Executive Summary

The Capital District Transportation Committee (CDTC) retained Nelson\Nygaard Consulting Associates as part of a team of consultants to conduct the Harriman Campus – University at Albany Transportation Linkage Study. The project was funded through CDTC's Community and Transportation Linkage Planning Program and was a joint effort with the Harriman Research and Technology Development Corporation (HRTDC).

The study area included three major campuses: the Harriman Research and Technology Park (formerly the Harriman State Office Campus), the University at Albany (the Uptown Campus and the College of Nanoscale Science and Engineering, formerly Albany Nanotech) and the Patroon Creek Corporate Park. It also included the neighborhoods adjacent to the campuses and considered the wider region.

The objective of this project was to develop a vision for an integrated, multi-modal transportation system over a 10 year period and to identify strategies and projects that would help facilitate connections and linkages between the sites in the study area. The vision and strategies were intended to support natural synergy across campuses and also to ensure that transportation and land use projects enhance the quality of life for everyone living and working in the area.

Research Process

This study was a multi-team and multi-faceted effort. CDTC and HRTDC managed the study, working with the Study Advisory Committee and a group of stakeholders representing the diverse interests in the study area. Working together this group created a series of planning principles that were used to guide the study:

- Improve inter-campus connections, especially for cycling and walking. Connect key points on the campuses, capitalize on existing routes, and develop new routes.
- Improve the interface with surrounding neighborhoods, as requested by local residents.
- Improve linkages within the City of Albany and to the greater region, especially via transit. Increase on-campus densities and massing to support this objective.
- Reduce the number of single-occupancy vehicle trips and the parking supply needed to serve those trips via active transportation demand and parking management policies and programs.
- Maintain access to the regional roadway network.
- Address pedestrian safety and accessibility issues on a site-specific level.
- Coordinate transportation improvements with land use improvements proposed in the Harriman Campus Master Development Plan and other local land use policies.

With these principles in mind, the Study Team conducted extensive field research, including site visits, examination of the motorized, non-motorized and transit networks and evaluated how these systems served area employees, students and residents. Two public work sessions were also held, one in the early stages of the project to collect ideas and another towards the end to review project recommendations.

