**Date:** May 20, 2021  

**Date of Meeting:** May 5, 2021  

**Meeting Location:** Video conference  

**Work Order Number:** 32189-005  

**Project:** Howard County Complete Streets  

**Meeting Description:** Complete Streets Implementation Team Meeting #17 (Part 1)  

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Introduction

The purpose of the meeting was to review the revised schedule and reorganization of Design Manual chapters, address remaining comment log items, and provide an overview of the remaining Design Manual edits.

Jeff Riegner welcomed all attendees and reviewed the agenda. Jeff led the group through the presentation attached to these minutes.

Revised Schedule and Design Manual Chapter Reorganization

Jeff shared that after further discussion with staff, it was decided that reordering the chapters in Volume III would create more challenges than benefits. Therefore, the chapters will be kept in the same order they are in today:

- Chapter 1: Introduction
- Chapter 2: Street Design
- Chapter 3: Structure Design
- Chapter 4: Adequate Public Facilities Ordinance (APFO)
- Chapter 5: Traffic Studies

To reduce confusion associated with this change, effort will be made to refer to chapters by their name rather than the number for the next few months. This change will not impact the ability integrate the Complete Streets policy with the Design Manual.

Jeff then shared the revised schedule. All five Design Manual chapters are being advanced simultaneously. To date, the CSIT has had the most input to the Introduction chapter which is being revised to incorporate street types. New content is also being introduced. The revised Introduction is expected to be reviewed by staff in May and the CSIT in June. The Street Design chapter will be informed by feedback received during the May CSIT meetings. Several revisions are already in progress and will continue over the next few months.

The CSIT provided feedback on the Structure Design chapter after the April CSIT meetings. Most comments were accepted, although a few comments will be discussed when the Comment Log is reviewed later this meeting. The new section on underpasses will require some more time to complete, but the bulk of the structures chapter should be available for review by the CSIT in June. The APFO chapter does not require any significant changes, although a few housekeeping items will be addressed. The Traffic Studies chapter was reviewed with staff, but it requires significant edits before it is ready for review by the CSIT in June or July. The goal is to develop a complete initial Design Manual draft by July 9 that can be shared with the public later that month.

Christiana Rigby asked whether changes to the APFO chapter is a legislative effort or considered part of the Design Manual updates. Jeff replied that because it is also a legislative effort it is not being addressed as part of the Design Manual updates. The housekeeping measures will address minor technical issues with the chapter. Christiana asked what changes will be made to the Traffic Studies chapter. Jeff replied that most changes and additions to that chapter will be regarding walking and bicycling studies, for example bicycle Level of Traffic Stress (LTS), the pathway width calculator, and requirements for different types of traffic control devices at mid-block or unsignalized intersections. A lot of the detail provided in the Traffic Studies chapter applies to capital projects.

Comment Log

Jeff reviewed outstanding comments that are ready for discussion. The goal for reviewing comments is to ensure that everyone is heard and understood. If there are not opposing viewpoints, changes can be incorporated, but it may not be possible to incorporate every comment because there may not be consensus. Comments in bold and italics were recently resolved, and pink comments require further discussion with the CSIT. The log includes comments received on the Structure Design chapter (previously described as “Chapter 4”).
Comment 23

Kristin Russell provided a comment on the importance of intersection design addressing all modes of travel. The current Design Manual focuses on Level of Service, but more attention should be directed to balancing the needs of all users, as well as how to handle transitions to intersections. Larry Schoen echoed these concerns in some of his comments. Jeff agreed that intersections are extremely important, and that many of these issues are included in the list of items to be included in the Design Manual rewrite, which is the last agenda item. Most of these issues will be addressed in the Street Design chapter.

Comment 49

Kristin provided a comment about whether stormwater management should be accommodated in the right of way. Jeff noted that for new construction, stormwater management is assumed to be accommodated outside of the right of way. A paragraph or two about opportunities to provide stormwater management within the right of way will be included in Volume III of the Design Manual, but specific design guidance is provided in Volume I which will not be updated as part of this effort. Impacts to operations and maintenance will also be addressed.

