

Metropolitan Washington Council of Governments

New Ave Bikeway Section D District Connector

Preliminary Design Report May 2023





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I. Introduction

Preliminary (30%) design was completed for the City of Takoma Park's New Ave Bikeway Section D – District Connector project. The preliminary design was funded through the Metropolitan Washington Council of Governments (MWCOG) Transportation / Land-Use Connections (TLC) Grant Program. Design was completed in consultation with staff from the City, Maryland National Capital Park & Planning Commission (M-NCPPC), and local community stakeholders.

The objective of the project is to enhance bicyclist mobility by providing a safe, low-stress enjoyable bikeway connection from Poplar Avenue to the District of Columbia, while avoiding impacts to local neighborhoods, property, environmental resources, and utilities.

The project is located within the City of Takoma Park, Montgomery County, Maryland. Project limits for the New Ave Bikeway Section D – District Connector include four (4) low-volume residential streets beginning at the intersection of Kansas Lane and Eastern Avenue (DC Line) to the intersection of Poplar Avenue and New Hampshire Avenue (MD 650) as shown in Figure 1.

This report presents the existing conditions, activities undertaken in developing the 30% design and considerations for the next phase of design.



Figure 1 - Map of New Ave Bikeway Network

RK&K May 2023

II. Existing Conditions

Roadway

The New Ave Bikeway Section D – District Connector project limits extend from the intersection of Kansas Lane at Eastern Avenue (DC Line) and continue for approximately 0.5 mile through low-volume, low-speed residential City streets to the intersection of Poplar Avenue at New Hampshire Avenue (MD 650). The neighborhood residential streets are generally characterized as variable width roadways with on-street parking and limited right of way with adjacent property features, including steep slopes, retaining walls, fences, landscaping, and driveways. The existing conditions for each major segment of the project are described below:

Kansas Lane between Eastern Avenue NE and Westmoreland Avenue: This segment of the bikeway is narrow at 23 feet to 24 feet wide (excluding gutter pan) with street parking on the east side, with non-continuous, variable width sidewalk (2 feet to 3.5 feet) on both sides with no additional right of way behind the sidewalk. Kansas Lane at Westmoreland Avenue is a raised intersection. See Photo 1.

Westmoreland Avenue between Kansas Lane and <u>4th Avenue</u>: This segment of the bikeway is very narrow at 18 feet to 19 feet wide (excluding gutter pan), with street parking on the south side. There is a continuous sidewalk along the north side and the sidewalk along the south side starts at the intersection of Kansas Lane and Westmoreland Avenue and continues until it terminates at approximately 100 feet from the intersection of Westmoreland Avenue and 4th Avenue. The southwest corner of the Westmoreland / Kansas intersection is also a school bus stop. See Photo 2.

Photo 1 - Kansas Ln Looking Towards Eastern Ave



Photo 2 – Westmoreland Ave Looking from Kansas Ln

4th Avenue from Westmoreland Avenue to Cockerille Avenue: This segment of the bikeway is narrow at 19 feet to 22 feet wide (excluding gutter pan), with street parking on both sides and continuous variable width sidewalk on the west side and no sidewalk along the east side of 4th Avenue between Westmoreland and Allegheny Avenue. There is continuous 4 feet wide (typical) sidewalk along the east side of 4th Avenue between Allegheny Avenue and Cockerill Avenue. There are two (2) speed humps located along this segment of 4th Avenue at approximately 130 feet north of the intersection with Westmoreland Avenue and approximately 50 feet south of the intersection with Orchard Avenue. There are also raised crosswalks at both the north and south legs of the intersection with Cockerille Avenue. See Photo 3.

4th Avenue from Cockerille to Poplar Avenue: This segment of the bikeway is 23 to 23.5 feet wide (excluding gutter pan), with street parking permitted on the west side of the street. There is continuous 4-feet wide (typical) sidewalk along



Photo 3 - 4th Ave and Orchard Ave Looking from Cockerille Ave

the east side of the roadway and there is no sidewalk on the west side of the roadway. There is a speed hump at approximately 275 feet north of Cockerille Avenue.

