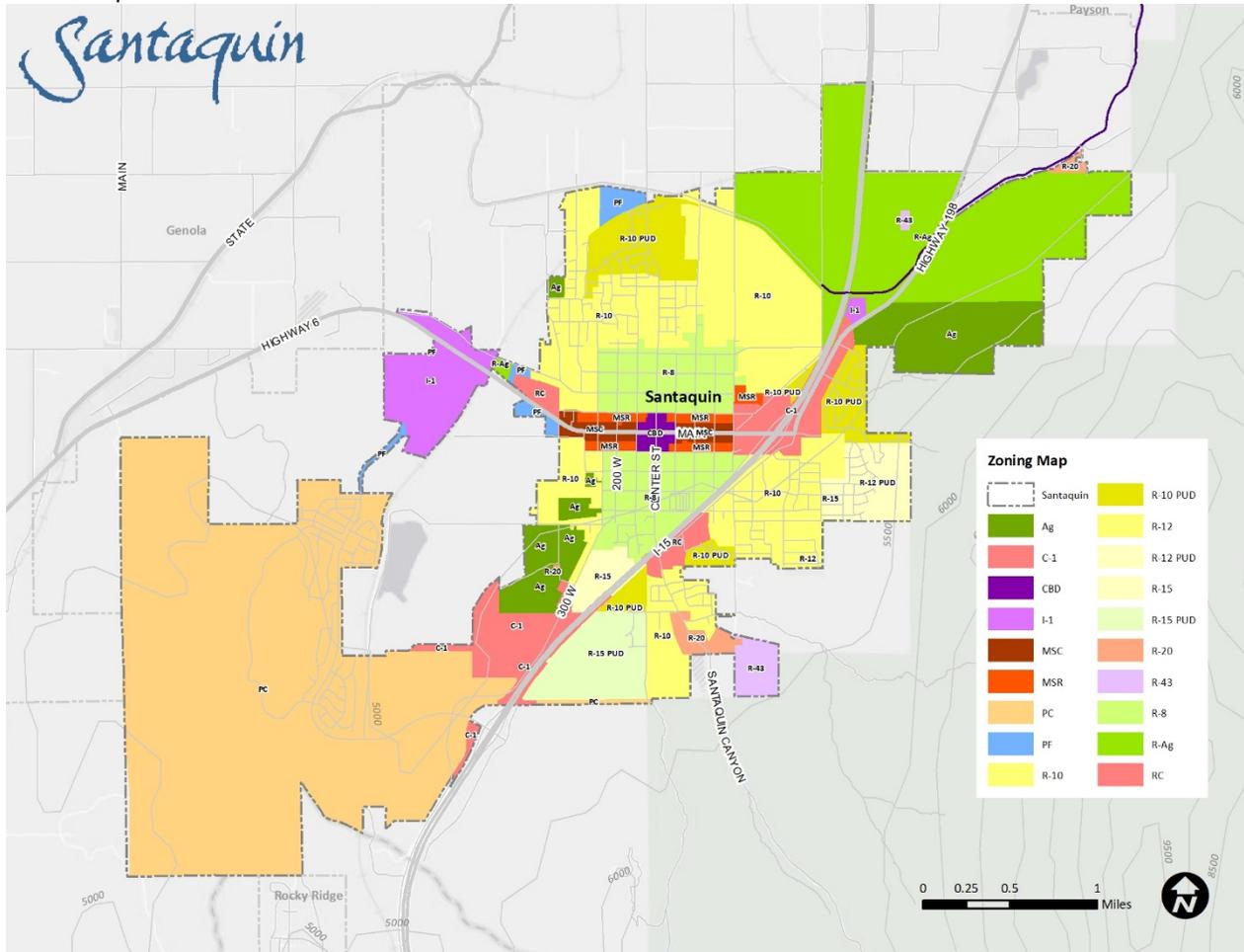


Figure 13. Santaquin City Zoning Map

2.5 Street Inventory

To assess the current conditions of the Santaquin City street network, two inventories were performed: a major street inventory and a pavement quality inventory. Routes included in the major street inventory were those functionally classified as collector streets or arterial streets. Functional classification is a system of categorizing roads based on their size and traffic capacity. “Collector” roads are medium-sized roads that connect smaller residential roads to “arterial” roads which provide regional access. A discussion of Functional Classification is included in the Plan Recommendations section of this report. Some roads included in the major street inventory were under construction; however, they were identified as their constructed functional class on future street network maps. Observations for this inventory included: pavement width, number of travel lanes, a street cross section, as well as the presence and condition of sidewalks. The pavement quality inventory assessed pavement conditions on all publicly accessible streets.

The Santaquin street network is mainly comprised of unstriped roads. Although roadway striping is a good practice for a community, it is not uncommon for two-lane roads not to have a center delineating stripe. Areas with striped lanes mostly emanate from the I-15 interchanges. Three and five lane sections of road are limited to Main Street/U.S. 6, Summit Ridge Parkway, and S.R. 198. (See Figure 14).

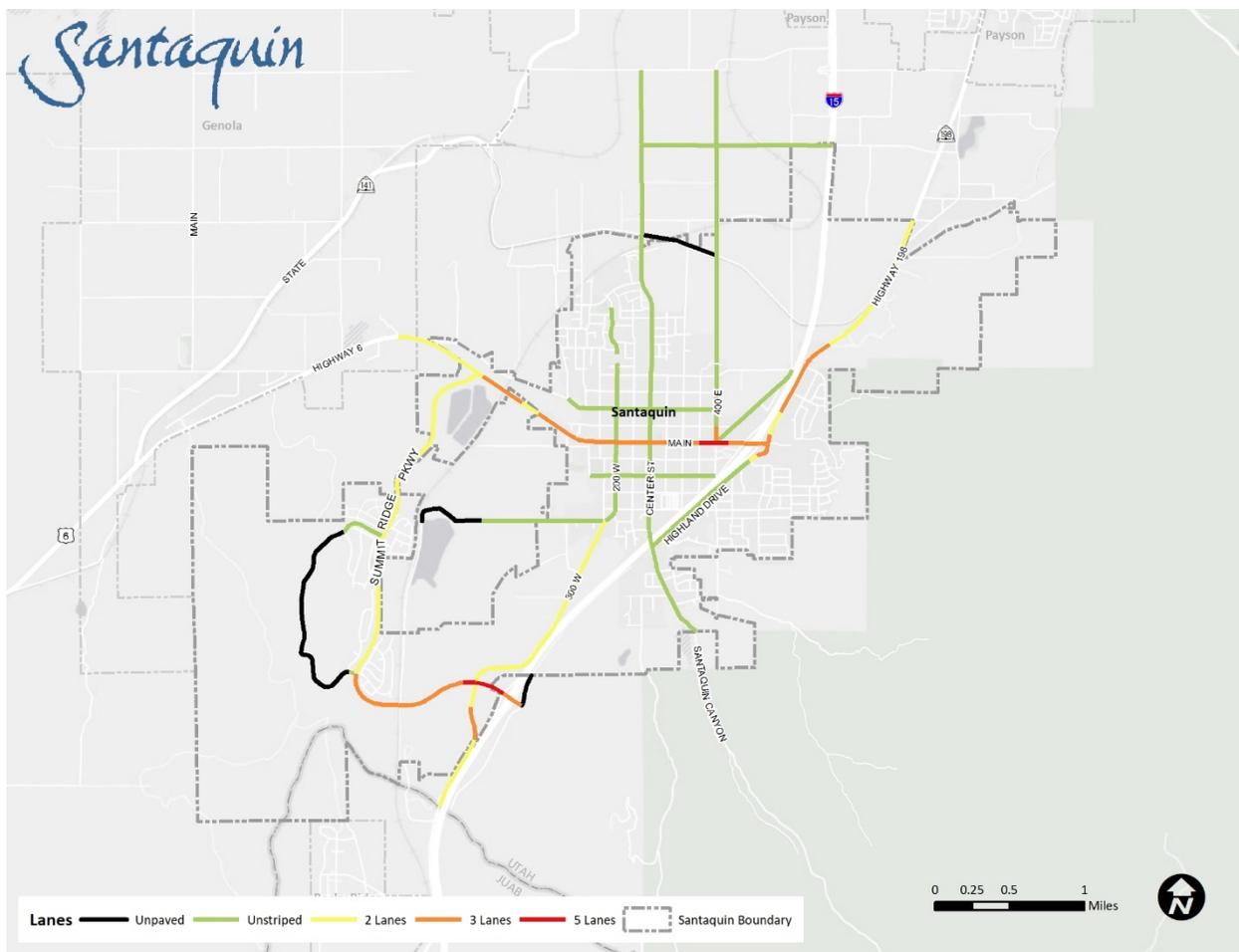


Figure 14. Street Network, 2013

The pavement width varies greatly, from 20 feet on local roads, to greater than 60 feet on roads such as Main Street and Summit Ridge Parkway (Figure 15). With the growth in the area and the development that goes along with it, there are some roads that are as yet unpaved but will be paved as buildings come.

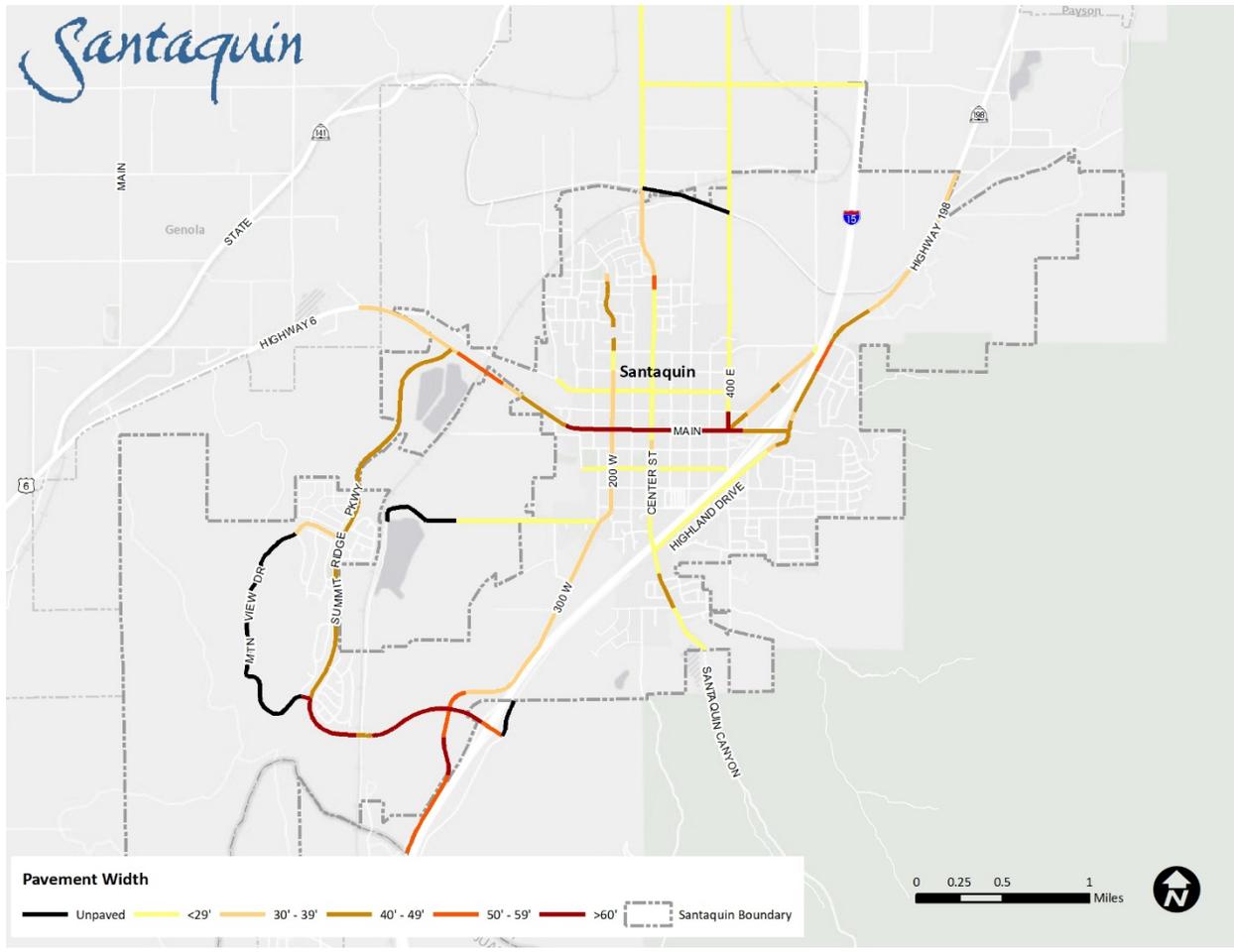


Figure 15. Pavement Width, 2013

A detailed inventory of the streets currently in Santaquin City can be found in the Street Inventory Appendix.

2.6 Pavement Quality

A pavement quality inventory of all publicly accessible city streets was performed to quantify the scale of needed maintenance. Pavement quality conditions in Santaquin run the gamut from fresh asphalt to unpaved roads. Certain residential developments to the north of town have roads that appear to be structurally deficient due to the poor ride quality and general unevenness of the roadway. It should be noted that Main Street/U.S. 6, I-15, and S.R. 198 are maintained by Utah Department of Transportation (UDOT) and were not inventoried. This inventory utilized a one to five scale to assist in identifying maintenance deficiencies that can be used as part of a larger pavement maintenance program. For example, structurally deficient roads would require an expensive reconstruction while new asphalt may require only on-going striping and minor crack sealing activities.

- **Level 1: Unpaved.** These streets are included on city maps but are currently unpaved.
- **Level 2: Dense Cracking or Structurally Deficient.** Parametrix never tested the structure of the roadbeds, however, the driving experience paired with comments from the City suggest that some roads in Santaquin are structurally deficient. The density of cracking at this level is roughly three or more cracks in any given square yard of roadway. Cracking at this density, as well as pavement irregularity, are potential signs of structurally deficient roads. This cracking is often accompanied with potholes. Many of these roads have received layers of chip seal preservation. This blend of tar and aggregate creates a smoother roadbed but does not address the underlying pavement cracking issue. Level 2 roads may also feature chip seal that has been worn through, exposing the underlying pavement. Figure 16 contains examples of paving types that were classified as Level 2.



Figure 16. Level 2 Examples

- **Level 3: Moderate Cracking or Intact Chip Seal.** Pavement that was identified as Level 3 has slightly less dense cracking than Level 2. Generally at this level, fewer than three cracks exist in any given square yard of pavement surface. Also, chip sealed roads that are intact are given this classification as they have not started to wear through. Figure 17 contains examples of paving types that were classified as Level 3.



Figure 17. Level 3 Examples

- **Level 4: Light Cracking.** Level 4 pavement has cracking that is less dense than Level 3. Any given square yard may contain one or no cracks at all. Blocks at this level contain several cracks but

they generally have a density of less than one crack per yard. Figure 18 contains an example of paving that was classified as Level 4.



Figure 18. Level 4 Example

- **Level 5: New Pavement or Very Sparse Cracking:** Level 5 pavement has recently been laid and has few current maintenance needs. Cracks at this level are very sparse and only one to two occur in any given block. Figure 19 contains an example of cracking at this density.

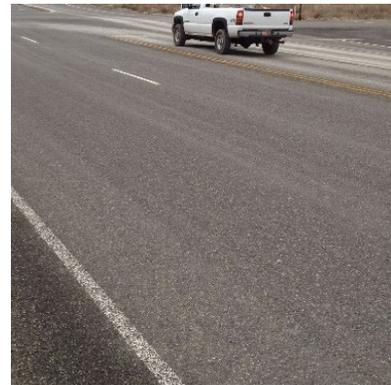


Figure 19. Level 5 Example

Pavement quality in Santaquin City would benefit from a consistent system of maintenance. The details of a pavement management system will be explored in greater detail in the Short-Term Recommendations chapter of this report. Approximately half of the road length in Santaquin falls into the Level 4 to 5 range. The Summit Ridge development area has pavement in the best overall condition. Meanwhile, neighborhood streets to the northwest tend to be the poorest. Certain roads and connections currently displayed on city maps remain as yet unpaved. Figure 20 displays the current pavement quality conditions in Santaquin. Table 3 contains a length summary of roads inventoried.

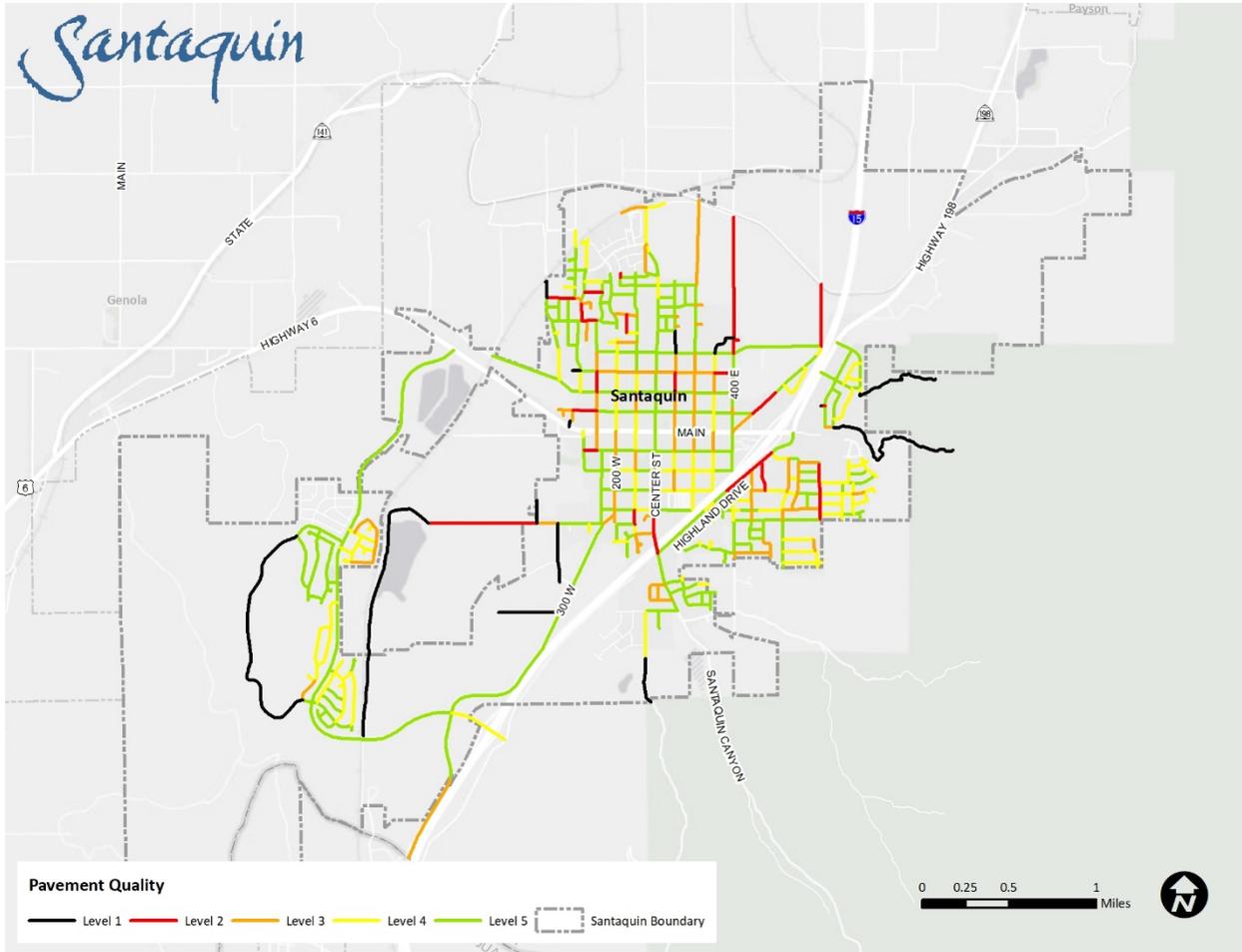


Figure 20. Pavement Quality, 2014

Table 3. Roads Inventoried

Pavement Quality Level	Length (miles)	Percent (%) of Total
1	4.58	7%
2	4.31	7%
3	8.85	14%
4	12.02	20%
5	31.37	51%
Total	61.13	

2.7 Pedestrian Facilities

The sidewalk network can best be described as ‘sparse’ and consistent with a rural community. Main Street and the more modern subdivisions - to the north, east and southwest - have good coverage. As development continues in these areas a more comprehensive sidewalk network will result. The older areas, adjacent to Main and Center Streets, have sporadic sidewalk coverage; often in need of upgrade. While these areas lack modern sidewalks, the low traffic volumes and ample shoulders within the right-

of-way do not currently inhibit pedestrian access for a youthful population. The original town center features a rectilinear street grid, similar to other Utah communities. A street grid, unlike contemporary meandering road layouts, improves a community's walkability through enabling a diversity of shorter route options for pedestrians.

Pedestrian crosswalks are limited to areas near Santaquin Elementary, Orchard Hills Elementary, and The Church of Jesus Christ of Latter-day Saints Meetinghouse at 250 South and 580 East. Signalized intersections with crossing signals include: Main Street and 200 West, Main Street and 400 East, and Main Street and Highland Drive. As Santaquin continues to develop, the need for quality pedestrian infrastructure will become more acute. The process of upgrading existing roadways is an excellent opportunity to improve the pedestrian infrastructure network. (See Figure 21). Ensuring that new roads adhere to a more rectilinear street network will build on the walkable legacy established by past generations.

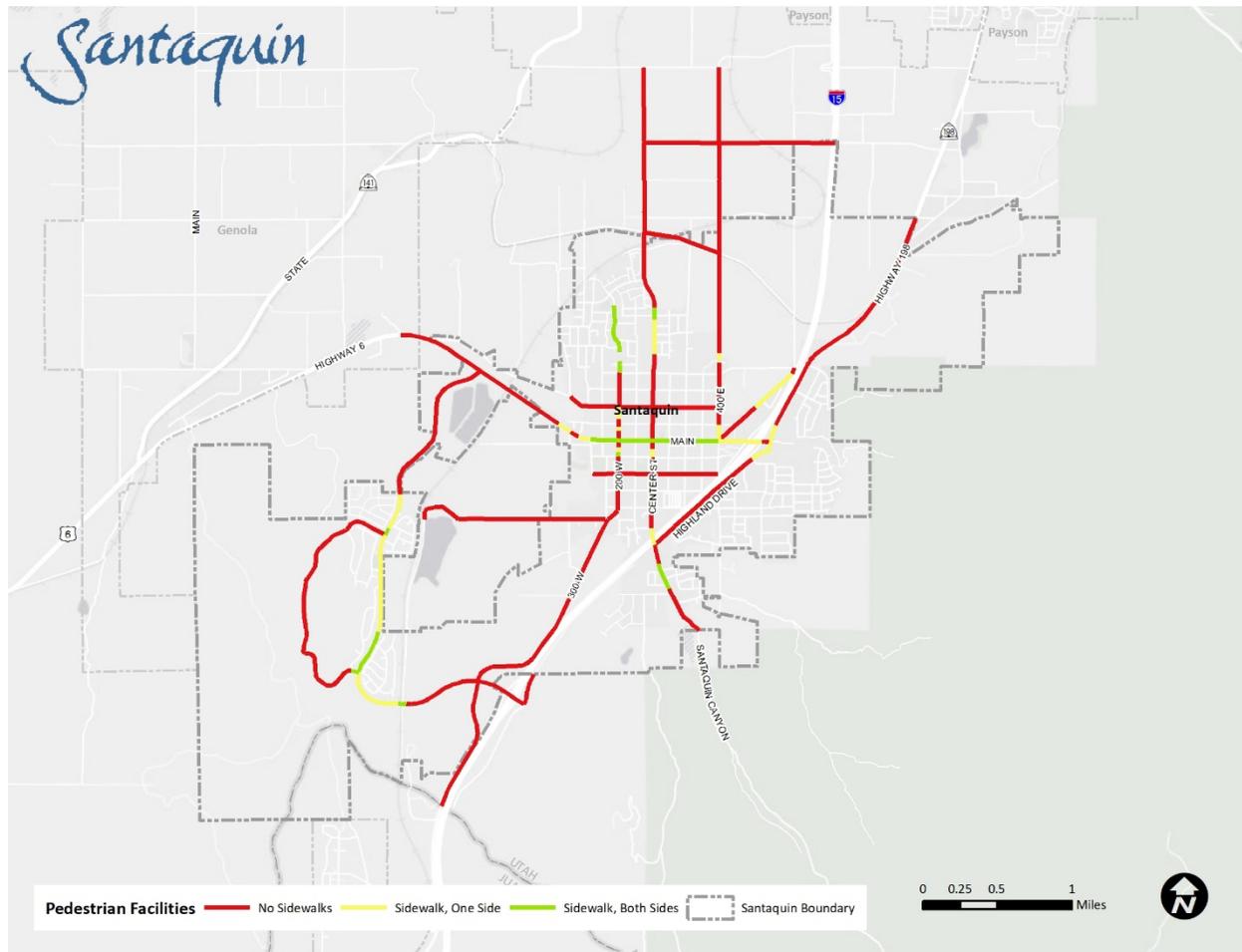


Figure 21. Current Pedestrian Facilities along Major Roads

2.8 Public Transportation

Utah Transit Agency (UTA) currently offers one bus route in Santaquin, the Santaquin/Payson/Spanish Fork to Provo Central Station, route 805. This route offers weekday 30 minute AM peak service northbound and 30 minute PM peak service southbound. As the route's name suggests, it brings commuters from Santaquin, Payson and Spanish Fork to Provo and Orem (Utah Valley University) weekday mornings and back again in the evenings. The route stops at three locations along U.S. 6: 500 West, Center Street, and 400 East (see Figure 22).