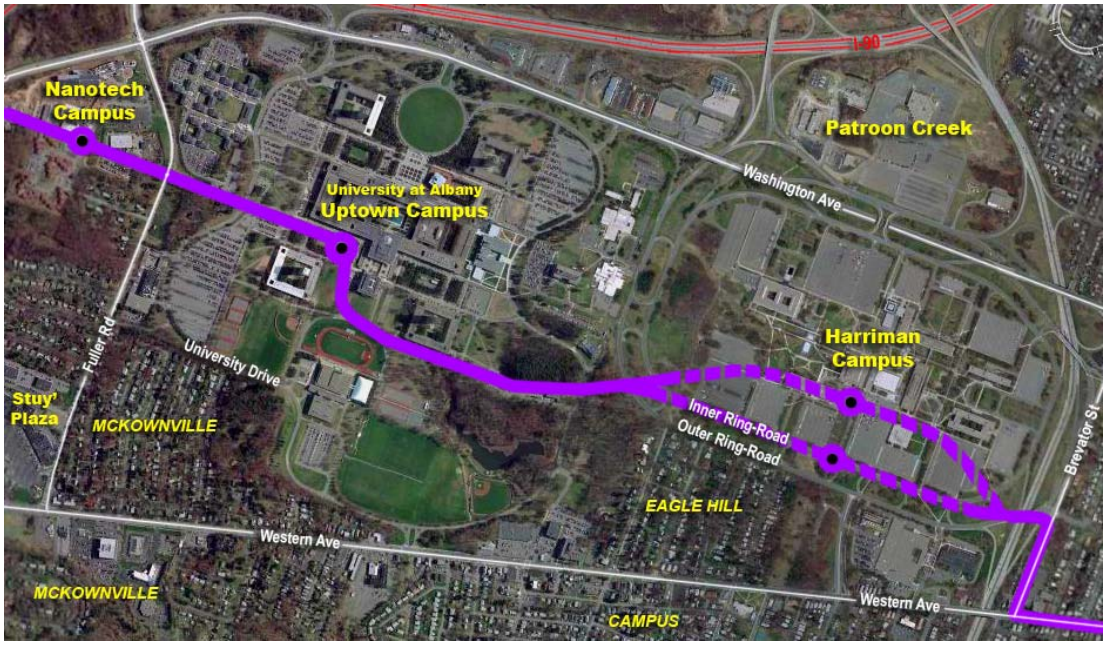
Short Term Strategies

Among the key challenges facing the study area is the lack of connections between the individual campuses, and the impact this has for meeting both study and regional objectives related to managing the demand for transportation. As the Project Team examined the area and considered potential solutions, the emphasis was on providing multimodal connections that included pedestrian, bicycle and transit needs as well as providing transportation resources that are integrated with existing and proposed land uses. The recommendations, therefore, are aimed at creating opportunities for connections that provide safe and attractive facilities for all travelers and build on existing infrastructure to create an attractive, accessible and functional place to live, work, and visit.

The Study Team identified a series of short term strategies to support the development of a multimodal transportation network. While strategies are listed as independent recommendations, projects and programs are mutually-dependent, as each proposed project and program is realized, that project will strengthen existing efforts and likewise be enhanced with the implementation of subsequent projects. These strategies include:

- **Establish an Area Transportation Management Association (TMA)** – The Study Team recommends establishing a TMA to guide the prioritization, funding and implementation of many of the projects and programs developed by this Study. The TMA would be supported and funded by representatives from each of the four major institutions. This group, together with representation from local neighborhood groups, would serve as a steering committee for development of the study area transportation network. (See implementation section on page 8).
- **Create a Transportation Spine** – Several sources identified the idea of a transportation spine as a strategy to link the campuses. While specifics are still under development, the concept is to create a multimodal facility for transit and non-motorized users that will provide connections from Harriman through to the Nanotech campus and potentially through to Crossgates Mall and downtown Albany. A potential alignment for the transportation spine is shown in **Figure ES-1**. In the immediate-term, it is critical to reserve right-of-way for this facility on the Harriman and Nanotech campuses.

Figure ES-1 Potential Transportation Spine Alignment



- **Enhance Existing Transit Services** – In support of the Capital District Transportation Authority's (CDTA) objectives, transitioning toward trunk routes on Washington and Western Avenues would allow more frequent and efficient transit service in the area. This will require coordination with the individual campuses to ensure that shuttle services are developed (HRTDC and Patroon Creek) or modified (University at Albany) to integrate with the improved trunk route services.
- **Encourage Area Institutions to Develop Transportation Demand Management Programs** – Transportation Demand Management (TDM) refers to incentive programs that support the use of transit, biking and walking, typically by influencing the price and supply of travel options. While some TDM programs are already available at some of the area institutions, these programs (such as parking management programs) could be strengthened across the Study Area, especially with guidance and support from a Transportation Management Association (see implementation on page 8).
- **Enhance Non-Motorized Facilities on Fuller Road** – Fuller Road is the main north-south roadway connecting Stuyvesant Plaza with the University at Albany and the Nanotech campus. Conceptual ideas that improve the multimodal functions without decreasing roadway capacity include:
  - Converting the two-way left turn lane into a series of raised medians and shorter left turn pockets, allowing the medians to become refuge islands for pedestrians;

  - Constructing a continuous, concrete sidewalk along the west side and striping crosswalks as necessary, coordinated with the median;
  - Narrowing the roadway four feet at the cemetery and realigning it to provide an 8-foot sidewalk on the west side; and,
  - Examining the potential to stripe a curb-side bicycle lane or designed shoulder area (by painting the pavement, adding pavement markings, etc.) through much of the corridor.

