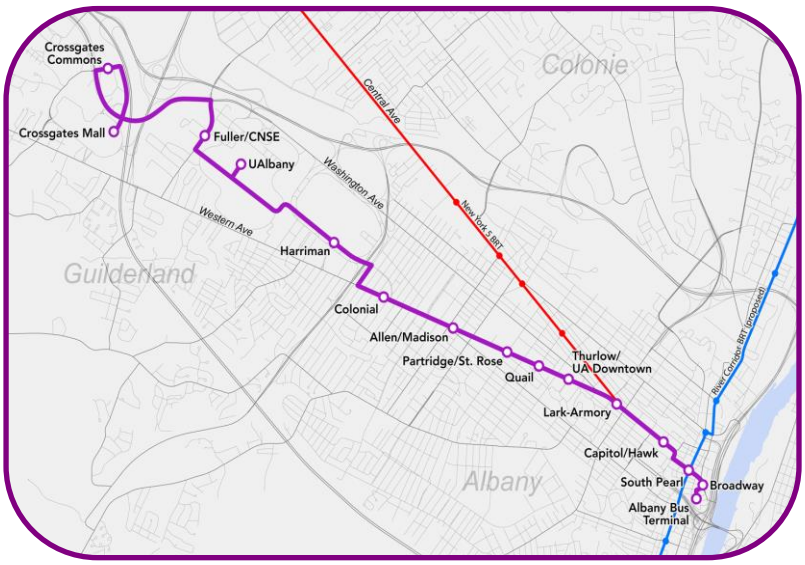

Washington-Western Avenues Simplified Alternatives Analysis

FINAL DRAFT REPORT – Executive Summary
January 2014

Prepared for:
Capital District Transportation Authority

Prepared by:
Creighton Manning Engineering, LLP

In association with:
AECOM
John M. Reilly
Shumaker Consulting Engineering & Land Surveying, P.C.
Hartgen Archeological Associates, Inc.

Executive Summary

The Capital District Transportation Authority (CDTA) and the Capital District Transportation Committee (CDTC) are committed to providing New York State's Capital Region with a cost effective and flexible transit system, through the implementation of 40-miles of Bus Rapid Transit (BRT) along three high ridership corridors. The Route 905 BusPlus BRT (Red Line) runs along NY Route 5 between Albany and Schenectady, and has seen a 20 percent increase in ridership since its implementation in April 2011. CDTA is now planning expansions of the BusPlus network along the River corridor (Blue Line), between Albany, Troy, and other communities along the Hudson River as well as along the Washington/Western corridor (Purple Line) between Downtown Albany and the Crossgates Mall which is the subject of this study.

This study was initiated as a Simplified Alternatives Analysis (AA) to evaluate feasible alternatives and to identify the Locally Preferred Alternative (LPA) for implementing BRT in the Washington/Western corridor. Adoption of the LPA by CDTA, and amending the Region's Long Range Plan to include the LPA will facilitate consideration of financing from the Federal Transit Administration (FTA) and project implementation.

