Executive Summary

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Executive Summary

The 12-mile US 1 corridor, in Howard County, Maryland, serves a diverse range of users and functions. The corridor is developed with very large tracts of manufacturing and distribution centers, small commercial centers, free-standing retail, hotels, restaurants and service businesses, and many residential communities. Its users include freight haulers and commuters en route to intersecting major highways, buses and transit users destined to neighborhoods and job centers, and growing numbers of pedestrians and bicyclists moving between corridor attractions.

As the primary conduit for all of this activity, US 1 should provide an environment that meets the needs of all its users. Similarly, the network of streets and trails that interact with US 1 should enable people to access their work and leisure activities safely and easily. As a major arterial corridor, plans for US 1 must also recognize its potential for increased use by transit vehicles, passenger safety walking to and waiting at transit stops, and increasing demands on driver awareness at conflict points.

The Phase I and II Route 1 Corridor Revitalization Reports prepared by Nelessen & Associates in 2001-2 recognized a changing land use pattern emerging on the corridor. An area specific Route 1 Manual and new zoning classifications was designed to put in place guidance to make the best use of land use changes and to guide building orientation, facility location and design to reflect the full range of transportation modes. The discussions and analysis presented in this document represent a further refinement of those efforts and is designed to identify and structure an implementation of County visions and State priorities for the US 1 Corridor.

The local vision for the corridor documented in Howard County's "Phase II Revitalization Report" (July 2002) included the following goals related to transportation:

- Promote safe and efficient vehicular travel
- Endorse public transportation in order to increase mobility and to serve as an alternative to the private automobile
- Provide for safe and efficient pedestrian and bicycle travel
- Enhance the streetscape, providing a unifying design for the corridor

The "Reconnaissance Study", prepared as Phase 1 of this study in Sept 2006 by Kittelson and Associates, offers a picture of existing conditions of the road itself as well as the access and circulation systems for property between I-95 and the CSX railroad, and I-95 and Deep Run. It recognizes local and regional travel patterns for automobile and truck traffic as well as increasing needs of pedestrian, bicycle, and transit travelers.

The Reconnaissance Survey also identified a variety of transportation challenges related to the existing conditions in the corridor. Specific examples provided by agency participants and the public during meetings and workshops identified the most important issues to be addressed in any strategy for improvement. They included:

- Limited roadway capacity
- Safety concerns

- Lack of connectivity to serve local vehicular, pedestrian, and bicycle travel needs
- Inconsistent, piecemeal aesthetic

Members of the public participated in this study through an advisory group made up of a cross section of business, resident, developer and trucking interests, and through two sets of public meetings held in July of 2006 and July of 2007 during key points in the study process. This report documents the analyses performed to respond to corridor challenges under future conditions and prepares a path toward their resolution with specific strategies and agency actions.

The Improvement Strategy comprises a physical improvement plan and a variety of tools to bring about change consistent with the local and regional goals. It provides policy direction and builds on existing processes to guide incremental improvements that will occur with private development and investment over time. The Strategy provides a recommended approach to accommodate existing and anticipated future travel demand. It considers land uses and system users throughout the corridor, including pedestrians and bicyclists. Finally, it presents a set of actions that vary broadly in terms of level-of-effort and timeframe in a way that can help to organize, phase, and focus change.

DOCUMENT OVERVIEW

The Reconnaissance Survey presented the details of the existing transportation system and its relationship to land use and access along the US 1 Corridor through Howard County. Building on that document, as well as the Route 1 Corridor Revitalization Study and the Route 1 Manual, this work presents an expanded understanding of issues and opportunities and presents an improvement strategy to bring about a safer, more efficient and attractive multimodal transportation system for the US 1 corridor.

