



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item #16
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MEMORANDUM

TO: Montgomery County Planning Board

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SUBJECT: I-270 / US 15 Draft Environmental Impact Statement (DEIS)
Maryland Department of Transportation Project No. FR 192B11
Planning Board Project Status Review

This memorandum provides a status report on the progress made by the Maryland Department of Transportation (MDOT) regarding the referenced project planning study. Representatives from MDOT will be available to answer questions at the October 2 worksession.

ORGANIZATION OF MEMORANDUM

This memorandum contains the following sections:

- 1) Study process and schedule
- 2) Staff findings and comments
- 3) Summary of study progress
- 4) Detailed review of study issues

STUDY PROCESS AND SCHEDULE

The Maryland State Highway Administration (SHA) and Maryland Transit Administration (MTA), agencies of MDOT, are jointly conducting the I-270/US 15 Multi-Modal Corridor Study. The study has evaluated highway and transit alternatives in a 31-mile long corridor between the Shady Grove Metrorail Station and US 15 (at Biggs Ford Road) north of the City of Frederick. Exhibit 1 shows the study area.

The SHA and MTA initiated the study in June 1994 and are completing the detailed planning phase that culminated in preparation of the DEIS in May 2002. A study team consisting of federal, state, and local agencies has met on a continuing basis through the study to assist and advise SHA and MTA staff. The study team expects to select a preferred alternate during late autumn 2003 and gain state and federal agency concurrence during early 2004. The study team will then develop a Final Environmental Impact Statement (FEIS) to address the impacts of this alternate and identify appropriate mitigation techniques. Once federal agency approval is obtained for the preferred alternate and funding allocated for project design, the project can proceed to the design phase.

Staff last briefed the Planning Board on this project in July 2002. The project schedule has subsequently been delayed by approximately one year as MTA and SHA staff investigate and resolve the issues described in the next section of this memorandum.

A key study team objective is to identify a preferred alternate for which funding can be included in the Federal Surface Transportation Reauthorization Act, commonly known as SAFETEA (Safe, Accountable, Flexible, and Efficient Transportation Equity Act). **Congressional action on SAFETEA, originally scheduled for September 2003, has been deferred by approximately six months.** In March 2003, Governor Ehrlich submitted his reauthorization agenda to Congress, including \$15M in planning funds plus an additional amount to be determined for construction.

