Transportation System Alternatives Study

Prepared for the

Bonneville Metropolitan
Planning Organization
Idaho Transportation Department

Prepared by

DKS Associates
TRANSPORTATION SOLUTIONS

In association with

CHS Consulting Group
Economic Research Development Group

May 2011

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Final Report

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Bonneville Metropolitan Planning Organization

Idaho Transportation Department

Prepared by

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Executive Summary

Overview

In May 2010, the Bonneville Metropolitan Planning Organization (BMPO) and the Idaho Transportation Department (ITD) initiated the Transportation System Alternatives (TSA) Study for the Greater Idaho Falls metropolitan area. The purpose of the study was to examine the short-, medium- and long-term transportation investments needed to meet the area's vision for economic development and quality of life and to explore alternative ways to address those needs. The study was initiated to support an update of the Long Range Transportation Plan (LRTP) for the area which is designed to address transportation investment decisions though the year 2035. This newsletter provides a summary of the conclusions of the TSA Study and the recommendations that it has made for the LRTP.

In an initial step, members of the BMPO Policy Board and members of the TSA Steering Committee were asked to describe their vision for the metropolitan area. The participants' almost unanimous opinion was that the vision consisted of two key elements:

1) The Greater Idaho Falls metropolitan area is, and should remain, a "regional center" serving Eastern Idaho and portions of Western Wyoming. This is the basis for the continued economic prosperity of the area.
2) The metropolitan area should continue to provide a "high quality of life" for its residents.

In the TSA study, the transportation investment needs were judged against these two vision statements and more detailed principles the study participants used to define the two vision statements.

Growth Forecasts

Population, employment and traffic forecasts were developed for horizon years – 2020, 2035, and 2060. Results for these forecast years were compared to existing conditions as established in 2008. Traffic data for 2008 was used to determine existing needs while data for 2020 was used to determine the medium-term needs that will emerge over the next five to ten years. The forecasts for 2035 were used to determine long-term needs and were the primary basis of the assessment of needs to be captured in the BMPO's LRTP. The forecasts for 2060 identify the transportation needs under something that resembles build-out for the urban area. These forecasts were used to determine whether the long-term investment recommendations for 2035 would be consistent with the needs likely to emerge in a 50-year horizon.

The population within the Bonneville Metropolitan Planning Area was roughly 100,000 in 2008. The area is expected to add about 2,500 new residents per year over the forecast horizon period. This will produce a population in 2020 of almost 130,000 and almost 170,000 by 2035. The long-range, fifty-year forecast of growth in the area suggests a population of roughly 230,000 by 2060. Significant employment growth in the planning area is also expected. The employment in the area was about 57,000 in 2008. The area is expected to add about 1,300 jobs per year producing an employment of about 72,000 by 2020 and about 92,000 by 2035. The long-term, fifty-year forecast for 2060 indicates employment in the area could reach 125,000.

Needs and Deficiencies

The growth in traffic is expected to match fairly close to the rate of growth in population and employment. Modeling for the project indicated that vehicle miles of travel within the metropolitan area will more than double between 2008 and 2035. However, if only the programs in the existing Transportation Improvement Program (TIP) are implemented, the vehicle hours of travel will increase by an additional 20% because of increased congestion. The effect of congestion on travel time will be even greater in 2060, when vehicle hours of travel will increase by 70% more than vehicle miles of travel.

In 2008, nine roadway segments had major congestion. At least 30 roadways will be highly congested by 2035 and the number of miles of congested roadway will increase by at least 500% unless there is additional investment in roadway capacity. A major bottleneck in the future will be at the interchange of I-15 and US-20 where the current (2008) volumes are already at the capacity of the interchange. As the volume increases, the delay will increase at a far higher rate.

An analysis of the economic competitiveness of the metropolitan area indicated there is significant competition for economic development with other existing metropolitan areas. While the Greater Idaho Falls metropolitan area has some competitive advantages at present including a low cost of living and a well-educated work force, if no additional transportation improvements are funded and implemented, the forecasted congestion would seriously jeopardize the capability of the metropolitan area to retain its position as a major regional center and attract new businesses.

A significant increase in the amount of congestion in the metropolitan area would also jeopardize the vision of maintaining a high quality of life for its residents. A high level of congestion would increase the rate of traffic collisions, injuries and fatalities and change the area's advantageous characteristics of minimal delay and high level of safety.

Another significant need identified in the TSA Study was for travel choices. As growth occurs in the area, there will be an increasing need to support businesses within the area by giving a travel option for individuals who cannot afford to travel to work by a private automobile or who chose to reduce the impact of their travel by reducing the number of vehicle trips. The TSA Study identified the need for a transit system that serves the

majority of the residents in the metropolitan area in the forecast years and provides a competitive travel time.

The TSA Study also identified the need to continue the development of a regional system of bicycle and pedestrian facilities that will allow residents and visitors the opportunity to walk or bicycle between origins and destinations within the area. This need will be greatest in the areas in which new growth is expected and where connections across major roadways, railroad tracks, the Snake River, and drainage canals are needed.

Recommendations

The recommendations of the TSA emerge from a set of central themes –

1. Improvements are needed for all modes of travel to ensure there are travel options for everyone
2. There is an appropriate future role for each major roadway in the metropolitan area to support travel by one or more modes of transportation
3. Actions must be taken by the agencies in the metropolitan area to protect the function of each roadway so it can best serve that role
4. Actively managing the operations of all transportation facilities and services will be necessary to achieve efficiency in moving people and goods

Specific recommendations are provided below.

Roadways
Consistent with the central themes outlined above, the TSA Study team has recommended a revision to the metropolitan area's roadway functional classification system to identify mode priorities. Under this revised classification, three mode priorities are defined:

- Truck and Automobile Priority – These are streets important to the safe and efficient movement of trucks and automobiles.
- Transit Priority – These streets will be the primary routes for fixed-route transit services in the future.
- Bicycle and Pedestrian Priority – These streets are important for the development of a network of facilities that accommodate non-motorized movement in a safe and enjoyable environment.

The travel forecast for 2035 indicates a serious threat of congestion on the main arterials in the core developed parts of the metropolitan area. To address this problem the development of two sets of peripheral roadway belts are recommended: an inner "strategic arterial" loop and an outer expressway or freeway belt. The strategic arterial loop is recommended to provide immediate relief to the already congested core area arterials. It is recommended the strategic arterial loop be developed where there are

existing roadways. The roadways should be built or retrofitted to have at least two through lanes in each direction with a raised separating median that allows left turns only at half-mile spacing.

The outer beltway is a long-term recommendation designed to allow for movement around the edges of the metropolitan area for trips that do not need to travel through the core area or only have a small portion of their trip in the core. The fifty-year growth projections indicate such an outer beltway will ultimately be needed to maintain a reasonable level of service for travel in the metropolitan area and some of this need may emerge by 2035.

It is recommended the outer beltway be a limited-access facility with either no at-grade intersections (freeway) or at-grade intersections no more than once per mile (expressway). It is also recommended a study of alternative alignments for the outer beltway be initiated immediately, with an agreement between the local jurisdictions to establish a moratorium on new development within the preliminary corridor until the alignment study is completed. Once a recommended alignment has been identified, the BMPO member jurisdictions should enter into an agreement to take the necessary steps to protect and acquire the needed rights-of-way.

The important role of I-15 and US-20 in providing high-capacity and high-speed access into and out of the metropolitan area is clearly recognized by the TSA Study findings. These two facilities are critical to maintaining the metropolitan area's role as a regional center consistent with the vision statement of the study. The interchange between these two facilities and the design of the roadways and ramps within a mile of the interchange are not adequate to accommodate additional growth without a serious deterioration of level of service and safety. It is recommended a detailed corridor study be initiated immediately to evaluate options for improving interchange performance and performance of roadways near the interchange.

Improvements on other major and minor arterials in the metropolitan area will also be required over the next twenty-five years to accommodate growth and sustain a reasonable level of service by all modes. It is the recommendation of the TSA study that a standard typical section be developed for each mode-priority/functional-classification combination. The typical sections will determine the ultimate design for each roadway, and the travel forecast will determine when the physical improvements are required to accommodate additional traffic flow or transit services.

Public Transportation

The role of public transportation in the Greater Idaho Falls Area will have to change as growth continues. Growth in the next twenty-five years will increase the need for commute-oriented bus service to serve residents traveling to jobs within the study area. If the Greater Idaho Falls metropolitan area is to attract new businesses, affordable commute options to those sites will be needed. Many of the target sites for higher density commercial and industrial development are within the urban core area. A significant share of the commutes to these target sites will have to be by public transportation if an

acceptable level of service is to be maintained on the area's roadway system. It is the recommendation of the TSA Study that a fixed-route transit system be established and expanded as necessary to surrounding areas of new growth.

Bicycle and Pedestrian Facilities
A long range plan for bicycle and pedestrian facilities was produced in 2008 and received considerable input from an active Bicycle and Pedestrian Committee of the BMPO. It is the recommendation of the TSA Study that the Bicycle and Pedestrian Committee update the Long Range Bicycle and Pedestrian Plan, with support from BMPO staff.

Several elements should be given particular emphasis in the plan update as a result of the TSA Study findings and community input. The new plan should be consistent with the mode priorities defined by the TSA Study. The update of the plan should also consider appropriate locations where regional bike lanes, bike routes or multi-use trails should cross "Truck and Automobile Priority" roadways, including the proposed beltways and existing high-capacity roads such as I-15 and US-20. Crossing of railroad tracks, the Snake River and drainage canals should also be considered.

Transportation Demand Management (TDM)
TDM programs provide incentives for travelers to reduce the overall need for roadway capacity by encouraging the use of transit, ridesharing or non-motorized modes rather than driving alone. TDM programs also include incentives for travelers to avoid driving during the most congested times or to reduce vehicle trips by combining multiple trips into one or by avoiding travel by working from home occasionally. As population and employment in the metropolitan area grows and the area matures, the need for TDM strategies to reduce the amount of vehicular travel will increase, and options available to employees will also almost certainly increase. It is the recommendation of the TSA Study that BMPO begin a process of developing an employer-based TDM program.

Traffic System Management
The Greater Idaho Falls metropolitan area currently has 81 traffic signals. An assessment of the forecast volumes for major and minor arterials for 2035 suggests that at least 31 new signals will be required. With multiple jurisdictions owning and managing signals, there will be variation in how the signals are timed and managed and even in the hardware and software used to manage the timing and communication with the signal systems.

With growth, more traffic can be expected to cross jurisdictional boundaries. Coordination of the signals across jurisdictions will become increasingly more important along key corridors especially the strategic arterial loop and the outer beltway (to the extent that at-grade intersections are permitted). To define the best approach for future traffic management in the metropolitan area, it is recommended a traffic system management study be conducted to identify the best way to provide coordinated traffic management for the metropolitan area.

Implementation Steps

The TSA Study has produced a set of recommendations for transportation investment over the next twenty-five years designed to help the metropolitan area meet and sustain its vision. Implementing the recommendations of this study will require significant action on the part of the BMPO and its member jurisdictions and agencies. The TSA Study has also developed suggestions for specific steps designed to guide the implementation of the recommendations.

It is important the BMPO incorporate the recommendations for transportation investments and the implementation steps into the LRTP. This can be done immediately as part of the 2011 update of the LRTP. Once this step has been taken, it will be important for member jurisdictions and agencies to incorporate the recommendations of the LRTP in their comprehensive plans. This will include recognition of the new regional roadways, the new mode-priority functional classification, and the new guidelines for design and access management for each category of roadway.

1. Introduction

1.1 Overview

The Bonneville Metropolitan Planning Organization sponsored the Transportation System Alternatives (TSA) Study as part of the Long Range Transportation Plan (LRTP) Update for the Greater Idaho Falls area. A consulting team led by DKS Associates has provided technical assistance identifying future deficiencies in the transportation system and evaluating alternative approaches to address those deficiencies.

For the TSA Study, the DKS team explored a range of multi-modal strategy options including roadway expansion, new roadway facilities, public transportation services, pedestrian and bicycle facilities, system management, intelligent transportation systems, demand management, and land-use management. The team identified the types of economic benefits that the transportation improvements could produce and the types of adverse economic impacts that can result from a lack of action.

All of the work in the TSA Study was performed with oversight from the BMPO Policy Board and with regular review and participation from a Steering Committee consisting of staff from all of the jurisdictions and agencies that are members of the BMPO, as well as other key stakeholder organizations. Two newsletters were used to disseminate information about the project to the general public and a public open house was conducted to provide an opportunity for input and reaction. The project included development of a vision statement and supporting principles for the planning area. Population and employment forecasts were then prepared for three horizon years: 2020, 2035 and 2060. From the future-year population and employment, traffic forecasts were developed. Transportation system needs and deficiencies were identified for the current conditions using an inventory of existing transportation facilities and services and recent information on traffic volumes, level of service and vehicle collisions. Future needs and deficiencies were identified using the traffic forecasts and assessments of level of service. An assessment of the economic-development implication of not addressing the needs and deficiencies was also conducted.

Alternative methods of addressing the existing and future needs and deficiencies were identified with Steering Committee and BMPO Policy Board input and were evaluated using an agreed-upon framework and set of performance measures. As part of this evaluation of alternatives, the DKS team provided information about six other Midwestern, Western or Northwestern metropolitan areas that were similar in size to what is forecasted for the Greater Idaho Falls metropolitan area for 2035. In addition to being selected on the basis of geographic location and population, the peer cities were also selected based on having characteristics similar to those of the Greater Idaho Falls metropolitan area -including being located on an interstate or other major US highway that is connected with other parts of a region and being bisected by a river. Map showing the street systems of the six peer cities are included in Appendix A.

Recommendations were developed for all travel modes in consultation with the Steering Committee and the BMPO Policy Board. This included identification of steps for the implementation of the recommendations.

1.2 Vision Statement

The Transportation System Alternative Study began in the summer of 2010 with a discussion of vision for the Greater Idaho Falls area. There was a high level of consensus among the technical staff of participating agencies and the BMPO Policy Board in regard to the vision. The two main themes that emerged from the discussion were as follows: 1) the region is, and should remain; a "regional center" serving Eastern Idaho and portions of Western Wyoming and 2) the region should continue to provide a "high quality of life" for its residents. Some of the key elements of these two parts of the vision are identified below.

Regional Center

- A major launching point for visitation to the National Parks and to other outdoor recreation
- A major location for shopping
- A major center for medical care and medical training
- An energy, science and technology research center with commercial spin-off industries
- A center for higher education including University Place (University of Idaho, Idaho State and Boise State), Eastern Idaho Technical College and BYU Idaho (Rexburg)
- Continuing to be a regional center for agricultural equipment, supplies and processing

High Quality of Life for Residents

- Maintaining the small town atmosphere while growing
- Retaining the historic character of the area
- A region with everything you need within it and a transportation system to get you to everything
- Reasonable compact cities that can be served efficiently
- Ability to move across town easily without going through neighborhoods and with minimal congestion
- Sensible arterials and connections that work well
- Good access into and out of town
- Good mobility for everyone – automobile, transit , shuttles, vanpools, bike and walking

- Strong vibrant downtown with cultural opportunities
- Greenways, trails and parks for outdoor activities
- Strong identity with the Snake River
- Beautiful entrances to the area

This vision for the region was used throughout the study to guide the formulation of solution options and recommended plan elements.

1.3 Outline of the Report

The remainder of this report is organized into seven sections:

- Section 2 – Growth Forecasts
- Section 3 – Assessment of Deficiencies and Needs
- Section 4 – Economic Development Implications of Transportation Investments
- Section 5 – Process for Evaluation of Alternatives
- Section 6 – Results of Evaluation
- Section 7 – Recommendations of the TSA Study
- Section 8 – Implementation Steps

2. Growth Forecasts

2.1 Population

Forecasts of growth in population and employment were produced by the BMPO and its member agencies for the years 2020, 2035 and 2060. The forecasting for this study represented an updating of forecasts for 2020 and 2035, which were previously produced for the BMPO by Intermountain Demographics[1] in October 2008. Also needed was an expansion of the forecasts to include the year 2060. An initial set of forecasts for 2060 was made by extrapolating the average annual growth between 2020 and 2035 out to 2060 in each traffic analysis zone of the BMPO regional model. The previously developed forecast and the new 2060 forecasts were adjusted based on a review by local planners of vacant land, zoning maps and comprehensive plans.

The population within the Greater Idaho Falls metropolitan area was approximately 100,000 in 2008 as indicated in Table 2-1. The area is expected to add about 2,500 new residents per year over the forecast horizon period. This will produce a population in 2020 of almost 130,000 and a population by 2035 of almost 170,000. The long-range, fifty-year forecast of growth in the area suggests a population of roughly 230,000 by 2060.

Table 2-1 Population Forecast

	2008	2020	2035	2060
Population	**99,200**	**128,700**	**167,900**	**231,500**
Growth from 2008	-	29,500	68,700	132,300
Percentage Growth from 2008	-	29.7%	69.2%	133.4%

[1]Rosebrock, Dale, Intermountain Demographics, Technical Memorandum -- Population, Housing Unit, and Employment Forecasts and Allocations, September 30, 2008.

Whereas the current urbanized area, including Idaho Falls, Ammon, Iona and parts of Bonneville County, represent the more densely populated sections of the region, much of the forecasted growth will naturally occur outside of the area, and thus substantially increase the size of the urbanized area in the future. This is shown by Figure 2-1 where growth in different parts of the area is illustrated.

2.2 Employment

Significant growth in employment in the planning area is also expected. The employment in the area was approximately 57,000 in 2008. The area is expected to add around 1300 jobs per year, producing an employment of about 72,000 by 2020 and about 92,000 by 2035 as indicated in Table 2-2. The long-term, fifty-year forecast for 2060 indicates that employment in the area could reach 125,000. As indicated in Figure 2-2, the growth in employment is expected to be focused somewhat more within the currently urbanized areas than the population, but significant growth is still expected in what are now more rural areas of the county.

