

APPENDIX B

Transportation Master Plan
(Executive Summary)

EXECUTIVE SUMMARY

This Master Transportation Plan (MTP) is intended to be a useful tool to aid West Jordan City in taking a proactive effort in planning and maintaining the overall transportation network within their city. The first West Jordan Master Transportation Plan was completed in 1998 and this Plan represents the update to that plan. The process of preparing the West Jordan Transportation Master Plan was broken into four primary phases:

1. **Initiate Project and Develop Database** – The initial stage of work dealt with organizing the project and the Technical Advisory Committee and assembling existing conditions data including mapping data, previous reports, traffic counts, and accident histories.
2. **Analysis** – The second phase of the project included the analysis of the existing data and the development of estimated future traffic volumes using a travel demand model.
3. **Develop Master Plan** – This phase of the project represented the majority of work. The future roadway network for motorized vehicles was developed along with networks for transit, bicycles, and pedestrians. The residential traffic management plan was prepared including traffic calming.
4. **Approve Document** – The final phase of the plan preparation was to prepare a Capital Facilities Plan for potential projects, to write the plan, and to prepare additional tables and graphics. The completed draft document was then compiled and presented for comment to interested parties. The plan was then revised based on comments and the final plan was then presented to the City Council for adoption.

Throughout the entire plan preparation process, a public involvement plan was implemented with regular meetings of the Transportation Advisory Committee (TAC).

Public Involvement

A vital component in preparing this Master Transportation Plan has been seeking input from the citizens of West Jordan. A variety of different methods were utilized to acquire public opinion on the plan each of which are presented below and then discussed in more detail.

- **Open Houses** – Members of the master plan consultant team attended or sponsored public open houses at three different times throughout the study process. Two of the open houses were sponsored by the General Plan update while the other was sponsored by this plan.
- **Resident Survey** – A survey form was distributed throughout the city by inclusion in water bills that asked residents about their transportation concerns and provided an opportunity for them to share their comments. Nearly 2,400 survey forms were received providing illumination into citizen opinions.

- **Public Meetings** – Public meetings were held at the conclusion of the study process to present the plan to the General Plan Committee, Planning Commission, and the City Council.

Street System

Streets and highways provide for two distinct and very different functions: mobility and land access. Both functions are vital and no trip is made without both. Highway facilities are classified by the relative amounts of through and land-access service they provide. There are three primary classifications:

1. **Local Streets** – These facilities primarily serve land-access functions. Their design and control facilitates the movement of vehicles onto and off the street system from land parcels. Through movement is difficult and is discouraged by both the design and control of the facility.
2. **Collectors** – These facilities, the “middle” classification, are intended to serve both through and land-access functions in relatively equal proportions. For long through trips, such facilities are usually inefficient, though they are frequently used for shorter through movements associated with the distribution and collection portion of trips.
3. **Arterials** – These facilities are provided to service primarily through-traffic movement. While some land-access service may be accommodated, it is clearly a minor function, and all traffic controls and the facility design are intended to provide efficient through movement.
4. **Freeways and Expressways** – These facilities are provided to service long distance trips between cities and states. No land access service is provided by these facilities.

There are also ways to subdivide each of these major classifications. Arterials are often divided into major and minor categories. In West Jordan collectors are divided into major and minor categories with major collectors having higher carrying capacity than minor collectors¹.

Cross-Sections

The cross-section standards presented in this plan are similar to those in use by West Jordan prior to this update. The pavement width is the same with the changes coming in additional width for the side treatments to allow for wider sidewalks and park strips on arterial streets and major collectors. There are five functional classifications in this plan, which will be used in new construction in previously undeveloped areas. In-fill and redevelopment construction, as determined by city staff, the Planning Commission, and the City Council will be built to match existing cross-sections.

The additional width required on arterial streets and major collectors constructed in previously undeveloped areas can be obtained by one of two methods: the city may acquire the property or the city may obtain a sidewalk easement for the use of property. Generally, an easement will be obtained west of 4800 West while the property will be obtained for roads east of 4800 West.

¹ *Traffic Engineering*, McShane and Roess, Englewood Cliffs, New Jersey, 1990, p. 38

The new arterial street cross-section is 20 feet wider than the typical 106-foot right-of-way. The additional 20 feet will allow for 10-foot park strips and sidewalks. The new major collector cross-section is 10 feet wider than the typical 80-foot right-of-way. The additional 10 feet will allow for 10-foot park strips.

