MONTGOMERY COUNTY PLANNING BOARD
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

April 1, 2014

James T. Smith, Secretary
Maryland Department of Transportation
7201 Corporate Center Drive
Hanover, Maryland 21076

Re: Mandatory Referral for the Purple Line

Dear Mr. Smith,

The Montgomery County Planning Board/Parks Commission reviewed and approved the Mandatory Referral for the Purple Line at our regularly scheduled meeting on March 20, 2014. Our comments to the Maryland Transit Administration (MTA) are in Attachment 1, to the Maryland State Highway Administration (SHA) in Attachment 2, and the Montgomery County Department of Transportation (MCDOT) in Attachment 3. As you know, this project is of statewide and regional importance. Accordingly, your assistance is requested to ensure a coordinated joint response by MTA and SHA, constituent agencies of the Maryland Department of Transportation (MDOT).

While MTA is the overall sponsoring agency that will construct the Purple Line, this is a large and complex project that requires approvals from different agencies. Many of the major station areas are located on or near State highways and therefore the assistance of SHA is essential in achieving optimal pedestrian and bicyclist access to these stations. We believe that MDOT should take the lead to ensure the highest level of coordination between MTA and SHA, as well as input from MDOT's staff in order to achieve the best possible conditions for Purple Line passengers and surrounding communities.

While the project as currently designed is substantially consistent with the County's approved and adopted master plans, we believe that the pedestrian accommodation and station access in the project area must be improved to ensure the success of the Purple Line. The stations of greatest concern accessible by State roads are Woodside Station, located on MD 390 (16th Street), and Piney Branch Road Station, located on MD 193 (University Boulevard).

The introduction of a rail station and the land use changes recommended by approved and adopted master plans will fundamentally change the nature of many of the Purple Line station

areas from being largely focused on automobiles to being equally focused on pedestrians. Yet pedestrians are not adequately prioritized at these station areas. For example:

- MTA is appropriately proposing a marked crosswalk on MD 390 to provide access to the Woodside Station. However, the crossing as planned is unsafe because pedestrians would be directed to cross MD 390, a six-lane highway with a posted speed limit of 35 mph and an AADT of over 25,000 vehicles, without the protection of a traffic signal.
- The intersection of MD 390 and Spring Street includes an excessive crossing distance on the east leg, requiring two pedestrian signals and three refuge islands to break up the crossing. The intersection geometry also enables vehicles traveling northbound on 16th Street and turning right onto Spring Street to speed across one of the crosswalks. MTA is planning to acquire the Spring Center to the northeast of the intersection and reconstruct the Spring Street bridge over the tracks, so there is an opportunity to make major improvements for pedestrians in an area that connects the Silver Spring CBD with the Woodside Station. With the coming of the Woodside Station, the redevelopment of the Spring Center site after construction of the Purple Line, the completion of the Fenwick Place development at the southwest corner of Spring Street and Second Avenue, an approved redevelopment of the north Falklands parcel, and the potential redevelopment of the southeast corner of the 16th Street/Spring Street intersection, this pedestrian crossing will become far busier than it is currently.
- The proposed Piney Branch Road Station is one of only two Purple Line stations along the entire 16 mile alignment that have a single-ended platform. Station access is from the north side of the platform, so passengers coming from the south have to walk out of their way to get to the station. The longer travel time would decrease the station's catchment area and therefore its ridership. The Long Branch Sector Plan recommends a traffic signal at the intersection of MD 193 (University Boulevard) and Gilbert Street to not only improve station access, but also to facilitate a connection between the Sligo Creek Trail and the Long Branch Trail to the Northwest Branch Trail. SHA has not yet agreed to provide this traffic signal.

A thorough review of this project is needed with the goal of meeting both AASHTO recommendations for pedestrian facilities and ADA Best Practices at a minimum; the use of both of these policies is recommended by the Federal Highway Administration in providing access to transit stations.

In commercial areas, a higher level of accommodation is required to ensure that transit patrons have safe and adequate access, that potential patrons are encouraged to use the Purple Line and justify the State's and County's significant investment in this facility, and to support and promote transit-oriented development. Needed improvements within the Purple Line corridor should be completed in the near term, with the rail facility itself. Other longer term improvements will probably be needed to enhance station access, improvements that will require a partnership between SHA and MCDOT as the P3 design progresses. It is important, though, that additional improvements be identified and dealt with as quickly as possible and responsibility assigned so that construction can be expedited.

Embedding the Purple Line tracks on University Boulevard is of particular importance in this coordination effort. While we concur with the decision to repurpose two travel lanes on University Boulevard for the Purple Line, we believe that this transitway should be accessible to the County's planned bus rapid transit service unless it is clearly demonstrated that this would have a negative effect on overall transit service.

In addition, we request assistance from the SHA for access to our facility at Long Branch Local Park. The Purple Line will restrict access (no left turns in and out) to the community center and pool facilities along MD 320 (Piney Branch Road). MTA has committed to constructing a new driveway for the park to connect to the Barron Street signal, which will allow for left turns out of the park, but left turns in remain a problem. While this is a state highway, the park includes County facilities. We would like MDOT and SHA to work with M-NCPPC, Montgomery County Department of Parks and Montgomery County DOT to find a way to allow left turns into the park directly from Piney Branch Road, particularly during large community events and swim meets at the park; this would eliminate the need to make circuitous detours on County streets through the neighborhood to make the turn.

While MTA is only required to meet minimum MDE standards for stormwater management on this project, there appear to be significant opportunities to retrofit existing untreated impervious areas that drain through the project area to help mitigate some of the existing water quality issues along this urban corridor. M-NCPPC requests that MDOT view this as an opportunity to provide additional stormwater management treatment to these areas and continue to work with the Department of Environmental Protection and the Department of Parks to determine stormwater management opportunities within the impacted watershed. Additionally, it is imperative that the design team identify ways to maximize on-site treatment, ensure impervious runoff is actually intercepted, and balance the treatment facility

capacity with the impervious areas draining to them. There is significant potential to address the state and local water quality goals by combining the efforts and funding of various agencies through this process.

Finally, I would like to ask that you identify a point of contact for issues that require a high level of coordination. This person would provide a way to make you aware of issues that come to our attention and have them addressed as efficiently as possible.

Thank you for your assistance in coordinating a joint response from MDOT that reflects coordination between MTA's and SHA's responses to the individual Planning Board/Parks Commission recommendations, as well as any necessary input from your staff. We request that these responses be provided to us within 45 days. If you have any questions or comments concerning our review, please do not hesitate to call me at 301-495-4605, or you may call David Anspacher of our staff at 301-495-2191.

Sincerely,

Françoise M. Carrier
Chair

Attachments
Attachment 1: Planning Board Comments to MTA
Attachment 2: Planning Board Comments to SHA
Attachment 3: Planning Board Comments to MCDOT

Cc:
Jamie Kendrick
Mike Madden
Stuart Montgomery
Jeffrey Folden
Sean Johnson
Gary Erenrich
Glenn Orlin

Attachment 1
Planning Board and Parks Commission Recommendations for the Maryland Transit Administration
April 1, 2014

PURPLE LINE MANDATORY REFERRAL

On March 20, 2014, the Planning Board made the following comments sitting as both the Planning Board and the Parks Commission. The Maryland Transit Administration (MTA) made numerous commitments to each individual park impacted by the Purple Line project. These commitments are identified and documented in the de minimis letters for each park, and these commitments are expected to be reflected by the FTA's Record of Decision due to be released at the end of March 2014. The following comments are in addition to those commitments.

General Comments

Perhaps the greatest benefit but also the greatest challenge of a P3 process is that bidders have the opportunity to propose refinements to the project. The benefit is that proposals will be evaluated based upon a set of criteria, creating an incentive for bidders to propose innovative designs and to reduce costs and provide improvements to the project. The challenge is that only items that are specifically required by the RFP are binding on the bidders – all other elements of the project can be modified. As with any new project delivery approach there are challenges to be worked out, especially in the tight, urban context of the project. We are still learning what those challenges will be with the Purple Line. One issue that has emerged in the staff's review of the Purple Line is that due to the competitive procurement process, MTA is unable to publicly discuss what aspects of the project are binding in the RFP. The binding elements will not be made public until a preferred concessionaire is selected in late 2014.

- *In future P3 projects endeavor to provide greater assurance to the public and municipalities, before the final concessionaire is selected, about what aspects of the project are binding and what aspects of the project the bidding concessionaires have the opportunity to change. If the final design of this project or future projects changes in any substantial way from what has been presented to the Board for review, the requirement in State law for Mandatory Referral of the project will not have been met and MTA will need to resubmit the project for Mandatory Referral.*
- *Provide regular briefings to the Planning Board on the Purple Line project over the course of final design and construction, much as the State did for the Intercounty Connector project.*

Communities along the Purple Line corridor continue to voice concerns about location-specific aspects of the project. One example is the design of a highly visible power substation located on the north side of Wayne Avenue between Cloverfield Road and Greenbrier Drive. MTA, with the participation of Department staff, continues to work with the community to address this issue. Similar issues remain in other neighborhoods and will likely arise in other areas during project design and construction. Therefore, MTA should:

- *Commit to regular meeting with neighborhood working groups throughout final design and construction of the projects to: 1) provide communities with regular updates, 2) hear community concerns with construction, 3) receive feedback on final design treatments.*
- *Consider design guidelines that have been approved or will be approved by the Montgomery County Planning Board for station areas (such as for the Bethesda CBD, Chevy Chase Lake Sector Plan, Silver Spring CBD, Long Branch Sector Plan, and Takoma Langley Crossroad Sector Plan) and community feedback for the design of retaining walls, traction power substations, catenary poles and wires, and other structures that will have a visual presence.*

MTA has suggested that an objective analysis of pedestrian access is needed to determine whether station access is adequate, and has indicated that one such metric is multimodal level of service (including level of service evaluations for pedestrians, bicycles, transit, and automobiles). We agree that an objective measure would be useful, but to our knowledge only automobile level of service has been evaluated to date. We therefore request that MTA:

- *Conduct a multimodal level of service analysis within the immediate station areas. If deficiencies are identified, MTA, in coordination with MDOT, SHA, and MCDOT, should identify potential solutions and incorporate them into the Purple Line RFP.*

Pedestrian access to the Purple Line stations in Montgomery County can be improved, especially at the Lyttonsville, Woodside, and Piney Branch Road stations. In many locations sidewalks or paths are directly adjacent to the curb with minimum width sidewalks. Since pedestrian volumes around Purple Line stations will increase substantially once the Purple Line is operational, MTA should work with MCDOT and SHA to:

- *Commit to providing quality pedestrian and bicycle improvements between stations and the communities in their immediate vicinities.*
- *Conduct a thorough review of this project with the goal of meeting both AASHTO recommendations for pedestrian facilities as well as ADA Best Practices at a minimum.*
- *Identify near term and long term improvements to enhance station access.*

MTA should further support pedestrian and bicycle access to transit. One way to do this is to:

- *Establish a mechanism during the final design and construction phases of the Purple Line project to enable Montgomery County to supplement Purple Line funding to enhance pedestrian and bicycle station access in locations where additional infrastructure is needed. This will ensure efficient use of public funds and minimize post-Purple Line disruption.*

MTA's commitment to allowing bicycles on the light rail vehicles at all times recognizes the growing importance of bicycle access. In fact, the Purple Line / Red Line Urban Design Guidelines Draft (dated 9/12/2012) recommends installing a quantity of bicycle racks at every station that provides for a number of cyclists equal to 1% of anticipated daily transit ridership, but no less than eight bicycles. Therefore, MTA should:

- *Estimate the number of bicycle parking spaces needed at each station based on the Purple Line / Red Line Urban Design Guidelines and determine how many additional spaces are needed beyond what the Purple Line project can accommodate.*

This will assist Montgomery County in identifying additional locations for bicycle parking spaces during the development review and facility planning.