Table 2-2 Employment Forecasts

	2008	2020	2035	2060
Employment	**57,000**	**72,000**	**92,000**	**125,000**
Growth from 2008	-	15,000	35,000	68,000
Percentage Growth from 2008	-	26.3%	61.4%	119%

Figure 2-1 Population Forecasts by Location

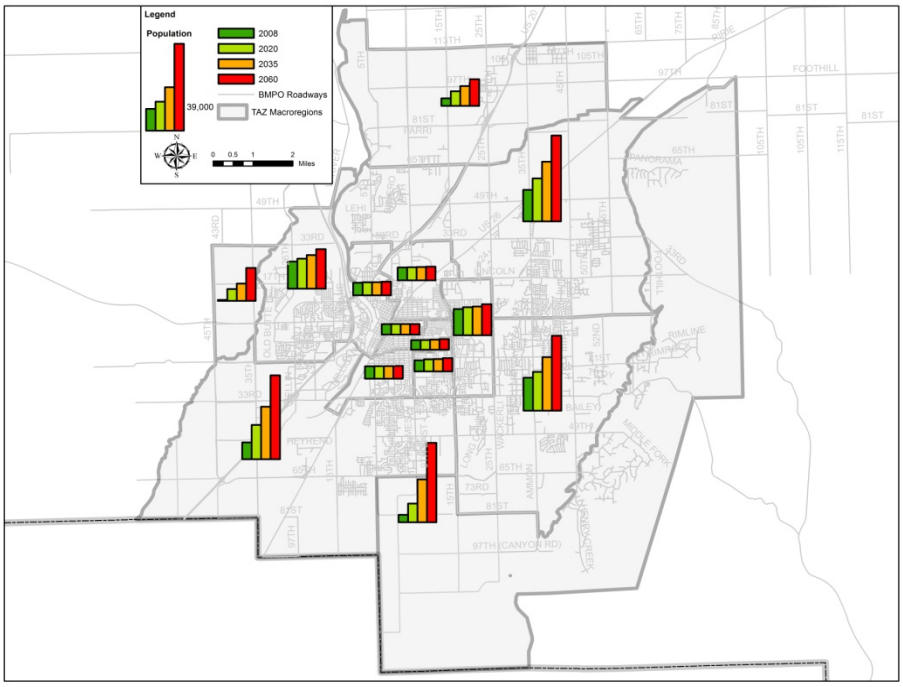


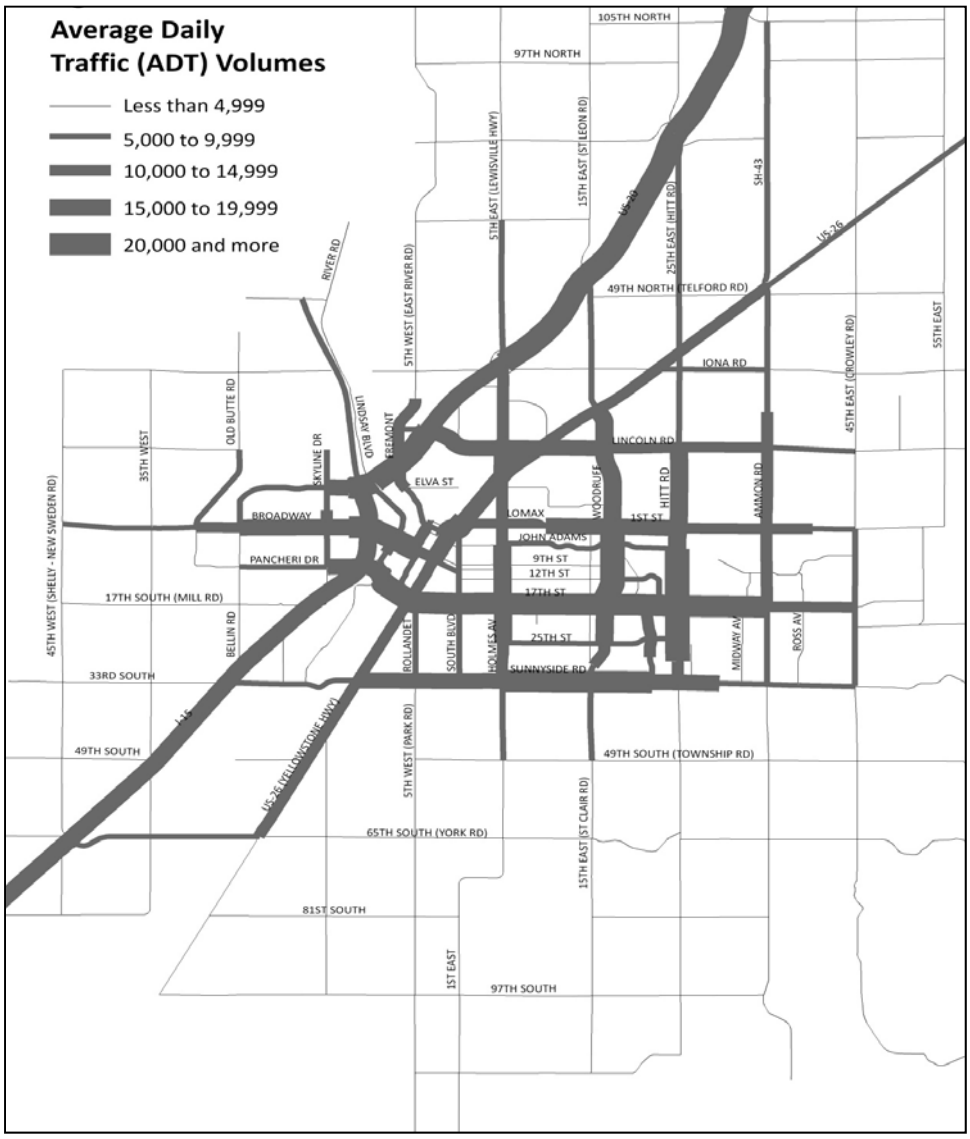
Figure 2-2 Employment Forecasts by Location

3. Assessment of Deficiencies and Need

3.1 Roadway Level of Service

Figure 3-1 provides a summary of the traffic volumes on the primary roadways in the study area. As expected, traffic volumes are highest in the core of the urbanized area. As one moves away from the core toward the rural areas, roadway traffic is reduced with the exception of the freeway/highway system that carries traffic from other regions to the area.

Figure 3-1 Existing Traffic Volumes



One of the most commonly used indicators of need and deficiency for roadways is "level of service," which is an indicator of relative delay on a roadway due to congestion. For arterials, the measure is generally related to the average time that vehicles are stopped at a signalized intersection where most delay occurs. The range of delay for each level-of-service category is provided in Table 3-1.

Table 3-1 LOS Criteria for Signalized Intersections

Level of Service	Stopped Delay per Vehicle (sec)
A	≤ 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	>80.0

Source: Highway Capacity Manual, Special Report 209, TRB, Washington, DC (2000).

In 2008, roughly 7.5 miles were heavily congested during the peak commute hours – 3.5 miles were at level of service "E" and 4 miles were at level of service "F". The roadway segments that are "Heavily Congested" (LOS E or F) or "Moderately Congested (LOS D) are indicated in Figure 3-2:

East-West Streets:

- US 20 (Saturn Ave. to Riverside Dr.)
- 1st Street (Hitt Rd. to Ammon Rd.)
- Pancheri Drive (Skyline Dr. to west of Utah Ave.)
- 17th Street (Just west of Holmes Ave. to just east of Hitt Rd.)

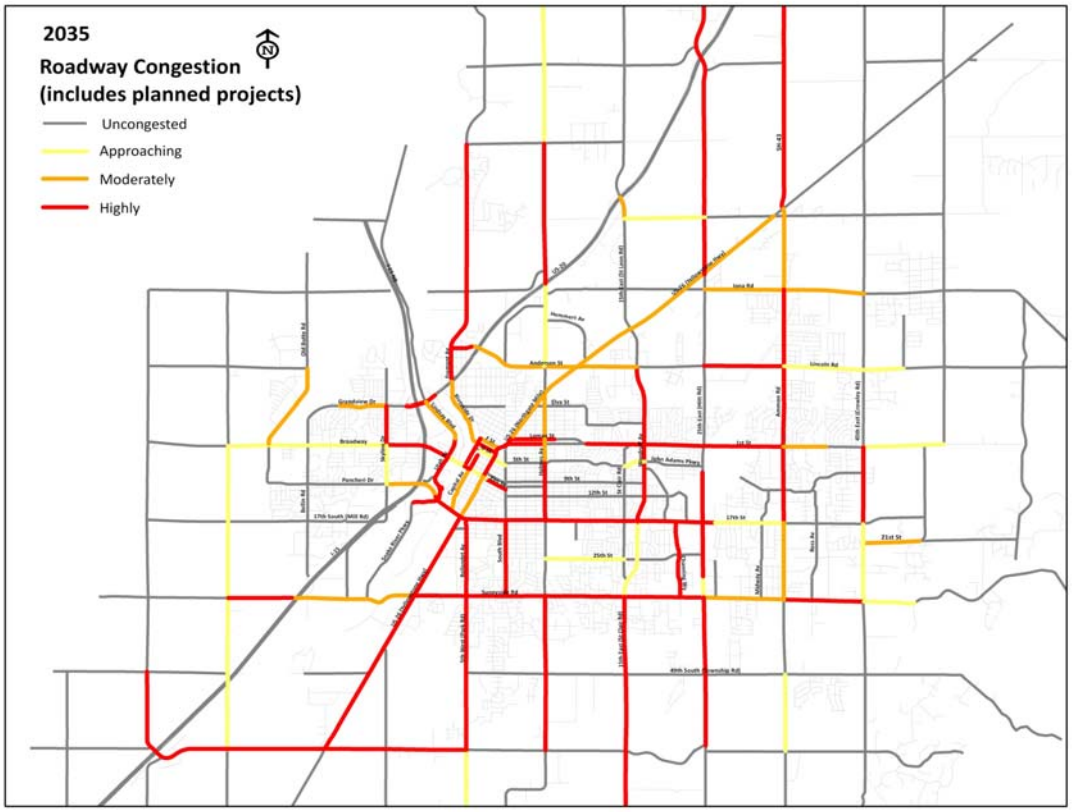
North-South Streets

- Utah Avenue (Broadway to Houston St.)
- Memorial Drive (Riverside Dr. to Broadway)
- Channing Way (17th St. to Coronado St.)
- Ammon Road (1st St. to 17th St.)

Figure 3-2 Existing Level of Service

The analysis of growth forecasts for the project indicates that the region will outgrow its transportation system within the next twenty years. Without a substantial investment in roadways, transit, and other transportation infrastructure, additional congestion and delay will result and the safety of the system will deteriorate. Figure 3-3 indicates that without expansion of roadway capacity, many of the region's major streets will operate at level of service E or F, meaning significant commute-period delay.

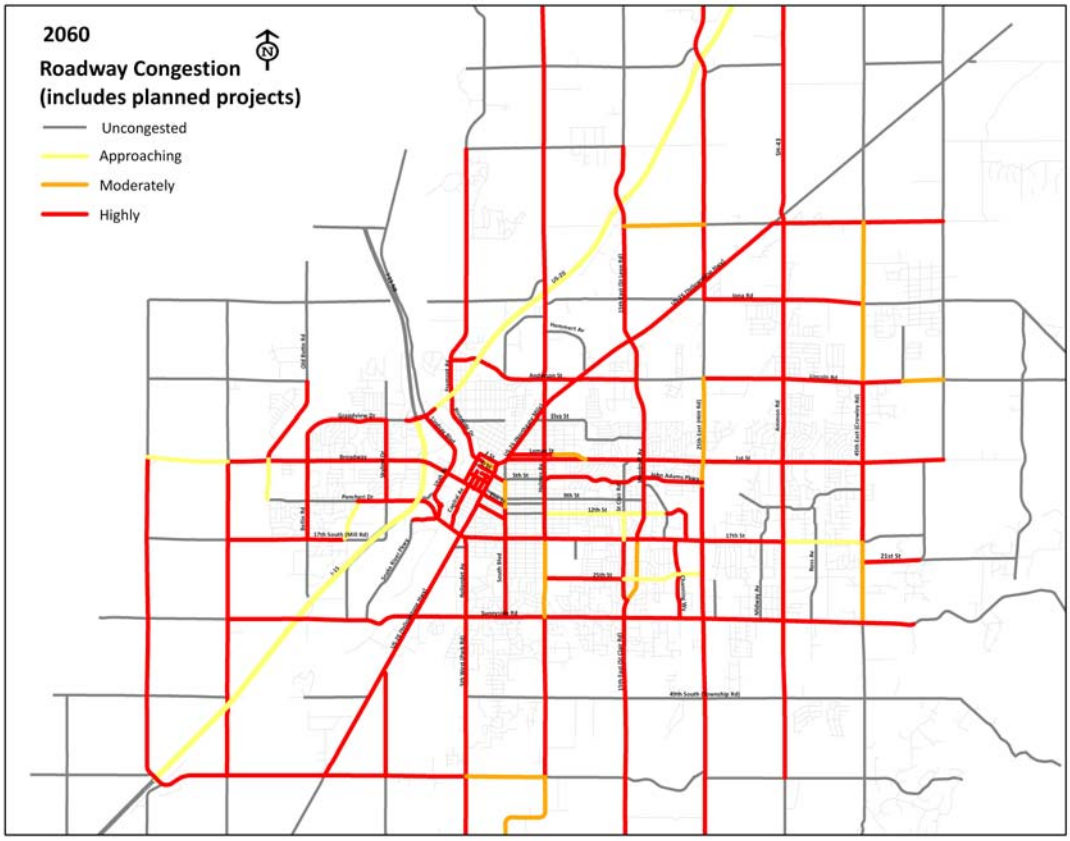
Figure 3-3 Expected Level of Service on Major Streets in 2035 without New Capacity



In 2035, at least 30 roadways will be highly congested and the number of miles of congested roadway will be almost ten times than in 2008. The forecast for 2035 indicates that there will be roughly 21 miles at level of service "E" and 39 miles at level of service "F".

The need for additional investment to sustain a reasonable level of service on the roadway system is further illustrated with the forecast for 2060. As indicated in Figure 3-4, a majority of the freeway and arterial system will operate at level of service E or F if additional investment is not made.

Figure 3-4 Expected Level of Service of Major Streets in 2060 without New Capacity

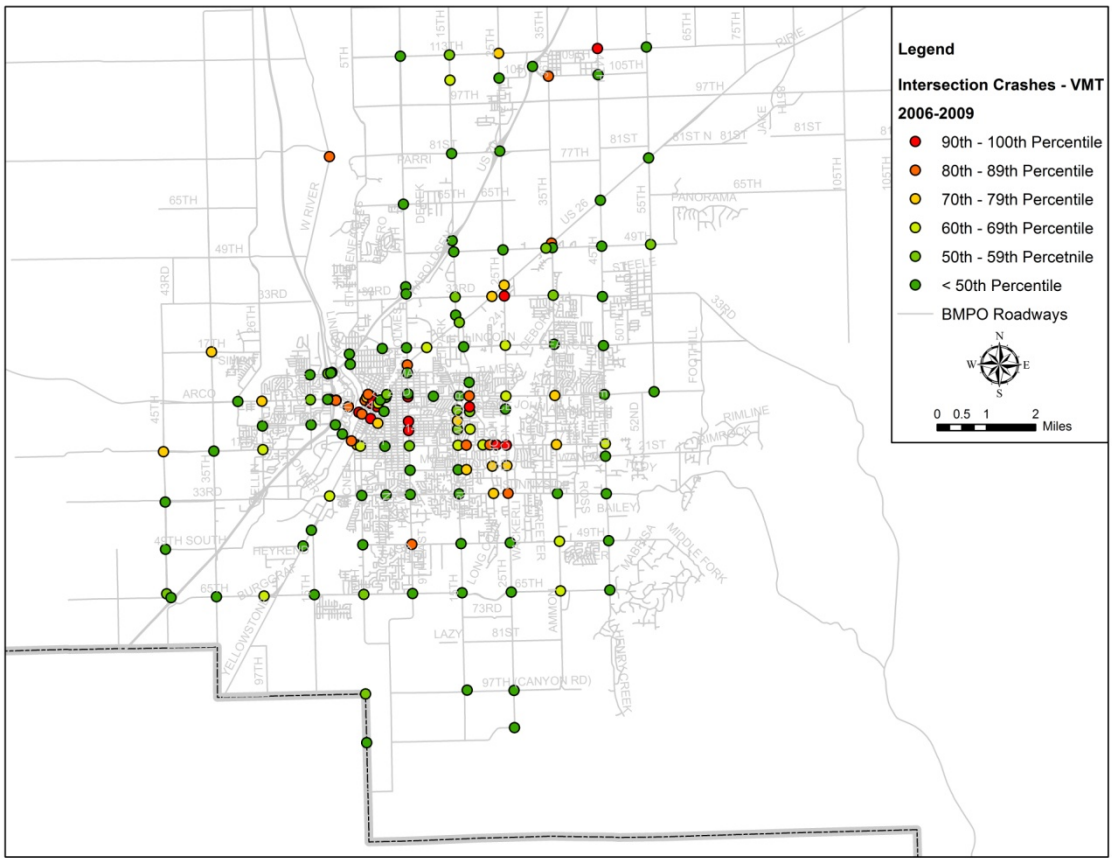


3.2 Safety

The need for safety improvements was evaluated by identifying high crash rate locations based on crash data for the period 2006-2009. Figure 3-5 identifies the locations where the intersection crash rate was higher than the average for the area during that period. The analysis of crash rates indicates that the roads with the most intersection crashes are as follows:

- Broadway between I-15 and Yellowstone Avenue (US-26)
- 17th between Snake River and Hitt Road
- S. Holmes Avenue between 17th Street and 1st Street
- Memorial Drive/Riverside Drive between W. Elva Street and E Street

Figure 3-5 Relative Crash Rates by Intersection 2006-2009



An analysis of crashes between motor vehicles and pedestrians and bicyclists was also conducted. During the period 2006-2009 there were eight vehicle/pedestrian crashes, and their locations are indicated in Figure 3-6. There were also 22 vehicle/bicyclist crashes, and their locations are indicated in Figure 3-7.

The segments on Broadway, S. Holmes Avenue, and 1st Street are also the locations of at least one vehicle/pedestrian crash and at least four vehicle/bicyclist crashes. There were no reported crashes between vehicles and either pedestrians or bicyclists on Riverside or Memorial Drive.