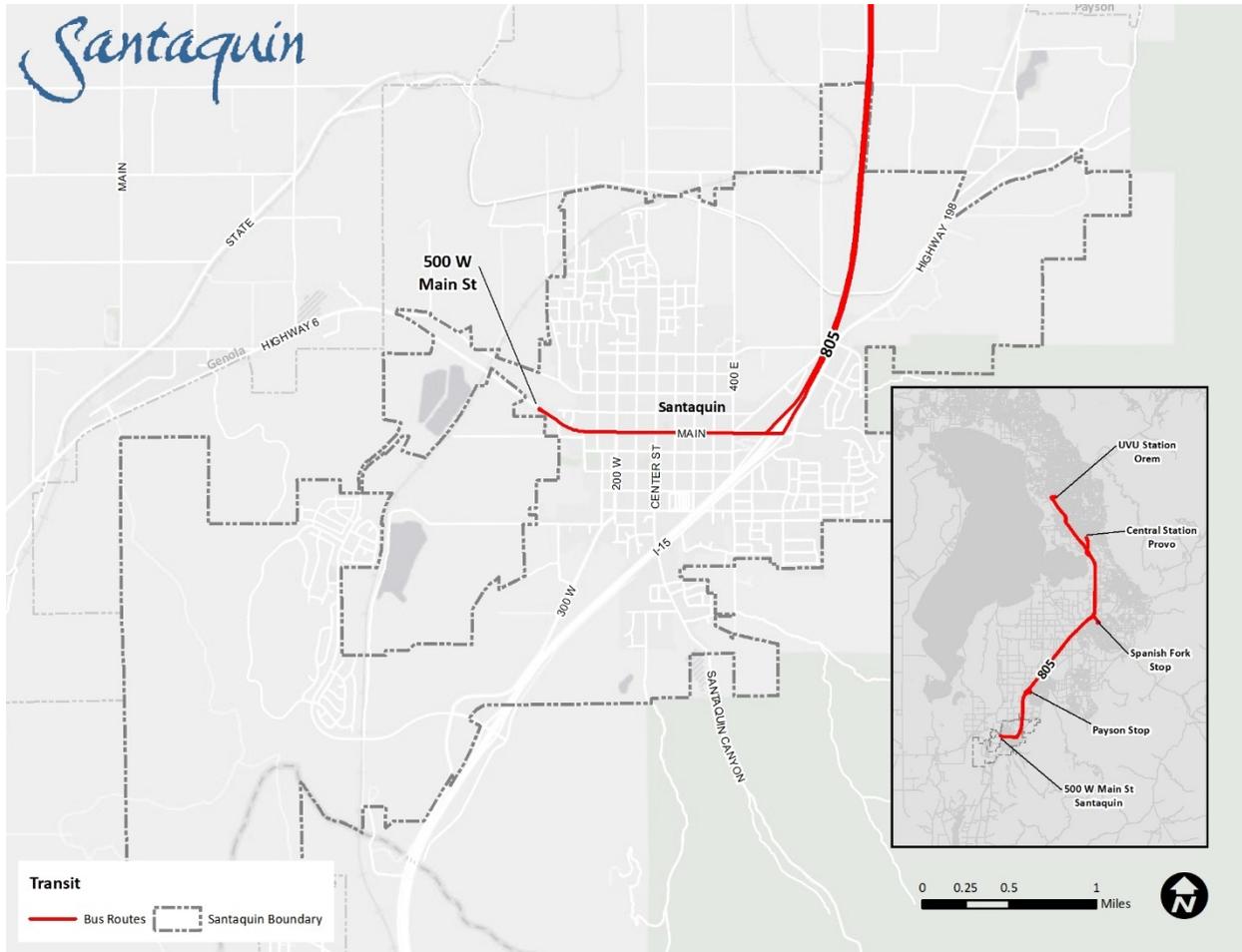


Figure 22. Route 805, Santaquin/Payson/Spanish Fork to Provo Central Station

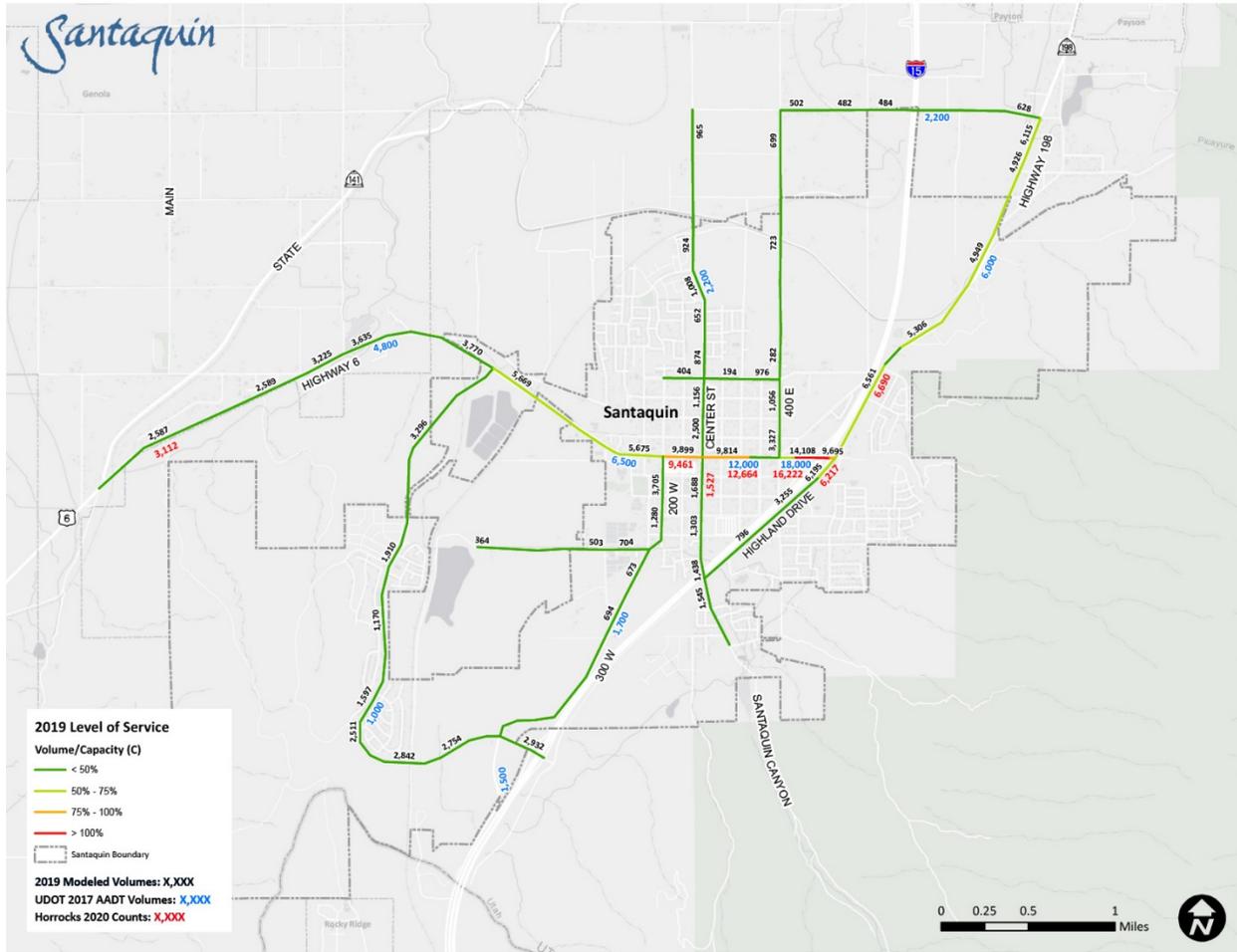
Table 4. Route 805 Schedule

Northbound to Provo Station/UVU					Southbound to Santaquin				
500 W & Main St (Santaquin)	800 S & 1270 W (Payson)	1000 N & 600 E (Spanish Fork)	Provo FrontRunner	Utah Valley University	Utah Valley University	Provo FrontRunner	1000 N & 600 E (Spanish Fork)	800 S & 1270 W (Payson)	500 W & Main St (Santaquin)
5:00 AM	5:08 AM	5:21 AM	5:35 AM		2:34 PM	2:53 PM	3:06 PM	3:23 PM	3:33 PM
6:00	6:08	6:21	6:35		3:34	3:53	4:06	4:23	4:33
6:30	6:39	6:53	7:08	7:20	4:04	4:23	4:33	4:53	5:03
7:00	7:09	7:23	7:38	7:50	4:34	4:53	5:06	5:23	5:33
7:30	7:39	7:53	8:08	8:20	5:04	5:23	5:36	5:53	6:03
8:00	8:09	8:23	8:38	8:50	5:34	5:53	6:06	6:23	6:33
8:30	8:39	8:53	9:08	9:20	6:04	6:23	6:36	6:53	7:03

2.9 Level of Service

Level of Service (LOS) is a measure used to rate the quality of traffic service. LOS is determined by categorizing traffic flow and assigning quality levels of traffic based on performance measures such as speed, travel lanes, truck traffic, etc. Utah’s Unified Transportation Plan states that “level of service (LOS) standards for urban areas are typically ‘D’ or better while LOS standards for rural areas are typically ‘C’ or better.” In keeping with a desire to uphold a rural feel within Santaquin, the City has opted to maintain LOS C. Level of service standards are defined in the American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 2011 (6th Edition) where LOS C is defined by traffic levels which represent “stable flow.” This level can be measured by methods included in the Transportation Research Board (TRB), Highway Capacity Manual HCM2010, October 2010.

Currently LOS C or better is maintained throughout Santaquin City, with the exception of U.S. 6 adjacent to the interchange. The traffic volumes in Santaquin are modest, with Average Daily Traffic (ADT) only rising above 10,000 on the eastern portion of Main Street. Figure 23 shows modeled 2019 traffic volumes, 2017 UDOT Average Annual Daily Traffic (AADT) data (where available), 2020 traffic counts provided by the city (where available), and the volume to capacity ratio for a LOS C standard.



Source: UDOT 2017 ADT & 2019 Travel Demand Model.

Figure 23. Current Daily Traffic Volumes on Major Roads

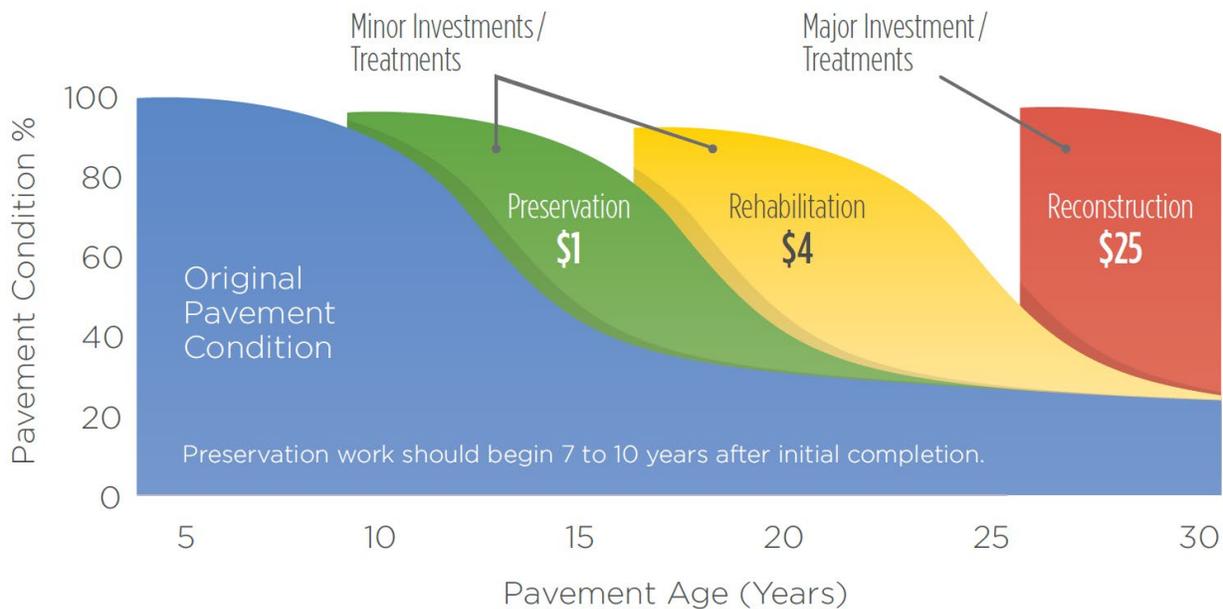
3. SHORT-TERM RECOMMENDATIONS

3.1 Pavement Quality

Understanding the quality of existing pavement can help municipalities prepare for future maintenance expenses. Any holistic capital facilities plan should consider these expenses. Some cities utilize an “impact fee” charged to new development which can help fund new transportation infrastructure required by the new development. Developer impact fees, however, can only be used for new construction or upgrading existing facilities to maintain current LOS conditions; they cannot be used for pavement maintenance.

Most cities in Utah rely on the state gas tax and other user fees distributed in the form of B&C road funds from UDOT to perform roadway maintenance activities. With the increase in more fuel efficient vehicles, many communities have found that B&C road funds are insufficient to keep pace with maintenance expenses. Some communities have turned to general fund money or tax increases as a means of supporting ongoing roadway maintenance. Recently, Provo City has looked towards a concept called transportation utility fees as a means to avoid larger tax increases on some properties due to large amounts of property held by tax exempt property owners. Transportation utility fees have been very successful in Provo.

It is recommended that Santaquin implement a routine pavement maintenance program. Proactive, routine maintenance before pavement quality significantly deteriorates helps delay the need for a much more expensive, total reconstruction. UDOT describes this approach as the “good roads cost less” approach to maintenance. Figure 24 demonstrates this principle.



Source: Utah Unified Transportation Plan 2015-2040.

Figure 24. “Good Roads Cost Less” Pavement Maintenance Methodology

Currently, maintaining pavement on the worst roads—a “worst, first” approach—consumes funds that could be better spent on routine maintenance of roads in better condition. Table 5 displays Santaquin’s infrastructure using the categorizing methodology described in the Existing Conditions chapter.

Table 5. Lane Miles by Pavement Quality Level

Level	Length (in lane miles)	Percent (%) of Total
1 – Unpaved	12.1	9%
2 – Poor	8.6	7%
3 – Fair	17.7	14%
4 – Good	24.78	19%
5 – Excellent	65.22	51%
Total	128.4	

Annual costs to maintain these lane miles depend largely on the extent of damage to the pavement. The more damaged a road is, the more expensive it is to maintain. Table 6 compares the estimated annual maintenance costs of a “worst, first” strategy to the costs after Santaquin has invested in addressing the root cause of pavement cracking. Under the current strategy, we assumed that annually, Level 2 roads (poor condition) cost approximately \$25,000 per lane mile to maintain. Level 3 and 4 roads annually cost approximately \$4,000 and \$3,000 per lane mile to maintain, respectively. Level 5 roads annually cost approximately \$1,000 per lane mile to maintain. If the City undertakes the significant investment to improve the pavement quality overall, costs per lane mile would be reduced. The consistent maintenance strategy assumes that all paved roads are brought up to a 3 or 4 quality level and require annual maintenance of \$3,000 to \$4,000 per lane mile.

Table 6. Annual Pavement Maintenance Program Estimated Costs

Worst, First Maintenance Strategy Annual Cost	Consistent Maintenance Strategy Annual Cost
\$466,000-\$583,000	\$363,000-\$454,000

Source: Parametrix estimates, based on Figure 24 and the pavement quality inventory.

According to the 2017 UDOT B & C Funds Allocation Summary, Santaquin received approximately \$446,252.76 in B&C road maintenance funding in 2017. Santaquin City will need to catch-up on deficient maintenance but, once caught up it appears as if annual B&C road funds may be sufficient to keep pace with annual maintenance needs, if performed on an ongoing basis. B&C road funds are distributed annually based on a statewide formula that considers population and roadway mileage. It is reasonable to anticipate that Santaquin's share of B&C road funds will continue to rise with the increase in traffic volumes and population growth in both Santaquin City and statewide. A more consistent maintenance program would reduce the frequency of total pavement reconstruction projects and lower the overall maintenance cost to be closer to the annual B&C roadway revenue. The Utah State University's Local Technical Assistance Program (LTAP) Center provides pavement preservation resources to cities, and can help Santaquin develop a pavement preservation plan, for a nominal fee.

3.2 Maintenance

Various maintenance activities are important to optimize the function of the roadway network. While this maintenance can be expensive, the roadway system is one of the largest assets of the City and this

asset requires ongoing maintenance. Annual maintenance activities will include ongoing improvements to pavement markings and signage which meets standards outlined in the Manual on Uniform Traffic Control Devices (MUTCD). Other annual maintenance costs may include snow removal, litter removal, pothole repair, lawn care and landscaping, culvert and drainage improvements, and similar efforts that will require ongoing vigilance. Additionally, the City should develop a plan, schedule and budget to address crack sealing and minor pavement overlays on an annual basis so that all roads are maintained on a systematic schedule of performing treatments every three to seven years, depending on a variety of factors. A steady maintenance program should cost approximately \$3,000 per lane mile per year. With this in mind, such a program would cost approximately \$363,000-\$454,000 annually.

3.3 Hot Spot Analysis: Traffic Safety

In total 554 crashes occurred within Santaquin City limits between 2014 and 2018 (Figure 25). Of these crashes, 270 occurred on I-15 and associated ramps. The largest concentration of crashes occurred around the Santaquin Main Street interchange, with three fatalities, nine serious injuries, and 28 minor injuries.

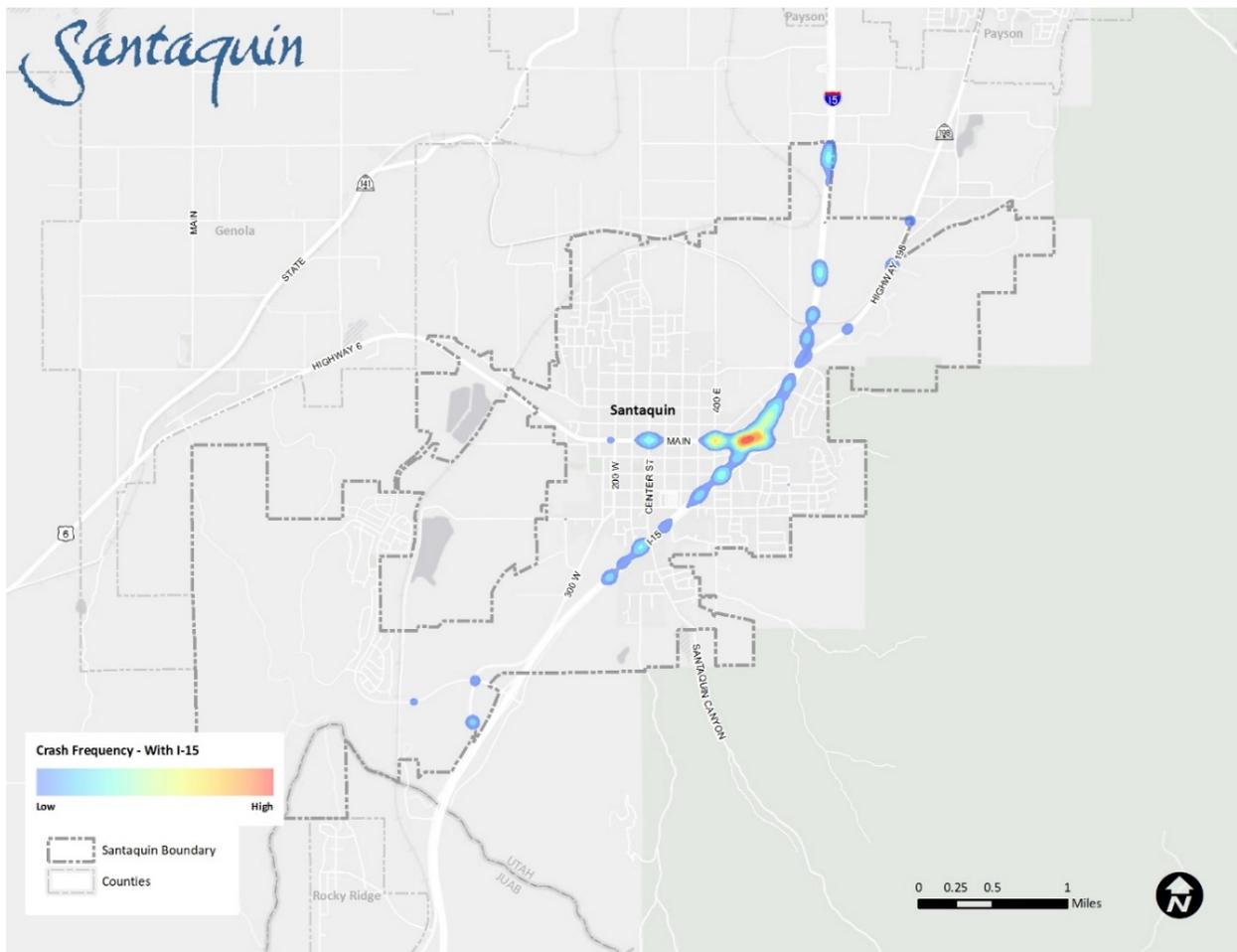


Figure 25. Santaquin Crash Frequency 2014-2018

Figure 26 shows crashes occurring on roads in Santaquin excluding I-15 and associated interchanges. There were 270 crashes were reported from 2014-2018, with two fatalities, three serious injuries, and 19 minor injuries reported from these crashes (Figure 27). Large crash hotspots include multiple areas along Main Street, four significant clusters on Highway 198, and two hotspots in south Santaquin near the intersection of Summit Ridge Parkway and Old Highway 91.