General Parkland Comments

The Purple Line impacts six parks and one park easement in Montgomery County. Some impacts are minor, while others are more significant. It is important that when MTA completes the Purple Line project that all parks be safe and functional for our park patrons and restored to park standards. Therefore:

- *All parks shall be restored to a condition that Parks considers fully functioning for long-term park usage following construction.*

Environmental Comments

Interior forest clearing is proposed along the limits of disturbance (LOD) adjacent to Rock Creek Stream Valley Park. The LOD line jogs out in places furthering the impacts to the Rock Creek Stream Valley requiring additional clearing of interior forest, specimen trees and steep slopes. Therefore, MTA should further:

- *Minimize the clearing of forest along with its associated steep slopes and erodible soils.*

In addition:

- *Work with Montgomery County Planning staff to identify forest mitigation opportunities outside of parkland prior to approval of the Forest Conservation Plan.*

According to the FEIS there will be approximately 193 specimen trees (over 30" diameter at breast height 'DBH') removed and forest cleared within the Purple Line right-of-way in Montgomery County. In an effort to greater understand the final proposed impacts and mitigation measures taken by MTA, staff requests MTA:

- *Provide the draft Maryland Forest Conservation Plan when available for staff comment and information about the quantities proposed for forest clearing, specimen tree removal, and mitigation sites.*

The legends included on the landscape plans (Volume 1 starting on plan sheet #570) do not include a clear and consistent representation of which trees are proposed for removal, and which trees will be preserved. Therefore, MTA must:

- *Modify the landscape plans to clearly differentiate the trees that will be removed from the trees that are being proposed for planting.*
- *Provide native canopy cover landscape trees along the limits of disturbance as a replacement for the canopy tree loss due to the construction of the Purple Line. Canopy cover trees must reach a height of 50 feet or greater at maturity.*

There are a number of questions and concerns staff has regarding the selected tree and shrubs proposed as landscape planting along the Purple Line. There is significant inconsistency throughout the mandatory referral submission regarding the spacing of the proposed trees would like adjustments to the landscape plan for more consistency, uniformity, shading, habitat, and symmetry. Provide additional plantings throughout the Purple Line particularly in the following locations:

- *Provide uniform tree planting spacing (35'-40' on center) and additional native canopy tree cover in the following areas within the Limits of Disturbance, where feasible:*

  South Side of Purple Line within the LOD at stations:

  - *111+00 to 145+00*
  - *183+00 to 194+00*
  - *235+00 to 236+00 (outfall)*
  - *238+00 to 239+00*
  - *242+00 to 243+00*
  - *258+00 to 265+00*
  - *296+00 to 297+00 (plant along newly graded bank on the west side of 16th Street*

- *358+00 to 395+00*
- *401+00 to 408+00*
- *428+00 to 432+50*
- *435+50 to 440+50*
- *445+00 to 446+00*
- *461+00 to 502+00 (University Boulevard)*

North Side of Purple Line within the LOD at stations:

- *135+00 to 147+00*
- *183+00 to 194+00*
- *196+00 to 206+00*
- *219+00 to 237+00 (behind the Montgomery County bus depot)*
- *258+00 to 264+00*
- *265+00 to 267+00*
- *280+00 to 292+00*
- *304+00 to 309+50*
- *321+50 to 324+00*
- *330+00 to 332+00*
- *358+00 to 395+00*
- *401+00 to 408+00*
- *435+50 to 440+50*
- *445+00 to 446+00*
- *461+00 to 502+00 (University Boulevard)*

➲ *Work with property owners to plant additional native trees, flowering trees, or shrubs on their private property as buffers to the Purple Line in the following locations:*
- *North side of the Purple Line from station 119+00 to 127+00*
- *South side of the Purple Line from station 111+00 to 132+00*
- *North and south side of the Purple Line at stations 349+00 to 352+00*

➲ *Staff requests MTA collaborate with Columbia Country Club for tree replacement locations and species preferences as there are numerous trees being removed and planting proposed which may further affect the view and experience of the Club members.*

MTA should strive to recreate the natural stratified structure of forests when replanting natural areas. These plantings should follow the document titled "Natural Resources Management Plan for M-NCPPC Parkland in Montgomery County." Therefore, MTA should:

➲ *Collaborate with M-NCPPC Parks Department to provide acceptable plantings for stratified reforestation areas (non-mitigation sites) on parkland to include shrubs, flowering and canopy trees in the following Park natural areas: Rock Creek Stream Valley Park, Sligo Creek Stream Valley Park, Long Branch Stream Valley Park*

According to the FEIS, moderate noise impacts ranging from 50-80 dBA are projected during operations at seven single family residences and four apartment buildings. The noise exposure projected at these sites is due primarily to the sounding of horns required as the LRT approaches stations and grade crossings. If horns exposure is utilized, MTA must:

- *Demonstrate how the noise levels will either be abated, or be in compliance with federal noise requirements for the seven single family residences and four apartment buildings identified as M-23, M26, M-27A & M-28 in the FEIS (Noise Technical Report, page 20).*

The use of ESD's within the right-of-way is limited. In some instances, runoff from the Purple Line is not draining specifically into the ESD's shown on the plan. Therefore, MTA should:

- *Work with M-NCPPC and DEP staff to provide stormwater treatment, particularly by increasing the use of ESDs within the limit of disturbance.*

This is likely government's last best opportunity to improve existing water quality conditions in these down-county watersheds to comply with state and local water quality goals. The Purple Line project provides a mechanism to treat significant amounts of uncontrolled runoff within the project area that negatively affect receiving streams, including Sligo Creek and Long Branch. M-NCPPC staff believes that MTA, DEP, and M-NCPPC should cooperate in achieving this important goal.

- *While MTA is only required to meet minimum MDE standards for stormwater management ('SWM') on this project, there appear to be significant opportunities to retrofit existing untreated impervious areas that drain through the project area to help mitigate some of the existing water quality issues along this urban corridor. M-NCPPC requests that MTA view this as an opportunity to provide additional SWM treatment to these areas and continue to work with DEP and the Department of Parks to determine stormwater management opportunities within the impacted watershed.*

- *It is imperative that the design team identify ways to maximize on-site treatment, ensure impervious runoff is actually intercepted, and balance the treatment facility capacity with the impervious areas draining to them.*

Originally the Department of Parks was contacted by MTA for approval of a stream restoration and wetland mitigation site close to the headwaters of Rock Creek. Parks would prefer that MTA pursue mitigation opportunities as close to the point of project impact as possible. For example, Parks staff has identified two potential wetland creation projects, one in Rock Creek SVU 1 and one at Ken-Gar Palisades Local Park. Therefore, MTA should:

- *Continue to work with the Department of Parks and DEP to identify specific areas for compensatory wetland mitigation down-county and as close to the affected wetlands as possible.*
- *Continue to work with the Parks Department and DEP to identify specific areas for stream mitigation down-county and as close to the affected stream reach as possible.*
- *Provide occupancy sensors on all platforms to dim lighting to 50% when platform is vacant. This will reduce energy costs and lower glare to drivers and the neighborhood. (MTA)*
- *Plant grass as an ESD measure between and along the tracks where the line is parallel to the Capital Crescent Trail and where the tracks are in dedicated lanes and not on a bridge or in a tunnel.*

MTA has an opportunity to provide a unique identity for each station, both architecturally and historically, that will emphasize the unique characteristics of their respective community and are developing an Arts in Transit program.

- *A consistent approach to the architectural style of each station can be maintained for all of the Montgomery County stations; however, MTA could incorporate art as part of an Art in Transit program, interpretive signage and wayfinding, lighting and landscaping, and pavers and building materials that represent the historical context unique to that station.*
- *The aesthetic design of this project, including stations, materials, and finishes, should be consistent with the quality typical of major statewide and highly visible projects.*

The Purple Line project will introduce ancillary light rail structures, such as traction power substations and catenary poles and wire into neighborhoods along the corridor. These structures can have visual and noise impacts. Therefore, MTA should:

- *Continue to investigate visual and noise mitigation for three traction power substations located in residential areas in Lyttonsville (TPSS #4), Wayne Avenue (TPSS #6), and Long Branch (TPSS #7). Relocation and undergrounding should be considered for these substations. If these residential substations cannot be relocated or put underground, and for all other substations, MTA should consider additional mitigation for visual and noise impacts that are consistent with the setting, including landscaping, screening, designs that resemble single story homes and materials that resemble existing homes in the area.*
- *The catenary system used should minimize the visual impact. Other ancillary gear such as constant tension weights and electrical transmission cables should be covered or concealed within the pole structure.*

Bethesda Station Area

At this time there is no plan to construct the "alternative" Bethesda Station recommended in the Bethesda Purple Line Station Minor Master Plan Amendment, so the "default" station is the subject of this mandatory referral. MTA has indicated that it needs to know whether the Apex Building will be demolished by mid April 2014 to be able to construct the "alternative" station.

- *Should an agreement be made to demolish the Apex Building to allow an improved Bethesda station design to be built, MTA must submit the "alternative" station design to the Planning Board as a mandatory referral. The Planning Board commits to an expedited review of a Bethesda Station area mandatory referral.*

The Town of Chevy Chase continues to have concerns regarding impacts to Elm Street Urban Park and adjacent residences, noise impacts, and an access point to the Capital Crescent Trail. Therefore, MTA and MCDOT should:

- *Continue to work with the Town of Chevy Chase to address design refinements to the Purple Line and the Capital Crescent Trail to provide an additional grade-separated crossing of the trail and to reduce noise impacts and impacts to Elm Street Urban Park and residences adjacent to the park.*

Connecticut Avenue Station Area

The abutments on both sides of Connecticut Avenue are perpendicular to the Purple Line tracks, but create leftover trapezoidal sidewalk spaces under the bridge. Ideally, the abutments would parallel Connecticut Avenue, improving pedestrian security, avoiding areas for trash to collect, and framing the view along the avenue. While the abutments on the east side of Connecticut Avenue may be difficult to

shift, due to the location of the elevators and the platform, it appears more feasible to redesign the abutments on the west side of Connecticut Avenue. Therefore, MTA should:

- ➲ *If feasible, redesign the geometry of the abutments to be parallel to Connecticut Avenue, without narrowing pedestrian walkways.*
- ➲ *Provide wall-wash lighting along the abutment walls to enhance pedestrian safety.*

A 100-foot-wide underpass for Street B-1 beneath the tracks and the trail, with the additional width specifically for pedestrians and bicyclists using an enhanced linear open space, would be beneficial for the following reasons:

- It provides more light and air for people passing through it – pedestrians and bicyclists in particular. The passage will be more pleasant and comfortable to use.
- It allows more opportunity to create a stronger visual and physical connection between the proposed central open space on the north side and the proposed neighborhood park on the south side – contributing to a better network of open space
- It reduces the impact of the Purple Line as a barrier separating north and south – and creates a more welcoming passage for flow between the sides.
- It allows for higher visibility through the passage from either end consistent with Crime Prevention through Environmental Design (CPTED) principles.