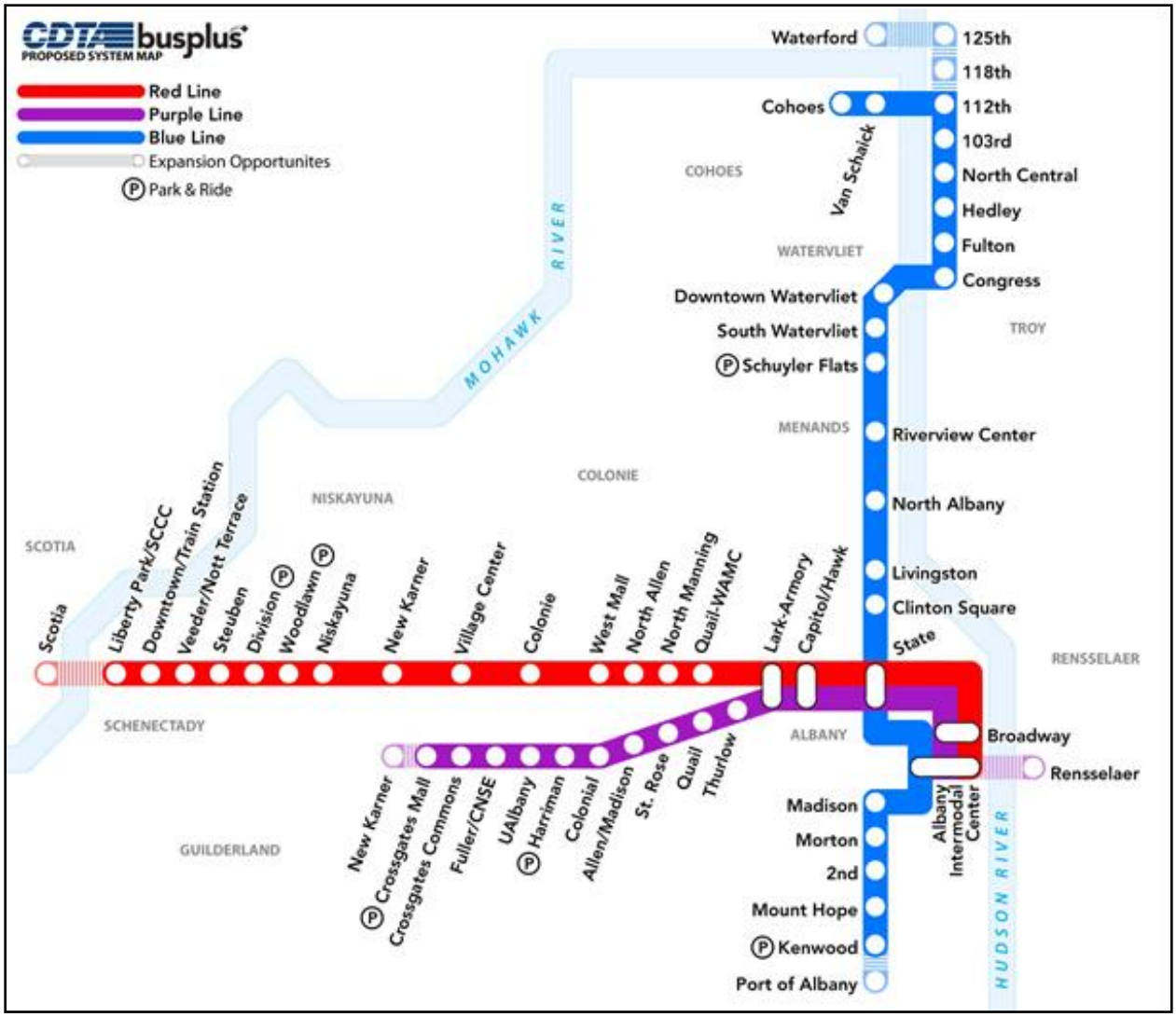

Figure ES.1: 40 Miles of BRT

A. Project Identification

The project calls for a bus rapid transit service to operate between Downtown Albany and the Crossgates Mall along Washington and Western Avenues in the city of Albany and town of Guilderland. The Locally Preferred Alternative route is approximately 8 miles in length, includes 15 stations and would operate seven days a week for 22 hours a day with a peak frequency of 7 minute headways. Notable transportation system improvements include a transit center at Crossgates Mall (which is currently CDTA's busiest stop), a section of exclusive busway through the Harriman State Office Campus and the University at Albany Uptown Campus, queue jump lanes at four locations, and transit signal priority. In addition, each BRT station will include partially enclosed shelters, real time passenger displays, distinctive signing and branding, security cameras, bicycle racks, benches, and trash receptacles.

The investment needed to implement BRT along the preferred alignment is estimated at $64 million, which includes construction costs, new buses, contingencies, and professional services (design and construction inspection). Annual operating costs are expected to increase by approximately $2.2 million, as service on some existing transit routes in the corridor will be slightly reduced.