<u>Poplar Avenue from 4th Avenue to Gude Avenue</u>: This segment of the bikeway varies from 24 feet to 26 feet wide (excluding gutter pan), with street parking permitted along the north side and parking with some restrictions along the south side of the roadway. There are two (2) curb extensions along the north side of the roadway that provide the minimum 36 inch wide sidewalk passing zones around utility poles and one curb extension that includes a tree with pervious area. The three (3) curb extension locations also serve as traffic calming measures. There is continuous variable width (4 feet to 5 feet) sidewalk along both sides of Poplar Avenue.

<u>Poplar Avenue from Gude Avenue to New Hampshire Avenue (MD 650)</u>: This segment of the bikeway is 22 feet wide typical (excluding gutter pan). There is 5 feet wide sidewalk (typical) along the south side and 4 feet wide sidewalk (typical) along the north side. There is no parking allowed on either side of the roadway for this segment.

Site Survey

A field run topographic survey was completed by the project team in December 2022. The survey includes curb and gutter, sidewalk, fences, utility surface features, drainage structures, street lighting, trees, and signs. A deed mosaic was prepared to establish the existing right-of-way.

Utilities

A utility composite was developed based on available record information provided by utility companies and surface features identified during the field run survey. All line styles are Depicted According to Record (DATR) and in accordance with MDOT SHA CADD standards. The utility composite was developed with Quality Level (QL) C/D information. The utility composite is referenced on the 30% design plans (Appendix B).

Natural Resources

A desktop investigation of mapped resources included review of: The United States Geologic Survey (USGS) Geographic Information Systems (GIS) Quadrangle Mapping; The United States Department of Agriculture; Natural Resource Conservation Service (USDA-NRCS) Web Soil Survey (WSS) for Montgomery County, Maryland; National Wetlands Inventory (NWI) GIS data; Maryland Department of Natural Resources (MDNR) Wetlands and Waters GIS data; Montgomery County Planning Department's MCATLAS map viewer; Federal Emergency Management Agency (FEMA) 100-year floodplain GIS data; and the Chesapeake Bay Critical Area GIS data. The NWI and DNR GIS mapping did not identify any wetlands or waters within the project corridor. FEMA GIS data for Montgomery County indicates that there is no 100-year floodplain within the project study area. The MD-DNR Aquatic Resources Pre-Screening Tool indicated that there are no aquatic resources of concern within the project study area. MCATLAS map viewer did not identify any forests or forest conservation easement areas within the project limits. There are street trees along the corridor that will require tree condition inventory during subsequent stages of design. Environmental permitting agency correspondence was not initiated as part of this scope of work and should be conducted during the next phase of design to confirm that there are no listed rare threatened and endangered species (RTE) concerns.

Cultural Resources

A review of the MEDUSA Online system did not identify any cultural or historic resources within the New Ave Bikeway Section D – District Connector project limits. However, coordination with the Maryland Historical Trust (MHT) to review the project and offer comment shall be initiated after preliminary design.

III. Stakeholder and Community Outreach

Throughout development of the 30% design, City staff and the consultant team conducted meetings with agency stakeholders and the community to obtain feedback. Agendas and minutes from agency stakeholder and community outreach meetings are included in Appendix A. The following meetings were conducted:

Kickoff Meeting – September 26, 2022:

The City hosted a virtual meeting with the Metropolitan Washington Council of Governments and the consultant team to review the project scope, goals and schedule.

Route Selection Meeting – October 10, 2022:

A field meeting was held with the City of Takoma Park staff to discuss two (2) potential alignment (route) options for the New Ave Bikeway District Connector improvements. The team walked both alignments to review the existing site conditions and requirements to implement the District Connector bikeway improvements along both potential routes. A Route Selection Memo was prepared to document the pros and cons for each option and to make a preferred alignment (route) recommendation for preliminary design. The Route Selection Recommendations Memo, dated October 13, 2022, is included in Appendix A.

Public Informational Field Walk – December 10, 2022:

City planning staff held a field walk and ride with community members to collect input for the proposed improvements. Comments were collected and considered in preparing the draft 30% design. Point-by-point responses to community feedback from this meeting are included in Appendix D.