Figure 3-6 Locations of Crashes between Motor Vehicles and Pedestrians 2006-2009

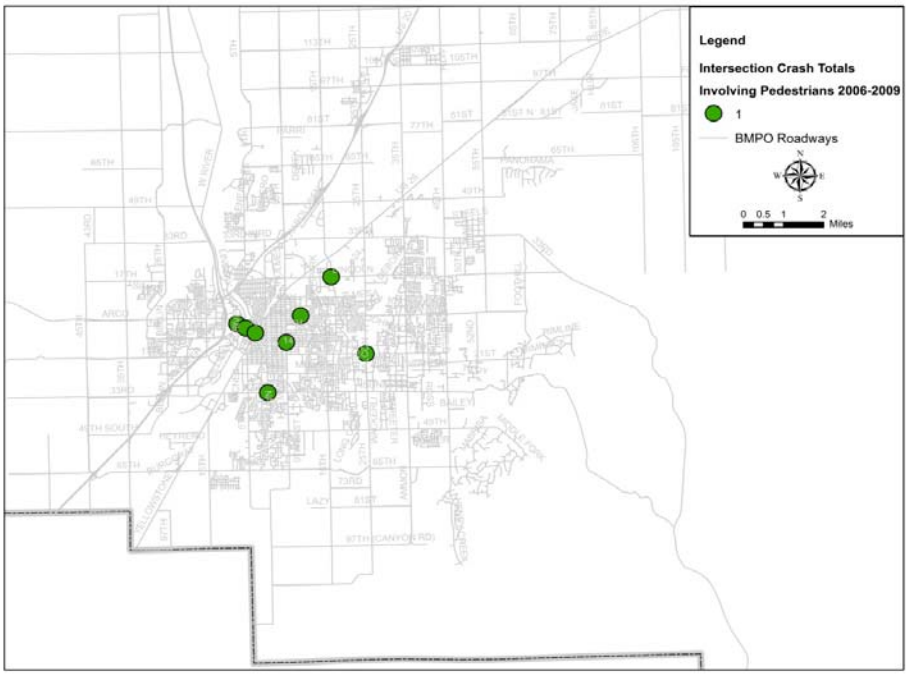
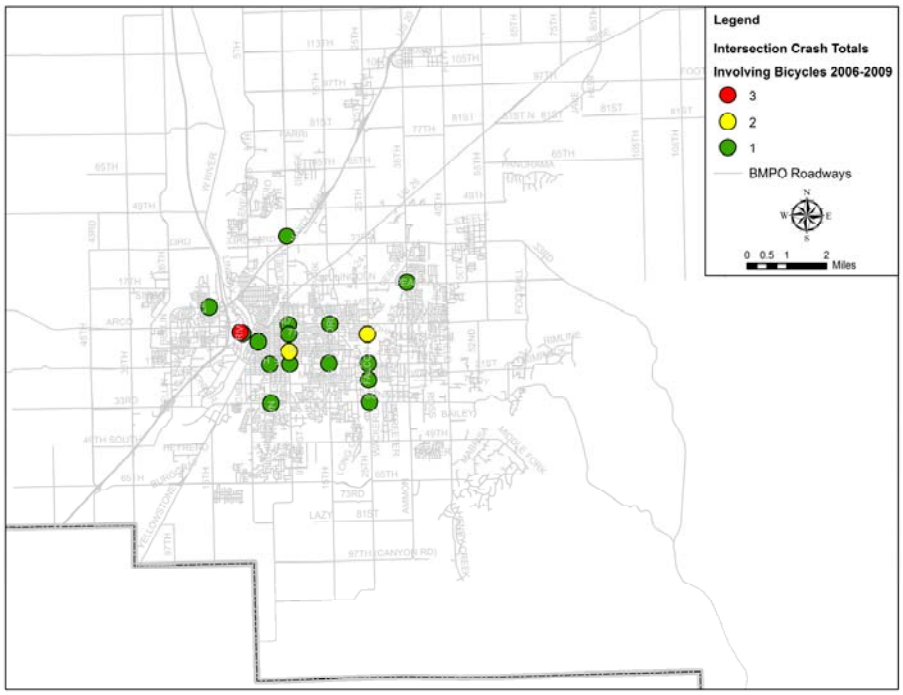


Figure 3-7 Locations of Crashes between Motor Vehicles and Bicyclists 2006-2009



3.3 Mobility and Travel Choice

Another significant need indentified in the TSA Study was the need for travel choices. At present, the Greater Idaho Falls metropolitan area is heavily dependent on the private automobile for travel, with the exception of employees of the Idaho National Laboratory (INL) either at its main site 30 miles east of Idaho Falls or at one of its sites within Idaho Falls. The INL operates a bus service that shuttles employees to all of its employment sites. The Targhee Regional Public Transportation Authority (TRPTA) offers demand responsive bus services within the metropolitan area designed to meet the needs of the mobility impaired or economically disadvantaged. Reservations for service are required one day in advance for the door-to-door service, but riders may board at specified check points without a reservation. TRPTA does not offer fixed-route services with competitive travel times for workers within the metropolitan area. As growth occurs in the area, there will be an increasing need to support businesses within the metropolitan area by giving a travel option for those who cannot afford to travel to work by private automobile or those who choose to reduce the impact of their travel by reducing the number of vehicle trips. The TSA Study identified the need for a transit system that serves a majority of the residents in the metropolitan area in the forecast years and provides a competitive travel time. A **TRPTA Checkpoint Service Study** recently completed by TRPTA recommends an initial step toward a fixed-route system.

The TSA Study also identified the need to continue the development of a regional system of bicycle and pedestrian facilities that will allow residents and visitors the opportunity to walk or bicycle between origins and destinations within the area.

4. Economic Development Implications of Transportation Investment

4.1 Overview of Economic Development Analysis

As part of the TSA Study, the project team conducted a high-level assessment of economic and economic development factors that will shape the region's ability to attract and retain quality jobs over the long term. The work included data analysis using EDR-LEAP (an economic modeling software package) as well as interviews with key local stakeholders representing economic development (Grow Idaho Falls), planning (City of Idaho Falls Planning Department), real estate (a commercial real estate broker) and the region's major employer (Idaho National Laboratory), as well as the project team's previous research on economic development competitiveness factors, including the specific impacts of transportation infrastructure and congestion.

4.2 Implications of Population and Employment Growth

Projections for future job growth in Idaho Falls are as follows:

- 15,000 new jobs between 2008 and 2020, for an average annual growth rate of 2.0 percent;
- 20,000 new jobs between 2020 and 2035, for an average annual growth rate of 1.6 percent; and
- 33,000 new jobs between 2035 and 2060, for an average annual growth rate of 1.2 percent.

At this pace of growth, a significant amount of new employment and residential development will be required. A portion of this growth may be accommodated through redevelopment of existing sites at higher density; however the bulk of growth will require new development sites. Currently, companies considering locating or expanding in Idaho Falls are seeking buildings of 100,000 to 200,000 square feet, while the existing building stock is comprised primarily of smaller buildings (up to about 40,000 square feet) on smaller lots. Most sites large enough to accommodate these users exist in outlying areas. At the same time, residential areas are expected to continue to expand eastward. Directing residential growth eastward and office, retail, and industrial uses along I-15, US-20, near the airport, and north of the city will help protect the rich agricultural lands west of the city, which are an important economic engine for the region.

The doubling of population and employment will increase demand for transportation. Largely coming from the east, residents will need access to employment centers such as those along I-15 and Yellowstone Highway, and at the Idaho National Laboratory to the east. Residents will also need access to regional shopping areas such as those along Hitt Road, as well as the Eastern Idaho Medical Center. Neighborhood and community retail areas will spring up along main thoroughfares within residential areas to serve

populations living there, and they will need to receive shipments by truck. As the region's physical size grows to accommodate these new jobs, drive distances will increase, and goods movement will become more of an issue.

To help assess the economic potential of the Greater Idaho Falls metropolitan area, it was compared with the six peer cities. Table 4-1 presents total jobs currently in the Idaho Falls area and each of the peer cities as a point of reference for the relative size of each economy.

Table 4-1 Total Jobs in the Idaho Falls Area and Peer Cities (2009)

Peer City	Jobs
Idaho Falls Area	59,904
Reno, NV	239,437
Richland, WA	92,148
Cedar Rapids, IA	151,721
Sioux Falls, SD	157,224
Bend, OR	94,638
Billings, MT	103,643

Source: IMPLAN via EDR-LEAP.

Some key differences in economic make-up between the smaller Idaho Falls area and larger comparison cities illustrate the changes that the Idaho Falls area can expect as growth brings not only more jobs, but economic diversification as well. For example, the Idaho Falls area has a lower proportion of employment in monetary, financial and credit activity; insurance carriers and related activities; administrative and support services; and professional, scientific and technical services than most of the larger economies. As Idaho Falls grows, these industries will grow as well, not just in number of jobs but also as a share of total jobs.

Jobs in these industries imply different land use and transportation patterns than those that currently exist. They utilize more and higher quality office space, particularly as regional and national headquarters are established. Firms in these industries typically rely on a larger and more highly educated workforce, which in turn implies demand for more and higher quality housing units within a reasonable commute.

The Idaho Falls Region also has a much smaller share of employment in amusement and recreation relative to the peer cities analyzed, and a smaller share of employment in accommodations, eating and drinking. This may indicate an opportunity for future industry growth, perhaps building on nearby world-class recreation attractions. However, these industries typically need a large pool of unskilled workers, which implies demand for affordable housing and transportation, including public transportation.

4.3 Comparison of Competitiveness Factors in Peer Cities

Transportation access represents just one of a long range of key factors that determine the business location and expansion decisions that drive job attraction and creation. In general, the range of factors can be categorized as follows:

- **Cost factors** – The cost of utilities, labor, land, housing and taxes
- **Quality factors** – Workforce skill level, industrial/office park amenities, availability of freeway-visible retail space, broadband connectivity
- **Market access factors** – Labor market size, number of businesses within a 1-day truck delivery radius
- **Transportation access factors** – Drive times to airports, marine terminals, rail intermodal loading terminals, distance to international border crossings, and average highway speed

When companies and site location firms make business location and expansion decisions, they consider these factors in aggregate and relative to what is available in other potential locations. Different industries rely more heavily on some factors than others, so as Idaho Falls' industry mix changes, so will the importance of each of these factors.

When compared with the six peer cities, Idaho Falls' cost factors rate as follows:

- **Labor cost:** Relatively higher than all 6 peer cities
- **Electricity cost:** Comparable to most, though higher than Cedar Rapids and well lower than Reno
- **Taxes:** Comparable to some, but much higher than Reno, and somewhat higher than Cedar Rapids and Bend
- **Housing cost:** Comparable to some, but lower than Reno, Richland and Bend

As measured by the percent of population over age 25 with a bachelor's degree or higher, Idaho Falls has a lower level of workforce skill (23%) compared with the other peer cities, which ranged from 27% (Reno, Bend and Billings) to 29% (Richland). The region's educational level can be expected to increase as it grows and diversifies; however, the region may also need to provide additional educational opportunities to help meet the needs of future industries.

Market access factors are much lower than peer cities as the region simply has a smaller, less dense population, which is more distant from a major metropolitan area compared to the peer cities (with the exception of Billings, which has a larger labor market, but much smaller 1-day truck delivery market).

The project team also analyzed the extent to which these factors are barriers to growth in Idaho Falls relative to each of the peer cities. The small size of the labor pool was found

to be a barrier for every industry that relies on an ample workforce. As the region's population increases, so will its labor force. However, if transportation capacity lags growth, it will artificially shrink the labor pool as congestion puts additional residents beyond commuting distance from employment areas. The next greatest barrier for many industries was higher taxes, followed by lower labor skill levels.

Highway access was found to be a barrier for several key industries including:

- Food Products (compared to Richland and Cedar Rapids)
- Plastics and Rubber Products (compared to Richland, Cedar Rapids and Bend)
- Education Services (compared to Cedar Rapids and Bend)
- Mail, Package Delivery and Warehousing (compared to Reno, Cedar Rapids and Billings)
- Professional, Scientific and Technical Services (compared to Richland, Cedar Rapids and Bend)

As this section has illustrated, highway transportation is just one of a number of key factors that govern job attraction and retention. Nonetheless, it is interrelated to some degree with many of the other factors. It affects the size of the labor and delivery markets, affects the workforce's ability to access training/educational opportunities, and clearly affects access to other modes of transportation.

4.4 Economic Costs of Congestion

If transportation infrastructure capacity does not increase to meet (1) the growing volume of personal trips to work, shopping and recreation, and business trips for services and deliveries and (2) the changing needs of a more diverse array of industries, congestion will result. While many areas of the country experience some congestion during peak morning and evening commute periods, areas that fail to implement transportation infrastructure that accommodates anticipated growth tend to experience longer peak congestion periods as well as delays during non-peak hours due to crashes, or simply due to the higher volume of heavy trucks on local roadways during the day.

Congestion incurs three basic types of costs on businesses and residents:

1) **The Cost of Time Delay** – The cost of time spent sitting in traffic that could be spent productively.
2) **The Cost of Variability** – When a given trip could take 5 minutes or 50 minutes, depending on accidents or sudden changes in the number of travelers on the road at the same time, employees and delivery people must build additional time into their trip to reach their destination on time, even if this often puts them at their destination far ahead of schedule.

3) **Excess Miles to Avoid Congestion Bottlenecks** – When main thoroughfares are blocked by accidents, or simply by too many vehicles, some users will seek alternate routes on smaller roadways. These routes are often longer in terms of miles, which use more fuel and cause more vehicle wear and tear.

In addition to increased costs to local area businesses, congestion can significantly hinder a region's ability to attract and retain jobs. It reduces a region's competitiveness for business attraction and expansion.

A significant portion of the economy does not depend on the delivery of goods and services via truck, but instead operates through electronic, telephone, mail and courier services. This includes headquarters operations and major back-office functions of financial institutions, insurance companies and some business services (such as data processing). It also includes regional headquarters offices of retail chains and distribution companies. However, these major office activities still require access; they typically locate where there is broad labor force access for both executives and clerical staff (including both public transit and highway access) and often also good access to a major airport for regional or national travel by executives and sales-force employees. For regional activities, road access for sales and service travel is also important. As congestion increases, it will reduce the future attractiveness of the Idaho Falls region for attracting and retaining these office activities.

4.5 Impact of Congestion on Economic Competitiveness

The long-run impact of congestion on regional economic development cannot be viewed in isolation. It must be viewed in terms of how it affects overall regional competitiveness for business site location decisions, which affects attraction, retention and expansion for regional and national firms that serve markets beyond the Idaho Falls area. In this respect, the effect of congestion on business site location and investment decisions can be deceiving. Even when the term "congestion" is not stated as a business site selection criterion, it ends up affecting a variety of other site selection factors, as follows:

- At the point when a business site selector is screening competing areas, congestion can affect the availability of a workforce with required skills, especially for firms seeking more specialized and larger workforces at a single location.
- Congestion can also affect accessibility to transportation routes and terminals, and transportation shipping costs, especially for firms with heavy freight shipping requirements and broad scale delivery markets.
- Within a region, congested areas can have higher wage rates to compensate for the more difficult worker commute.
- At the point of screening specific sites, congestion can affect land costs, and it will clearly affect travel times for truck access to suppliers, customers, ports and intermodal terminals.

- When congestion becomes a sufficiently sized problem at a region-wide scale, then it also becomes a quality of life issue that influences where people choose to live and how much they pay for housing, as well as accessibility to cultural and recreational assets and leisure time available.

Once a pattern of congestion has developed, it can be very difficult to resolve because housing units, office space, retail stores and industrial buildings will have been built on land that becomes needed for roadways. Relocating these residents and businesses is costly and disruptive, and sometimes simply not possible. Furthermore, once congestion reaches a level that it begins to raise the cost of doing business and make the region less attractive for new businesses to locate and existing businesses to expand, growth may not simply stop, it may begin to decline as existing businesses move operations to areas with less congestion. Once a region begins to decline, it can be very difficult to revive.

In the short and medium term, the region will continue to attract new jobs and population on the basis of a number of other attractive factors, including the vibrancy of Idaho National Laboratory, tourists at Yellowstone and Grand Teton National Park, the availability of developable lands, access to I-15 and US-20, and citywide broadband connectivity.

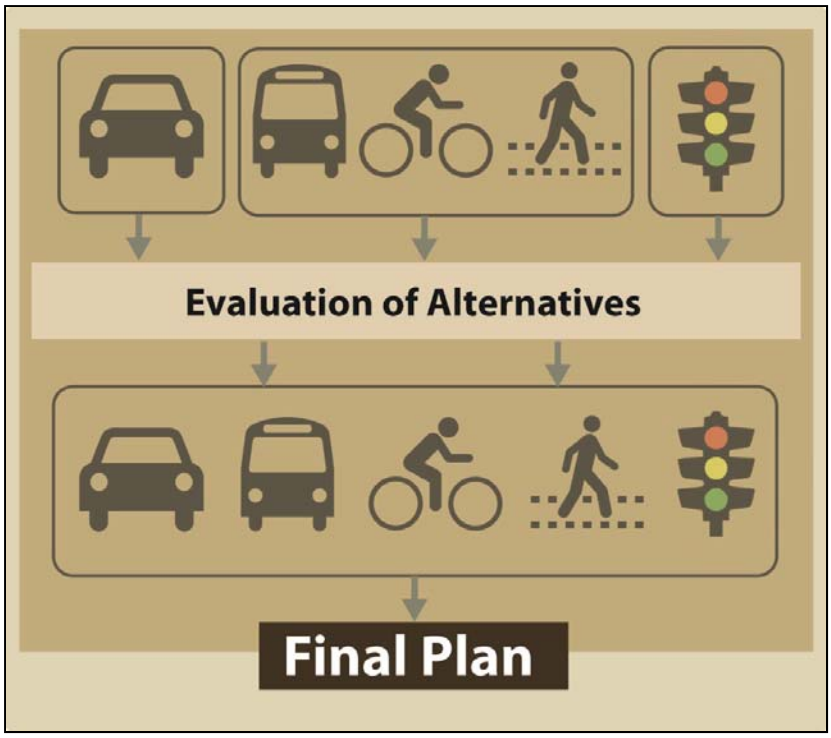
The region will not avoid this short- to medium-term growth by not planning for it. However, it is possible to improve how residents and businesses experience the impacts of projected growth, and lay the foundation for more sustainable growth patterns over the long run.