Figure ES.2 shows the proposed route in purple. The eastern end of the corridor overlaps with the NY5 Route 905 BusPlus service shown in red and intersects with proposed River Corridor BRT.

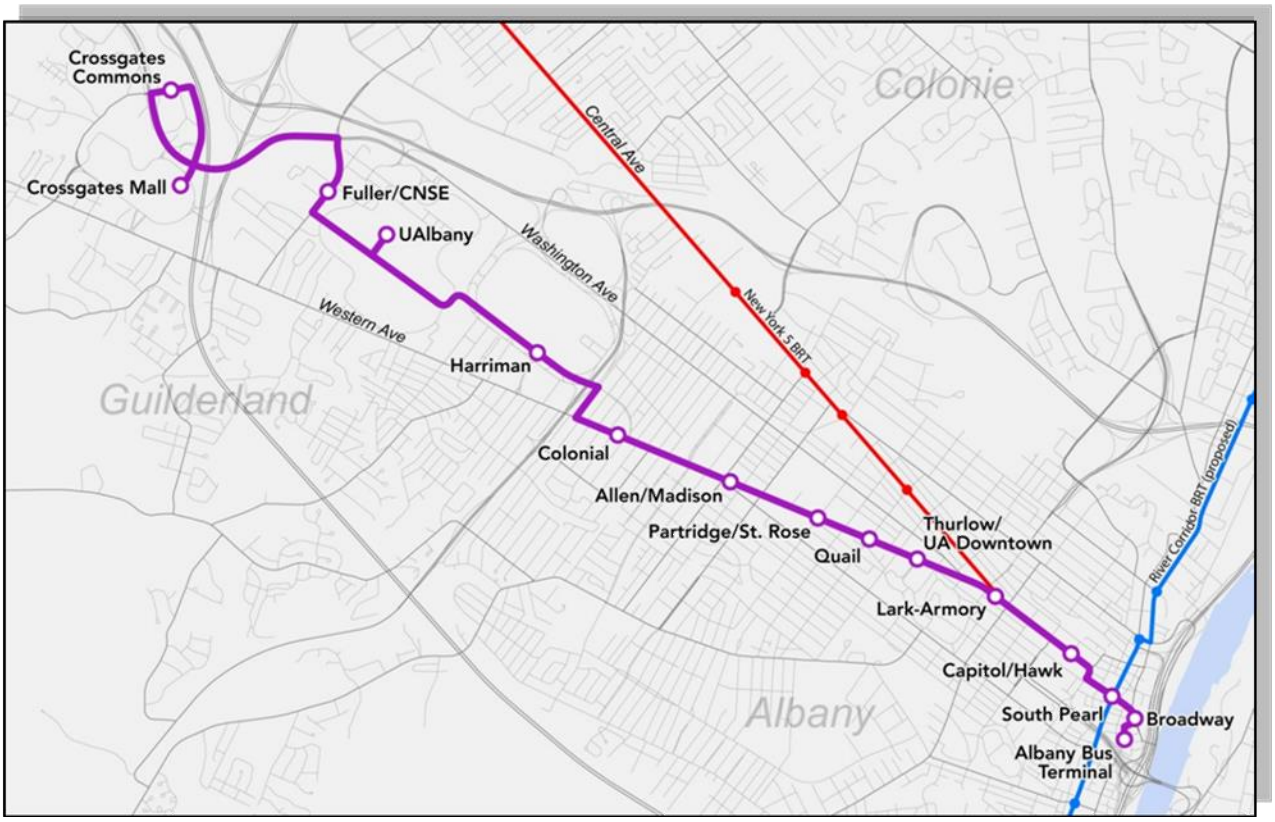

Figure ES.2: Locally Preferred Alternative

B. Setting

The corridor includes major institutions, offices, colleges and universities, shopping centers, retail districts, and urban residential areas. At the eastern end of the corridor, Downtown Albany includes the region's largest central business district which is characterized by high employment density with locations such as the New York State Capitol and the Empire State Plaza state office complex. This area includes the two largest transfer stops in the region – State/Pearl Street and Lark Street, where the Washington/Western BRT will join the existing BusPlus line on NY Route 5 and the future River Corridor BRT line.

