Appendix B

Long Range Transportation Plan

For

Morgan County

February, 2008

Morgan County

Long Range Transportation Plan

Table of Contents

Chapters

1. County Overview and Existing Conditions
2. Projected Future Needs
3. Evaluation Process
4. Evaluation of Individual Projects
5. Financial Assumptions
6. Recommendations

Appendix A—Summaries of Interviews with City and County Representatives

Appendix B—Definitions of the Levels of Service

Appendix C—North Morgan Transportation Study, 2004

Appendix D—Accident Data on State and Local Highways

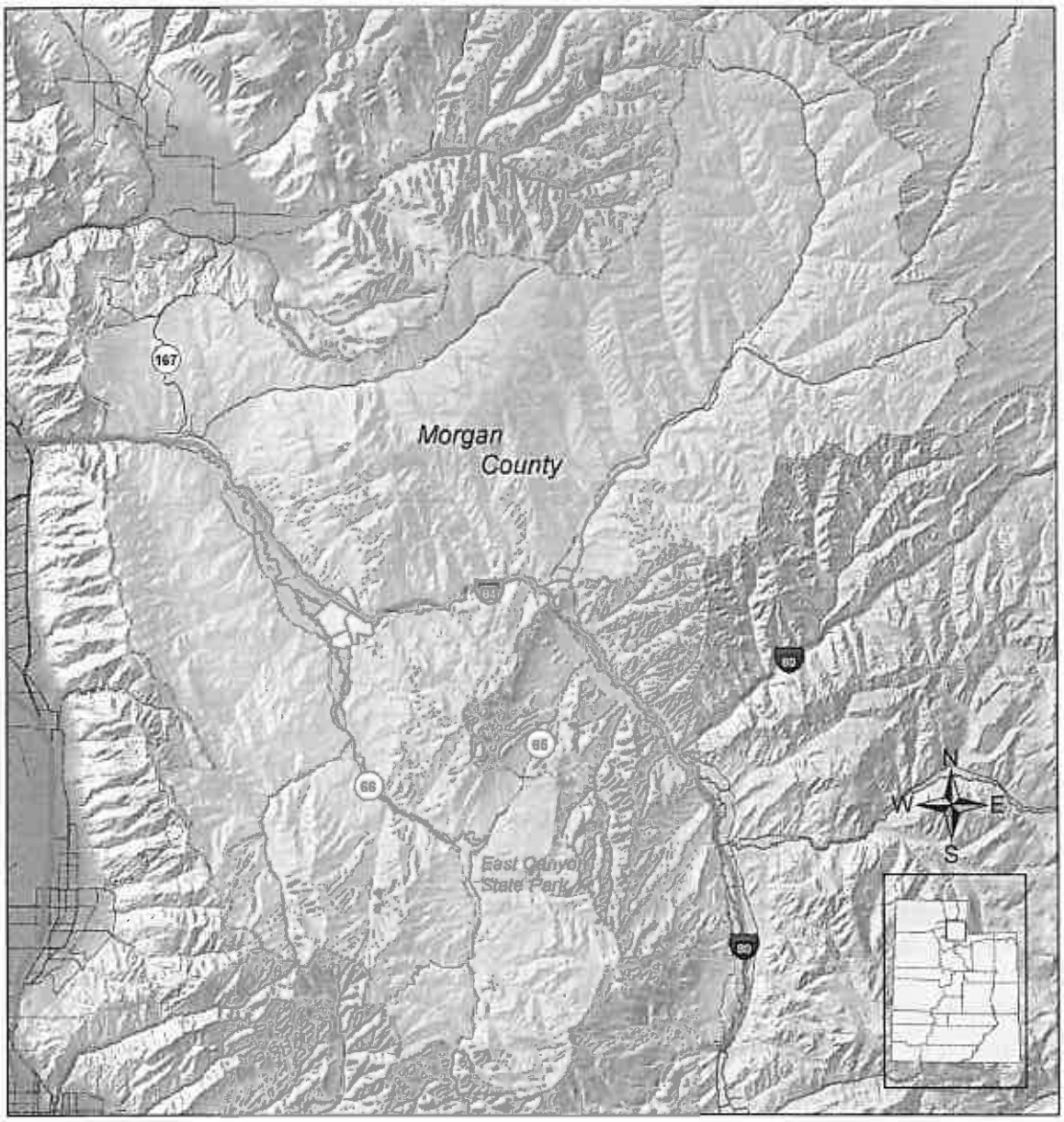
Appendix E—Major UDOT Highway Projects

CHAPTER 1

COUNTY OVERVIEW AND EXISTING CONDITIONS

Geography

Morgan County is a rural county in northern Utah, situated east of Weber County on the Wasatch Back (Map 1). With a land area of 610 square miles, it is the smallest county in Utah. The county seat is Morgan City, the only incorporated municipality in the county. Much of Morgan County is privately owned, with public ownership consisting of Forest Service and State Park land. East Canyon State Park lies at the southern end of the county, accessible on SR66 through Morgan City.



Map 1: Morgan County

Population

The Utah Population Estimates Committee (UPEC) estimates the July 1, 2007 population at 9,265, a 29% increase since the 2000 Census. Table 1 shows a demographic summary of the county from the 2000 Census. The county has a slightly higher median age than the state (28.5 vs. 27.1) and is less racially diverse (98.1% White vs. 89.2 % White). The Hispanic population, which is growing substantially in the state, makes up a lower percentage of the population (1.4% vs. 9.0%) than the state as a whole. Over 60% of workers in the county commute to another county for employment.

Table 1: Summary of General Demographic Characteristics-2000 Census

Subject	Number	Percent
Total population	7,129	100
SEX AND AGE		
Male	3,616	50.7
Female	3,513	49.3
Under 5 years	581	8.1
5 to 9 years	664	9.3
10 to 19 years	1695	23.8
20 to 44 years	2128	29.8
45 to 64 years	1441	20.2
65 to 84 years	561	7.9
85 years and over	59	0.8
Median age (years)	28.5	
RACE		
White	6,994	98.1
Hispanic or Latino (of any race)	103	1.4
Average household size	3.48	(X)
HOUSING OCCUPANCY		
Occupied housing units	2,046	94.8
Vacant housing units	112	5.2
For seasonal, recreational, or occasional use	54	2.5
WORKERS 16+	3,168	(X)
Work in County of Residence	1,217	38.4
Work in Other County, Same State	1,930	60.9

Employment

According to the Utah Department of Workforce Services (DWS), Morgan County has a 2006 non-farm employment of 1,867 employed at 285 establishments. Major employers, which include education, manufacturing, and services, are listed in Table 2 below.

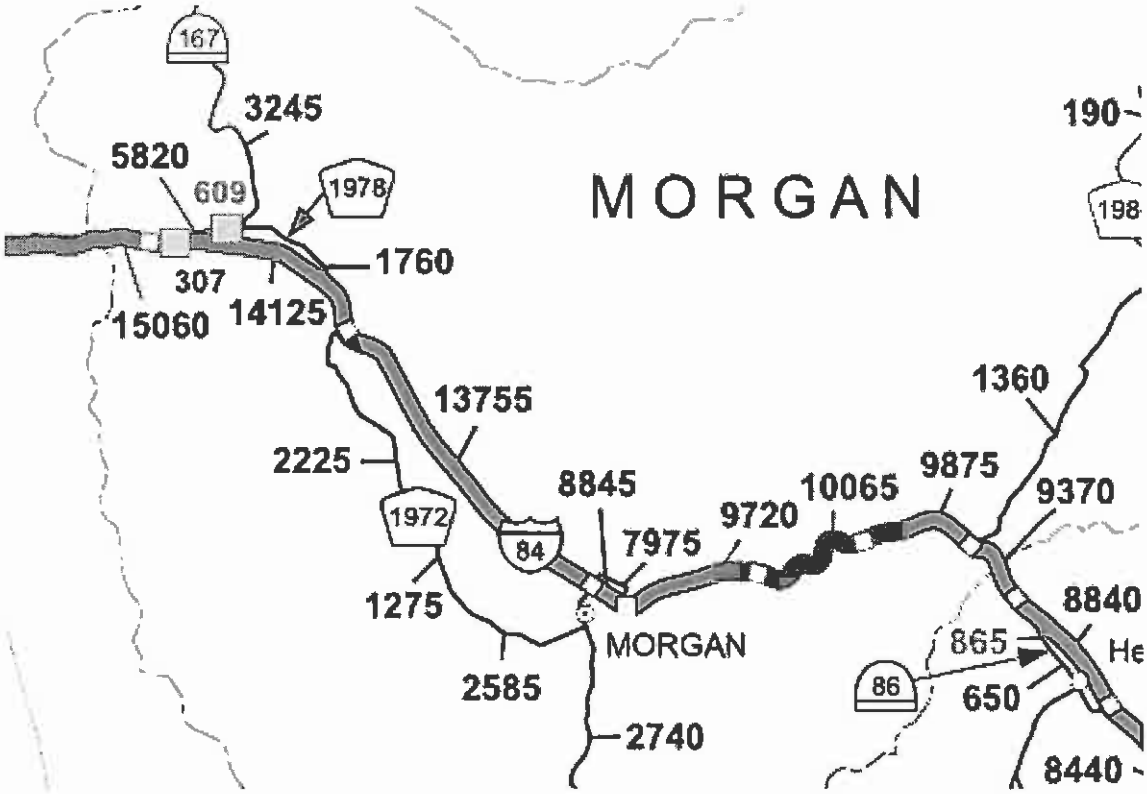
Table 2: Major Employers

Company	Industry	Employment
Morgan School District	Public Education	250-499
Browning	Sport & Athletic Equip. Mfg	100-249
Holcim US Inc	Cement Mfg.	100-249
Morgan County	Local Government	50-99
IGA Grocery	Grocery Store	50-99
Barber Brothers Ford Inc	Automobile Dealer	20-49
Browning Arms Company	Corporate Office	20-49
Durrant Slate Plumbing Inc	Residential Plumbing/HVAC	20-49
Larry's Spring Chicken Inn	Restaurant	20-49
Morgan Valley Food LLC	Grocery Store	20-49

Source: Utah DWS

Traffic

Map 2 shows the most current (2006) traffic information for state roads in Morgan County. As would be expected, the highest traffic volume is on I-84 with over 13,000 vehicles daily. Volumes in Morgan City are in the 2,500 daily vehicle range. With these volumes, congestion is not an issue. Therefore, major transportation issues in Morgan County are safety and economic development related.



Map 2: Average Annual Daily Traffic
Source: Traffic on Utah's Highways: 2006

CHAPTER 2

PROJECTED FUTURE NEEDS

Socioeconomic Projections

With the county's location immediately east of the fast-growing Wasatch Front, the population of Morgan County is projected to outpace the urban areas in the valley. Table 3 shows the population projections for the Wasatch Front counties, as well as the state as a whole.

Table 3: Population Projections (Source: GOPB 2008 Baseline)

County	2005	2010	2020	2030	2040	2005-2040 Population Growth	2005-2040 Annual Growth Rate
Davis County	278,278	323,087	369,467	390,159	407,238	46%	1.32%
Morgan County	8,516	10,589	16,756	24,478	34,407	304%	8.68%
Salt Lake County	978,285	1,079,679	1,273,929	1,468,615	1,671,627	70%	2.02%
Tooele County	52,133	63,777	91,849	119,871	152,734	92%	5.51%
Weber County	213,684	232,696	278,256	320,634	370,523	73%	2.09%

The average annual rate of change (AARC) for Morgan County of 8.7% is more than four times the AARC of any of the urban counties and more than three times the rate for the state. Even with this high projected growth rate, a 2040 population of 34,000 will still leave Morgan County with the lowest population in the Wasatch Front Regional Council's area.

Table 4 below shows the projected total employment for the Wasatch Front Regional Council area. As with population, Morgan's annual growth rate of 10.4% is higher than any of the other counties, while the 2040 total of 16,000 will still result in the smallest employment base in the region. With employment growing at a higher rate than population, the percentage of the population commuting out of the county will drop, but the overall number will continue to grow.

Table 4: Employment Projections (Source: GOPB 2008 Baseline)

County	2005	2010	2020	2030	2040	2005-2040 Employment Growth	2005-2040 Annual Growth Rate
Davis County	140,657	169750	200,044	209,651	215,040	53%	1.51%
Morgan County	3,434	4,212	7,676	11,497	15,918	364%	10.39%
Salt Lake County	697,280	790,393	897,257	994,647	1,112,712	60%	1.70%
Tooele County	19,285	24,998	37,469	50,980	67,842	252%	7.19%
Weber County	114,530	129,971	156,377	181,205	210,552	84%	2.40%

Transportation Demand

With a projected population growth rate of over 8% per year, transportation demand will continue to rise. Congestion, however, should not be a major issue, outside of some isolated locations in Morgan City and at the Mountain Green Interchange. The major concern for transportation demand is safety. Roads that were designed to accommodate a few hundred vehicles will soon be accommodating a few thousand. Curve geometry, sight distances, and bridge clearances will be the major issues that will need to be addressed. Also, as the population in the urban counties continues to expand, there will be more pressure on the recreational facilities in Morgan County. This is especially true of bike traffic to and from East Canyon State Park.

Economic Development

With a major interstate freeway bisecting the county, Morgan is poised for economic development. The headquarters of Browning Firearms is still located in the county, and the cement plant at Croyden is one of the major manufacturers in the county. With some spot improvements (albeit expensive ones) access to the plant, as well as the main access to Morgan City could be improved and some important barriers to economic development taken down.

CHAPTER 3

EVALUATION PROCESS

The process to identify and evaluate individual transportation concerns began with an interview with the County Council, Morgan City Mayor Dean Pace, city and county planners and engineers and the Senior Center advisory board. Summaries of the various interviews and meetings may be found in Appendix A. These individuals and groups identified fourteen separate transportation (mostly highway) needs within the County. The suggested projects are listed below in no order of importance:

1. Realign the road to the cement plant at the Croydon Exit off I-84 to eliminate a difficult turn for large trucks.

2. Construct a new interchange at the Trapper's Loop road to replace the Mountain Green half interchange.

3. Widen State Road 66 between Morgan City and East Canyon Reservoir to allow for bicyclists.

4. Widen Morgan Valley Drive to allow for bicyclists.

5. Fix the sight distance problem on State Road 66 in the area of Rouser Lane.

6. Construct an additional bridge over the Weber River on Young Street.

7. Upgrade the two railroad underpasses into Morgan City.

8. Widen the Old Highway, now known as 700 East, with a center turn lane and shoulders.

9. Install a traffic light if warranted at the intersection of Young Street and State Road 66.

10. Provide a second exit from Island Road, also known as 300 West which is a very long street with only one outlet.

11. A bridge over the Weber River in the area of Como Springs will be needed as the area develops.

12. Consider re-opening the east bound exit off I-84 into Morgan City which has been closed for some time.

13. Complete 600 West to Island Road.

14. Widen frontage road on the south side of I-84 between to two freeway exits in Morgan City and make it bi-directional.

15. Expand transit shuttle service for seniors and other individuals who do not drive or own a vehicle.

After interviews with the aforementioned city and county representatives, personal visits to the roads in question and examination of other relevant data, five criteria were used to evaluate each proposed project. These criteria are:

1. Economic Value—This is a rather broad term that encompasses transportation facilities that are actively used by major employers such as the Croyden exit for trucks servicing the Holcim Cement plant to roads similar to State Highway 66 that serve the general population as well as the economic interests of Morgan City. Accordingly, economic value in dollar terms is difficult to quantify. Nevertheless, an evaluation as to whether an improvement to a road or other transportation facility would have an economic effect should be based on such questions as:

Does the road serve a major employer in the County?