5. Process for Evaluation of Alternatives

5.1 Alternatives Considered

The DKS team evaluated a set of alternatives for addressing the challenges of the growth forecast in the planning area. The team evaluated alternatives in three different categories as illustrated in Figure 5-1: **Major Roadway Capacity Expansion, Alternative Mode Enhancement,** and **System Management.** Once the initial set of alternatives had been analyzed, a hybrid alternative was developed that took the best parts of the initial alternatives. After this hybrid alternative had been analyzed, a recommendation for a regional transportation system was developed. The contents of each of the three initial alternatives are described below.

Figure 5-1 Process for Defining and Evaluating Alternatives



Major Roadway Capacity Expansion – The primary focus of this alternative was on improvement of motor vehicle access with major roadway investments. The concepts tested in this alternative consisted of the following:

- Beltway Around the Metropolitan Area
- New I-15/US-20 Interchange
- New I-15 Ramps at Broadway
- Connection of Major Regional Arterials
- Expansion of State Highways Entering the Region

Alternative Mode Enhancement – The primary focus of this alternative was on improvement of mobility by modes other than the automobile and on reducing automobile use. The concepts tested in this alternative consisted of the following:

- High Level of Transit Service
- Carpool and Vanpool Programs
- Park-and-Ride Lots
- Employer-based Transportation Demand Management Programs
- Regional Multi-use Trail System
- Regional On-road Bicycle Lane and Route System
- Canal Crossings

System Management – The primary focus of this alternative was on achieving a high level of efficiency for the transportation system. The concepts tested in this alternative consisted of the following:

- Regional Traffic Management Center
- Intelligent Transportation Systems
- Aggressive Signalization and Signal Coordination
- Traveler Information Systems
- Incident Management Systems
- Aggressive Access Management

5.2 Framework for Evaluation of Alternatives

In the initial phase of the TSA Study, the DKS team worked with the Steering Committee and the BMPO Policy board to formulate a framework for the evaluation of alternatives for the study. This resulted in a recommended set of performance measures and a set of analytical tools and methods. A brief description of each is presented below.

Performance Measures

The DKS team recommended the following set of performance measures to use in evaluating the alternatives:

Roadways and Traffic Control

1. Average operating speed
2. Roadway and intersection level of service

Transit

1. Percent of population within ¼ mile of good transit service (reasonable frequency)
2. Percent of employment within ¼ mile of good transit service
3. Commute and total ridership

Pedestrian and Bicycle

1. Percent of population within ½ mile of a regional multi-use trail
2. Percent of population with ½ mile of a roadway with a regional bicycle lane

Transportation Demand Management Programs

1. Vehicle trips and vehicle miles traveled (VMT) reduced

Analysis Tools and Methods

A variety of technical analysis tools were used in the technical work of the project. They included the following:

Geographic Information System – A geographically referenced database to store information about exiting conditions, forecasts of future conditions and the results of analyzing alternatives.

Traffic Forecasting Model (QRSII) - A computer model that uses future-year estimates of population and employment to forecast vehicle trips and assigns them to a roadway network to provide estimates of daily traffic by roadway segment.

Capacity Analysis and LOS Estimation Software – Tools that estimate the level of service for roadways and intersections based on the ratio of peak hour volume to capacity.

Sketch Planning Tools – A variety of tools with which to develop rough estimates of transit ridership, trip reduction and system performance from alternatives.

6. Results of Evaluations

The three initial alternatives - **Major Roadway Capacity Expansion, Alternative Mode Enhancement,** and **System Management** - were evaluated at a level that was sufficient to determine which parts of each alternative should be included in a hybrid alternative and evaluated more thoroughly.

6.1 Major Roadway Capacity Expansion

The examination of options for major roadway capacity expansion began with a comparison of the Greater Idaho Falls metropolitan area's roadway mileage by facility type with those of the peer cities. As indicated in Table 6-1, The Greater Idaho Falls metropolitan area has a ratio of freeway miles to population that is among the highest of the peer cities. Only Richland, Washington and Sioux Falls, South Dakota are higher. The number of arterial miles is also higher than all but two of the peer cities – Sioux Falls, South Dakota and Billings, Montana. This comparison suggests that the Greater Idaho Falls area is not suffering from a lack of major roadways and that there may already be enough major roadways to accommodate travel within the twenty-five-year time frame of the 2035 forecast. What is of concern is the number of lanes on each of the facilities and how they operate.

Table 6-1 Comparison of Roadway Miles by Facility Type for Peer Cities

Peer Cities	Population	Freeway	Arterial	Freeway Miles Per 100,000
Reno, NV	420,000	30.2	191.4	7.2
Richland, WA	245,000	49.6	165.3	20.2
Cedar Rapids, IA	256,000	16	206.0	6.3
Sioux Falls, SD	238,000	52.5	259.7	22.0
Bend, OR	160,000	14.2	49.4	8.9
Billings, MT	155,500	19.4	253.2	12.5
Idaho Falls Area	126,000	24.9	215.9	19.8

Beltways

The forecasts for 2035 and 2060 indicate that without a major investment in new roadway capacity that there will be significant congestion, particularly within the inner core urban area. Expanding many of the arterial streets in this urban core would be difficult because of the commercial and residential development that borders the streets. To address future travel needs with the least economic and social impact on these urban core streets, two

beltway concepts were explored as alternatives to widening each street where congestion was forecasted.

As part of the TSA Study, the team examined the potential benefit from two sets of high-capacity roadways on all sides of the metropolitan area to relieve some of the urban core congestion. The team examined a set of close-in or inner roadways as well as a set of outer roadways. Possible alignments for the roadways were as follows:

North: Inner Roadway - Iona Road (33rd North) and 49th North
Outer Roadway – 81st North

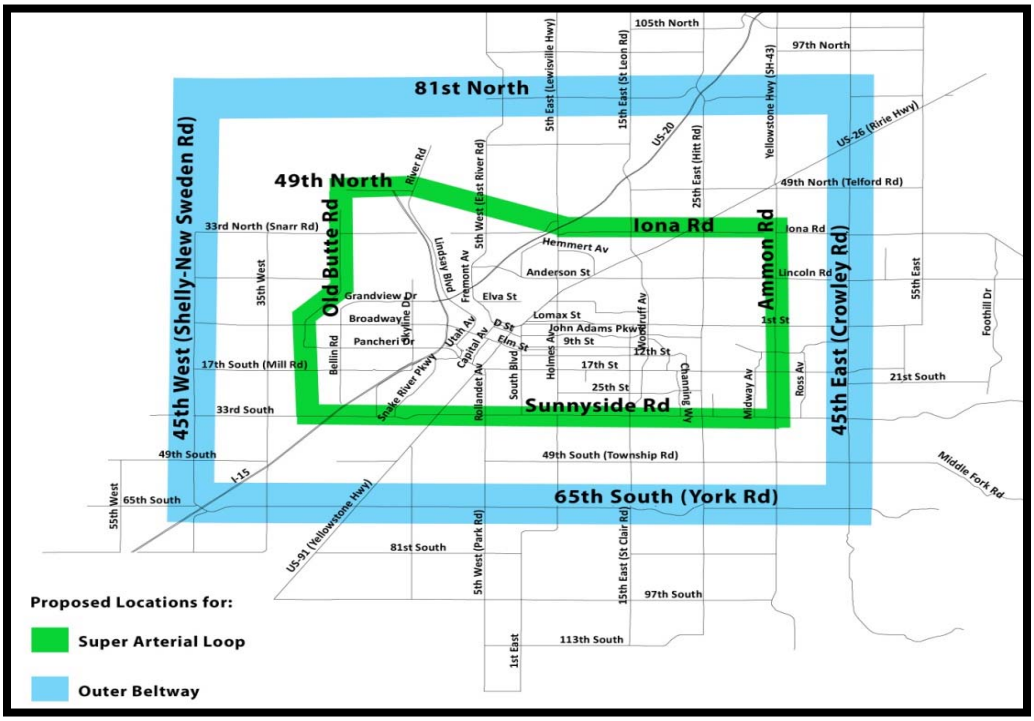
East: Inner Roadway – Ammon Road (35th East)
Outer Roadway – Crowley Road (45th East)

South: Inner Roadway – Sunnyside Road (33rd South)
Outer Roadway – York Road (65th South)

West: Inner Roadway – Old Butte Road with Extension to Sunnyside
Outer Roadway – 45th West

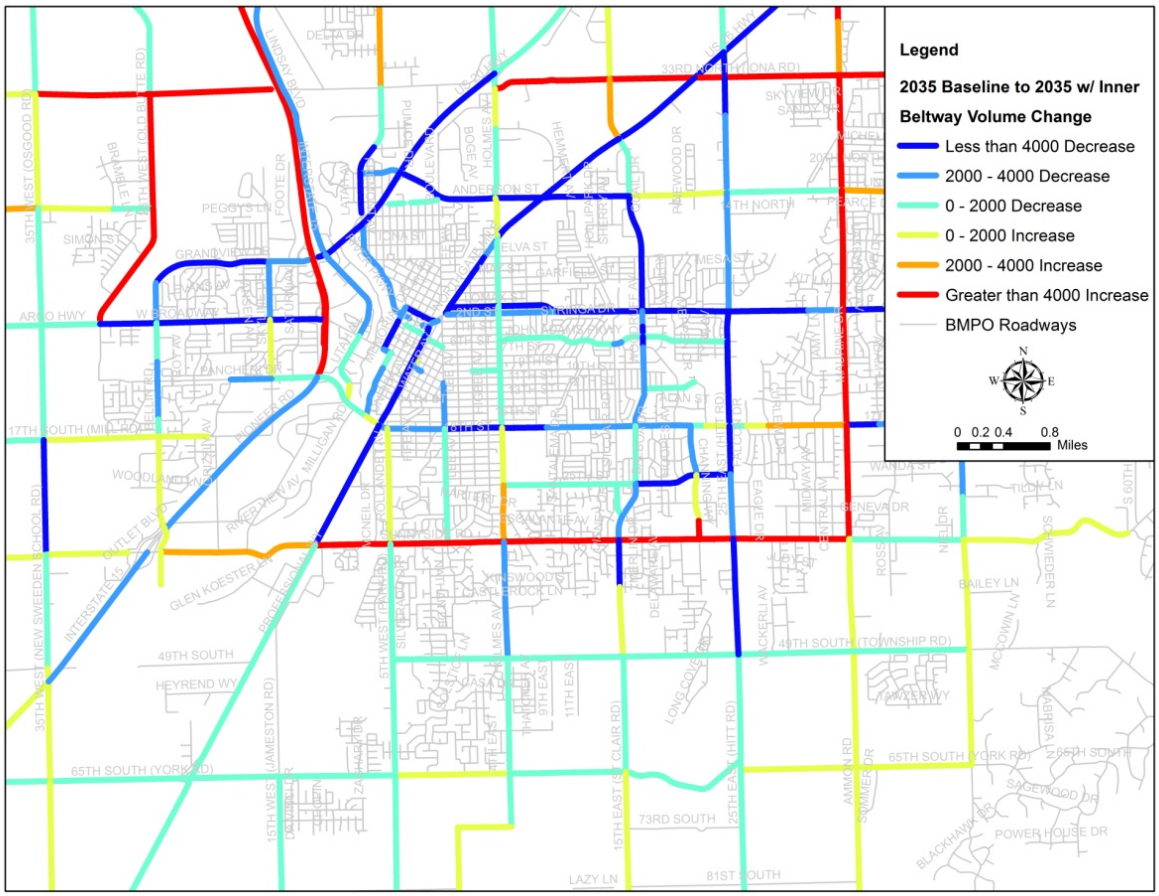
These options are shown in Figure 6-1. The project team evaluated inner roadways in these approximate alignments as five-lane roadways with a median that limits turns to major intersections spaced at least one-half mile apart and the outer roadways as expressways with six lanes and at-grade intersections spaced at least one mile apart.

Figure 6-1 Major Beltway Options



The potential benefits of the two sets of peripheral roadways were analyzed by modeling the future-year traffic flow with improvements made to these roadways to allow higher capacity and faster speeds. The inner set of roadways was modeled with an assumption of at least two lanes in each direction and a dividing median to restrict left turns to half-mile spacing. This inner set of strategic arterials was also assumed to have dual left-turn lanes and right-turn lanes wherever needed to maintain an average operating speed of 45 miles per hour. Figure 6-2 illustrates the effect of the strategic arterials on the flow of the urban core streets. Almost all of the major arterial streets inside of the strategic arterial loop had decreases in volume of at least 2,000 vehicles per day and some had decreases of 4,000 or more. In these results, a new bridge across the Snake River for Iona Road (West 33rd North) is assumed.

Figure 6-2 Change in Daily Volume of Traffic from Strategic Arterial Loop



Analysis of the opportunities for a bridge over the Snake River on Iona Road suggests that a straight extension of the road to make the connection may not be feasible. The river is dammed at the point where the extension of Iona Road would cross the river and the river is wider at that point as illustrated in Figure 6-3. On the west side of the river, there is very little room between the river and I-15 and Lindsay Boulevard is also located within that space. A final problem with a bridge at that location and an interchange with I-15 is related to the Idaho Falls Airport. The extension of Iona Road would intersect I-15 just past the end of a runway for the airport, and there would not be enough vertical clearance for an interchange. Because of the problems associated with the connection of Iona Road to I-15 with the river crossing, an analysis of the benefits of the strategic arterial loop without a river crossing or interchange with I-15 was also tested. The effects of this option on daily traffic volumes are shown in Figure 6-4. Most of the traffic reduction on the urban core streets is still achieved. A connection farther to the north at 49th North was also examined. The expected change in volumes form the 2035 baseline with this option is illustrated in Figure 6-5.

Figure 6-3 Issues Related to the Connection of Iona Road to I-15

If a connection to I-15 can be made from Iona Road, there could be a significant reduction of the traffic load at the I-15/US-20 interchange. Modeling of the option indicated that the reduction in average daily traffic might be 24,000 vehicles if Iona Road is connected directly and 12,000 vehicles if the connection is made at 49th North.

Figure 6-4 Change in Daily Volume of Traffic from Strategic Arterial Loop without a Connection of Iona Road to I-15

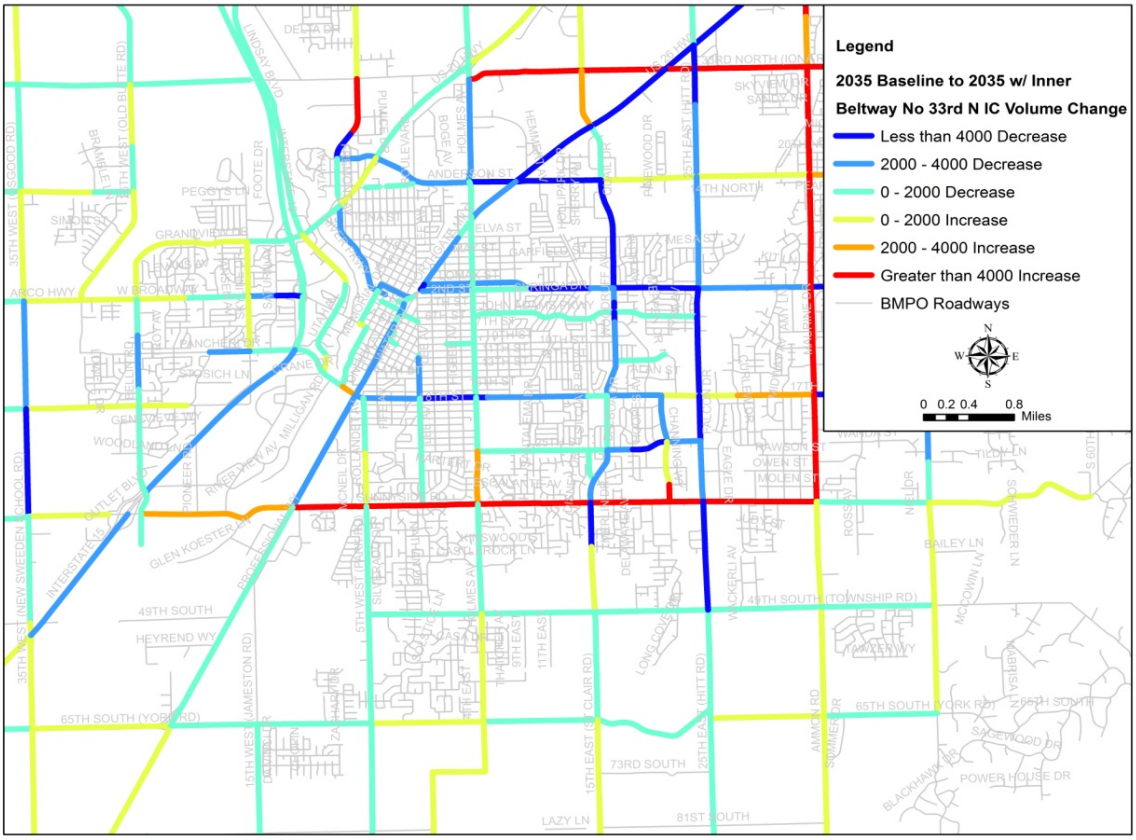
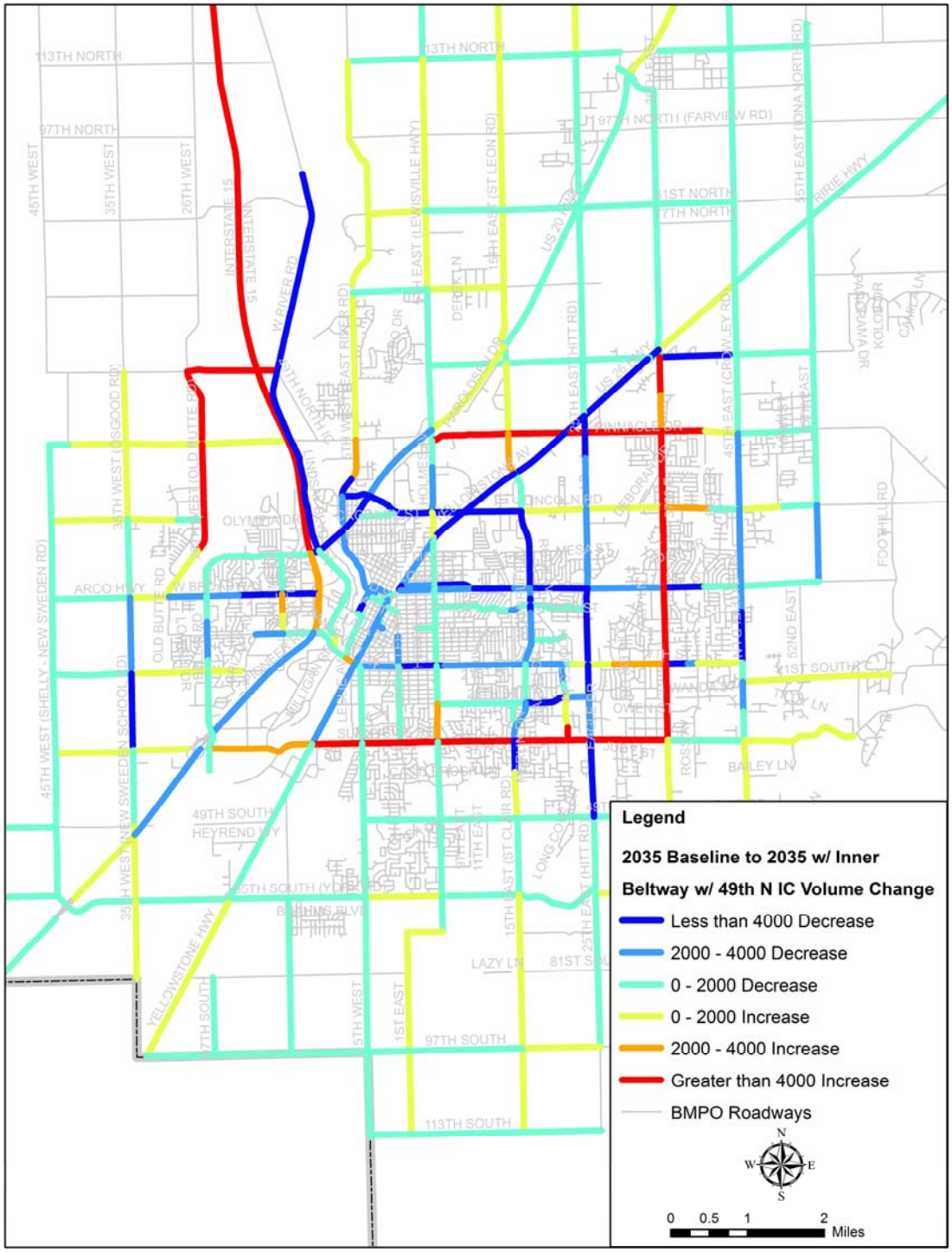