Traveling west along the corridor, the land use transitions to medium density residential neighborhoods and a number of educational institutions including the College of Saint Rose, University at Albany's Downtown Campus and Alumni Quad dormitory, and Albany High School.

The Harriman State Office Campus, the University at Albany Uptown Campus, the SUNY College of Nanoscale Science and Engineering campus, and Crossgates Mall are all part of the western end of the corridor. Harriman Campus is a 330-acre site with on-going building renovations as part of the Governor's initiative to pursue redevelopment and to reassign 1,400 public employees to the campus. The University at Albany enrolls 17,300 students and has more than 1,900 faculty and staff. The College of Nanoscale Science and Engineering is a rapidly growing technology campus with over 3,000 employees. The western terminus includes the commercial centers of Crossgates Mall and Crossgates Commons, totaling over 2.5 million square feet.

C. Current Conditions

There are six (6) primary transit routes that operate in the corridor - #10, #11, #12, #114, #763, and UAlbany Alumni-Western Shuttle. Other routes that serve parts of western end of the corridor include #712 and #190. Each route is shown in Figure ES.3.

Almost 25% of Albany's population has no car, which increases to 35% in sections of the corridor. The existing bus routes in the corridor provide primary access to employment, commercial centers, schools, and universities for a significant portion of the corridor population.

Ridership data evaluated comprehensively as part of the study showed average daily ridership in the corridor of about 10,850 people on weekdays during the spring of 2012. Ridership demand has continued to increase since 2012, and a September, 2013 query of ridership showed a total of over 14,000 average daily riders. Service changes are planned during January 2014 to keep up with demand, while BRT planning is on-going.

Table ES.1: Average Daily Ridership (2013)

Route	Weekday
10: Western Avenue	2,807
11: SUNY Shuttle	2,306
12: Washington Avenue	5,766
763: Albany-Schenectady	354
114: Madison-Washington	1,396
UAlbany: Alumni-Western	1,729
Total	**14,359**

The existing service operates in mixed traffic along busy urban arterials, with end to end running times on the order of 40 to 45 minutes depending on the specific route and time of day. The mixed traffic affects travel time and reliability, which makes transit use an unattractive option for choice riders.

The ring road system at the Harriman Campus, UAlbany Uptown Campus, and Crossgates Mall increase service runtime by requiring the bus to detour off-route to serve these locations. CDTA in coordination with UAlbany and Office of General Service has plans to construct a bus-way through the center of the UAlbany Uptown Campus and Harriman Campus that will serve

students, staff, and campus employees along a direct route. While the development plans for Harriman Campus have focused on creating a transit supportive land use plan that will complement transit development at the adjacent UAlbany Uptown Campus, the current roadway configuration is difficult and time consuming for buses and passengers. Similarly, the outer ring road at Crossgates Mall and the current location of the bus stop on the opposite side of the Mall, cause increased bus travel times.