High capacity UDOT facilities such as the Bangerter Highway or the proposed Mountain View Corridor have separate functional classifications and are not described in detail here. The roadway classifications described here are only those municipal streets that fall under the jurisdiction of West Jordan City. A summary of these classifications and their cross-section geometry is shown in Table 3.1.2.

Table ES.1 West Jordan City Cross-Sections

| Classification | # of Lanes ¹ | Total Width | Pavement Width | Park Strip Width | Sidewalk Width |
|-----------------------|-------------------------|-------------|----------------|------------------|----------------|
| Local Street | 2 | 50' | 25' | 5' | 5' |
| Residential Collector | 2 | 60' | 35' | 5' | 5' |
| Minor Collector | 2 | 66' | 41' | 5' | 5' |
| Major Collector | 3 | 90' | 55' | 10' | 5' |
| Arterial | 5 | 126' | 81' | 10' | 10' |

¹Number of Lanes includes a center two-way-left-turn-lane if the number is odd.

Transportation Improvement Plan

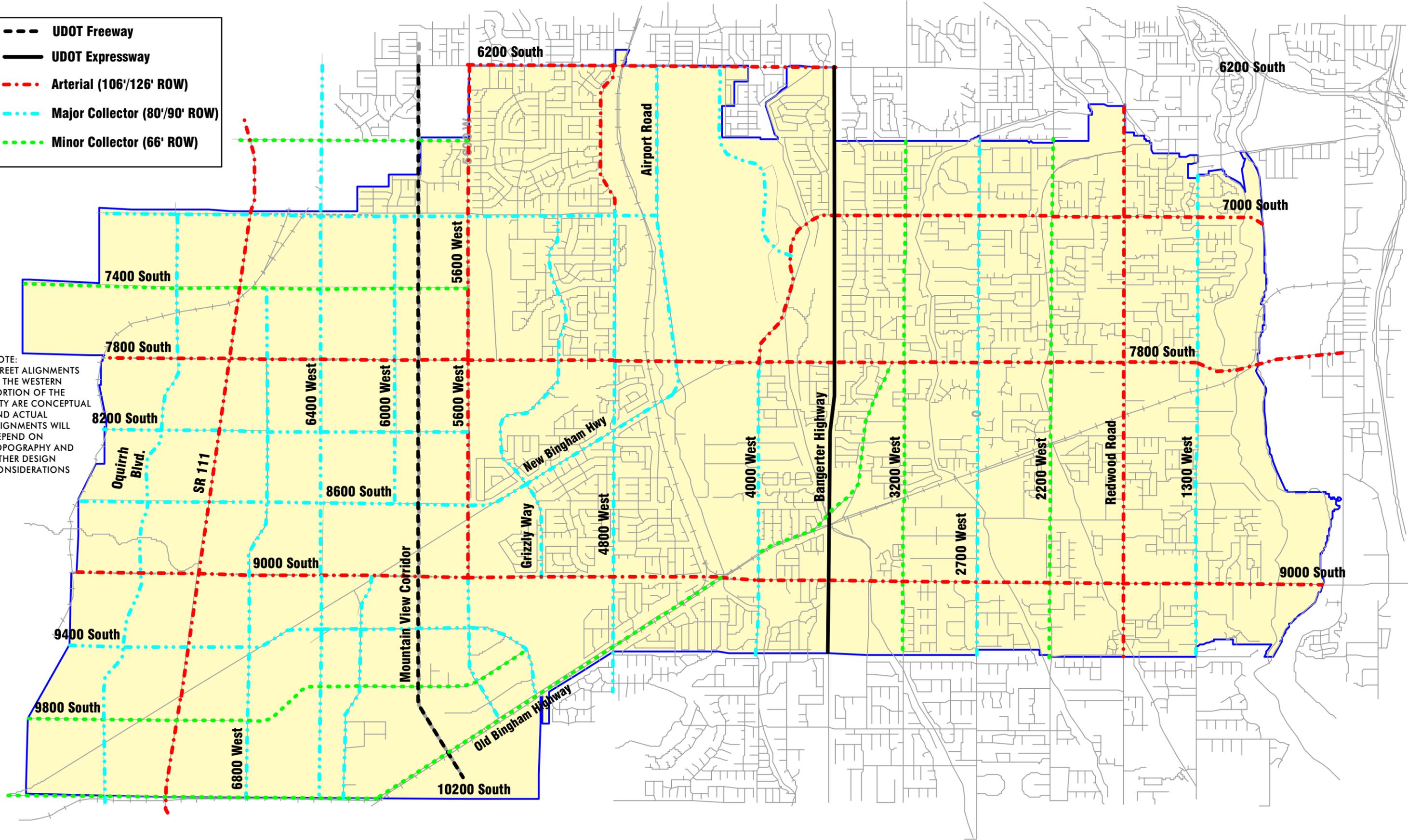
One of the fundamental purposes of this Master Transportation Plan is to outline the changes and improvements to the citywide transportation infrastructure over the next thirty years. The existing roadway network and traffic conditions served as the starting point in this process. The majority of the new streets to be constructed are in the western portion of the city. For the most part the arterials and collectors in the eastern portion of the city are built out to their ultimate condition, although many are expected to experience traffic volumes at or above their capacity in the future.