Therefore, MTA should:

- ➲ *Construct a 100-foot-wide underpass for Street B-1 in the Chevy Chase Lake Sector Plan.*

A traction power substation will be located largely within the Georgetown Branch right-of-way, adjacent to the south side of the Purple Line tracks, about 200 feet west of Connecticut Avenue. There will be an access road that runs alongside the tracks with a driveway on Connecticut Avenue. To reduce the visual impact of the substation, MTA should:

- ➲ *Consider whether it is feasible to integrate the traction power substation at Connecticut Avenue into the elevated fill for the tracks and trail, with service doors along the retaining wall, to reduce visual impacts.*

As one of the original arterials leaving and entering Washington DC, MTA must make every effort to preserve the viewshed along Connecticut Avenue. Therefore, MTA should:

- ➲ *If feasible, redesign the Connecticut Avenue bridge structure to reduce visual obstructions both below and above the rail/trail bed. Staff suggests a shallow arch structure (or steel girder of similar profile if required) as the basis for design. This comment is consistent and more in keeping with the design intent indicated in the Chevy Chase Lake Master Plan. A similar design should also be considered for the proposed bridge over "New Street" just east of Connecticut Avenue.*

Direct access is needed to the Capital Crescent Trail from the east side of Street B-1 so that trail users can access the proposed "central park" without having to cross the street. Therefore, MTA should:

- ➲ *Design the trail to accommodate a stair on the north side of the trail and the east side of Street B-1, to be provided by developers at a future date.*

- *Given the adjacency to residential and public spaces, the fill retaining walls should be designed with visual articulation. One suggestion is to provide concrete arch niches with appropriate depth to incorporate future community art. Pilasters between the niches can incorporate masonry veneer or stamped concrete forms to resemble local brick or stone materials.*

Lyttonsville Station Area

The Lyttonsville and Woodside Stations are part of the Greater Lyttonsville Sector Plan, now underway. Analysis for the sector plan area has identified potential issues that could affect redevelopment opportunities along Brookville Road and access for the Forest Glen Annex. Therefore, MTA should:

- *Create a mechanism during final design of the Purple Line to accommodate reasonable refinements at the Lyttonsville and Woodside stations that are identified during the preparation of the Greater Lyttonsville Sector Plan.*
- *Continue to work with the Planning Department during the Greater Lyttonsville sector planning process to accommodate the potential for improved access and community development.*

The Purple Line Functional Plan (page 19) recommends an elevator, stairs, and a ramp from Lyttonsville Place to the platform; however, the 30% engineering plans only show stairs and a ramp with an 8% grade. This elevator is important because it will assist people who are unable to use stairs or a steep ramp to access the station. Therefore, MTA should:

- *Provide an elevator on the east side of the Lyttonsville Lane Bridge leading down to the platform centerline, consistent with the Purple Line Functional Plan.*

The redesign of the Lyttonsville maintenance yard improves the redevelopment opportunities along Brookville Road. However, two issues remain that continue to limit redevelopment potential. First, there remains a small access driveway to the maintenance facility located just east of Lyttonsville Place Bridge, at the corner with Brookville Road. This driveway is located in perhaps the most likely area for redevelopment due to its proximity to the Lyttonsville Station and because it has the greatest depth of any parcel on the south side of Brookville Road. Second, the current design does not take advantage of the significant workforce (approximately 2,400 employees and an unknown number of visitors) located at the Forest Glen Annex of Fort Detrick, located just a few blocks away. Current designs envision access to the station from the Forest Glen Annex via Stewart Avenue and the Capital Crescent Trail, completely bypassing Brookville Road.

Consultants to MTA developed three concepts for providing pedestrian access to Lyttonsville Station from Brookville Road. Once the feasibility of these concepts has been evaluated by MTA, and in consultation with Planning Department staff, MTA should revise the 30% engineering plans to permit the pedestrian connection to be added with minimal disruption to the Purple Line. Therefore, MTA should:

- *Adjust the overhead catenary system poles and downguy locations at the Lyttonsville Station to accommodate the three identified alternatives for station access from Brookville Road. Locate the track crossovers just to the east of the Lyttonsville station platform to not preclude a future access point from Brookville Road.*
- *Conduct final design for station access from Brookville Road to the Lyttonsville Station platform based on feedback from the Planning Department.*

Additionally, to enhance redevelopment opportunities:

- *Include criteria in the Purple Line RFP that incentivizes a further reduction in the size of the Lyttonsville maintenance yard and shop, to avoid impacts to the northeast of the Lyttonsville Place Bridge.*

A traction power substation (TPSS #3) will be located in the Georgetown Branch right-of-way, in an industrial area between Rock Creek Park and Ride On bus depot. To fit this substation into the context of the area:

- *TPSS #3 should be screened in accordance with the wooded surroundings. At a minimum, a masonry exterior, screening of all exterior roof systems, and a board-on-board fence rather than a chain link fence surrounding the structure must be provided to properly blend with the wooded surroundings.*

A traction power substation (TPSS #4) will be located on land owned by CSX Transportation, at the end of Kansas Avenue adjacent to a residential neighborhood. While MTA plans to screen the substation, its location in a residential area is undesirable. There is industrial land on the other side of the Purple Line tracks that is more suitable for the substation. Therefore, MTA should:

- *Continue to investigate shifting the location of TPSS #4 just to the north in the area bounded by the Georgetown Branch, the Metropolitan Branch, and the industrial property. If the substation cannot be relocated, MTA should design a substation that resembles a single story home with materials that resemble the existing homes in the area.*

Additional Lyttonsville station area comments include:

- *The Lyttonsville Station and associated trail, stair, and ramp access should be designed to reflect their status as community landmarks, incorporating public art that depicts the cultural and historic features of the community. Particular emphasis should be placed on Lyttonsville's African American heritage. Staff recommends that Art in Transit funds be utilized for the entry canopy at the top of the Lyttonsville Place Bridge to the pedestrian ramp in order to provide a memorial, historical marker, and community information boards. This area could also contain directional maps of the Lyttonsville area. Furthermore, the retaining walls can be made available for public art to call attention to the natural and social history of Greater Lyttonsville.*
- *Utilize all opportunities for spot landscaping along the retaining wall and sound barriers along the Capital Crescent Trail to reduce their apparent size and intrusiveness on the neighborhood.*
- *The glazing shown on the staircase from Lyttonsville Place to the Purple Line platform (see Volume 7, Plan Sheets 167 and 169) must be designed to allow maximum light infiltration and to be transparent from the platform to ensure "eyes on the street" or in this case, "eyes on the stairs" for essential safety precautions, in conformance with Crime Prevention through Environmental Design (CPTED) guidelines.*
- *The maintenance and operations building must meet or exceed LEED Silver ratings as required for all commercial structures in Montgomery County.*

Silver Spring Transit Center Station Area

The Purple Line Functional Plan (page 27) recommends a direct connection between the Red Line and the Purple Line. MTA has made design provisions for a future direct connection between the Purple Line and Red Line, but this connection is estimated by WMATA to cost about $27.9 million and is unfunded. The marginal cost to add the direct connection may be less than $27.9 million, if its provision would

reduce the need for some of the vertical circulation planned between the Silver Spring Transit Center and the Purple Line and the CSX/Red Line/MARC tracks. Therefore, MTA should:

- *Assess whether any of the vertical circulation between the Silver Spring Transit Center and the CSX/Red Line/MARC could be reduced if a direct connection between the Red Line and Purple Line were constructed as part of the Purple Line, and therefore what the marginal cost would be to add the direct connection.*

Ease of transfers between transit lines plays an important role in encouraging people to use public transportation. Under existing plans, passengers transferring between the Purple Line and the Red Line will have to descend 80 feet to street level and then ascend about 25 feet to the Red Line tracks. This will increase travel time for passengers and create additional pedestrian congestion in the vertical circulation for the Red Line and Purple Line. With the future direct connection passengers will avoid using the vertical circulation column between the Red Line and the Purple Line. Therefore, MTA should:

- *Design and construct a convenient direct connection between the Red Line and the Purple Line at the Silver Spring Transit Center station.*

Purple Line passengers with disabilities accessing the station from street level must take two elevators to get to the platform, transferring at the mezzanine level. This increases their travel time. Therefore:

- *At the Silver Spring Transit Center provide a more direct connection from street level to the Purple Line platform for passengers needing elevator access.*

Users of the Capital Crescent Trail have to travel to the east end of the station to access the mezzanine, but it appears that direct access from the trail to the mezzanine could be provided from the trail. Therefore, in coordination with MCDOT, MTA should:

- *Evaluate whether it is possible to provide direct access to the Purple Line mezzanine from the Capital Crescent Trail to the east of the escalator.*

In addition, as a major transfer station for the Red Line, Purple Line, and buses, Silver Spring will require a substantial number of bicycle parking spaces. A recent study conducted by Toole Design Group evaluated several locations for a full service bicycle parking station in the vicinity of the Silver Spring Transit Center. One of the more promising locations is at 1110 Bonifant Street, an office building that MTA will demolish to construct the Purple Line. A remnant of the parcel is planned to be used for stormwater management, but MTA has indicated that it could easily be relocated offsite. Therefore, MTA should:

- *Relocate the stormwater management facility proposed on the remnant of 1110 Bonifant Street to an offsite location. After completion of the Purple Line, the County should be given first right of refusal to use of the remnants of this parcel for the Silver Spring Bicycle Parking Facility.*

A traction power substation (TPSS #5) will be located in the existing Metro Plaza commercial area, located off East-West Highway. It will be adjacent to a WMATA substation, in the location of the existing FedEx store. There will be a driveway off of East-West Highway.

- *The design of TPSS #5 should allow air rights over the substation so that future development can fully utilize the CBD-3 density allowed at this location.*

The existing Silver Spring Metrorail station will be at a considerably lower elevation than the Purple Line platform and mezzanine, but experiences high winds and driving rains under current conditions. The greater height of the Purple Line may exacerbate these conditions. Therefore, MTA should:

- *Determine whether the addition of the Purple Line above the Red Line station will exacerbate the high winds and driving rains at the Metrorail station. If this is likely to occur, MTA should modify its station design to reduce the effect.*

Silver Spring Transit Center Plaza Easement

The Purple Line and Capital Crescent Trail projects cross over a park easement at the Silver Spring Transit Center (SSTC). This was anticipated as part of the MOU between M-NCPPC and WMATA that governs the park easement exchange required to construct the SSTC. Parks recognizes the two projects are important, but we ask that MTA minimize disruptions to the park easement and entrance to the Metro station.

- *MTA and the Department of Parks agree to work collaboratively to ensure a high quality design is achieved, utilizing materials previously approved for use within the Transit Plaza Easement Area, (as identified in Exhibit E of the MOU), for this important, heavily used civic space. Special consideration shall be given to locating features associated with the Purple Line construction so as not to render the Transit Plaza Easement Area ineffectual as open space, or limit its intended use for ingress and egress from the Transit Center, or as an attractive portal to downtown Silver Spring.*

Silver Spring Library Station Area

It appears that the proposed utility modules will constrict pedestrian circulation on the platforms and handicap ramps. In the worst location, the distance between the face of the pole and the edge of the platform would be six feet; the distance between the pole and the edge of the tactile paving would be less than four feet. In addition to being an annoyance to transit patrons, requiring them to squeeze through tight spaces may cause a safety problem given the drop-off at the platform edge. Therefore:

- *At the Silver Spring Library Station: 1) Confirm that the proposed utility modules will not create an unacceptable conflict and safety problem with pedestrian access, 2) Continue to coordinate with the library on the issue of lighting and investigate whether attaching fixtures to the building overhang at the station is a feasible option, and 3) Eliminate the utility modules/poles on the platform where pedestrian circulation is most constrained and relocate their operable features to other poles wherever possible.*

Wayne Avenue

Wayne Avenue is a prominent residential street and a gateway to Silver Spring. To mitigate the impacts resulting from the Purple Line, MTA should develop a package of improvements for Wayne Avenue, including:

- *Underground existing utilities on Wayne Avenue. Street lights should be affixed to the catenary line overhead. Pedestrian lighting on either side of Wayne Avenue should use Washington Globe street lights required by the Silver Spring Streetscape Standards. This same detail should be used for any other specified pedestrian scale lighting along the Purple Line in Silver Spring, including*

the bridge over Sligo Creek. All specified fixtures, fastenings, and finishes should be submitted to M-NCPPC for review.