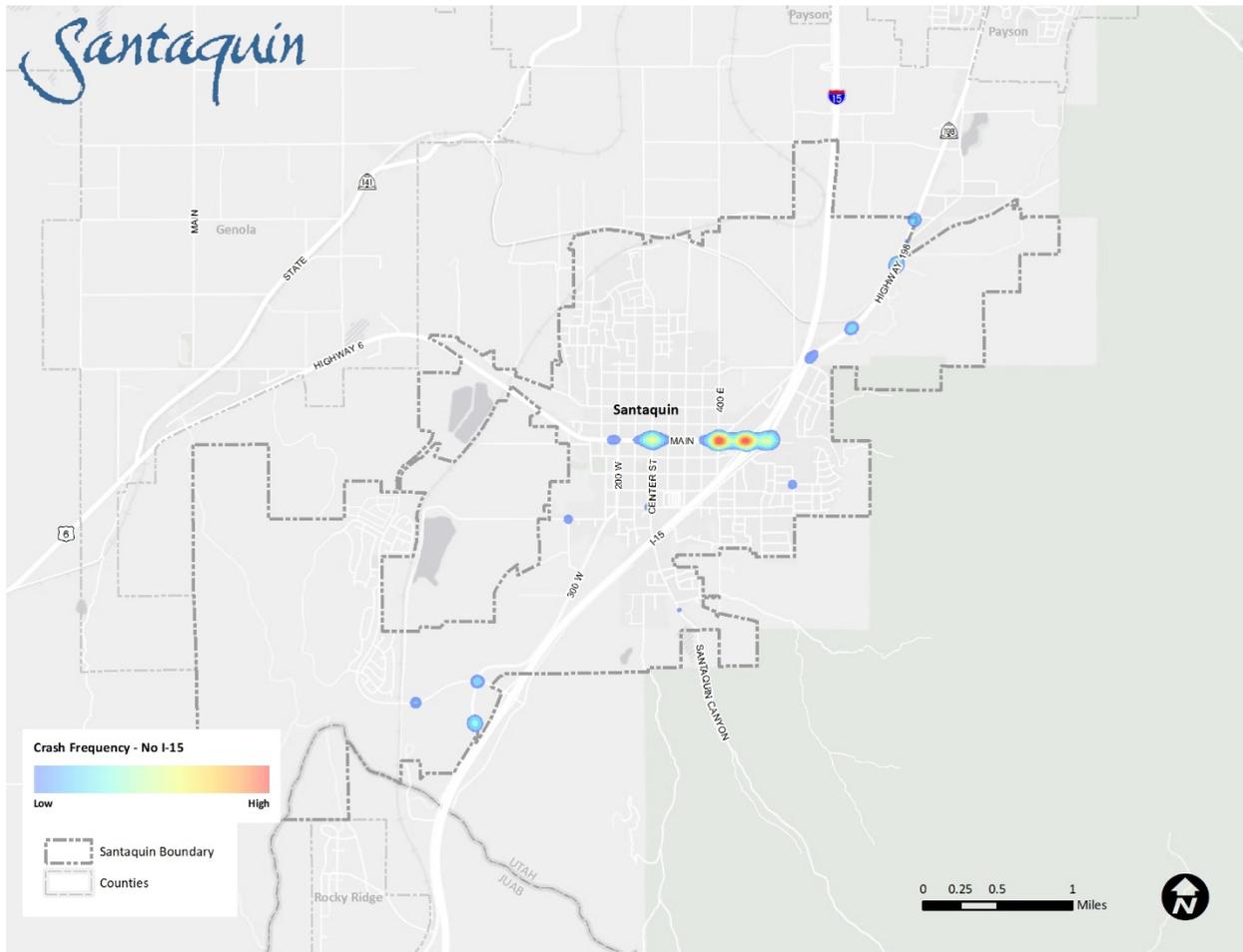


Figure 26. Santaquin Crash Frequency (excluding I-15) 2014-2018

Crash type analysis on Santaquin Main Street revealed different crash characteristics by intersection. At the signalized intersection of 400 East Main Street (Figure 27), most crashes were front to rear (rear-end) crashes, with crashes from a side angle reported as the second most common. Crashes recorded at the intersection of Center Street and Main Street (Figure 28) were most commonly from an angle, with the second most common crash type reported as rear-end crashes.

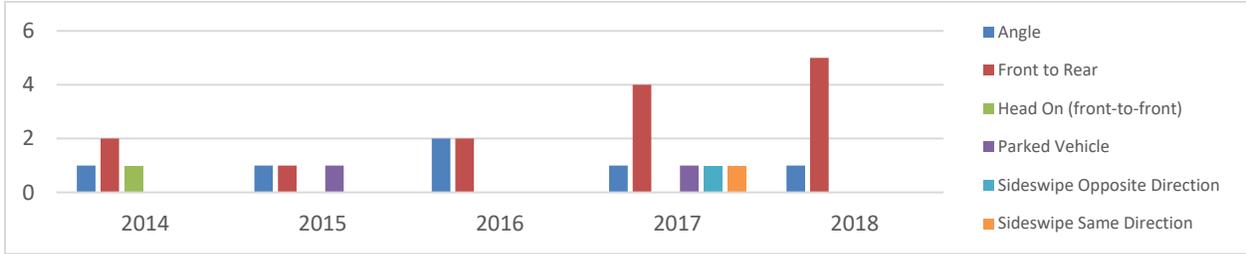


Figure 27. Crash types at 400 E. Main St. from 2014-2018

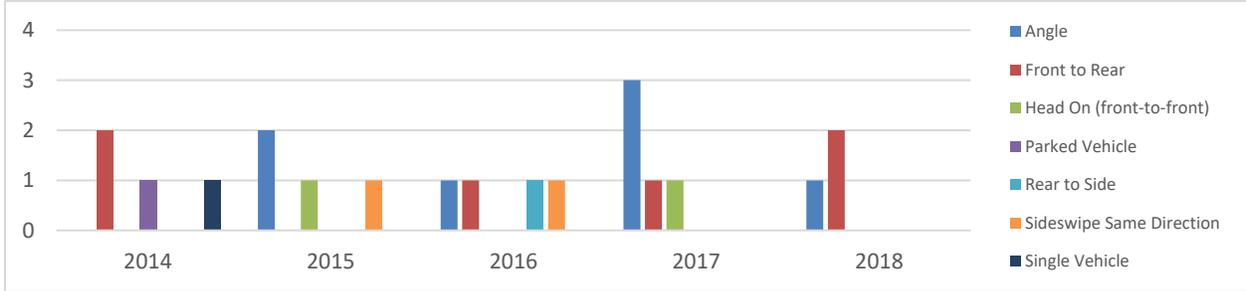


Figure 28. Crash types at the intersection of Center St. and Main St. from 2014-2018

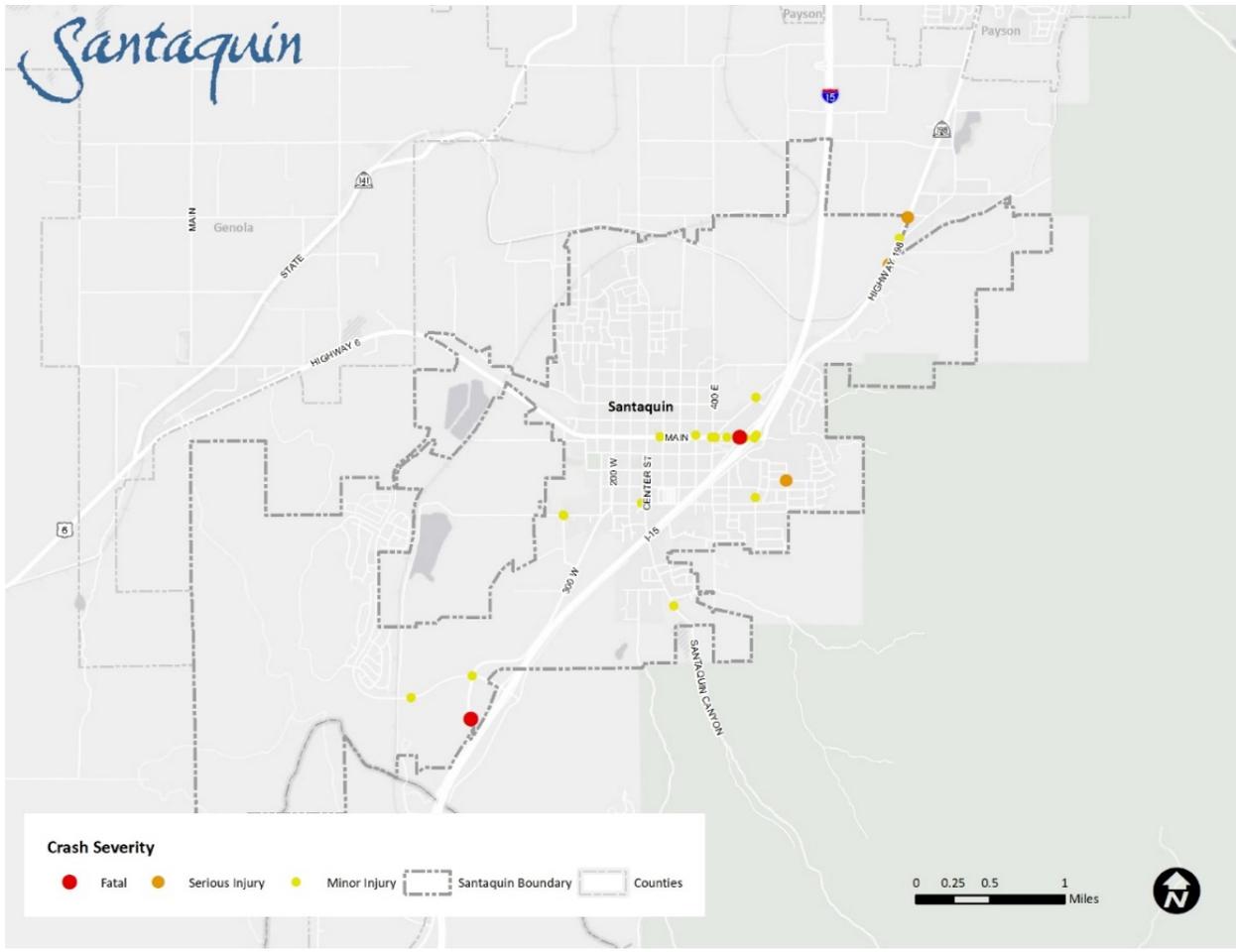


Figure 29. Santaquin Crashes by Severity 2014-2018

4. FUTURE CONDITIONS

4.1 Land Use

MAG estimates population, household size, and employment for Utah County municipalities out to the year 2050. In Santaquin, MAG estimates the 2050 population to grow by 158% to 35,950. Santaquin City expects its population to grow by 243% to 47,775 by 2050. This discrepancy is attributable to adjustments made by Santaquin City to household size, increasing from MAG’s assumption of 2.8 to 3.9, which the City feels is more representative of their community. Estimates provided by Santaquin City were utilized for the purposes of this plan, primarily to adjust TAZ level demographic information.

Table 7 shows projections for population, households, and employment from MAG and Santaquin City. Santaquin City is expecting more households, jobs, and population than MAG estimations predict. For detailed tables with information at the TAZ level see the TAZ Projections Appendix.

Table 7. Demographic Projections

	Current MAG	Santaquin Revisions	MAG Projections		Santaquin Projections	
	2019	2019	2030	2050	2030	2050
Population	13,897	13,897	18,286	35,950	26,135	47,775
Households	3,956	3,956	5,580	12,039	6,701	12,250
Employment	2,554	2,554	5,101	11,948	5,626	12,163

The number of estimated 2050 households by TAZ is shown in Figure 30. The highest concentrations of households are projected in the developing Summit Ridge area and east of I-15. Employment is expected to concentrate along the Main Street corridor and along I-15 around the southern and central interchanges, as well as a concentrated area along I-15 at the northern city boundary. Figure 31 shows projected 2050 employment by TAZ.

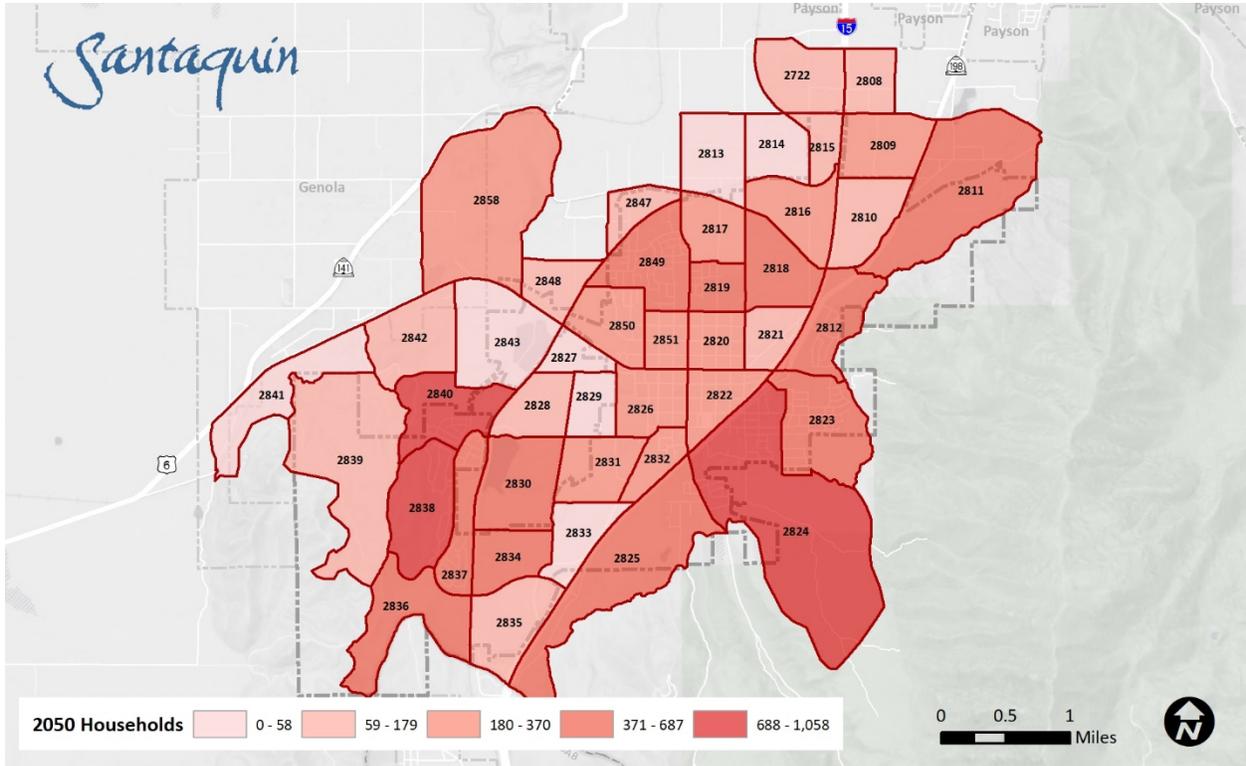


Figure 30. 2050 Households by TAZ, Santaquin Forecast

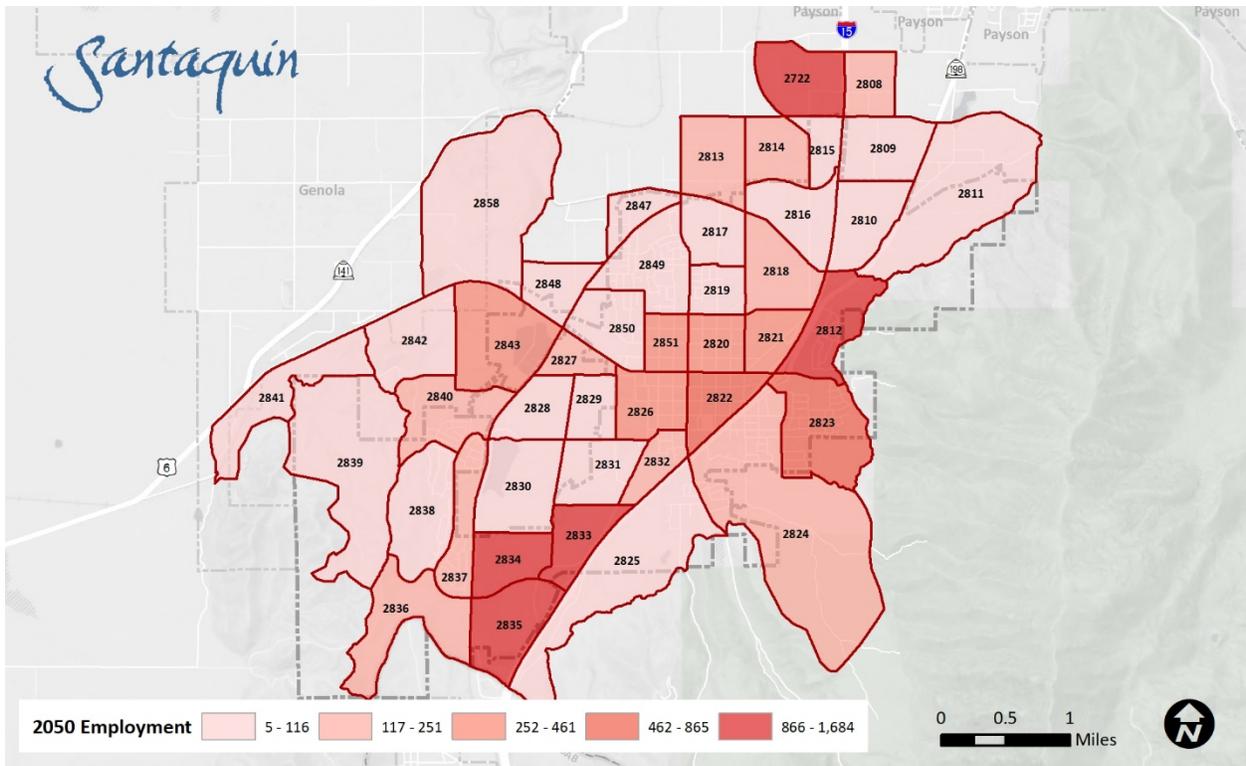


Figure 31. 2050 Employment by TAZ, Santaquin Forecast

4.1.1 2019 to 2030 Projected Growth

Looking at population and employment growth over the next 10 years is insightful, as impact fee analysis is based on growth and projects within this time frame. Figure 32 and Figure 33 below illustrate the projected growth in households and employment from 2019 to 2030. The highest growth areas for households in this time period are in the southern portion of the City, particularly in the Summit Ridge development. Other relatively high growth areas are north of 400 North. The highest growth in employment occurs just north of Main Street and west of I-15 where a grocery store and a high school will be located. Other relatively high growth areas for employment are in the southern portion of the City along I-15.

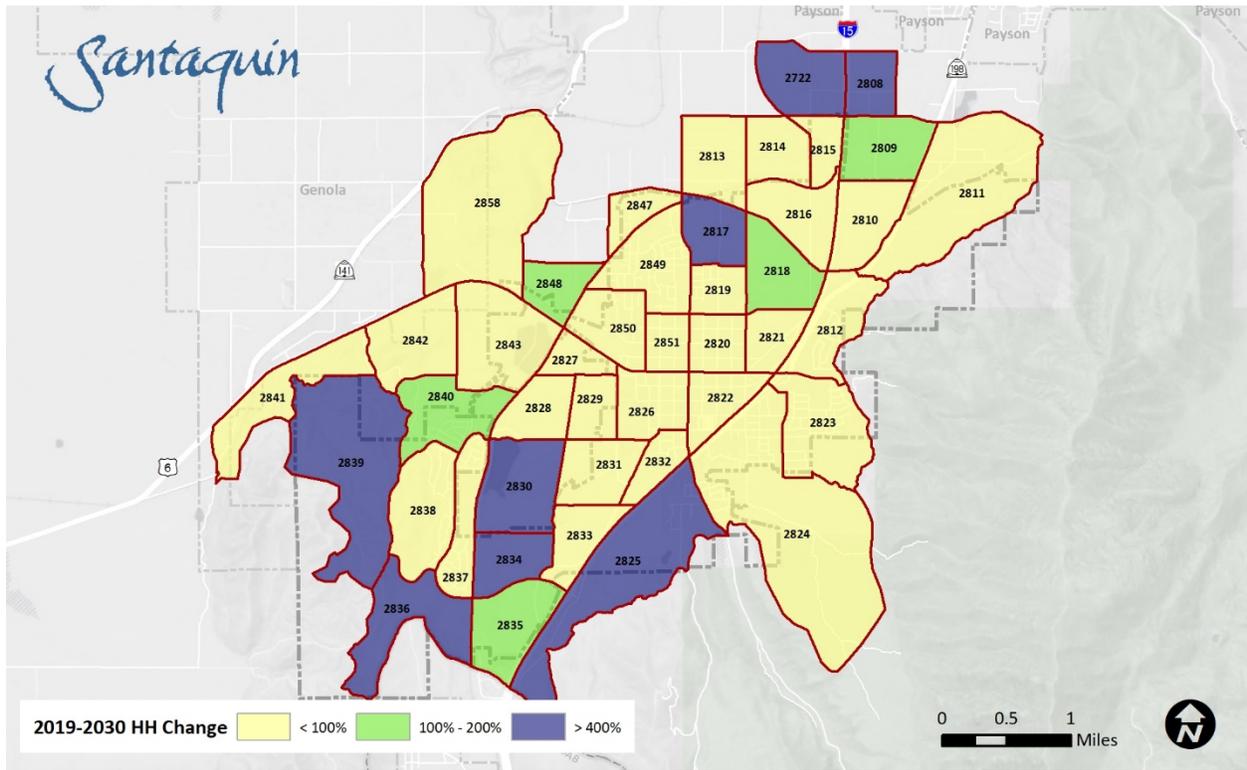


Figure 32. 2019 to 2030 Projected Growth Households

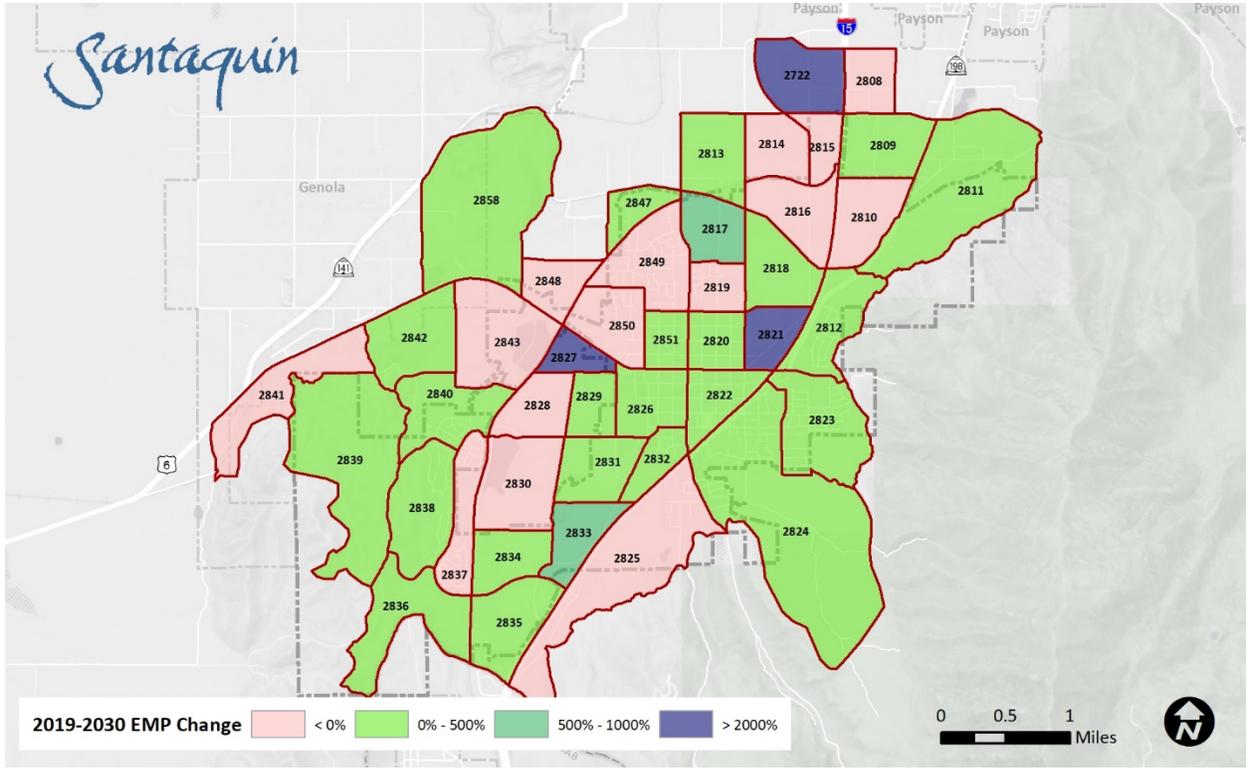


Figure 33. 2019 to 2030 Projected Growth Employment=

4.1.2 Future Land Use Plan

Santaquin’s future land use plan (see Figure 34), found in their General Plan adopted in 2007, shows preservation of a Main Street commercial core, with medium density housing to the north and south. Agriculture preservation is prevalent in the northern portion of the City, with some additional preservation to the southwest. Business park developments are located along the western portion of the Main Street corridor. A new commercial development is planned adjacent to the future FrontRunner commuter rail station in the south. Low-density residential uses are found in the southwestern and southeastern portions of the City.