Is the road a major corridor for freight?

Is a substantial portion of the traffic on the road business related?

Is the road a principal means for people to access employment?

These and other questions will be discussed as part of the criteria which will then be ranked according to importance.

2. Congestion Relief—There is little congestion in Morgan County today compared to the urban areas. Nevertheless, with projected growth, it is anticipated that congestion mitigation measures and additional capacity will be needed in future years. This criterion is intended to measure relief afforded to anticipated future travel demand. All proposed road projects will have a brief statement as to the current and projected future levels of service. The Utah Department of Transportation and other highway agencies have carefully defined these levels of service as noted in Appendix B. In order to apply a given level of service to a road, a traffic study would be needed. Because such studies are beyond the scope of this evaluation, a brief reference to the level of traffic will be noted as part of this criterion.

A more complete discussion of current and projected traffic conditions and needs may be found in Chapter 3.

3. Safety—Most traffic concerns in Morgan County center on this criterion. There are several areas where there are significant safety concerns. These concerns center

on sight / distance issues, turning radii for large trucks, narrow bridges, narrow and low underpasses, approaches to bridges, bicycle lanes and poor pavement condition.

Also, a careful evaluation will be made of accident data from UDOT records found in Appendix D. The comparison of the road in question against the 'expected' crash rate or severity index is against other similar roads monitored by UDOT from across the State.

4. Pavement Condition—Most of the transportation improvements involve an evaluation of the condition of the pavement for the road in question. Clearly, this is a substantial determinant of cost and should be included in any project evaluation.

5. Cost Effectiveness of Improvements—All proposed improvements must be measured against the yardstick of cost. Obviously, small, inexpensive improvements that bring large improvements in safety, congestion relief or economic activity will be highlighted.

CHAPTER 4

LISTING OF PROJECTS

It should be noted that possible improvements to I-84 are not included as needed projects because the freeway was deemed as sufficient to meet existing and projected needs in its current condition. The only issues surrounding the freeway are those of general maintenance. The bridge decks on I-84 and some portions of pavement are scheduled for a major re-construction project from the mouth of Weber Canyon to the Mountain Green Interchange beginning November 2007. The freeway will not be widened. The current estimated cost of the project is $23,345,700.

Safety on the freeway in terms of accidents is generally good. Nevertheless, the number of crashes as noted in Appendix D—Accident Data are somewhat above what would be expected on similar freeways across the State. Approximately 2/3 of all automobile accidents in Morgan County during the years 2003-2005 occurred on I-84. This is not unreasonable since 69.7% of all vehicle miles traveled (VMT) in Morgan County are on the freeway. Additional information is available regarding VMT on the UDOT website at http://www.udot.utah.gov/main/f?p=100:pg:10255965121919957000:::V,T:,530 .

State Highway 65 is not included in this chapter as a concern because it is in generally good condition with no serious safety or economic issues. It is lightly traveled and has wide shoulders for bicyclists and other safety needs. Nor was any portion of it listed as a concern by any elected or appointed city or county official. Lastly, accident and severity rates are below average.

1. The Road to the Cement Plant at the Croydon Exit off I-84.

The County owned road to the cement plant at the Croydon Exit off of I-84 is a short but important road within Morgan County because it is the principal access for the largest private employer in the County. Every working day, hundreds of large semi-trailer trucks make their way to and from the cement plant. The access over the Weber River, then under a railroad bridge followed by a sharp right turn immediately thereafter is a difficult transit for such large trucks. Generally, passage under the bridge and around the turn by a truck requires that vehicles traveling the opposite direction wait while the truck passes by. Also, the condition of the pavement is at failure with large potholes and cracks.

Evaluation Criteria

1. Economic Value: The road is used by hundreds of trucks every day as access to a principal employer within the County.

2. Congestion Relief: By urban standards, the road is not congested nor is it likely to become so in the next 15 years due to growth in travel demand. Traffic is, therefore, rated light to moderate.

3. Safety: Any situation which requires alternating unregulated one-way traffic on an ongoing basis, especially involving large tractor-trailer trucks, is a safety hazard. In addition, the proximity of the Weber River to a traffic safety hazard is also a consideration. Were a truck to fall into the River with a load of cement powder or rupture its fuel tank into the water, there would be major ramifications for a principal source of drinking water for hundreds of thousands of people and questions of liability for the truck owner and the county as the owner of the road.

Nevertheless, Lost Creek Road, which includes the Croydon Exit, has only had three reported accidents in three years which puts it substantially below the expected level of crashes in comparison to the state average. Thus, even though the Exit is less than optimal, there have been few crashes.

4. Pavement Condition: Poor.

5. Cost Effectiveness of Improvements: The pavement is a problem for only a few hundred yards so repaving would not be unduly expensive. Removing the railroad bridge would be extremely expensive. Also, the railroad bridge is owned by Union Pacific which has indicated it is not interested in expensive improvements.

Widening the highway bridge over the River would be difficult because even though it could be widened, there would be insufficient clearance below the railroad bridge. However, if the river were put in a different channel that ran under the road and then parallel to the railroad tracks a little further to the west and was piped to the north side of the tracks at that point, the present channel could be used to widen the road.

A further possibility that should be evaluated is the removal of the berm supporting the tracks on the west side of the underpass and the widening of the railroad bridge at that point. The railroad grade would not have to be raised which would make this an attractive option.

Recommendations:

1. Repave the road.

2. Commission a traffic study to look at cost effective ways of mitigating the one way traffic problem.

3. Be certain to involve Union Pacific in the study.

2. A New Interchange at the Trapper's Loop Road to Replace the Mountain Green Half Interchange.

The principal access for traffic accessing I-84 in western Morgan County and for traffic accessing the Trapper's Loop Highway is the Mountain Green Interchange. Presently, the interchange has only an east bound exit and a west bound entrance to I-84. It is also at the far western end of the County. The nearest alternative freeway access is the Peterson Interchange approximately 5 miles to the east.

An extensive study of the possible alternatives for a Trapper's Loop interchange, the North Morgan Transportation Study (NMTS), was completed in 2004 and can be found in its entirety in Appendix C. In the study, six alternatives were examined for need, cost, feasibility and environmental conflicts. It was determined that the status quo (the no action alternative) is increasingly unacceptable given the inconvenience of the existing Mountain Green (partial) Interchange, the continuing growth in the immediate area and the increasing use of the Trapper's Loop highway to access Snow Basin Ski Resort and other attractions in the immediate vicinity. Of the possible improvements, an interchange aligned with the Trapper's Loop Highway along I-84 was deemed the preferred alternative (NMTS p. 14).

Evaluation Criteria

1. Economic Value: Without the assistance of a traffic study, it is assumed that most of the traffic needing to access I-84 from the area is west bound. Nevertheless, the location of the interchange and its half diamond nature is less than convenient for area residents. Also, motorists desiring to access the Trapper's Loop Highway have an indirect route to get to the Highway. This is a problem for individuals unfamiliar with the local roads and a challenge for tourism development.

In addition, the area is platted for 1,600 new homes. As the area builds out, convenient access will be a concern for the new home owners and a needed selling point to developers.

2. Congestion Relief: There is not significant congestion today traffic should be considered moderate. The NMTS determined that peak demand on the Mountain Green Interchange is about 800 vehicles per hour or about 50% of capacity (NMTS p. 2). Nevertheless, as the area builds out and recreational use of the Trapper's Loop Highway increases, traffic congestion could become a problem. This may also be true of individuals wishing to travel east who are presently forced to use local roads which are narrow and low speed. As traffic increases, these local roads could quickly be overwhelmed.

3. Safety: The current half interchange is not unsafe. It is inconvenient, however, in that it forces individuals wishing to travel east onto local roads that are not as safe or as fast as the freeway.

Crash data along Highway 167 which feeds the current interchange do not indicate any special problems. What crashes have been recorded have been scattered along the entire length of the highway and not concentrated at any one spot. There have been a couple of crashes where north bound vehicles were turning west (left) to enter westbound traffic to the onramp. Nevertheless, this does not constitute a statistically significant problem and crashes are below expectations on the statewide scale.

4. Pavement Condition: Good.

5. Cost Effectiveness of Improvements: The construction cost of a new diamond type freeway interchange is currently approximately $40 million. This cost could be increased by the close proximity of the railroad on the south side of the freeway which could make for a difficult bridge geometry. Justifying the expenditure of $40 million for the convenience of approximately 5,000 residents will be challenging in light of the massive problems in other areas of the State.

The project is presently listed as illustrative on the UDOT Long Range Plan meaning the project is desirable but, funds are not available. As the area builds out and congestion becomes a reality, justification for the project will be easier.

Recommendations:

1. A realistic cost/benefit analysis done at county expense may help convince UDOT to fund the project in future years.

2. Preservation of the corridor by the County would ensure that the interchange remains a viable option for UDOT. Utah State law, UC Section 10-9a-401 requires municipalities to

> "prepare and adopt a comprehensive, long range general plan for:
> (a) present and future growth needs of the municipality; and
> (b) growth and development of all or any part of the land within the municipality.
> (2) The plan may provide for:
> (a) health, general welfare, safety, energy conservation, *transportation,* prosperity, civic activities, aesthetics, and recreational, educational, and cultural opportunities;"

In addition, municipalities may, as part of their master plan, file an official map designating transportation corridors under UC 10-9a-407. Because this area is part of the unincorporated county, the Morgan County Council may, under UC 17-34-1 (2)(a) "provide municipal-type services to areas of the county outside the limits of cities and towns;" Therefore, the county is empowered to adopt a general plan and, as part of the plan, adopt an official map designating the corridor for the Trappers Loop Interchange and the access road.

Morgan County will participate in an RUDAT study during the fall and winter 2007/2008 which may more closely identify the corridor. Assuming that a corridor is identified, the Regional Council recommends that area in question be surveyed and an official map adopted.

3. Widen State Road 66 to Allow for Bicyclists.

State Road 66 leading south from Morgan City to East Canyon Reservoir is increasingly becoming a destination for recreational bicyclists in the summer. The scenery is world class and the ride pleasant in some areas and challenging in others. The problem for motorists is the road is narrow with no shoulders and has sight distance problems in many areas. As a result, bicyclists use the lane of travel creating a safety problem.

An additional problem in this area is slow moving vehicles such as pick-up trucks pulling trailers or motor homes. There is currently not a place for them to pull over and allow faster traffic to pass by.

Evaluation Criteria

1. Economic Value: Most of the recreational bicyclists are assumed to be from out of town. Hence, they become tourists who purchase gas and food in the area providing a source of income for local residents. Enhancing their experience, therefore, becomes desirable from an economic standpoint.

The same is true for out of town motorists using the Highway.

2. Congestion Relief: There is not a congestion problem on the Highway and traffic south of Morgan City is rated light to moderate due to the fact that some motorists may have to follow slower vehicles which cannot pull over and let them pass at convenient intervals.

3. Safety: Having large numbers of bicyclists riding in the lanes of travel on a state highway with sight/distance problems is clearly an issue. In addition, a road where motorists are commonly caught behind slower vehicles with few legitimate opportunities to pass creates a situation where some will begin to take chances. This then becomes an additional safety hazard.

There have been 35 crashes along the 14.35 miles of Highway 66 during 2003-2005. Again, this is below the expected crash rate for a road of this type and level of usage. The severity index is slightly below the national average. There is no indication in the data as to whether bicyclists have been involved in these crashes. Lastly, there is not a concentration of accidents at any one spot along the highway that would indicate a problem area.

4. Pavement Condition: Mostly good with a fair rating in some spots.

5. Cost Effectiveness of Improvements: Widening the road with adequate shoulders for bicyclists or passing lanes for slower vehicles would be very difficult and expensive for much of the length of the Highway. State Highway 66 has steep drop offs or equally steep cuts into the hillside in many areas. Nevertheless, there are lengthy portions of the road that could be widened within the existing right-of-way to accommodate passing lanes for slow vehicles and safety areas for bicyclists. Further study is warranted to determine those areas. The cost of widening those few portions of the Highway that could be improved should not be unreasonable. Possible funding would be available from the UDOT enhancements budget.

A further option for a bicycle lane as part of the current highway is a separate bicycle facility parallel to the road. An example of this may be viewed in the town of Liberty in the Ogden Valley. In the instance cited, it would be difficult and expensive to raise the shoulder to the level of the current highway, so the county simply put the bicycle lane parallel to and lower than the highway. This is a distinct possibility for certain portions of Highway 66. Nevertheless, depending on the width of the current right of way, the cost of property acquisition could be high.

Recommendation:

1. A study to determine which areas could be cost effectively widened should be the next step.

4. Widen Morgan Valley Drive to Allow for Bicyclists.

Morgan Valley Drive west of State Road 66 generally parallels I-84 on the south side of the freeway and is a rural, low speed country road. It is used as a local arterial street by area residents in a lightly populated portion of the County. It is also a scenic, pleasant and relatively level road for recreational bicyclists. It suffers from the same problem as noted above for State Road 66, that being conflicts between motorists and bicyclists. Fortunately, there are not steep drop offs on the sides of the road so there are possibilities for road widening to accommodate bicyclists.

Evaluation Criteria

1. Economic Value: Making a tourist draw safe only enhances its attractiveness. Other than the out of town bicyclists, the road does not generally serve important employers or other large economic interests.

2. Congestion Relief: Congestion is generally not an issue on this road traffic would normally be considered as light. When bicyclists do encounter motorists, they can generally slip off to the side of the road to allow the motorists to pass.

3. Safety: Having large numbers of bicyclists riding in the lane of travel is generally a safety concern. However, sight distance issues and shoulder access do not rise to the level of State Road 66 as noted above.

The portion of Morgan Valley Drive from Young Street to Milton has had 21 crashes during the years 2003-2005. This is below the expected crash rate based on statewide comparisons. However, the severity is slightly above average.

4. Pavement Condition: Mostly good with a fair rating in some spots.

5. Cost Effectiveness of Improvements: The addition of shoulders could be expensive if there is a large amount of right of way to be purchased over a relatively lengthy portion of road. In view of the relatively minor level of physical conflicts, a study would be warranted to determine if there are areas of the road that could be conveniently widened without the purchase of large amounts of right of way.

Recommendation:

1. A study to determine which portions of the road have sufficient right-of-way for a shoulder widening project would be appropriate. The road is due for re-construction in 2011. Serious consideration should be given to areas needing center turn lanes and wide shoulders in any studies preceding that construction.

5. Fix the Sight Distance Problem on State Road 66 in the Area of Rouser Lane.

As motorists on Rouser Lane access State Road 66, they enter the Highway at the bottom of a small hill. Southbound traffic comes over the hill at high speeds allowing little time for motorists to safely access the highway and for southbound traffic to avoid a slow vehicle entering the highway.

Evaluation Criteria

1. Economic Value: Rouser Lane serves only residential and some small farm areas. State Highway 66 is used by tourists accessing East Canyon Reservoir.

2. Congestion Relief: Rouser Lane is a quiet country lane and is not generally congested. Traffic should be rated as light.

3. Safety: This is clearly a safety problem. A south bound motorist moving at the legal speed limit would have to make an emergency stop or maneuver to avoid a large, slow moving vehicle entering the Highway such as a pick up truck pulling a trailer. This would be especially true in inclement weather.

The list of recorded accidents does not, however, list any accidents at the intersection of Rouser Lane and Highway 66. What accidents have been listed on Highway 66 have been mostly in Morgan City where there are numerous access points.

4. Pavement Condition: Mostly good with a fair rating in some spots.

5. Cost Effectiveness of improvements: This is a sore point for safety. Relocation of the access point could be expensive depending on the need to purchase right-of-way. Nevertheless, it would eliminate a safety concern.