Cost estimates for the construction of new roadways were produced for each functional classification. All of the arterial and collector street segments in the City were ranked by their 2030 volume to capacity ratio as generated by the travel demand model. New street segments were assigned an estimated construction cost in current year (2002) dollars. This list represents all of the new arterial and collector streets to be constructed in West Jordan over the next thirty years. Figure ES.1 shows the future roadway network by functional classification.

All of these future roadway projects were assigned to one of three general time periods: 2002 to 2010, 2010 to 2020, and 2020 to 2030 based on the expected population and development growth West Jordan will experience over the same time periods. Generally, new roadway construction progresses from east to west. A map showing the time period for these projects is shown in Figure ES.2 and a list of each project and their associated costs is given in Table ES.2.

-  UDOT Freeway
-  UDOT Expressway
-  Arterial (106'/126' ROW)
-  Major Collector (80'/90' ROW)
-  Minor Collector (66' ROW)

NOTE:
STREET ALIGNMENTS
IN THE WESTERN
PORTION OF THE
CITY ARE CONCEPTUAL
AND ACTUAL
ALIGNMENTS WILL
DEPEND ON
TOPOGRAPHY AND
OTHER DESIGN
CONSIDERATIONS



Future Roadway Network



Figure ES.1

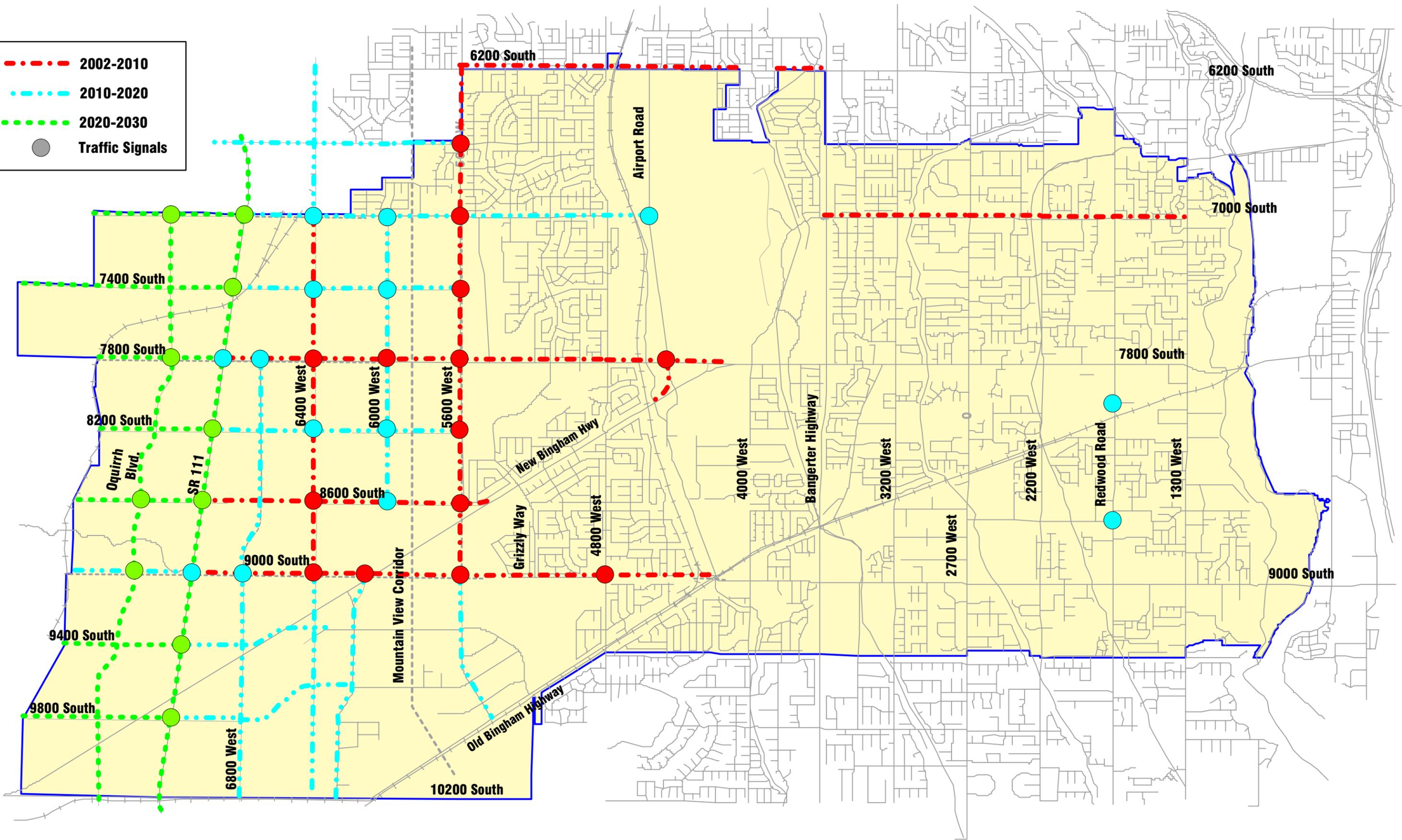
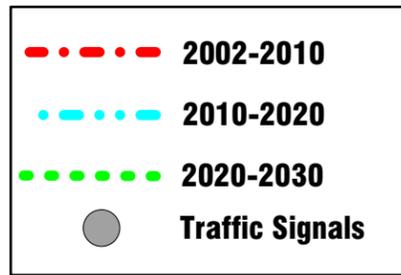