- **Improve Wayfinding** – Once drivers reach the Harriman Ring Roads from either I-90 and/or NY 85, finding specific buildings or facilities is confusing. In the short-term, developing a series of color-coded or numbered area signs, scaled appropriately for motorized (traveling at the posted speed limit) and non-motorized users that direct travelers to subsets of the campus is recommended.
- **Develop Access Management Programs** – Managing roadway access by limiting the number of driveways or the allowed curb cuts onto a roadway is an effective way to maintain road speeds and free flow traffic conditions. Reducing turnaround movements it also improves safety for motorists, and for bicyclists and pedestrians.
- **Consider Environmental Justice** – The Study Team crafted recommendations to be sensitive to all adjacent residences and other surrounding land uses. Special attention will need to be paid to households in the areas of special concern identified as the planning concepts evolve into specific projects.
- **Create Bike Lanes on Harriman Ring Road** – The Study Team proposes bicycle lanes on both of the Harriman campus ring roads as short term projects. It is suggested that the inside lane of each road be converted to a bike lane, as these have fewer conflicts with high-speed on- and off-ramps.
- **Remove/Close Several Turnarounds on Ring Road** – In order to limit weaving and improve wayfinding on the Harriman ring roads, it is proposed that seven or eight of the turnarounds be closed to vehicular traffic. The turnarounds would remain open for bicycles and pedestrians.
- **Provide Pedestrian Facilities at Washington Avenue Bridge** – The existing bridges over Washington Avenue between the Harriman and Patroon campuses present an opportunity to improve linkages between the two campuses. It is suggested that the guard rails on each of these bridges be relocated so they do not block pedestrian access. The sidewalks would be extended to the ring roads and crosswalks and refuge islands installed.
- **Create a Non-Motorized Access at Brevator and Belvedere** – In the short term, access by pedestrians and cyclists to the Harriman Campus at Belvedere needs to be improved. These concepts include:
  - Bicycle lanes on the ring roads to provide a better bicycle facility as well as the opportunity for refuge islands at crosswalks.

- The sidewalks on the bridge across Route 85 would be temporarily designated as shared bicycle/pedestrian facilities and signed accordingly.
- Excess roadway can be removed where the exit road diverges from the ring road.
- The merge between the Route 85 off-ramp and the ring road can be redesigned to moderate speeds on the ring road and provide a shorter crossing distance.
- Refuge islands can be added to the current striped median on Brevator Street. Marked crosswalks should also be added.
- Curb extensions can be added in the parking lane at the corners.
- Extend sidewalks from Belvedere Avenue to Brevator Street.

- **Address peak hour congestion at Harriman Outer Loop and I-90 Exit 3** – There is a yield sign at the bottom of the ramp that carries traffic from the Harriman Campus Outer Loop Road to Exit 3 of I-90. The analysis suggests that the capacity problem on the ramp from the Outer Loop Road to the "Yield" sign would likely be better solved through demand side solutions, such as Transportation Demand Management (TDM) strategies, improved transit connections, and increased non-motorized facilities.
- **Improve Vehicular Merge at Harriman Outer Loop, NY Route 85 South off-ramp and Washington Avenue westbound off-ramp** – There are concerns regarding speed and increased merging traffic where the off ramps from Route 85 South and Washington Avenue westbound merges with the Harriman Campus Outer Loop Road. Short-term options include re-striping to narrow the lane width on the exit ramps from NY 85 South and from Washington Avenue westbound in order to slow traffic and better organize the merges.
- **Calm Traffic in the Northwest Quadrant of University Drive** – Potential solutions to the conflict between traffic on University Drive and the pedestrians who must cross University Drive on their way to/from the center of campus involve traffic calming to reduce the speed of traffic on this segment of University Drive in conjunction with enhanced pedestrian facilities to create highly visible pedestrian crossings.
- **Improve Non-Motorized Facilities along University Drive** – Traffic calming will be supported and achieved, in part, by building on efforts outlined in the UAlbany Purple Path Study, dated fall 2005, which recommends a multi-use path along the interior of University Drive.