Recommendation:

1. A study to determine the possibility of leveling the grade on State Road 66 or moving the access point for Rouser Lane would be the next step in addressing this problem.

6. An Additional Bridge Over the Weber River on Young Street is Desirable

Presently, there are two bridges over the Weber River through Morgan City, State Street (State Road 66) and 125 North and one access to I-84. The bridge on 125 North has been recently re-built. The main bridge on Highway 66 will be re-built beginning January 7, 2008. Access over the River is limited for residents in the eastern portion of the City. An additional bridge would create a third exit from the city to the freeway for safety purposes. There is also a developing congestion problem when the three area schools let out in the afternoon that could be addressed by the proposed bridge.

Evaluation Criteria

1. Economic Value: This bridge would allow greater access to the City's commercial district. It would not address the problem with the railroad underpasses which is much more important in terms of economic development. It would allow for greater development, mostly residential, on the eastern edge of the City.

2. Congestion Relief: By urban standards, congestion is minimal. Nevertheless, some relief of traffic congestion would be welcome during the brief period after the three area schools close for the day.

3. Safety: A third exit to I-84 for the City residents would clearly be a safety benefit.

4. Pavement Condition: Not Applicable.

5. Cost Effectiveness of Improvements: Building a new bridge along with the needed approaches would be expensive, at least in the neighborhood of $1 million (the approximate cost of the bridge replacement on 125 North) exclusive of right-of-way acquisition costs. Addressing some of the other more pressing needs, especially the railroad bridges would appear to be more cost effective.

Recommendation:

1. Place the bridge on the City master plan and wait for further development on the eastern portion of the City. In the meantime, pursue mitigation of the issues surrounding the railroad bridges.

7. The two railroad underpasses into Morgan City need upgrading.

There are two underpasses traversing the mainline of the Union Pacific Railroad through Morgan City on State Street and 125 North. Both underpasses are very narrow with steep approaches. This is a difficult situation for economic development and safety.

Evaluation Criteria

1. Economic Development: Morgan City representatives have been told repeatedly by prospective businesses that the entrance to the City through the underpasses is a problem. The underpasses are sufficiently constrained to represent not only a negative for economic development, but also a safety hazard for large trucks. Until at least the underpass for State Street is improved, economic development will continue to be hampered within the City.

2. Congestion Relief: The underpasses have the potential to become chokepoints and therefore a problem for traffic congestion. Presently, however, traffic is free flowing at light to moderate levels.

3. Safety: Two large trucks coming from opposite directions have little room to spare as they pass under the railroad bridge. In addition, the approaches on both sides are steep and sight distance is limited. Nevertheless, there have been no recorded accidents at the underpass on Highway 66 during the years 2003-2005 according to available UDOT data.

It should be noted that the bridge over the Weber River on SR-66 approximately ½ mile south of the railroad underpass is scheduled to be replaced by UDOT beginning in early 2008.

4. Pavement Condition: Generally good.

5. Cost Effectiveness of Improvements: Depending on the type of improvement involved, the cost effectiveness ratio could be very favorable. This is because the narrow railroad underpass is presently seen as a major impediment to economic development. A wholesale removal of the underpass could be very expensive, however. A lowering of the slope for the approaches, especially on the south side of the underpass would be much less costly. This would not address the narrowness of the underpass, however.

Recommendation:

1. Pursue a study of options and costs for improvements to the railroad underpass on State Road 66. Addressing the problems with the underpass on eastern portion of Commercial Street will come, in time, but State Road 66 is the main entrance into the City and should be considered first.

8. The Old Highway, also known as 700 East, needs improvement.

The Old Highway, formally State Road 73, has been ceded to Morgan County and is now known as 700 East. It is becoming busier as new development is taking place near its intersection with Highway 66.

Evaluation Criteria

1. Economic Development: The addition of wider shoulders and a center turn lane would make the area more desirable to residential developers. There is, however, little prospect of major commercial development as a result of widening the highway.

2. Congestion Relief: There is presently no to very little congestion on the road and traffic should be considered as light.

3. Safety: The addition of a center turn lane and wider shoulders in a residential area would clearly be a plus for safety.

Many portions of the road are also fronted by residences, particularly in Morgan City. Pedestrians do have sidewalks available for a small portion of the highway in Morgan City on the south side of the road. There are large areas of the road with residential development that do not have sidewalks. This is clearly a safety concern, especially in the winter when plowed snow makes it difficult to walk anywhere but the road.

There have been 16 automobile accidents during the recorded years of 2003-2005. This is less than half of the expected crash rate for a road of this type. Nevertheless, the severity index is slightly higher than average.

4. Pavement Condition: Generally good with some spots being rated as fair.

5. Cost Effectiveness of Improvements: Presently there are not a large number of accidents on this road. Rather, such problems tend to concentrate around busy intersections. Nevertheless, the addition of a center turn lane would add convenience for motorists wishing to pass a vehicle waiting to make a left turn. In addition, it would afford that much more of a margin of safety. The addition of shoulders would allow for safe emergency stops, especially in the winter when the dirt shoulders of the road are covered with piles of plowed snow. Lastly, the construction of sidewalks would take pedestrians off the road in the winter and enhance safety.

The widening of shoulders could probably be done within existing right-of-way. Any further widening for a center turn lane would require the acquisition of right-of-way. An easement for future sidewalks is currently held by the City and could be used as construction funding becomes available.

Recommendations:

1. A traffic study of the safety issues on the road relative to width and whether or not it should be widened would be appropriate.

2. The addition of sidewalks should be a primary consideration.

9. The Intersection of Young Street and State Street (State Road 66) needs to be evaluated for a Traffic Signal.

The intersection of Young Street and State Street in Morgan City was evaluated some years ago for a traffic signal. It was determined at that time that a traffic signal was not warranted. Since that time, traffic has increased with the three schools in the area to the point that the question of the need for a traffic control measure has re-emerged. Vehicles counted on Highway 66 in 2005 were 8,045 per day at Young Street.

Evaluation Criteria

1. Economic Development: The addition of a traffic signal would make little difference in the short run as to any economic development possibilities. In future years, this may be a consideration to the location of businesses.

2. Congestion Relief: There is little congestion in comparison with what is experienced on a daily basis in the urban areas. Nevertheless, the delay for motorists trying to cross Highway 66 at Young Street after the schools close in the afternoon is becoming an issue. Traffic after school lets out for the afternoon and later at rush hour should be considered moderate.

3. Safety: This is probably the prime consideration for the placement of a traffic signal. Accident rates and travel demand should be evaluated prior to any recommendation. Accident data for the years 2003-2005 show that there have been several accidents in the immediate area, but only one at the intersection.

4. Pavement Condition: Generally good.

5. Cost Effectiveness: A traffic signal would clearly reduce the potential for serious accidents and their associated costs.

Recommendation:

1. UDOT is in the process of conducting a traffic count at the intersection. A careful review of the results and a fresh traffic study to determine the need for a traffic signal should then be conducted. Based on UDOT traffic warrants (standards), a traffic signal may then be considered.

10. Island Road in Morgan City is a very long street with only one exit.

Island Road is a long residential street with only one exit which creates a problem if the entrance is blocked for some reason.

Evaluation Criteria:

1. Economic Development: The area will probably continue to be residential in nature so economic development is not a consideration except for developers.

2. Congestion Relief: The road is rural in nature and congestion is not a problem. Traffic should be considered as light.

3. Safety: Emergency access and/or egress could be problem if the road were blocked for some reason. For safety purposes, there should be a second exit. No UDOT crash data is available for this road.

4. Pavement Condition: Generally good to fair in some spots.

5. Cost Effectiveness of Improvements: For safety purposes, a small, inexpensive cross street would be very cost effective, especially if built by developers. Nevertheless, it will still serve comparatively few residents.

Recommendation:

1. The area is platted for a cross street as more development occurs. Incentives should be given to developers to complete the cross street at the earliest opportunity.

11. A bridge over the Weber River in the area of Como Springs will be needed as the area develops.

As Morgan City expands eastward, the area near Como Springs will fill in. At that time, it would be desirable for another bridge over the Weber River.

Evaluation Criteria:

1. Economic Development: As the area near Como Springs develops, it will probably continue to be residential in nature. Therefore, its economic development potential is limited.

2. Congestion Relief: Since the area is undeveloped, any suggestion as to possible congestion relief would be speculative. It is unlikely that motorists would travel this far east to avoid what little congestion does exist over the bridges in the downtown area.

3. Safety: Another bridge over the Weber River for safety purposes and/or emergency egress is clearly desirable. This is especially true since this the County Fairgrounds are located in this area. The additional bridge coming off of Young Street mentioned in item six would probably not serve this need in an acceptable fashion inasmuch as an additional cross street would have to be built to access Young Street from 100 South; 100 South is a quiet residential street and could not readily handle a large increase in traffic; and the road around the point of the mountain is very narrow and only one way for about 50 yards.

No UDOT crash data is available for this area.

4. Pavement Condition: Not Applicable

5. Cost Effectiveness: From a safety standpoint, this would clearly be money well spent for the reasons stated here and in item six.

Recommendation:

1. As the area builds out, such a bridge will become a necessity. At that time, it would be advisable to seek financial participation from the prospective developers who stand to benefit from the construction of the bridge.

12. The eastern Morgan City Interchange on I-84

The east bound off ramp and west bound on ramp of the eastern most interchange for I-84 into Morgan City has been closed for some time now. Morgan City has requested that their re-opening be considered.

Evaluation Criteria

1. Economic Development: An additional interchange for a city is almost always desirable. In this case, it would access the eastern portion of the City that is presently far from the current primary freeway interchange and give an assist to businesses at the eastern edge of Commercial Street. Nevertheless, it would be of limited value until the Weber River is bridged at this point.

2. Congestion Relief: The current interchange is not congested and the full re-opening of the eastern interchange would afford little relief.

3. Safety: The ramps were closed for safety purposes previously. The reasons for that closure have not changed. In viewing the ramps from a westbound drive on I-84, it was apparent that the two interchanges are very close and a re-opening of the ramps in question would create a significant weaving problem.

4. Cost Effectiveness: The re-opening could be effected at little monetary cost. Nevertheless, the potential for and the severity of accidents would be high calling into question the cost effectiveness of the proposal.

5. Pavement Condition: Fair since the pavement in question has not been maintained. Nevertheless, a simple overlay at little cost could quickly bring the lanes up to standard.

Recommendations:

1. The Wasatch Front Regional Council recommends against the proposed action due to the close proximity of the western interchange into Morgan City and the significant and substantial weaving and safety problems a re-opening would create.

13. 600 West needs to be completed to Island Road.

Another bridge over the Weber River at 600 West would complete a grid type system for the western portion of Morgan City. Presently, this area is not part of the incorporated City. Nevertheless, it is part of the City's declaration for growth and it is anticipated that the City will annex the area at some future date.

Evaluation Criteria

1. Economic Development: The area is presently undeveloped. As it is built out, it will probably remain residential. The primary beneficiaries of a bridge over the Weber River and a connection to Island Road from an economic standpoint would likely be the developers. Therefore, it is reasonable that they should participate financially in the road and bridge.

2. Congestion Relief: There is little or no congestion today and there would have to be substantial additional growth before that would occur. Traffic levels on the road are light.

3. Safety: From a safety standpoint, an additional access across the Weber River would be desirable, especially for emergency access and egress.

4. Cost Effectiveness: This would be most cost effective if a developer were to build the road and bridge.

5. Pavement Condition: Not Applicable

Recommendation:

1. Wait until a developer wants to build in the area and allow him to contribute financially to the project.

14. Widen frontage road on the south side of I-84 between to two freeway exits in Morgan City and make it bi-directional.

A narrow frontage road exists on the south side of I-84 in Morgan City between the two freeway interchanges. Presently, the road is posted for one-way traffic flowing eastbound. When the road was built along with the freeway in 1963, it was bi-directional. It was made into a one way road in the 1970's. Morgan City has expressed an interest in widening the road and making it a two way road again.

1. Economic Development: The road would allow better access to the commercial areas of the City. There are not any commercial developments along the road and it is unlikely that there would be in the near future.

2. Congestion Relief: There is no congestion along Commercial Street that would be served by making the frontage road bi-directional. Traffic along the frontage road itself is minimal.

3. Safey: West bound traffic on the road would terminate on Highway 66 facing the traffic coming off the exit from I-84. This would make for a dangerous situation in which one confused motorist going straight instead of turning could cause a major accident. UDOT engineers consulted on this matter also expressed concern for the safety implications of the proposal. Nevertheless, they were willing to consider the matter after further study.

4. Cost Effectiveness: In order to meet current standards, the road would need to be widened. The right-of-way is already in State ownership so there would be little on no cost for property acquisition. Nevertheless, there is little or no congestion that needs relief on the parallel streets of Commercial Street and the Old Highway and there are no businesses that would directly benefit from making the road bi-directional.

5. Pavement Condition: Good but narrow.

Recommendations:

1. Making the frontage road a two way street would create a traffic hazard for west bound traffic on the road and east bound vehicles exiting the freeway.

2. The cost of widening the frontage road could still run into the hundreds of thousands of dollars for a small benefit. There are other, more pressing needs in the City and County.

15. Shuttle Service for Seniors and Others

There is presently a weekly shuttle service from Morgan City to Ogden and other points in the urbanized area that is available for seniors and others who may not wish to drive. The service operates if five or more individuals want to go. Also, the shuttle will pick up seniors and bring them to the luncheon at the senior center on weekdays. Lastly, the shuttle will pick up individuals who wish to go the local grocery store or other shopping needs up to three times per week. Generally, this service is available only to senior citizens.

Anecdotal data from the Senior Center suggests that approximately 300 seniors frequent the Center. Of those, about half do not drive or drive on a very limited basis.

Bus service by UTA or some other public agency is a remote possibility given the rural nature of the county. A ¼ cent sales tax generating approximately $270,000 would barely pay for one bus route at current cost levels.

Evaluation Criteria:

1. Economic Development: Nationally, approximately five percent of the adult population does not drive for one reason or another. Many of these are seniors who, in Morgan County, have some degree of mobility thanks to the Morgan County Senior Center Program. There may be other individuals, however, who still wish to be active and/or need to work. Allowing them daily access to employment opportunities would clearly be desirable, especially now that the Wasatch Front has less than 3% unemployment and employers are having a difficult time finding workers. Before the implementation of any such service, however, a careful study would be needed.

2. Congestion Relief: The creation of a daily shuttle service would have little impact on any congestion issues in Morgan County.

3. Safety: For individuals whose driving skills are questionable, the provision of a public transit service beyond that currently available would be in their interest and the public's as well.

4. Cost Effectiveness: The implementation of a transit service beyond what is currently available through the Senior Center would be very expensive and would be used by a small percentage of the population. In Salt Lake County, less than 3% of all vehicular trips are made on public transit. In a rural area, the economics would be difficult to justify. Nevertheless, such a service would be very valuable for those who do not drive and have no other alternative.

5. Pavement Condition: Not Applicable

Recommendations:

1. How much additional transit service beyond what is being currently provided is in question. This issue would need to be studied prior to the implementation of any new service. Such a study should include transit needs of the entire population.

2. Should additional transit service be deemed necessary, a possible sales tax increase could be tapped, in part, to assist in the operational costs.

CHAPTER 5

FINANCIAL ASSUMPTIONS

Transportation expenditures on highways within Morgan County come from three sources. They are: 1. The Utah Department of Transportation budget for state and federal highways within Morgan County which includes federal monies for the preservation of I-84; 2. The Morgan County budget for highways which is mostly made up of funds coming from the Utah State B & C road fund ('B' funds are for counties and 'C' funds are for cities) derived from state gasoline tax, and; 3. Morgan City funds which are primarily C funds as well. However, the City does program some local funds for highway maintenance. The class B & C revenue figures may be found on the UDOT website under "Doing business with UDOT/local governments" at http://www.udot.utah.gov/main/f?p=100:pg:3040316367955586749:::V,T:,134.