Table ES.2 Capital Facilities Plan

| | Street | From | To | Cost per mile | Segment Length (mi.) | Segment Cost | Phase |
|------------------|------------------|---------------------|--------------------|---------------|----------------------|--------------|-------|
| Arterials | | | | | | | |
| 1 | 7000 South | Redwood Road | Bangerter Highway | \$12,000,000 | 2 | \$24,000,000 | 1 |
| 2 | 6200 South (1/2) | Bangerter Highway | 5600 West | \$2,671,572 | 2.25 | \$6,011,036 | 1 |
| 3 | 9000 South | Bangerter Highway | 5600 West | \$5,343,143 | 0.5 | \$2,671,572 | 1 |
| 4 | 9000 South | 5600 West | SR-111 | \$4,232,327 | 1.9 | \$8,041,422 | 1 |
| 5 | 7800 South | 4000 West | 5600 West | \$5,343,143 | 2 | \$10,686,287 | 1 |
| 6 | 5600 West | North City Boundary | 7000 South | \$4,232,327 | 1 | \$4,232,327 | 1 |
| 7 | 5600 West | 7000 South | 7800 South | \$4,232,327 | 1 | \$4,232,327 | 1 |
| 8 | 5600 West | 7800 South | 9000 South | \$4,232,327 | 1.5 | \$6,348,491 | 1 |
| 9 | 7800 South | 5600 West | SR-111 | \$5,343,143 | 1.625 | \$8,682,608 | 1 |
| 10 | 6200 South (1/2) | 5600 West | SR-111 | \$2,671,572 | 1.25 | \$3,339,465 | 2 |
| 11 | 9000 South | SR-111 | West City Boundary | \$4,232,327 | 0.875 | \$3,703,287 | 2 |