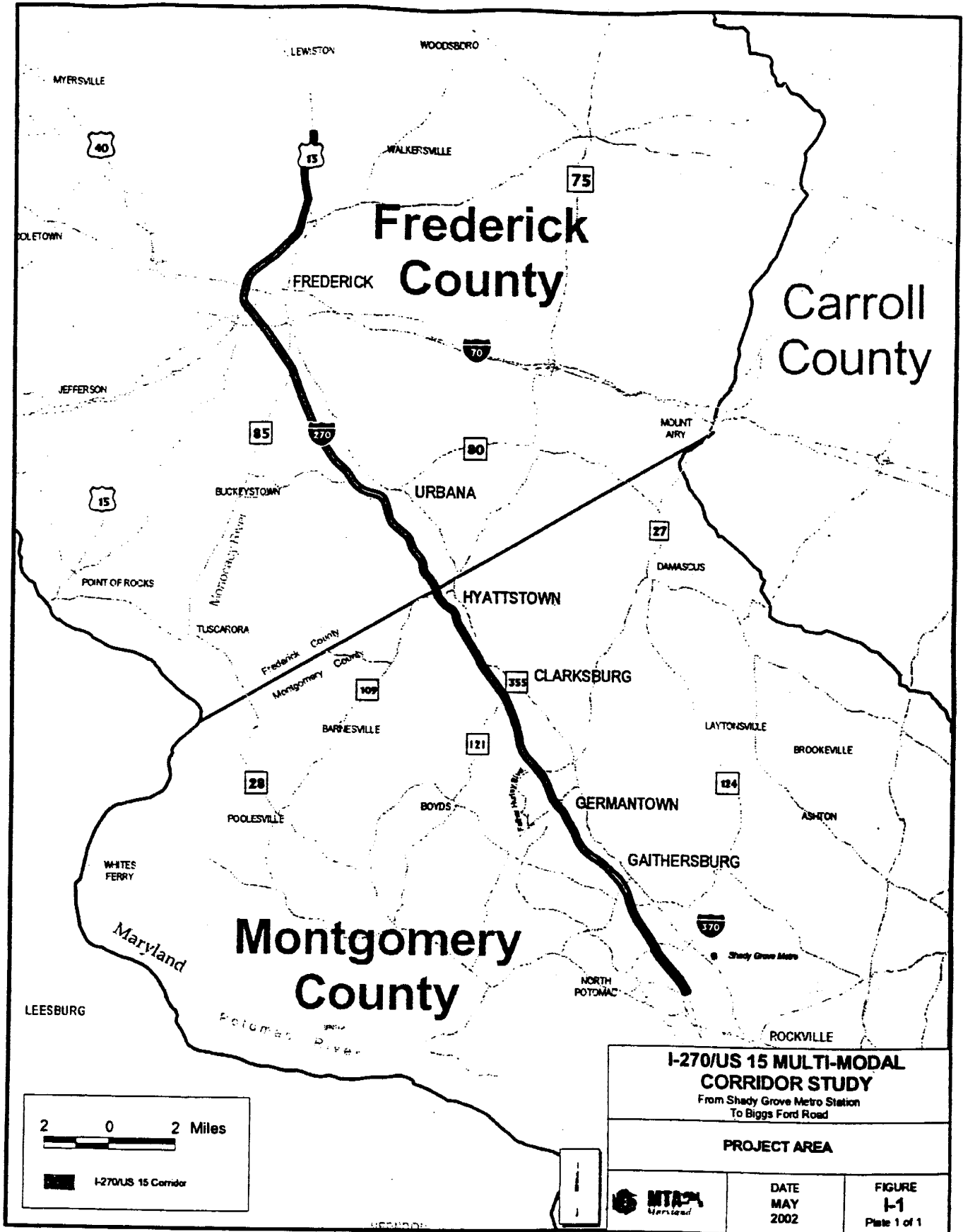
Secretary Flanagan has indicated a preference to move forward on the Corridor Cities Transitway by selecting a mode within the next several weeks. The mode selection would be a positive step forward because it would provide a recognizable identity and vision for the transitway. **Staff urges, however, that the state only announce a mode selection concurrent with the release of a well-defined capital and operating program that will allow agency staff members, elected officials, and the public to understand the quality of the services being proposed.**

STAFF FINDINGS AND COMMENTS

Based on the recent study progress, Montgomery County Department of Park and Planning staff offer the following findings and comments. These comments, while structured in the manner of a resolution, are merely offered as potential talking points for the October 2nd briefing.

- If capital and operating costs were equal, the locally preferred mode for the Corridor Cities Transitway (CCT) should be light rail transit (LRT). If, however,

Exhibit I



the state determines that implementation of a high-quality bus rapid transit (BRT) system is substantially more affordable than LRT, and that meaningful BRT segments can be constructed within the next federal reauthorization program, then the local elected officials should support BRT as the preferred CCT mode.

- Because the CCT will be constructed from the Shady Grove Metrorail Station to Frederick County in phases, the state and local governments within Montgomery County should commit to preserving the right-of-way for the full CCT, including service to Germantown and Clarksburg, as well as collaboration on a preferred yard and shop location.
- The CCT should be implemented on an accelerated schedule commensurate with or ahead of I-270 widening
- Additional through travel lanes on I-270, including consideration of managed lanes, should be consistent with the maximum number of lanes recommended in area master plans and should be designed and/or designated to promote transit use and ridesharing
- The state should provide elected officials, their staffs, and the public a clear statement of the process and schedule for decision-making and implementation, similar to the excellent level of information on process and schedule developed for the Intercounty Connector environmental impact study process

SUMMARY OF STUDY PROGRESS

The development of a preferred alternate has included MDOT investigation of several concerns in the Montgomery County portion of the study area as summarized below and described in greater detail in the following section of the memorandum.

