This summary highlights the transportation findings and recommendations related to traffic circulation and accessibility, primarily in the area of the Cedar Street and East Street busway stations. It was developed by a study team composed of staff from the Capitol Region Council of Governments, the Central Connecticut Regional Planning Agency, the Town of Newington, the City of New Britain and Central Connecticut State University. The consulting firm, Fuss & O’Neill, provided technical assistance. Municipal Advisory Committees from each Town as well as area stakeholders and Connecticut Department of Transportation (ConnDOT) officials offered input and guidance.

The study area is generally defined as the roadway network in the vicinity of the proposed Cedar Street and East Street busway stations and Route 9, Interchange 29. This area includes Route 175 from the Allen Street in New Britain to Old Farm Drive and Maple Hill Avenue in Newington. The study boundaries also include Fenn Road between Route 175 and Commerce Court and Ella Grasso Boulevard in the vicinity of Route 9.

Independent of this study, the design and construction of a 9.4-mile busway that links downtown New Britain with downtown Hartford (Union Station) is being managed by the Connecticut Department of Transportation. Preliminary engineering plans have been prepared and the DOT is working with stakeholders to secure the design and funding components of the project. Because the busway offers the potential of illustrating the advantages of coordinating transportation and land use, the Transportation Strategy Board (TSB) funded the Capitol Region Council of Governments (CRCOG) to study the areas surrounding the proposed busway stations. CRCOG’s charge was to conduct land use planning for one-half mile around stations, specifically looking at opportunities for Transit Oriented Development (TOD). As part of the Station Area Planning Project, existing and future traffic circulation in the vicinity of the Cedar Street and East Street stations was evaluated. The Traffic Circulation and Accessibility Study is a stand-alone document however many of the concepts were coordinated with the busway and station area planning efforts to create a more context sensitive / transit-oriented development supportive environment.
**Existing Conditions**

A review of existing conditions identified several operational and queuing problems that result in long delays and backups. The three primary issues include:

- Excessive peak hour vehicular delay (particularly at the Route 175 / Fenn Road / Route 9 northbound off-ramp and Fenn Road / Ella Grasso Boulevard / Holly Drive intersections);
- Significant vehicular queuing during the peak hours along a majority of Fenn Road between Ella Grasso Boulevard and Route 175 as well as on Route 175 between the Route 9 southbound on-ramp and the railroad track overpass to the east; and
- Safety issues that are primarily the result of turning movements from driveways along Fenn Road.

In an effort to mitigate the traffic problems, short- and long-term improvement options were identified. As this is an area that will be served by rapid transit as well as local and regional roadways, it is desirable that transit-supportive criteria be included in the final selection and design of both short- and long-term options. Some of those criteria are included here. This report also identifies other key area-wide improvements such as access management and traffic calming techniques. All of these general concepts are summarized in the following pages.

**Areawide Improvements**

**Access Management**

The Fenn Road and Route 175 corridors are plagued by long queues, numerous accidents, multiple turning movements and significant vehicular delays. As development occurs these conditions are going to deteriorate to a point of increased driver frustration and accidents.

Access management techniques that reduce and / or separate the number of conflict points should be implemented along the Fenn Road and Cedar Street corridors. As opportunities present themselves and in an effort to improve traffic circulation, rear connections to parcels and shared driveways should be pursued in combination with potential curb cut closures.
**Traffic Calming**

As development in the area occurs, the Town of Newington and the City of New Britain may consider traffic calming treatments at select locations. Traffic calming involves changes in roadway alignment and the installation of barriers or other physical measures to reduce travel speeds and/or cut-through traffic, in the interest of street safety, livability and other public purposes. Treatments, such as narrowing a roadway or creating a gateway into a residential area, will help to ‘calm’ a street by affecting a driver’s perception resulting in a change in driving behavior.

**Traffic Signalization**

As plans for the busway advance and development occurs, there is the potential for the installation of new traffic signals within the area. Concepts for minimizing these installations and/or improving traffic flow in the area should continually be explored. Wherever possible, traffic signals should be coordinated to ensure optimal traffic progression. Other concepts such as the use of roundabouts at key entry and departure intersections could be explored in an effort to define gateway corridors and reduce the number of traffic signals.