Comment 56

Larry provided a comment about how bicycle network considerations factor into facility design decisions. Jeff agreed that most of the Design Manual addresses the design of specific facilities, not establishing a low-stress bicycle network. This comment may be better addressed by BikeHoward than by the Design Manual. Chris Eatough responded that addressing network design in BikeHoward makes sense, since the master plan is where maps of priority low-stress connections should be located. Jeff noted that this comment was received in early February when on-road bike lanes were still shown in several proposed street types for new construction. Since that time, most of those on-road bike lanes have been eliminated from the street types. Larry agreed that the issue has been addressed in new construction, but it is still relevant when there is limited right of way for retrofits. The outstanding question is what the default treatment should be. Larry argued that the default treatment should be what is shown in the new street types. Jeff noted that the FHWA Bikeway Selection Guide will be referenced in the Design Manual which will address the process for trade-offs. The last step in that process is moving a bicycle facility to a parallel route. Larry indicated he is comfortable with parking this comment since it will be addressed in the Street Design chapter.

Comment 58

Larry commented that the transitions between different street types are important, and that planners, engineers, development staff, and transportation specialists will need different design tools to address site specific issues. Jeff replied that transitions between different street types and to intersections will be addressed in the Street Design chapter. He noted that in some cases, a disconnected facility may be built, with the understanding that it will be connected to the rest of the network by a future project. Larry acknowledged that new pathways have a beginning and end, but the County has not done a great job integrating these links into the existing bike network. He asked whether network connectivity will be addressed by the Design Manual. Jeff replied it will be addressed in the draft and there will be an opportunity to provide further comment on the issue. Larry asked whether path or bike lanes crossing driveways and side streets would be covered. Jeff responded that would also be addressed in the Street Design chapter.

Comment 68

Larry provided another comment that expressed concern with transitions, which will be addressed in the Street Design chapter as previously discussed.
Comment 70 and 71

Larry noted that many roads in rural areas have multi-unit developments or low-density housing and expressed concern that roadways will be designated solely based on whether the area is outside of the Planned Service Area (PSA). Jeff acknowledged that some areas that were rural are no longer rural, but the designs shown for rural areas are appropriate to many locations in Howard County. The designer can decide what makes the most sense based on the transportation function and the anticipated surrounding land use. If a road outside of the PSA has a land use that is suburban instead of rural, it would be appropriate for the designer to choose a suburban street type as their model. Chris agreed with this approach, affirming that the PSA would not be driving the selection of road design or road features since land use is the critical factor. Larry agreed with the described approach. Chad noted this process should be clearly stated in the revised Design Manual.

Comment 71

Larry expressed concern with the use of shoulders as a bicycle facility. Jeff noted the FHWA Bikeway Selection Guide states that a shoulder is an appropriate bikeway in a rural area. At the last CSIT meeting it was noted that the shoulder should remain as free of utilities as possible so a smooth surface can be maintained.

Comment 75

Larry asked for clarification on how a Rural Development Street would function. Jeff responded that the Rural Development Street is the rural version of the narrowest version of the Neighborhood Yield Street. Neither street has a striped centerline. Larry asked where this street type would be applied. Jeff noted it would be used in rural residential developments that do not have curbs. Curbs are currently required in areas with meaningful density. Paul Walsky observed that a street that is 24 feet wide can only accommodate parking on one side of the road. Jeff replied that given the low housing density in a rural development, people could park on either side of the street as long as they are not parked directly across from one another.

Larry mentioned Far Side Road as an example of a street with such low density that on-street parking does not regularly occur. Because it is a long straight street, vehicular speeds are often too high and would present an issue to someone trying to walk or bike along the street. Jeff replied that Far Side Road is a wider road that is also median separated. Streets in that neighborhood appear to be 24 feet wide. There are three ways to address vehicular speeds: narrow the street, build in curvature, and include traffic calming measures. Traffic calming measures should not be deployed until other measures have been implemented. Larry responded that developers would not want to provide wider streets and Carl agreed. Larry asked that the Design Manual include guidance on calming traffic. Chris noted that West Running Brook Road is 24 feet wide but is very pleasant and easy to use. The curvature and mature tree growth help calm traffic. Larry noted that there are also speed bumps on West Running Brook Road, reiterating his concern that long, straight stretches of roadway encourage excessive speeds. Jeff agreed that long straight stretches of roadway without the benefit of frequent intersections are not desirable.