Transit Concerns

- 1) **Affordability of Bus Rapid Transit (BRT) versus Light Rail Transit (LRT) for the Corridor Cities Transitway (CCT).** The DEIS suggested that both modes were cost-competitive and neither mode was substantially more cost-effective than the other. MTA now believes BRT to be substantially more cost-effective and affordable than LRT. MTA staff have indicated that Secretary Flanagan is interested in announcing a selected CCT mode within the next few weeks.
- 2) **Evaluating alternative CCT alignments, transit stations, and yard and shop location.** The study team has investigated alternative alignments that might better serve the Kentlands community, considered alternative transit station sites in Gaithersburg and Germantown, and identified an additional potential site for the yard and shop facility.

Highway Concerns

- 3) **Minimizing residential property impacts** The DEIS identified dozens of potential residential property displacements, mostly concentrated in the vicinity of the I-370 interchange in Gaithersburg and the Fox Chapel community in Germantown. SHA now believes most of the property displacements described in the DEIS can be avoided by revised engineering concepts
- 4) **Evaluating Newcut Road interchange alternatives.** SHA has performed additional alternatives analysis to address federal agency concerns regarding environmental resources impacted by the Newcut Road interchange design shown in the DEIS.
- 5) **Consideration of Managed Lane Concepts.** Given current budgetary constraints, SHA is considering various user-fee strategies statewide, including value pricing and managed-lane concepts on I-270. High-occupancy-vehicle (HOV) incentives are not necessarily included in the state's vision for managed lanes.
- 6) **Addition of General Purpose Lanes on I-270.** SHA has evaluated alternative means to provide needed capacity along I-270. Both six-lane and eight-lane cross sections at the Frederick County line are still potential options.

Study Process Concerns

- 7) **Developing a phased implementation plan.** The study team believes that a logical first phase of the CCT, if LRT were the selected mode, would be to connect Shady Grove to Metropolitan Grove. With this plan, the FEIS must identify how the Metropolitan Grove station best connects to I-270. If BRT is the selected CCT mode, the FEIS should address service between COMSAT and the Clarksburg Town Center. Regardless of CCT mode, the FEIS must determine how the master-planned hiker-biker trail along the CCT would be implemented.
- 8) **Next Steps: Process and Schedule.** Schedules and process for additional focus group and public involvement, CCT mode selection, definition of a locally preferred alternate for Federal SAFETEA Reauthorization and an FEIS are all being updated. The decision-making process and schedule, including public and elected official review, need to be clarified and publicized.

DETAILED REVIEW OF STUDY CONCERNS

The following paragraphs provide additional detail on the eight concerns described summarized above, in order.

Concern #1. Affordability of Bus Rapid Transit (BRT) versus Light Rail Transit (LRT) for the Corridor Cities Transitway (CCT)

The selection of BRT or LRT for the CCT depends heavily, but not entirely, upon estimated capital and operating costs and forecast transit ridership. The DEIS suggested that both BRT and LRT were both significantly cost-competitive. Revised estimates from MDOT indicate that BRT can be constructed far more efficiently than estimated in the DEIS, as indicated in Exhibit 2.

Exhibit 2. Corridor Cities Transitway Costs

	Light Rail Transit (LRT)	Bus Rapid Transit (BRT)
Capital Cost		
DEIS	\$857M	\$792M
Current Estimates ¹	\$705M	\$439M
Change from DEIS	(\$152M)	(\$353M)
Annual Operating Cost		
DEIS	\$25M	\$64M
Current Estimates ¹	\$23M	\$23M
Change from DEIS	(\$2M)	(\$41M)

¹ Current estimates reflect midpoint of range provided by MTA to study team 9/16/03

Both the LRT and BRT capital cost estimates and the BRT operating cost estimates have been reduced substantially from the DEIS values. The primary factor in reducing BRT operating costs was development of a smaller but more efficient bus operations plan. The bus operations plan reduced the BRT scenario ridership to a level commensurate with the LRT ridership, providing better “apples to apples” comparison. Staff supports the changes to the bus operations plan. The number of buses eliminated in the revised bus operations plan also accounts for about \$57M in capital cost savings.