**Short-Term Conceptual Improvements**

Through the course of this study, it became evident that there are opportunities to implement short-term improvements that can be designed and constructed within the next 5 to 10 years. The highlighted options are conceptual in nature and meant for planning purposes. Before any of these options can be implemented, the concepts will have to be refined and adjusted through a full engineering process and will be subject to municipal and state reviews. Alternatives that only widen Route 175 and Fenn Road without regard to the creation of a busway station area/place are less desirable from a transit and pedestrian perspective. Where feasible, narrower lane widths and pavement treatments (ie. textured crosswalks) should be considered in an effort to minimize impacts and create a transit and pedestrian supportive environment.
Two options for improving intersection operations and queuing were identified for this location. These two alternatives involve widening and restriping on the north, south and west legs of the intersection. The proposed improvements will increase vehicular storage lengths and reduce the overall intersection delay.

**Option 1**
Widening and restriping the Route 9 northbound off-ramp to provide a channelized right-turn lane. In conjunction with this, an acceleration lane on Route 175 east of the intersection would be constructed. The acceleration lane would provide three eastbound lanes on Route 175 east of the intersection and would require additional road widening on the south side of Route 175. Widening would also occur on the west side of Fenn Road to provide an additional southbound right-turn lane. Road widening would also be required on Route 175 west of the intersection in order to provide three westbound egress lanes. The three travel lanes are required to accept the new double left-turn lane and double right-turn lane movements from the northbound and southbound approaches respectively.

**Option 2**
This option is similar to Option 1, however, there is no channelized northbound right-turn movement and no widening along Route 175, east of the intersection. The Route 9 northbound off-ramp approach would be widened to provide one additional turn lane and restriping would occur. Widening would also occur on the west side of Fenn Road and along Route 175, west of the intersection.
Fenn Road / Ella Grasso Boulevard / Holly Drive

Two options for improving traffic circulation at this intersection involve widening on the west side of Fenn Road and on the south side of Ella Grasso to provide additional turn lanes and signal timing modifications.

Option 1
Widening on the west side of Fenn Road both north and south of the intersection to provide an additional northbound left-turn lane. A new southbound left-turn lane is also proposed in the available taper area opposite the northbound double left-turn lanes. Some additional road widening is proposed on the southwest corner of the intersection to realign the Ella Grasso Boulevard eastbound right-turn lane into a free flowing channelized lane. The right-turn lane will operate under yield control and would be constructed in conjunction with an acceleration lane on Fenn Road, south of the intersection. The acceleration lane would provide three southbound lanes on Fenn Road and would require additional road widening on the west side of Fenn Road.

Option 2
This option is similar to Option 1 above, however, instead of providing a channelized eastbound right-turn movement, roadway improvements include widening along the south side of Ella Grasso Boulevard to provide an additional eastbound right-turn lane. Widening would also occur along the west side of Fenn Road to provide an additional northbound left-turn lane and corresponding southbound left-turn lane.
Three options for improving traffic circulation in the vicinity of the existing Route 9 southbound on-ramp, Paul Manafort Drive and Wells Street were identified and studied. The main objectives of these improvements are to eliminate the existing Route 9 southbound on-ramp / Paul Manafort Drive off-set intersection and reduce the southbound left-turn queue at the intersection of Route 175 and the Route 9 southbound on-ramp / Wells Street.

Option 1: Existing Route 9 southbound on-ramp alignment opposite Wells Street with Route 175 southbound double left-turn lanes

Option 2: Route 9 southbound on-ramp realigned opposite existing Paul Manafort Drive (through Elmer’s property)

Option 3: Route 9 southbound on-ramp and Paul Manafort Drive realigned opposite each other north of Elmer’s property and south of Wells Street
Pedestrian and Transit Supportive Alternatives

One goal of transit-oriented development is to encourage a shift away from automobile dependency by providing good pedestrian and bicycle access to transit stations. The illustration to the right shows the concept of a ‘University Station’ where the pedestrian network is enhanced to provide good connections between CCSU, the busway stations, and major activity centers. The pathways along East Street, Fenn Road and Ella Grasso Boulevard are adjacent to the roadway and amenities such as street trees and decorative lighting make the path more inviting to pedestrians. Connections to such destinations as the proposed busway station / multi-use trail behind Stop & Shop as well as Central Connecticut State University and the Barbour Road neighborhood are important elements of the pedestrian network.