Long Term Strategies

In the longer term, this study identifies a series of projects that will help transition the road network from its inward focus to one that re-directs the Harriman campus. The proposed network will create external linkages not only with the regional roadway network, but also with nearby campuses, surrounding neighborhoods and communities, and other regional facilities, such as the proposed Albany Convention Center, that are seeking improved connections. Similar to the short term recommendations, long term strategies are mutually supportive and best implemented in concert. Each project will strengthen and enhance the effectiveness not only of earlier projects as well as short-term projects and programs.

- **Complete Transportation Spine and Establish BRT Service** – In conjunction with development of a transportation spine between the campuses, planning for BRT service should likewise commence. The BRT service will provide high speed, high quality transit service between downtown Albany and each campus in the Study Area. It should be designed as an integral service in the wider CDTA service network and link to other regional resources such as the proposed Albany Convention Center. This high level of transit service between job centers at the campuses and downtown, and residential neighborhoods in between, will make living and working in the City of Albany a more attractive choice in the future.

- **Improve Wayfinding** – Once the Master Plan for the Harriman campus is finalized, work can begin to create a strong logo, color and brand for the multi-campus area, establishing an identity for area wide signage and wayfinding.

- **Develop Brevator as a "Mini Boulevard" with Non-Motorized Facilities** – A median in the center of Brevator Street is recommended between Western and Washington Avenues. Bicycle lanes would be placed between the travel and parking lanes. Crosswalks would be striped at intersections. In addition to more effectively using the existing roadway width and helping to calm traffic, the proposed boulevard would offer an attractive, planted buffer between the neighborhood and Route 85. Conceptual roadway dimensions for a typical cross-section are highlighted in **Figure ES-2**.

Figure ES-2 Brevator Street with Median and Bicycle Lanes

- **Remove Portions of the Harriman Ring Road** – It is proposed to virtually eliminate the ring roads (and all their attendant problems), reuse the roadways as possible, and reorganize the connections to major arterials. As major changes to portions of the Harriman Ring Road undergo detailed investigation, traffic volumes will need to be re-examined to determine how existing and future volumes will be accommodated on the proposed new street network.
- **Use Roundabouts to "Anchor" Harriman Campus** – Preliminary analysis suggests that the use of multiple, one lane roundabouts would lower vehicle speeds at and between the roundabouts making the roads safer and easier for pedestrian and bike crossings throughout the campus. This concept would also be expected to reduce the likelihood of cut-through traffic and enhance the appearance of the campus. In general, roundabouts also reduce delay while providing a better and more attractive driving experience.
- **Join Harriman and UAlbany Ring Roads** – The idea of connecting the Harriman and UAlbany ring roads at a common north/south boulevard has been suggested to reduce redundancy in the road network and to better connect the two campuses. This type of connection might also provide the University with needed land for expansion. If pursued, the design of this

connection must ensure that the remainder of University Drive does not become attractive to pass-through traffic.

- **Re-develop Washington Avenue as an At-Grade Facility** – In the long term, consideration should be given to raising Washington Avenue, creating an at-grade boulevard between the Harriman Campus and the Patroon Creek Corporate Park. An at-grade facility would facilitate connections between the two campuses and would provide additional land for development.

Implementation

Implementation of the proposed strategies and programs will be challenging. While three of the four sites are affiliated with the State of New York, individual sites are responding to market conditions and circumstances and each site makes its own decisions about how and when to grow or change. As a result, projects at some campuses will move faster than others and the relative importance of certain strategies proposed in this report will vary at each campus and over time.

In addition, as discussed, the proposed recommendations will have the greatest success when implemented as a complete package, for example, transit systems function best when supported by TDM programs and coordinated with pedestrian and bicycle infrastructure. Successful implementation, therefore, needs to be coordinated and comprehensive.

Because the precise timing of events in this dynamic area is difficult to predict, establishing a mechanism for the ongoing coordination of transportation decisions and investments is the most important, highest priority implementation action recommended in this study. Building from the dialogue and cooperation already established through this process, the first task will be to formalize a structure for advancing the many strategies and programs recommended in this report.