This report is presented in three parts: Refining the Vision, Tools to Implement the Vision and Transportation Improvement Strategy. Each chapter of Parts I and II has been organized to present the relationship of the chapter topic to the vision, the key findings, and the analyses undertaken. Part III, the Transportation Improvement Strategy, comprises actions, their timeframes for implementation, and lead/support agency identification. Actions described are based on the analyses documented in Parts I and II, the findings of the Reconnaissance Survey, and public and agency input. Part III is designed as a stand-alone document that can be used to highlight key issues, to track progress, and to summarize findings and options for managers and elected leaders.

Part I: ***Refining the Vision*** reviews analyses that were undertaken to better understand the future travel demand and presents preliminary alternatives to accommodate those demands. This section also presents methods to achieve target speeds along the corridor and includes a safety screening that can be used to prioritize corridor improvements.

Part II: ***Tools to Implement the Vision*** reviews the policies, processes, and guiding documents that shape public and private investment in the corridor. Tools designed to address conditions specific to the US 1 corridor are presented and discussed. They form the basis for recommendations made in the final chapter, Part III of this document.

Part III: ***Transportation Improvement Strategy*** comprises a physical Improvement Plan that describes the future transportation system elements and Implementation Actions that identify critical, immediate, near-term, and long-term agency actions that will facilitate the physical improvements.

In addition to a technical analysis, a process analysis was conducted which involved discussions with and review by County and SHA staff to determine how recommendations might be implemented. Finally, several case studies were conducted to identify how the existing policies and procedures function and might be improved to streamline outcomes in the corridor. Table 1 identifies the analyses completed, the reference for the analysis documentation, the challenges for which the analysis is relevant, and the key recommendations or conclusions of each analysis.

Table 1 Parts I & II: Analysis Summary Table

Tab	Analysis	Purpose				Recommendations/Key Findings
		Congestion and Speed	Safety	Local Circulation	Aesthetic & Comfort	
Part I – Refining the Vision						
A	Future Traffic Operations	X	X	X		Plan for 6 lanes on US 1 south of Bonnie View Lane as described by Build Option #3. Implement network connections and appropriately spaced traffic signals for additional route options and shorter local trips.
B	Development Trends and Multimodal Travel		X	X	X	Accommodate non-motorized travel throughout the corridor. Provide safe, attractive, and convenient routes of travel between activity nodes and nearby residential and employment areas. Address the design challenges of non-motorized travel needs on major truck routes as part of the future roadway design. Prepare for convenient, reliable transit service to activity nodes and employment centers. Enable viable transit service through site design and provision of pedestrian amenities. Design intersections to accommodate the appropriate design vehicle to avoid over-sizing them. Develop a functional classification system recognizing mode and land use on the local road system.
C	Speed Management	X	X		X	Use speed management techniques to achieve target operating speeds. Install traffic signals at a consistent spacing to permit traffic progression; nearing ¼ mile in urbanized areas.
D	Safety Screening		X			Continue to monitor areas of completed safety improvements and identify locations for more detailed crash studies. Prioritize locations for access management improvements.
E	Major Spot Concepts	X	X			Advance the improvement alternatives for the MD 175 intersection and the MD 32 interchange area.
Part II – Tools to Achieve the Vision						
F	Development Review Analysis	X	X	X	X	Emphasize goal-oriented approach to project review. Strengthen the Sketch Plan phase enforcing concept approvals as a prerequisite to site engineering. Develop overlay requirements for roadway and path connectivity and block spacing. Require pedestrian amenities in site design to enable convenient transit service to activity centers and employment centers as densities increase. Provide safe, attractive, and convenient routes between activity nodes and nearby residential and employment areas. Distribute materials about site design and circulation best practices, and the US 1 vision.
G	Access Management Analysis	X	X	X	X	Adopt desired network connections and local roadway spacing standards. Prioritize access acquisition investments and cross access easements.
H	Roadway Character and Functional Classification Analysis			X	X	Establish functional classification overlay recognizing land use and mode priority. Provide design guidance for local roads accordingly recognizing context and community preservation.
I	US1 Typical Sections and Right-of-Way	X	X		X	Preserve right-of-way for the proposed typical sections. Design and construct US 1 as shown in the typical sections.
J	Network Connections Development	X	X	X		Adopt the proposed connections and accompanying information about the goals and anticipated phasing to retrofit street access. Adopt policy language encouraging desired network connections and spacing.