Draft 30% Design – February 21, 2023:

Draft 30% plans were submitted to the City of Takoma Park on February 21, 2023. The draft plans were then distributed to other agency stakeholders, including Maryland-National Capital Park and Planning Commission (M-NCPPC) for review and comment. Agency comments received, including responses from the design team are included in Appendix D.

Virtual Public Meeting – March 2, 2023:

A virtual public meeting was held to present the draft 30% design to the community for comment. Comments received from the virtual public meeting are included in Appendix D.

IV. Design Criteria

Design guidelines, standards and planning documents that were consulted for the preliminary design of the New Ave Bikeway Section D – District Connector include Montgomery County Bicycle Master Plan, NACTO Urban Bikeway Design Guide, NACTO Urban Street Design Guide, MDOT SHA Bicycle Policy & Design Guidelines, MDOT SHA Accessibility Policy & Guidelines for Pedestrian Facilities along State Highways, Maryland Manual on Uniform Traffic Control Devices (MdMUTCD), FHWA Public Right-of-Way Accessibility Guidelines (PROWAG), AASHTO Guide for the Development of Bicycle Facilities (2012, 4th Edition), the AASHTO Green Book (2018, 7th Edition) and the City of Takoma Park Streetscape Manual (2021).

Sharrows

The MDSHA Bicycle Policy & Design Guidelines states that "on roadways with low motor vehicle volumes and/or speeds, bicycles can easily share the travelled way with other traffic and usually do not need

special treatments such as bicycle lanes." Shared lane markings, or sharrows may be considered on roadways where the speed limit is 35 mph or less. Sharrows should be placed a minimum of 4 feet from the face of curb or roadway edge to the center of the sharrow marking. The MdMUTCD states that sharrows should be placed immediately after an intersection and spaced at intervals no greater than 250 feet thereafter.



Figure 2 - Sharrow Marking

Shared Use Path

The AASHTO Guide for the Development of Bicycle Facilities states that the minimum paved width for a two-directional shared use path is 10 feet. In some circumstances a reduced width of 8 feet can be used instead. At a minimum a 2 feet wide graded shoulder with a maximum of 1V:6H slope should be

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provided for clearance from lateral obstructions such as bushes, trees, post mounted signs, and traffic control devices. The shared use path shall have a maximum cross-slope of 2% to satisfy ADA requirements.

Speed Humps

The Takoma Park Streetscape Manual provides design guidance for speed humps as a traffic calming treatment. There are two types of speed hump designs that are designated for use in the City of Takoma Park. The Takoma Park standard speed hump is 12 feet in length and is 3 inches to 4 inches in height. The Montgomery County standard speed hump is 12 feet and 3 inches in height. Figure 3 below shows the profile for a Takoma Park standard speed hump and Figure 4 shows the profile for a Montgomery County standard speed hump. The NACTO Urban Design Guide states that both 3-inch and 4-inch humps are safe for bicyclists. A 4-inch hump should be used with caution where bicycle traffic is frequent or rapid.

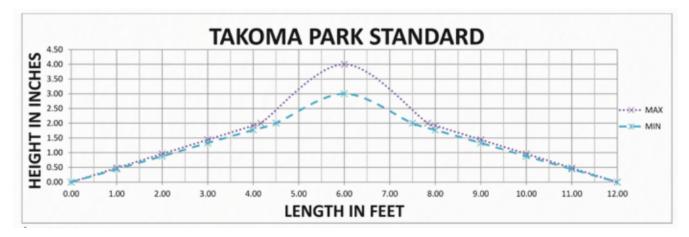


Figure 3 - Takoma Park Speed Hump Profile

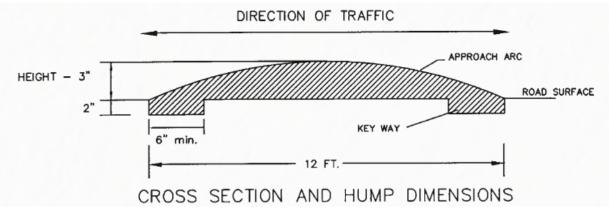


Figure 4 - Montgomery County Speed Hump Profile

Street Parking

Chapter 31 of the Montgomery County Code prohibits to stop, stand, or park a vehicle in the following scenarios:

- Within 15 feet of a fire hydrant
- Within 20 feet of any crosswalk, whether at an intersection or not, when such crosswalk is marked off by painted lines
- Within 30 feet upon the approach to any flashing signal, stop sign, yield sign, or traffic-control signal located at the side of the roadway
- At any place an official sign prohibits parking

In residential neighborhoods the City of Takoma Park has recently constructed two-way roadways with 21' minimum roadway width and parking on one side of the street.

