Executive Summary

ES 1.1 Introduction

The Capitol Region Council of Governments (CRCOG) and the Connecticut Department of Transportation (CTDOT) initiated the Buckland Area Transportation Study (BTS) in 2006 to identify near and long-term transportation improvements for the roadway network in the Buckland commercial area which encompasses portions of the Towns of Manchester, South Windsor and East Hartford.

This executive summary highlights the study background and process, technical findings and recommendations, potential funding sources and implementation schedule.

ES 1.2 Study Background

The Buckland Hills Area is located within the towns of Manchester and South Windsor, approximately nine miles east of Hartford, 45 miles northeast of New Haven, and 29 miles south of Springfield, MA.

In the mid-1980's the towns of Manchester and South Windsor enacted zoning and financial incentives to spur commercial and residential development in the area north of I-84. Over the following two decades the area has grown to include approximately three million square feet of commercial space representing one of the largest concentrations of retail and restaurant providers in the northeast. This concentration of retail and commercial development generates significant traffic volume in the Buckland Hills Area during the peak Friday and weekend afternoon periods, particularly during the high retail seasons.

In addition to traffic generated by the retail development, this area experiences significant through-traffic volumes on regional roadways, including I-84 (>100,000 vehicles per day), I-291, and I-384. The combination of retail-generated traffic, commuter traffic and regional through-traffic creates significant congestion that negatively impacts area access, circulation, travel times, and safety. Unfortunately, the level of roadway improvements has not kept pace with the accelerated rate of development.

The Buckland Area Transportation Study was initiated to achieve the following overarching goals:

- Formulate plans of improvement for operations and safety along the major elements that define the transportation system in the study area, including roadways, access drives, transit and bicycle and pedestrian services;

- Plan for future growth and development. It is understood that the Buckland commercial area is of regional stature, with as yet unrealized potential for additional growth;

- Ensure transportation equity and balance by identifying transportation improvement alternatives that promote enhanced mobility and quality of life through the use of all transportation modes.

The study milestones are shown in the following Figure ES-1.

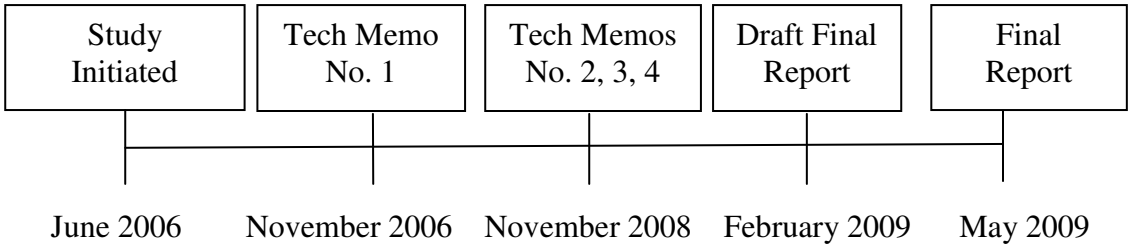


FIGURE ES-1: STUDY MILESTONES

ES 1.3 Public Involvement

The Public had several opportunities to provide input to this study. A brief description of the Public Involvement program is provided in the following paragraphs.

ES 1.3.1 Website

A project website, www.bucklandstudy.org, was developed and continually updated to provide study information, publish meeting notices, and collect public comments. For those who wished to share their personal travel experiences in the Buckland area, or provide comments, a brief survey was provided on the site. In order to publicize the site, business-card sized information cards were developed and provided to shop owners, municipal offices and other establishments for the public to take. Public comments and survey results are compiled in Appendix D.

ES 1.3.2 Study Advisory Committee

Local, State and Federal Resource Agencies and other stakeholders were invited to participate on an Advisory Committee that met at specific milestones in the process to provide input to issues and alternatives being considered. The Advisory Committee meetings were open to the public, and opportunities to comment were provided. A total of five advisory committee meetings have been held during the course of this study. A list of Advisory Committee members is attached in Appendix C.

ES 1.3.3 Public Informational Meetings

At key milestones in the study, Public Informational Meetings were held. The meetings were held at central locations in Manchester and South Windsor. The public had the opportunity to ask questions and provide comments. Times and locations of meetings were advertised in local papers, on the website and in high-traffic locations through the region. A total of three public informational meetings have been held during the course of this study.