Part III: Transportation Improvement Strategy

The diagram below provides the basic framework and relationships of the US 1 Corridor Improvement Strategy. Highlights include short- and long-term transportation solutions and tools listed here. The matrix on the following page presents the complete list of actions by agency and is detailed in the last chapter of this document. They are organized to be part of the following set of overarching actions:

- Typical sections for the future widening of US 1;
- Local circulation network connections and public street access;
- Priority access management locations along US 1;
- Enhancements to key regional mobility access points;
- Site design best practices;
- Recommendations regarding development review; and,
- Recommendations regarding roadway character and functional classification.

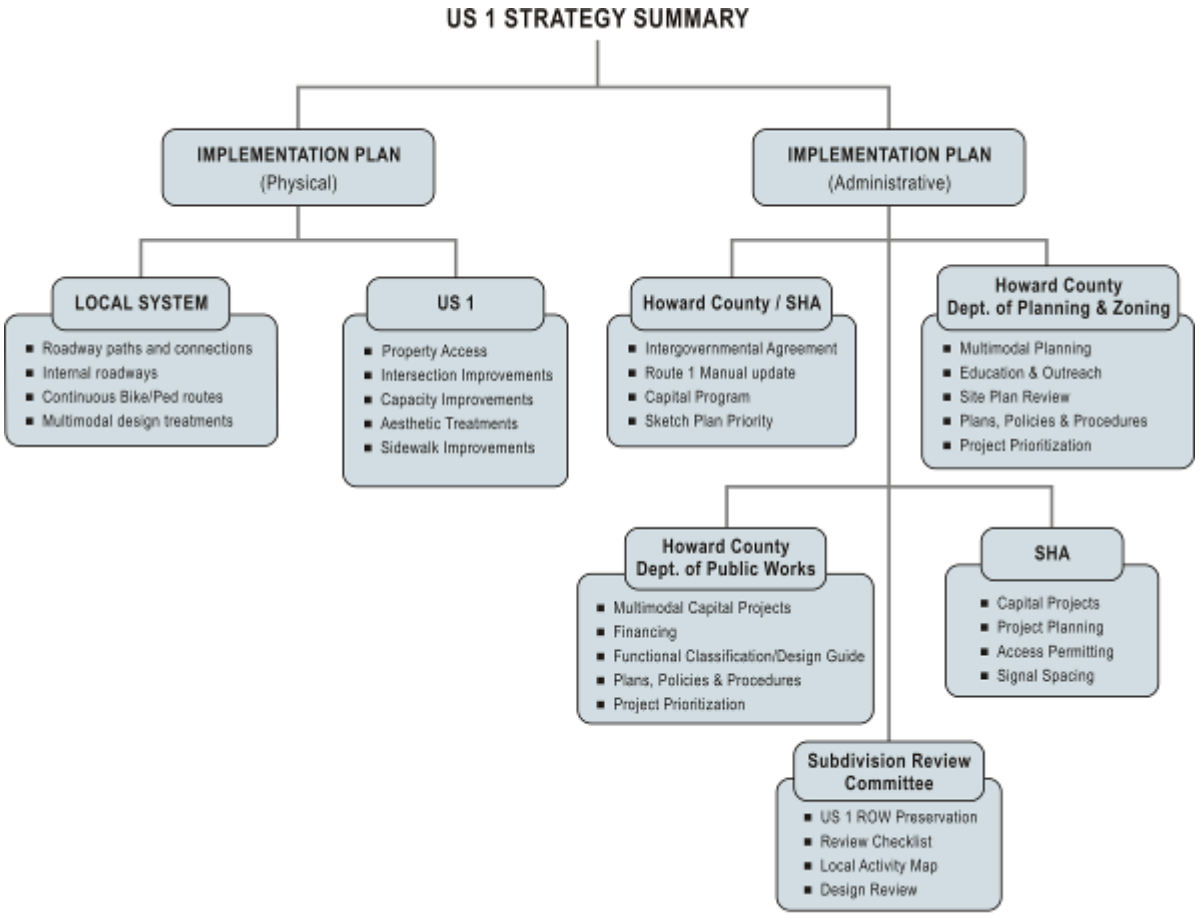

Table 2 Part 3: Summary of Improvements, Strategies and Recommendations

Focus	Item	Strategy Description	Collaborators	Timeline
All Partners				
Plans, Policies & Procedures	Intergovernmental Agreement	Draft and adopt agreement to incorporate US 1 Corridor Improvement Strategy and Recommendations into applicable state and local policy and planning documents.	SHA, Howard County	6 months
	Route 1 Manual Revision	Revise Route 1 Manual for consistency with Transportation Improvement Plan.	Howard County DPZ	6 months
	Capital Improvement Program Additions	Create funding and construction mechanisms for modest capital projects identified in the Transportation Improvement Plan to permit developer contributions and construction as opportunities arise.	SHA, Howard County DPW	9 months
	Sketch Plan Priority	Reestablish Sketch Plan as a prerequisite to site engineering.	DPZ, DPW	6 months
	US 1 Right-Of-Way Preservation/ Acquisition	Incorporate the recommended US 1 typical cross-sections into Spring 2008 update of the Highway Needs Inventory.	OPPE	9 months
Maryland State Highway Administration (SHA) Initiatives				
Capital Projects	US 1 Maintenance and Spot Improvements	Enhance the multimodal environment in all system preservation projects, consulting a plan of priority truck routes to limit locations for large vehicle access, and to improve pedestrian facilities.	District 7, OOTS	Ongoing