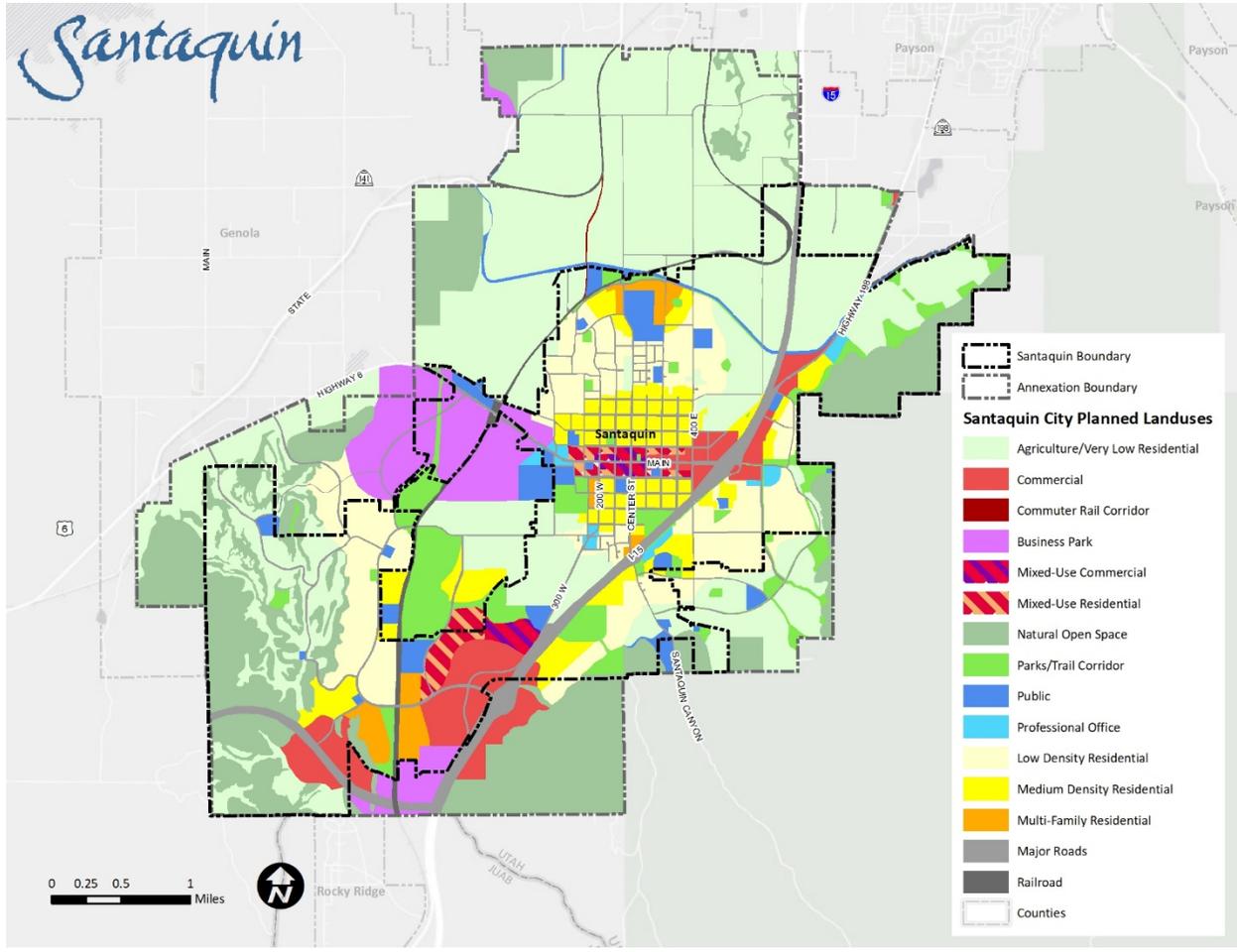


Figure 34. Future Land Use Plan

4.1.3 Future Annexation

Santaquin currently has plans to make large annexations to the north and south (see Figure 35). Covering approximately 6,234 acres, the annexation areas will nearly double Santaquin’s existing land area. To the north the annexation area begins at Santaquin’s northwestern corner and extends northeast to I-15. To the south the annexation area will append portions of Juab County as well as an area southeast of the Main street corridor.

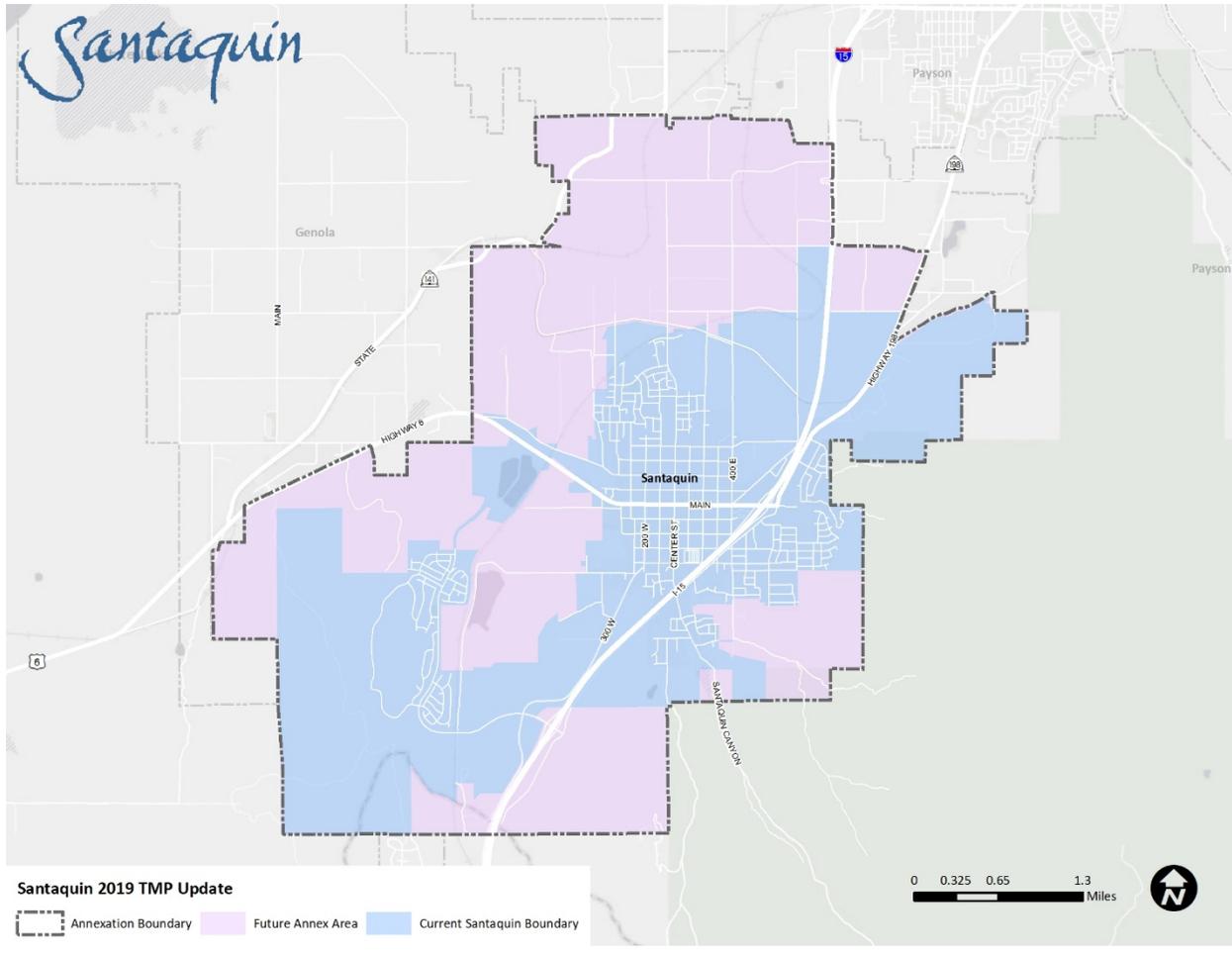
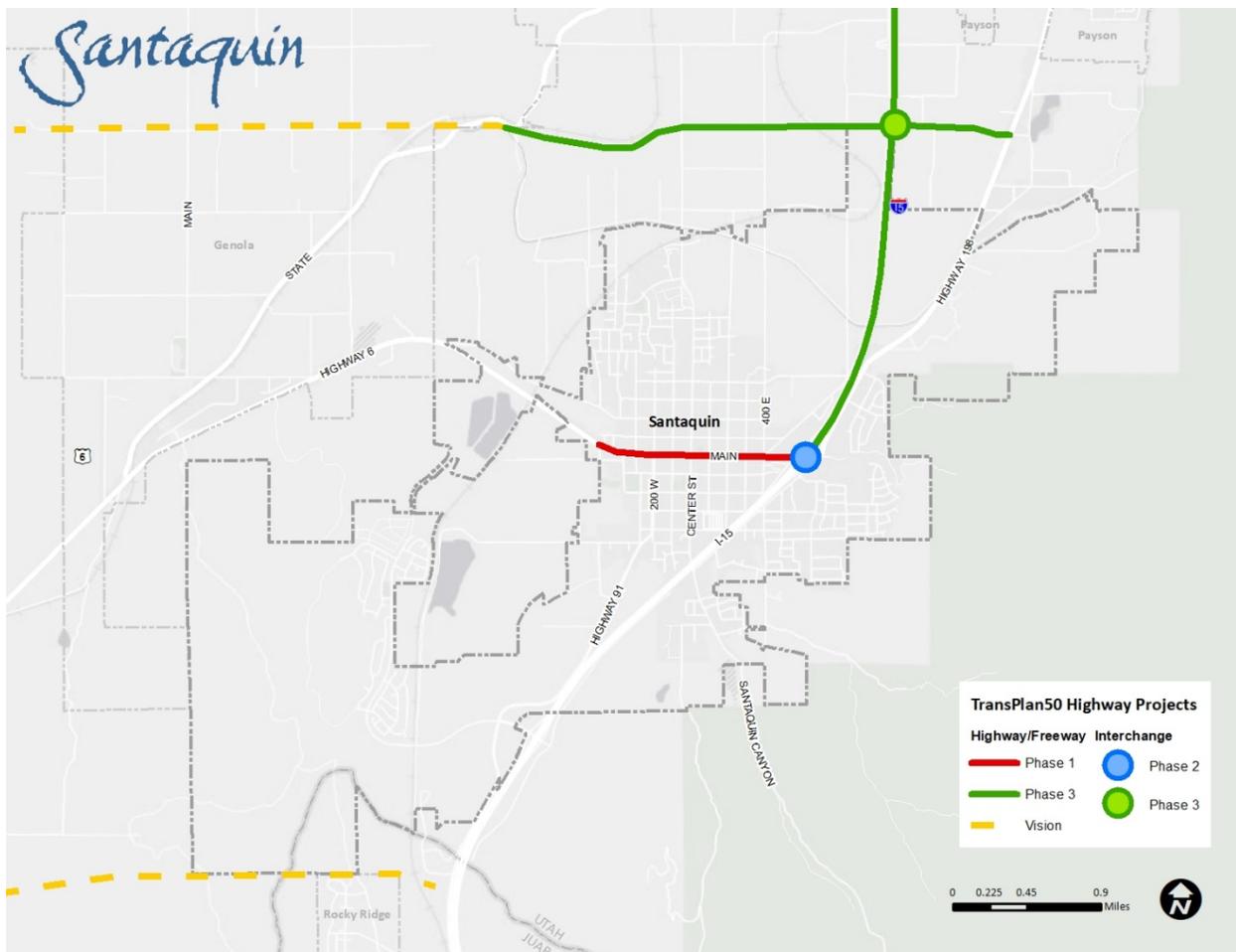


Figure 35. Future Annexation Areas

4.2 Regional Plans

The forecasting and planning undertaken by Santaquin City is complimented region-wide by agencies which perform regional planning such as the MAG, UDOT, and UTA.

TransPlan50 is the regional transportation plan for urbanized Utah County, produced by MAG. The plan consists of a coordinated system of capital-intensive roadway projects, transit improvements, and pedestrian/bicycle facilities programs over the next thirty years. Phased TransPlan50 projects in Santaquin include: Main Street widening (5-lanes) to 500 West, Summit Ridge Parkway extension to U.S. 6 (completed), I-15/Santaquin Main Street interchange reconstruction, I-15 widening (6-lanes) south to Santaquin Main Street, new interchange at I-15 and 12400 South, and widening (5-Lanes) and extension of 12400 South to Mountain Road. Additionally, there are two vision projects with impacts to Santaquin: Saratoga Springs to Santaquin proposed freeway, and Santaquin to Elberta proposed freeway.



Source: MAG, TransPlan50

Figure 36. TransPlan50 Projects in Santaquin

4.3 Travel Demand Modeling

Future traffic conditions were forecasted using the WFRC – MAG regional travel demand model version 8.3. The model base year was 2019 and future conditions were forecast through 2050, with base year and future year socioeconomic data for Santaquin City updated as part of the calibration process. For the 2050 model run, socioeconomic data for Santaquin City was generated with input by city staff, while MAG projections were used for the surrounding areas. The existing network in the model accurately reflected the current network, however changes to the socioeconomic data were needed. This data was reviewed and updated by city staff (detailed in the appendix).

4.3.1 Future Volumes

Once the base model was calibrated to best reflect current conditions, future population, household and employment data were used with a future roadway network to model future 2030 and 2050 travel volumes. Figure 37 and Figure 38 show projected volumes and percent of capacity utilized for 2030 and 2050 respectively.

The 2030 model (Figure 37) projects three roads will approach or exceed 100% capacity at a Level of Service C. These roads include Main Street around the I-15 interchange and around the Summit Ridge Parkway intersection, 200 West just south of the Main Street intersection, and 400 East just north of the Main Street intersection.

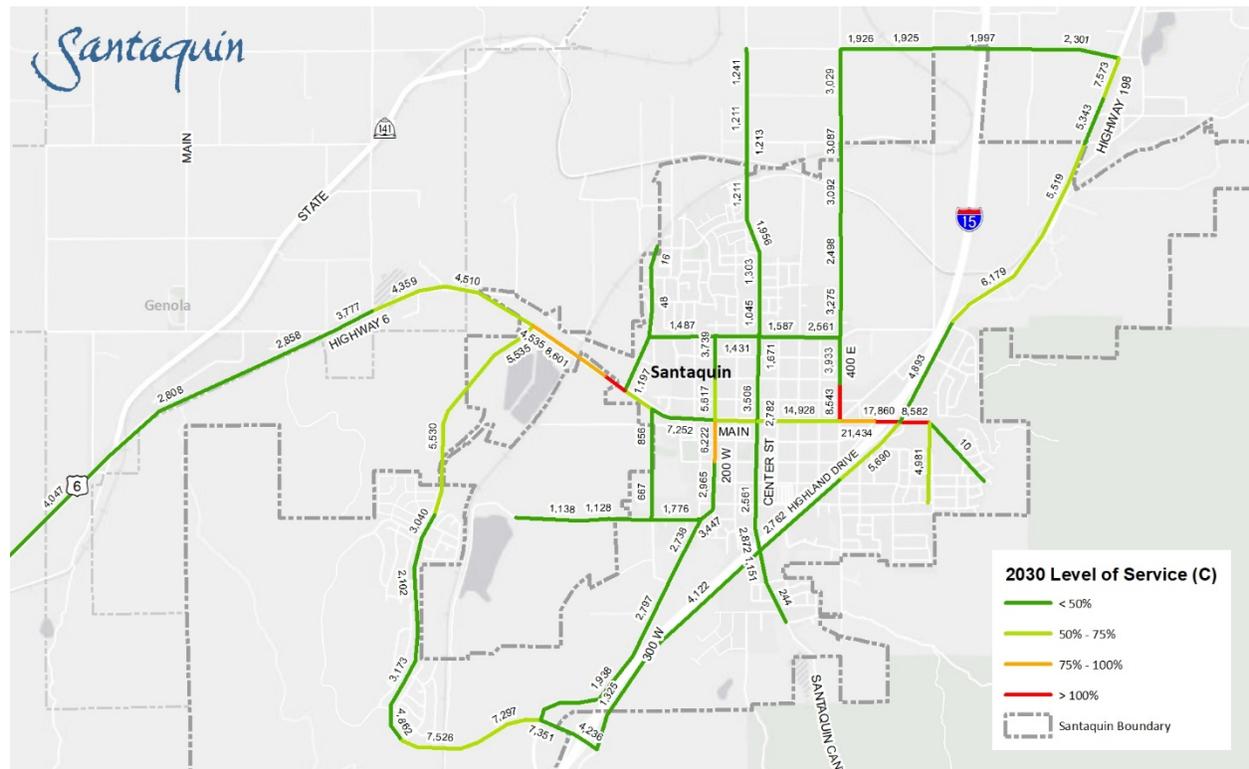


Figure 37. 2030 Level of Service/Travel Volumes, Daily

The 2050 model projects that many roads in Santaquin will approach or exceed 100% capacity at a Level of Service C. These roads are as follows (Figure 38):

- Main Street at the I-15 interchange
- Highland Drive at the central I-15 interchange
- Highway 198, central and on the north end near the future interchange
- 400 East near the Main Street intersection
- 300 West in south Santaquin
- Summit Ridge Parkway in south Santaquin
- 200 West/500 South from Main Street to Summit Ridge Parkway

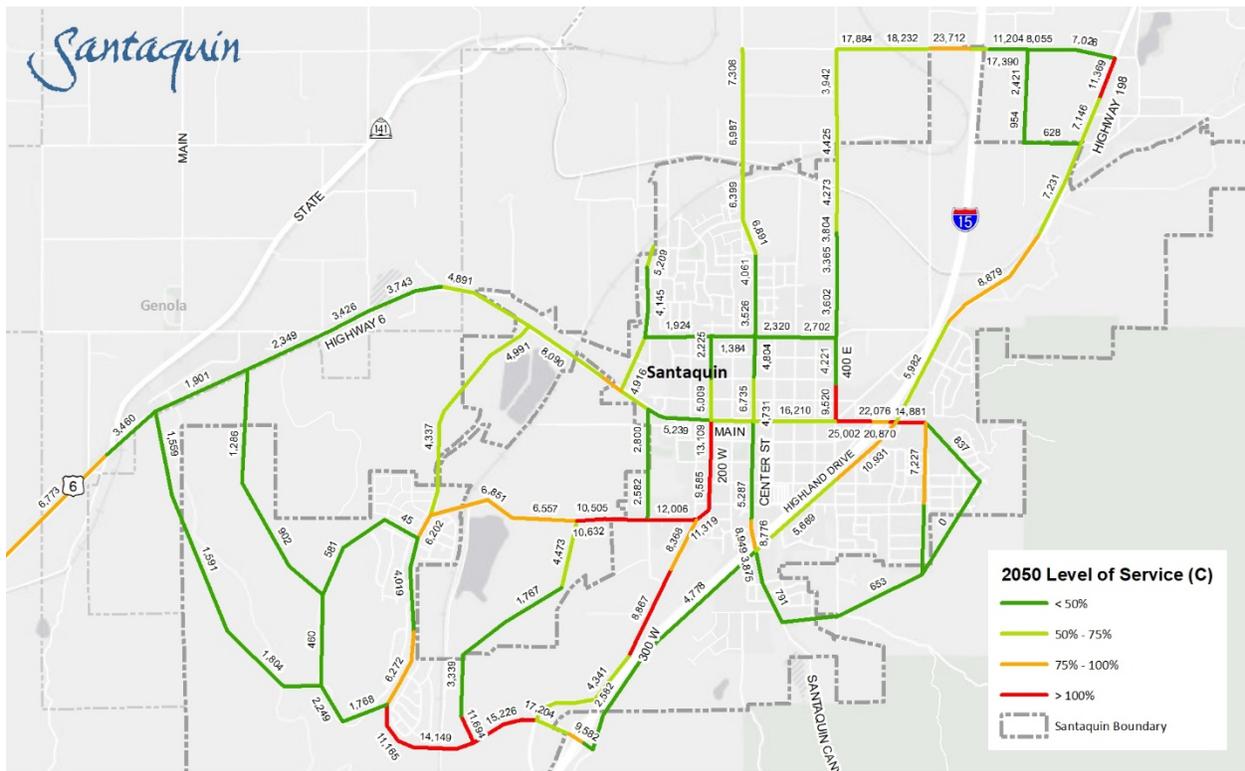


Figure 38. 2050 Level of Service/Travel Volumes, Daily

5. PLAN RECOMMENDATIONS

5.1 Functional Classification

A Functional Classification of streets is used to group roadways into classes according to the character of traffic they are intended to serve. The classes are based upon the degree of mobility (speed and trip length) and land access that they permit. Roadway functional classifications are generally comprised of a mix of arterials, collectors, and local streets. Arterials are designed to serve higher volumes of traffic at higher speeds, while collectors are designed to balance land access with traffic speeds and traffic capacity. Local streets are intended to provide low speed access to individual properties. Figure 39 summarizes the hierarchy of the functional classification of streets based upon mobility and access, and Figure 40 shows a map of the Santaquin future (2050) network by functional classification.