Figure 6-5 Change in Daily Volume of Traffic from Strategic Arterial Loop with a Connection of to I-15 via 49th North



The study team also identified a number of other potential impacts of the strategic arterial loop and these are illustrated in Figure 6-6 and Figure 6-7. Portions of the strategic arterial loop are presently only two lanes and are bordered by farm land. This is illustrated by the photographs of Iona Road and Ammon Road in Figure 6-6. The Ammon Road photo also includes a canal crossing, which are common on the loop routes. The eastern portion of Iona Road has two schools in close proximity. The middle school is shown in Figure 6-6 and the location of both schools is illustrated in Figure 6-7. There is also a high school on the east end of Sunnyside Road. Portions of the strategic loop already have continuous center turn lanes, and the installation of a raised median will mean a change in access for those segments.

Figure 6-6 Issues Related to Strategic Arterial Loop

Two Lane Section on Iona Road

Two-lane Section and Canal Crossing on Ammon Rd.

Sensitive Land Uses on Iona Road

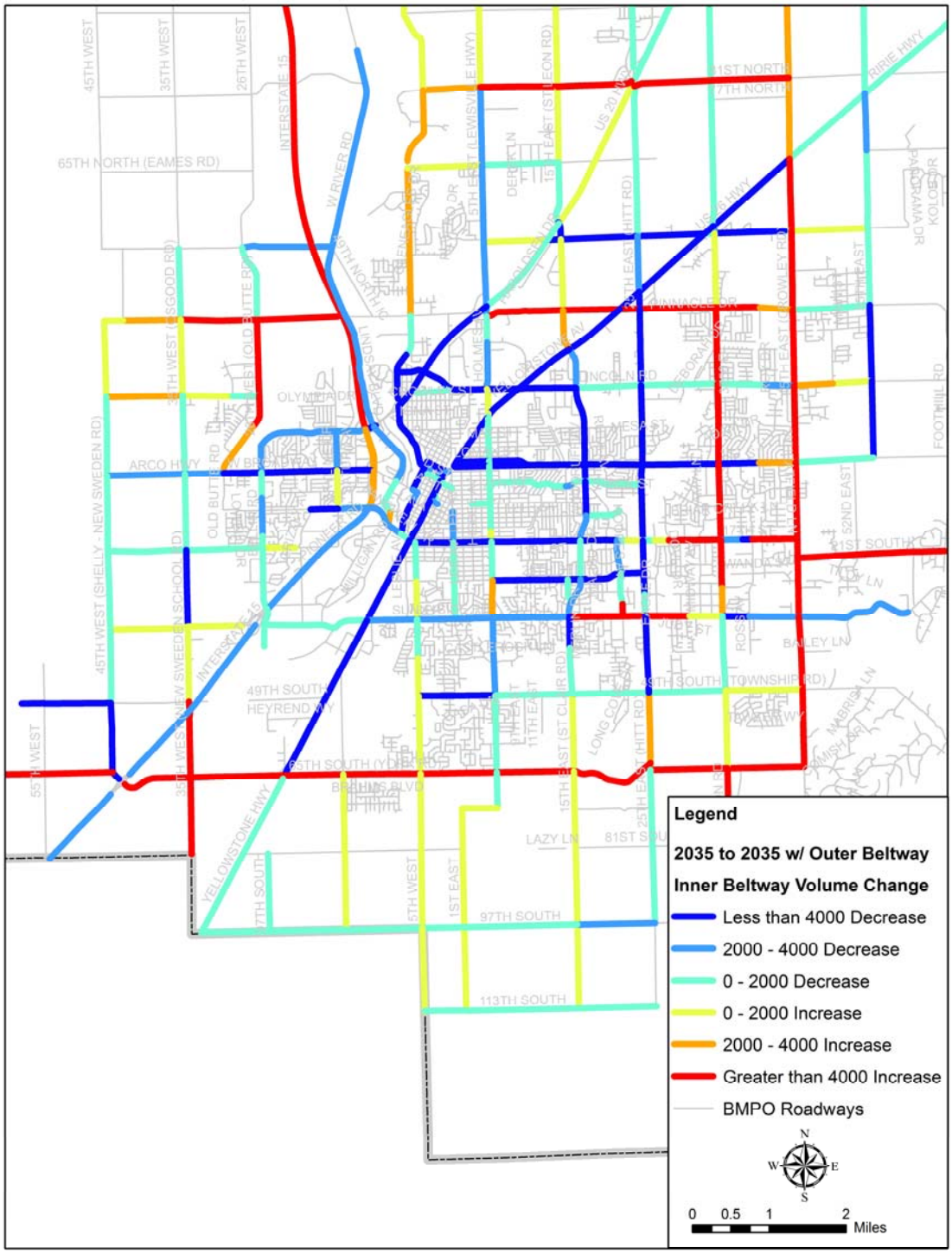
Continuous Left-turn on Sunnyside Rd.

Figure 6-7 Location of High School and Middle School on Iona Road

Because the analysis of the strategic arterial loop suggested that it would not be sufficient to address all of the congestion on the roadways in the urban core, the outer beltway was also examined. The outer beltway was coded into the traffic model as a four-lane divided expressway with a speed limit of 55 miles per hour and at-grade intersection no more than once per mile. Although the outer beltway might ultimately be constructed as a freeway with no at-grade intersections, the beltway was tested for 2035 as an expressway. The outer beltway included a new crossing of the Snake River on the north side and an interchange with I-15.

Two versions of the outer beltway were tested – one using 81st North Road and another using 145th North Road on the north. The version using 81st North Road performed much better in drawing off traffic from the congested urban core arterials. When added to the network with the strategic arterial loop the outer beltway with 81st North Road significantly reduced the congestion within the urban core that could not be mitigated by the strategic arterial loop as indicated in Figure 6-8. The two beltways combined provide a high level of mobility around the outside edges of the urban core and a much better level of service within the core.

Figure 6-8 Change in Daily Volume of Traffic from Outer Beltway (81st North) and the Strategic Arterial Loop



Several issues were identified for the construction of an outer beltway. To build the beltway as tested, it would require a right-of-way of at least 150 feet. None of the existing roadways that were used to define the beltway corridors have that width in public ownership. There are also numerous locations where there are residences, businesses or farm buildings close to the exisitng roadway. Acquiring sufficent right-of-way in the alignment of the existing roadways may require the relocation of existing buildings. An example on York Road is provided in Figure 6-9.

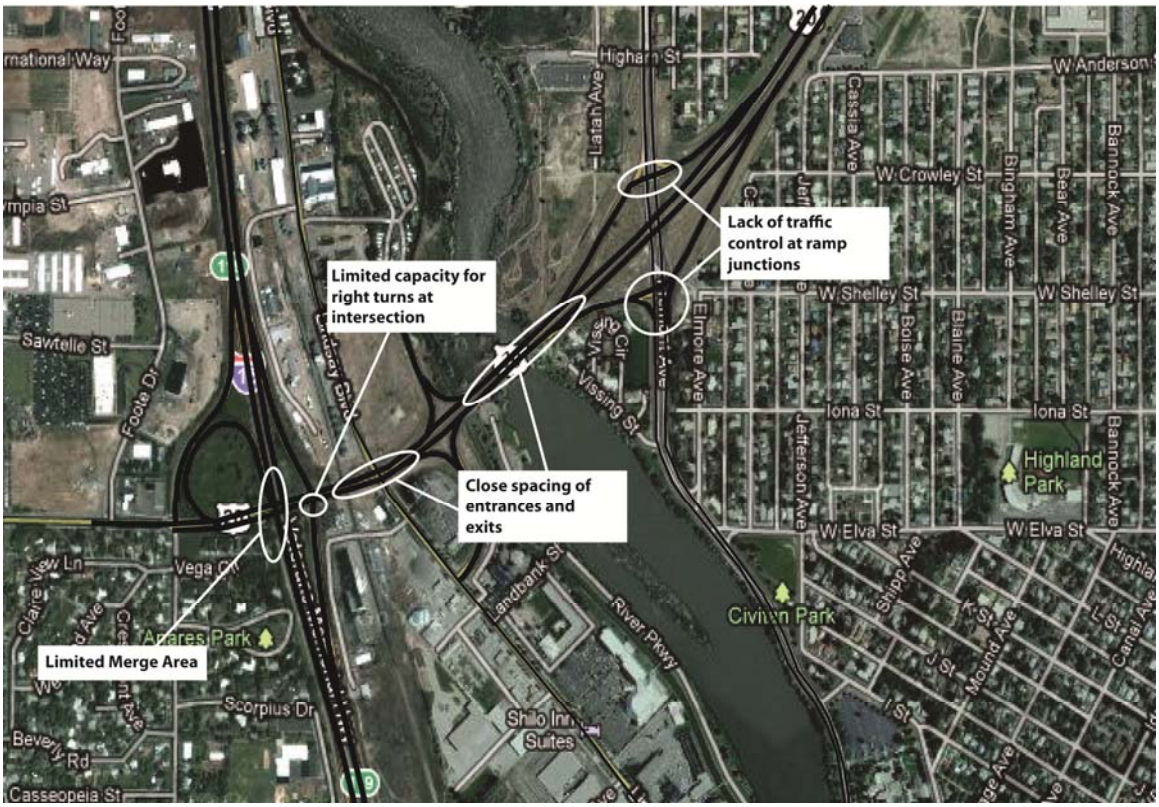
Figure 6-9 Residence near Roadway on York Road

I-15/US-20 Interchange

The important role of I-15 and US-20 in providing high-capacity and high-speed access into and out of the metropolitan area is clearly recognized by the TSA Study findings. These two facilities are critical to maintaining the metropolitan area's role as a regional center consistent with the vision statement of the study. While most of the mileage of these two facilities is designed to provide high level of service and good throughput for many years to come, the interchange between these two facilities and the design of the roadways and ramps within a mile of the interchange are not adequate to accommodate additional growth without a serious deterioration of level of service and safety.

Because a very high percentage of the volume at the interchange is moving from one facility to the other, the capacity of the connections at the interchange is important. At present, northbound traffic on I-15 destined for US-20 must go through a signalized at-grade intersection where a right turn is required. This is indicated in Figure 6-10. The throughput of the right turn is limited because of conflict from through traffic entering US-20 from the west and particularly by traffic exiting at the Lindsay Boulevard off ramp, which is only about 500 feet from the end of the I-15 off ramp. Southbound traffic on US-20 destined for southbound I-15 must pass through the signalized intersection with the northbound off-ramp from I-15 but then has a loop ramp to I-15 with a very short merge length at I-15. The conflict from the short merge frequently results in congestion causing a backup on the loop ramp. Peak period traffic on US-20 is often congested because of the close spacing of on-and-off ramps for Lindsay Boulevard, Riverside Drive and Science Center Drive, which are all within a two-mile length of the road.

Figure 6-10 Capacity Issues in the I-15/US-20 Interchange Corridor



Several options were considered for improvement of the I-15 /US-20 Interchange. These included drawing off demand through the beltway options. Also considered, were physical improvements to the existing I-15/US-20 interchange that would provide more throughput at a reasonable level of service. This included direct flyover ramps between the two facilities and may require the closing of some existing ramps to reduce conflict at merge points. Finally, traffic signal control at ramp intersections and metering of ramp flow were considered as options to yield the maximum vehicle throughput between the two roadways. The effectiveness of improvements to the interchange and the adjacent ramps will depend on the feasibility of the major physical improvements. Conducting the feasibility assessment was beyond the scope of the TSA Study and so a detailed corridor study is recommended to evaluate the options for improving the interchange performance and the performance of the roadways near the interchange. The corridor considered should be from just south of Broadway on I-15 to just north of Science Center Drive on US-20.

Other Arterials

Improvements on other major and minor arterials in the metropolitan area will also be required over the next twenty-five years to accommodate growth and sustain a reasonable level of service by all modes. The improvements needed for these other arterials will

depend on their function in the metropolitan area. As part of the TSA study, a typical section for each roadway was developed based on its function and role, and the roadway typical section will determine the ultimate design for each roadway, and the travel forecast will determine when the physical improvements are required to accommodate additional traffic flow or transit services.

6.2 Alternative Mode Enhancement

Transit

Transit service will also have to be expanded significantly to accommodate the increase in travel. Not only will the need for commute oriented transit service increase by 2035, there will also be a significant increase in the population over 65. Although forecast of population by age is not available for the greater Idaho Falls Metropolitan area, statewide forecasts for Idaho indicate that the percentage of the population that is over 65 will increase from about 12% in 2010 to over 18% by 2030 as indicated in Table 6-2. While the population of the state is expected to increase by 30% during that 20 year period, the population over 65 is expected to increase by 100%. Meaning this population of older residents will have special transportation needs but many will also be continuing to work at least part-time.