	MD 175/US 1 Improvements	Investigate design alternatives that meet travel demands and fit within the increasingly urban character of US 1.	OPPE	To be determined
	MD 32 Area/US 1 Improvements	Investigate improvement alternatives for US 1 between Guilford Road and Howard/Corridor Road to address safety and driver expectancy needs.	District 7, OOTS	To be determined
	US 1 Reconstruction	Establish a project to begin the National Environmental Policy Act (NEPA) planning process to specify location of typical sections; address environmental & property impacts and preliminary project costs.	OPPE	To be determined
Systems Design	Speed Management	Monitor speeds north of Montgomery Road and consider targeted enforcement or speed management.	District 7, OOTS, & Highway Design	9 months
	Access Management	Establish a signal spacing policy consistent with Strategy recommendations. Consolidate access points and obtain frontage access controls in coordination with private development and County roadway projects. Establish a voluntary access control acquisition program for the US1 Corridor similar to SHA's program for limited access highways on the Eastern Shore.	OPPE, EAPD RIPD, EAPD, ORE	Ongoing
Howard County Department Of Planning and Zoning (DPZ) Initiatives				
Multimodal System Planning	Truck Routes	Designate priority truck routes, orient truck traffic to these routes, and provide appropriate design and amenities.	DPZ, DPW, Motor Carriers	6 months
	Bicycle Circulation Network & Facilities	Develop a continuous bicycle circulation network, fill gaps, add signing and lane markings, require bicycle parking in new commercial, employment and civic areas and retrofit existing destinations.	DPZ, Rec & Parks, DPW, Bicycle Advocates	18 months
	Parking Management	Develop parking policy with appropriate consideration of multimodal travel opportunities and shared supply in mixed zones.	DPZ	12 months
	Transit Service	Work with transit providers to locate stops in new development, improve transit service and encourage transit use by corridor employees.	DPZ, Howard Transit, MTA	Ongoing
	North Elkridge Circulation Study	Conduct a targeted study of bicycle and pedestrian circulation north of Old Washington Road.	DPZ, DPW	12 months