The breakdown of expenditures is as noted below:

Fiscal Year	#UDOT Maintenance & Reconstruction	*Morgan County	Morgan City (Local fund and B & C Total)	Morgan City B & C Portion
2007	$ 4,417,672	$330,658.98	$409,000	$174,287
2006	$ 1,780,487	$300,213.80	$448,661	$247,419
2005	$ 7,669,790	$256,909.59	$189,776	$ 52,638
2004	$16,912,704	$339,296.20	$285,840	$180,000
2003	$ 1,725,680	$304,852.57	$266,598	$170,000

* The Morgan County highway budget consists entirely of B & C funds dedicated mostly to maintenance of existing roads and bridges.

Maintenance and Reconstruction cost figures are from the UDOT Region I office.

Historically, Morgan City has committed approximately $190,000 per year to highway maintenance. The larger amounts for 2006 and 2007 are anomalies because the City saved for a few years to participate in the bridge reconstruction of the city owned bridge over the Weber River. In most years, city revenues for highway maintenance consist primarily of Class C funds and are dedicated almost entirely to the maintenance of existing facilities.

Recent UDOT funds dedicated to Morgan County have included the construction of the Trappers Loop Highway (SR-167), major maintenance on I-84 and participation in the re-construction of the city owned bridge over the Weber River. Beyond these projects,

UDOT has mostly spent its funding within Morgan County on maintenance of the existing system.

Given the costs noted above for the suggested projects, current revenue levels are insufficient. Consideration may be given the possibility of a ¼ cent sales tax ballot measure that could be committed to transportation improvement. Such an increase would yield approximately $270,000 County-wide based on 2006 receipts for the current County levied ¼ cent.

Utah State Law authorizes counties to levy sales taxes, subject to voter approval, for transportation up to ¾ of a cent. Salt Lake County is the only jurisdiction at that level. Many other urban counties are at the ½ cent level. Davis and Weber counties have ballot questions for this November's election as to whether they should go to ¾ of a cent for transportation.

The first ¼ cent may be levied, subject to voter approval, by cities for public transit or highways (Utah Code 59-12-1001). The second quarter cent may be levied in full or in part and may be divided up by the County Council between highways and transit, all subject to voter approval (Utah Code 59-12-1503). The third ¼ cent may be levied for highways or transit at the discretion of the county council of governments after voter approval of the tax (Utah Code 59-12-1702 through 1705).

CHAPTER 6

RECOMMENDATIONS

Beyond the recommendations made for each individual project listed in Chapter 5, this Chapter will list some broader observations as to which projects are realistically 'doable' and which are not yet ready for further evaluation.

All projects previously considered have merit. Nevertheless, some needs are more compelling than others. Generally, safety is the primary issue when transportation needs are considered. Nevertheless, financial reality must also be part of any decision to pursue a project.

Presently, there are no pressing congestion problems in Morgan County. Therefore, relative to available funding, the following projects are recommended for immediate consideration based primarily on safety issues.

1. Even though there has been only one crash at Young Street and Highway 66 in the past three years, this intersection is becoming a challenge for those needing to cross the Highway. If a traffic signal were installed, it would provide relief for motorists trying to cross Highway 66 during the school release and rush hour times. It is possible that the signal could operate only during the needed times in question and be flashing yellow on Highway 66 and flashing red on Young Street at all other times.

   The proposed traffic signal would also draw motorists from nearby streets who need to cross Highway 66 thereby reducing the danger of crossing the Highway for blocks in either direction.

   This would be a relatively small project and within the realm of financial reality. This must be subject to the traffic count presently being conducted by UDOT.

2. The access point for Rouser Lane is a safety concern. Moving the entry point of the Lane to some nearby, safer location is financially 'doable'. Morgan County should begin working with UDOT to study the matter and develop a solution.

3. Lowering the grade of Highway 66 immediately south of the railroad underpass would diminish the abruptness of the elevation change and make entry into the City more pleasant. Nevertheless, the safety issues surrounding this project are not as compelling as the prior projects which should be considered first.

4. The railroad underpass at the Croyden Exit is a problem. Unfortunately, it is an expensive problem and, at current revenue levels, will not be remediated in the near future.

5. The proposed interchange for the Trappers Loop Highway would be difficult to justify under current circumstances given the $40 million price tag and the number of pressing issues competing with it around the State. Nevertheless, the County could file an official map under Utah Code Section 10-9a-407 indicating its official planning and zoning intention. The general location has already been identified.

   Also, the County should work toward preserving the corridor for the access to the interchange through property dedication or purchase. This would help greatly in attracting State funds in future years and make certain that the option to build the interchange is never precluded.

6. There are lengthy portions of Highway 66 where the shoulders could easily be widened within the existing right-of-way to allow for bicyclists. Funding for this program may be had from the UDOT Enhancements Budget. Projects up to $500,000 can be funded with a 20% local match. A second level of funding for the same project up to an additional $500,000 is available with a 50% local match.

7. A ¼ cent sales tax increase county wide would only bring in $270,000 based on 2006 receipts. Nevertheless, the option is available to the County to put the matter before the voters under three separate sections of the Utah State Code. Should the County decide to do so, it is suggested that a list of proposed projects be presented to the voters so that they are aware of which projects could be funded. This would be a way of completing some of the smaller projects noted above.

APPENDIX A

SUMMARIES OF INTERVIEWS WITH CITY AND COUNTY REPRESENTATIVES

MORGAN COUNTY COUNCIL
TRANSPORTATION NEEDS SCOPING SESSION
SEPTEMBER, 19, 2006

SAFETY ISSUES

- Off of I-84 Exit 111, on the northern side of the freeway, there is a narrow railroad bridge and a bad curve which large trucks have difficulty in negotiating. The railroad bridge has been there since 1933 and the height is insufficient for large vehicles. A traffic study of the local area is needed.
- Presently, the eastern freeway exit to Morgan City has the eastbound exit and westbound entrance closed. They need to be re-opened.
- Young Street currently dead ends at the Weber River. There needs to be a bridge constructed to allow a second egress to the eastern freeway interchange in case an emergency closes the State Street access to I-84.
- Old Highway Road should end in a 'T' rather than a 'Y' at its eastern terminus.
- The present railroad underpass into Morgan City is narrow and low causing problems for freight. It also is a drainage problem during heavy rains.
- The 'S' curves east of Morgan City on I-84 are dangerous and merit some study.

CONGESTION ISSUES

- There is little congestion presently in Morgan County with the exception of State Street which is becoming very difficult to cross at peak rush hour. A stop light at Young Street to allow cross traffic is desirable. This is a safety problem as well.

GROWTH ISSUES

- The Mountain Green area had 388 homes in 2001 and will have 1600 in the next ten years. These additional homes are already permitted under current approved zoning.
- The Mountain Green Exit is a half diamond and needs to be upgraded to a full diamond interchange.
- Presently, there are 28 apartments in the Mountain Green area with many more planned.
- The planned developments noted above will create a need for another interchange for the Trappers Loop Road and central Mountain Green area and is the first priority for additional capacity as expressed by the County Council. This would help alleviate a developing congestion problem on the old state highway.
- A bridge to Round Valley is needed.
- A road from Morgan City to Stoddard Lane would help with growth needs.

Morgan City Transportation Issues
December 20, 2006
Interview with Mayor Dean Pace, Steve Garside, City Planner and Greg Seegmiller, City Engineer

Regional Council staff member, Sam Klemm, met with the above noted representatives from Morgan City to discuss their perceived transportation needs for the next 25 years. Their concerns are listed below:

1. A river crossing on Young Street would help eliminate a congestion problem that is developing when all three schools close for the afternoon. It would also create a second exit from the city to the freeway for safety purposes. There is a hotel under consideration for the area. If the hotel were built, the bridge could then be constructed using CDBG funds.
2. The two railroad underpasses into the City are woefully inadequate. A traffic study, at a minimum, is warranted. The first underpass to be rebuilt should be the main road into the city.
3. 700 East, also known as the Old Highway, is in concept development on the STIP for widening. Every effort needs to be made to make certain this project progresses to the funded stage.
4. 300 West, also known as Island Road, is a very long street dead end street. There is a cross street that is master planned that would help solve this problem.
5. A park and ride in the vicinity of the main freeway entrance is desirable.
6. Congestion at the intersection of Young Street and State Street is beginning to be a problem at rush hour. UDOT conducted a traffic study there six years ago and determined that a traffic signal was not warranted at that time. Traffic has increased to the point that the issue is due for re-evaluation.
7. 600 West needs to be completed to Island Road. It will require a river crossing and extension past the sewer lagoons. This road and bridge will probably be built by developers. This would all be subject to a future annexation inasmuch as this area is currently in unincorporated Morgan County.
8. The City will probably annex the land in the Como Springs area in the future. A bridge over the river from Round Valley Road to the fairgrounds area would be needed as the area develops.
9. The Davis Applied Technology Center will probably build a satellite facility in the Industrial Road area in the immediate future. This will further emphasize the need for an improved railroad underpass on State Street into the City.
10. Proposed bicycle paths along Young Street, State Street and the River are desirable.
11. The east bound exit off I-84 needs to be re-opened. This will be especially important if the River is bridged at that point as noted in item 1.
12. A transit shuttle to the Ogden Intermodal Center is desirable for commuters, seniors and others who would prefer not to drive.

Morgan County Planner, Sherrie Christensen and Morgan County Engineer, Austin Rowser Commenting on Morgan County Highway Concerns

November 14, 2006

Wasatch Front Regional Council Representatives Scott Festin and Sam Klemm met with Sherrie Christensen, County Planner and Austin Rowser, County Engineer, regarding the staff level transportation concerns for Morgan County. There was a lengthy discussion of various roads and growth concerns. Their issues in order of priority are as follows:

1. The road to the cement plant off the I-84 Croydon Exit is a major safety problem. There is a very tight turning radius for the approximately 200 trucks per day accessing and leaving the plant. The morning peak period is probably the worst time between 9:00 a.m. and 10:00 a.m. There is also an environmental threat in the form of contamination of the adjacent Weber River if an accident dumped a fully loaded cement truck into the River.

   After the meeting, Scott and Sam visited the area and noted the difficult geometry for any potential fix. A traffic study would be useful at this point.

2. The interchange at Mountain Green is inadequate. It is only a half diamond interchange and does not meet the needs of a growing area. A better option in lieu of upgrading the current interchange would be to build a new interchange at Trapper's Loop. The current landowner is willing to donate the ground.

   The new interchange would allow the current Mountain Green Interchange to serve the main flow to and from Ogden while meeting the needs of the 1600 homes that are expected to be built in the immediate area in the next ten years.

3. No widening of arterials (additional through lanes) is needed yet. However, once the homes are added in the mid-valley area, the widening of the old highway would be desirable. Therefore, such widening should be contemplated in any long range plan.

4. There is considerable bicycle traffic along Morgan Valley Drive on weekends. This is a safety hazard because there is no bike lane or shoulder for that matter.

5. On Highway 66 to East Canyon Reservoir there is little or no shoulder for vehicles pulling trailers or boats to pull off.

6. On Highway 66 in the area of Rouser Lane, there is a sight distance problem.

Morgan County Senior Center
Environmental Justice Interview

Regional Council staff member, Sam Klemm, conducted an interview with the Board Members of the Morgan County Senior Center on July 19, 2007, as to their transportation needs. Those present included Board Chairman Lois Woody, Board Members Della Eddington and Louise Clements, Morgan City Mayor Dean Pace and City Councilman Lynn Mickelson.

Their primary transportation concerns were:

- The Senior Center van only goes to Ogden once per month if five people want to go.
- There are three vans, none of which are wheel chair equipped.
- The vans are available to pick up people and take them to the grocery store and other locations in Morgan City only once per week. Otherwise they must rely on family and friends if they do not drive.
- There are about 300 seniors, half of whom frequent the Senior Center.
- Assisted living is not available which would generally provide transportation to residents. A 45 unit assisted living facility is scheduled to be built beginning this fall.
- State Highway 66 is very difficult to cross at rush hour. A traffic study was conducted several years ago and recommended no traffic light at that time. It is time for another study.

SUMMARY OF OBSERVATIONS MADE DURING A ROAD TRIP ON MARCH 8, 2007 TO VIEW CONDITIONS ON SR-66, SR-65 AND I-84 IN MORGAN COUNTY

On March 8, 2007, Regional Council staff members Scott Festin, Ben Wuthrich and Sam Klemm invited Darin Fristrup from UDOT and Austin Rowser, Morgan County Engineer to survey highway and traffic needs along SR-66, SR-65 and I-84. The observations noted are as follows:

1. There are several locations with sight/distance issues on SR-66 in the climb up to East Canyon Reservoir. Addressing most of these problems would involve very expensive cut and fill solutions. One or two of the worst instances could be addressed individually.

2. The sight/distance problem is particularly severe at the north intersection of the 'Loop Road' with SR-66.

3. The Sheep Road intersection with SR-66 has a similar sight/distance problem, though less severe.

4. The pavement conditions for SR-65 and SR-66 were, with a few exceptions generally good to excellent.

5. The railroad bridge over SR-66 at the northern entrance to Morgan City presents a particular challenge. Any possible solutions would be very expensive. Nevertheless, a lowering and lengthening of the grade on the south side of the underpass would help with regard to the abruptness of the approach.

6. The tight turns and steep grades near East Canyon Reservoir on SR-66 could not be diminished without large, expensive and environmentally challenging projects.

7. SR-66 is beginning to see large numbers of bicyclists on summer weekends. This presents a problem because the shoulders of the highway are narrow to non-existent. Unfortunately, in most areas of the highway, there is limited to very limited opportunity to widen the shoulders to accommodate the bicyclists. Nevertheless, where there are such opportunities, they should be taken advantage of.

8. The railroad underpass at Croyden is a particular problem. While we were there, a large, belly dump double trailer truck made the southbound turn under the railroad bridge. The truck was able to make the turn using both lanes of travel. A northbound truck pulling a single trailer had to wait for the first truck to clear the bridge and also used both lanes to make the turn. We had to wait on the side of the road for the second truck to drive by us before proceeding.

   Also, of note, the pavement at the underpass has mostly failed with large potholes and cracks. This is slated for re-paving this summer. The railroad bridge is also in poor condition with numerous cracks in the bridge abutments on either side of the bridge. The rail road has no plans for any bridge reconstruction at this time.

9. The easternmost and now closed interchange on I-84 for Morgan City is clearly too close (1/4 mile) to the existing interchange to consider its re-opening.

10. The bridge abutments on I-84 under the Morgan City Interchange are uncovered and should be faced with concrete for preservation purposes. This is currently planned for this coming summer.

APPENDIX B

DEFINITIONS OF LEVELS OF SERVICE

LEVELS OF SERVICE DEFINITIONS

Freeways - Level of Service (LOS) is a qualitative measure of traffic flow. For freeways, LOS represents the freedom with which a driver can maneuver within the traffic stream. This freedom to maneuver is a function of the traffic density.

Freeway LOS is divided into six levels designated by the letters "A" through "F". A brief description of each freeway service level is given below. Pictures of freeway LOS and further discussion on this subject is found in the "Highway Capacity Manual" beginning on page 13-8.

LOS "A" – Free-flow operations at free flow speeds. Vehicles can maneuver within the traffic stream unimpeded. Traffic incidents have no noticeable impact to traffic operating at LOS "A".