Comment 92-93

Jennifer White provided two comments regarding rural streets. She noted that both Country Roads and Rural Development Streets may require adjacent shared use paths if they are part of a connected network of pathways. Jeff agreed with the comment and asked whether the path should be shown as part of the street type section or included elsewhere in the Design Manual. It is important that developers understand if a pathway is required. Chris replied that it should be included with the typical street types and either shown as an option or noted as such. He expressed support for a section that shows a pathway. Larry commented that the current note on the Country Road and Rural Development Street sections indicates that are to be used outside the PSA which needs to be corrected. He observed that a Country Road is a fairly high speed roadway, so an 8-foot shoulder would likely be LTS 3 or 4. Jeff commented that Jennifer’s original comment was about adding a shared use path to the road if it was needed to create a link in a pathway network, but comments suggest that a shared use path may be more of a typical treatment.
Chad requested an example and recommended Burntwoods Road near Glenelg High School. Jeff showed Burntwoods Road just east of the high school, which has narrower shoulders and would be a higher stress environment for cyclists than if there were 8-foot wide shoulders as called for in the Country Road street type. Larry noted that wide shoulders could also encourage higher speeds. Chris commented that if this road was being built today, a shared use path would be a nice option to have. There are segments of road like this that will get rebuilt as part of development frontage improvements, but it would not be worthwhile to include a pathway since it would be done piecemeal. Jeff replied that the Country Road type has the greatest potential for frontage improvements, as it is unlikely that there will be new Country Roads built in Howard County. He asked if a shared use path should be provided in lieu of full shoulders. A one- to two-foot shoulder could be provided as an offset to maintain the pavement edge and a path could accommodate people walking and biking. Chris responded that one or two disconnected pathway segments is not very worthwhile and Jennifer agreed. Jeff agreed that a short segment of shared use path on one side of the road is not useful, but a note could refer designers to BikeHoward to see if there is a pathway connection that should be made. Carl asked if the existing road does not have wide shoulders but does have a shared use path, whether connecting to the existing path could be considered in lieu of providing shoulders. Jeff replied that a note will be added to the Design Manual that a shared use path could be provided in lieu of most shoulders in “missing link” situations.

Jennifer also expressed concern with 12-foot wide lanes for Rural Development Streets. Jeff reiterated that this street would operate like a Neighborhood Yield Street and that a note would be added to discourage long straight streets.

Comment 94

Jennifer requested that speeds be added to the Street Type Table. Jeff replied that speeds can be added.

Comments on the Structures Chapter

Jeff noted that the next set of comments were regarding the Structures Chapter. Several members of the CSIT had similar comments regarding the provision of walking and bicycling even on bridges where there are not sidewalks or bicycle facilities existing or planned on either side. Based on the comments received, the recommendation is that 10-foot shoulders be provided as a default for areas where sidewalks, bike lanes, and shared use paths are not planned. Even in a rural area, the shoulders will provide generous space for low levels of walking and bicycling comfortably outside the path of motor vehicle traffic. In areas where more intensive treatments like sidewalks or shared use paths are proposed, those facilities will be continued across the structure. Larry asked if it would be excessive to propose a separate bridge facility for walking and bicycling which might be more affordable. Jeff replied that this provision only applies to bridges that are being replaced or for brand new bridges in areas where sidewalks and bicycle facilities are not proposed at any point in the future.

David Ramsay asked if anyone knows the widths of the elements on Triadelphia Road bridge near Folly Quarter Middle School. Tom Auyeung replied that there is a sidewalk on the school side of the roadway. Jeff noted that in cases where a bridge is in a quasi-rural location but proximate to a school, accommodations beyond a shoulder should be provided for people who walk and bike. In instances where there are no anticipated sidewalks or pathways, the provision of shoulders would benefit people walking and biking as well as maintenance workers and disabled vehicles. Chris noted that the occasional pedestrian or cyclist may be comfortable walking along a roadway with no facilities when it is possible to move off to the side of the road if conditions dictate, but it is impossible to step to the side on a bridge when there are no shoulders.

David mentioned Linden Church Road bridge as a good example that has a shoulder. Larry noted a shoulder could be converted to a two-way cycle track or protected bike lane in the future if conditions warrant. Chris asked whether a full 10-foot shoulder is necessary. Jeff replied that the shoulders could be narrower, but 10 feet can accommodate a painted buffer with flex posts and an 8-foot path. Narrower shoulders would limit opportunities in a retrofit. Larry asked what changes would be necessary to create a low-stress riding experience on the Linden Hill Road bridge. Chris observed that for a rider requiring low-stress accommodations to reach that bridge they would have to traverse miles of roadway without facilities. An individual that required LTS 1 accommodations would not be on the bridge in
the first place. Carl noted that the shoulders on Linden Hill Road bridge are not 10 feet wide, and that every foot the bridge is wider creates a more costly project. Kris noted that the Triadelphia Road bridge has a 5-foot sidewalk, 6-foot shoulder, and two 12-foot vehicular lanes. No one on the call knew the width of the shoulders on the Linden Hill Bridge. Jeff observed the consensus seems to support shoulders in the 8- to 10-foot range.