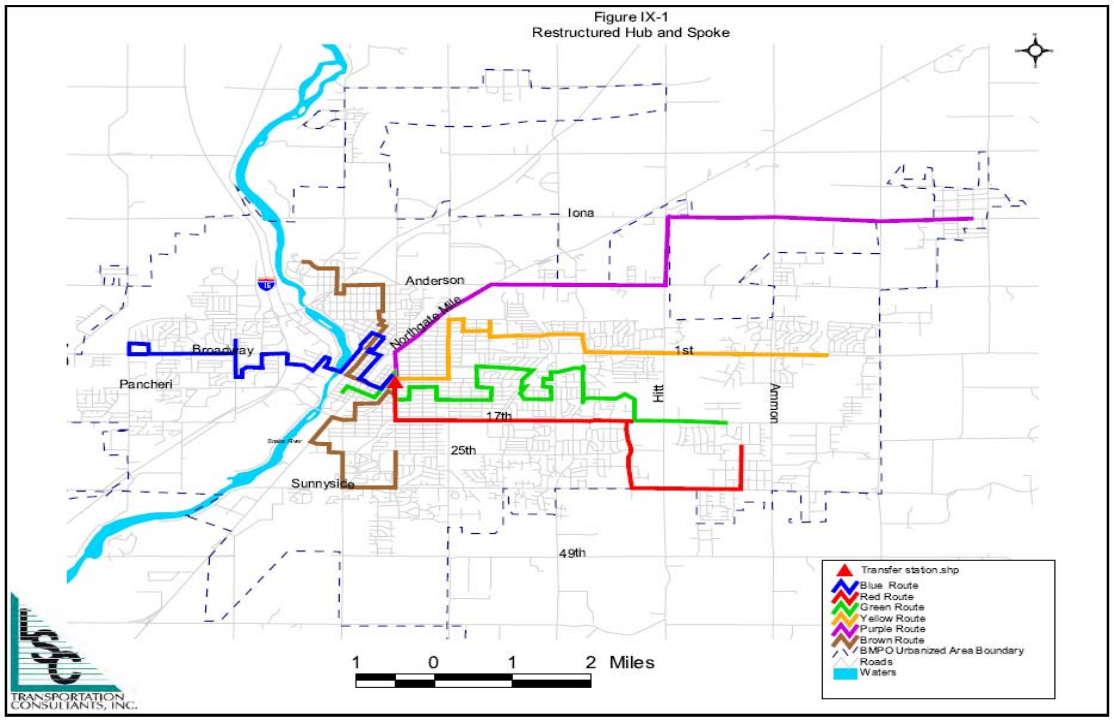
Table 6-2 Statewide Forecast of Population by Age Category for Idaho

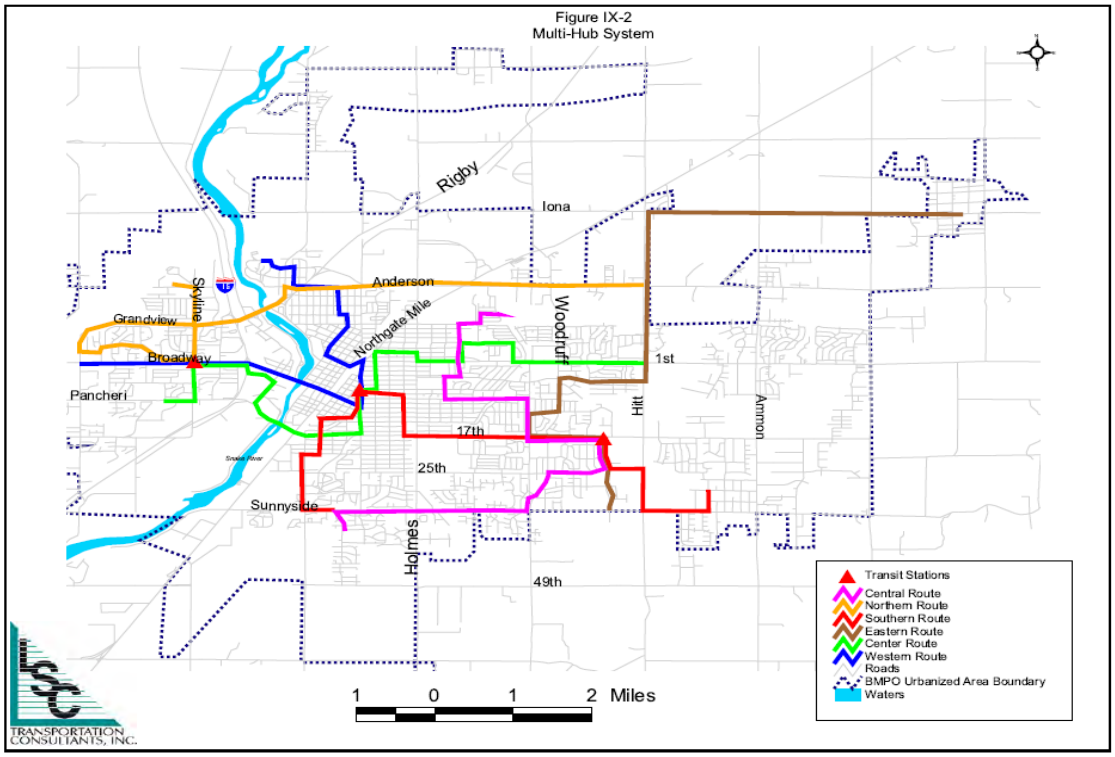
Age Group	2010	% of 2010 Population	2030	% of 2030 Population	Change 2010 to 2030	Percentage Change
Under 18	400,237	26.4%	486,088	24.7%	85,851	21.5%
5-17	284,357	18.7%	351,502	17.8%	67,145	23.6%
18-24	137,502	9.1%	164,732	8.4%	27,230	19.8%
25-44	416,966	27.5%	479,354	24.3%	62,388	15.0%
45-64	381,170	25.1%	478,417	24.3%	97,247	25.5%
65+	181,416	12.0%	361,033	18.3%	179,617	99.0%
Total	1,517,291	100.0%	1,969,624	100.0%	452,333	29.8%

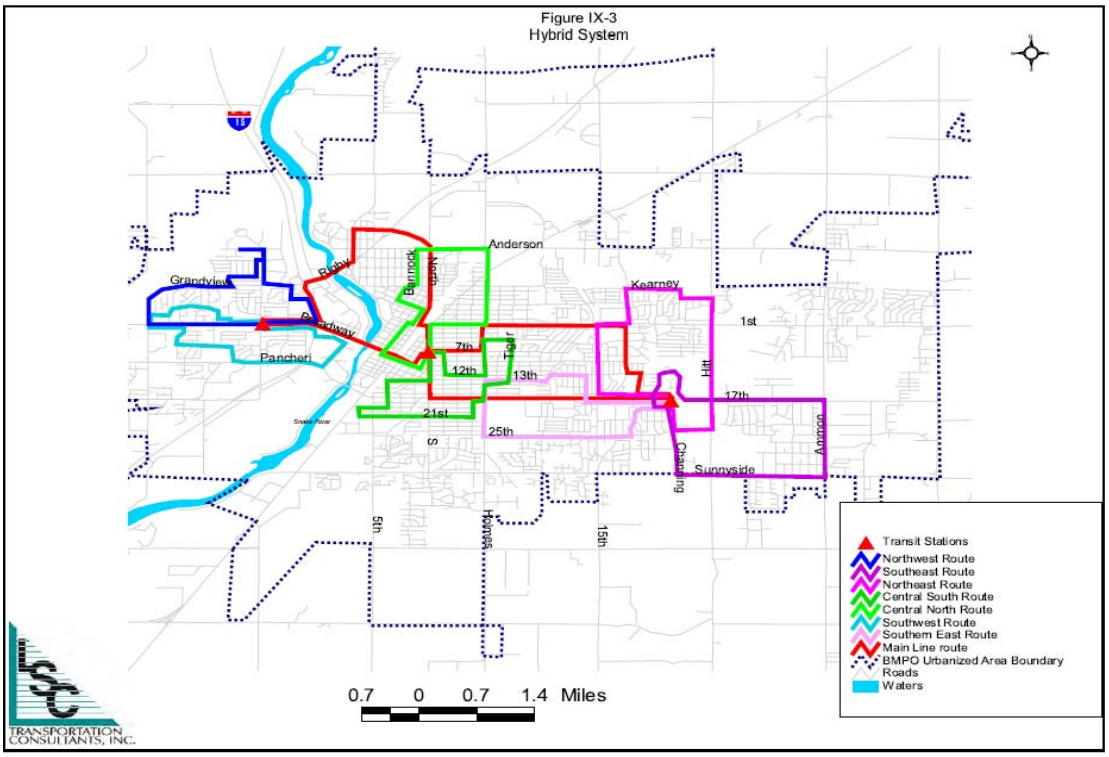
Source: U.S. Census Bureau – Population Division

Several different options were evaluated for transit route structuring. They were based on concepts tested by TRPTA in its most recent Short Range Transit Plan. The options are illustrated in Figure 6-11. One consisted of a radial structure in which bus routes operate from a single center in the core area of the region where transfers between routes could give riders access to the entire service area. A second option was similar but with multiple service hubs rather than a single one. A third alternative consisted of a grid system with routes operating on all major north-south and east-west routes.

Figure 6-11 Transit System Alternatives Considered







Transit ridership forecasts were developed for each alternative using a model that was developed for the TRPTA Short Range Transit Plan. The alternatives were evaluated for routing that was extended to include service to the new areas of growth in each forecast year. The results of the forecasts are represented in Table 6-3. The hybrid alternative produces considerably higher ridership and demonstrates the value of a fixed-route system component to serve future needs. If fully implemented as tested, the expanded hybrid routing system would maintain the percentage of the population within ¼ mile of service at about 40% and the percentage of employment with ¼ mile of service at about 60% even with substantial growth in outlying parts of the metropolitan area.

Options were also considered for how transit routes might be redesigned to provide more direct service to the historic downtown area of Idaho Falls. Preserving the historic downtown was included in the vision statement related to maintaining a high quality of life for the area residents. The options design to improve transit service to the downtown included ways for establishing priority for bus stops on the narrow downtown streets.

Table 6-4 provides a comparison of existing transit service and ridership in the Greater Idaho Falls metropolitan area with that in the six peer cities. Even when the private bus services of the INL are included, the Idaho Falls area is still among the lowest in transit riders per capita suggesting significant potential for transit service expansion.

Table 6-3 Average Weekday Ridership by Alternative

Alternative	2020*	2035*	2060*
Existing Service	181	187	200
Single Hub	431	453	494
Multi-Hub	430	449	488
Hybrid	905	950	1,033

Table 6-4 Comparison of Transit Ridership with Peer Cities

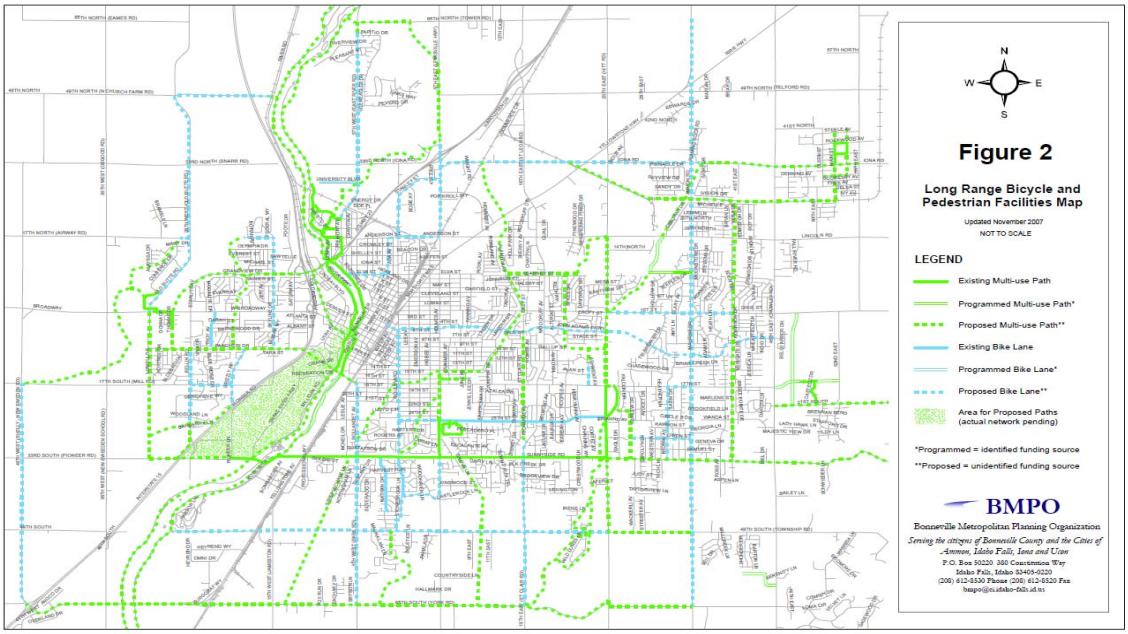
Peer Cities	2009 Population	Routes	Ridership (2008)	Rides per Capita
Reno, NV	420,000	25 Fixed	9,300,000	22.1
Richland, WA	245,000	24 Fixed	4,894,000	20.0
Cedar Rapids, IA	256,000	14 Fixed	1,230,000	4.8
Sioux Falls, SD	238,000	63 Fixed	1,026,000	4.3
Bend, OR	160,000	9 Fixed	300,000	1.9
Billings, MT	155,500	18 Fixed	720,000	4.6
Idaho Falls Area*	126,000	22 Fixed	350,000	2.8

* Includes INL bus services

Pedestrian and Bicycle

The Transportation System Alternatives Study built on progress already made in the BMPO Long Range Transportation Plan Update, including the development of a regional plan for bicycle and pedestrian improvements. This set of proposed improvements is illustrated in Figure 6-12. The Transportation System Alternatives Study examined how the proposed system of improvements for bicycle and pedestrian improvements can be integrated with improvements to facilitate the movement of people by automobile and transit as well as the movement of goods by truck and rail. When fully implemented, the plan will increase the percentage of the population with ½ mile of a regional multi-use trail from 28% to 60% and the percent of population with ½ mile of a bicycle lane from 13% to 48%.

Figure 6-12 Long Range Bicycle and Pedestrian Facilities Map from BMPO



Many communities across the U.S. have participated in a program of the League of American Bicyclists referred to as "Bicycle-Friendly Communities." In this program, a community's existing bicycle facilities, services and programs are evaluated by a panel of judges and each community is rated relative to other communities. The program promotes the development of bicycle communities through the competition but also provides planning support and information for communities that want to improve their rating. None of the communities in the Greater Idaho Falls metropolitan area have participated in the past, but some of the peer cities have participated as have other communities in Idaho, Montana and Wyoming. The ratings for those communities are presented in Table 6-5.

Table 6-5 Bicycle-Friendly Communities

Level	Number	Example Communities in the Designated Level
Platinum	3	Boulder CO, Davis CA, Portland OR
Gold	10	Jackson and Teton Counties WY, Fort Collins CO
Silver	28	Bend, OR, Wood River Valley ID
Bronze	117	Ada County ID, Coeur d'Alene ID, Billings MT, Iowa City IA, and Sioux Falls SD
Honorable Mention	59	Driggs and Victor ID, Cedar Rapids IA, Merced CA

*League of American Bicyclists 2010

Transportation Demand Management

TDM programs are those that provide incentives for travelers to reduce the overall need for roadway capacity by encouraging the use of transit, ridesharing or non-motorized modes rather than driving alone. TDM programs also include incentives for travelers to avoid driving during the most congested times or to reduce vehicle trips by combining multiple trips into one or by avoiding travel by working from home occasionally. TDM programs are most often oriented to commute travel and are often offered by employers. Some of the most common employer-based TDM program elements include ride matching for carpool or vanpool formation; subsidy of transit, carpooling or vanpooling costs; guaranteed ride home (taxi vouchers if an employee misses the last bus of the day), flexible work schedules, telecommuting, and compressed work weeks.

The study team considered a variety of employer-based demand management programs designed either to reduce reliance on the automobile for commute travel or to shift commute trips by automobile out of the peak commute hours. The options considered included the following:

- Flexible Work Schedules
- Compressed Work Week
- Telecommuting
- Rideshare Matching
- Transit Pass Subsidy
- Guaranteed Ride Home

These options were identified based on the experience of the consulting team with the effectiveness of demand management programs in smaller metropolitan areas.

National experience with TDM programs in major metropolitan areas indicates that peak-period commuter vehicle trips to large employment centers can be reduced by 5% to 20%. The high end of the range is generally associated with programs at employment sites where employees are charged for parking as part of the program and where there are

good alternatives to driving alone such as public transportation, carpooling or vanpooling. Without parking charges and good alternative modes of travel, results are generally near the lower end of the range.

Even when TDM programs are most effective at an employment center, the reduction in vehicle trips from a specific roadway are much smaller. Commuters to a specific employment site come from multiple directions and use multiple roadways. Those roadways are usually serving trips beside commute trips and so the reduction of commute vehicle trips is diluted by the non-commute travel on the roadway. As a result, even the most effective TDM programs at employment centers only reduce traffic on major roadways in the area by 1% or 2% at best. While the development of employer-based TDM programs in the Greater Idaho Falls metropolitan area will provide travel options for the area's employees, they are unlikely to have a significant impact on the need for additional roadway capacity in 2020 or 2035.

6.3 System Management

Traffic Signal Control

The main focus of the system management alternative was on enhanced traffic signal control. The study team evaluated where additional signals would improve traffic management in 2020 and 2035. The assessment of these locations was based on daily traffic forecasts prepared for the two future years. The team also evaluated the streets that crossed jurisdictional boundaries for which coordinated signal control could produce additional benefit.

Intelligent Transportation Systems (ITS) - The main focus for ITS options in the system management alternative was on the collection and distribution of information to support ongoing traffic management. This included continuous collection of traffic volumes at signalized intersections to support signal timing management and continuous collection of traffic volumes on the freeways to support freeway management and incident detection.

The existing traffic signals within the City of Idaho Falls are managed by Idaho Falls Power. The system includes 47 traffic signals, 45 of which are connected by fiber optic communications with Ethernet. The two signals that are not on the network are satellite signals located at schools. Some intersections currently have video detection, but Idaho Falls Power is working to replace video detection with loop detectors as budget is available. ITD uses video detection. Idaho Falls Power currently uses Econolite controllers with the Centracs system. There are also 34 traffic signals managed by ITD in Idaho Falls and vicinity. Idaho Falls Power maintains some of the ITD signals in addition to their own system, but they do not operate those signals. Two traffic signals are owned by the City of Ammon and are operated through an electrical service contractor.

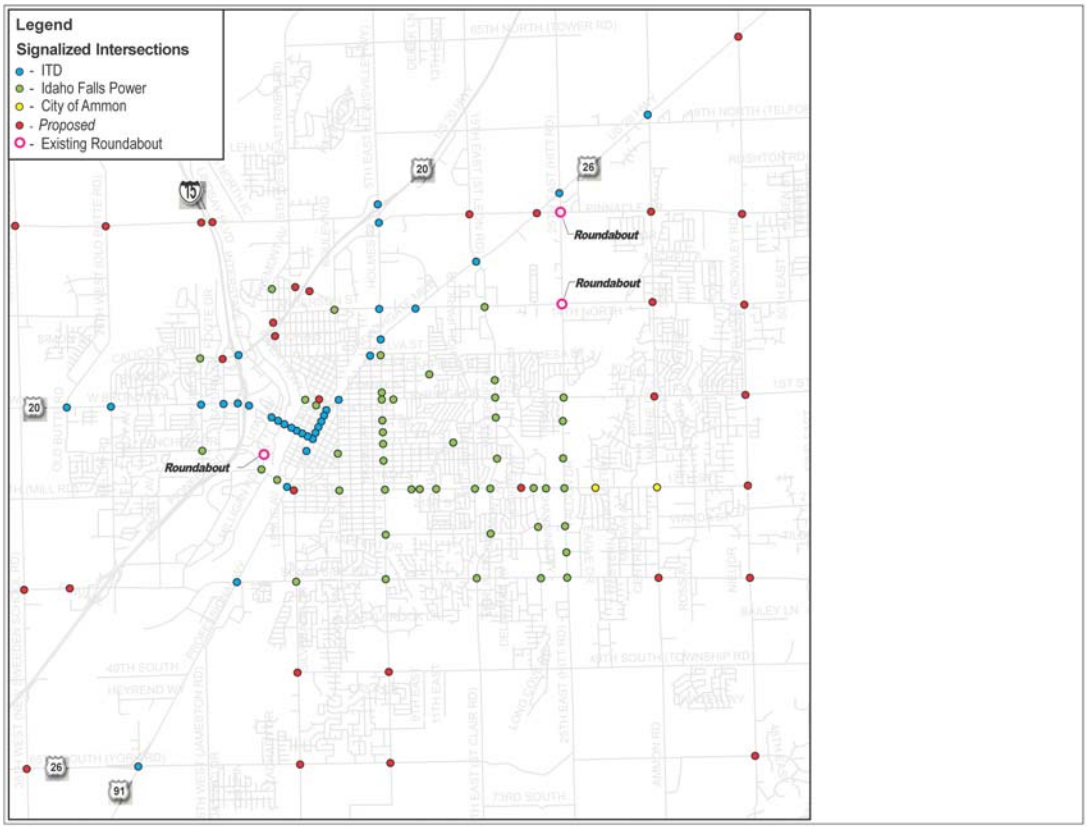
There are currently no variable message signs in the study area, but Idaho Falls Power would like to add them on arterials. Software capability already exists and would not require additional licensing.