LOS "B" – Reasonable free-flow operation at free flow speeds. The ability to maneuver within the traffic stream is only slightly restricted and driver comfort is still high. Traffic incidents have no noticeable impact to traffic operating at LOS "B".

LOS "C" – Traffic flows with speed at or near free flow speed. The ability to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance of the driver. Minor traffic incidents can still be absorbed but the impact to service will be substantial resulting in queues behind any significant blockage.

LOS "D" – Speeds drop noticeably as traffic density approaches unstable flow conditions. The ability to maneuver within the traffic stream is more noticeably restricted, and the driver experiences reduced physical and psychological levels of comfort. A minor incident at this level of service will create queuing as there is little space in the traffic stream to absorb any disruptions.

LOS "E" – Also known as capacity flow or forced flow. Operations at this level are very unstable and there are virtually no gaps in the traffic stream. Any disruption of the traffic stream, even entering traffic or lane changes, can create a disruption to traffic flow. Any incident will lead to substantial disruption to the traffic flow and extensive queuing. Maneuvering within the traffic stream is extremely limited and the physical and psychological comfort afforded the driver is poor.

LOS "F" – This level describes a breakdown in traffic flow, also known as a traffic jam.

Arterials – For urban streets, LOS describes the through-vehicle travel speed of a segment or for an entire street. Arterial LOS is an entirely different performance measure than freeway LOS even though both use the letters "A" through "F" to designate the different service levels. The average travel speed is computed from the running speed including the control delay (stop signs and traffic lights) at intersections. Thus the more intersections there are and the type of control used at the intersections will affect arterial LOS. Inappropriate signal timing or lack of signal coordination or progression can significantly degrade arterial LOS.

APPENDIX C

NORTH MORGAN TRANSPORTATION STUDY

2004

Morgan County

North Morgan Transportation Study

FINAL REPORT
April 7, 2004

UDOT
CONNECTING COMMUNITIES

MORGAN COUNTY
UTAH

North Morgan County Transportation Planning Study

1.0 Background

Morgan County is largely privately owned, with very little public land. Many of the landowners are making plans to develop their land. The largest pressure for development is in the Mountain Green area. The county, in an effort to be proactive, has identified in the General Plan the need for a new, or improved interchange in Mountain Green area. This study is being done primarily because of the development pressure and the county's desire to plan for future growth. This study will serve as a supplement to the General Plan with regard to some transportation and growth issues.

1.1 Beginnings of Study

Morgan County officials have had a long-standing desire to have a transportation study conducted in the Mountain Green area. This was accentuated during the 2002 Winter Olympics, when a great deal of traffic was required to use the Mountain Green Interchange on I-84, and the Trappers Loop Road (State Hwy. 167), which leads to the Snow Basin Ski Resort, and the Ogden Valley. In 2003, the Wasatch Front Regional Council (WFRC) received a limited amount of funding from the 21st Century Communities Program, the purpose of which is to assist rural communities of the state to accomplish more planning. Morgan County is a member of the Wasatch Front Regional Council, and the decision was made to use part of these funds to assist the County in addressing the transportation issues of Mountain Green, which is the fastest growth area in Morgan County. Also, the Utah Department of Transportation (UDOT) has a program to assist rural communities with the development of transportation plans. Considering the availability of these resources, and the needs of Morgan County for a planning study in the Mountain Green area, the WFRC and UDOT decided to team up to accomplish the North Morgan Transportation Planning Study.

1.2 Planning Process for this Study

Since the amount of funds available for this planning study is limited, the scope of work by necessity was developed with this funding constraint in mind. The study was designed to be accomplished within about a 60-day time frame. It is a cooperative venture between Morgan County, UDOT, and the WFRC. Morgan County provided the land use, population, economic, and planning information that was used to build the study's database. UDOT conducted some travel demand analyses for the Mountain Green Interchange, I-84, Trappers Loop Road, and a few other roadways, and some preliminary engineering with regard to possible interchange designs. UDOT and the WFRC, with the cooperation of Morgan County, jointly developed the interchange alternatives that the study considered. The WFRC collected and evaluated the existing and projected future population and land use and development data. The WFRC, with the assistance of Morgan County also organized the stakeholders meetings for the study. The documentation and mapping of the study was a shared responsibility between UDOT and the WFRC.

1.3 Study Area

The study area includes primarily the northern portion of Morgan County, centered around the Mountain Green area. To the north the study area extends along the Trappers Loop Road corridor, which includes the Snow Basin and other areas on either side of Trappers Loop Road. Closer to I-84 and the Mountain Green Interchange, the study area includes the community of Mountain Green and surrounding areas. To the east, the study area includes the Cottonwood drainage area where the airport and the Browning Arms factory are located. Lastly, the study area also extends into the Morgan Valley as far south as Morgan City, and some of the foothills adjacent to the valley.

2.0 Purpose of Study

The purpose of this transportation planning study is to generally evaluate the transportation needs of the northern portion of Morgan County. More specifically, the study intends to identify the most important transportation needs in the northern portion of Morgan County, or the "greater" Mountain Green area, and identifies ways those needs could be met. It focuses primarily on the Mountain Green Interchange and the issues associated with it, Trappers Loop Road (State Hwy. 157), and the effects of future growth on the existing interchange and study area. Alternative solutions will be identified and recommendations will be made, which will enable local planning officials to make long-range plans for future land use and development, and the instigation of measures that will allow for corridor preservation of future transportation facilities.

3.0 Summary of Existing Conditions

The Mountain Green Master Plan has a description of the area in general terms. This section of the supplemental report will focus on the most recent data available. This supplemental report will also focus attention on the data as relates to the interchange and the area around it.

3.1 Traffic

UDOT has a permanent count station installed on I-84 between the Mountain Green Interchange and the Peterson Interchange. The Average Annual Daily Traffic (AADT) reported from that count station is 12,300. I-84 west of Mountain Green is carrying about 17,300 vehicles per day. A new permanent count station was installed prior to the 2002 Winter Olympic Games on SR-167 just East of the Mountain Green Interchange. The AADT from that station is about 5,700. Recent counts on the Mountain Green Interchange ramps show a daily traffic volume of approximately 2,500 on each ramp. The highest hourly traffic volumes over the entire year on SR-167 and the ramps are about 800 vehicles per hour. This equates to about 50% of the capacity of the ramps and SR-167. Similarly, all of the other highways in the study area are currently operating at about 30% to 50% of their maximum capacities. The following map illustrates both existing and future daily traffic witch will be discussed in the next section.

3.2 Environmental

Spatially, Morgan County is one of the smaller counties in Utah and is located in the area of the "Wasatch Back", which is just east of the Wasatch Front Range of mountains. The heart of the county is a mountain valley called Morgan Valley, which is a relatively narrow fluvial valley that has been shaped by the Weber River and several tributary creeks and streams that flow from the surrounding

hills and mountainsides. Very scenic mountains ranging in elevation between 8,000-10,000 feet surround the valley, which is about 4,900 feet in elevation. Most of the people live, and agricultural activities take place in the valley. The Weber River is the major water feature of the valley and a major source of water for the northern Utah area. Numerous wetland areas that can be found in the flood plain, particularly north of the community of Petersen and west of the area where the Weber Canyon begins to narrow, that are frequented by, and provide habitat for numerous wildlife species, accompany the Weber River. The surrounding mountains, which are mostly privately owned, also provide valuable habitat for a variety of species, particularly elk and deer. The mountains receive a considerable amount of precipitation during the winter and early spring months, much of it in the form of snow. Average temperatures in the valley range between the low 20s in winter and the low 70s in summer in degrees F. The climate in the valley is considered to be a steppe, or semi-arid. The mountains are primarily covered with grasses, scrub oak and conifers, depending on the slope orientation.

More environmental, as well as historical and other background information, can be obtained by consulting the *Morgan* [County] *General Plan* (2000), and in the *Mountain Green Master Plan* (2000).

3.3 Land Use/Population

The only incorporated community in Morgan County is Morgan City, which is the county seat. The city had a population of 2,635 people as reported by the 2000 Census. The growth in Morgan City has been relatively slow to moderate over the years, and therefore, the city may not have many more people than what was reported by the Census. On the other hand, the unincorporated community of Mountain Green has had a relatively higher growth rate and could actually be larger than Morgan City. The Morgan City and Mountain Green are the two most significant concentrations of population are in Morgan County. However, there are several smaller unincorporated communities in the Morgan Valley with populations of several hundreds, or smaller. These are: Littleton, North Morgan, Stoddard, Milton, Enterprise, and Petersen. The population of all of Morgan County was reported to be 7,181 by the 2000 Census. Today, it is estimated to have a population of about 7,400 people.

Morgan County is predominantly a rural county. Most of its land use is dedicated to agriculture and open space, most of which is privately owned. Most of the remainder of the county is in residential land use. There are a few commercial businesses in the county, which are primarily located in Morgan City. Morgan's commercial development is located in two distinct areas. One commercial district is located on along the Frontage Road next to the railroad tracks and close to the freeway. This is the old commercial district of Morgan. Another distinct district is in the form of strip commercial development fronting SR-66, which runs through the middle of the city. There is also a limited amount of institutional, or government land use, such as Morgan High School and other schools, City Hall, and the County Courthouse, which are all in Morgan City. Mountain Green has virtually no commercial development. Its most prominent commercial development is the convenience store located in the northwest corner of 5800 Old Hwy. Road and SR-167 (Trappers Loop Road). There are also a bank and a small service oriented strip mall in the same general area. As far as industrial development is concerned, the Browning Arms plant and the Cottonwood

Commercial Park, by the Morgan Airport, are the only developments of this type located in the northern portion of Morgan County.

3.4 Freight Movement

Aside from local deliveries to stores and businesses, freight is not a major factor in Mountain Green or the area covered by the Morgan Transportation Master plan. However, while more than 150 million tons of freight passes through both Morgan and Mountain Green every year aboard trucks on Interstate 84 and aboard the freight trains of the Union Pacific, these operations have little or no impact on the area in question.

Holcim Cement, a significant freight-generating industry, is located just outside the boundary of this study at Devils Slide, Utah. Holcim receives a total of more than 811,000 tons of raw materials for making cement, as well as coal from Utah mines to power the plant, with all inbound materials arriving by truck via I-84. This equates to a total of almost 33,000 trucks arriving at the plant via state-maintained highways each year.

Outbound cement loads total 858,000 tons, with 27% shipped by rail in 100-ton capacity covered hopper rail cars, for a total of 2,316 rail cars shipped. The remaining 73% of the cement produced leaves the Holcim plant by truck. Using the largest cement-hauling tandem trailer trucks, with a total carrying capacity of 40-tons per truck, this would equate to a total of more than 15,500 trucks outbound from the Devils Slide plant each year.

Although not impacting either Morgan or Mountain Green, the Holcim plant is a classic example of how one industry can have a major impact on freight movement and highway infrastructure in a given area.

3.5 Bicycle and Pedestrian Conditions

Mountain Green is connected to other areas by a small roadway network. Although this road network provides a necessary link to the community, it is not as conducive to bicycle and pedestrian traffic as Morgan County would like. There are sections within this network where sidewalk and wider roadways are available, and new subdivision developments are installing sidewalks next to the roadways. These types of improvements have provided a benefit for the pedestrian traffic. However, even with these improvements, most bicyclists traveling from outside of the area do not typically stay in Mountain Green or in Morgan County. More often, bicyclists will start in Mountain Green, but use Trapper's Loop into the Ogden Valley because of the more bicycle-friendly, wide and unobstructed shoulder width of the road.

4.0 Summary of Future Conditions

The future conditions that are presented here are based upon the Mountain Green and Morgan County Master Plans. The future conditions are an estimate of the growth and impact that the current and future zoning and building will have on the area of Mountain Green.

4.1 Morgan County Zoning/Planning

The Existing zoning regulations in Morgan County restrict higher density developments. There is a zoning district that calls for 1- acre minimum lot size within 300 feet from an established roadway. There are districts in the low-lying areas just beyond the 1-acre zone along roadways that require a 20-acre

minimum lot size. There is a zoning district in the foothills requires a 160-acre minimum lot size. Most of the remaining areas of the County, particularly in the mountains, require a 320-acre minimum lot size. This type of zoning has aided the County in preventing "wild-fire" growth and has allowed the County to grow at a relatively moderate rate of about 2.5 percent, annually. However, with the population base of over a million people within about a 30-minute drive of northern Morgan County, quality and responsible growth is a significant concern of the County.

Morgan County is sensitive the effects of future growth. In order to enable the County to carefully consider of the effects of new growth, and evaluate the of impacts of development, Morgan County has adopted a General Plan which guides future development toward cities, towns, and villages. The County also has a Planned Community Ordinance, which allows the County to evaluate the impacts of developments, and enables it to require mitigative measures, including impacts related to traffic.

The County proposes the Mountain Green area to be the focal point of future economic growth and development. Morgan City is also expected to expand its commercial base and residential areas. As future growth occurs, the County is very concerned about the preservation of it rural/agricultural areas. For that reason, the County's growth will be focused around its cities, towns, and villages. Recreation is also expected to play a significant roll in Morgan County's future.

4.2 Future Land Use/Population

Morgan County is located in an area that is referred to as the "Wasatch Back", which is located on the back side, or east side of the Wasatch Front Range of mountains. In contrast, the "Wasatch Front" lies on the west side of the Wasatch Range. Both of the metropolitan areas of Salt Lake and Ogden/Layton, with a population of about 1.4 million, are situated along the Wasatch Front and in close proximity to Morgan County. There is good freeway access between Morgan County and the Wasatch Front metropolitan areas, and therefore, travel times between work, homes and shopping are usually less than 30 minutes. The excellent access has made it possible form many residents of Morgan County to live in the relative small, undiscovered Morgan Valley, with its rural, small town flavor and majestic alpine mountains. Morgan County has many of the same attributes as the other "Wasatch Back" Counties of Summit and Wasatch, which have experienced rapid residential growth over the past 20 or 30 years. The general trend for the "Wasatch Back" is for continued rapid growth due in large part to the "urban flight" of people trying to escape traffic congestion and the daily grind of the larger metropolitan areas of the Wasatch Front. Therefore, there is no reason not to expect a future wave of residential and other types of growth in Morgan Valley and other parts of the County.

Over the past few years, the Morgan County Planning Department and County Council have been presented with a myriad of development proposals affecting the northern portion of the County. These proposals, most of which have not reached the point where construction could start, are listed in Table 1, below. As the table shows, there are essentially three development components that can be identified if all of the proposals are aggregated. These are: (1) recreational; (2) "bedroom" residential; and (3) commercial (see Figure 1).

The recreational component is associated with future plans to further develop and expand the Snow Basin Resort, which is located just a short drive to the north of the Mountain Green community. Another recreational component is associated with the 14,000-acre Gailey/Holding Ranch, which is owned by Earl Holding of Snow Basin, and others, and has the potential for becoming an entirely new ski destination resort, similar to Snow Basin. These two developments would primarily be comprised of condominiums, hotels and a few homes. Most of the residential development is assumed to be "part time" and as such is expected to have a minority of the owners/renters as full time residents. Nevertheless, Snow Basin expansion could potentially include 1,110 single-family homes, 1,511 condominium units, and 1,860 hotel units (rooms). In addition, 40 commercial units could be included as well. Based preliminary proposals, the Gailey/Holding Ranch could include as many as 500 single family homes, 1,000 condominiums units, and 500 hotel units (rooms).