MDOT has indicated that revisions to five key assumptions explain reductions in both LRT and BRT capital costs. Where available, the effect of each assumption on capital cost is described. The study team is discussing the desirability of these changes, presented below in generally increasing order of staff concern:

- The cost of right-of-way expected to be obtained through dedication has been removed, saving approximately \$55M. The value of this property, however, remains important in determining the local agency contribution to the project.
- The cost of purchasing additional Metrorail vehicles to absorb the increased ridership on the Red Line attributable to the CCT, estimated in the DEIS at \$69M for the LRT scenarios and \$112M for the BRT scenarios. The equity of this revision is being discussed among state, federal, and WMATA staff representatives
- Removal of BRT bypass lanes and pedestrian overpasses at stations.

- The removal of the hiker-biker trail from both the LRT and BRT scenarios.

Throughout the study process, the study team has understood that from a technical perspective that BRT can be developed to have essentially all the same features as LRT. The qualitative advantages perceived with LRT are primarily a sense of permanence suggested by the steel rails and a relative lack of North American experience with true rubber-tired rapid transit systems.

A corresponding limitation of BRT is that it's possible to gild a bus service and merely label it BRT without committing to quality infrastructure or service. Staff suggests that if:

- further scrutiny of the revised operating plans and cost estimates indicate that a high-quality BRT system is substantially more affordable than LRT, and
- MTA can commit to implementing a high-quality BRT on meaningful segments of the CCT within the next federal reauthorization cycle,

then elected officials should support the BRT mode.

Concern #2. Evaluating Alternative CCT Alignments, Transit Stations, and Yard and Shop Locations

During the past year MTA has investigated alternative alignments, transit station locations, and yard and shop locations in response to both civic requests and development pressures.

The Kentlands community has requested that MTA realign the CCT to serve Kentlands directly, rather than from the planned Quince Orchard Park station on the east side of Great Seneca Highway. MTA is continuing to investigate the potential for such realignment.

The value of a Kentlands realignment is related to physical challenges the study team has faced in co-locating the Quince Orchard Park / Sioux Lane station with the development plans for the Medimmune headquarters site. Similar challenges have occurred in the vicinity of the School Drive Station in Gaithersburg and the Middlebrook Station in Germantown where recent development approvals have encroached upon transit station planning efforts.

The DEIS identified several potential locations for yard and shop facilities at three station areas: Shady Grove, Metropolitan Grove, and COMSAT. Investigations into CCT phasing suggest that the COMSAT sites are not pragmatic yard and shop locations for a facility that most logically is implemented northward from Shady Grove. The Metropolitan Grove and Shady Grove sites face either environmental concerns or the reduction of development potential in the immediate vicinity of a multi-modal transit station. The study team has identified an additional yard and shop location at the Montgomery County Police Department Vehicle Recovery Facility, a site that resolves the concerns with the Metropolitan Grove and Shady Grove sites, but is currently undergoing a \$3.4M improvement (County PDF No. 470102).

Continued coordination at the city, county, and state levels is needed to identify and preserve a yard and shop location and transit station locations to ensure a viable CCT design.

Concern #3. Minimizing Residential Property Impacts

The DEIS identified up to 385 potential residential displacements and SHA has developed alternative designs that would greatly reduce the number of affected properties. The DEIS displacements are concentrated in two areas:

- In the vicinity of the I-370 interchange in Gaithersburg, the DEIS identified up to 342 displacements associated with an HOV-only ramp between I-270 and I-370. This ramp would facilitate express bus service to the Shady Grove Metrorail station and staff therefore finds it a desirable element of the highway design. SHA has determined that it may be feasible to redesign the ramp with lower design speeds (perhaps thereby limited to transit vehicles only) and limit the number of residential displacements to approximately ten residences in the Brighton West community.
- Between Seneca Creek and the Middlebrook Road interchange, the DEIS identified up to 35 displacements in the Fox Chapel community associated with extension of the collector-distributor roadway system and the CCT alignment. SHA has determined that, by reducing shoulder widths and employing retaining walls, the improvements can be implemented without any residential displacements. SHA presented these findings at an August 26, 2003 Fox Chapel community meeting.