V. Description of Proposed Improvements

Bikeway Design

The objective of the proposed design is to enhance bicyclist mobility by providing a safe, low-stress enjoyable bikeway connection from Poplar Avenue to the District of Columbia, while avoiding impacts to local neighborhoods, property, environmental resources, and utilities. Providing a continuous shared use path throughout the project limits was considered during design development, however after reviewing the corridor it was determined not feasible due to right-of-way constraints, available roadway width, on-street parking requirements and utilities. The proposed improvements include sharrows (typical) along Kansas Lane, Westmoreland Avenue and 4th Avenue and a continuous 10 foot wide shared use path (SUP) along Poplar Avenue. The proposed SUP along Poplar Avenue will connect to the proposed SUP at the southern limit of the New Ave Bikeway Section B improvements at the intersection of New Hampshire Avenue (MD 650).

Kansas Lane between Eastern Avenue NE and Westmoreland Avenue:

The proposed improvements for this segment of the bikeway include sharrows with bike route and wayfinding signs, and sidewalk reconstruction. To address community concerns, the existing variable width (2-3.5 feet wide) sidewalk on the south side of Kansas Lane will be reconstructed to provide a continuous 5 feet wide sidewalk. A curb extension is also proposed at the southeast corner of the Westmoreland Avenue / Kansas Lane intersection to provide a 5 feet wide, ADA compliant sidewalk that also serves as the location of a school bus stop. An existing utility pole and guy anchor will require relocation to provide the desired 5 feet wide minimum sidewalk clearance. Figure 5 shows examples of bike route signs that may be considered for the improvements.





Figure 5 – Bike Route Signs

Westmoreland Avenue between Kansas Lane and 4th Avenue:

The proposed improvements for this segment of the bikeway include bike sharrows and bike route/wayfinding signs. The existing parking along the south side will not be impacted. One of the comments from the public was to switch the parking to the north side of the roadway. We recommend maintaining parking on the south side of Westmoreland Avenue with consideration given to the proposed curb extension at the southeast corner that also serves as a school bus stop.

4th Avenue from Westmoreland Avenue to Cockerille Avenue:

The proposed improvements for this segment consist of bike sharrows, bike route/wayfinding signs, and speed hump replacement. The existing parking along this segment will not be impacted. The existing Takoma Park standard speed hump nearest Westmoreland Avenue is proposed to be replaced with the more bike friendly Montgomery County standard speed hump. A shared use path was investigated through this segment on both sides of the roadway. To accommodate a SUP would require a combination of parking removal, ROW acquisition, and property impacts. Considering the low volume of vehicles, it was determined that sharrows are appropriate along this segment to avoid impacts to onstreet parking and private property.

4th Avenue from Cockerille to Poplar Avenue:

The proposed improvements for this segment consist of bike sharrows, bike route/wayfinding signs, and speed hump replacement. The existing parking along this segment will not be impacted. The existing Takoma Park standard speed hump nearest Poplar Avenue is proposed to be replaced with the more bike friendly Montgomery County standard speed hump. A shared use path was investigated through this segment on both sides of the roadway and determined to not be feasible as it would require impacts to street parking and private property.

Poplar Avenue from 4th Avenue to Gude Avenue:

The proposed improvement for this segment consists of proposed curb (i.e., narrowing roadway), 10 foot shared use path, utility pole relocation, and parking removal. In the original 30% design it was proposed to construct an 8 foot path but after the public meeting the community preferred to narrow the roadway by 2 feet to increase the shared use path width to 10 feet. There is an existing utility pole in the middle of the proposed shared use path that will be relocated out of the SUP. The existing parking on the south side of the roadway is proposed to be removed. Parking will be maintained on the north side of the road between 4th Avenue and Gude Avenue.