Focus	Item	Strategy Description	Collaborators	Timeline
Howard County Department Of Planning and Zoning (DPZ) Initiatives - Continued				
Education & Outreach	Best Practice Materials	Develop informational/educational materials about the US 1 Revitalization Vision, the transportation improvement plan, and multimodal site design (to create successful pedestrian networks) for distribution to development professionals and elected officials.	DPZ, Legislative affairs	9 months
	Staff Workshop	Prepare and present a workshop for the Subdivision Review Committee and engineering staff working in the corridor to raise awareness of best practices for walkable places.	DPZ	9 months
Plan Review	Site Design Guidance	Augment the Route 1 Manual to require site design to advance street connections through sites with roads to adjacent parcels and existing streets; limit dead end access to/from collectors and arterials; enhance connections and facilities for transit, pedestrians and bicycles including bicycle parking in employment and commercial zones.	DPZ	9 months
	Local Activity Submittal	Develop specific requirements and forms for a Local Activity Submittal that will supplement Sketch Plan requirements for all development proposals in the US 1 Corridor.	DPZ	9 months
Plans, Policies & Procedures	Mapping Updates	Revise and amend the Local Network Connections Maps as needed to reflect evolving opportunities and constraints.	DPZ	Ongoing
	US 1 Right-of-way Preservation	Revise the Route 1 Manual to formalize the desired right-of-way preservation and ensure consistency with SHA's pending Highway Needs Inventory (HNI) update.	DPZ, SHA	6 months
	Project Prioritization	Prioritize roadway, transit and path capital improvement projects for agreement and implementation by the Department of Public Works and for State Consolidated Transportation Program inclusion.	DPZ, DPW, Communities	Annually
Howard County Department Of Public Works (DPW) Initiatives				
Capital Projects	County Roadway Connections Projects	Establish an annual capital program to design and construct retrofit roadway and path connections as identified in the Improvement Plan. Priority projects are listed in Section K.	DPW, DPZ	Annually
	Bicycle Routes & Facilities	Establish an annual capital program to fill gaps in the bicycle network; add appropriate signing, pavement markings and traffic control to routes.	DPW, DPZ, Bicycle Advocacy	Annually
	Sidewalk Connections	Construct sidewalks (shaded where possible) on both sides of all new roadways and improvement projects in the corridor. Facilitate provision of adequate ROW for appropriate sidewalk width and inclusion of street trees for all public walking paths.	DPW, DPZ	Ongoing
Finance	Transportation Impact Fees	Establish a mechanism to pool developer contributions and permit timely and orderly implementation of transportation improvements.	DPZ, DPW,	12 months
Follow-up Planning	Functional Classification Overlay/ Street Design Standards	Establish a functional classification overlay for the corridor that supports an interconnected, hierarchical network and provides roadway design guidance based on land use and/or priority users.	DPW, DPZ	12 months
	Dorsey Run Road Access	Establish an access management plan for Dorsey Run Road to manage conflicts, create a connected network and enable viable transit service.	DPW, DPZ	12 months
	Transportation Impact Analysis	Consider revising APFO Roads Test and Traffic Study requirements to include high-volume local road intersections and require pedestrian and crash analysis to encourage safety assessments and improvements.	DPW, DPZ	9 months
Subdivision Review Committee Initiatives				
Development Process	Review Checklists	Highlight issues and desired outcomes related to transportation and identify how the development plan accommodates each element of the US 1 Improvement Plan.	DPZ	6 months
	US 1 Access Design	Restrict widening beyond the planned typical section for US 1. The third outside through lane on US 1 will serve turning movements at driveways, stopping transit vehicles, and trucks.	DPZ, DPW, SHA	Ongoing
	Local Activity Submittal	Incorporate the Local Activity Submittal into the Sketch Plan review process.	DPZ, DPW	6 months

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