- **Establish Area Transportation Management Association (TMA)** – The presence in this area of four major institutions, as well as significant interest from state, regional, and local governments, suggests that this type of organizational structure could have considerable financial and technical support. CDTA and CDTC may be able to allocate seed money to the TMA with federal funds from the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. A TMA has considerable potential for success in the study area because of the close proximity of the work sites, the increasing emphasis on promoting multi-modal travel, and the limited parking supply and other transportation demand management programs already in place at the University at Albany.
- **Priority Projects** – All the key recommendations from this study have been prioritized in **Figure ES-3**. Short-term actions should be initiated within the next five years. Longer-term actions should be initiated within 10 years. Primary responsibility for each project is assigned to one or more entities; however all

of these initiatives should be shared and reviewed through the TMA as they move forward to ensure coordination. An order-of-magnitude cost category (low, medium, or high) for each project is also provided.

- **Funding and Financing** – In addition to the various public sources of funding available for transportation infrastructure, there are other potential sources of revenue that should be considered given the magnitude of improvements that will ultimately take place as the Harriman Campus redevelops and Nanotech, UAlbany and Patroon Creek build out. Public-private partnerships should be pursued whenever feasible to leverage public funding sources to the greatest degree possible.

Figure ES-3 Implementation of Proposed Strategies

Action Item	Primary Implementation Responsibility	Order of Magnitude Costs
Immediate Term Steps		
Identify and reserve transit spine Right of Way on Harriman Campus	HRTDC, CDTA; CDTC	Short-term: Low Long-term: High
Reserve Tricentennial Drive Right of Way	University at Albany	Short-term: Low Long-term: High
Fuller Road Rehabilitation	Albany County	Low-Medium
Short Term Strategies		
Establish a Site Area TMA	Study Area Stakeholders	Low
Develop Transportation Spine	UAlbany; CDTC; CDTA, HRTDC (TMA)	Short-term: Low Long-term: High
Reconfigure CDTA transit routes	CDTA; UAlbany; HRTDC (TMA)	Short-term: Medium Long-term: High
Reconfigure Intercampus Shuttles	UAlbany, CDTA (TMA)	Low
Universal Transportation (TDM) Program	CDTA & CDTC; HRTDC, UAlbany; Patroon Creek (TMA)	Medium
Parking Management Strategies	UAlbany, HRTDC, Patroon Creek; CDTC (TMA)	Low
Develop Shuttle Routes for Harriman and Patroon Creek	HRTDC, Patroon Creek (TMA)	Medium
Purple Path Recommendations	UAlbany (TMA)	Medium
Way finding	HRTDC; UAlbany; Patroon Creek (TMA)	Low
Access Management	CDTC; Albany County; local jurisdictions (TMA)	Low
Harriman Ring Roads – Bike Lanes and Turnarounds	HRTDC; CDTC; local jurisdictions (TMA)	Low
Bridge over Washington Avenue	HRTDC, Patroon Creek, CDTC	Medium
Harriman Outer Loop Road and I-90 Exit 3	HRTDC, Patroon Creek, CDTC	Low
Merge Location (Harriman Outer Ring Road just east of Patroon Creek)	HRTDC, Patroon Creek, CDTC; local jurisdictions; (TMA)	Low
UAlbany Ring Road - Northwest Quadrant	UAlbany; local jurisdictions	Medium
Longer Term Strategies		
Outer Ring Road-Route 85 Area	HRTDC; local jurisdictions	High
Harriman Master Plan Road Network	HRTDC; local jurisdictions	High
Harriman Master Plan Roundabouts	HRTDC; local jurisdictions	High
Join UAlbany and Harriman Ring Roads	HRTDC; UAlbany; local jurisdictions	High
Raising Washington Avenue	HRTDC; local jurisdictions	High

Source: Nelson Nygaard Consulting Associates/The Chazen Companies