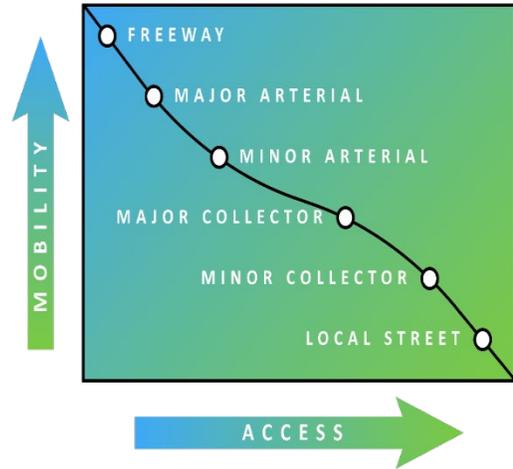


Figure 39. Mobility vs. Access

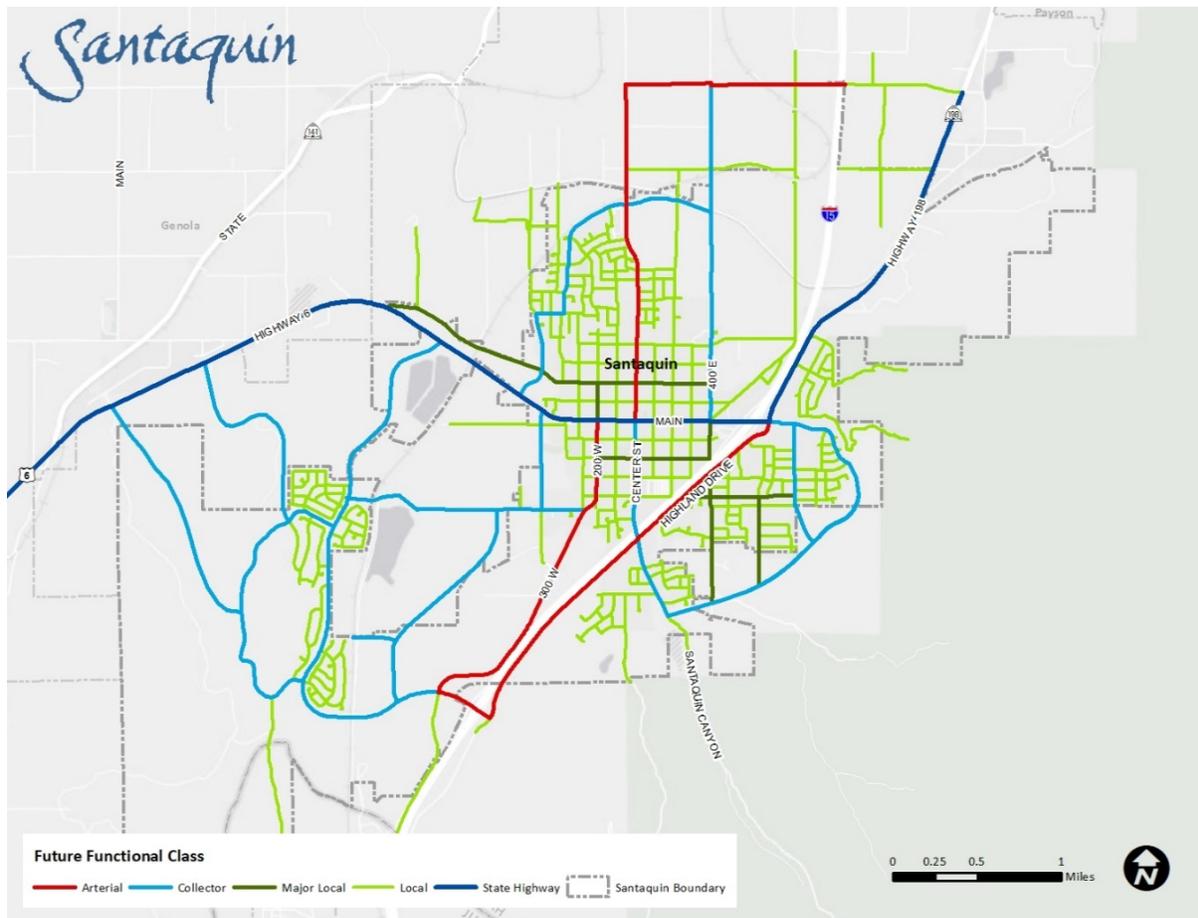


Figure 40. Map of Future Network by Functional Classification

Table 8 provides general characteristics for the traffic operations of each functional classification. The definitions outlined include speed, average trip length, accident rate, and access control. Access control refers to the number of intersections, driveways, etc., interrupting the roadway.

Table 8. Functional Classification Summary

Functional Group	Speed (miles per hour [mph])	Average Trip Length (miles)	Expected Accident Rate (accidents per million vehicle miles)	Access Control
Arterial	45+	3-15	3 to 5	Significant
Collector	25-45	1-5	2 to 4	Moderate
Major Local/Local	<30	<0.5	Varies	None

5.1.1 Local

Local streets are designed to offer access from residences to the roadway network. Local streets serve many driveways and provide a collection point to collector or arterial roadways. Local streets should be designed to minimize speed and cut-through traffic while meeting the requirements of emergency vehicles. Local streets are typically placed with driveways on both sides and have posted speed limits of 25 miles per hour. Generally, no striping is proposed on local streets. However, the City engineer may provide roadway striping as needed as a traffic calming measure. Parking may be restricted on local streets near intersections, in high density or commercial areas, where snow removal or storage issues arise, or at other locations deemed necessary by the City.

- The 26-foot Rural Private Lane is the smallest cross-section. It consists of 13-foot lanes with no sidewalks or park strips and drainage gutters.
- The 55-foot Local street contains 29 feet of road width, park strips and sidewalks, 9 feet for parking on one side, and mountable curbs.
- The 56-foot Rural Local Street features 24 feet of pavement, no curbs, and 16 feet of space preserved on either side of the street for anticipated future improvements.

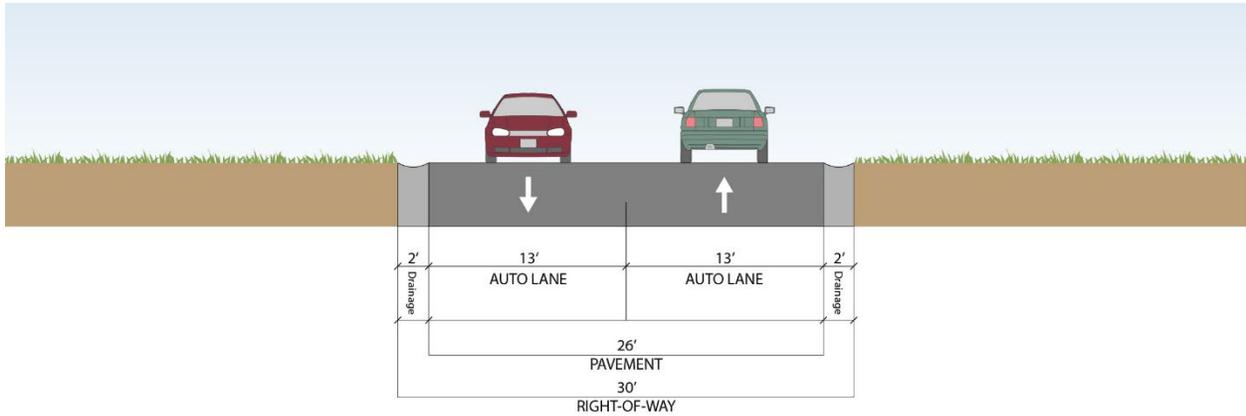


Figure 41. 26-Foot Rural Private Lane

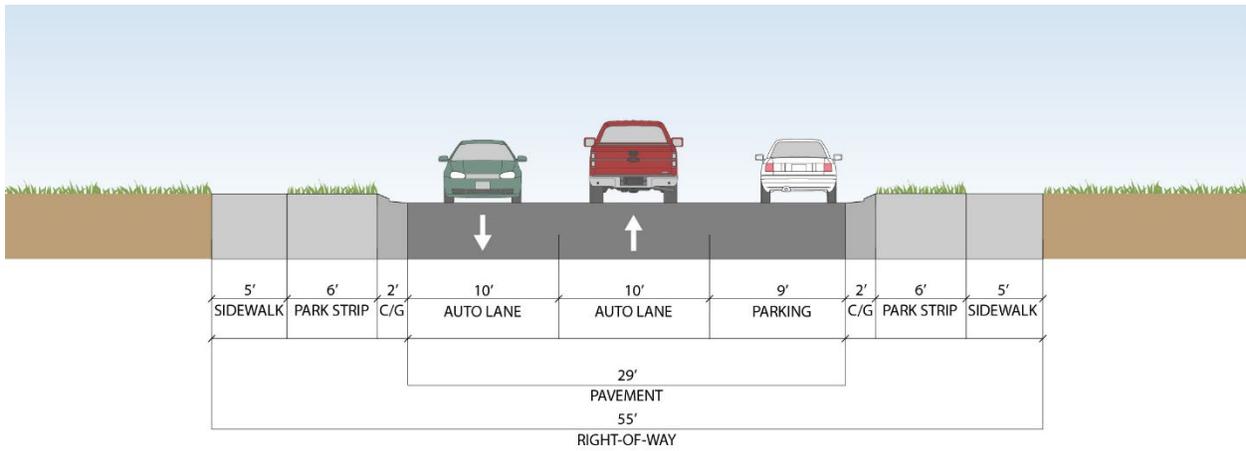


Figure 42. 55-Foot Local – 2-Lane/Parking One Side

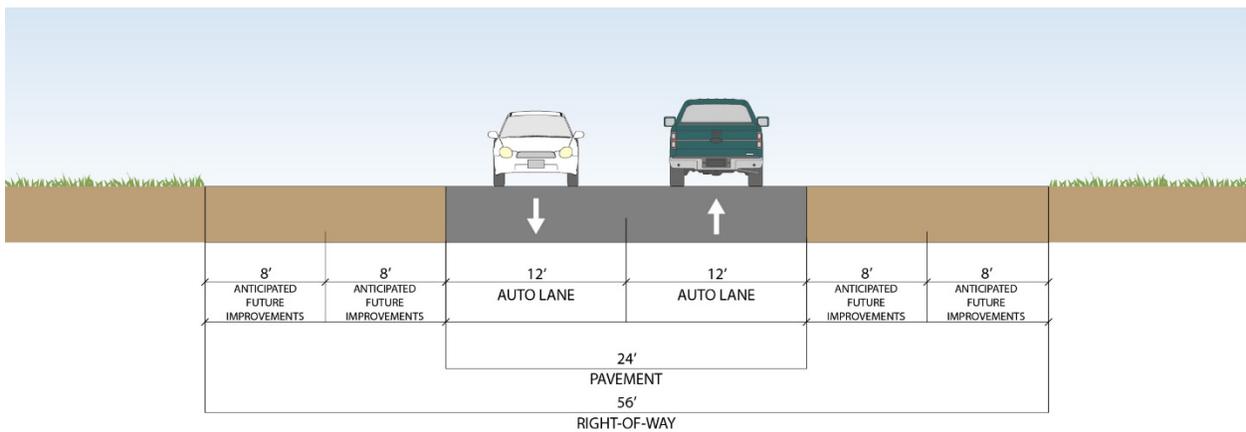


Figure 43. 56-Foot Rural Local

5.1.2 Major Local

Major local streets have the same general characteristics as local streets, only with wider rights of way to accommodate slightly higher density land uses and to accommodate parking.

- The 62-foot Major Local cross section is designed to accommodate slightly higher density residential, neighborhood commercial, school, church and institutional land uses. This cross section features ten-foot lanes, eight-foot parking lanes, mountable curbs, park strips and sidewalks. The city requires high-back curb and gutter around city parks, schools, churches, and industrial uses. The eight-foot parking lanes could also be restriped for bike lanes when deemed appropriate by city staff.

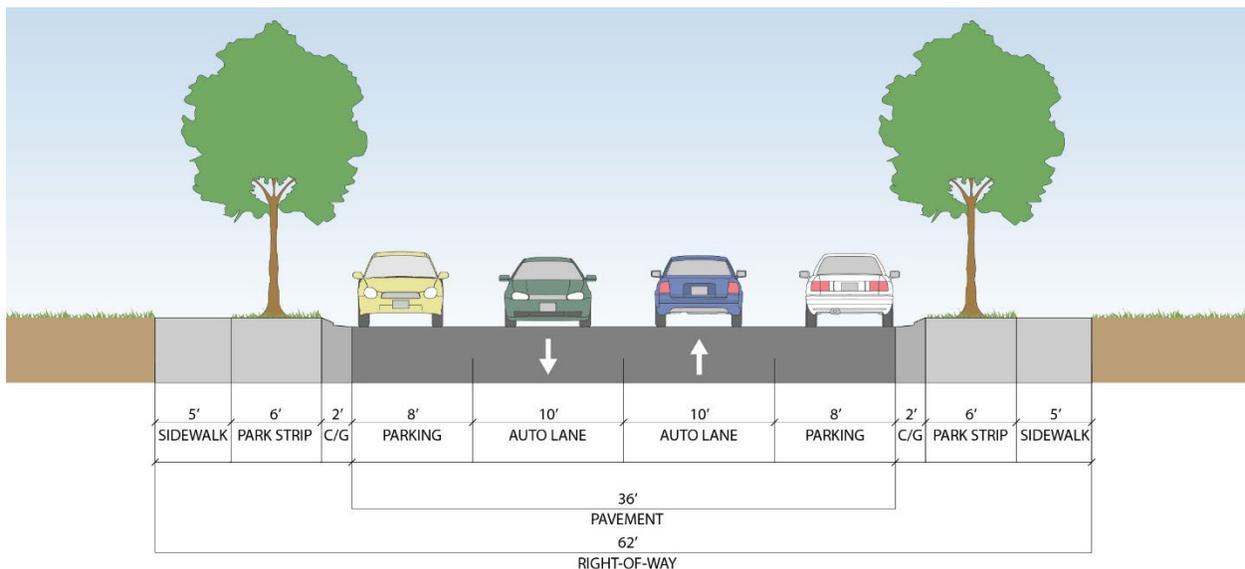


Figure 44. 62-Foot Major Local

5.1.3 Collector

Collector streets connect users from local neighborhood streets to arterial streets and other collectors.

- The 60-foot Collector cross section has 11-foot travel lanes in each direction and a 12-foot center turn lane within a 60-foot right-of-way. This cross-section features high-back curb and gutter, park strips, and sidewalks on either side.

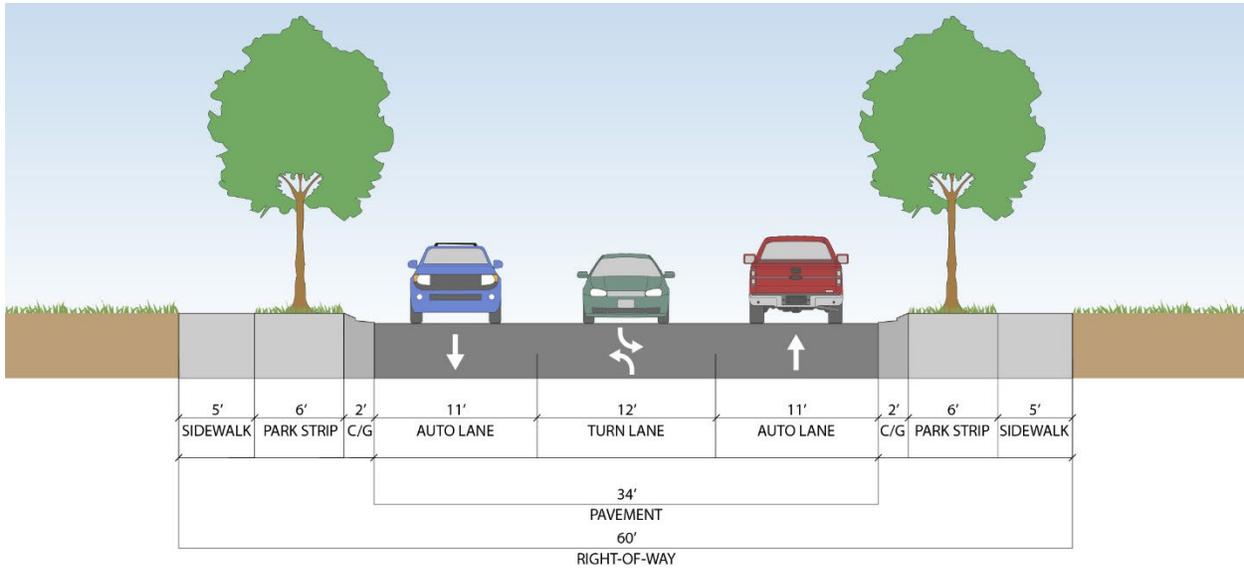


Figure 45. 60-Foot Collector

5.1.4 Arterial

Arterial streets balance regional travel and local access by connecting local and collector streets to regional transportation options such as freeways and highways.

- The 90-foot arterial cross section has two travel lanes in each direction and a center turn lane.
- The 99-foot Center Street cross section has two travel lanes in each direction and a center turn lane, but also has gravel shoulders on either side.
- Future arterial Highland Drive has a 68-foot right of way with barrier curbs, two 11-foot travel lanes, a 10-foot center turn lane, a 9-foot right turn lane, a 5-foot park strip, and a 10-foot meandering trail.

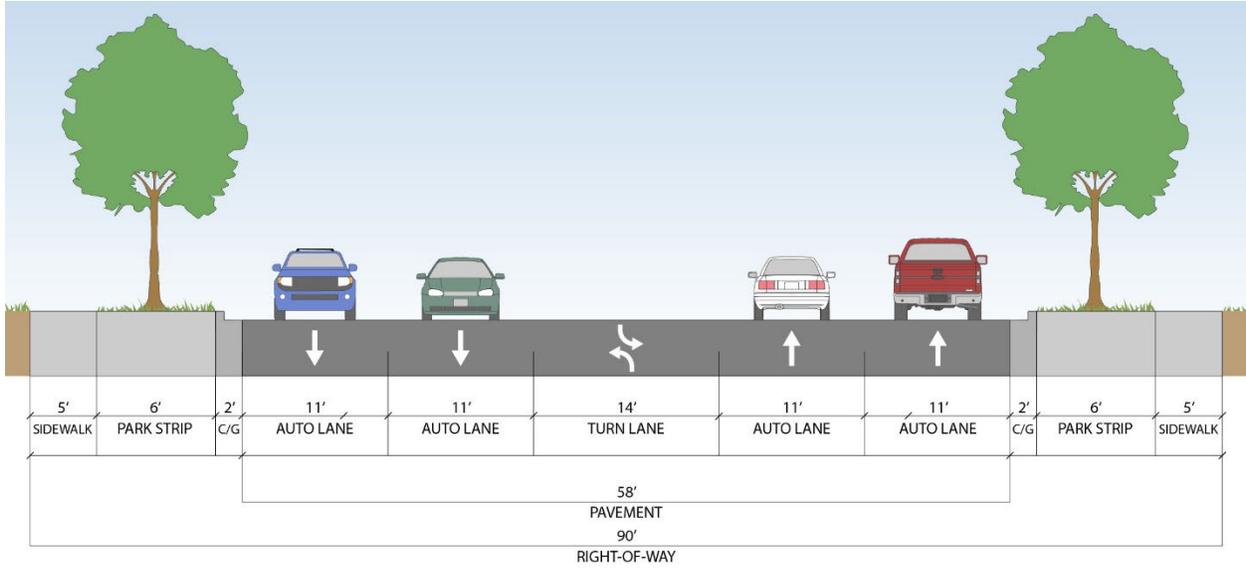


Figure 46. 90-Foot Arterial

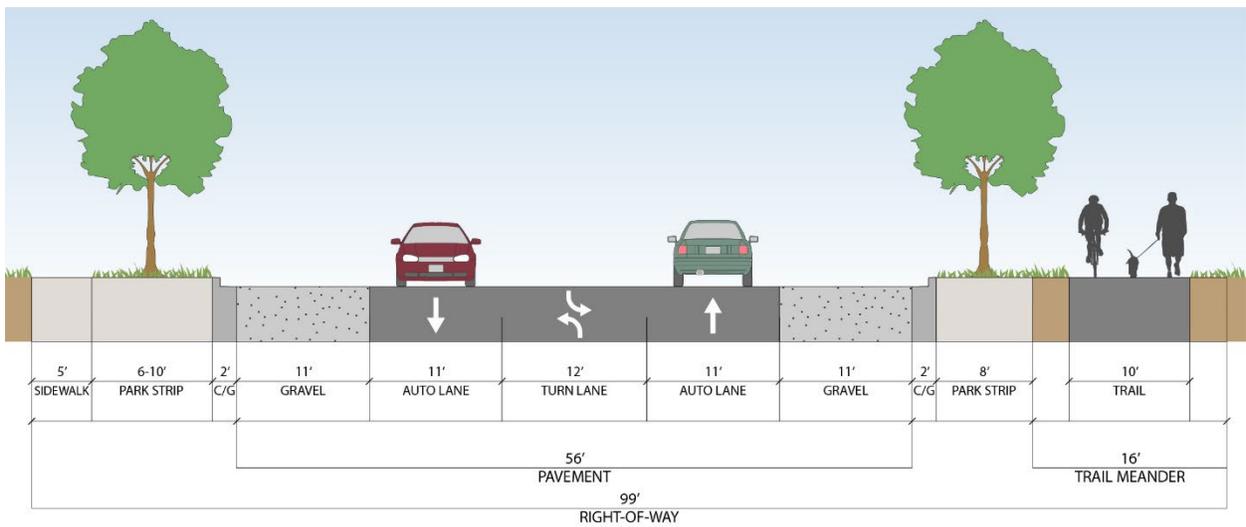


Figure 47. Center Street

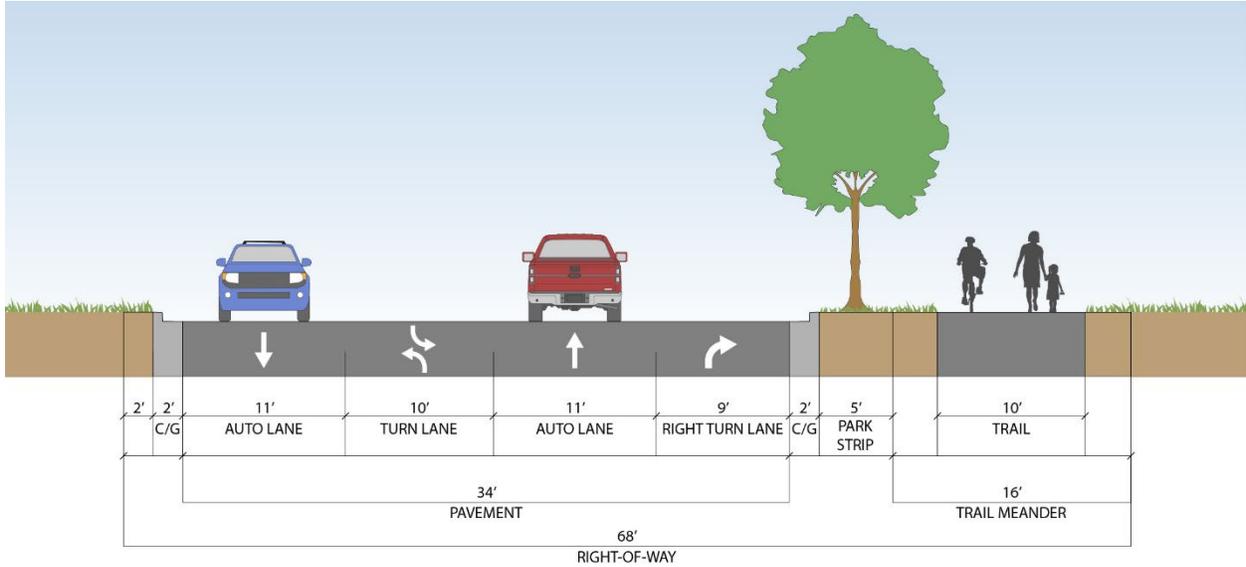


Figure 48. Highland Drive

5.1.5 State Highways

State highways within Santaquin City boundaries will adhere to UDOT’s own design standards and not those described above. However, Santaquin does have an agreement with UDOT pertaining to U.S. 6 that allows for the City’s 99-foot arterial cross-section to be utilized between 500 West and I-15.

- The 99-foot Main Street cross-section contains two 11-foot auto lanes in each direction, a 12-foot center turn lane, 8 feet of parking on either side, barrier curbs, park strips, and sidewalks.