- *At the school property the retaining wall ranges from 10 feet to 15 feet high. Consider terracing the wall as two 5-foot to 7-foot high walls, where space permits, in order to reduce the visual impact of one large wall adjacent to sidewalk. Also consider using meta,l square-tube guardrail instead to lessen the impact of the retaining wall on pedestrians.*
- *On Wayne Avenue, where a solid extension of the retaining wall is used as a vehicular guardrail, use metal square-tube guardrail instead to lessen the impact of the retaining wall for pedestrians.*

Dale Drive Station Area

While the pedestrian space is at almost the bare minimum on the south side at Wayne Avenue, the intersection at Wayne Avenue and Dale Drive is proposed to add a turn lane in each direction. Therefore, in coordination with MCDOT:

- *The intersection of Wayne Avenue and Dale Drive should be changed to eliminate these turn lanes in favor of providing a dedicated transit lane in the eastbound direction, shifting the platform one lane to the north and creating a pedestrian refuge on the west leg of the intersection.*

At the Dale Drive Station make the following changes:

- *Provide bollards along the edge of the pedestrian refuge located between the crosswalk and the tracks to deter cars from deliberately or accidentally driving up onto the platform ramp. They will also serve as a physical caution before entering the track or street.*

MTA proposes a directional pylon at the northeast corner of Wayne Avenue and Dale Drive to inform passengers of the location of the Purple Line Station, but not at the southeast corner.

- *At the Dale Drive Station, provide a pylon at the southeast corner of the intersection of Wayne Avenue and Dale Drive.*

Sligo Creek Stream Valley Park

The ultimate right-of-way for Wayne Avenue to accommodate both the Purple Line and the Silver Spring Green Trail impacts the Sligo Cabin parking lot.

- *The Purple Line and Silver Spring Green Trail construction will require the reconstruction of the existing Sligo Cabin parking lot to safely reestablish the maximum number of parking spaces practicable and interconnections with the playground, hiker/biker trail, and track area. All reconstructed areas shall meet SWM regulations and be ADA-compliant. Contrary to MTA's language in the de minimis letters, and in the interest of improving existing water quality in the project area, Parks will allow underground SWM below the reconstructed parking lot to help MTA provide better SWM treatment for the upstream drainage area.*
- *MTA will work with Parks to develop the full design of the Sligo Creek Trail along and across Wayne Avenue including signage, safe road crossing, and functional interconnections at each end. The current design shows a path width of 8'9" over the bridge, while M-NCPPC has expressed a goal of providing a width of up to 14-feet. The Interagency Work Group will review*

design options with the goal of achieving a wider trail section along the Wayne Avenue bridge structure up to a maximum width of 14-feet.

- *The extent of construction required to functionally restore the parking lot at Sligo Cabin Park is unclear based on the drawings submitted with the Mandatory Referrak. The drawings do indicate storm drain construction in close proximity to the existing track and associated features, and MTA will be required to functionally restore affected facilities to a condition Parks and MCPS consider acceptable.*
- *Design the retaining walls, bridge barriers, handrails, fences and guardrails at the Sligo Creek Stream Valley Park with aesthetic consideration for park and trail users, in consultation with M-NCPPC, Montgomery County Department of Parks.*
- *Increase the amount of proposed landscaping for the Sligo Creek Stream Valley Park, in consultation with M-NCPPC, Montgomery County Department of Parks.*

Manchester Place Station Area

It is dangerous for cyclists to cross embedded tracks at less than a 45 degree angle because their wheels can get caught in the tracks. Since the angle of the tracks is less than 45 degrees as the Purple Line tracks leave Wayne Avenue and enters the Manchester Place Station, MTA plans to provide a road sign for on-road bicycles traveling north on Wayne Ave to dismount their bikes. However, all roads should be bikeable. Therefore, MTA should:

- *Continue to explore ways for cyclists traveling on Wayne Avenue to cross the Purple Line tracks at a 60 to 90 degree angle.*

Long Branch Station Area

The Long Branch Sector Plan recommended a full-movement intersection on Arliss Street just north of the Long Branch Station platform, to facilitate access into the Town Center site. Therefore, in coordination with MCDOT and the Washington Real Estate Investment Trust (WRIT):

- *Provide for a future northbound left turn lane into the Long Branch Town Center by either: 1) repurposing the northern portion of the proposed southbound left turn lane from Arliss Street to Piney Branch Road, or 2) adding a northbound left turn lane from Piney Branch Road to the Town Center.*

Additionally, there is a portal to the Plymouth Avenue tunnel located on Arliss Street. MTA is not planning to install physical barriers that prevent people from walking into the tunnel, but mentioned the possibility of alarms that would sound if someone enters the portal. MTA should:

- *Continue to evaluate ways to reduce the likelihood that people will enter the Arliss Street portal.*

Piney Branch Road

While the Purple Line Functional Plan (page 37) recommends implementing sidewalks that are at least 6 feet wide on Piney Branch Road as part of the Purple Line project and the Long Branch Sector Plan recommends implementing a combined sidewalk and buffer area that is 15 feet wide as part of redevelopment, MTA is proposing to provide only 5-foot sidewalks with no buffers from the road and is reluctant to acquire additional right-of-way to widen the sidewalks. Five-foot-wide sidewalks adjacent to the curb are unacceptable in a station area, failing to meet not only the above master plan recommendations, but also AASHTO recommendations, ADA Best Practices, and even SHA's own guidelines. Opportunities for improving the sidewalks where there is publicly owned land, such as the Long Branch Community Center, the Miles Glass property, Long Branch Local Park, and Long Branch Stream Valley Park should be explored. In addition, while the sidewalks as proposed are close to existing buildings, there appears to be additional space where the sidewalks could be widened, though this would require property acquisition. Therefore, SHA and MTA should work together to:

- *Construct the sidewalks on Piney Branch Road to be a minimum of 6 feet wide with a three-foot-wide landscaped offset, or ten feet where adjacent to the curb, but evaluate where the sidewalks can be further widened.*
- *Along the frontage of publicly owned property, construct the sidewalks to be 15 feet wide per the Long Branch Sector Plan Design Guidelines.*

In addition, MTA should:

- *Extend the Piney Branch Road culvert at Long Branch to permit future construction of a 10-foot-wide sidewalk.*

The sidewalks on Piney Branch Road to the west of Arliss Street are obstructed with street lights, bus shelters, and utility poles. The proposed five-foot-wide sidewalks that are immediately adjacent to the curb in the Long Branch commercial area are inadequate. AASHTO recommends ten-foot-wide-sidewalks along arterials in business districts where the sidewalk is adjacent to the curb. The large parking lot on the north side of the road appears to have wide drive aisles that could be reduced in width to achieve additional space for sidewalks. Therefore, MTA should coordinate with SHA to:

- *Increase the width of the sidewalks on the north side of Piney Branch Road, between the Flower Theater and Arliss Street, to 10 feet by reconfiguring the parking lot.*

Long Branch Stream Valley Park

It is our understanding that MTA has agreed to establish the Interagency Working Group (IWG) to address complex issues affecting SWM, trail infrastructure, stream crossings, environmental mitigation and various master plan issues. M-NCPPC staff envisions that the IWG will be comprised of, but not limited to, representatives from the following departments/agencies: MCDEP, MCDOT, M-NCPPC Parks, M-NCPPC Planning, MDE, MDDNR, USACOE, USFWS and NCPC.

- *The Interagency Work Group will further study and recommend appropriate designs for modification of the existing stream crossing under Piney Branch Road, with the goal of creating an environmentally sensitive stream crossing and providing upstream and downstream channel improvements to establish long-term stream stability and fish passage.*
- *MTA will need to provide a non-native invasive (NNI) management plan for long-term eradication.*

Long Branch Local Park

- *MTA will close the old parking lot entrance along Piney Branch Road and construct a new park entrance to align with the Barron Street intersection and functionally interconnect to the existing parking lot, including entrance sign relocation, pavement removal, and appropriate landscape planting. Stormwater treatment will be provided for the new park entrance and Long Branch Trail extension.*
- *MTA will reestablish the Long Branch Trail to cross Piney Branch Road at Barron Street and parallel the new park entrance road into the Long Branch site, including signage, safe road crossing, and functional interconnections at each end of trail.*
- *One issue that is going to require interagency cooperation to resolve involves the left turn into the park. While the new driveway entrance into the park permits left turns out of the park, there are no provisions at this time to permit left turns in. To accommodate left turns in, one of two things will need to happen: 1) MTA and SHA will provide a dedicated left-turn lane from east-bound Piney Branch Road; or 2) MTA and SHA will allow left turns into the park from the left travel lane. Solution #1 is unlikely due to space constraints along Piney Branch Road; other roadway/pedestrian/park trail improvements will need any new space gained along this road as part of redevelopment. Solution #2 continues to be studied by MTA. It is possible that left turns into the park could be permitted during specific peak-periods (such as swim meets, community events, etc.).*

Piney Branch Road Station Area

The Long Branch Sector Plan recommends a new traffic signal, a future shared use path (SP-79) along Gilbert Street and Gilbert Street Extended, and access to the southern end of the Piney Branch Station at the intersection of Gilbert Street and University Boulevard. At this time the State Highway Administration has not agreed to provide a traffic signal at this location, but that should not forestall planning for a future where a traffic signal is permitted. Therefore, MTA should:

- *Include design allowances in the RFP to enable access to the station from Gilbert Street, via a walkway up the middle of University Boulevard, once the intersection is signalized.*
- *Embed the Purple Line tracks at the intersection of University Boulevard and Gilbert Street.*

University Boulevard

Per its policy, SHA is requiring that the Purple Line project include bike lanes on University Boulevard, however bike lanes do not provide sufficient protection to attract cyclists with a wide range of abilities on a busy state highway with a posted speed limit of 40 mph. Buffered bike lanes and cycle tracks are widely regarded as superior facilities to bike lanes in this environment. At a minimum SHA should require MTA to provide a striped buffer between the bike lanes and traffic (buffered bike lanes), though a physical separation from traffic is preferable (cycle tracks).

We understand that SHA is reconsidering its policy on bicycle lanes, as evidenced by the Maryland Twenty-Year Pedestrian and Bicycle Plan finalized in January 2014. An objective of the plan (page 32) is to "Encourage the use of existing processes to implement pilot projects on State roadways to test innovative design treatments such as cycle tracks, colored bike lanes, and new pedestrian crossing treatments, following a context sensitive design approach." The Purple Line project provides a rare opportunity to prioritize bicycling on a major urban thoroughfare. While bike lanes are an improvement over existing conditions, a treatment with greater protection for cyclists is needed. SHA should consider conducting a pilot project on University Boulevard as part of the Purple Line to implement cycle tracks or buffered bike lanes where there is sufficient right-of-way. Therefore, in coordination with SHA, MTA should:

- *Construct cycle tracks or buffered bike lanes on University Boulevard where right-of-way is available, and transition from the cycle tracks or buffered bike lanes to regular bicycle lanes where the right-of-way is constrained.*

If the state is not willing to construct cycle tracks or buffered bike lanes as part of the Purple Line, then the typical section should include the off-road shared use path per the Long Branch Sector Plan and Takoma/Langley Crossroads Sector Plan. Therefore:

- *If there is not agreement to construct cycle tracks (or buffered bike lanes) in place of standard on-road bike lanes, provide 8-foot-shared use paths along both sides of University Boulevard where right-of-way is available. Where sufficient space is not available, the shared use path should transition into a sidewalk.*

MTA will also be installing several structures along University Boulevard, including traction power substations, signal boxes, and parking lots. These structures should not be constructed within the area designated for bikeway and streetscape improvements.