Idaho Falls Power has two workstations for operating the signal system. The dedicated server for signals is not on the City network due to security concerns. The City currently does not employ a traffic engineer except by contract as needed.

Based on the existing system and future needs, several opportunities for system management were identified. The opportunities fall into four general categories that are discussed in greater detail below – traffic signals, traffic-monitoring cameras, variable message signs, and a traffic management center.

Future growth outside the core of Idaho Falls will generate the need for about 30 additional traffic signals by 2035. The proposed signal locations are shown on Figure 6-13.

Figure 6-13 Locations of Existing and Proposed Traffic Signals for 2035



In addition to the proposed traffic signals, future congestion may also be mitigated by refining time-of-day coordination on key corridors, implementing an adaptive signal system, and providing active management of signal timing.

There are several key corridors where time-of-day coordination has already been implemented. Some improvements could be realized by refining coordination regularly or

by using an adaptive signal system. Additional monitoring could provide opportunities for more active management of signal timing as well. Coordination between Idaho Falls Power, City of Ammon and ITD signals could also provide a significant benefit on corridors that intersect state facilities. Table 6-6 identifies key corridors and, for multi-jurisdictional corridors, how many signals are not operated by Idaho Falls Power.

Table 6-6 Key Signalized Corridors

Corridor	Extents	Number of Signals*	Number of Not Maintained by Idaho Falls Power
Broadway Street	Old Butte Road to US-26	14	All ITD
US-26	York Road to Crowley Road	19	All ITD
Pancheri Drive/17th Street	Skyline Drive to Crowley Road	19	1 ITD and 2 Ammon
Sunnyside Road	US-26 to Ammon Road	7	1 ITD and 1 Ammon
Holmes Avenue	Lincoln Road to Sunnyside Road	13	2 ITD
Woodruff Avenue	Iona Road to Sunnyside Road	10	1 ITD
Hitt Road	1st to Sunnyside Road	7	

* Includes proposed signals shown on Figure 6-13

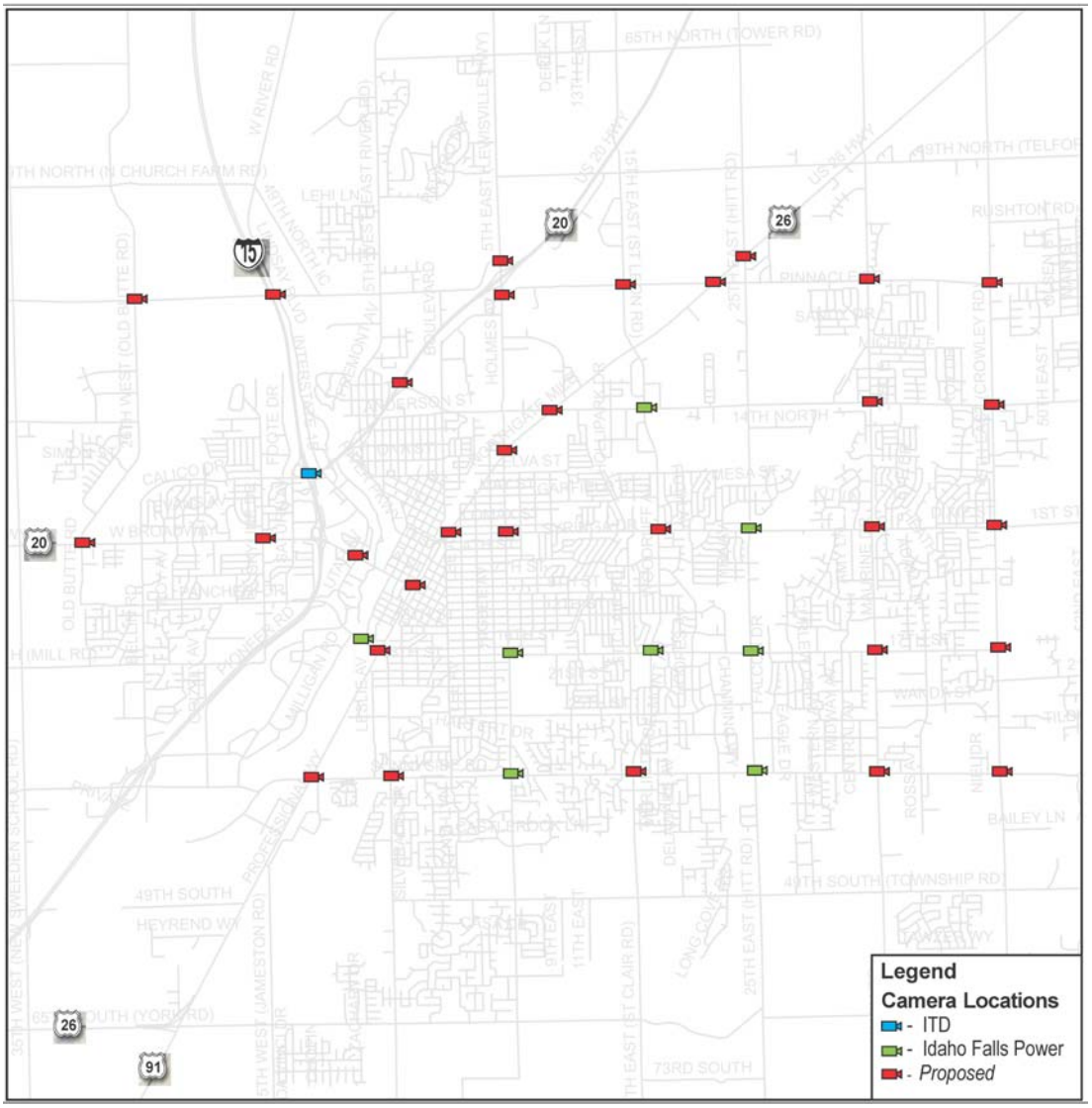
Traffic-Monitoring Cameras

Idaho Falls has several existing closed-circuit television cameras (CCTVs) for monitoring traffic that provide fairly good coverage of the major intersections on the busiest corridors. In addition to these existing surveillance cameras, several locations have been identified for future cameras. General criteria used for siting cameras on arterials include placing at major intersections, spacing of about one-half mile, and locating on the outside of horizontal curves.

Many of the signalized intersections along US-26 currently use video detection. There may be some opportunity to use these existing cameras for monitoring of major intersections by staff in a centralized control center. Video detection cameras often do not provide a good enough view of the roadway for use on a website to disseminate information to the public. It is recommended that existing video detection cameras be utilized to the extent possible, but additional monitoring cameras along US-26 at key intersections would also be useful.

Existing and proposed monitoring camera locations are shown on Figure 6-14. Of the proposed locations shown on US-26, video detection cameras exist at all intersections except at 17th Street and Lomax Street.

Figure 6-14 Locations of Existing and Proposed Traffic Monitoring Camera for 2035



Variable Message Signs

Variable Message Signs (VMS) can be used to communicate information to the public. The messages are often controlled via a traffic management center (discussed later in more detail). The City of Idaho Falls already has software capabilities for managing VMS. ITD also has existing VMS on their system outside of Idaho Falls but within the Bonneville Metropolitan Planning Area so expanding the system to accommodate additional VMS should be feasible. Within the study area, major corridors like US-26, Broadway, 17th Street, Holmes Avenue, and Sunnyside Road would be good locations to provide drivers with information via VMS.

Transportation Management Center

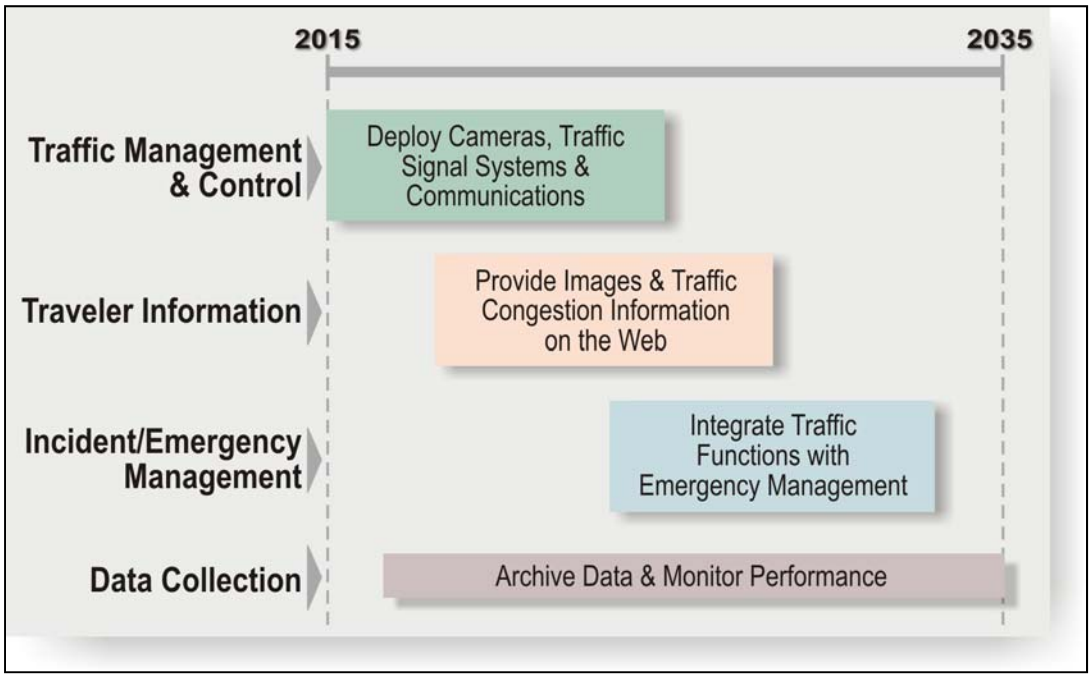
A Transportation Management Center (TMC) is the primary point of coordination for managing an agency's—or multiple agencies'—transportation resources. This may include centralized control of traffic signals, dispatch for maintenance and/or incident response vehicles, viewing of CCTV surveillance cameras, and operation of any number of other field devices such as traffic detection, road weather information stations, and variable message signs.

If the TMC alternative is implemented for Idaho Falls and vicinity, a strategy should be developed that identifies the type and configuration of the TMC and addresses the interests of various stakeholders. Each stakeholder could maintain their own separate TMC or a regional TMC could be implemented either at one physical location or as a virtual TMC. The primary stakeholders for the study area are the City of Idaho Falls, Idaho Falls Power, ITD, and the City of Ammon.

The City of Idaho Falls already has an extensive fiber optic communications network in place that will be of great benefit in developing a TMC. There is also GIS data available that could be used for mapping incidents, congestion, and work zones.

The chosen strategy could be implemented gradually to ease the financial impact. Flexible staffing options, like rotating existing staff or allowing after-hours remote access, might also reduce the operating costs. Figure 6-15 shows various elements with approximate periods of implementation.

Figure 6-15 System Management Strategy Implementation Timeline



A coordinated transportation management center can be achieved through physical collocation of agencies or through a "virtual TMC" where agencies are connected by secure communications. Regardless of the physical architecture of a coordinated TMC, the benefits are the same.

7. Recommendations of the TSA Study

7.1 Central Theme of Recommendations

The recommendations of the TSA emerge from a set of central themes –

1. Improvements are needed for all modes of travel to ensure there are travel options for everyone.
2. There is an appropriate future role for each major roadway in the metropolitan area to support travel by one or more modes.
3. Actions must be taken by the agencies in the metropolitan area to protect the function of each roadway so it can best serve that role.
4. Actively managing the operations of all transportation facilities and services will be necessary to achieve efficiency in moving people and goods.

Specific recommendations for Roadways, Public Transportation, Bicycle and Pedestrian Facilities, Transportation Demand Management and Traffic System Management are provided below.

7.2 Adding Mode-Priority to Functional Classification

Consistent with the central themes outlined above, the TSA Study team has recommended a revision to the metropolitan area's roadway functional classification system to identify mode priorities. Under this revised classification, three mode priorities are defined:

- **Truck and Automobile Priority** – These are streets important to the movement of trucks and automobiles. By giving priority to these vehicles, the facilities can operate safely at a high level of service. By doing so, they will become the roads of choices for drivers wanting to get from one part of the metropolitan area to another. This should reduce the amount of vehicular traffic on other streets where access to businesses is important or where accommodation of bicyclists and pedestrians is important.
- **Transit Priority** – These streets will be the primary trunk routes for fixed-route transit services in the future. These streets should also provide a good level of service and pull-outs for bus stops. Over time, transit priority at traffic signals may be important to minimize the effects of traffic signals on transit operating times.
- **Bicycle and Pedestrian Priority** – These streets are important for the development of a network of facilities that accommodate non-motorized movement in a safe and enjoyable environment. These streets, combined with off-road multi-use trails will provide connections between residential areas,

schools, parks, recreational facilities, commercial businesses, and employment sites. Sidewalks of adequate width will be provided on these streets and enough space provided in the street itself to accommodate bicyclist safely in either a bike lane or a dedicated bicycle route.

7.3 Roadways

The travel forecast for 2035 indicates a serious threat of congestion on the main arterials in the core developed parts of the metropolitan area. In these areas, additional widening of roadways would not be possible without significant cost for right-of-way and impact on residential and commercial areas. To address this problem, development of two sets of peripheral roadway belts is recommended: an inner "strategic arterial" loop and an outer expressway or freeway belt.

Strategic Arterial Loop

The strategic arterial loop is recommended to provide immediate relief to the already congested core area arterials. It is recommended the strategic arterial loop be developed where there are existing roadways. The roadways should be built or retrofitted to have at least two through lanes in each direction with a raised separating median that allows left turns only at half-mile spacing. Intersections along the strategic arterials should be constructed or retrofitted to provide right-turn lanes and dual left-turn lanes from the strategic arterial. The strategic arterials could accommodate buses if appropriate, but only if bus pullouts are constructed to allow the loading and unloading of passengers without interfering with truck and automobile flow. The strategic arterial should not have bicycle lanes or be designated as bicycle routes and should only have multi-use trails within the right-of-way or adjacent to the right-of-way when needed to provide pedestrian and bicycle access to schools along the roadway. The roads recommended to constitute the inner strategic arterial loop are as follows:

- West – Old Butte Road with extension to Sunnyside Road
- South – Sunnyside Road (33rd South)
- East – Ammon Road (35th West)
- North – Iona Road (33rd North) and 49th North

It is further recommended that the partner members of the BMPO enter into an agreement to take the necessary steps to protect the right-of-way necessary to accommodate the build-out of the strategic arterial loop and to limit any direct access to the roadway as it is being incrementally funded and built out.

Outer Beltway

The outer expressway or freeway belt is a long-term recommendation designed to allow for movement around the edges of the metropolitan area for trips that do not need to travel through the core area or only have a small portion of their trip in the core. The fifty-year projections for growth indicate such an outer beltway will ultimately be needed

to maintain a reasonable level of service for travel in the metropolitan area and some of this need may emerge by 2035. It is recommended the outer beltway be a limited access facility with either no at-grade intersections (freeway) or at-grade intersection no more than once per mile (expressway). A speed limit of at least 55 miles per hour should be allowed on the facility between at-grade intersections if the facility is an expressway and 65 miles per hour if the facility is a freeway.

Acquisition of the necessary right-of-way for the outer beltway and construction of the facility may take decades to fund and the need is not likely to emerge for that long. Identification of the appropriate alignment and preservation for the right-of-way is recommended now before new development eliminates the options for a suitable alignment. The approximate corridors for the outer beltway are as follows:

- West – 45th West
- South – York Road (65th South)
- East – Crowley Road (45th East)
- North –81st North

It is recommended a study of alternative alignments for the outer beltway be initiated immediately, with an agreement between the local jurisdictions to establish a moratorium on new development within the preliminary corridor until the alignment study is completed. Once a recommended alignment has been identified, the BMPO member jurisdictions should enter into an agreement to take the necessary steps to protect the right-of-way necessary to accommodate the beltway in the chosen alignment and to limit any direct access to the roadway as it is being incrementally funded and built.

The important role of I-15 and US-20 in providing high-capacity and high-speed access into and out of the metropolitan area is clearly recognized by the TSA Study findings. These two facilities are critical to maintaining the metropolitan area's role as a regional center consistent with the vision statement of the study. While most of the mileage of these two facilities is designed to provide high level of service and good throughput for many years to come, the interchange between these two facilities and the design of the roadways and ramps within a mile of the interchange are not adequate to accommodate additional growth without a serious deterioration of level of service and safety.

Define Corridor Preservation Needs

Preserving a right-of-way corridor needed for the future regional Outer Beltway will be important to its ultimate success. Development must not be permitted to occur that would preclude construction of the future expressway, and provisions must be made for alternate access to adjacent parcels from parallel, lower-classified streets (e.g. minor arterials, collectors, or locals).

As part of the TSA process, a proposed corridor was identified for the Outer Beltway. This corridor runs along 81st North on the north, York Road on the south, Crowley Road on the east and 45th West on the west. However, this corridor is approximate and at this

early stage should be considered as a fairly wide, up to one-half mile on either side of the existing roads previously mentioned.