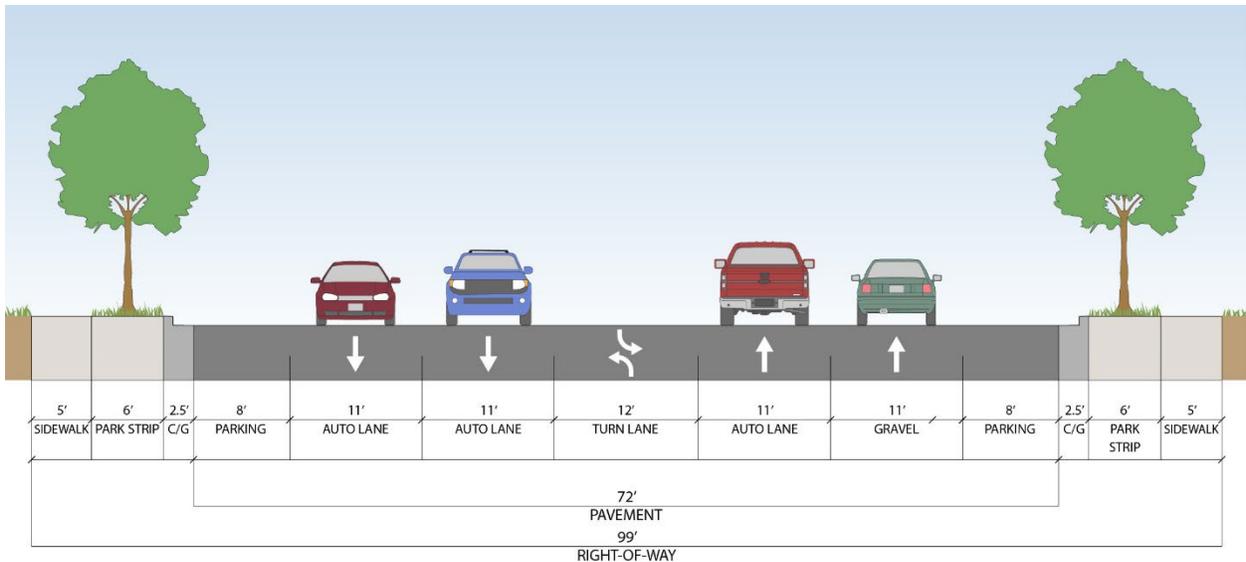


Figure 49. Main Street

5.2 Transportation Guidelines

5.2.1 Traffic Control

The need for traffic control devices will increase as traffic volume and the road network throughout Santaquin continues to grow. Per the MUTCD, “an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.” There are eight different traffic signal warrants the MUTCD states that need to be considered when investigating the need for a traffic control signal. These warrants look at vehicular volumes, pedestrian volumes, school crossings, signal coordination, vehicular crashes, and the adjacent road network. The evaluation of new traffic control devices should be made as need arises, verified by a warrant analysis and accompanied by traffic engineering study if deemed necessary by the City engineer. Potential future needed traffic signals based on anticipated conditions are shown in Figure 50.

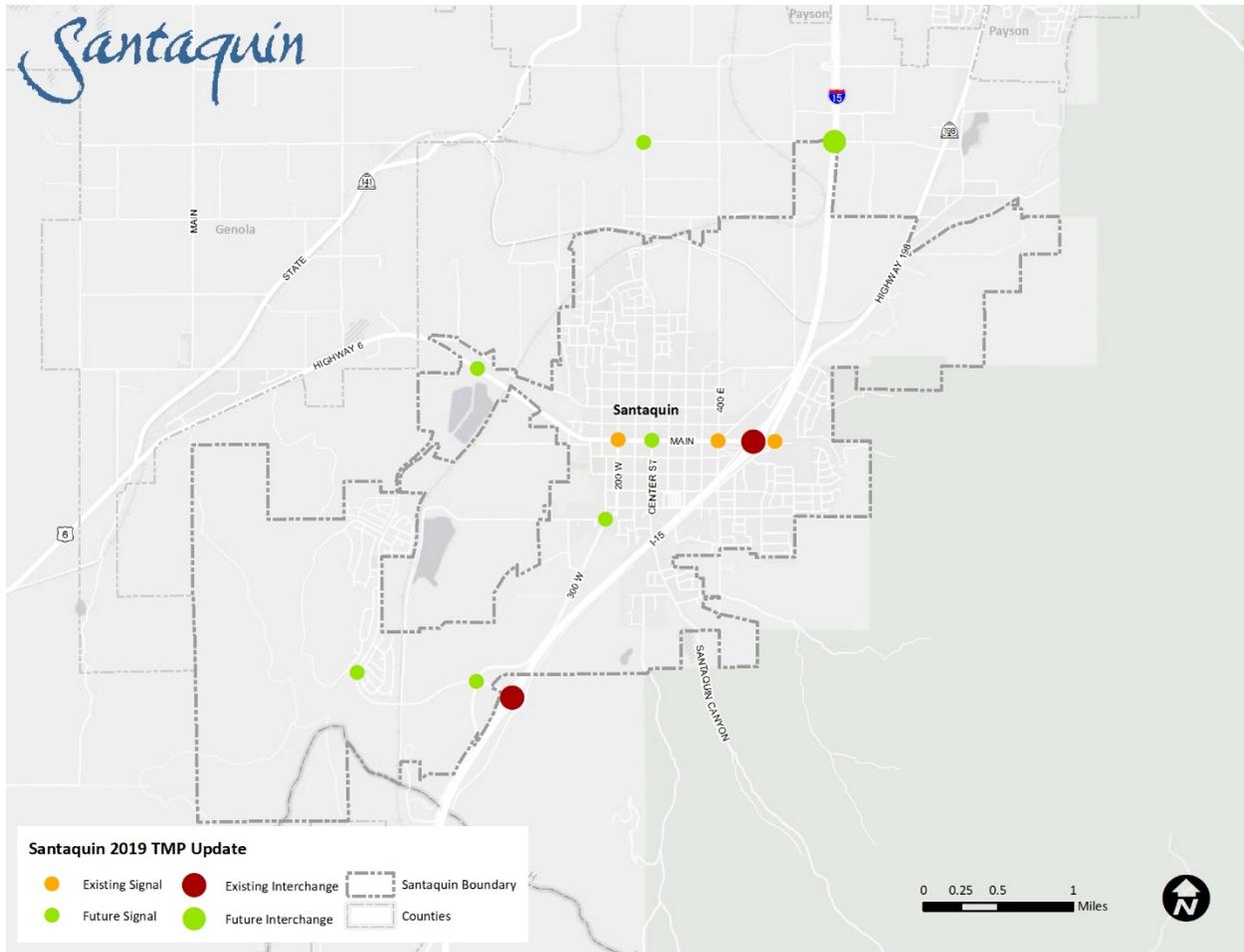


Figure 50. Existing and Potential Traffic Signals

5.2.2 Access Spacing

Access spacing standards allow drivers to process one decision at a time. Through proper spacing, drivers may monitor upcoming conflict points and react accordingly to each conflict. Access spacing, also referred to as driveway spacing, is measured from the closest edge (perpendicular tangent section) of the nearest driveway to the center of the proposed driveway. For state highways, UDOT Administrative Rule R930-6 defines the driveway, public street and signal spacing.

The Santaquin Master Transportation Plan has summarized the allowable access spacing on all non-UDOT streets in Santaquin City. On non-state routes, access spacing may be adjusted by the City engineer based on localized conditions. Requests to decrease access spacing standards may be granted by the City engineer provided that a traffic impact study is prepared by the developer documenting the preservation of safety, capacity, and speed with reduced access spacing. Table 9 lists the Santaquin City access spacing standards.

Table 9. Spacing Categories

	Minimum Signal Spacing (feet)	Minimum Public Street Spacing (feet)	Minimum Private Access Spacing (feet)
Arterial Streets	2640	660	250
Collector Streets	1320	300	150
Major Local Streets	1320	300	150
Local Streets	N.A.	150	No Minimum

5.2.3 Corner Radii

The dimensions of curb radii directly affect the speed of turning motor vehicles. Large radii are needed to accommodate large trucks and busses, but may also allow cars to make high speed turns and create increased crossing distances for pedestrians. A network of intersections with short curb radii would be of greatest benefit to pedestrians, but would hinder movement of fire trucks; thus creating a hazardous environment. Therefore, curb radii standards are needed in order to accommodate all types of users. Current Santaquin standards provide for a 26-foot back of curb corner radii for all streets. Recommended back of curb corner radii for each street classification is shown in Table 10.

Table 10. Back of Curb Radii by Street Intersection

Right-of-Way	Right-of-Way			
	Local	Major Local	Collector	Arterial
Arterial	30'	30'	40'	40'
Collector	30'	30'	40'	40'
Major Local	25'	30'	30'	30'
Local	25'	25'	30'	30'

The above radii may be adjusted based on traffic volumes, intensity of large vehicle uses and the needs of specific lane uses/truck routing. Changes to curb radii are subject to the discretion of the City engineer.

5.2.4 Future Bicycle Infrastructure

Currently there are two official planning documents which plan for bicycle infrastructure in the Santaquin area, MAG's TransPlan50 and the Southern Utah County Active Transportation Plan. MAG's plan includes the extension of bike facilities on Santaquin Main Street, the Highland Drive Trail and the Highline Canal Trail. The Southern County Active Transportation Plan also include facilities on 100 South, Center Street, 400 East, and a multi-use path along the eastern foothills. The planned bicycle infrastructure from these plans are shown in Figure 51.

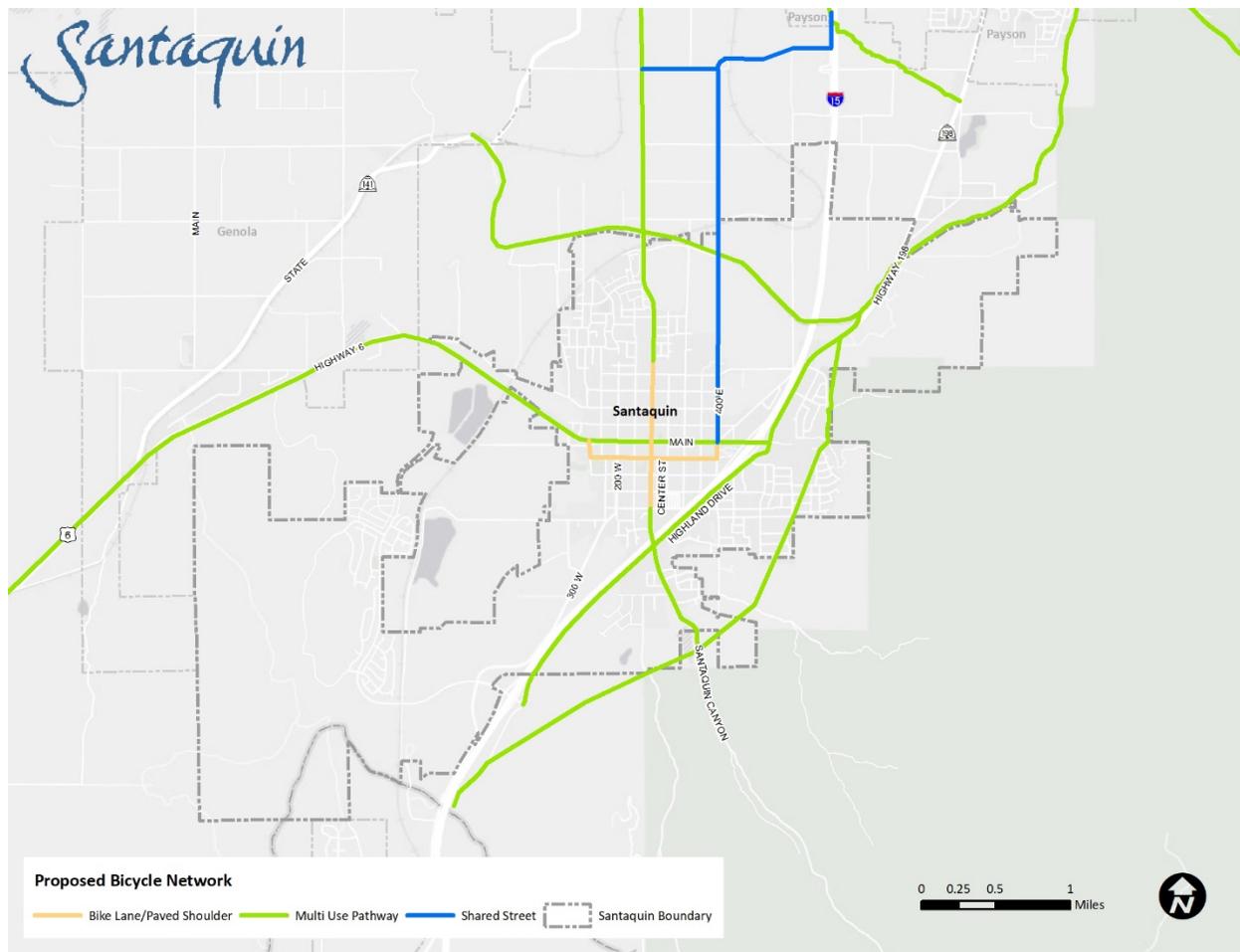


Figure 51. Planned Bicycle Infrastructure

5.2.5 Future Transit

Given Santaquin's geographic location and low population density, robust public transportation routing in Santaquin does not currently make sense. Current service provides transportation from Santaquin to job centers to the north, but as non-residential land uses develop, transit service that circulates people

within the City will begin to be more feasible. Transportation planning at the regional level has considered the extension of FrontRunner commuter rail south from Provo into Santaquin, and was a project in MAG's previous 2040 Regional Transportation Plan. Recently, in MAG's new TransPlan50 Regional Transportation Plan, commuter rail expansion is only planned to Payson. Figure 52 below shows the FrontRunner alignment and station location from MAG's 2040 RTP.

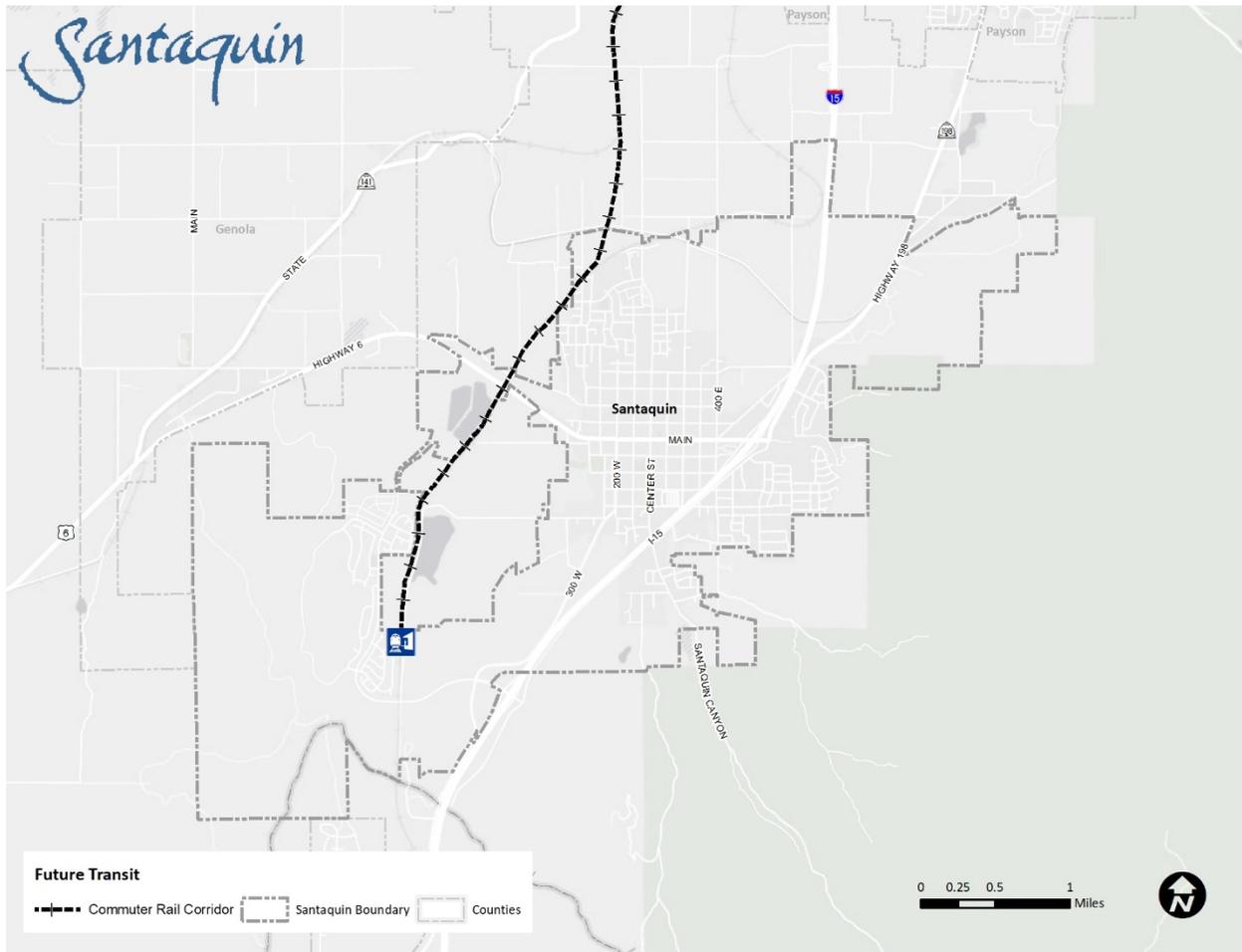


Figure 52. Potential Future FrontRunner

6. CAPITAL FACILITIES PLAN

The Capital Facilities Plan (CFP) identifies projects that are anticipated to be needed by a particular time and calculate a planning level cost estimate for each improvement. The recommended improvements are separated into Phase I (10 years, 2030), Phase II (20 years, 2040), and Phase III (30 years, 2050). These improvements are for collector streets and above. The CFP only includes projects that increase the capacity of the road network.

Figure 53, located below, is a map of the planned improvements by phase. Table 11 lists the projects by phase and includes the project length, improvement type, corresponding cross-section, and cost.

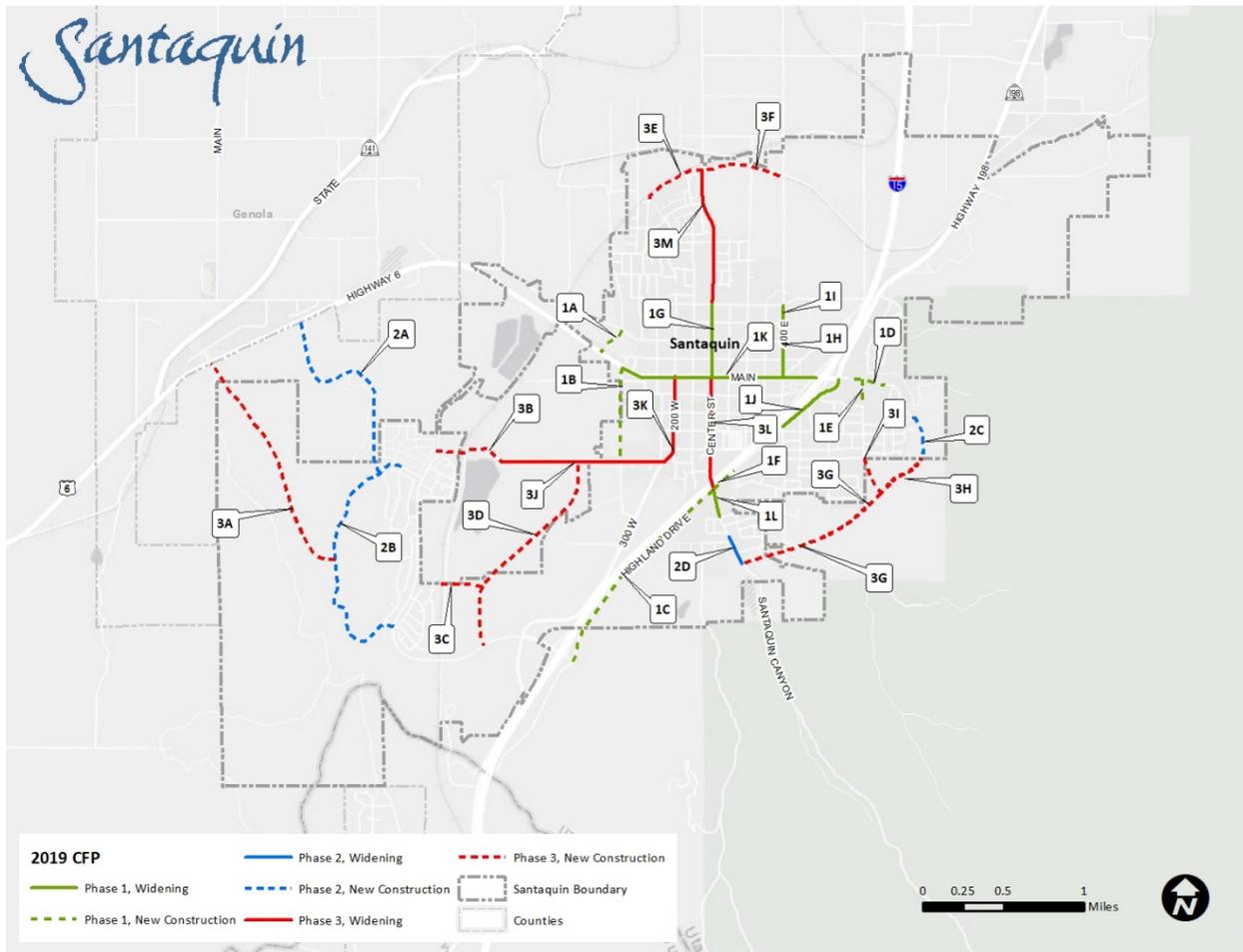


Figure 53. Capitol Facilities Plan by Phase

Table 11. Capital Facilities Plan

Phase 1

ID	NAME	FROM	TO	LENGTH (MI)	IMPROVEMENT TYPE	CROSS-SECTION	TOTAL COST (ROUNDED)
1A	600 West	Lark Road	U.S. 6	0.20	New Construction	3-Lane Collector	\$960,000
1B	500 West	U.S. 6	500 South	0.59	New Construction	3-Lane Collector	\$2,890,000
1C	Highland Drive 1	Center Street	Summit Ridge Parkway	1.41	New Construction	Highland	\$6,320,000
1D	East Main Street	HWY 198/ Highland Drive	1000 East	0.19	New Construction	3-Lane Collector	\$940,000
1E	900 East 1	Main Street	150 South	0.16	New Construction	Major Local	\$790,000
1F	Highland Drive 2	Canyon Road	120 East	0.18	Reconstruction	Highland	\$850,000
1G	Center Street 1	400 North	U.S. 6	0.46	Widening	Center Street	\$4,050,000
1H	400 East 1	200 North	U.S. 6	0.23	Widening	3-Lane Collector	\$600,000
1I	400 East 2	400 North	200 North	0.22	Widening	3-Lane Collector	\$1,360,000
1J	Highland Drive 3	400 East	Main Street	0.47	Widening	Highland	\$2,580,000
1K	US-6	I-15	500 West	1.20	Widening	Main Street	\$9,900,000
1L	Santaquin Canyon	I-15	780 South	0.17	Widening	3-Lane Collector	\$1,600,000

Phase 2

ID	NAME	FROM	TO	LENGTH (MI)	IMPROVEMENT TYPE	CROSS-SECTION	TOTAL COST (ROUNDED)
2A	West Road 1	U.S. 6	Mountain View Dr	1.34	New Construction	Major Local	\$6,530,000
2B	Mountain View Drive	Summit Trails	Summit Ridge Parkway	1.67	New Construction	Major Local	\$8,000,000
2C	East Boundary Road 1	250 South	City Boundary	0.28	New Construction	Major Local	\$1,360,000
2D	Santaquin Canyon	880 South	East City Boundary	0.19	Widening	3-Lane Collector	\$1,860,000

Phase 3

ID	NAME	FROM	TO	LENGTH (MI)	IMPROVEMENT TYPE	CROSS- SECTION	TOTAL COST (ROUNDED)
3A	West Road 2	U.S. 6	Mountain View Dr	1.50	New Construction	Major Local	\$7,180,000
3B	500 South 1	Summit Ridge Parkway	Summit Creek Reservoir	0.45	New Construction	3-Lane Collector	\$3,120,000
3C	Commuter Rail Connector	Harvest View Drive	Commuter Rail Station	0.26	New Construction	Major Local	\$1,250,000
3D	Road A1	Summit Ridge Parkway	500 South	1.39	New Construction	Major Local	\$6,700,000
3E	Ginger Gold Road	320 West	Center Street	0.40	New Construction	Major Local	\$1,940,000
3F	Ginger Gold Road	Center Street	400 East	0.52	New Construction	Major Local	\$2,550,000
3G	East Boundary Road 2	Canyon Road	900 East	0.99	New Construction	Major Local	\$8,700,000
3H	East Boundary Road 3	900 East	Oak Summit Drive	0.33	New Construction	Major Local	\$1,590,000
3I	900 East 2	450 South	East Boundary Road	0.25	New Construction	Major Local	\$1,210,000
3J	500 South 2	Summit Creek Reservoir	Highway 91	0.99	Widening	3-Lane Collector	\$6,890,000
3K	200 West	U.S. 6	500 South	0.56	Widening	3-Lane Collector	\$2,770,000
3L	Center Street 2	U.S. 6	Highland Drive	0.70	Widening	Center Street	\$15,480,000
3M	Center Street 3	Ginger Gold Road	400 North	0.84	Widening	Center Street	\$10,230,000