Poplar Avenue from Gude Avenue to New Hampshire Avenue (MD 650):

The proposed improvements in this segment consist of proposed curb (i.e., narrowing roadway), 10 foot shared use path, and Type A curb at the back of path. The proposed 10 foot shared use path matches the width of the proposed New Ave Section B shared use path at New Hampshire Avenue. An 8 inch max height Type A curb is proposed in areas of the back of shared use path to limit grading within the adjacent property and avoid impacts to utility poles. The design also shows the proposed curb extension at the southwest corner of the Poplar Avenue at MD 650 intersection for the proposed New Ave Section B improvements. Turning movements were evaluated at the intersection to accommodate an SU-40 design vehicle without tracking into opposing lanes. We do not recommend extending the south curb return any further than that shown on the plans.

One of the comments from M-NCPPC was to convert Poplar Avenue from 4th Avenue to New Hampshire Avenue into a "Neighborhood Greenway". From our initial review we do not recommend a greenway because of its proximity to New Hampshire Avenue. The MCDOT Bicycle Master Plan states neighborhood greenways should be applied to streets with low volumes (less than 3,000 ADT) and that are parallel to major roadways. Poplar Avenue is perpendicular to New Hampshire Avenue and it is estimated the ADT is above the minimum threshold. This can be investigated further during subsequent design phases to determine the viability of a Neighborhood Greenway for this segment.

Stormwater Management

Stormwater management for the proposed design is in accordance with the *Maryland Stormwater Design Manual (Revised May 2009)* and *Takoma Park City Code, Section 16.04.* Per the guidelines in this manual, for "redevelopment" areas the goal is 50% removal of existing impervious. All POIs classify as redevelopment, therefore, 50% of existing pavement within the LOD that is not removed is required to be treated at a PE of 1.0 inch for water quality purposes. New impervious area is to be treated at the appropriate composite PE, based on soil type.

POI 1 is located at an existing inlet along westbound Eastern Avenue before the intersection with Kansas Lane. The work proposed in this POI involves sidewalk reconstruction and ADA compliant upgrades.

POI 2 is located at an existing inlet along northbound Kansas Lane between Eastern Avenue and Westmoreland Avenue. The work proposed in this POI involves sidewalk reconstruction and ADA compliant upgrades.

POI 3 is located at an existing inlet along eastbound Westmoreland Avenue between Kansas Lane and 4th Avenue. The work proposed in this POI involves sidewalk reconstruction and ADA compliant upgrades.

POI 4 is located at an existing inlet along westbound Poplar Avenue after the intersection with Gude Avenue. The work proposed in this POI involves shared use path construction and ADA compliant upgrades.

POI 5 is located at an existing inlet along eastbound Poplar Avenue between Gude Avenue and New Hampshire Avenue. The work proposed in this POI involves shared use path construction and ADA compliant upgrades.

The stormwater requirements for these POIs are summarized below in Table 1. See Appendix E for detailed calculations.

POI	ESDv POI (CF)	ESDv Redevelopment (CF)
1	0	0
2	-90	103
3	0	0
4	90	172
5	138	172
TOTAL	-	447

 Table 1 - Summary of Stormwater Requirements

Across most of the project corridor, residential property is directly adjacent to all sidewalks. A microbioretention is proposed in POI 2 at the corner of Eastern Avenue and Kansas Lane to provide 1311 CF of ESDv. With over-treatment in POI 2, water quality is provided in excess for the project as a whole. A waiver for quantity control under 16.04.080 will most likely be required for POIs 4 and 5 as there is a net increase of impervious area within those POIs.

Drainage upgrades withing the project corridor are limited to those structures which are impacted by the proposed work and an open back inlet for the SWM facility. As there is a minimal increase in impervious area for all POIs where storm drain improvements are proposed, it is assumed that peak flows will not increase, and therefore existing storm drain pipes will have adequate capacity to convey flow. There are no known flooding concerns in this area.

VI. Right of Way Requirements

Right of way impacts are not anticipated based on the proposed improvements. Regarding the proposed sidewalk reconstruction at the southwest corner of Westmoreland Avenue and Kansas Lane, further research of right of way deeds should be performed during the next phase of design to confirm if the proposed sidewalk improvements are within the existing right of way or an existing easement.