Comment 98

Jennifer noted that for bridges that afford scenic views, consider providing a viewing platform outside the operating space of the pathway. Jeff asked if the County generally allows open space for people to go fishing. Chris noted that this comment only applies to bridges that cross over bodies of water rather than a roadway. No one objected to including a note in the Design Manual that address the provision of a viewing platform for bridges over waterways.

Comment 101

Jennifer requested that the AASHTO Pedestrian Guide and Bike Guide be cross referenced since they both have chapters on structures. Jeff noted that the most recent AASHTO Pedestrian Guide is 17 years old and is out of date. Larry asked if there was better guidance. Jeff replied that the AASHTO Bridge Guide is already cross referenced.

Comment 103

Previous discussion already addressed the concerns raised by this comment.

Comment 105

Jennifer requested pedestrian and bicycle facilities be accommodated in underpasses. Jeff replied that a new section on underpasses will be provided.

Comment 110

Jennifer commented that when retaining walls are directly adjacent to sidewalks and shared use paths, they can create an uncomfortable environment for cyclists and pedestrians. Jeff replied that staff had an extensive conversation around this issue. For new construction the first preference will be to revise the grading so that a retaining wall is not needed. If a wall is required, the manual will note that the sidewalk or shared use path should be wider than standard. Although a wider sidewalk or path at the base of a retaining wall is desirable, design guidance should not be so restrictive that opportunities to build better walking and bicycling facilities in constrained areas are lost. Jennifer asked that when a site is constrained by a retaining wall whether the vehicular travel lanes could also be narrowed to create more space for cyclists and pedestrians. Jeff replied that FHWA provides guidance that helps evaluate those tradeoffs. Jennifer agreed that tradeoffs must happen, and it is good that they will not all be on the bike and pedestrian side.

Comment 113, 119, 122, 136, 140

Each of these comments noted that more guidance needs to be provided regarding railing systems and barriers both on multi-modal and shared use path bridges. Jeff replied that additional information will be provided regarding railings and barriers.

Overview of Remaining Design Manual Edits

Jeff provided an overview of items that need to be provided in Design Manual edits. Most of the current Design Manual content will be revised as appropriate to reflect a Complete Streets approach. This list includes items that are not addressed by the current Design Manual. Suggestions came from “parked” items in the comment log and previous meeting minutes. This is an early opportunity to discuss updates to the Design Manual, but further discussion will take place when the CSIT reviews draft chapters.
Chris asked if it was fair to characterize a lot of the additions as potential tools in a toolbox that a designer can use in retrofit situations with some flexibility, as opposed to prescriptive guidance. Jeff replied that is the intended approach. One document that has informed this approach is the Gaithersburg Street Design Guide which uses “typical applications” that outline where certain treatments are appropriate.

Jeff noted that some of the recommendations are not toolbox items but address how streets are designed, starting with speed management, a fundamental principle of Complete Streets. These principles have already been used in developing the street types and Street Type Table. Bicycle LTS will be incorporated as a principle. Jeff noted that the functional classification has not gone away, and clarification needs to be provided on the relationship between the functional classification system and street types, and how the two systems will coexist side by side. How street types are selected and applied to new construction and retrofit projects needs to be established, as well as a section on design processes and tradeoffs for capital and developer projects. Guidance on the scenic overlay section needs to be provided. Green stormwater infrastructure will be introduced, and designers directed to Volume I for further guidance. Because the Howard County Design Manual does not apply to state roads, the appropriate state guidance will be cross referenced.

Larry asked if it is possible to have requirements that exceed what the state would do when a developer is increasing the LTS of a road. Jeff replied that capital projects on a state road follow state guidance but asked for clarification from the County on how developer projects are handled. Chris noted that the MDOT State Highway Administration (SHA) has representatives on the development review committee so they take the lead on discussions with the developer if the frontage is on a state road. Carl noted that the state has a process that culminates with the granting of an entrance permit. It is expected that the developer follows the state standards and details, which is enforced because they control the entrance permit.