- *On both sides of University Boulevard grade and keep clear of structures a 23-foot-wide area adjacent to the curb, where right-of-way is available or property acquisitions occur, to accommodate the 8-foot-wide cycle track and a 15-foot sidewalk area. If SHA agrees to permit the construction of cycle tracks, the clear width can be reduced to 18 feet.*

The Countywide Transit Corridors Functional Master Plan (page 55) recommends providing two dedicated lanes for bus rapid transit (BRT) on University Boulevard, without adding lanes to the road. Though not explicitly stated, the recommendation is for BRT to share the Purple Line transitway. One impediment to sharing the transitway is that the Purple Line as currently planned will run on "ballast" tracks that are raised above the surface of the street. For this to be a shared transitway, the tracks will have to be "embedded" in the transitway. MTA recently prepared a draft white paper evaluating the constraints with embedding the tracks on University Boulevard. Planning staff appreciates MTA's concerns but believe that this issue should be explored further. The benefits of sharing the transitway would have to outweigh the impacts to the Purple Line to support this recommendation, but since a definitive case has not yet been made that the Purple Line should have sole use of the track area, MTA should:

- *Embed the Purple Line tracks in the pavement on University Boulevard so that the Purple Line transitway can be shared with a future bus rapid transit service.*

The intersection of the Carroll Avenue and University Boulevard within the Long Branch Sector Plan area is heavily traveled by vehicles and pedestrians. It is within walking distance of three elementary/middle schools. At present, the planned Purple Line is accommodating pedestrian crossings at only three of the four legs of this intersection. Staff is concerned that the proposed crossings create a circuitous route for pedestrians making east/west movements through the intersection. This community has a large number of children and transit dependent residents so any proposed improvements should take into account the need for efficient pedestrian connections. Additionally, Long Branch has experienced a number of pedestrian and vehicular incidents in the past and the Long Branch Sector Plan has proposed that it be improved with a variety of pedestrian safety measures. The current plan submitted by MTA does not allow for full crossing movements at this intersection and may encourage residents to make unsafe choices rather than use the proposed marked pedestrian crossings. Therefore, MTA should:

- *Provide an analysis of pedestrian circulation between the existing New Hampshire Estates, Rolling Terrace and Takoma Academy schools and the surrounding community to ensure that safe, adequate and efficient pedestrian connections are provided in each direction at the intersection of Carroll Avenue and University Boulevard.*

New Hampshire Estates Neighborhood Park

The Planning Board/Parks Commission will discuss parkland replacement during a closed session (not public) at its meeting on April 3rd. MTA should expect additional comments from the Board immediately following. In addition:

- *Access to all park facilities will be maintained throughout construction. Temporary parking facilities to replace the existing parking lot shall be provided off Piney Branch Road prior to the closure of the existing lot. The temporary parking lot shall be ADA-compliant and functionally interconnected with existing park facilities.*
- *MTA will replace long-term on-site parking consistent with existing facilities based on concept plans to be provided by the Department of Parks, which demonstrates full restoration of all park*

amenities impacted by the Purple Line construction, including the removal of all abandoned infrastructure due to reconstruction.

- ➲ *Protect existing trees in the park.*
- ➲ *Reestablish the park pedestrian entrance from University Boulevard.*

Takoma Langley Transit Center Station Area

The Takoma Langley Crossroads Sector Plan was approved in June 2012 by the Montgomery County Council. A Takoma Langley Crossroads Sector Plan was also approved by Prince George's County. The sector plans in both counties recommend evaluating a future realignment of Lebanon Street in Prince George's County with Anne Street in Montgomery County as part of the redevelopment of the block bounded by Lebanon Street, New Hampshire Avenue, and University Boulevard.

The Takoma Langley Crossroads Sector Plan (page 35) recommends a new signalized intersection for Street B-2 at one of two places: 1) the intersection of University Boulevard/Edwards Place is preferred by Planning Department staff for through traffic movements, and 2) the intersection of University Boulevard/just west of Edwards Place is preferred by a property owner for access and is currently proposed by MTA.

- ➲ *If the decision is made not to embed the tracks for the whole length of University Boulevard, then they should be embedded at all intersections for vehicular, pedestrian, and bicycle access.*

In particular,

- ➲ *Embed the Purple Line tracks at the intersection of: 1) University Boulevard and Anne Street and 2) University Boulevard and Edwards Place.*

CAPITAL CRESCENT TRAIL MANDATORY REFERRAL

The Purple Line is expected to begin construction in 2015 and to begin service in 2020. This will mean that the Capital Crescent Trail could be out of service for as much as 5 years. The County T&E Committee asked MCDOT to develop a detour plan during their work session on February 24, 2014. Staff supports this request, and furthermore requests that MTA include incentives to minimize disruption to the trail.

- *The Purple Line RFP should provide a strong incentive to keeping the trail closure to a minimum and phase trail closures in a logical sequence, consistent with construction phasing/schedules.*

Attachment 2
Planning Board Recommendations for the Maryland State Highway Administration
April 1, 2014

PURPLE LINE MANDATORY REFERRAL

General Comments

Pedestrian access to the Purple Line stations in Montgomery County is inadequate overall, especially at the Lyttonsville, Woodside, and Piney Branch Road stations. In many locations sidewalks or paths are directly adjacent to the curb with minimum width sidewalks. Since pedestrian volumes around Purple Line stations will increase substantially once the Purple Line is operational, SHA should work with MTA and MCDOT to:

- *Commit to providing quality pedestrian and bicycle improvements between stations and the communities in their immediate vicinities.*
- *Conduct a thorough review of this project with the goal of meeting both AASHTO recommendations for pedestrian facilities as well as ADA Best Practices, at a minimum.*
- *Identify near term and long term improvements to enhance station access.*

In addition, legal crosswalks exist at all intersections of two public roads per State law, and all crosswalks must be made fully ADA-compatible per federal law. Therefore:

- *All intersections must be made fully ADA-compatible. At intersections where a safe crossing cannot be provided, signs prohibiting the crossing to all pedestrians should be installed, but SHA must ensure that there are adequate crossing opportunities, particularly in the vicinity of all bus stops.*

Woodside Station Area

The Woodside Station is located on the east side of 16th Street (MD 390), just across the street from two multifamily complexes that contain over 1,200 dwelling units. The Purple Line 30% design plans direct residences to cross 16th Street at an unsignalized crosswalk at the existing entrance to the Spring Center, connecting to proposed sidewalks on the west side of 16th Street and a ramp that leads down to the residences. While we support the proposed crossing at this location, the crossing as planned is unsafe because the road is six lanes wide, has a posted speed limit of 35 mph, is used by over 25,000 vehicles on a typical weekday, and SHA has not yet agreed to provide a traffic signal.

For those pedestrians who will be uncomfortable crossing 16th Street under these conditions, the nearest signalized crossing of 16th Street is 800 feet to the south at Spring Street. This will require a deviation of as much as 7 minutes, which is substantial given that the average person will walk as much as 10 minutes to a rail station. Few passengers will go out of their way to cross at this signalized intersection. Most will either cross 16th Street at this dangerous location or will be deterred from using the Purple Line altogether.

Additionally, the location where pedestrians are directed to cross 16th Street is proposed to have a "Maryland T" intersection, a design that does not accommodate pedestrian access.

Therefore, SHA should:

- *Ensure safe pedestrian access from the west side of 16th Street to the Woodside Station by: 1) replacing the "Maryland T" intersection at the existing Spring Center with a normal tee intersection that does not have the splitter island in the median; 2) providing a pedestrian refuge on the south leg of the new tee intersection; and 3) providing a pedestrian-actuated traffic signal at the new intersection.*

As currently designed, the intersection of 16th Street and Spring Street does not adequately prioritize pedestrians and bicyclists. The crossing distance on the east leg of the intersection is excessive, requiring two pedestrian signals and three refuge islands to break up the crossing. Furthermore, the intersection geometry enables vehicles traveling northbound on 16th Street and turning right onto Spring Street to speed through the intersection. While this may be an appropriate intersection design in areas with limited pedestrian activity, it is inappropriate in an urban area adjacent to both the Silver Spring Central Business District and a planned Purple Line station, where pedestrian activity will be substantial. Since SHA is responsible for the roads that form this intersection, SHA should coordinate with MCDOT and MTA to redesign this intersection to adequately prioritize pedestrians by:

- *Eliminating the free right turns and realigning Spring Street and the Spring Street Bridge to form a tee intersection with 16th Street, as part of the reconstruction of the Spring Street Bridge.*
- *Providing a minimum 6-foot-wide median pedestrian refuge on the north leg of the intersection of 16th Street and Spring Street.*

Bonifant Street

The following issues should be addressed in coordination with the Montgomery County Department of Transportation to ensure adequate pedestrian access to the east of the Silver Spring Transit Center:

- *The sidewalk bump out at the northeast corner of Georgia Avenue and Bonifant Street will be eliminated, narrowing the sidewalk to about three feet at the Quarry House entrance. Ensure that this sidewalk meets the ADA minimum (i.e. it has a clear width of at least 3 feet).*
- *The sidewalk bump out at the southeast corner of Georgia Avenue and Bonifant Street would be eliminated, but this elimination appears unnecessary. The bump out should be retained to shorten the pedestrian crossing distance on the east leg of the intersection.*

Piney Branch Road

The Purple Line Functional Plan (page 37) recommends implementing sidewalks that are at least 6 feet wide on Piney Branch Road as part of the Purple Line project, and the Long Branch Sector Plan recommends implementing a combined sidewalk and buffer area that is 15 feet wide as part of redevelopment. MTA is proposing to provide only 5-foot sidewalks, with no buffers from the road, and is reluctant to acquire additional right-of-way to widen the sidewalks. Five-foot-wide sidewalks adjacent to the curb are unacceptable in a station area, failing to meet not only the above master plan recommendations, but also AASHTO recommendations, ADA Best Practices, and even SHA's own guidelines. SHA should make use of opportunities for improving the sidewalks where there is publicly owned land, such as the Long Branch Community Center, the Miles Glass property, Long Branch Local Park, and Long Branch Stream Valley Park. In addition, while the sidewalks as proposed are close to existing buildings, there appears to be additional space where the sidewalks could be widened, though this would require property acquisition. SHA and MTA should work together to:

- *Construct the sidewalks on Piney Branch Road to be a minimum of 6 feet wide with a three-foot-wide landscaped offset or ten feet where adjacent to the curb, but evaluate where the sidewalks can be further widened.*
- *Along the frontage of publicly owned property, construct the sidewalks to be 15-feet wide per the Long Branch Sector Plan Design Guidelines.*

The sidewalks on Piney Branch Road to the west of Arliss Street are obstructed with street lights, bus shelters, and utility poles. The proposed five-foot-wide sidewalks that are immediately adjacent to the

curb in the Long Branch commercial area are inadequate. AASHTO recommends ten-foot sidewalks along arterials in business districts where the sidewalk is adjacent to the curb. The large parking lot on the north side of the road appears to have wide drive aisles that could be reduced in width to achieve additional space for sidewalks. SHA should coordinate with MTA to:

- ➲ *Increase the width of the sidewalks on the north side of Piney Branch Road, between the Flower Theater and Arliss Street, to 10 feet by reconfiguring the parking lot.*

The crosswalks crossing Piney Branch Road where it intersects Barron Street are skewed due to the location of existing driveways. However, the Montgomery County Department of Parks plans to demolish the Miles Glass building and the Purple Line project plans to relocate the driveway to the Long Branch Community Center. Therefore:

- ➲ *If the driveway to the Long Branch Community Center at the intersection of Piney Branch Road and Barron Street is realigned either before or during the construction of the Purple Line (either by MTA or another entity), the driveway design should locate the crosswalks on the east and west leg of the intersection at 90 degree angles from Piney Branch Road to reduce the pedestrian crossing distance.*

Piney Branch Road Station Area

The 30% plans for the Purple Line do not include a direct connection to the south end of the Piney Branch Road station platform, even though this connection is recommended in the Long Branch Sector Plan. Without this access point, passengers will be required to walk about two minutes out of their way to access the platform. Since the average rail passenger will walk 10 minutes to a station, a 2 minute additional walk will decrease the catchment area of the station.