Arterials Total **\$81,948,823**

Collectors

| | | | | | | | |
|----|-------------------|------------------|---------------------|-------------|-------|-------------|---|
| 12 | 6400 West | 7000 South | 7800 South | \$2,029,783 | 0.5 | \$1,014,891 | 1 |
| 13 | 6400 West | 7800 South | 9000 South | \$2,029,783 | 2 | \$4,059,566 | 1 |
| 14 | 8600 South | 5600 West | SR-111 | \$2,029,783 | 1.75 | \$3,552,120 | 1 |
| 15 | 5600 West | 9000 South | Old Bingham Highway | \$2,029,783 | 1 | \$2,029,783 | 2 |
| 16 | 6600 South | 5600 West | West City Boundary | \$1,230,434 | 0.375 | \$461,413 | 2 |
| 17 | 6000/6200 West | 7000 South | 7800 South | \$2,029,783 | 1 | \$2,029,783 | 2 |
| 18 | 6000/6200 West | 7800 South | 9000 South | \$2,029,783 | 1.75 | \$3,552,120 | 2 |
| 19 | 6000/6200 West | 9000 South | 10200 South | \$2,029,783 | 0.5 | \$1,014,891 | 2 |
| 20 | 7000 South | Grizzly Way | 5600 West | \$2,001,055 | 0.625 | \$1,250,659 | 2 |
| 21 | 7000 South | 5600 West | SR-111 | \$2,029,783 | 1.5 | \$3,044,674 | 2 |
| 22 | 10200 South (1/2) | 6000 West | SR-111 | \$615,217 | 1.5 | \$922,826 | 2 |
| 23 | 8200 South | 5600 West | 6400 West | \$1,230,434 | 0.75 | \$922,826 | 2 |
| 24 | 9800 South | 6000/6200 West | SR-111 | \$1,230,434 | 1.25 | \$1,538,043 | 2 |
| 25 | 9400 South | Bagley Park Road | SR-111 | \$1,230,434 | 1 | \$1,230,434 | 2 |
| 26 | 7400 South | 5600 West | SR-111 | \$1,230,434 | 1.625 | \$1,999,455 | 2 |
| 27 | 6800 West | 7800 South | 9000 South | \$2,029,783 | 1.5 | \$3,044,674 | 2 |
| 28 | 6800 West | 9000 South | 10200 South | \$2,029,783 | 1 | \$2,029,783 | 2 |
| 29 | 8200 South | 6400 West | SR-111 | \$2,029,783 | 0.7 | \$1,420,848 | 2 |
| 30 | 8200 South | SR-111 | West City Boundary | \$2,029,783 | 0.8 | \$1,623,826 | 3 |
| 31 | 7800 South | SR-111 | West City Boundary | \$2,029,783 | 1 | \$2,029,783 | 3 |
| 32 | Oquirrh Blvd | 6400 South | 9000 South | \$2,029,783 | 3.75 | \$7,611,686 | 3 |
| 33 | Oquirrh Blvd | 9000 South | South City Boundary | \$2,029,783 | 1.75 | \$3,552,120 | 3 |
| 34 | 9800 South | SR-111 | West City Boundary | \$1,230,434 | 1 | \$1,230,434 | 3 |
| 35 | 9400 South | SR-111 | West City Boundary | \$2,029,783 | 1 | \$2,029,783 | 3 |
| 36 | 7000 South | SR-111 | West City Boundary | \$2,029,783 | 1 | \$2,029,783 | 3 |
| 37 | 10200 South (1/2) | SR-111 | West City Boundary | \$615,217 | 1 | \$615,217 | 3 |
| 38 | 8600 South | SR-111 | West City Boundary | \$2,029,783 | 1.5 | \$3,044,674 | 3 |

| | |
|---------|--------------|
| Phase 1 | \$83,532,649 |
| Phase 2 | \$33,534,964 |
| Phase 3 | \$23,767,307 |

| | |
|--------------|----------------------|
| Total | \$140,834,921 |
|--------------|----------------------|