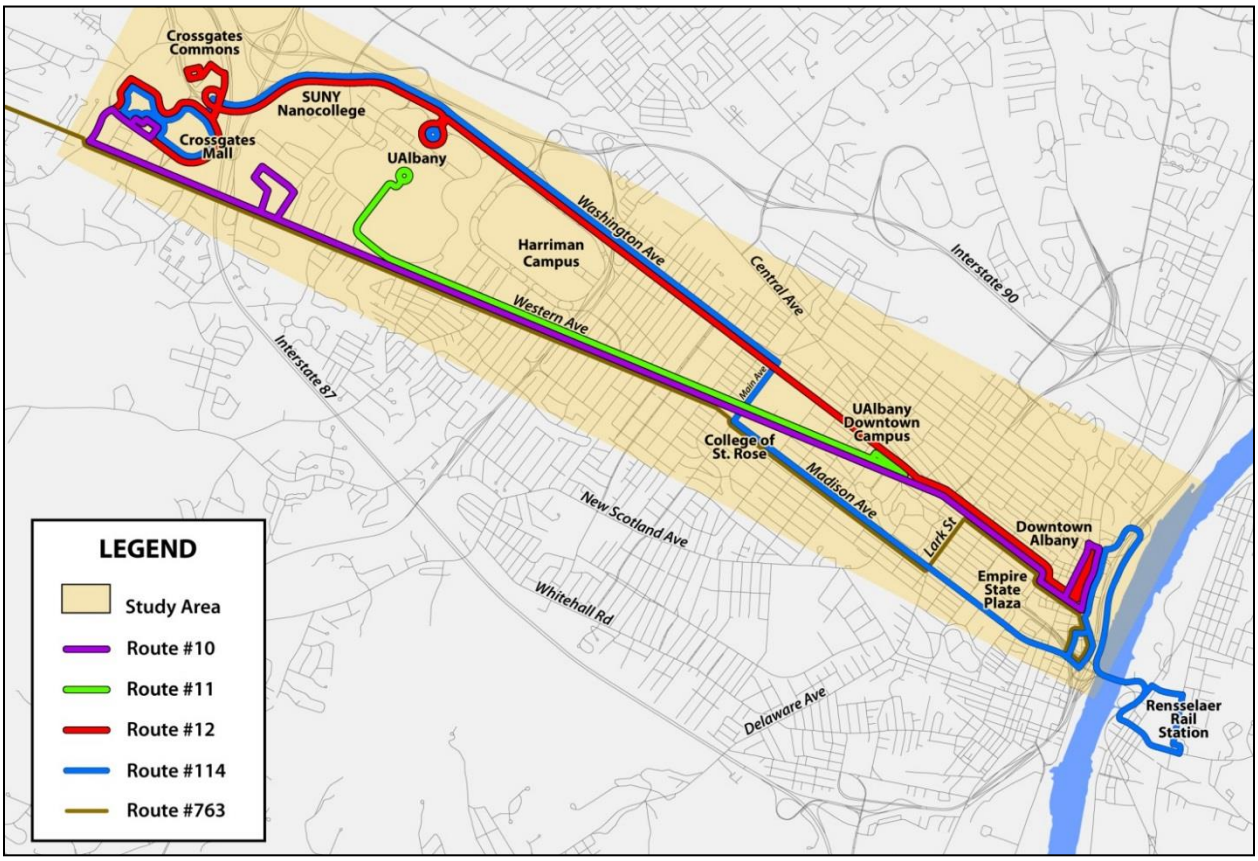

Figure ES.3: Existing Transit Routes

The City of Albany is also working to alleviate parking problems downtown and the costs associated with provision of public parking. A residential parking permit system was implemented in Downtown Albany in January 2013 which resulted in increased transit ridership for employees in Downtown Albany. Parking is also at a premium at the many educational institutions in the corridor. The City and various institutions would prefer to minimize the cost and impacts of parking. However, the lack of direct and reliable transit service in the study corridor results in a greater number of passenger vehicle trips and more parking spaces.

D. Conditions in the Horizon Year

Absent the proposed BRT project, ridership demand will continue to increase with growth at the Harriman State Office Campus, College of Nanoscale Science and Engineering and between the two UAlbany campuses. CDTA is responding to corridor growth by reducing headways along major routes within the corridor. The existing transit systems are less able to affect change, such as enabling TOD development and helping alleviate downtown parking concerns.

Without the BRT, Harriman campus re-occupancy and redevelopment will be more autocentric with related traffic congestion.

E. Purpose of the Project

The purpose of the project is to provide faster, more direct, and more reliable east-west transit service connecting the major activity centers in the Washington/Western Corridor with downtown Albany, and to improve mobility and access among and between these existing and emerging major activity centers. The proposed project will address the project purpose by:

Dedicated busway at Harriman Campus

- Linking key activity centers and residential areas
- Creating a new, limited stop service with frequent and consistent service patterns throughout the day and evening to reduce travel time and improve reliability
- Constructing a dedicated busway to connect the UAlbany Uptown Campus and the re-developed Harriman Campus
- Providing a new transit center with direct access to Crossgates Mall.
- Constructing specific BRT treatments at select intersections to improve travel time and maximize reliability

The project purpose is consistent with the Albany 2030 Comprehensive Plan which was adopted by the City of Albany Common Council on April 2, 2012, the regional planning document – New Visions, and UAlbany's Facilities Master Plan.