The corridor preservation process must begin with Idaho Falls, Ammon and Bonneville County amending their respective comprehensive plans to acknowledge the future Outer Beltway corridor. This comp plan process would involve two steps. The first step would be to identify the broad, mile-wide corridor and require that any development or subdivision of land within that area go through an additional corridor-preservation review. This review would ensure that the proposed development would not preclude a future expressway alignment, either by directly blocking an alignment or by requiring direct property access. At this early stage, it should be assumed that 150 feet of width will be required for the future limited-access facility. This first step should be an early action item and occur as soon as possible.

Once a formal alignment study for the Outer Beltway has been completed and a more-defined alignment and right-of-way width identified, then the second comp plan step can occur. The local jurisdictions' comp plan corridor preservation section would be modified to narrow the affected area of the future corridor. Once the corridor area is narrowed, the typical planning review process will likely become more difficult, as there will be fewer avoidance options available to developers in the direct path of the proposed corridor. Specific development may have to be restricted and advance right-of-way acquisition may be required in some cases. The preparation of a detailed alignment study could take up to a year to complete, longer if funding isn't immediately available. So the second comp plan step could occur several years after the first, which emphasizes the need for the initial step to occur as soon as possible.

Alignment Study

A detailed alignment study is needed for the future Outer Beltway, to preserve and refine the definition of the needed corridor and as a step toward environmental approval and right-of-way acquisition. It should be clear that National Environmental Policy Act (NEPA) approval of an alignment is not part of this study and that as a scope of work is developed for this study that the required NEPA process be kept in mind, so that work on this alignment study is not "wasted" and can be used and built upon for use in a future NEPA Environmental Assessment (EA) or Environmental Impact Statement (EIS).

Several key elements would be completed during the alignment study, including:

- A plan that identifies future right-of-way needs and proposed lane configurations, based on a 20-year forecast.
- An environmental scan that will evaluate possible impacts to agricultural resources, air quality, native plants and animals, cultural and historical resources, geology and soils, hazardous and toxic materials, hydrology and water quality, land use planning, noise, mineral resources, and recreation.
- Proposed access control for the new expressway.

I-15/US-20

Solution of the problems at and near the I-15/US-20 interchange will not be simple or inexpensive. A combination of strategies is recommended by this study to meet the future needs of these two roadways cost-effectively and in a manner consistent with the principles for meeting other roadway needs of the metropolitan area. It is recommended the inner strategic arterial loop and outer beltway be designed to provide reasonable alternatives for the I-15 to US-20 movements to the extent possible. This will require alternative connections between I-15 and US-20 to the north of the present interchange. These connections may be part of the inner and outer beltways or as a separate stand-alone connection.

It is also recommended physical improvements to the existing I-15/US-20 interchange be considered that would provide more throughput at a reasonable level of service. This may include direct flyover ramps between the two facilities and may require the closing of some existing ramps to reduce conflict at merge points. Finally, traffic signal control at ramp intersections and metering of ramp flow should be considered to develop the maximum vehicle throughput between the two roadways. It is recommended a detailed corridor study be initiated immediately to evaluate the options for improving the interchange performance and the performance of the roadways near the interchange. The corridor considered should be from just south of Broadway on I-15 to just north of Science Center Drive on US-20.

Other Arterials

Improvements on other major and minor arterials in the metropolitan area will also be required over the next twenty-five years to accommodate growth and sustain a reasonable level of service by all modes. It is the recommendation of this study that a standard typical section be developed for each mode-priority/ functional-classification combination. The typical sections will determine the ultimate design for each roadway, and travel forecast will determine when the physical improvements are required to accommodate additional traffic flow or transit services.

7.4 Public Transportation

The role of public transportation in the Greater Idaho Falls Area will have to change as growth continues. Growth in the next twenty-five years will increase the need for commute-oriented bus services within the area to serve residents other than INL employees who are commuting to jobs within the study area. If the Greater Idaho Falls metropolitan area is to attract new businesses to the area, affordable commute options to those sites will be needed. Many of the target sites for higher density commercial and industrial development are within the urban core area. A significant share of the commutes to these target sites will have to be by public transportation if an acceptable level of service is to be maintained on the area's roadway system. Maintaining an acceptable roadway level of service is not only consistent with the visions for the metropolitan area, it is also necessary to provide reasonable travel time for the public

transportation service. It is recommended that long range planning for fixed route transit service as initiated and that opportunities to serve downtown Idaho Falls be explored.

7.5 Bicycle and Pedestrian Facilities

In many ways, the planning for bicycle and pedestrian travel in the metropolitan area will be more advanced than for other modes. A long range plan for bicycle and pedestrian facilities was produced in 2008 and received considerable input from an active Bicycle and Pedestrian Committee of the BMPO. The plan identified a network of bicycle lanes, bicycle routes and multi-use, off-road trails to meet the non-motorized travel and recreational needs of the metropolitan area's residents and commuters. The plan created a vision for a regional system of facilities and identified priorities among the recommendations to guide investment decisions by BMPO and the local jurisdictions. The 2008 plan also formerly identified which roads should have a bicycle and pedestrian priority with appropriate facility design incorporated as roads are built-out or expanded.

It is the recommendation of the TSA Study that the Bicycle and Pedestrian Committee, with support from BMPO staff, update the Long Range Bicycle and Pedestrian Plan. Several elements should be given particular emphasis in the plan update as a result of the TSA Study findings and community input. The new plan should be consistent with the mode priorities defined by the TSA Study. New bicycle lanes or routes should not be planned for roads designated as "Truck and Automobile Priority." Alternatives should be sought on adjacent roads where the traffic volumes are reduced by the inner and outer beltway projects. The update of the plan should also consider appropriate locations where regional bike lanes, bike routes or multi-use trails should cross "Truck and Automobile Priority" roadways including the proposed beltways and existing high-capacity roads such as I-15 and US-20. Crossing of railroad tracks, the Snake River and drainage canals should also be considered.

7.6 Transportation Demand Management (TDM)

As population and employment in the metropolitan area grows and the area matures, the need for TDM strategies to reduce the amount of vehicular travel will increase, and the options available to employees will also almost certainly increase. More commute-oriented, fixed-route transit service is likely to be provided (a recommendation of the TSA Study) giving employees another alternative to driving alone. It is the recommendation of the TSA Study that BMPO begin a process of developing an employer-based TDM program. Initially this should consist of providing employers with information about TDM strategies. At a later stage, the BMPO could undertake an area-wide ride matching program to assist in carpool and vanpool formation. As the transit service increases, the BMPO should also explore ways to support the local and INL bus services with an expansion of the park-and-ride facilities that would serve the transit routes as well as carpooling and vanpooling.

7.7 System Management

With multiple jurisdictions operating traffic signals, there are variations in the hardware and software used to manage the timing and to communicate with the signal system. While this relatively uncoordinated system performs adequately under the volumes that presently pass between jurisdictions, as the growth continues outside the City of Idaho Falls, more traffic can be expected to cross jurisdictional boundaries. Coordination of the signals across the boundaries will become increasingly more important along key corridors. This will be especially true along the strategic arterial loop and the outer beltway (to the extent that at-grade intersections are included). It is recommended a traffic system management study be conducted to identify the best approach for meeting future needs and providing coordinated traffic management for the metropolitan area.

8. Implementation Steps

The TSA Study has produced a set of recommendations for transportation investment over the next twenty-five years designed to help the metropolitan area meet and sustain its vision. Implementing the recommendations of this study will require significant action on the part of the BMPO and its member jurisdictions and agencies. The TSA Study has also developed recommendations for specific steps designed to guide the implementation of the recommendations.

It is important the BMPO incorporate the recommendations for transportation investments and the implementation steps into the LRTP. This can be done immediately as part of the 2011 update of the LRTP. Once this step has been taken, it will be important for member jurisdictions in the BMPO to incorporate the recommendations of the LRTP in their comprehensive plans. This will include recognition of the new regional roadways, the new mode-priority functional classification, and the new guidelines for design and access management for each category of roadway. As the right-of-way requirements for new roadways to be substantially expanded are defined regionally, it will be important for the jurisdictions' Comprehensive Plans to recognize these right-of-way needs and incorporate the language necessary to legally protect them to preserve the right-of-way.

A recommended short-term action is for the BMPO and ITD to sponsor a more detailed study of the corridor consisting of I-15 and US-20 from just south of the Broadway ramps on I-15 to just north of the Science Center ramps on US-20. This corridor study should examine the alternatives for improving the performance of the corridor for the next twenty-five years. The corridor study should include options discussed as part of the TSA Study including construction of an alternative connection between I-15 and US-20 north of the existing interchange, and physical modifications to the existing interchange that would provide more throughput.

A second recommended short-term action is an alignment study for the outer beltway. This study should consider all reasonable alignments for the recommended outer beltway in the vicinity of the roadway locations identified in the TSA Study. The study should identify the best alignment that will accommodate a footprint for a freeway design. Although the initial implementation of the outer beltway may not be as a freeway, the recommendation of the TSA Study is that enough right-of-way be preserved to ultimately accommodate a freeway loop around the area. The selection of a preferred alignment should consider the right-of-way cost, cost of constructing a beltway within the right-of-way, the need for relocation of homes or businesses, the loss of agricultural land and other potential impacts to the environment. The study should also consider the opportunities for incorporating power lines, telecommunication lines or other utilities with the right-of-way. The outer beltway Alignment Study should provide opportunities for stakeholder and public input.

A third recommended short-term implementation action is the adoption and implementation of the recommendations of the TRPTA Checkpoint Service Study as a first major step toward a fixed-route transit service that provides a higher level of service and coverage for peak-period commute trips as well as other trips in the metropolitan area.

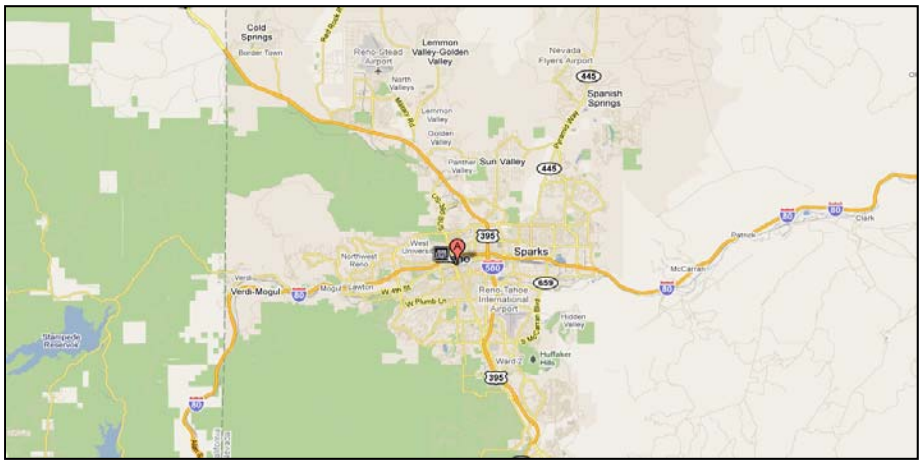
A fourth recommended short-term implementation action is to update the Bicycle and Pedestrian Plan. This work has already begun and should continue.

Other short-term implementation steps include the following:

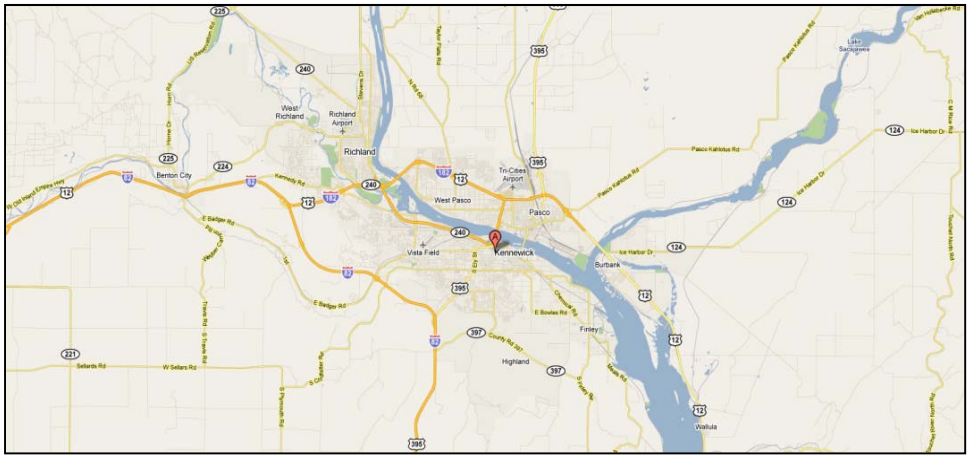
1) Adopt a schedule for incorporating additional improvements into the Metropolitan Transportation Improvement Program (MTIP) and the Statewide Transportation Improvement Program (STIP).
2) Develop Corridor Preservation Guidelines to strengthen the support for preserving the rights-of-way needed for the outer beltway, the strategic arterial loop and other roadways that will need to be widened to meet the long-term design guideline for the Mode-Priority Functional Classification.
3) Refine Access Management Guidelines to strengthen the support for preserving the functional operation of the Strategic Arterials and other major arterials to meet their long-term Mode-Priority Functional Classification.
4) Conduct a Regional Traffic Systems Management and Intelligent Transportation Systems Plan.
5) Establish a Regional Traffic Systems Management Subcommittee of the BMPO.
6) Conduct a Downtown Public Transportation Service Plan as part of other planning for downtown Idaho Falls to address circulation and parking issues.
7) Conduct a study of the economic benefits of the LRTP.
8) Establish an Economic Development Subcommittee of the BMPO.
9) Prepare a Long-Range Transit Plan.
10) Establish a Public Transportation Subcommittee of the BMPO.
11) Conduct a Regional Long-Range Transportation Safety Study.
12) Develop a Regional Transportation Demand Management Program.

Appendix A - Peer Cities

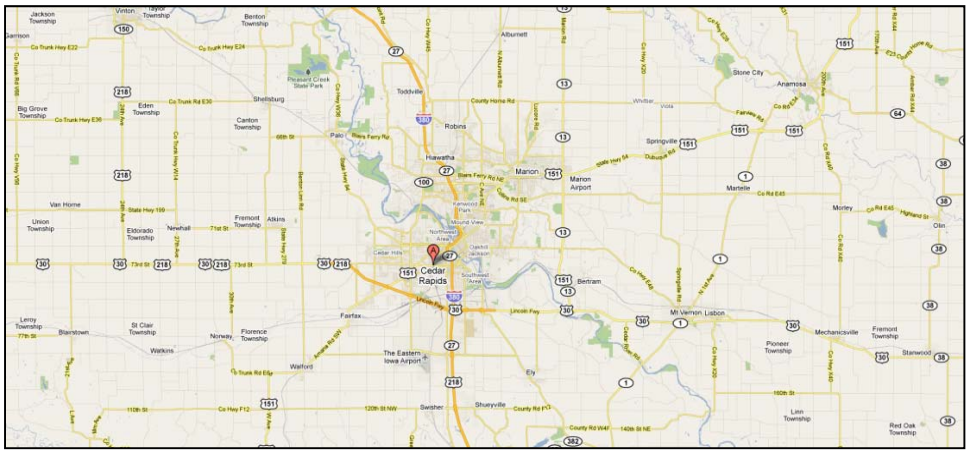
Reno, Nevada



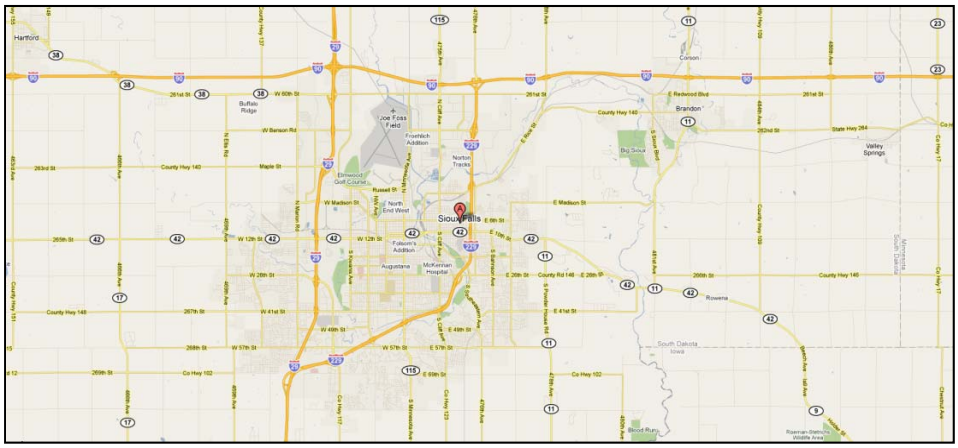
Richland-Kennewick, Washington



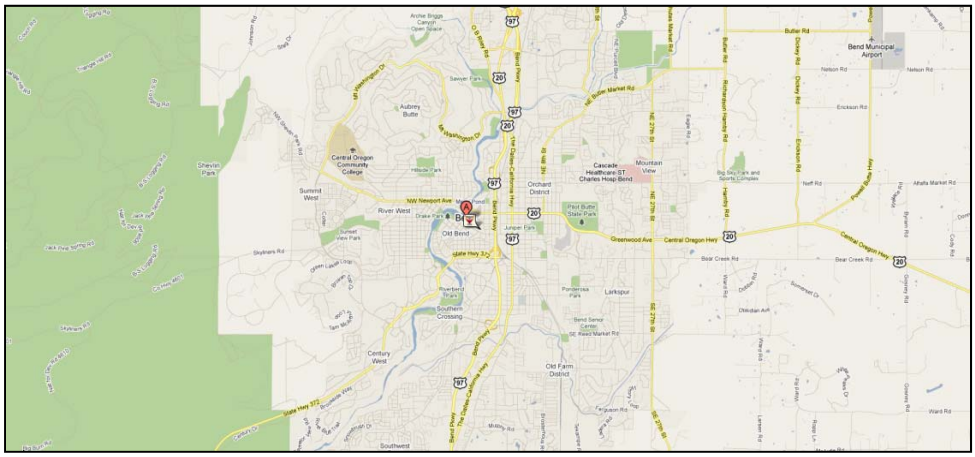
Cedar Rapids, Iowa



Sioux Falls, South Dakota



Bend, Oregon



Billings, Montana