The largest component of the types of development proposals that have been considered by the County is the so-called "bedroom" residential component. This component is primarily comprised of single family residential and some residential condominium development. Development proposals for the Mountain Green community have included as many as 3,066 single-family homes and 500 residential condominium units. The Wilkinson/Cottonwoods area includes 980 single-family homes. The remainder of the Morgan Valley, which includes Morgan City, Littleton, Stoddard, Milton, Enterprise and Peterson communities would add nearly another 4,500 single family homes.

Along with the residential development component, future development proposals include a commercial development component. The County has designated an area near Mountain Green between the Old Highway and I-84 near the Trappers Loop Hwy. connection to the Old Highway as Mountain Green's "Town Center". This is the area that has been designated to receive most of the county's future commercial business development. Other areas have been identified for commercial business development as well. These are the McMillan area, just east of the "Town Center" area, the Cottonwoods at Mountain Green, which is located to the east and north of the "Town Center", and Snow Basin. These conceptual commercial business development proposals include a total of 320 businesses.

When the various development proposals are considered in aggregate, the number of single family (bedroom) residential units would amount to 10,129, residential condominium units to 3,011, and hotel units to 2,360 units (rooms). If one assumes a dwelling unit occupancy, or family size of 3 for the 10,129 single-family residential units, the population has the potential to increase by nearly 30,400 people. However, since none of the development proposals, except for the Cottonwood at Mountain Green, have been given final approval, it is difficult to estimate at what rate and time frame this residential and other development would occur. If one also considers the 3,011 residential condominiums units, which may have a combination of both full-time and part-time residents, than there is the potential for an additional increase of population. If one assumes 1.5 people per unit, than there would be an additional 4, 500 people. The 2,360 hotel units (rooms) would also house a certain number of people, most of which would be temporary, or short-term. Hotel rooms would add an additional number of people to the county's population.

Table 1

Mountain Green Master Plan

Land Use and Traffic Generation Summary

Area	Development	Land Use Type	Units*	External Trips per Unit	Total Traffic
Snow Basin Area	Ski Village*	Hotel	740	2	1,480
		Condos	520	3	1,560
	Kent's/Earl's	Hotel	820	2	1,640
		Condos	80	3	240
		Homes	132	6	792
	U.C. Universe	Homes	196	6	1,176
	Strawberry Area	Hotel	300	2	600
		Homes	186		
		Condos	380	3	2,883
		Homes	208	6	4,692
		Businesses	40	40	1,600
	North Eastern	Homes	29		
	East Strawberry	Condos	531		
		Homes	329		
	South Eastern	Homes	30		
		Area Totals:	**4,521**		**16,663**
Mountain Green Area	Monte Verde/Strawberry Cr.	Homes	150	6	1,518
	Highlands/Spring Ranch	Homes	1,083	6	6,498
	Town Center	Homes	1,000	6	6,000
		Businesses	150	40	6,000
	Rollins/Browning	Homes	800		
	McMillian	Homes	30	6	180
		Condos	300	3	1,500
		Businesses	100	40	4,000
	Trappers Point	Homes	50		
		Area Totals:	**3,116**		**25,696**
Wilkinson/ Cottonwood Area	Rosehill	Homes	80	6	480
	Browning	Businesses	30	40	1,200
	Cottonwoods	Homes	800	6	4,800
	Bohman	Homes	100	6	600

		Area Totals:	**1,010**		**7,080**
	Total for Mountain Green *North* of I-84 – Full Build-out:		**8,697**	**units**	**49,439 trips**
	50% of Build-out (medium growth):		**4,349**	**units**	**24,720 trips**
Gailey/ Holding Property	New Resort *South* of I-84	Hotel	500	2	1,000
		Condos	1,000	3	3,000
		Homes	500	6	3,000
		Skiers	750	2	1,500
		Area Totals:	**2,750**		**8,500**
Peterson		Homes	960	6	7,200
Enterprise		Homes	253		
Milton		Homes	130		
Stoddard		Homes	500		
Littleton		Homes	130		
		Area Totals:	**1,973**		
Morgan City		Homes	2500		
		Grand Totals:	**15,970**		

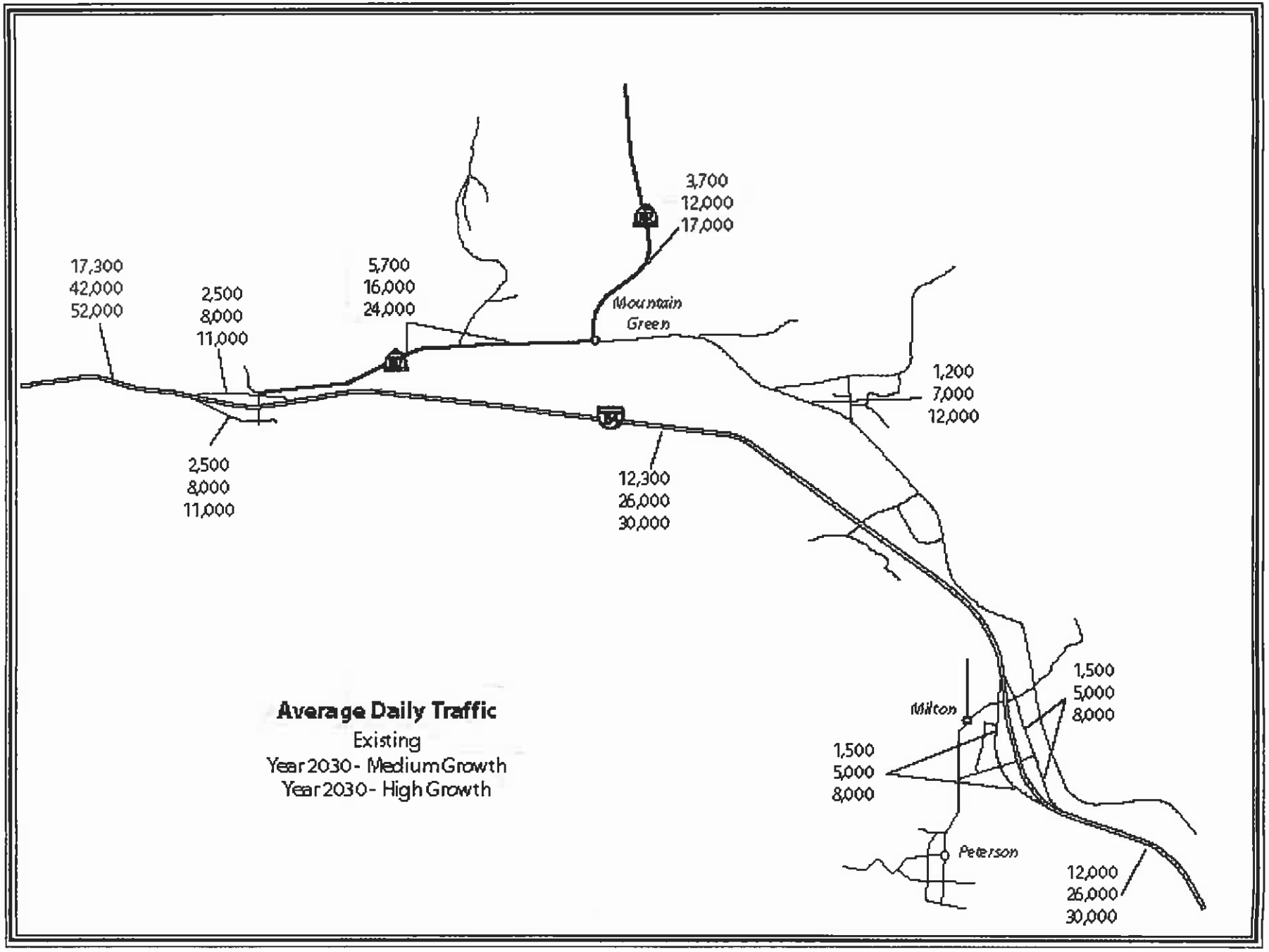
* In Weber County

Note: Estimates do not necessarily represent a build-out situation. Growth estimates do not include growth potential of the Ogden Valley.

Source of Land Use Information: Morgan County Planning Department.

Figure 1 Morgan County Growth Nodes (to be added)

Figure 2 Traffic Projections



4.3 Future Traffic

Over the past 15 years, traffic in the Mountain Green area has grown at an average rate of about 2½ % per year. Development plans in the area indicate that the growth rate will increase significantly over the next 15 years and beyond. Local government officials provided detailed information on future development. The future land use data indicates that the traffic volumes in the area could increase 200% to 300% over the next 30 years. The table lists the future land use and the potential traffic generated by these developments. At 50% of the total build-out for these projects, about 25,000 new trips will be generated. At 100% build-out as many as 50,000 new trips could be traversing the transportation system. These new trips were distributed on the highway system according to their geographic locations. The following map gives two future traffic volumes for the year 2030 showing a medium growth and a high growth scenario.

The medium growth traffic volumes indicate that both the half interchange at Mountain Green and SR-167 will reach their existing capacities within 30 years. With high growth these facilities will be well over capacity. Trappers loop Road, the county road east of trappers loop and the Peterson interchange will reach capacity under the high growth scenario. I-84 west of Mountain Green will be close to capacity once full build-out of the planned developments is completed.

In summary, the existing transportation system will be in adequate to service the planned development. Capacity improvements will be necessary.

4.4 Future Bicycle and Pedestrian Facilities

Walking and bicycling are important transportation modes that will need to be considered in the overall transportation network, especially with Morgan County's plans to develop into a tourist destination. Embracing this vision, the County realizes the need for expanding bicycle and pedestrian access into and around the Mountain Green area. The Mountain Green Master Plan requires that a map identifying all completed trails, proposed trails, trailheads, and trail type be submitted to the County. As area improvements are planned and implemented, connectivity of trails in Mountain Green, Morgan County and the surrounding areas should play an integral role in the decision making process. In order to provide for a better quality of life for all of those living in Morgan County, the trails will be accessible to all users and incorporate ADA requirements.

The trails systems, as they are planned, designed, and constructed, may have slight variances in application type due to possible differences of the terrain at a specific trail location. However, regardless of the design type, the applicable design standards found in the AASHTO Guide for the Development of Bicycle Facilities should be followed, as well as the MUTCD guidelines for appropriate signage of the trails system.

Bicyclists are allowed on all roadways, except where legally prohibited, and as such should be a consideration on all roads that are being designed and constructed, and as improvements are taking place, such as an interchange

upgrade. Opportunities to include bicycle paths and increased shoulder width in conjunction with a roadway project should be taken whenever technically, environmentally, and financially feasible.

Sidewalks in residential areas should be at least 5 feet wide whenever adequate right-of-way can be secured. This will provide adequate room and a level of comfort to persons walking in pairs or passing and will specifically allow for persons with strollers or in wheelchairs to pass. On major roadways, sidewalks at least 6 feet wide and with a 6 to 10-foot park strip to provide a snow storage area and a buffer to higher speed traffic are appropriate. In pedestrian-focused areas, such as schools, parks, sports venues or theaters, and in hotel and market districts, even wider sidewalks are desirable to accommodate and encourage the higher level of pedestrian activity, especially where tourist use would be expected. As sidewalks are planned and placed throughout the area, the Utah Department of Transportation's approved standard for sidewalks should be followed. This will ensure consistency throughout the Mountain Green area.

5.0 Interchange Alternative Analysis

Maps of the alternatives discussed in this section are included in this report as an illustration of the ideas presented. Any alternative will need to be fully evaluated before any definite alignments can be designed. The first cost associated with any analysis is for the environmental document itself. This cost would range from $1 million to $2 million and is not reflected in the planning level cost shown below. The alternatives will be presented here as a preliminary to any larger environmental study in the area for an interchange. An Interchange Justification Report needs to be submitted to the Federal Highway Administration before any interchange can be constructed. The different alternatives are as follows:

- **Alternative 1** – No Build/No Improvements
- **Alternative 2** – West Interchange; improving the existing interchange to a full interchange.
- **Alternative 3** – West Central New Interchange; a new, full interchange east of the existing interchange, west of the area center.
- **Alternative 4** – Central New Interchange; a new, full interchange south of Trapper's Loop Road, which may or may not include two one-way couplets.
- **Alternative 5** – East New Interchange; a new, full interchange east Trapper's Loop Road and northwest of the Peterson Interchange.
- **Alternative 6** – West Interchange Interim Improvements

5.1 Alternative 1 – No Build/No Improvements

Though this alternative is unacceptable to Morgan County and the Mountain Green area, it must be included. With this alternative there would be no construction costs and no environmental impacts to the surrounding area. There are some serious disadvantages to this alternative. If no improvements are made then the Mountain Green area will have limited access for to I-84/I-80 and the emergency vehicles will have a more limited access as well. The "No Build"

alternative will also create a restricted economic development potential for Mountain Green north of I-84.

5.2 Alternative 2 – West Interchange

This alternative would create a full, though unconnected, interchange at the existing west interchange (See Figure 3). The advantages of this alternative are that there would be fewer environmental impacts, reduced conflicts and issues with the railroad, and it is possible to have some interim improvements. The interim improvement would be to add an eastbound on ramp until more could be done in the area.

Yet, there are many disadvantages. The overall access to the area is poor. There are design issues with the frontage road to the north and the topography of the area. The interchange is still not central to the area served. The economic development potential north of I-84 is still restricted. Improvements will need to be done to the Old Highway, or State Route 167, adding to the construction costs. Finally, this would be a non-standard interchange and the Federal Highway Administration may not approve of the design.

The costs for this alternative are from $4 million to $8 million. If SR-167 needs to be widened to 5 lanes, the cost would increase $8 million to $10 million.

5.3 Alternative 3 – West Central New Interchange

This alternative has two options (see Figure 4). Alternative 3A creates an offset intersection on SR-167. The road would then travel approximately south to I-84 to a new interchange. Alternative 3B would create a full intersection at Trapper's Loop Road (SR-167) and Old Highway then curve to the west before turning to the south to a new interchange with I-84.

The largest advantage of this alternative is that the impacts to the wetlands should be fewer than other alternatives. This would need to be verified during the design stage. Another advantage is a full access interchange.

One disadvantage of Alternative 3A is that it does create an offset intersection between the interchange and northbound Trapper's Loop. The new interchange would be close to the old half-interchange. This distance would be less than 1 mile and it would therefore be unacceptable to keep both interchanges open.

Many options are available for the interchange. Designs costs for this interchange will be shown for two types of diamond interchange and a SPUI. The planning level cost estimates will be summarized in Table 3.

5.4 Alternative 4 – Central New Interchange

This alternative also has two options (see Figure 4). Alternative 4A comes south from Trapper's Loop Road to a new interchange with I-84. Alternative 4B splits the traffic into two one-way couplets. The southbound couplet would come south from Trapper's Loop Road then turns east to rejoin the northbound side. The northbound couplet would curve east then turn north in until it curves back into Trapper's Loop.

Alternative 4B is preferred by Morgan County for the Mountain Green area. The largest advantage of Alternative 4 is that the route is through the center of the area. This will bring a strong economic development potential to the area. A new interchange in this area will be good for emergency services and overall access to the area. The one-way couplets will spread the downtown district, making it larger, with a narrower street cross-section.

The biggest disadvantages are the potential environmental impacts to the area. With an access road to the south, the alternative would cross the center of the wetlands area. The costs of this alternative could be the highest of all the alternatives. Alternative 4B would have the added expense of two roadways through the center of the business district. Lastly, the proximity of the railroad could create many problems right around the interchange.

The planning level cost estimate of Alternative 4, as with Alternative 3, will be summarized in Table 3 of this report.

5.5 Alternative 5 – East New Interchange

Alternative 5 will join the Old Highway with I-84 at a new intersection with a new road. This road can be in one of two locations that will be help to avoid larger environmental impacts to the area (see Figure 5).