Appendix A

Additional Information

TAZ Projections

Roadway Cost Estimates

TAZ Projections

TAZ Projections

TAZ ID	MAG Projections						Santaquin Adjusted Values					
	Households			Employment			Households			Employment		
	2020	2030	2050	2020	2030	2050	2020	2030	2050	2020	2030	2050
2721	12	12	42	93	52	133	12	12	42	93	52	133
2722	7	64	173	13	813	1255	7	64	173	13	813	1255
2807	42	79	157	5	8	13	42	79	157	5	8	13
2808	9	63	169	96	57	241	9	63	169	96	57	241
2809	10	20	244	8	9	20	10	20	244	8	9	20
2810	4	5	88	8	8	63	4	5	88	8	8	63
2811	145	283	552	52	61	70	145	283	552	52	61	70
2812	209	239	256	157	753	1267	209	239	467	157	753	1267
2813	4	4	36	13	32	247	4	4	36	13	32	247
2814	14	23	33	14	5	147	14	23	33	14	5	147
2815	3	3	80	2	2	60	3	3	80	2	2	60
2816	6	7	237	8	8	92	6	7	237	8	8	92
2817	40	131	250	7	13	25	40	311	250	7	13	25
2818	63	155	442	48	83	42	63	155	442	48	83	42
2819	181	253	424	30	27	95	181	253	424	30	27	95
2820	229	243	328	129	212	461	229	243	328	129	212	461
2821	96	100	114	19	58	397	96	100	114	19	397	397
2822	243	252	346	165	322	809	243	252	346	165	322	809
2823	294	370	466	411	620	865	294	370	466	411	620	865
2824	353	422	983	104	152	156	353	422	983	104	152	156
2825	70	137	525	43	13	116	70	479	525	43	13	116
2826	196	206	290	251	284	446	196	280	290	251	284	446
2827	1	1	0	3	113	251	1	1	0	3	113	251
2828	0	17	133	23	5	23	0	17	133	23	5	23
2829	18	26	58	6	27	9	18	26	58	6	27	9
2830	20	118	560	81	11	46	20	118	560	81	11	46
2831	20	28	344	20	21	34	20	28	344	20	21	34
2832	108	108	229	38	66	179	108	108	229	38	66	179
2833	0	0	2	61	452	1621	0	0	2	61	452	1621
2834	4	33	488	215	860	1618	4	33	488	215	860	1618
2835	31	78	163	26	30	1684	31	78	163	26	30	1684
2836	86	218	447	60	134	224	86	558	447	60	134	224
2837	228	316	666	71	36	173	228	316	666	71	36	173
2838	238	345	817	40	173	67	238	345	817	40	173	67
2839	1	7	102	0	1	8	1	7	102	0	1	8

2840	301	607	1058	125	141	198	301	607	1058	125	141	198
2841	7	7	13	4	4	5	7	7	13	4	4	5
2842	52	77	93	7	8	37	52	77	93	7	8	37
2843	1	1	8	7	7	327	1	1	8	7	7	327
2844	1	1	91	12	11	19	1	1	91	12	11	19
2845	3	4	80	38	101	181	3	4	80	38	101	181
2846	0	3	307	10	9	215	0	3	307	10	9	215
2847	1	1	93	9	16	29	1	1	93	9	16	29
2848	1	2	179	5	5	46	1	2	179	5	5	46
2849	419	493	687	46	46	57	419	641	687	46	46	57
2850	191	211	370	47	46	64	191	227	370	47	46	64
2851	155	164	254	237	295	325	155	185	254	237	295	325

Roadway Cost Estimates

500/600 West					ID: 1A
From:		To:			
Lark Rd		US 6			
New 3-Lane Collector			Length of Project (Mi):		0.20
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$14,500	
MOBILIZATION	LUMP	1	5.0%	\$24,100	
BONDING	LUMP	1	2.5%	\$12,100	
TRAFFIC CONTROL	LUMP	1	0.2%	\$1,000	
SWPPP & BMPs	LUMP	1	1.0%	\$4,900	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,500	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP			\$0	
CLEARING AND GRUBBING	ACRE	1.45	\$1,000.00	\$1,449	
3-LANE COLLECTOR	MI	0.20	\$1,388,000	\$276,459	
STORM DRAIN SYSTEM	MI	0.20	\$450,000	\$89,630	
LANDSCAPING & FINISH ITEMS	LF	1100	\$100.00	\$110,000	
PERMANENT SIGNING	LF	1100	\$4.00	\$4,400	
				SUBTOTAL	
				\$541,038	
				CONTINGENCY (40%)	
				\$216,415	
				ROADWAY SUBTOTAL	
				\$757,453	
DESIGN/OTHER					
ENGINEERING			9%	\$68,171	
CONSTRUCTION ENGINEERING/MGMT			11%	\$83,320	
				DESIGN SUBTOTAL	
				\$151,491	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	1.45	\$25,000	\$36,214	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$5,432	
				RIGHT-OF-WAY SUBTOTAL	
				\$41,646	
				PROJECT SUBTOTAL	
				\$950,590	

Highland Drive					ID: 1C
From:		To:			
Center Street		Summit Ridge Rkwy			
New construction - Highland Dr Cross Section			Length of Project (Mi):		1.41
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$94,500	
MOBILIZATION	LUMP	1	5.0%	\$157,500	
BONDING	LUMP	1	2.5%	\$78,800	
TRAFFIC CONTROL	LUMP	1	0.1%	\$3,200	
SWPPP & BMPs	LUMP	1	1.0%	\$31,500	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$15,800	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP	1	1.0%	\$31,500	
CLEARING AND GRUBBING	ACRE	11.59	\$1,000.00	\$11,590	
HIGHLAND DRIVE CROSS SECTION	MI	1.41	\$1,226,600	\$1,724,712	
STORM DRAIN SYSTEM	MI	1.41	\$450,000	\$632,741	
LANDSCAPING & FINISH ITEMS	LF	7500	\$100.00	\$750,000	
PERMANENT SIGNING	LF	7500	\$4.00	\$30,000	
				SUBTOTAL	
				\$3,561,843	
				CONTINGENCY (40%)	
				\$1,424,737	
				ROADWAY SUBTOTAL	
				\$4,986,581	
DESIGN/OTHER					
ENGINEERING			9%	\$448,792	
CONSTRUCTION ENGINEERING/MGMT			11%	\$548,524	
				DESIGN SUBTOTAL	
				\$997,316	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	11.59	\$25,000	\$289,740	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$43,461	
				RIGHT-OF-WAY SUBTOTAL	
				\$333,201	
				PROJECT SUBTOTAL	
				\$6,317,098	

500 West					ID: 1B
From:		To:			
US 6		500 South			
New 3-Lane Collector			Length of Project (Mi):		0.59
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$42,600	
MOBILIZATION	LUMP	1	5.0%	\$70,900	
BONDING	LUMP	1	2.5%	\$35,500	
TRAFFIC CONTROL	LUMP	1	0.1%	\$1,500	
SWPPP & BMPs	LUMP	1	1.0%	\$14,200	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$7,100	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP	1	4.0%	\$56,800	
CLEARING AND GRUBBING	ACRE	4.28	\$1,000.00	\$4,277	
3-LANE COLLECTOR	MI	0.59	\$1,388,000	\$816,184	
STORM DRAIN SYSTEM	MI	0.59	\$450,000	\$264,613	
LANDSCAPING & FINISH ITEMS	LF	3200	\$100.00	\$320,000	
PERMANENT SIGNING	LF	3200	\$4.00	\$12,800	
				SUBTOTAL	
				\$1,646,474	
				CONTINGENCY (40%)	
				\$658,590	
				ROADWAY SUBTOTAL	
				\$2,305,063	
DESIGN/OTHER					
ENGINEERING			9%	\$207,456	
CONSTRUCTION ENGINEERING/MGMT			11%	\$253,557	
				DESIGN SUBTOTAL	
				\$461,013	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	4.28	\$25,000	\$106,914	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$16,037	
				RIGHT-OF-WAY SUBTOTAL	
				\$122,952	
				PROJECT SUBTOTAL	
				\$2,889,028	

Main Street					ID: 1D
From:		To:			
Maverik		Oak Summit Drive			
New 3-Lane Collector			Length of Project (Mi):		0.19
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$14,300	
MOBILIZATION	LUMP	1	5.0%	\$23,700	
BONDING	LUMP	1	2.5%	\$11,900	
TRAFFIC CONTROL	LUMP	1	0.3%	\$1,500	
SWPPP & BMPs	LUMP	1	1.0%	\$4,800	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,400	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP			\$0	
CLEARING AND GRUBBING	ACRE	1.42	\$1,000.00	\$1,416	
3-LANE COLLECTOR	MI	0.19	\$1,388,000	\$270,219	
STORM DRAIN SYSTEM	MI	0.19	\$450,000	\$87,607	
LANDSCAPING & FINISH ITEMS	LF	1100	\$100.00	\$110,000	
PERMANENT SIGNING	LF	1100	\$4.00	\$4,400	
				SUBTOTAL	
				\$532,241	
				CONTINGENCY (40%)	
				\$212,897	
				ROADWAY SUBTOTAL	
				\$745,138	
DESIGN/OTHER					
ENGINEERING			9%	\$67,062	
CONSTRUCTION ENGINEERING/MGMT			11%	\$81,965	
				DESIGN SUBTOTAL	
				\$149,028	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	1.42	\$25,000	\$35,397	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$5,310	
				RIGHT-OF-WAY SUBTOTAL	
				\$40,706	
				PROJECT SUBTOTAL	
				\$934,872	

900 East		ID: 1E		
From:	To:			
Main Street	150 South			
New Major Local		Length of Project (Mi):	0.16	
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$12,000
MOBILIZATION	LUMP	1	5.0%	\$19,900
BONDING	LUMP	1	2.5%	\$10,000
TRAFFIC CONTROL	LUMP	1	0.3%	\$1,200
SWPPP & BMPs	LUMP	1	1.0%	\$4,000
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,000
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP			\$0
CLEARING AND GRUBBING	ACRE	1.21	\$1,000.00	\$1,213
MAJOR LOCAL	MI	0.16	\$1,425,900	\$230,100
STORM DRAIN SYSTEM	MI	0.16	\$450,000	\$72,617
LANDSCAPING & FINISH ITEMS	LF	900	\$100.00	\$90,000
PERMANENT SIGNING	LF	900	\$4.00	\$3,600
SUBTOTAL				\$446,630
CONTINGENCY (40%)				\$178,652
ROADWAY SUBTOTAL				\$625,283
DESIGN/OTHER				
ENGINEERING			9%	\$56,275
CONSTRUCTION ENGINEERING/MGMT			11%	\$68,781
DESIGN SUBTOTAL				\$125,057
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	1.21	\$25,000	\$30,318
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$4,548
RIGHT-OF-WAY SUBTOTAL				\$34,866
PROJECT SUBTOTAL				\$785,205

Center Street		ID: 1G		
From:	To:			
400 North	US 6			
Widening - Center St Cross Section		Length of Project (Mi):	0.46	
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$40,100
MOBILIZATION	LUMP	1	5.0%	\$66,800
BONDING	LUMP	1	2.5%	\$33,400
TRAFFIC CONTROL	LUMP	1	1.5%	\$20,100
SWPPP & BMPs	LUMP	1	1.0%	\$13,400
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$6,700
UTILITY RELOCATIONS	LUMP	1	6.0%	\$80,200
REMOVALS	LUMP	1	7.0%	\$93,600
CLEARING AND GRUBBING	ACRE	1.2	\$1,000.00	\$1,164
CENTER STREET CROSS SECTION	MI	0.46	\$1,900,500	\$868,874
STORM DRAIN SYSTEM	MI	0.46	\$450,000	\$205,732
LANDSCAPING & FINISH ITEMS	LF	2500	\$100.00	\$250,000
PERMANENT SIGNING	LF	2500	\$4.00	\$10,000
SUBTOTAL				\$1,690,070
CONTINGENCY (40%)				\$676,028
ROADWAY SUBTOTAL				\$2,366,098
DESIGN/OTHER				
ENGINEERING			9%	\$212,949
CONSTRUCTION ENGINEERING/MGMT			11%	\$260,271
DESIGN SUBTOTAL				\$473,220
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	1.2	\$900,000	\$1,047,362
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$157,104
RIGHT-OF-WAY SUBTOTAL				\$1,204,467
PROJECT SUBTOTAL				\$4,043,784

Highland Drive		ID: 1F		
From:	To:			
Center Street	120 East			
Reconstruction - Highland Dr Cross Section		Length of Project (Mi):	0.18	
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$12,000
MOBILIZATION	LUMP	1	5.0%	\$20,000
BONDING	LUMP	1	2.5%	\$10,000
TRAFFIC CONTROL	LUMP	1	1.5%	\$6,000
SWPPP & BMPs	LUMP	1	1.0%	\$4,000
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,000
UTILITY RELOCATIONS	LUMP	1	6.0%	\$24,000
REMOVALS	LUMP	1	6.0%	\$24,000
CLEARING AND GRUBBING	ACRE	1.45	\$1,000.00	\$1,447
HIGHLAND DRIVE CROSS SECTION	MI	0.18	\$1,226,600	\$215,406
STORM DRAIN SYSTEM	MI	0.18	\$450,000	\$79,025
LANDSCAPING & FINISH ITEMS	LF	1000	\$100.00	\$100,000
PERMANENT SIGNING	LF	1000	\$4.00	\$4,000
SUBTOTAL				\$501,879
CONTINGENCY (40%)				\$200,751
ROADWAY SUBTOTAL				\$702,630
DESIGN/OTHER				
ENGINEERING			9%	\$63,237
CONSTRUCTION ENGINEERING/MGMT			11%	\$77,289
DESIGN SUBTOTAL				\$140,526
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$0
RIGHT-OF-WAY SUBTOTAL				\$0
PROJECT SUBTOTAL				\$843,156

400 East		ID: 1H		
From:	To:			
200 North	US 6			
Widening to 3-Lane Collector		Length of Project (Mi):	0.23	
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$8,700
MOBILIZATION	LUMP	1	5.0%	\$14,500
BONDING	LUMP	1	2.5%	\$7,300
TRAFFIC CONTROL	LUMP	1	0.2%	\$600
SWPPP & BMPs	LUMP	1	1.0%	\$2,900
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$1,500
UTILITY RELOCATIONS	LUMP	1	6.0%	\$17,400
REMOVALS	LUMP	1	4.0%	\$11,600
CLEARING AND GRUBBING	ACRE	0.51	\$2,000.00	\$1,019
3-LANE COLLECTOR	MI	0.12	\$1,388,000	\$162,120
STORM DRAIN SYSTEM	MI	0.12	\$450,000	\$52,560
LANDSCAPING & FINISH ITEMS	LF	700	\$100.00	\$70,000
PERMANENT SIGNING	LF	700	\$4.00	\$2,800
SUBTOTAL				\$353,000
CONTINGENCY (40%)				\$141,200
ROADWAY SUBTOTAL				\$494,199
DESIGN/OTHER				
ENGINEERING			9%	\$44,478
CONSTRUCTION ENGINEERING/MGMT			11%	\$54,362
DESIGN SUBTOTAL				\$98,840
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$0
RIGHT-OF-WAY SUBTOTAL				\$0
PROJECT SUBTOTAL				\$593,039

400 East		To:		ID: 1I	
From:		200 North			
400 North					
New 3-Lane Collector		Length of Project (Mi):		0.22	
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$15,900	
MOBILIZATION	LUMP	1	5.0%	\$26,400	
BONDING	LUMP	1	2.5%	\$13,200	
TRAFFIC CONTROL	LUMP	1	0.2%	\$1,100	
SWPPP & BMPs	LUMP	1	1.0%	\$5,300	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,700	
UTILITY RELOCATIONS	LUMP	1	6.0%	\$31,700	
REMOVALS	LUMP	1	4.0%	\$21,100	
CLEARING AND GRUBBING	ACRE	0.95	\$2,000.00	\$1,903	
3-LANE COLLECTOR	MI	0.22	\$1,388,000	\$302,641	
STORM DRAIN SYSTEM	MI	0.22	\$450,000	\$98,118	
LANDSCAPING & FINISH ITEMS	LF	1200	\$100.00	\$120,000	
PERMANENT SIGNING	LF	1200	\$4.00	\$4,800	
				SUBTOTAL	
				CONTINGENCY (40%)	
				ROADWAY SUBTOTAL	
DESIGN/OTHER					
ENGINEERING			9%	\$81,253	
CONSTRUCTION ENGINEERING/MGMT			11%	\$99,309	
				DESIGN SUBTOTAL	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE		\$25,000	\$0	
DEVELOPED	ACRE	0.26	\$900,000	\$237,863	
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$35,679	
				RIGHT-OF-WAY SUBTOTAL	
				PROJECT SUBTOTAL	

West Road 1		To:		ID: 2A	
From:		Mountain View Dr			
US 6					
New Major Local		Length of Project (Mi):		1.34	
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$97,700	
MOBILIZATION	LUMP	1	5.0%	\$162,800	
BONDING	LUMP	1	2.5%	\$81,400	
TRAFFIC CONTROL	LUMP	1	0.1%	\$3,300	
SWPPP & BMPs	LUMP	1	1.0%	\$32,600	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$16,300	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP	1	2.0%	\$65,200	
CLEARING AND GRUBBING	ACRE	10.04	\$1,000.00	\$10,044	
MAJOR LOCAL	MI	1.34	\$1,425,900	\$1,905,764	
STORM DRAIN SYSTEM	MI	1.34	\$450,000	\$601,440	
LANDSCAPING & FINISH ITEMS	LF	7100	\$100.00	\$710,000	
PERMANENT SIGNING	LF	7100	\$4.00	\$28,400	
				SUBTOTAL	
				CONTINGENCY (40%)	
				ROADWAY SUBTOTAL	
DESIGN/OTHER					
ENGINEERING			9%	\$468,083	
CONSTRUCTION ENGINEERING/MGMT			11%	\$572,102	
				DESIGN SUBTOTAL	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	10.04	\$25,000	\$251,106	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$37,666	
				RIGHT-OF-WAY SUBTOTAL	
				PROJECT SUBTOTAL	

Highland Drive		To:		ID: 1J	
From:		Main Street			
400 East					
Widening - Highland Dr Cross Section		Length of Project (Mi):		0.47	
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$36,700	
MOBILIZATION	LUMP	1	5.0%	\$61,200	
BONDING	LUMP	1	2.5%	\$30,600	
TRAFFIC CONTROL	LUMP	1	1.5%	\$18,400	
SWPPP & BMPs	LUMP	1	1.0%	\$12,300	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$6,200	
UTILITY RELOCATIONS	LUMP	1	6.0%	\$73,400	
REMOVALS	LUMP	1	6.0%	\$73,400	
CLEARING AND GRUBBING	ACRE	3.85	\$1,000.00	\$3,851	
HIGHLAND DRIVE CROSS SECTION	MI	0.47	\$1,226,600	\$573,022	
STORM DRAIN SYSTEM	MI	0.47	\$450,000	\$210,223	
LANDSCAPING & FINISH ITEMS	LF	2500	\$100.00	\$250,000	
PERMANENT SIGNING	LF	2500	\$4.00	\$10,000	
SIGNAL MODIFICATIONS	EACH	1	\$175,000.00	\$175,000	
				SUBTOTAL	
				CONTINGENCY (40%)	
				ROADWAY SUBTOTAL	
DESIGN/OTHER					
ENGINEERING			9%	\$193,321	
CONSTRUCTION ENGINEERING/MGMT			11%	\$236,282	
				DESIGN SUBTOTAL	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE		\$25,000	\$0	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$0	
				RIGHT-OF-WAY SUBTOTAL	
				PROJECT SUBTOTAL	

MountainView Dr		To:		ID: 2B	
From:		Summit Ridge Pkwy (So.)			
Summit Ridge Pkwy (No.)					
New Major Local		Length of Project (Mi):		1.67	
Description	Unit	Quantity	Unit Cost	Estimated Cost	
ROADWAY					
SURVEY	LUMP	1	3.0%	\$121,600	
MOBILIZATION	LUMP	1	5.0%	\$202,600	
BONDING	LUMP	1	2.5%	\$101,300	
TRAFFIC CONTROL	LUMP	1	0.1%	\$4,100	
SWPPP & BMPs	LUMP	1	1.0%	\$40,600	
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$20,300	
UTILITY RELOCATIONS	LUMP			\$0	
REMOVALS	LUMP	1	0.1%	\$4,100	
CLEARING AND GRUBBING	ACRE	12.52	\$1,000.00	\$12,515	
MAJOR LOCAL	MI	1.67	\$1,425,900	\$2,374,635	
STORM DRAIN SYSTEM	MI	1.67	\$450,000	\$749,412	
LANDSCAPING & FINISH ITEMS	LF	8800	\$100.00	\$880,000	
PERMANENT SIGNING	LF	8800	\$4.00	\$35,200	
				SUBTOTAL	
				CONTINGENCY (40%)	
				ROADWAY SUBTOTAL	
DESIGN/OTHER					
ENGINEERING			9%	\$572,842	
CONSTRUCTION ENGINEERING/MGMT			11%	\$700,140	
				DESIGN SUBTOTAL	
RIGHT-OF-WAY					
UNDEVELOPED	ACRE	12.52	\$25,000	\$312,886	
DEVELOPED	ACRE		\$900,000		
RESIDENTIAL RELOCATIONS	EACH				
BUSINESS RELOCATIONS	EACH				
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$46,933	
				RIGHT-OF-WAY SUBTOTAL	
				PROJECT SUBTOTAL	

East Boundary Road		ID: 2C		
From:	To:			
250 South	City Boundary			
New Major Local	Length of Project (Mi):	0.28		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$20,700
MOBILIZATION	LUMP	1	5.0%	\$34,500
BONDING	LUMP	1	2.5%	\$17,300
TRAFFIC CONTROL	LUMP	1	0.1%	\$700
SWPPP & BMPs	LUMP	1	1.0%	\$6,900
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$3,500
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1	0.1%	\$700
CLEARING AND GRUBBING	ACRE	2.12	\$1,000.00	\$2,124
MAJOR LOCAL	MI	0.28	\$1,425,900	\$402,942
STORM DRAIN SYSTEM	MI	0.28	\$450,000	\$127,165
LANDSCAPING & FINISH ITEMS	LF	1500	\$100.00	\$150,000
PERMANENT SIGNING	LF	1500	\$4.00	\$6,000
SUBTOTAL				\$772,531
CONTINGENCY (40%)				\$309,012
ROADWAY SUBTOTAL				\$1,081,543
DESIGN/OTHER				
ENGINEERING			9%	\$97,339
CONSTRUCTION ENGINEERING/MGMT			11%	\$118,970
DESIGN SUBTOTAL				\$216,309
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	2.12	\$25,000	\$53,092
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$7,964
RIGHT-OF-WAY SUBTOTAL				\$61,056
PROJECT SUBTOTAL				\$1,358,907