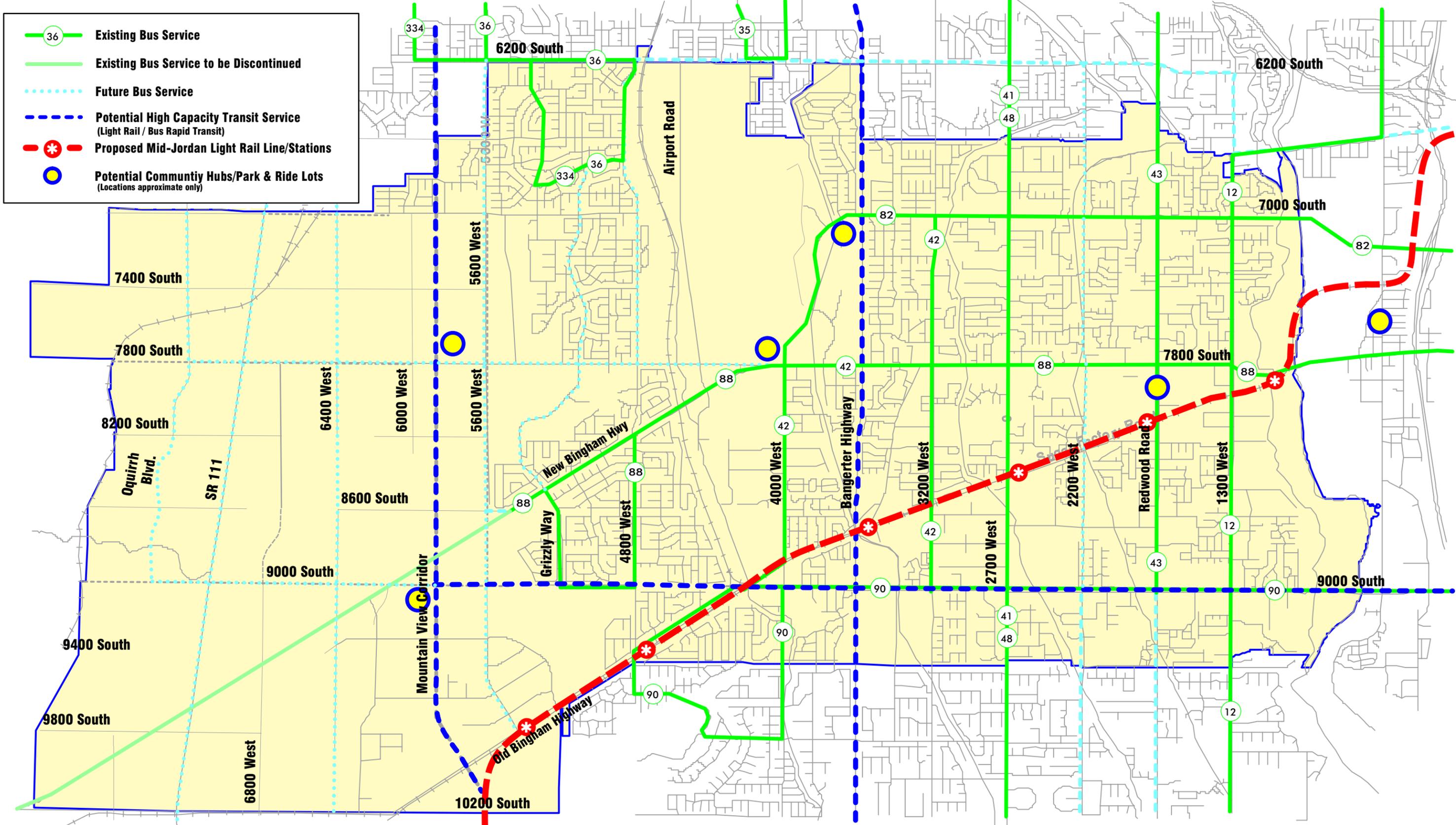
Public Transportation

An effective and efficient transit system is going to be an increasingly vital component of the overall transportation network in West Jordan as the City continues to grow. Proper transit planning and design not only requires that the transit facilities themselves be considered but also the adjacent land uses and corridors. There are many opportunities for transit service enhancements in West Jordan. A large part of future transit service in West Jordan will be the Mid-Jordan light rail line that will run along the existing rail corridor within the city. Environmental work for this line is currently underway with service expected to begin between 2007 and 2010.

The Wasatch Front Regional Council's Long Range Plan calls for increased bus service throughout Salt Lake County. As new roads are built and the population expands, it will be necessary for UTA to provide service to these new corridors, such as 5600 West, which will be an arterial street and will likely be close to the Mountain View Corridor, which may also be a transit corridor. Other existing facilities could use an immediate service increase, such as 7800 South, which currently only has peak period service. This corridor should receive bus service all day, as is done on 7000 South and 9000 South, as soon as possible. Figure ES.3 shows future transit corridors in West Jordan.

Recommended Bike Paths

The map of the proposed bicycle and trail facilities network is shown in Figure ES.4. All of the proposed street cross-sections allow for the addition of bicycle lanes. Before a bicycle lane can be installed on a roadway, the roadway itself must be complete along the entire extent of the bicycle path. Missing shoulders and incomplete segments pose a serious hazard to bicyclists. An example of a good facility for bike lanes is Grizzly Way, which could immediately support a bike lane from 7000 South to 9000 South.