Concern #4. Evaluating Newcut Road Interchange Improvements

The Army Corps of Engineers (ACOE) is particularly concerned about wetlands impacts in the vicinity of the proposed I-270 interchange with Newcut Road. SHA is investigating the effects of both alternative interchange configurations as well as the effects of not constructing an interchange at all. Continued interagency coordination is required to address the ACOE concerns.

Concern #5. Consideration of Managed-Lane Concepts

SHA has announced that the concept of "managed lanes" will be evaluated prior to completion of the FEIS. The term managed lanes describes a range of physical and operational elements that could include:

- toll collection
- value pricing (tolls that change according to congestion levels)
- movable barriers
- reversible lanes
- preferential treatment for transit and carpools
- some combination of these elements.

The means by which managed lanes would be investigated in the I-270 study has not yet been defined by SHA or MDOT. MDOT is in the process of conducting a value pricing study for I-270 that will be used in the evaluation of managed-lane concepts. At this time SHA believes that some physical components of a managed-lane alternative could be included in a preferred alternative without requiring a Supplemental Draft Environmental Impact Statement.

The introduction of a user fee can be a useful tool to better balance supply and demand and provide some level of revenue. Both of these objectives are useful for addressing congestion in a fiscally sound manner. Staff finds that a "managed" lane would generally be consistent with the Master Plan of Highways, which does not specify operational details regarding tolls. However, the Master Plan of Highways does contain specific recommendations regarding HOV lanes as another tool for efficiently managing demand and **staff recommends that a toll lane is not a one-for-one substitute for an HOV lane under the label of a managed lane.**

Concern #6. Addition of General Purpose Lanes on I-270

The DEIS described five alternatives for the highway component as briefly summarized below:

Alternate 1 is the No-Build Alternate.

Alternate 2 is the Transportation Systems Management/Travel Demand Management (TSM/TDM) Alternate, which includes no improvements on I-270.

Each of the Alternates 3, 4, and 5 extends the typical cross section found at the southern end of I-270 as far north as Father Hurley Boulevard. To the north of Father Hurley Boulevard:

- Alternate 3 includes extending an HOV lane north to I-70
- Alternate 4 includes extending a general purpose lane north to I-70
- Alternate 5 includes extending both an HOV lane and a general purpose lane north to I-70

Staff finds that both Alternates 3 and 4 would be considered consistent with the Master Plan of Highways in Montgomery County. Only Alternate 3, however, would be consistent with the Planning Board's recommended transportation network described in the January 2002 Transportation Policy Report, which specified HOV lanes for widening I-270 north of Clarksburg Road (MD 121).

The DEIS indicates that each of the three build alternates, Alternates 3, 4, and 5, share several common characteristics:

- None of the build alternates are forecast to eliminate congestion on I-270 in Montgomery County
- None of the build alternates are forecast to substantially affect transit ridership

Concern #7. Developing a phased implementation plan

SHA and MTA staff suggest that the nearly \$3 billion in capital improvements being considered for the corridor preclude implementation as a single project. Rather, to smooth the feasibility of both funding and construction impacts, the recommended improvements will likely be phased as a series of projects.

The FEIS will include an examination of phasing options for implementation of the recommended package of improvements. The DEIS does not provide information on phasing, but information on capital costs and existing and forecast congestion is available to allow staff to suggest implementation priorities that provide the biggest bang for the buck early in the implementation process.