The advantages of Alternative 5 are many. The environmental impact potential is lower in this area. Access to the proposed development on the south side of I-84 may be easier to achieve. There are fewer design and topographic limitations for the new interchange and roadway.

Even with all of these advantages, there are some significant disadvantages. There are larger farmland impacts with Alternative 5. The interchange would be out of direction for eastbound travelers to the Mountain Green and Snow Basin areas. Also, the interchange would be in a poor location for the general area of Mountain Green.

With the many potential options for interchange types, the planning level cost estimates will be summarized in Table 3.

5.6 Alternative 6 – West Interchange Interim Improvements

Morgan County officials have identified a need for some interim, or "stop gap" improvements to the existing interchange. With the current interchange at Mountain Green, eastbound access to, and westbound exiting from I-84 is not possible. These movements can only be made at the Peterson Interchange, which is more than 2 miles away to the southeast. This alternative would simply include the addition of an eastbound ramp to I-84. The ramp would approximate 2000 feet in length and would likely cost less than one million dollars. The addition of this ramp would provide more service to the interchange by allowing eastbound access to I-84. The addition of this ramp would eliminate much of the out-of-direction travel that the design limitations of the existing interchange currently causes.

Another aspect to possibly making interim improvements to the existing interchange is access to Morgan Valley south of the Weber River and I-84. In the future, there is a possibility that more development will occur in this part of Morgan Valley and that there will be an increased demand to increase accessibility to that area of the county. The evaluation of the various alternatives has shown that the most practical way to increasing accessibility to this area would be from the existing interchange. There are significant cost and environmental ramifications to building a new full service interchange that would allow I-84 traffic to exit at a new interchange and head south across the railroad tracks, the Weber River ad associated wetlands.

This alternative would cost around $1 million, which is less than Alternative 2

The different types of interchanges and the costs associated with them are summarized in Table 2. The costs will be added for each alternative in Table 3 to give a planning level cost estimate range.

Table 2

Improvement Type	Cost (in millions)
Tight Diamond Interchange – no mainline or railroad realignment; dual MSE walls for eastbound on and off ramps	$17 - $20
Diamond Interchange – no MSE wall; mainline realignment	$20 - $25
Single Point Urban Interchange (SPUI)	$23 - $28
Single Connector road to Trapper's Loop (SR-167)/Old Highway	$3 - $5
One-way Couplets to Trapper's Loop (SR-167)	$6 - $8
Access Road to South – requiring structure over railroad, river and wetlands	$15 - $40

Table 3

Interchange Alternative	Type of Interchange/Planning Level Cost Range (in Millions)		
	Tight Diamond	Diamond	SPUI
3 – No South Access, With Connector Road	$20 - $25	$23 - $30	$26 - $33
4A – No South Access, With Connector Road	$20 - $25	$23 - $30	$26 - $33
4B – No South Access, With One-Way Couplets	$23 - $28	$26 - $33	$29 - $36
5 – No South Access, With Connector Road	$20 - $25	$23 - $30	$26 - $33
3 – With South Access and Connector Road	$35 - $65	$38 - $70	$41 - $73
4A – With South Access and Connector Road	$35 - $65	$38 - $70	$41 - $73
4B – With South Access and One-Way Couplets	$38 - $68	$41 - $73	$44 - $76
5 – With South Access and Connector Road	$35 - $65	$38 - $70	$41 - $73

Figure 3. Alternative 2

Figure 4. Alternatives 3 and 4

Figure 5. Alternative 5

6.0 Federal Requirements

A meeting was held on March 22, 2004 between the study team, some Morgan County elected officials, a representative of UDOT Region 1, and representatives of the Utah office of the Federal Highway Administration. The purpose of the meeting was to obtain information concerning the federal requirements that apply to proposed modifications to I-84 and/or interchange on the Interstate. Discussed was the possibility of a new interchange, and some interim improvements to the existing interchange in the Mountain Green area. Representatives of FHWA recommended that a more detailed analysis of environmental, safety, access, phasing of improvements, and other long term transportation-related issues be conducted in the future relative to the interchange at Mountain Green. They recommended that any new improvements in the Mountain Green area should include a full-service interchange to replace the old interchange that does not provide full service. They indicated that any changes to the existing interchange, or the construction of a new interchange at a different location would require the preparation of an Interchange Modification Justification Report. The requirements that will need to be considered in the preparation of this report are listed below.

The FHWA Policy on Additional Interchanges to the Interstate System (Federal Register / Vol. 55 No. 204 dated October 22, 1990) indicates that federal approval is required for any new or revised access points on the interstate system. (See Appendix -----)

The new access approval process is as follows:

I. The need for a new interchange or a revision to an existing access is determined through the appropriate study or studies.

II. This study information is summarized and the state DOT then submits a request to the FHWA Division Office for approval of the proposed changes. Per a memo dated April 26, 1989 from the FHWA Utah Division to the Utah Department of Transportation (See appendix ----), the change in interstate access request must include at a minimum the following items:

1. Purpose of proposed changes in access
2. Relationships to other highway improvement plans and programs
3. Distances to and size of communities directly served
4. Description of existing and proposed access
5. Description of any proposed or planned local street network improvements
6. Traffic and operational analysis for existing and proposed conditions
7. Other relevant information

III. The FHWA Division & Regional Offices both review the submitted request and forward it on to the FHWA Washington Headquarters with their comments.

IV. The FHWA Washington Headquarters then reviews the entire proposed package and approves or denies the request.

It should be noted that the Federal Planning & NEPA guidelines apply as project funds are programmed, environmental work is completed, and final design work is carried out.

7.0 Local Government/Public Involvement

7.1 Local Government Coordination/Stakeholder Meetings

When the proposal was made to assist Morgan County with some of its transportation and development issues, discussions were held with the Planning Department to obtain agreement on the scope of work of the study. Discussions were also held with the Chairman of the County Council with regard to the study and what it would entail. Requests of the Planning Department for development proposal information and other data, and a "stakeholders" list were made and fulfilled. The list of stakeholders from the county included some of the more significant property owners and developers, the Chair of the County Council, the Planning Director, and some representatives from the Utah Department of Transportation and the Wasatch Front Regional Council staffs. In total, three stakeholder meetings were held in an effort to obtain input from them on the issues, problems, and suggestions on ways the problems and issues could be resolved. A copy of the Rough Draft of the Study Report was provided the stakeholders for their review and comment. Once the initial review comments and other corrections were incorporated into the report, the stakeholders and the County were afforded another opportunity for review and input so that the Final Report could reflect the input and views of the stakeholders.

7.2 Local Government Preferences

The county is very aware of the effects of an efficient transportation system. They are particularly aware of the problems to transportation that new growth in the future could bring. Therefore, the county is very concerned that the operation of the existing I-84 Interchange at Mountain Green continue to function well and not be overwhelmed by new growth in population and traffic. It is the county's desire that the existing interchange function safely and efficiently, and if this cannot be achieve with the existing interchange, that consideration be given to planning of a new interchange on I-84 more in alignment with the Trappers Loop Road. The interchange that would most meet Morgan County's needs and future plans is "Alternative 4", which has been identified and evaluated in this report. In addition, the county would like to coordinate its future land use development in the Mountain Green and other areas with any future transportation improvements that might be made in the future. The county is planning for needed commercial business development in the Mountain Green area, and is interested in establishing a "Town Center" that would be planned around a new interchange more than 1.5 miles from the existing one.

The county realizes the limitation of the existing interchange, particularly that it is fairly antiquated and does not provide full service. School buses and other vehicles many times are required to travel several miles out of their way in order to travel in the eastbound direction from the existing interchange. The county has expressed a desire for a new interchange at some point in the future in order to better serve existing and future transportation needs, and to provide an impetus in fulfilling its plans and hopes for more commercial business development in the Mountain Green area.

The county is desirous of seeing some improvements relative to the interchange situation in the Mountain Green area. It is not satisfied with the status quo, or a "no build" alternative, because of the poor circulation and safety issues associated with the existing interchange. At a minimum, if new interchange improvements are currently not needed, or warranted, the county would like some interim or "stop gap" improvements made to the existing interchange in order to make it safer and more functional. The county has observed that there is currently fill and road base in place for an eastbound ramp at the interchange, but there is no paved surface and it has been blocked with concrete barriers. The County desires the addition of an eastbound ramp to the interchange, and believes it could be easily accomplished, considering that the rudiments of a ramp are already in place. In addition, another interim improvement that the county is in favor of would be the development of a westbound exit ramp via the rest area on I-84.

8.0 Recommendations

After the evaluation of the alternatives and their cursory effects, the results of the stakeholder meetings, and discussions with Morgan County officials, the following recommendations are listed below:

(1) It is recommended that the existing interchange be considered for some interim, or "stop gap" improvements in the near future. First, as was stated previously, the existing interchange is not a full service interchange. Eastbound access to, and westbound exiting from I-84 at the Mountain Green Interchange is currently not possible. These movements can only be made at the Peterson Interchange, which is more than 2 miles to the southwest of the Mountain Green Interchange. This situation creates an inconvenience to the residence of Mountain Green and out-of-direction travel. One of the measures that can be taken to improve the interchange is to further develop the eastbound on ramp. The earthwork for the ramp has been completed, however, there is currently no pavement and it is blocked off with jersey barriers. Development of this ramp would cost very little, and would provide a much needed additional movement at the interchange. Also, at some point in the future, some consideration should be given to the development of a westbound off ramp from I-84 to the Old Highway near Mountain Green. Adding this would provide the opportunity for movements in all directions from the Mountain Green area.

(2) In the long term, it is recommended that consideration be given to the development of a new interchange on I-84 near the point where the Trappers Loop Road, were it extended to the south, would intersect with I-84. This recommendation calls for the development of Alternative 4, which is described in this report. Morgan County's local officials and the Steering Committee favor this alternative. This alternative is the most compatible with Morgan County's adopted plans for land use and economic development for the Mountain Green Community. Based on the analysis of the alternatives, it is apparent that a tight diamond interchange would be the most feasible, with no connection to the south, since there are numerous constraints to the south in the form of the railroad tracks, the Weber River, and extensive wetlands and wildlife habitat.

(3) At some point in the future, the establishment, or increased access to the south and west of the Weber River in the Morgan Valley will be needed. It was concluded by the analysis of the alternatives that there would be too much environmental impact to, and project costs by creating a connection to the south from a new interchange, or Alternative 4. It is recommended that if a need for a connection to the south arises, that the existing interchange at Mountain Green be considered for the establishment of such a connection, since it appears that from this action the least amount of environmental impacts would result.

9.0 Corridor Preservation and Tools

In order to be most effective, corridor preservation, or management should be a shared responsibility between the highway agency (UDOT) and the local governments (Morgan County). Each party has certain strengths and weaknesses relative to corridor preservation. The most effective corridor preservation actions that can be taken in the early stages of corridor preservation are those that the local governments have the power to undertake. Local governments are the only governmental entities that have the responsibility to plan future land use/developments. It is during the early stages of site planning and subdivision development review/approval processes that the planned corridor should be considered. Local governments should be resolved to preserve the corridor by making it a part of its General Plan so that the preservation of the corridor has the status of official local government policy. This can be accomplished by incorporating the corridor into the transportation element of the General Plan, or by establishing and adopting an "Official Map".

There will be times when local government ordinances, transfer of development rights, setbacks and other tools will not suffice in preserving a transportation corridor from development. In this case, if the corridor is part of the local government's General Plan, or is on an Official Map, and it is anticipated that construction of transportation improvements are planned to take place within a 30-year time frame, the local government could apply for funds for the acquisition of the property from UDOT's Corridor Preservation Revolving Loan Fund. If the proposal meets the criteria and other requirements of the Fund, financial resource can be made available to the local government to acquire the property if development of the property is immanent and there is nothing more the local government can do to keep the parcel from being developed. Once the project that is planned for the corridor is sufficiently developed, and funding for the project secured, the loan can than be repaid to the Revolving Loan Fund.

There are three main ways that corridors can be preserved. Each of these three main ways has several methods. The three main methods are Acquisition, Exercise of Police Powers, and Voluntary Agreements and Government Inducements.

9.1 Acquisition

One way to preserve a transportation corridor is to acquire the property outright. The property acquired can be developed or undeveloped. When the city is able to acquire undeveloped property, the city has the ability to build without greatly impacting the public. On the other hand, acquiring developed land can be very expensive and can create a negative image for the City. Acquisition of land

should be the last resort in any of the cases for Transportation Corridor Preservation. The following is a list of some ways that land can be acquired.

- Development Easements
- Public Land Exchanges
- Private Land Trusts
- Advance Purchase and Eminent Domain
- Hardship Acquisition
- Purchase Options

9.2 Exercise of Police Powers

Police powers are those ordinances that are enacted by a local government in order to control some of the aspects of the community. There are ordinances that can be helpful in preserving corridors for the Transportation Master Plan. Many of the ordinances that can be used for corridor preservation are for future developments in the community. These can be controversial, but can be initially less intrusive.

- Impact Fees and Exactions
- Setback Ordinances
- Official Maps or Maps of Reservation
- Adequate Public Facilities and Concurrency Requirements

9.3 Voluntary Agreements and Government Inducements

Voluntary agreements and governmental inducements rely on the good will of both the developers and the local government. Many times it is a give and take situation where both parties could benefit in the end. The developer will likely have a better-developed area and the local government will be able to preserve the corridor for transportation in and around the development. Listed below are some of the voluntary agreements and governmental inducements that can be used in order to preserve transportation corridors in the city limits.

- Voluntary Platting
- Transfer of Development Rights
- Tax Abatement
- Agricultural Zoning

Each of these methods has its place, but there is an order that any government should try to use. Voluntary agreements and government inducements should be used, if possible, before any police powers are used. Police powers should be tired before acquisition is sought. The last technique to be used should always be the last resort in any corridor preservation. The Utah Department of Transportation has developed a toolkit to aid in corridor preservation techniques. This toolkit contains references to Utah code and examples of how the techniques have been used in the past.