According to MTA, the access point is not included in the 30% plans because SHA has not agreed to provide a traffic signal at this location. SHA is concerned that left turning traffic from University Boulevard to Piney Branch Road will back up beyond a signal at Gilbert Street. However, the introduction of a rail station in University Boulevard and the land use changes proposed by the Long Branch Sector Plan will fundamentally change the nature of the area from one largely focused on automobiles to one equally focused on pedestrians. A traffic signal at the intersection of University Boulevard and Gilbert Street should be considered for several reasons:

- Improved station access: The proposed Piney Branch Road station is one of only two Purple Line stations along the entire 16 mile alignment that have a single-ended platform. Providing a traffic signal at Gilbert Street would permit access to the station from the south side, reducing travel time by about 2 minutes for riders traveling to and from points to the south of the station and would reduce the number of pedestrian conflicts at Piney Branch Road, potentially improving its operation.
- Safety: A new signal would promote slower vehicular speeds from all directions of travel in the immediate vicinity of the intersection. This is particularly important because of the significant volumes of pedestrians that are expected to cross University Boulevard. The lower traffic volumes at this tee intersection make it a safer place for pedestrians to cross if a signal is installed.
- Enhanced bikeway network: The traffic signal is also an important component of an off-road bikeway that is proposed to connect the Sligo Creek Trail and the Long Branch Trail to the

Northwest Branch Trail. From west to east the shared use path would travel along Domer Avenue, Barron Street, Gilbert Street, and Piney Branch Road.

- Context: The Long Branch area today has considerable pedestrian activity. With the additional pedestrian activity generated by the Piney Branch Road Purple Line Station and the density proposed in the Long Branch Sector Plan, University Boulevard will be transformed into a more urban area. MTA's plans to convert two existing traffic lanes to a transitway shows a significant advancement in balancing the needs of all roadway users, and this approach can also be applied to signalized intersection spacing in urban environments. The spacing between Piney Branch Road and Gilbert Street is about 425 feet, similar to many other examples within a short distance from Gilbert Street and other areas in Montgomery County where the focus is more on providing adequate pedestrian access, local circulation, and access to businesses than it is on higher speed through-travel. Examples include:

  MD 193 (University Boulevard)
  - Carroll Avenue to Merrimac Drive (planned): 500 feet
  - Merrimac Drive (planned) to Lebanon Street (planned): 600 feet
  - Lebanon St (planned) to Shopping Center driveway (planned): 200 feet
  - Shopping Center driveway (planned) to Takoma / Langley Transit Center driveway : 225 feet
  - Takoma / Langley Transit Center driveway to New Hampshire Avenue: 400 feet

  MD 320 (Piney Branch Road)
  - University Boulevard to Barron St: 475 feet
  - Barron St to Garland St: 375 feet

SHA should:

➲ *Provide a traffic signal at the intersection of University Boulevard and Gilbert Street.*

University Boulevard

Per its policy, SHA is requiring that the Purple Line project include bike lanes on University Boulevard, however bike lanes do not provide enough protection to attract cyclists with a wide range of abilities on a busy state highway with a posted speed limit of 40 mph. Buffered bike lanes and cycle tracks are widely regarded as superior facilities to bike lanes in this environment. At a minimum, SHA should require MTA to provide a striped buffer between the bike lanes and traffic (buffered bike lanes), though a physical separation from traffic is preferable (cycle tracks).

We understand that SHA is reconsidering its policy on bicycle lanes, as evidenced by the Maryland Twenty-Year Pedestrian and Bicycle Plan finalized in January 2014. An objective of the plan (page 32) is to "Encourage the use of existing processes to implement pilot projects on State roadways to test innovative design treatments such as cycle tracks, colored bike lanes, and new pedestrian crossing treatments, following a context sensitive design approach." The Purple Line project provides a rare opportunity to prioritize bicycling on a major urban thoroughfare. While bike lanes are an improvement over existing conditions, a treatment with greater protection for cyclists is needed in this area. SHA should consider conducting a pilot project on University Boulevard as part of the Purple Line to implement cycle tracks or buffered bike lanes where there is sufficient right-of-way. Therefore, SHA should work with MTA to:

- *Construct cycle tracks or buffered bike lanes on University Boulevard where right-of-way is available, and transition from the cycle tracks or buffered bike lanes to regular bicycle lanes where the right-of-way is constrained.*

If the state is not willing to construct cycle tracks or buffered bike lanes as part of the Purple Line, then the typical section should include the off-road shared use path per the Long Branch Sector Plan and Takoma/Langley Crossroads Sector Plan. Therefore, SHA should work with MTA to:

- *If there is not agreement to construct cycle tracks (or buffered bike lanes) in place of standard on-road bike lanes, provide 8-foot-shared use paths along both sides of University Boulevard where right-of-way is available. Where sufficient space is not available, the shared use path should transition into a sidewalk.*

The right turn lanes in the northwest and southeast quadrants of the intersection of University Boulevard and Carroll Avenue are extremely wide and almost the same width as the adjacent three through lanes. Therefore:

- *The right turn lanes in the northwest and southeast quadrants of the intersection of University Boulevard and Carroll Avenue should be designed to be more perpendicular to University Boulevard. This will reduce the need for the wide lanes, slow down turning traffic, and make it easier for pedestrians to cross.*

Takoma Langley Transit Center Station Area

The intersection of University Boulevard and New Hampshire Avenue should be designed to prioritize pedestrian safety and minimize their exposure. The proposed curb radii of between 65 feet and 100 feet at three of the four corners are far in excess of what is needed to accommodate the design vehicle. Therefore:

- *At the intersection of University Boulevard and New Hampshire Avenue, the radii should be reduced to encourage slower turning speeds, shorten the crossing distance, and enable the handicap ramps to be in better alignment with the crosswalks.*

AASHTO recommends that a pedestrian refuge be provided at all intersections that exceed 60 feet. The crossing distance of about 150 feet on the east leg of University Boulevard, for example, is 150% over the distance for which AASHTO recommends that a pedestrian refuge be provided (60 feet). Therefore:

- *At the intersection of University Boulevard and New Hampshire Avenue the median island on the east leg should be extended to create a refuge and the medians on the north and south legs should be bulbed-out to six feet minimum in width to create refuges.*

The right turn lanes in the northwest and southeast quadrants of the intersection of University Boulevard and New Hampshire Avenue are extremely wide and almost the same width as the adjacent three through lanes. Therefore:

- *The right turn lanes in the northwest and southeast quadrants of the intersection of University Boulevard and New Hampshire Avenue should be designed to be more perpendicular to University Boulevard. This will reduce the need for the wide lanes, slow down turning traffic, and make it easier for pedestrians to cross.*

In addition:

- *On the northeast and southwest corners of the intersection, the proposed landscape panels behind the sidewalk should instead be moved to be adjacent to the curb so that pedestrians are better guided toward the handicap ramps and to break up the expanse of pavement at this large intersection.*

Additional graphics that help to explain many of the comments can be found at:
www.mcatlast.org/purple

PURPLE LINE MANDATORY REFERRAL

General Comments

Pedestrian access to the Purple Line stations in Montgomery County needs additional improvement, especially at the Lyttonsville, Woodside, and Piney Branch Road stations. In many locations sidewalks or paths are directly adjacent to the curb with minimum width sidewalks. Since pedestrian volumes around Purple Line stations will increase substantially once the Purple Line is operational, MCDOT should work with MTA and SHA to:

- *Commit to providing quality pedestrian and bicycle improvements between stations and the communities in their immediate vicinities.*
- *Conduct a thorough review of this project with the goal of meeting both AASHTO recommendations for pedestrian facilities as well as ADA Best Practices at a minimum.*
- *Identify near term and long term improvements to enhance station access.*

In addition, legal crosswalks exist at all intersections of two public roads per State law, and all crosswalks must be made fully ADA-compatible per federal law. Therefore:

- *All intersections must be made fully ADA-compatible. At intersections where a safe crossing cannot be provided, signs prohibiting the crossing to all pedestrians should be installed, but SHA must ensure that there are adequate crossing opportunities, particularly in the vicinity of all bus stops.*

A bus service planning study has not been completed to determine how RideOn bus service and other shuttle services will be adjusted (bus stop locations, routes, frequency, and span of service) when the Purple Line is completed. This is needed to inform decisions about station areas in final design, such as the location of crosswalks and where to located bus stops. MCDOT should:

- *Conduct a bus service planning study to determine how routes, frequencies, span of service and the location of bus stops will be adjusted when the Purple Line opens for service. MCDOT should also coordinate service changes for Metrobus routes with WMATA.*

Finally, Montgomery County can further support pedestrian and bicycle access to transit by:

- *Utilizing a "Bicycle Pedestrian Priority Area Projects" annual program to enhance pedestrian and bicycle station access in locations where redevelopment is unlikely in the next 5 to 10 years. This program was recommended by the full Council on March 25, 2014, pending budget reconciliation.*

Bethesda Station

The Town of Chevy Chase continues to have concerns regarding impacts to Elm Street Urban Park and adjacent residences, noise impacts, and an access point to the Capital Crescent Trail. Therefore, MTA and MCDOT should:

- *Continue to work with the Town of Chevy Chase to address design refinements to the Purple Line and the Capital Crescent Trail to provide an additional grade-separated crossing of the trail and to reduce noise impacts and impacts to Elm Street Urban Park and residences adjacent to the park.*

Lyttonsville Station Area

While the northeast leg of the intersection of Brookville Road and Lyttonsville Place has an acceleration lane today, it is unclear why it is needed when the intersection is controlled by a four-way stop and the only traffic coming from the south is originating at the RideOn maintenance depot. Therefore:

- *Eliminate the acceleration lane on the north leg of the intersection of Brookville Road and Lyttonsville Place. Instead use the space for wider sidewalks and bike lanes to provide continuity from the proposed sidewalks on the Lyttonsville Place Bridge.*

While Lyttonsville Place is one of two roads that residents will use to get to Lyttonsville Station, and it is a route that trucks use to get to the Lyttonsville industrial area, the Purple Line 30% engineering plans provide no bicycle accommodations and only the bare minimum (5-foot-wide sidewalks with no offset from the road) accommodation for pedestrians south of the bridge. To enhance bicycle and pedestrian access to the Purple Line station:

- *Widen the proposed 5-foot-wide sidewalk on both sides of Lyttonsville Place to at least 7 feet to meet AASHTO recommendations and provide bicycle lanes by removing the "activity lane."*

Furthermore, it is not clear that a bus stop on Lyttonsville Place is the best location for a few reasons. First, a bus stop on Lyttonsville Place requires an at-grade crossing, whereas a bus stop on Brookville Road could be located next to a stop-controlled intersection. Second, the curb-to-curb distance on Brookville Road is wider than Lyttonsville Place so there is additional space for a bus pull-off area. Finally, if the Forest Glen Annex provide shuttles from their campus to the station, it would be preferable to have a stop on Brookville Road, instead of Lyttonsville Place, so that the shuttles can turn around at the RideOn Depot instead of circulating through the community. While RideOn buses currently stop within the base, the Forest Glen Annex is upgrading security, and it is possible that they will rely on their own shuttle service in the future. Therefore, MCDOT should:

- *Consider a bus stop with a pull-off area on Brookville Road instead of Lyttonsville Place and improve the crossing of Brookville Road at Lyttonsville Place for pedestrians.*

There is a conflict between cyclists traveling on the Capital Crescent Trail and Purple Line passengers crossing the Capital Crescent Trail to get from the ramp to the Purple Line platform. Therefore:

- *The conflict point on the Capital Crescent Trail at the ramp from Lyttonsville Place should include features that inform bicyclists of pedestrian crossings.*
- *Provide a larger landing area at the base of the proposed ramp down to the Capital Crescent Trail from Lyttonsville Place. The landing and crossing could be designed to incorporate local historical and cultural enhancements.*

The Forest Glen Annex is the largest employer in the Lyttonsville area (2,000+ employees), and many employees and visitors will walk to the Purple Line station as part of their commute. To do so, these passengers will need to cross Brookville Road, a wide street with heavy truck volumes. MTA expects many passengers will use the Capital Crescent Trail to get to the station, avoiding the poor sidewalks and industrial area on Brookville Road. Therefore, to facilitate pedestrian travel between the Forest Glen Annex and the Purple Line station, MCDOT should:

- *Provide a traffic signal at the intersection of Brookville Road and Stephen Sitter Avenue.*

- *Since Stewart Avenue will be the main access route for employees at the Forest Glen Annex until a new access point on Brookville Road can be constructed, reduce the parking lane widths on Stewart Avenue to 8 feet and reallocate that space to the sidewalk area to achieve a 5 foot buffer and 10 foot sidewalk on the south side and a 9 foot sidewalk on the north side.*

Finally:

- *In addition to lighting the Capital Crescent Trail under the Lyttonsville Place Bridge, provide wall-wash lighting along the bridge abutment walls to enhance pedestrian safety.*

Woodside Station Area

As currently designed, the intersection of 16th Street and Spring Street does not adequately prioritize pedestrians and bicyclists. The crossing distance on the east leg of the intersection is excessive, requiring two pedestrian signals and three refuge islands to break up the crossing. Furthermore, the intersection geometry enables vehicles traveling northbound on 16th Street and turning right onto Spring Street to speed through the intersection. While this may be an appropriate intersection design in areas with limited pedestrian activity, it is inappropriate in an urban area adjacent to both the Silver Spring Central Business District and a planned Purple Line station, where pedestrian activity will be substantial. Since SHA is responsible for the roads that form this intersection, MCDOT should coordinate with SHA to redesign this intersection to adequately prioritize pedestrians by:

- *Eliminating the free right turns and realigning Spring Street and the Spring Street Bridge to form a tee intersection with 16th Street, as part of the reconstruction of the Spring Street Bridge.*

Spring Street is the connection between the Silver Spring Central Business District and the Woodside Purple Line Station. As such it should be constructed as a gateway to Silver Spring and prioritized for pedestrians and bicycles. Furthermore, it is unclear why on-street parking is prioritized on a bridge where the pedestrian walkways are especially constricted, especially since parking meters will further reduce the clear width. Therefore, MCDOT should:

- *Eliminate both rows of parking on the Spring Street Bridge. Widen the proposed 5-foot-wide sidewalks to 13 feet wide. Separate the 16-foot-wide shared travel lane into 11-foot-wide through lanes and 5-foot-wide bike lanes.*

Silver Spring Transit Center Station Area

During the Planning Board's review of the Purple Line mandatory referral on March 20, 2014, there was considerable discussion regarding the need for a direct connection between the planned Purple Line station and the existing Red Line station at the Silver Spring Transit Center. This connection is recommended in the Purple Line Functional Plan and is important because it will facilitate transfers between the two rail lines, but remains unfunded. The Maryland Transit Administration estimates that there will be 3,500 daily transfers between the Red Line and Purple Line by 2040. This represents almost 30% of Purple Line boardings and alightings at this station. Therefore, in coordination with MTA and WMATA, MCDOT should:

- *Design and construct a convenient direct connection between the Red Line and the Purple Line at the Silver Spring Transit Center station.*

Bonifant Street

The following issues should be addressed to ensure adequate pedestrian access to the east of the Silver Spring Transit Center:

- *The ramp on the south side of the road is shared use path width, but the ramp directly across the street on the north side of "Ripifant Road" is smaller than shared use path width. Both ramps should be shared use path width and aligned.*
- *The sidewalk and curb on the north side of Bonifant Street between Dixon Avenue and the alley should be reconstructed so that they are in alignment with the sidewalks on either side.*
- *The sidewalk on the south side of Bonifant Street between the alley and Georgia Avenue appears to be as narrow as two feet wide at the eastern end. Ensure that this sidewalk meets the ADA minimum.*
- *The sidewalk bump out at the northeast corner of Georgia Avenue and Bonifant Street will be eliminated, narrowing the sidewalk to about three feet at the Quarry House entrance. Ensure that this sidewalk meets the ADA minimum (i.e. it has a clear width of at least 3 feet).*
- *The sidewalk bump out at the southeast corner of Georgia Avenue and Bonifant Street would be eliminated, but this elimination appears unnecessary. The bump out should be retained to shorten the pedestrian crossing distance on the east leg of the intersection.*

Silver Spring Library Station Area

One area of concern at the Silver Spring Library Station is the southwest corner of the intersection of Wayne Avenue and Fenton Street, where the Purple Line will form a fifth leg of the intersection. Pedestrians should be directed away from the apex of this corner, as it is the entry and exit location for the Purple Line trains. Therefore, in coordination with MTA and the Montgomery County Department of General Services (DGS):

- *The sidewalk at the southwest corner should be constructed to go directly between the Wayne Avenue and Fenton Street ramps and be 12 feet wide to accommodate a high level of activity. The space between that sidewalk and the radius curb should be made of a non-traversable surface to discourage pedestrians entering this location.*

An approved development at the southeast corner of Wayne Avenue and Fenton Street will improve the pedestrian area, if constructed. If the project is not constructed, work with MTA to make the following improvement:

- *The proposed sidewalk at the southeast corner of Wayne Avenue and Fenton Street should be constructed behind the ramps. While the current design meets ADA requirements, it is far from meeting ADA Best Practices, which should be followed at this major downtown intersection that is immediately adjacent to the station.*

There are barriers between the platforms at the Silver Spring Library station limiting crossings to the corner of Wayne Avenue and Fenton Street and at the detectable warning surface (DWS) near Bonifant Street. Therefore, in coordination with MTA and DGS:

- *At the Silver Spring Library station, the area with the detectable warning surface should be widened and better integrated with the plaza at the corner of Bonifant Street and Fenton Streets.*

Wayne Avenue

MCDOT is not recommending street trees on the north side of Wayne Avenue because per County Standard 700.01: "no tree plantings will be permitted if green space is less than 6 feet". The County should reconsider this standard and allow street trees to be planted on the north side of Wayne Avenue, especially since the Purple Line proposed substantial impacts along the roadway. Therefore, MCDOT should:

- *Grant a design exception to allow street trees to be planted in the 5-foot-wide buffer on the north side of Wayne Avenue between the curb and the Silver Spring Green Trail.*

The Purple Line Functional Plan (page 31) recommends sidewalks that are at least 6 feet wide on the south side of Wayne Avenue. The 30% engineering plans include 5-foot-wide sidewalks, even though there appear to be opportunities to widen the sidewalks to 6 feet in the right-of-way.

- *The sidewalks on the south side of Wayne Avenue should be widened to 6 feet with landscaped buffers from traffic wherever the right-of-way is available to do so.*

Dale Drive Station Area

While the pedestrian space is at almost the bare minimum on the south side at Wayne Avenue, the intersection at Wayne Avenue and Dale Drive is proposed to add a turn lane in each direction. Therefore, in coordination with MTA:

- *The intersection of Wayne Avenue and Dale Drive should be changed to eliminate these turn lanes in favor of providing a dedicated transit lane in the eastbound direction, shifting the platform one lane to the north and creating a pedestrian refuge on the west leg of the intersection.*

On the east side of Dale Drive, north of Wayne Avenue, MTA is proposing dual sidewalks along the school driveway. This is in addition to the sidewalks provided adjacent to Wayne Avenue. Therefore, in coordination with MTA and Montgomery County Public Schools (MCPS):

- *The dual sidewalks along Dale Drive between Wayne Avenue and the school driveway should be combined into one wider sidewalk that is offset from the curb. The sidewalk north of the school driveway should be offset from the curb similar to what exists now but with a straighter alignment.*

Manchester Place Station Area

On Wayne Avenue between Sligo Creek Parkway and Manchester Road, there is extra pavement that may lead to unwanted vehicular movements. Therefore:

- *On Wayne Avenue between Sligo Creek Parkway and Manchester Road, a raised island should be constructed between the two turn lanes to guide vehicles into the correct lanes.*

Long Branch Station Area

The Long Branch Sector Plan recommended a full-movement intersection on Arliss Street just north of the Long Branch Station platform, to facilitate access into the Town Center site. Therefore, in coordination with MTA and the Washington Real Estate Investment Trust (WRIT):

- *Provide for a future northbound left turn lane into the Long Branch Town Center by either: 1) repurposing the northern portion of the proposed southbound left turn lane from Arliss Street to Piney Branch Road, or 2) adding a northbound left turn lane from Piney Branch Road to the Town Center.*

BETHEDSA METRO STATION SOUTH ENTRANCE MANDATORY REFERRAL

The following changes should be considered:

- *On Elm Street at the intersection with Wisconsin Avenue, the existing eastbound movement should continue to permit all movements, if possible.*
- *Provide dual handicap ramps at the southwest corner of Wisconsin Avenue and Elm Street.*

In addition:

- *Should an agreement be made by mid April 2014 to demolish the Apex Building to allow an improved Bethesda station design to be built, MCDOT must submit the "alternative" Bethesda Metro Station South Entrance project design to the Planning Board as a mandatory referral. The Planning Board commits to an expedited review of a Bethesda Station area mandatory referral.*

CAPITAL CRESCENT TRAIL MANDATORY REFERRAL

While MCDOT is the project sponsor for the Capital Crescent Trail, MTA is designing the trail. Therefore, MCDOT should work with MTA to accomplish the recommendations below.