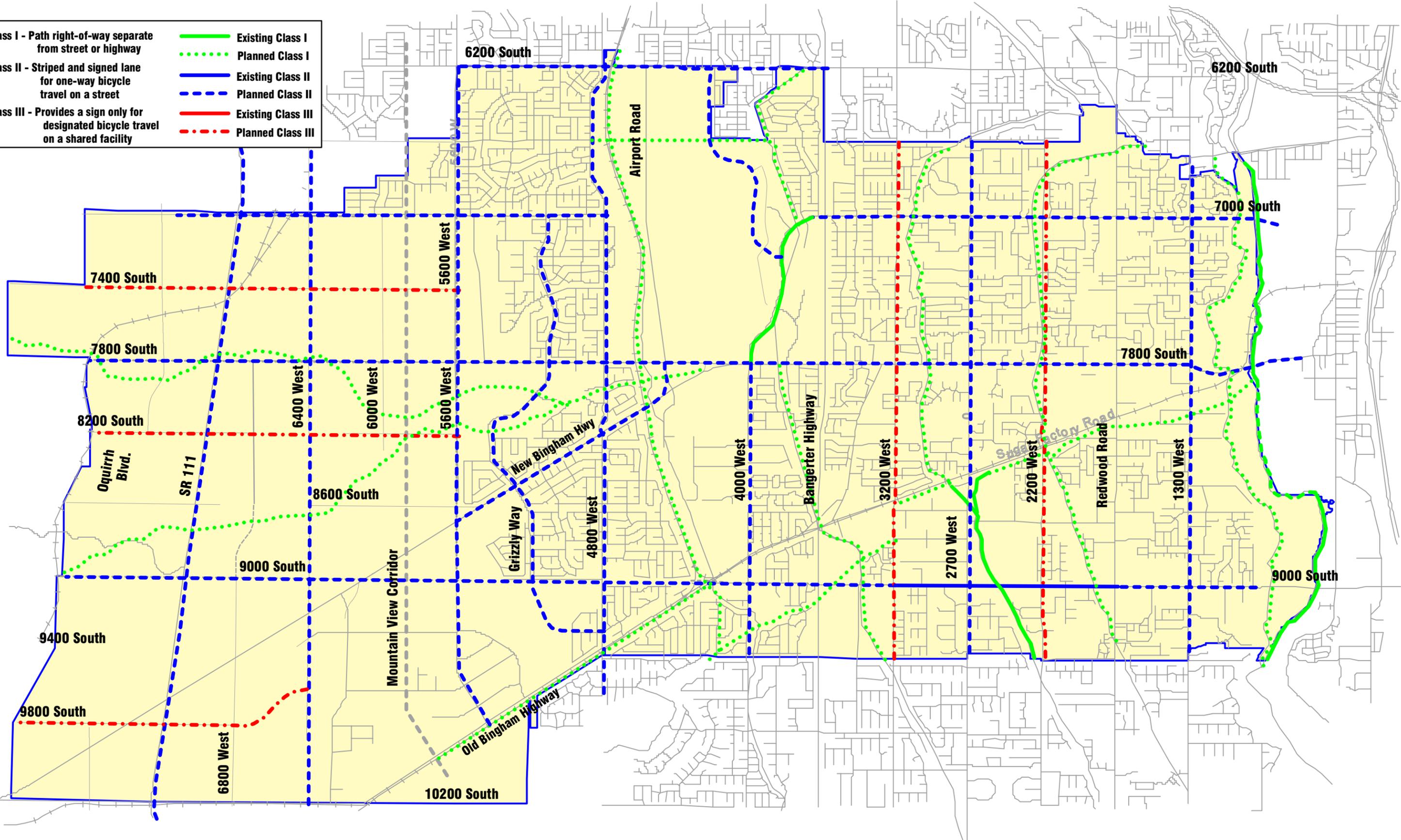


Light Rail
to Sunrise
Development



- Class I - Path right-of-way separate from street or highway**
- Class II - Striped and signed lane for one-way bicycle travel on a street**
- Class III - Provides a sign only for designated bicycle travel on a shared facility**

- Existing Class I
- ⋯ Planned Class I
- Existing Class II
- - - Planned Class II
- Existing Class III
- - - Planned Class III



Recommended Trails/Bicycle Routes



Figure ES.4