It appears likely that the Corridor Cities Transitway would be implemented in phases. If LRT were the selected mode, a three-phase implementation plan would be practical:

- Phase I from Shady Grove to Metropolitan Grove
- Phase II from Metropolitan Grove to COMSAT, and
- Phase III from COMSAT through Clarksburg Town Center into Frederick County

Based on the DEIS, the state can obtain federal location and design approval for Phases I and II as part of the FEIS and Record of Decision. Phase III was not studied in this DEIS and will need to be part of a subsequent project planning study. If BRT is the selected CCT mode, however, extension of CCT service from COMSAT to the Clarksburg Town Center should be addressed in the FEIS.

If Phase I is implemented as either BRT or LRT, additional consideration must be given to the design of the Metropolitan Grove station as an interim terminal station. Access and parking issues are paramount. SHA has developed a concept for extending Metropolitan Grove Road to a transit/HOV only interchange with the I-270 HOV lanes. Additional efforts are required to determine whether such a phasing plan would require a Supplemental Draft Environmental Impact Statement (SDEIS).

Regardless of mode, MTA estimates that the capital cost of implementing the CCT between Shady Grove and Metropolitan Grove will be about 60% of the cost of implementation between Shady Grove and COMSAT.

One clear advantage of the BRT mode on the CCT is that the phasing plan could be much more flexible since busway segments could be implemented piecemeal and used in queue-jumper fashion as they come on line. Funding from all levels of governmental sources could be developed in smaller increments, potentially reducing the amount of competition with major transit system improvements nationwide. The travel benefits of a BRT system could therefore begin to be realized during the early phases of construction as compared to waiting for a several-mile long LRT segment, with completed stations and a yard and shop, to be completed. For instance, implementation of portions of the CCT between Metropolitan Grove and Clarksburg could occur before the portion between Shady Grove and Metropolitan Grove is complete.

Staff urges that planning and design activities for the CCT continue on a schedule accelerated ahead of I-270. While both highway and transit components of the multi-modal project are needed, the CCT design activities can influence, and are definitely influenced by, land use and development decisions in the County and the independent municipalities. A clear vision and a plan of action for the CCT will help improve the development review process and preserve the existing investment in the transitway alignment. For this reason, staff recommends that local agencies and elected officials should support the CCT implementation as the highest priority among the various projects in the I-270 study area.

Several highway components evaluated in the I-270 study also affect local land use planning. Two new interchanges in Montgomery County are proposed. The Watkins Mill Road Extended interchange has already been accelerated as a breakout project from the rest of the I-270 study. **The Newcut Road interchange is similarly needed to support development in Clarksburg.**

MTA staff have indicated that removing the proposed hiker-biker trail along the CCT alignment would improve project cost-effectiveness per Federal Transit Administration criteria and therefore improve project eligibility for new-starts funding. **The responsibility for, and phasing of, the master planned hiker-biker trail remains to be determined.**

Concern #8. Next Steps: Process and Schedule

The study team understands that several next steps need to be coordinated, including:

- Completion of the technical studies described above, including
 - CCT alignment, transit stations, and yard and shop site selection
 - Newcut Road interchange
 - Managed Lanes concept investigation
- Selection of a locally preferred alternate, including both highway and transit elements
- Determination regarding the need for a Supplemental DEIS
- Submission of a project or projects as part of the SAFETEA federal reauthorization package in early 2004.
- Completion of an FEIS for the multi-modal study or, alternatively, separation of the environmental impact statement process into independent elements for the highway and transit components described in the DEIS.

Staff finds that the federal reauthorization is the primary deadline affecting project implementation. The current authorization, known as TEA-21, expires September 30, 2003. In March 2003, Governor Ehrlich submitted his reauthorization agenda to Congress, including \$15M in planning funds plus an additional amount to be determined for construction. At this time, it appears that Congress will approve a five-month or six-month extension of current TEA-21 funding levels. The extension would delay deliberation on and passage of SAFETEA until early 2004, allowing the Ehrlich administration several weeks to update requested funding levels.

During the past year, SHA and MTA have been working diligently with local communities and interest groups on the concerns described in this memorandum. A plan to synthesize, both technically and procedurally, each of the concerns into a locally preferred alternate and a reauthorization package has not yet been developed. **We urge SHA and MTA to develop and publicize this plan as part of the decision making process.**

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