ES 1.3.4 Targeted Stakeholder Outreach

In addition to the Public Informational Meetings, the Study Team made every effort to identify stakeholder groups that had specific issues to discuss. The study team arranged the following meetings with stakeholders:

- Presentation: Mayor, Town of South Windsor
- Presentation: Mayor, Town of Manchester
- Presentation: Mayor, Town of East Hartford
- Meeting with Greater Manchester Chamber of Commerce
- Meeting with South Windsor Chamber of Commerce
- Presentation: South Windsor Town Council
- Presentation: Manchester Town Council
- Meeting with Emergency Responders
- Meeting with Bike/Ped Stakeholders
- Meeting with Transit Stakeholders

The study team received first hand information about various facilities or the problems faced by the users. The study team gave due consideration to their feedback in the process of recommending improvements.

ES 1.3.5 Planning Workshops

Seven planning workshops have been held during the course of this study. These workshops were attended by Study Team members and other designated persons, appropriate for the topic being discussed. The focus of these meetings was to facilitate the decision making process. A total of seven planning workshops have been held during the course of this study.

ES 1.4 Findings and Recommendations

Technical Memorandum No. 1 – "Existing and Future Conditions Report", documents the level of traffic congestion that is anticipated to occur within the study corridor by the year 2030 assuming no significant infrastructure improvement or expansion.

Furthermore, this report clearly stated that doing nothing in the way of transportation infrastructure improvement and/or expansion will result in gridlock and further decline in quality of life for the residents of the study corridor. Identification of various needs and deficiencies within the corridor was achieved by plan review, field investigation, stakeholder meetings, advisory committee input and public outreach via public meetings and public comments documented on the project website.

Technical Memorandum No. 2 – "Future Conditions Report – Roadway Alternatives", documents the alternatives development and refinement process for roadway alternatives. Brainstorming through advisory committee workshop resulted in a number of ideas. The study team converted these ideas into twenty (20) design concepts. The initial screening process reduced these concepts to ten (10) and further screening narrowed these ten (10) concepts to four (4) concepts.

Technical Memorandum No. 3 – "TSM/TDM, Transit, Bike/Pedestrian Facilities", recommended improvements to make streets in the study area friendlier for shared use.

Technical Memorandum No. 4 – "Land Use Study", identified effective land use management strategies for the study area municipalities to consider managing and mitigating traffic congestion and also offered a range of effective techniques that could help local governments direct future growth in the Buckland area towards greater walkability and multimodal access.

A planning workshop was conducted on December 16, 2008 to finalize the recommendations made in the technical memorandums. The technical working group identified the following recommendations as the best suited to address the future needs of the study area.

ES 1.4.1 Roadway Modifications

ES 1.4.1.1 Redstone Road Extension and Exit Ramp to I-291

Modify existing I-84 eastbound off-ramp at Exit 62 to provide access from the existing ramp to proposed structures over Buckland Street and existing on-ramp to I-84 eastbound. Continue the service road adjacent to eastbound I-84 to connect to the proposed extension of Redstone Road with an at-grade intersection. Extend existing Redstone Road to intersect with the proposed service road from the I-84 eastbound Exit 62, and continue Redstone Road over I-84 and the westbound frontage roads with a new overpass. On the west side of the overpass an on-ramp to I-84 westbound is also proposed from an at-grade intersection with Redstone Road. Redstone Road will continue to Buckland Hills Drive between the ring-road at "The Shops at Buckland Hills" and "Wal-Mart". Potential solutions to connect the retail parcels with Redstone Road include at-grade intersections, ramps to access elevated roadways and combinations of various design elements. In conjunction with the improvements at Redstone Road, this

improvement also includes changing the location of where vehicles access I-291 westbound from I-84 westbound. The existing I-84 westbound ramp to I-291 will be closed and I-291 traffic will be directed to take westbound Exit 62 (Westbound Frontage Road). A connection will be made from the Westbound Frontage Road to I-291 west.

The following Figure ES-2 shows proposed Redstone Road extension over I-84.