Santaquin Canyon		ID: 2E		
From:	To:			
I-15	780 South			
Widening to 3-Lane Collector	Length of Project (Mi):	0.17		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$12,700
MOBILIZATION	LUMP	1	5.0%	\$21,100
BONDING	LUMP	1	2.5%	\$10,600
TRAFFIC CONTROL	LUMP	1	0.2%	\$900
SWPPP & BMPs	LUMP	1	1.0%	\$4,300
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,200
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1	4.0%	\$16,900
CLEARING AND GRUBBING	ACRE	0.75	\$1,000.00	\$751
3-LANE COLLECTOR	MI	0.17	\$1,388,000	\$238,815
STORM DRAIN SYSTEM	MI	0.17	\$450,000	\$77,426
LANDSCAPING & FINISH ITEMS	LF	1000	\$100.00	\$100,000
PERMANENT SIGNING	LF	1000	\$4.00	\$4,000
SUBTOTAL				\$489,692
CONTINGENCY (40%)				\$195,877
ROADWAY SUBTOTAL				\$685,568
DESIGN/OTHER				
ENGINEERING			9%	\$61,701
CONSTRUCTION ENGINEERING/MGMT			11%	\$75,413
DESIGN SUBTOTAL				\$137,114
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	0.75	\$900,000	\$675,715
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$101,357
RIGHT-OF-WAY SUBTOTAL				\$777,072
PROJECT SUBTOTAL				\$1,599,754

Highway 91		ID: 2D		
From:	To:			
500 South	Summit Ridge Development			
Widening to 3-Lane Collector	Length of Project (Mi):	1.15		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$82,400
MOBILIZATION	LUMP	1	5.0%	\$137,300
BONDING	LUMP	1	2.5%	\$68,700
TRAFFIC CONTROL	LUMP	1	0.2%	\$5,500
SWPPP & BMPs	LUMP	1	1.0%	\$27,500
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$13,800
UTILITY RELOCATIONS	LUMP	1	6.0%	\$164,700
REMOVALS	LUMP	1	4.0%	\$109,800
CLEARING AND GRUBBING	ACRE	5.00	\$1,000.00	\$4,998
3-LANE COLLECTOR	MI	1.15	\$1,388,000	\$1,589,904
STORM DRAIN SYSTEM	MI	1.15	\$450,000	\$515,459
LANDSCAPING & FINISH ITEMS	LF	6100	\$100.00	\$610,000
PERMANENT SIGNING	LF	6100	\$4.00	\$24,400
SUBTOTAL				\$3,354,461
CONTINGENCY (40%)				\$1,341,784
ROADWAY SUBTOTAL				\$4,696,246
DESIGN/OTHER				
ENGINEERING			9%	\$422,662
CONSTRUCTION ENGINEERING/MGMT			11%	\$516,587
DESIGN SUBTOTAL				\$939,249
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE		\$900,000	\$0
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$0
RIGHT-OF-WAY SUBTOTAL				\$0
PROJECT SUBTOTAL				\$5,635,495

Santaquin Canyon		ID: 2F		
From:	To:			
880 South	East City Boundary			
Widening to 3-Lane Collector	Length of Project (Mi):	0.19		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$13,500
MOBILIZATION	LUMP	1	5.0%	\$22,500
BONDING	LUMP	1	2.5%	\$11,300
TRAFFIC CONTROL	LUMP	1	0.2%	\$900
SWPPP & BMPs	LUMP	1	1.0%	\$4,500
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$2,300
UTILITY RELOCATIONS	LUMP	1	6.0%	\$27,000
REMOVALS	LUMP	1	4.0%	\$18,000
CLEARING AND GRUBBING	ACRE	0.91	\$1,000.00	\$906
3-LANE COLLECTOR	MI	0.19	\$1,388,000	\$259,378
STORM DRAIN SYSTEM	MI	0.19	\$450,000	\$84,092
LANDSCAPING & FINISH ITEMS	LF	1000	\$100.00	\$100,000
PERMANENT SIGNING	LF	1000	\$4.00	\$4,000
SUBTOTAL				\$548,377
CONTINGENCY (40%)				\$219,351
ROADWAY SUBTOTAL				\$767,727
DESIGN/OTHER				
ENGINEERING			9%	\$69,095
CONSTRUCTION ENGINEERING/MGMT			11%	\$84,450
DESIGN SUBTOTAL				\$153,545
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	0.91	\$900,000	\$815,441
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$122,316
RIGHT-OF-WAY SUBTOTAL				\$937,758
PROJECT SUBTOTAL				\$1,859,031

West Road 2		ID: 3A		
From:	To:			
US 6	Mountain View Dr			
New Major Local	Length of Project (Mi):	1.50		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$109,200
MOBILIZATION	LUMP	1	5.0%	\$181,900
BONDING	LUMP	1	2.5%	\$91,000
TRAFFIC CONTROL	LUMP	1	0.1%	\$3,700
SWPPP & BMPs	LUMP	1	1.0%	\$36,400
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$18,200
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP			\$0
CLEARING AND GRUBBING	ACRE	11.24	\$1,000.00	\$11,237
MAJOR LOCAL	MI	1.50	\$1,425,900	\$2,131,983
STORM DRAIN SYSTEM	MI	1.50	\$450,000	\$672,833
LANDSCAPING & FINISH ITEMS	LF	7900	\$100.00	\$790,000
PERMANENT SIGNING	LF	7900	\$4.00	\$31,600
SUBTOTAL				\$4,078,052
CONTINGENCY (40%)				\$1,631,221
ROADWAY SUBTOTAL				\$5,709,273
DESIGN/OTHER				
ENGINEERING			9%	\$513,835
CONSTRUCTION ENGINEERING/MGMT			11%	\$628,020
DESIGN SUBTOTAL				\$1,141,855
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	11.24	\$25,000	\$280,913
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$42,137
RIGHT-OF-WAY SUBTOTAL				\$323,050
PROJECT SUBTOTAL				\$7,174,178

Commuter Rail Connector		ID: 3C		
From:	To:			
Road A1	Commuter Rail Station			
New Major Local	Length of Project (Mi):	0.26		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$19,000
MOBILIZATION	LUMP	1	5.0%	\$31,700
BONDING	LUMP	1	2.5%	\$15,900
TRAFFIC CONTROL	LUMP	1	0.1%	\$700
SWPPP & BMPs	LUMP	1	1.0%	\$6,400
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$3,200
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP			\$0
CLEARING AND GRUBBING	ACRE	1.94	\$1,000.00	\$1,942
MAJOR LOCAL	MI	0.26	\$1,425,900	\$368,468
STORM DRAIN SYSTEM	MI	0.26	\$450,000	\$116,285
LANDSCAPING & FINISH ITEMS	LF	1400	\$100.00	\$140,000
PERMANENT SIGNING	LF	1400	\$4.00	\$5,600
SUBTOTAL				\$709,195
CONTINGENCY (40%)				\$283,678
ROADWAY SUBTOTAL				\$992,873
DESIGN/OTHER				
ENGINEERING			9%	\$89,359
CONSTRUCTION ENGINEERING/MGMT			11%	\$109,216
DESIGN SUBTOTAL				\$198,575
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	1.94	\$25,000	\$48,550
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$7,282
RIGHT-OF-WAY SUBTOTAL				\$55,832
PROJECT SUBTOTAL				\$1,247,280

500 South		ID: 3B		
From:	To:			
300 West	Summit Creek Reservoir			
New 3-Lane Collector	Length of Project (Mi):	0.45		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$47,700
MOBILIZATION	LUMP	1	5.0%	\$79,400
BONDING	LUMP	1	2.5%	\$39,700
TRAFFIC CONTROL	LUMP	1	0.1%	\$1,600
SWPPP & BMPs	LUMP	1	1.0%	\$15,900
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$8,000
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1	1.0%	\$15,900
CLEARING AND GRUBBING	ACRE	3.30	\$1,000.00	\$3,301
3-LANE COLLECTOR	MI	0.45	\$1,388,000	\$630,056
STORM DRAIN SYSTEM	MI	0.45	\$450,000	\$204,269
LANDSCAPING & FINISH ITEMS	LF	2400	\$100.00	\$240,000
PERMANENT SIGNING	LF	2400	\$4.00	\$9,600
RAILROAD CROSSING	EACH	1	\$500,000.00	\$500,000
SUBTOTAL				\$1,795,426
CONTINGENCY (40%)				\$718,171
ROADWAY SUBTOTAL				\$2,513,597
DESIGN/OTHER				
ENGINEERING			9%	\$226,224
CONSTRUCTION ENGINEERING/MGMT			11%	\$276,496
DESIGN SUBTOTAL				\$502,719
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	3.30	\$25,000	\$82,533
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$12,380
RIGHT-OF-WAY SUBTOTAL				\$94,913
PROJECT SUBTOTAL				\$3,111,229

Road A1		ID: 3D		
From:	To:			
Summit Ridge	500 South			
New Major Local	Length of Project (Mi):	1.39		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$101,900
MOBILIZATION	LUMP	1	5.0%	\$169,800
BONDING	LUMP	1	2.5%	\$84,900
TRAFFIC CONTROL	LUMP	1	0.1%	\$3,400
SWPPP & BMPs	LUMP	1	1.0%	\$34,000
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$17,000
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP			\$0
CLEARING AND GRUBBING	ACRE	10.48	\$1,000.00	\$10,479
MAJOR LOCAL	MI	1.39	\$1,425,900	\$1,988,341
STORM DRAIN SYSTEM	MI	1.39	\$450,000	\$627,501
LANDSCAPING & FINISH ITEMS	LF	7400	\$100.00	\$740,000
PERMANENT SIGNING	LF	7400	\$4.00	\$29,600
SUBTOTAL				\$3,806,921
CONTINGENCY (40%)				\$1,522,768
ROADWAY SUBTOTAL				\$5,329,689
DESIGN/OTHER				
ENGINEERING			9%	\$479,672
CONSTRUCTION ENGINEERING/MGMT			11%	\$586,266
DESIGN SUBTOTAL				\$1,065,938
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	10.48	\$25,000	\$261,987
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$39,298
RIGHT-OF-WAY SUBTOTAL				\$301,285
PROJECT SUBTOTAL				\$6,696,912

Ginger Gold Rd		ID: 3E		
From:	To:			
13000 South	Center Street			
New Major Local	Length of Project (Mi):	0.40		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$29,000
MOBILIZATION	LUMP	1	5.0%	\$48,200
BONDING	LUMP	1	2.5%	\$24,100
TRAFFIC CONTROL	LUMP	1	0.1%	\$1,000
SWPPP & BMPs	LUMP	1	1.0%	\$9,700
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$4,900
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1	2.0%	\$19,300
CLEARING AND GRUBBING	ACRE	2.97	\$1,000.00	\$2,975
MAJOR LOCAL	MI	0.40	\$1,425,900	\$564,444
STORM DRAIN SYSTEM	MI	0.40	\$450,000	\$178,133
LANDSCAPING & FINISH ITEMS	LF	2100	\$100.00	\$210,000
PERMANENT SIGNING	LF	2100	\$4.00	\$8,400
SUBTOTAL				\$1,100,152
CONTINGENCY (40%)				\$440,061
ROADWAY SUBTOTAL				\$1,540,212
DESIGN/OTHER				
ENGINEERING			9%	\$138,619
CONSTRUCTION ENGINEERING/MGMT			11%	\$169,423
DESIGN SUBTOTAL				\$308,042
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	2.97	\$25,000	\$74,372
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$11,156
RIGHT-OF-WAY SUBTOTAL				\$85,528
PROJECT SUBTOTAL				\$1,933,783

East Boundary Road		ID: 3G		
From:	To:			
Santaquin Canyon	900 East			
New Major Local	Length of Project (Mi):	0.99		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$72,500
MOBILIZATION	LUMP	1	5.0%	\$120,700
BONDING	LUMP	1	2.5%	\$60,400
TRAFFIC CONTROL	LUMP	1	0.1%	\$2,500
SWPPP & BMPs	LUMP	1	1.0%	\$24,200
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$12,100
UTILITY RELOCATIONS	LUMP	1	4.0%	\$96,600
REMOVALS	LUMP	1	8.0%	\$193,100
CLEARING AND GRUBBING	ACRE	7.43	\$1,000.00	\$7,431
MAJOR LOCAL	MI	0.99	\$1,425,900	\$1,409,968
STORM DRAIN SYSTEM	MI	0.99	\$450,000	\$444,972
LANDSCAPING & FINISH ITEMS	LF	5300	\$100.00	\$530,000
PERMANENT SIGNING	LF	5300	\$4.00	\$21,200
SUBTOTAL				\$2,995,672
CONTINGENCY (40%)				\$1,198,269
ROADWAY SUBTOTAL				\$4,193,940
DESIGN/OTHER				
ENGINEERING			9%	\$377,455
CONSTRUCTION ENGINEERING/MGMT			11%	\$461,333
DESIGN SUBTOTAL				\$838,788
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	7.43	\$25,000	\$185,780
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH	1	\$3,000,000	\$3,000,000
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$477,867
RIGHT-OF-WAY SUBTOTAL				\$3,663,647
PROJECT SUBTOTAL				\$8,696,375

Ginger Gold Rd		ID: 3F		
From:	To:			
Center Street	400 East			
New Major Local	Length of Project (Mi):	0.52		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$38,300
MOBILIZATION	LUMP	1	5.0%	\$63,700
BONDING	LUMP	1	2.5%	\$31,900
TRAFFIC CONTROL	LUMP	1	0.1%	\$1,300
SWPPP & BMPs	LUMP	1	1.0%	\$12,800
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$6,400
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1	1.5%	\$19,200
CLEARING AND GRUBBING	ACRE	3.92	\$1,000.00	\$3,920
MAJOR LOCAL	MI	0.52	\$1,425,900	\$743,781
STORM DRAIN SYSTEM	MI	0.52	\$450,000	\$234,730
LANDSCAPING & FINISH ITEMS	LF	2800	\$100.00	\$280,000
PERMANENT SIGNING	LF	2800	\$4.00	\$11,200
SUBTOTAL				\$1,447,231
CONTINGENCY (40%)				\$578,892
ROADWAY SUBTOTAL				\$2,026,123
DESIGN/OTHER				
ENGINEERING			9%	\$182,351
CONSTRUCTION ENGINEERING/MGMT			11%	\$222,874
DESIGN SUBTOTAL				\$405,225
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	3.92	\$25,000	\$98,002
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$14,700
RIGHT-OF-WAY SUBTOTAL				\$112,702
PROJECT SUBTOTAL				\$2,544,050

East Boundary Road		ID: 3H		
From:	To:			
900 East	City Boundary			
New Major Local	Length of Project (Mi):	0.33		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$24,100
MOBILIZATION	LUMP	1	5.0%	\$40,200
BONDING	LUMP	1	2.5%	\$20,100
TRAFFIC CONTROL	LUMP	1	0.1%	\$900
SWPPP & BMPs	LUMP	1	1.0%	\$8,100
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$4,100
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP	1		\$0
CLEARING AND GRUBBING	ACRE	2.45	\$1,000.00	\$2,455
MAJOR LOCAL	MI	0.33	\$1,425,900	\$465,767
STORM DRAIN SYSTEM	MI	0.33	\$450,000	\$146,992
LANDSCAPING & FINISH ITEMS	LF	1800	\$100.00	\$180,000
PERMANENT SIGNING	LF	1800	\$4.00	\$7,200
SUBTOTAL				\$899,914
CONTINGENCY (40%)				\$359,966
ROADWAY SUBTOTAL				\$1,259,879
DESIGN/OTHER				
ENGINEERING			9%	\$113,389
CONSTRUCTION ENGINEERING/MGMT			11%	\$138,587
DESIGN SUBTOTAL				\$251,976
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	2.45	\$25,000	\$61,370
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$9,206
RIGHT-OF-WAY SUBTOTAL				\$70,576
PROJECT SUBTOTAL				\$1,582,431

900 East		ID: 3I		
From:	To:			
450 South	East South Boundary			
New Major Local	Length of Project (Mi):	0.25		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$18,400
MOBILIZATION	LUMP	1	5.0%	\$30,600
BONDING	LUMP	1	2.5%	\$15,300
TRAFFIC CONTROL	LUMP	1	0.1%	\$700
SWPPP & BMPs	LUMP	1	1.0%	\$6,200
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$3,100
UTILITY RELOCATIONS	LUMP			\$0
REMOVALS	LUMP			\$0
CLEARING AND GRUBBING	ACRE	1.85	\$1,000.00	\$1,853
MAJOR LOCAL	MI	0.25	\$1,425,900	\$351,613
STORM DRAIN SYSTEM	MI	0.25	\$450,000	\$110,966
LANDSCAPING & FINISH ITEMS	LF	1400	\$100.00	\$140,000
PERMANENT SIGNING	LF	1400	\$4.00	\$5,600
SUBTOTAL				\$684,331
CONTINGENCY (40%)				\$273,733
ROADWAY SUBTOTAL				\$958,064
DESIGN/OTHER				
ENGINEERING			9%	\$86,226
CONSTRUCTION ENGINEERING/MGMT			11%	\$105,387
DESIGN SUBTOTAL				\$191,613
RIGHT-OF-WAY				
UNDEVELOPED	ACRE	1.85	\$25,000	\$46,329
DEVELOPED	ACRE		\$900,000	
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$6,949
RIGHT-OF-WAY SUBTOTAL				\$53,278
PROJECT SUBTOTAL				\$1,202,955

200 West		ID: 3K		
From:	To:			
US 6	500 South			
Widening to 3-Lane Collector	Length of Project (Mi):	0.56		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$40,400
MOBILIZATION	LUMP	1	5.0%	\$67,300
BONDING	LUMP	1	2.5%	\$33,700
TRAFFIC CONTROL	LUMP	1	0.2%	\$2,700
SWPPP & BMPs	LUMP	1	1.0%	\$13,500
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$6,800
UTILITY RELOCATIONS	LUMP	1	4.0%	\$53,800
REMOVALS	LUMP	1	6.0%	\$80,700
CLEARING AND GRUBBING	ACRE	2.31	\$1,000	\$2,309
3-LANE COLLECTOR	MI	0.56	\$1,388,000	\$777,727
STORM DRAIN SYSTEM	MI	0.56	\$450,000	\$252,145
LANDSCAPING & FINISH ITEMS	LF	3000	\$100.00	\$300,000
PERMANENT SIGNING	LF	3000	\$4.00	\$12,000
SUBTOTAL				\$1,643,081
CONTINGENCY (40%)				\$657,232
ROADWAY SUBTOTAL				\$2,300,313
DESIGN/OTHER				
ENGINEERING			9%	\$207,028
CONSTRUCTION ENGINEERING/MGMT			11%	\$253,034
DESIGN SUBTOTAL				\$460,063
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	0.00	\$900,000	\$0
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$0
RIGHT-OF-WAY SUBTOTAL				\$0
PROJECT SUBTOTAL				\$2,760,376

500 South		ID: 3J		
From:	To:			
Summit Creek Reservoir	Highway 91			
Widening to 3-Lane Collector	Length of Project (Mi):	0.99		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$71,600
MOBILIZATION	LUMP	1	5.0%	\$119,300
BONDING	LUMP	1	2.5%	\$59,700
TRAFFIC CONTROL	LUMP	1	0.2%	\$4,800
SWPPP & BMPs	LUMP	1	1.0%	\$23,900
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$12,000
UTILITY RELOCATIONS	LUMP	1	8.0%	\$190,900
REMOVALS	LUMP	1	5.0%	\$119,300
CLEARING AND GRUBBING	ACRE	4.81	\$2,000.00	\$9,629
3-LANE COLLECTOR	MI	0.99	\$1,388,000	\$1,378,296
STORM DRAIN SYSTEM	MI	0.99	\$450,000	\$446,854
LANDSCAPING & FINISH ITEMS	LF	5300	\$100.00	\$530,000
PERMANENT SIGNING	LF	5300	\$4.00	\$21,200
SUBTOTAL				\$2,987,480
CONTINGENCY (40%)				\$1,194,992
ROADWAY SUBTOTAL				\$4,182,472
DESIGN/OTHER				
ENGINEERING			9%	\$376,422
CONSTRUCTION ENGINEERING/MGMT			11%	\$460,072
DESIGN SUBTOTAL				\$836,494
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	1.81	\$900,000	\$1,624,924
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$243,739
RIGHT-OF-WAY SUBTOTAL				\$1,868,662
PROJECT SUBTOTAL				\$6,887,628

Center Street		ID: 3L		
From:	To:			
US 6	I-15			
Widening - Center St Cross Section	Length of Project (Mi):	0.70		
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$162,300
MOBILIZATION	LUMP	1	5.0%	\$270,500
BONDING	LUMP	1	2.5%	\$135,300
TRAFFIC CONTROL	LUMP	1	2.0%	\$108,200
SWPPP & BMPs	LUMP	1	1.0%	\$54,100
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$27,100
UTILITY RELOCATIONS	LUMP	1	6.0%	\$324,600
REMOVALS	LUMP	1	12.0%	\$649,100
CLEARING AND GRUBBING	ACRE	3.0	\$1,000.00	\$2,972
CENTER STREET CROSS SECTION	MI	0.70	\$1,900,500	\$1,331,182
NEW BRIDGE/BIDGE WIDENING	SQ FT	22500	\$150	\$3,375,000
STORM DRAIN SYSTEM	MI	0.70	\$450,000	\$315,197
LANDSCAPING & FINISH ITEMS	LF	3700	\$100.00	\$370,000
PERMANENT SIGNING	LF	3700	\$4.00	\$14,800
SUBTOTAL				\$7,140,351
CONTINGENCY (40%)				\$2,856,140
ROADWAY SUBTOTAL				\$9,996,492
DESIGN/OTHER				
ENGINEERING			9%	\$899,684
CONSTRUCTION ENGINEERING/MGMT			15%	\$1,499,474
DESIGN SUBTOTAL				\$2,399,158
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	3.0	\$900,000	\$2,674,400
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$401,160
RIGHT-OF-WAY SUBTOTAL				\$3,075,560
PROJECT SUBTOTAL				\$15,471,209

Center Street		ID: 3M		
From:		To:		
Ginger Gold Road		400 North		
Widening - Center St Cross Section		Length of Project (Mi):		0.84
Description	Unit	Quantity	Unit Cost	Estimated Cost
ROADWAY				
SURVEY	LUMP	1	3.0%	\$73,500
MOBILIZATION	LUMP	1	5.0%	\$122,400
BONDING	LUMP	1	2.5%	\$61,200
TRAFFIC CONTROL	LUMP	1	2.0%	\$49,000
SWPPP & BMPs	LUMP	1	1.0%	\$24,500
DUST AND DEBRIS CONTROL	LUMP	1	0.5%	\$12,300
UTILITY RELOCATIONS	LUMP	1	6.0%	\$146,900
REMOVALS	LUMP	1	4.0%	\$98,000
CLEARING AND GRUBBING	ACRE	4.8	\$1,000	\$4,787
CENTER STREET CROSS SECTION	MI	0.84	\$1,900,500	\$1,596,798
STORM DRAIN SYSTEM	MI	0.84	\$450,000	\$378,090
LANDSCAPING & FINISH ITEMS	LF	4500	\$100.00	\$450,000
PERMANENT SIGNING	LF	4500	\$4.00	\$18,000
SUBTOTAL				\$3,035,474
CONTINGENCY (40%)				\$1,214,190
ROADWAY SUBTOTAL				\$4,249,664
DESIGN/OTHER				
ENGINEERING			9%	\$382,470
CONSTRUCTION ENGINEERING/MGMT			15%	\$637,450
DESIGN SUBTOTAL				\$1,019,919
RIGHT-OF-WAY				
UNDEVELOPED	ACRE		\$25,000	\$0
DEVELOPED	ACRE	4.8	\$900,000	\$4,307,929
RESIDENTIAL RELOCATIONS	EACH			
BUSINESS RELOCATIONS	EACH			
ROW ACQUISITION (MAPS, APPRAISALS, ETC)	LUMP		15%	\$646,189
RIGHT-OF-WAY SUBTOTAL				\$4,954,119
PROJECT SUBTOTAL				\$10,223,702