F. Alternative Service Plans

Several alternative routes and service plans were examined, building from the *Conceptual Design Study,* dated October, 2011, with three BRT routes emerging for more detailed alternatives analysis in this study. The three alternative routes include:

- Alternative 1 – Washington Avenue
- Alternative 2 – Western Avenue via busway
- Alternative 3 – Western and Washington Avenues via Brevator

Proposed service plans were developed for each alternative as summarized in Table ES-2. A very high service level is proposed with peak headways for BRT buses of seven 7 minutes. Depending on the alternative the overall annual operating cost increases are on the order of $2.2 to $2.6 million.

Table ES.2: Summary of Service Plan Alternatives

Alternative	Peak Vehicles	Annual Revenue Hours	Net Change in Hours*	Percent Change in Hours*	Annual Operating Cost	Net Change in Operating Cost	Percent Change in Operating Cost
Existing / No Build	19	83,597	-	-	$6,321,842	-	-
Alternative 1: Washington Avenue	25	115,202	31,605	38%	$8,947,575	2,625,733	42%
Alternative 2: Western Avenue via Busway	**23**	**112,630**	**29,033**	**35%**	**$8,542,800**	**2,220,958**	**35%**
Alternative 3: Washington and Western Avenues via Brevator	23	112,855	29,258	35%	$8,643,300	2,321,458	37%

**Includes Routes #10, #11, and #12 only as #763 and #114 will remain unchanged*

G. Merits of the Project

As compared to other transit alternatives, provision of a bus rapid transit service in the Washington/Western Corridor is the most cost effective method to satisfy the project purpose. Continuation of the current trunk, neighborhood, and commuter service routes (Null Alternative) does not effectively capture all riders and connect them to the major activity centers in the corridor. Light Rail Transit (Alternative 4) was dismissed during the Conceptual Design Study phase for the Washington/Western Corridor. The primary reasons for alternative dismissal were anticipated ridership level, lack of potential dedicated right-of-way, and the lack of local capital funds. Various regional plans have also rejected light rail in the Capital District. Providing bus rapid transit service is the most cost effective way to address the existing service deficiencies in the corridor while accommodating ridership increases due to implementation of the service.

Table ES.3: Alternatives Ranking

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3
Economic Development Potential	1	3	1
Impact on Local Services	3	2	2
Capital Cost	3	1	3
Operating Cost	1	3	3
Connection of Major Destinations	1	3	2
Ridership Growth Potential	1	3	2
Reduced Travel Time	2	2	2
Improved Reliability	1	3	1
Cumulative Ranking	**13**	**20**	**16**

Based on a comparative evaluation, Alternative 2 (Western Avenue via Busway) is identified as the Locally Preferred Alternative (LPA). This alternative best meets the objectives of supporting economic development, ridership growth, and improved travel time reliability. Alternative 2 excels in providing direct, supporting connections between the UAlbany campuses as well as central access to the Harriman Campus and access on Fuller Rd to the College of Nanoscale Science and Engineering.

The project has been the focus of significant public involvement over the last several years, and the busway concept included as part of Alternative 2 has been vetted and recommended in past planning and engineering studies.

H. Summary

Providing bus rapid transit service along the Washington/Western Corridor will connect key destinations while improving reliability and reducing travel times. BRT will also improve the transit network for captive riders by expanding the service network. This type of transit service will offer the flexibility to expand service in the corridor as economic development and ridership in the corridor is spurred by the enhanced transit service.

Conditions in the future assume completion of an efficient and attractive BRT service in the corridor connecting people and destinations, and facilitating regional and local land use patterns and policies.

Figure ES.4: Concept of Transit Center at Crossgates mall