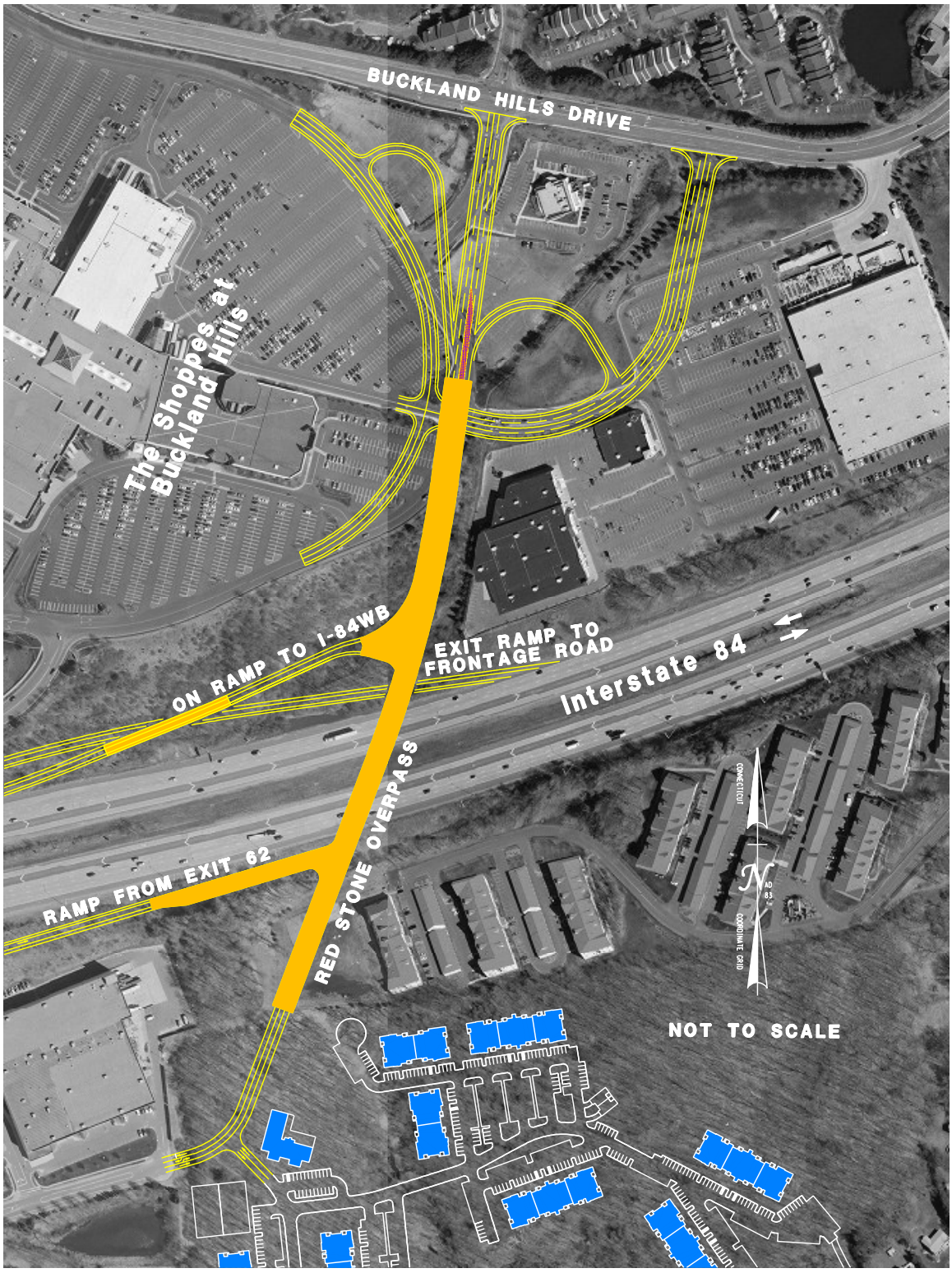


FIGURE ES-2: REDSTONE ROAD EXTENSION OVER I-84

ES 1.4.1.2 Access improvements at I-84 westbound (new) ramp Exit 63

A new off-ramp from I-84 westbound will be provided for traffic exiting to travel northbound on Route 30 (Deming Street). The ramp will merge onto Route 30 between I-84 and McIntosh Drive. Access to McIntosh Drive will be considered during the preliminary design phase. The existing I-84 westbound off-ramp to N.B./S.B. Route 30 (Deming Street) will be converted to an exit ramp for traffic traveling southbound (only) on Route 30 Deming Street. This will be achieved through modifications to the ramp and signal configuration where it meets with Route 30.

Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and the I-84 eastbound ramps are currently being designed by CTDOT.

The following Figure ES-3 shows proposed improvements to eastbound I-84 Exit 63.

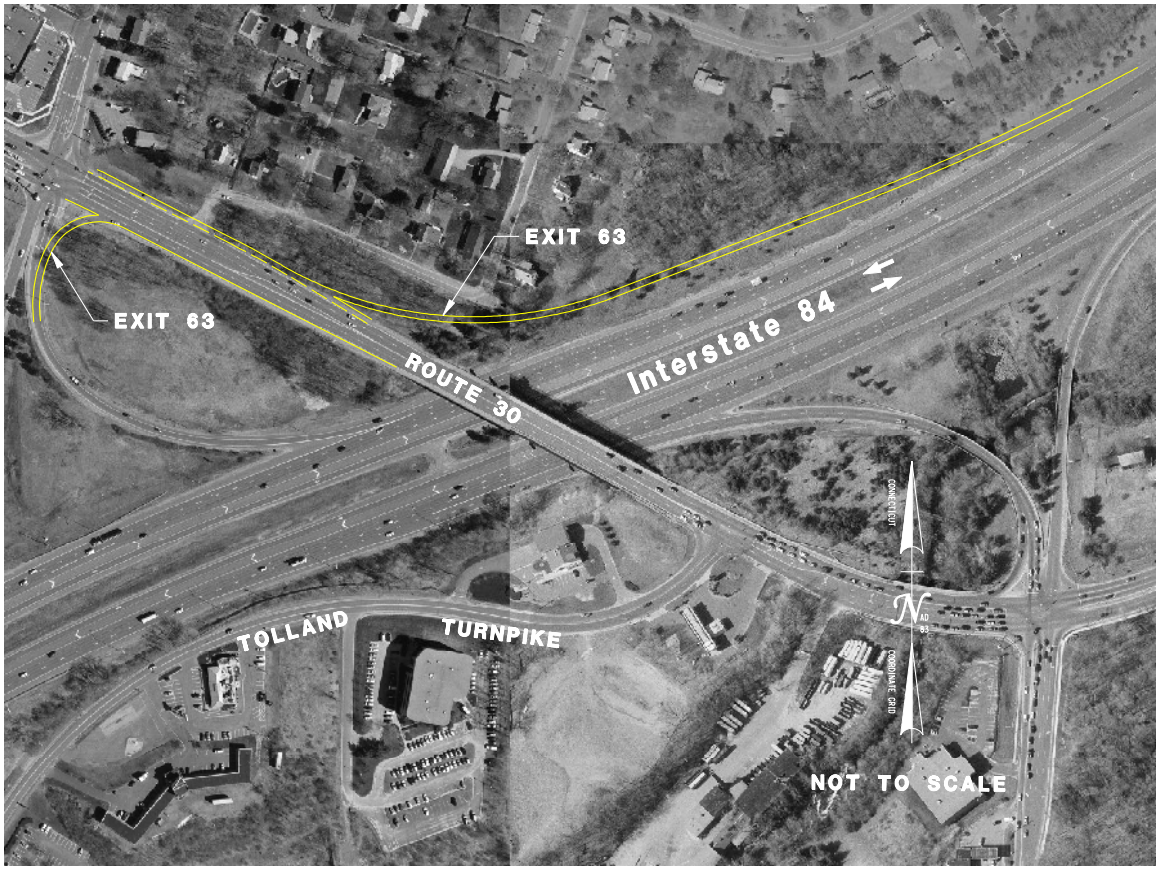


FIGURE ES-3: IMPROVEMENTS AT EXIT 63

ES 1.4.1.3 Transit Center and HOV ramps

Improved access to the proposed Transit Center which is to be located in the commuter parking lot between I-84, Buckland Street and Pleasant Valley Road have three potential improvements. The main element of this improvement will provide a direct connection with the existing HOV Lanes on I-84 through the construction of a fly-over ramp from the HOV Lanes to the existing access ramp for Pleasant Valley Road and the Westbound Frontage Road. The existing HOV off-ramp to Buckland Street will be eliminated as part of this improvement.