The ‘University Station’ concept focuses on the vision of creating a transit supportive environment where pedestrian and vehicular mobility are more balanced. Alternatives that incorporate access management techniques (such as shared driveways and/or restricted turning movements) and context sensitive design (such as narrower lane widths, textured crosswalks or street trees) could be incorporated into the plan.
The figure to the right illustrates a potential pedestrian / transit oriented development supportive plan for Fenn Road near Cedar Street. As the figure shows, if narrower lane widths are provided only an additional 2 to 4 feet of widening would be needed to add a second southbound turn lane. The affected municipalities will need to work as partners with ConnDOT to ensure the vision of a balanced, pedestrian / transit-supportive system in the community is accomplished. The graphics below illustrate potential before and after cross-sections for Fenn Road.

The philosophy behind this cross section is to emphasize the creation of public spaces that feel comfortable and safe, draw more people, and attract development. The lower cross-section ranges are general guides and may not be appropriate to use on heavily traveled streets.
Long-Term Conceptual Improvements

In addition to short-term operational improvements, longer-term options that involve the construction of new ramps and roads were examined. Due to anticipated environmental, financial and right-of-way issues, the construction is expected to occur 10+ years out. This section will provide a summary of four conceptual long-term improvements that are recommended for consideration within the study area.

Route 9 Southbound On-Ramp from Ella Grasso Boulevard

Recommendation
Provide a new Route 9 southbound on-ramp from Ella Grasso Boulevard west of the existing Route 9 overpass. The general location and alignment of this ramp system would have to be determined after more detailed discussions with area stakeholders. Careful consideration needs to be given to the National Iwo Jima Memorial, the Bass Brook and CCSU owned property.

Alignment considerations include constructing a new Route 9 southbound on-ramp opposite the existing Route 9 southbound off-ramp or locating a new southbound on-ramp west of the existing off-ramp on the south side of Ella Grasso Boulevard. These alternative alignments are not being further pursued at this time due to the potential for significant impacts to the memorial site. If the Iwo Jima Veterans determine that it would be advantageous to relocate the memorial to another location, then options for a Route 9 southbound on-ramp could be revisited.

General Findings
The construction of a new Route 9 southbound on-ramp from Ella Grasso Boulevard will provide a secondary access point for vehicles traveling to Route 9 southbound within the study area. Traffic from Fenn Road, Ella Grasso Boulevard, and the northern half of the CCSU campus would then be able to access Route 9 southbound without having to travel to Route 175. This redistribution of traffic will remove a significant number of vehicles from the over-capacity intersections of Route 175 at Fenn Road, Route 175 at the Route 9 southbound on-ramp/ Wells Street, and Route 175 at Paul Manafort Drive. In general traffic volume decreases are expected to be realized on Fenn Road (south of Ella Grasso Boulevard), Route 175 (between Fenn Road and the Route 9 southbound on-ramp) and on the existing Route 9 southbound on-ramp. Traffic volume increases are expected to occur on Ella Grasso Boulevard, east of the proposed ramp location.

Estimated Cost
$5,000,000 (dependent upon specific alignment chosen and exclusive of right-of-way)
**Route 9 Northbound On- and Off-Ramps to Fenn Road**

**Recommendation**
Eliminate the existing Route 9 northbound on-ramp from Ella Grasso Boulevard and provide new northbound on and off-ramps on Fenn Road approximately 1,000 feet north of the Ella Grasso Boulevard intersection. The existing Route 9 northbound off-ramp to Route 175 and Fenn Road would remain open.

**General Findings**
The construction of new Route 9 northbound on and off-ramps to Fenn Road north of Ella Grasso Boulevard will distribute traffic to the roadway network more uniformly, and improve traffic operations and queuing at the critical Route 175 / Fenn Road intersection as well as the Route 175 / Route 9 southbound on-ramp intersection. While significant benefits would be realized from this alternative, extensive earthwork, significant costs, and property acquisitions would be required.