General Comments

Upon completion, the segment of the Capital Crescent Trail between Silver Spring and Bethesda will likely experience similar popularity to the existing segment between Bethesda and Georgetown. The design of the trail should reflect its importance as a facility of regional significance. Therefore:

- *Develop and implement a unique signing and branding plan for the Capital Crescent Trail between the Silver Spring Metro station and the Bethesda Metro station. Signing should be provided at regular intervals on the trail, as well as at all access points.*

The Capital Crescent Trail's importance as a bikeway will increase with the completion of this project, but a wayfinding plan has not yet been developed to direct trail users to and from the trail/bikeway. Therefore:

- *Implement a wayfinding plan on the trail at all access points and in locations beyond the trail to direct trail users to the trail.*

In many locations ramps connecting to the Capital Crescent Trail are not flared. This affects sight distance and makes it more difficult to maneuver between the trail and the ramps. Therefore:

- *All ramp connections to the Capital Crescent Trail should be flared to the extent possible to facilitate access to the trail.*

The engineering plans show a noise wall for the Purple Line located on the side of the Capital Crescent Trail that is away from the Purple Line. This could create a situation where noise from the Purple Line is augmented on the trail. Therefore:

- *In the final design, any noise walls planned for installation should be placed directly adjacent to the track. In cases where the trail and the tracks are parallel, the noise wall should be placed between the track and the trail. A fence will be placed on the outer edge of the trail. This will improve the sound and visual quality along the trail by creating a solid buffer from moving rail equipment.*

Location Specific Comments

The recently approved Bethesda Purple Line Station Minor Master Plan recommends that the Capital Crescent Trail "mainline route" cross over the Purple Line on a bridge and then travel along the northern edge of Elm Street Park (just south of the Purple Line) southwest to the intersection of Elm Street and 47th Street, where it branches into a "surface route" and a potential new "tunnel route." As currently designed there are two closely spaced 90-degree turns in Elm Street Urban Park. This will be difficult for many cyclists to navigate, especially cyclists with trailers, and will create a severe pinch point at a location that will experience high use. Therefore, to be consistent with the master plan:

- *Explore ways to provide a smooth transition for the Capital Crescent Trail into Elm Street Park avoiding sharp turns, including consideration of structural adjustments to the Air Rights Building garage.*

The ramp from the Capital Crescent Trail to the south side of East-West Highway would require an extremely sharp 180-degree turn to go east on East-West Highway, which will be difficult for cyclists to maneuver. It would be beneficial to have a longer landing area at the terminus to facilitate turns by cyclists, though this is complicated by the steep grade of the ramp. While this ramp has an 8.25% grade, it may be possible to create this landing area at East-West Highway by shortening the landing area at the junction with the trail. Therefore:

- *To create additional landing space at the western terminus of the East-West Highway ramp, investigate whether it is possible to reduce the length of the landing area at the junction with the Capital Crescent Trail.*

In addition, the sidewalk between the bridge and Montgomery Avenue is adjacent to the curb, even though there appears to be sufficient space for an offset. Therefore:

- *Along East-West Highway, widened the sidewalk to 7 feet and build it against the retaining wall for the ramp so that a landscaped buffer between the sidewalk and the road can be provided. Add an ADA ramp that is aligned with the ramp on the other side of the driveway.*

In some locations only stair access is provided to the Capital Crescent Trail, due to right-of-way limitations or other reasons. For people on bicycles this can be challenging, because carrying bicycles up stairs can be heavy and awkward, especially Capital Bikeshare bikes. Bicycle "channels" provide a groove on the side of the staircase that enables many cyclists to push their bicycles up and down the stairs. To facilitate bicycle access:

- *Provide a bicycle channel on the stairway connection to the Capital Crescent Trail at East-West Highway, Sleaford Road, and on the east side of Connecticut Avenue.*

The Chevy Chase Lake Sector Plan recommends a shared use path (LB-4) on the south side of Newdale Road to connect the Capital Crescent Trail to the west side of Connecticut Avenue. Currently, engineering plans show a 5 to 6-foot-wide sidewalk in this location. MTA has indicated that "an 8-foot-wide shared use path cannot be accommodated due to the proximity of MSE Wall 1FO supporting the CCT." However, the 30% engineering plans show a buffer between Newdale Road and this sidewalk, so it is unclear why the shared use path cannot be widened for most of its length. Therefore:

- *A shared use path should be provided on the south side of Newdale Road that is 10 feet wide where right-of-way is available, and 8 feet wide in constrained locations.*

The Chevy Chase Lake Sector Plan recommends a shared use path (SP-82) along Coquelin Run between Jones Bridge Road and Chevy Chase Lake Drive, with a connection to the Capital Crescent Trail. The Purple Line 30% engineering plans reflect a 14-foot-wide underpass for SP-82; however, a connection between the two trails is not included. Design allowances should be included in final design so that this connection is not precluded in the future. Therefore:

- *Design the ultimate ramp connection between the Capital Crescent Trail and the Coquelin Run Trail during final design.*

Until this ramp connection is constructed, the distance between the two closest trail access points (Connecticut Avenue and Jones Mill Road) is about two-thirds of a mile, roughly a 14 minute walk. For trail users in this segment, the maximum walk time to any access point will be 7 minutes, or half the walk time from end to end. Therefore:

- *To enhance trail security, a temporary staircase should be constructed from the Capital Crescent Trail to the Coquelin Run right-of-way.*

The tie-in between the long ramp that connects Jones Mill Road to the Capital Crescent Trail appears to have inadequate sight distance. Therefore:

- *Provide a landing area between Jones Mill Road and Capital Crescent Trail that facilitates adequate sight distance and safe connections.*

To improve pedestrian and bicycle access to the Capital Crescent Trail:

- *The median island on the south leg of Jones Mill Road, across from the ramp, should be 8 to 10 feet wide to facilitate use by southbound bicyclists headed toward the ramp.*
- *The sidewalk in the southwest quadrant of the intersection of Jones Bridge Road and Jones Mill Road should be constructed behind the proposed ramps to facilitate travel by disabled persons as well as to provide storage space for people waiting to cross either street.*

In addition,

- *The gap between the two traffic islands at Station 1034+00 appears to be too narrow to adequately accommodate left turns from Jones Bridge Road.*

The proposed location of the trail in the September 2012 engineering drawings is on CSX property, within 50 feet of their track centerline, and therefore does not meet CSX's criteria for selling their property for a trail. Therefore, the best location for the trail appears to be on the south side of the tracks as shown in the 30% engineering drawings. This means that there are tradeoffs to consider between impacts to residential properties, the function of the Capital Crescent Trail, and the function of Talbot Avenue. Since this involves potential changes to circulation, emergency vehicle access, and private property, this issue will be explored in greater detail as part of the ongoing Greater Lyttonsville Sector Plan. Therefore, MCDOT should work with MTA to:

- *Issue a change order to address the substandard trail width on the Capital Crescent Trail, between Michigan Avenue and Lanier Drive, if recommended by the Greater Lyttonsville Sector Plan.*

At this point there is no agreement between CSX Transportation and MTA to locate the Capital Crescent Trail on CSX property between Lyttonsville Road and 16th Street. If this issue is not resolved MCDOT will need to select an alternate routing for the trail. Therefore:

- *If CSX does not agree to locate the Capital Crescent Trail on CSX property between Lyttonsville Road and 16th Street, MCDOT must submit the revised trail plans to the Planning Board as a mandatory referral.*

Although Third Avenue is a low volume road, the proposed access point to the trail should avoid a mid-block crossing. Therefore:

- *Realign the trail access point to either Noyes Lane or Noyes Drive to avoid mid-block crossings.*

The connection between the Capital Crescent Trail and the Metropolitan Branch Trail is located on a channel on top of the Silver Spring Transit Center. It appears from the 30% engineering plans that the channel may narrow to about 8 feet between knee walls, which is an effective width of 4 feet after

reductions for shy distance. While this channel was constructed as part of the transit center, it remains inaccessible at this time so staff was unable to measure it. Regardless, all trails must have an effective width of at least 8 feet to be considered a shared use path. Between two knee walls this would mean the actual width would have to be at least 12 feet wide, to account for shy distance. Widening the connection between the two trails would require a change to the Silver Spring Transit Center green roof and is outside of the purview of the current Capital Crescent Trail project. However, Montgomery County should conduct a follow-up project once the Silver Spring Transit Center is complete to:

- *Investigate ways to widen the connection between the Capital Crescent Trail and the Metropolitan Branch Trail to be 16 feet upon completion of the Silver Spring Transit Center to achieve a 12-foot effective width.*

SILVER SPRING GREEN TRAIL MANDATORY REFERRAL

While MCDOT is the project sponsor for the Silver Spring Green Trail, MTA is designing the trail. Therefore, MCDOT should work with MTA to accomplish the recommendations below.

General Comments

Several ramps on the north side of the Wayne Avenue are shown at an inadequate width to accommodate the Silver Spring Green Trail. Therefore:

- *Ramps for the Silver Spring Green Trail should be a minimum of 8 feet wide and the trail should be pointed directly into the ramp wherever possible rather than coming in at a 90-degree angle.*

The design of the Silver Spring Green Trail should reflect its importance as a connection between the Silver Spring Metrorail station, Capital Crescent Trail, the Metropolitan Branch Trail, and the Sligo Creek Trail. Therefore:

- *Develop and implement a unique signing and branding plan for the Silver Spring Green Trail between Spring Street and Sligo Creek Parkway. Signing should be provided at regular intervals on the trail, as well as at all access points.*

Location Specific Comments

With the completion of the Silver Spring Green Trail by 2020, only a one-block long segment of the trail will be incomplete. Therefore:

- *Design and construct the last remaining unbuilt and unprogrammed portion of the Silver Spring Green Trail, a one-block segment between Fenwick Lane and Cameron Street.*

The 4th Edition of the *Guide for the Development of Bicycle Facilities* states that the typical width of a shared use path is 10 to 14 feet wide, with the wider values applicable to areas with high use and/or a wider variety of user groups (page 5-3). In very rare circumstances, a reduced width of 8 feet may be used where specific conditions exist. While there is limited right-of-way along much of Wayne Avenue, there are locations where the trail could be expanded to the recommended 10 feet. Therefore:

- *Widen the Silver Spring Green Trail to 10 feet while maintaining a 5-foot-wide buffer with the curb where: 1) there is sufficient right-of-way, and 2) widening the trail would not make retaining walls higher. Candidate locations appear to be between Springvale Road and Greenbrier Drive and in front of the elementary and middle schools.*

The distance between ramps on the north side of Dartmouth Avenue is about 70 feet, even though the typical curb-to-curb distance for the rest of the road is about 25 feet. This is excessive for a residential street. Therefore:

- *Extend the curb at the northwest corner of Wayne Avenue and Dartmouth Ave to reduce the crossing distance for trail users.*

The Silver Spring Green Trail is proposed to be located adjacent to the curb at around Station 383+00, even though there appears to be sufficient right-of-way to provide an offset from the curb. Therefore:

- *Offset the trail from Wayne Avenue by building a retaining wall for the adjacent school parking lot.*

At the intersection of the Silver Spring Green Trail and the Sligo Creek Trail the connection is not flared. This affects sight distance and makes it more difficult to maneuver between the trail and the ramps. Therefore:

- *The connection between the Silver Spring Green Trail and the Sligo Creek Trail should be flared to the extent possible to facilitate access to the trail.*

The Sligo Creek Trail and the Silver Spring Green Trail will converge between the Sligo Cabin Park playground and Sligo Creek Parkway. This segment of the trail is currently a narrow sidewalk adjacent to the curb. MTA is proposing to widen the trail to 8 feet typically, and to 9 feet as it passes over the Wayne Avenue Bridge over Sligo Creek. Trail users tend to shy away from the road and bridge parapets by about 2 feet so the effective width of the trail will be only 5 feet on the bridge. This is substandard for any trail, but especially at a location where two major trails converge. Therefore:

- *The Silver Spring Green Trail on the Wayne Avenue Bridge over Sligo Creek should be widened to 14 feet (an effective width of 10 feet) to reflect expected demand. A barrier should be provided between the roadway and the trail on the bridge.*

The Wayne Avenue Bridge over Sligo Creek is a gateway to Silver Spring and should reflect its importance for motorists, train patrons, and trail users. When rebuilt, the new bridge should convey the same sense of arrival as does the East-West Highway Bridge over the Georgetown Branch in Bethesda. Therefore:

- *The existing stepped brick parapets on the Wayne Avenue Bridge over Sligo Creek should be replicated in the design of the new bridge. Ornamental lighting should be added to the bridge due to the high level of pedestrian and bicyclist activity on the bridge, as planned in the design of the existing bridge.*

The southwest corner of Wayne Avenue and Sligo Creek Parkway is the receiving end of the Sligo Creek Trail but has a sidewalk width. Therefore:

- *Widen the southwest corner of Wayne Avenue and Sligo Creek Parkway to at least 8 feet. Sligo Creek Trail should be relocated behind the traffic signal pole so that users can directly access the ramp to cross Sligo Creek Parkway.*

Additional graphics that help to explain many of the comments can be found at:
www.mcatlast.org/purple