ES 1.4.1.4 Auxiliary Lanes between Exits 62 & 63

Utilizing the existing right-of-way, auxiliary lanes between exit 62 and exit 63 should be constructed by reallocation of the space available for travel lanes, shoulders and the separator between the HOV Lanes and the main traffic lanes.

ES 1.4.1.5 Single Point Urban Interchange (SPUI) at the intersection of Buckland Street, Pleasant Valley Road and Buckland Hills Drive

A bridge connecting Pleasant Valley Road and Buckland Hills Drive will carry through traffic over Buckland Street. Since the traffic movement at the intersection of Buckland Street and flyover ramps is controlled by a single three phase signal, traffic models predicted improvement in the level of service of this intersection. However, as per the recommendation of the Advisory Committee, the need and feasibility of creating SPUI will be assessed in future.

ES 1.4.1.6 Realignment of Pleasant Valley Road at the connection to the Frontage Road to I-84 westbound, with a connection to the proposed transit center

Provide a connection to the proposed Transportation Center by realigning the intersection of Pleasant Valley Road and the connector to the Frontage Road to I-84 westbound to form a four-way intersection. The fourth leg of the intersection will serve as the access to the future transit center.

The need and feasibility of this improvement will be assessed in the future studies.

ES 1.4.1.7 Connection from Pleasant Valley Road to Evergreen Walk

A connection from Pleasant Valley Road to Evergreen Walk shopping area will provide additional access to shoppers in and out of Evergreen Walk. This additional access will improve the level of service of the intersection of Pleasant Valley Road, Buckland Hills Drive and Buckland Street.

ES 1.4.2 Roadway Improvements by Others

The Towns and CTDOT have undertaken the task of design of improvements at some of the locations in the study area. The study team was apprised of these proposed improvements during the technical working group meeting on December 16, 2008. At the time of writing this report, it was still uncertain as to who will be responsible for these improvements. These proposed improvements are:

ES 1.4.2.1 Auxiliary lanes from exit 62 to exit 64 along I-84

ES 1.4.2.2 Improvements to the intersection of Deming Street and I-84 eastbound ramps

ES 1.4.2.3 Proposed signal at the intersection of the driveway of Lazy Boy and Buckland Hills Drive in the Town of Manchester

ES 1.4.2.4 Proposed widening of Buckland Hills Drive between the driveway to Lazy Boy and driveway to Wal-Mart.

ES 1.4.3 TSM/TDM

The congestion experienced as a result of various issues identified in Technical Memorandum No. 1 limits free movement and hinders emergency vehicle access in the Buckland Hills Area. While increasing existing roadway capacity is one option to mitigate congestion, it is often very expensive to add capacity to an existing roadway network. The other option is to either use an existing roadway network more efficiently or reduce the traffic demand.

Transportation Systems Management (TSM) techniques support making the existing transportation system operate in a more efficient manner.

Transportation Demand Management (TDM) techniques support the application of strategies and policies to reduce automobile travel demand or to redistribute demand in space and time.

TSM/TDM techniques recommended by this study are:

- Change McIntosh Drive to right-in and right-out type access at its intersection with Deming Street;
- McDonalds driveway, located at the intersection of Deming Street and Hale Road, right-in and right-out type access;
- Change the alignment of Deming Street at its intersection with Oakland Street so that Deming Street intersects Oakland Street at approximately 90 degrees;
- Provide advanced guidance signs for easy way-finding for tourists;

- Modify connectivity and linkages as detailed in Technical Memorandum No. 2;
- Coordinate traffic signal timing on arterial and collector streets;
- Expedite incidence response by provision of installation of placards to assist in pinpointing location of the incidents;
- Install Intelligent Management Systems to better utilize the existing infrastructure;
- Encourage ridesharing (carpooling and vanpooling) to reduce travel demand;
- Encourage Transit Oriented Development to provide community access to buses or rail;
- Encourage employers to offer Guaranteed Ride Home programs. These programs have shown to be most successful in reducing total traffic volume and increasing the use of alternate means of transport.

ES 1.4.4 Transit Alternatives

Existing transit service within the Buckland Hills Mall area consists of a network of local and express bus routes operated by Connecticut Transit (CT Transit), plus Paratransit and shuttle buses serving specific market areas.