Larry asked to discuss the stated goal of designing bicycle facilities to LTS 2 or better. At previous CSIT meetings the team agreed that if a corridor is near a school where children may be getting around on their own, LTS 1 should be the default. Jeff asked the team what their feedback is on LTS 1 being the default as opposed to LTS 2. No one provided any feedback. Jeff noted that for the Street Types, the two circumstances where LTS 1 is provided are Neighborhood Yield Streets and all sections where bikeways (including shared use paths) are physically separated. Leah noted that Neighborhood Yield Street 1 provides for on-road bike lanes that might be classified as LTS 2 depending on the effective speed of the roadway. Neighborhood Yield Streets 2 provide for a shared use path which is LTS 1. Selecting which option is appropriate is at the discretion of the designer. Larry acknowledged that new construction is adequately covered by the Street Types, but retrofit situations are not adequately addressed. Jeff noted that LTS 2 allows for almost all adults to ride comfortably and that the difference between LTS 1 and 2 is not extreme. Chris commented that the most obvious area for discussion is school zones since those areas should have a higher emphasis on safety. There are already requirements for safe pedestrian routes to school if children are not provided bus service, and the Howard County Public School System (HCPSS) review is very thorough. Even in places where paths are not present, children can ride bicycles on sidewalks legally in Howard County. Christiana asked if it would be possible to address the areas around schools as well as other community amenities like libraries. Chris agreed, clarifying that the goal of LTS 1 while accessing these locations sounds reasonable. Christiana envisions it as a prioritization guide when looking at where LTS 1 connectivity should be built out. Jennifer commented that it is important to keep our goals in mind, which is to improve connections to services and resources. The realities of what everyday people need must be considered.

John asked if these priority destinations are identified in Bike Howard. Chris replied that they are not called out in terms of LTS since that did not exist as a tool at the time the plan was developed. John asked about criteria around schools or libraries. Chris replied that schools are mentioned as a priority area on maps. Libraries are not called out in the same way. Shopping centers and other popular local destinations are included. John asked if BikeHoward is referenced in the Design Manual. Chris replied that both master plans are mentioned in the new Introduction chapter. Jeff noted that the master plans will also be cross referenced in other chapters of the Design Manual. John agreed that there are areas that deserve more attention than others, and the master plans should be used to identify those areas. Christiana agreed she is comfortable with that approach but asked whether the master plans could be updated concurrent with the Design Manual edits. Chris replied that updating the master plans would require more time, although they are exploring an update next year. Leah noted that the access performance measures discussed
at the April CSIT meeting could also be used as a tool to prioritize focus areas. Bruce replied that he would like to avoid committing to another document update in support of this effort. He also expressed concern that an LTS 1 standard would consume limited resources, supporting Chris’s idea of having a goal but maintaining some flexibility. Jeff replied that the Design Manual will note that LTS 1 is preferred in certain designated areas, which the group can review. LTS 1 would be more appropriate for youth, but in some circumstances an LTS 1 facility could be much more expensive to build. Building a shared use path is a capital project. There may be other ways to get to LTS 1 without the burden of a capital project, such as reducing prevailing speeds along the roadway.

**Next Steps**

Jeff asked if there were any further comments on the fundamental principles.

Carl asked if information could be provided regarding what types of bicycle facilities SHA has been providing on state roads. He observed that there are a lot of bike lanes being installed recently and would be interested in knowing the state’s position on LTS. Jeff replied that LTS is fairly new to the state. MDOT is developing LTS guidance now, but it is not yet used as a guiding principle in design. Once the statewide map is prepared, it would make sense that it would be used for design guidance. He noted that in areas with significant constraints, it is sometimes reasonable to provide a higher stress facility where it is not reasonable or possible to provide a lower stress facility. Bike lanes can be better than nothing, but that is a fallback position.

Larry noted that he has not yet compared the fundamental principles with the Complete Streets policy, one of which is to give priority to a mode that is not currently accommodated before providing an enhancement to a mode that is already accommodated. Jeff replied that those principles are captured in the introductory chapter.

Jeff noted the Friday meeting will start by reviewing minutes and then the remaining slides on new material for the Design Manual. That will include how to determine the typical section, facilities for walking, facilities for bicycling, traffic calming measures, crossing at unsignalized intersections, intersection design, bikeways at intersections, network connectivity, and guidance for construction.

**Action items from this meeting include:**

- Review the minutes and the overview of remaining issues provided in the meeting materials.

The next CSIT meeting is scheduled for Friday, May 7 at 1:00 pm.

Leah Kacanda, AICP