APPENDIX D

ACCIDENT DATA ON STATE AND LOCAL HIGHWAYS

Crash Statistics for Morgan County, 2003-2005

I-84

no of crashes:	323
3-year AADT:	34,616
length (mi):	21.23
functional class:	rural interstate
crash rate:	1.20
severity index:	1.35
expected rate:	0.87
expected severity:	1.83

SR-65

no of crashes:	28
3-year AADT:	2130
length (mi):	13.34
functional class:	major collector
crash rate:	2.70
severity index:	2.07
expected rate:	2.32
expected severity:	1.81

SR-66

no of crashes:	35
3-year AADT:	4581
length (mi):	14.35
functional class:	major collector
crash rate:	1.46
severity index:	1.74
expected rate:	2.32
expected severity:	1.81

SR-167

no of crashes:	41
3-year AADT:	10,394
length (mi):	6.89
functional class:	minor arterial
crash rate:	1.57
severity index:	2.10
expected rate:	1.96
expected severity:	1.72

South Morgan Valley

no of crashes:	6
3-year AADT:	
length (mi):	3.90
functional class:	minor collector
crash rate:	
severity index:	2.33
expected rate:	
expected severity:	1.76

Milton Morgan Valley Dr/Young Street

no of crashes:	21
3-year AADT:	4774
length (mi):	8.87
functional class:	major collector
crash rate:	1.36
severity index:	1.90
expected rate:	2.32
expected severity:	1.81

Cottonwood Canyon Road

no of crashes:	2
3-year AADT:	
length (mi):	1.42
functional class:	minor collector
crash rate:	
severity index:	2.00
expected rate:	
expected severity:	1.76

Stoddard Lane

no of crashes:	1
3-year AADT:	
length (mi):	1.10
functional class:	minor collector
crash rate:	
severity index:	1.00
expected rate:	
expected severity:	1.76

Old Highway 30

no of crashes:	16
3-year AADT:	3902
length (mi):	10.18
functional class:	major collector
crash rate:	1.10
severity index:	1.63
expected rate:	2.32
expected severity:	1.81

Lost Creek

no of crashes:	3
3-year AADT:	1147
length (mi):	12.73
functional class:	major collector
crash rate:	0.56
severity index:	2.00
expected rate:	2.32
expected severity:	1.81

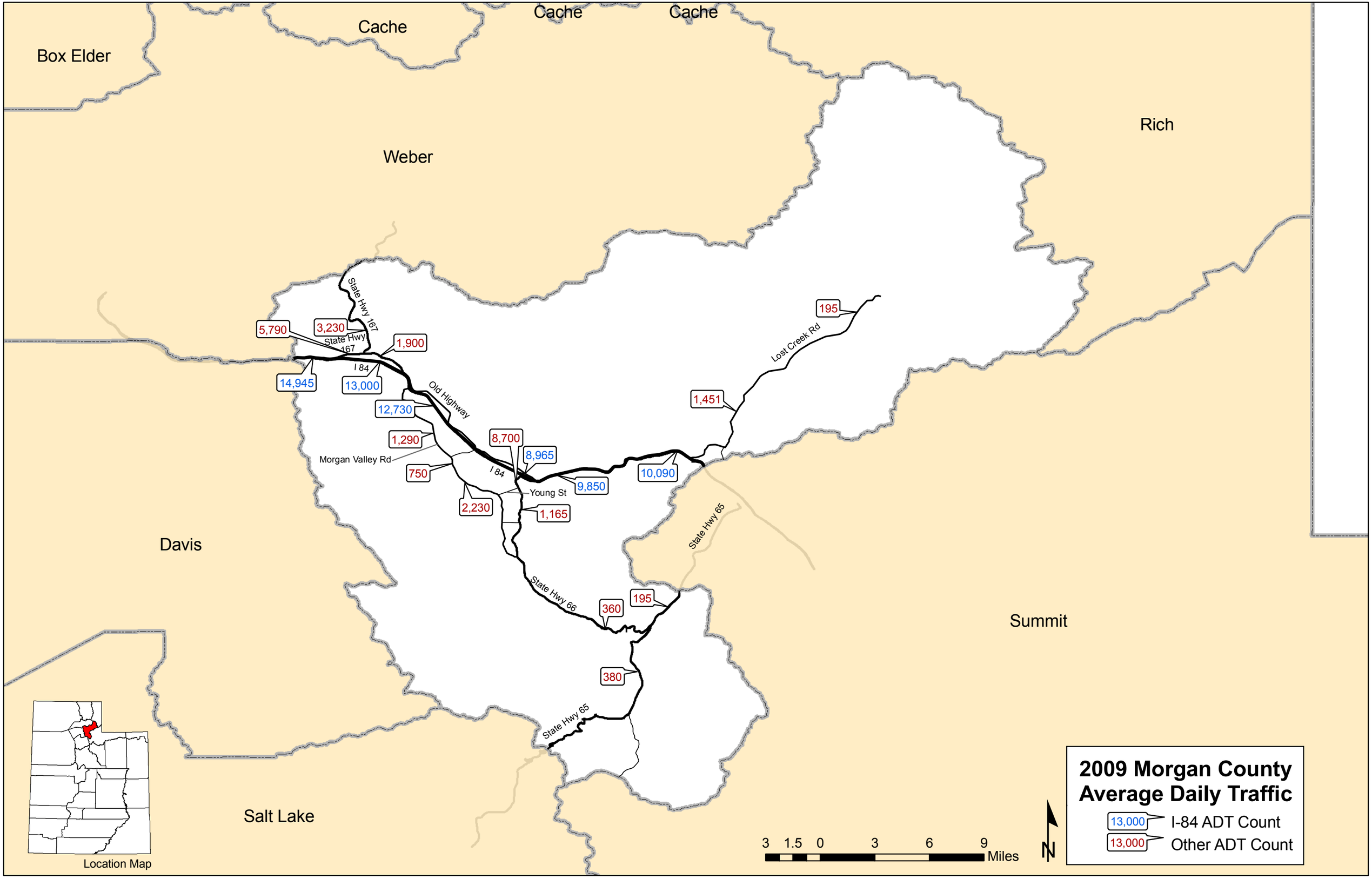
Jeremy Ranch East Canyon Road

no of crashes:	1
3-year AADT:	
length (mi):	3.75
functional class:	local
crash rate:	
severity index:	1.00
expected rate:	
expected severity:	1.67

APPENDIX E

MAJOR UDOT PROJECTS IN MORGAN COUNTY

Length	Project Concept	FA Funds	Matching Funds	Fund Source	Fd_name	Fund_yr
0.0	Bridge - Replacement # C-164	$2,520,000	$630,000	Bridge On System State	UDOT Projects	2010
6.0	RSI - Add Guardrail	$372,920.00	$27,080.00	Highway Safety Improvement	UDOT Projects	2007
0.0	REPLACE DETERIORATED CATTLEGUARD	$235,450	$14,550	Interstate Maintenance	UDOT Projects	2007
9.0	Concrete Pavement Joint Repair	$1,920,113	$118,656	Interstate Maintenance	UDOT Projects	2008
9.0	Concrete Pavement Joint Repair	$1,920,113	$118,656	Interstate Maintenance	UDOT Projects	2008
0.0	Bridge Deck Rehab	$2,400,000	$600,000	Bridge On System State	UDOT Projects	2011
11.0	Road - Pavement Rehabilitation	$23,773,560.00	$1,226,440.00	Interstate Maintenance	UDOT Projects	2004
1.2	Bridge - Rehabilitation #D-260	$300,000.00	$165,000.00	Bridge On System State	UDOT Projects	2004
0.0	Bridge Replacement	$960,000	$906,000	Bridge Off System State	Other Local Projects	2006
0.0	Bridge Replacement #029003C	$672,000	$168,000	Bridge Off System State	Other Local Projects	CD
0.0	Preliminary Engineering	$1,990,550	$144,546	STP_RURAL	Other Local Projects	CD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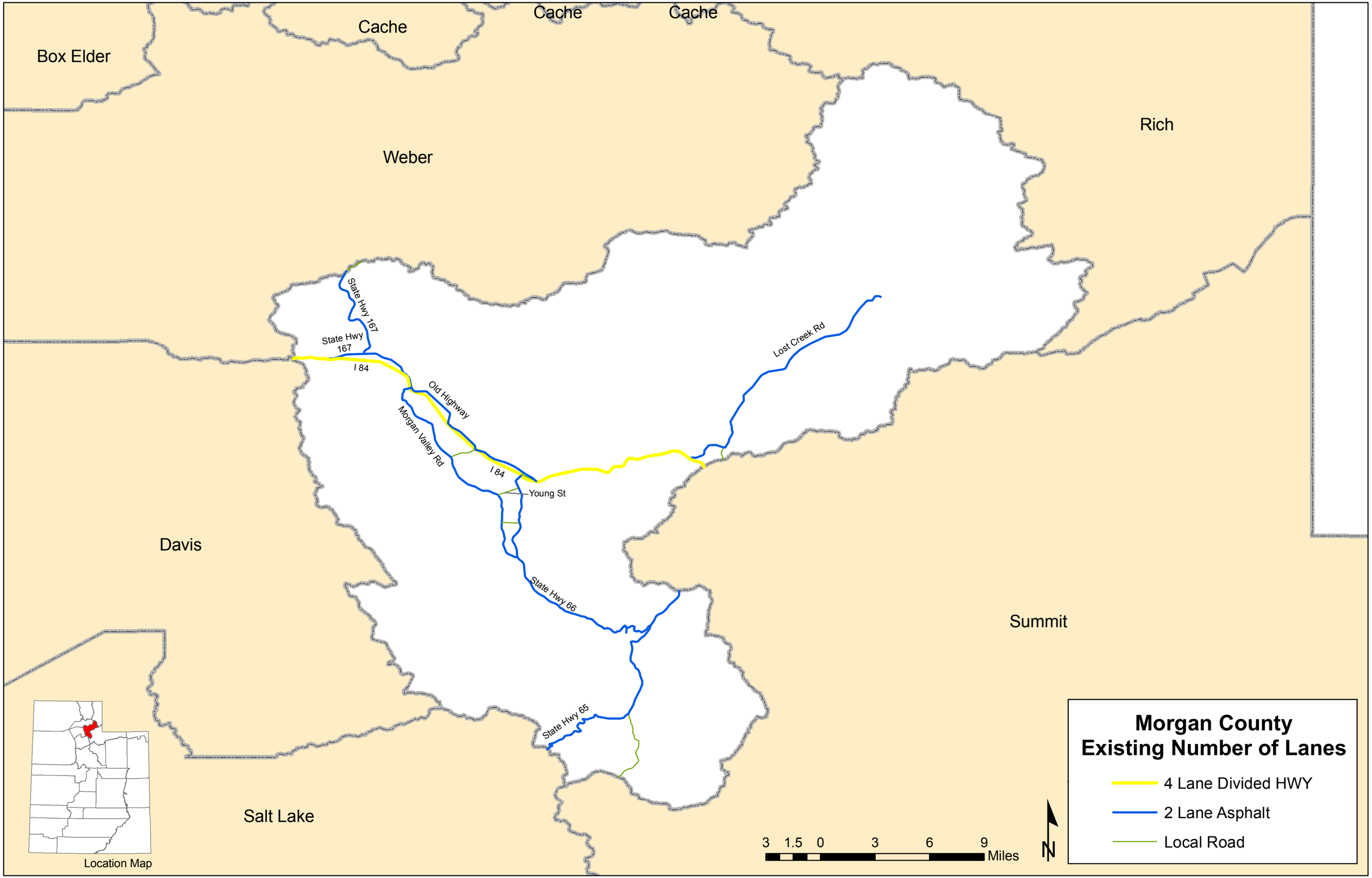
Cache
Cache
Cache
Rich
Weber
Davis
Summit
Salt Lake
State Hwy 167
5,790
3,230
State Hwy 167
1,900
I 84
14,945
13,000
Old Highway
12,730
1,290
8,700
8,965
Morgan Valley Rd
750
I 84
9,850
10,090
Young St
2,230
1,165
195
Lost Creek Rd
1,451
State Hwy 65
State Hwy 66
360
195
380
State Hwy 65
Location Map
3 1.5 0 3 6 9
Miles
N
2009 Morgan County
Average Daily Traffic
13,000 I-84 ADT Count
13,000 Other ADT Count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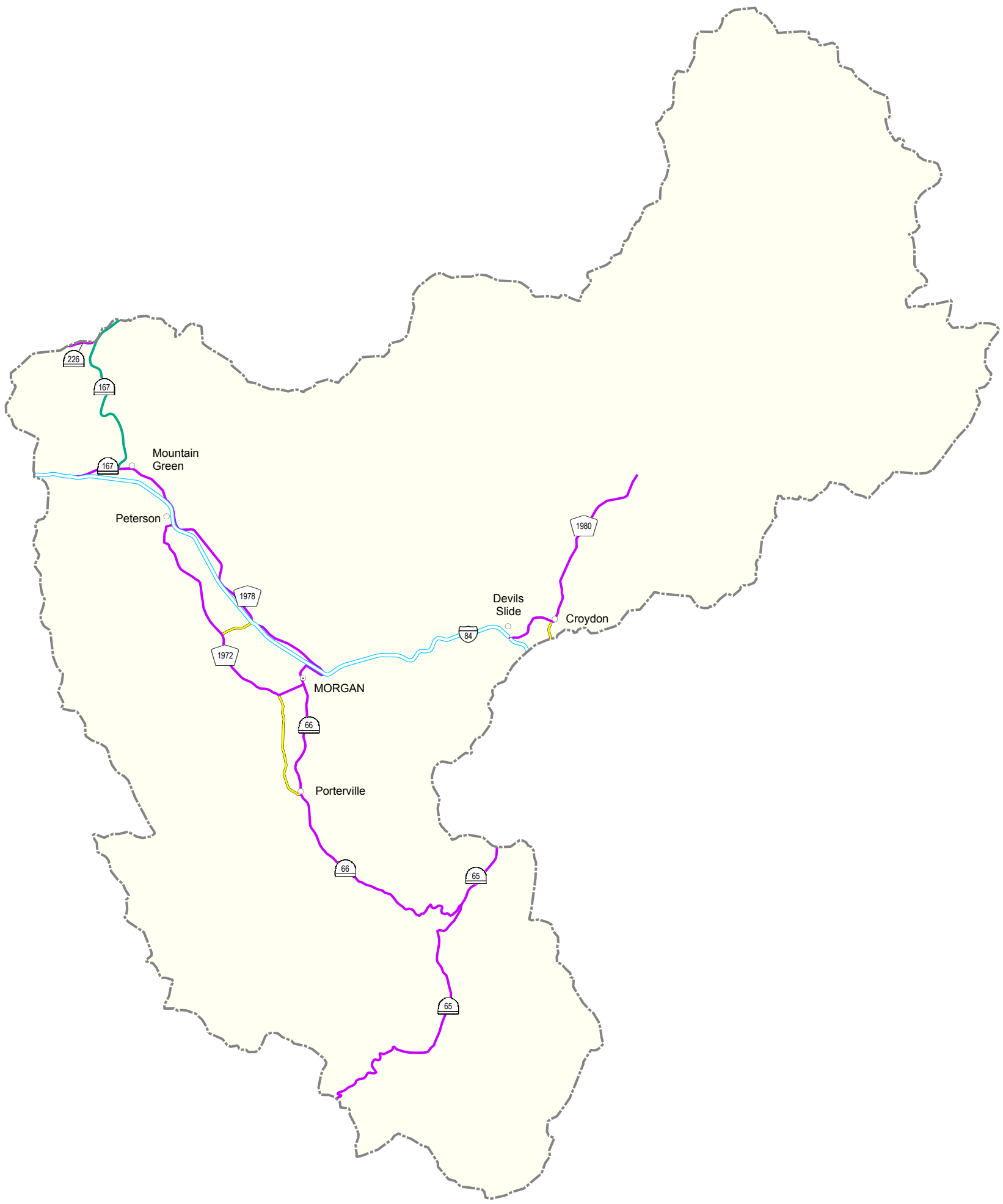
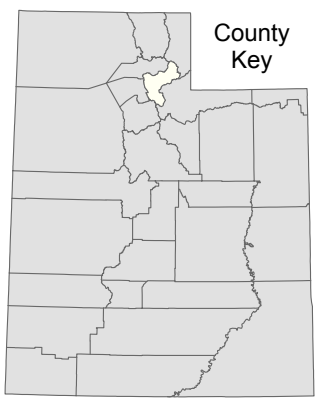
Cache
Cache
Cache
Rich
Weber
Davis
Summit
Salt Lake
State Hwy 167
State Hwy 167
I 84
Old Highway
Morgan Valley Rd
I 84
Young St
Lost Creek Rd
State Hwy 66
State Hwy 65
Location Map
3 1.5 0 3 6 9
Miles
N
Morgan County
Existing Number of Lanes
4 Lane Divided HWY
2 Lane Asphalt
Local Road





MORGAN COUNTY
RURAL FUNCTIONAL CLASS SYSTEM

- Interstate
- Freeway-Expressway
- Other Principal Arterial
- Minor Arterial
- Collector
- Minor Collector
- Federal Aid Urban Area Boundary
- Small Urban Area Boundary

N

NOTE: Dashed lines indicate proposed routes

Scale

0 1 2 4 6 8 Miles

Morgan County

Approved 02/14/05