The study team, based on this evidence and the feedback from the Advisory Committee and stakeholders, recommended the following improvements:

- Improve bus stop signage and shelters;
- Improve/consolidate existing bus routes;
- Consolidate existing bus stops;
- Provide Circulator Shuttle bus service;
- Replace bus radio system;
- Maintain/improve level of para-transit service;
- Implement Intelligent Transportation Systems;
- Construct multi-modal transportation center; and
- Provide Bus Rapid Transit to Manchester and Vernon.

ES 1.4.5 Bike/Pedestrian Facilities

The study team took the inventory of various bike/ped facilities, such as sidewalks, crosswalks, bike lanes and pedestrian signals, within the study area. The study team analyzed the inventory for gaps/discontinuities among these facilities. Based on the feedback from stakeholders and the Advisory Committee, the study team recommended the following improvements:

- Maintain continuity of sidewalks on all the streets in the study area;
- Improve the riding surface of existing mixed use trails;
- Provide exclusive bike lanes on the roads identified in the study;
- Provide crosswalks and pedestrian signals at intersections identified in the study

- Provide a bike station in the proposed transit center;
- Provide weather protected bike shelters at locations identified in the study.

ES 1.4.6 Land Use

The land use study examined the effect of land use patterns/land use planning decisions on mobility within and through the area. The study investigated, via case studies, the potential for land use management strategies to influence travel behavior (use of alternate modes) and enhance and sustain mobility and considered this in the context of full buildout in the Buckland study area under existing land use controls.

The land use study findings are:

- Land use management techniques can complement other congestion mitigation efforts by creating a critical mass of mixed-use and more options for travel;

- The greatest potential impact from best land use management strategies for Buckland may be the reduction of internal automobile trips within the study area to offset current conditions where people are now making multiple short trips amongst retail and service destinations;

- A pattern of mixed-use concentrated activity nodes within the Buckland study area in an organized pattern relative to one another can achieve car-trip reductions much more effectively than a random general increase in density and land use types consistent with the current zoning.

ES 1.5 Implementation

The technical working group classified the recommended improvements in two categories: high priority and priority.

The following recommendations are expected to have greatest benefit upon traffic operations in the study area and are considered high priority improvements:

- Although, not part of the Buckland Transportation Study, improvements to the intersection of Oakland Street, Tolland Turnpike (Route 30) and I-84 eastbound ramps is currently in the design stage.

- Redstone Road overpass over I-84 and new slip ramp to northbound I-291 from existing westbound frontage road;

- Additional westbound off ramp at exit 63 on westbound I-84;

- HOV ramps, multi-modal transportation center, and transit improvements.

The following recommendations are considered as priority improvements:

- Single Point Urban Interchange (SPUI) at the intersection of Pleasant Valley Road, Buckland Street and Buckland Hills Drive;
- Improvements to the intersection of Pleasant Valley Road and the I-84 ramps;
- Auxiliary lanes along I-84 between exits 62 and 63.
- Connection from Pleasant Valley Road to Evergreen Walk;

The technical working group agreed that all TSM/TDM, and Bike/Ped improvements are high priority improvements to be implemented as and when sufficient funds become available.

ES 1.6 Funding

Funding for all recommendations must come from various Federal, State, Local and potential private funding sources. Since this study is just the first step in a multi-phased planning, design and construction process, funding will be required for environmental documentation, and design and construction over a period of years. The CRCOG in conjunction with State and Local authorities will likely incorporate the recommendation elements into the revised Regional Transportation Plan and the Transportation Improvement Program (TIP) documents.

These recommendations will compete for funding with other pre-existing projects and proposals. Based on the support that the high priority recommendations received from the corridor towns, the CRCOG and the State Agencies, it is anticipated that several if not all high priority recommendations will be added to the aforementioned documents for funding allocation.

There are a number of priority recommendations that can be funded through state enhancement funds, local funding and private funding. To the extent possible these other funding sources should be engaged.

ES 1.7 Conclusions

The Buckland Area Transportation Study has recommended a set of transportation improvements and land use strategies to reduce congestion, enhance mobility and encourage alternate travel modes.

Together, these strategies will improve mobility throughout the region, enabling economic growth and enhancing the quality of life throughout the region.