Traffic volume decreases are expected to be realized on East Street, Fenn Road (south of Ella Grasso Boulevard), Ella Grasso Boulevard and the existing Route 9 northbound off-ramp. Preliminary estimates indicate a potential reduction of 4,000 to 4,500 vehicles per day on Fenn Road, between Ella Grasso Boulevard and Cedar Street, if these new ramps were constructed. Traffic on the existing Route 9 off-ramp could be reduced by as much as 2,000 vehicles per day. Traffic volume increases are expected to occur on Fenn Road, north of Ella Grasso Boulevard.

**Estimated Cost**
$11,000,000 (exclusive of right-of-way)
**East-West Parallel Road to Route 175**

**Recommendation**
Provide a new east-west roadway between Fenn Road and Willard Avenue (opposite Fisk Drive) This new roadway, aside from accommodating traffic associated with the development of the old Torrington Company property, would create a partial bypass to the adjacent heavily traveled segment of Route 175. Four general alignment concepts were identified.

**General Findings**
The concept of a Route 175 parallel roadway would divert a significant amount of traffic from Route 175. Pursuing one of these concepts in conjunction with new long-term Route 9 ramps on Fenn Road would divert even more traffic to the new roadway, further easing the traffic load on Route 175. Traffic volume decreases of as much as 3,500 vehicles per day are expected to be realized on Route 175 (east of Fenn Road). This value is likely to be larger if other long-term alternatives such as Route 9 ramps to/from Fenn Road are constructed jointly.

Design items to consider with any of these concepts include crossing both Amtrak and the proposed busway lines as well as extensive wetland impacts. Traffic signalization, depending on the final alignment will need to be evaluated, however, it is expected that signalization will be needed at the Willard Avenue (Route 173) / Fiske Drive intersection.

**Estimated Cost**
$18,000,000 to $20,000,000 (exclusive of right-of-way)
A majority of the cost is attributable to proposed structures over the Busway, Amtrak and the wetlands.
**Full Route 9 Interchange - West of Fenn Road, North of Ella Grasso Boulevard**

**Recommendation**
Provide access to Route 9 northbound and southbound, on- and off-ramps from a new roadway that connects Ella Grasso Boulevard and Fenn Road. At the eastern terminus, the new roadway would join at a new signalized three-way “T” type intersection approximately 1,000 feet north of Ella Grasso Boulevard. The western terminus of the new roadway would intersect Ella Grasso Boulevard at the existing Barbour Road intersection. Access to Barbour Road would be provided off of the new roadway.

**General Findings**
The exact alignment of a new roadway and ramps will need to be designed with careful consideration to the close proximity of proposed CCSU athletic fields. Other design items to consider include constructability issues (particularly tunneling under Route 9) and the close proximity of the adjacent interchanges (Exit 30 – Corbins Corner and Exit 29 – Route 175). Traffic volume decreases are expected to be realized on Fenn Road (south of Ella Grasso Blvd), Route 175 (west of Fenn Rd), the existing Route 9 southbound on-ramp, and Ella Grasso Boulevard (between Fenn Road and Barbour Road). Traffic volume increases are expected to occur on Fenn Road, north of Ella Grasso Boulevard.

**Estimated Cost**
$18,000,000 (exclusive of right-of-way)

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For more information or to see the full report contact CRCOG at (860) 522-2217 or go to CRCOG’s website at www.crcog.org

Suggested Citation: Capitol Region Council of Governments (CRCOG), 2005. Traffic Circulation and Accessibility Study Executive Summary: Route 175 / Fenn Road / Route 9 / Ella Grasso Boulevard, Newington and New Britain. CRCOG 241 Main Street, Hartford, CT 06106. www.crcog.org

Prepared in cooperation with citizens, the City of New Britain, Town of Newington, Central Connecticut State University, the Central Connecticut Regional Planning Agency, the Capitol Region Council of Governments and the Connecticut Department of Transportation. The opinions, findings and conclusions expressed in the publication are those of the respective Municipal Advisory Committees that served on the project and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation and / or the U.S. Department of Transportation.