VII. Utility Impacts

There are two utility pole relocations required to accommodate the improvements. The two (2) utility poles that require relocation are located at the southwest corner of the Westmoreland Avenue and

Kansas Lane intersection (station 13+75, RT) and on Poplar Avenue at approximately station 21+10 LT. The pole at station 13+75, RT will be relocated within the existing right-of-way to provide a 3 feet wide minimum sidewalk clearance. The pole at station 21+10, LT will be relocated to 1 foot behind the shared use path.

VIII. Construction Cost

The estimated construction cost for the New Ave Bikeway – District Connector improvements is \$480,850. This includes a 30% contingency and 6% contingency for utility relocations. See Appendix C for the detailed cost estimate, including a list of assumptions and exclusions.

IX. Considerations for the Next Phase of Design

As the City pursues future phases of design, the following items should be reviewed to ensure coordination of next steps to further evaluate and detail the recommended improvements required to enhance the City's New Ave Bikeway Section D – District Connector improvements:

- Perform tree condition survey and assess tree impacts (Kansas Lane and Poplar Avenue)
- Review right of way (ROW) deeds to confirm if ROW impacts are required at the southeast corner of Kansas Lane and Westmoreland Avenue.
- Coordinate with Maryland Historic Trust
- Coordinate with Natural Resources Agencies
- Prepare SWM Concept Package, secure City Approval
- Apply for Forest Exemption Request
- Submit Mandatory Referral Application to M-NCPPC
- Perform a utility designation (QL-B/A). Assess utility impacts and coordinate with utility owners
- Subsurface Geotechnical Investigation, including soil borings to confirm viability of SWM practices

APPENDIX A

Stakeholder Meeting Summaries

MWCOG TLC Program FY2023 Contract No. 21-093 DESIGN KICK-OFF MEETING AGENDA

Project:	City of Takoma Park, 2 Projects: Metropolitan Branch Trail Upgrade New Ave Bikeway – District Connector (Section D) Preliminary (30%) Design
Date & Time:	Monday, September 26, 2022 - 11:00 AM

Virtual Teams Meeting

Attendees:

NAME	AGENCY	PROJECT ROLE	EMAIL
Alex Freedman	City of Takoma Park, Planning & Community Development Division	Project Manager	alexanderf@takomaparkmd.gov
Erin Morrow	MWCOG	Project Liaison	emorrow@mwcog.org
Rick Adams	RK&K	Project Director	radams@rkk.com
Rob Gillespie	RK&K	Project Manager	rgillespie@rkk.com

1. Introductions

2. Overview of TLC Program Roles

- a. MWCOG
 - i. TLC Project Expectations
- b. City of Takoma Park
- c. Stakeholders contacts
 - i. MBT Upgrade
 - WMATA, Montgomery College, neighborhood associations
 - ii. New Ave Section D
 - neighborhood associations, MDOT SHA
- d. Consultants RK&K with CDDI as DBE subconsultant

3. Project Area, Objectives

- a. MBT Upgrade
 - i. City maintained section of MBT, 0.45 miles
 - Trail runs adjacent Takoma Ave / Fenton St from DC Line to Silver Spring
 - Improve safety per current design standards and best practices
 - alignment, width, clearances, lighting, intersection treatments sustainable paving
 - minimize impacts to local neighborhoods / property, environmental resources, utilities



Rummel, Klepper & Kahl, LLP —

b. New Ave Section D

- i. City's southern-most section of the New Ave Bikeway
 - Intersection of MD 650 / Poplar Ave thru low-volume neighborhood streets connecting to Kansas Lane (bike lanes) at DC line
 - Provide a safe, low-stress enjoyable bikeway connection
 - minimize impacts to local neighborhoods / property, environmental resources, utilities

4. Deliverables

- a. MBT Upgrade Existing Conditions Memo
- b. New Ave Section D Route Selection Memo
- c. Preliminary Plans (30%)
- d. Cost Estimates
- e. Design Reports
- f. Presentation

5. Schedule

Work must be completed by June 30, 2023.

Work Plan and Schedule				
Task	Week	Status	Completion Date	
1. Call / Kickoff with City & MWCOG	0	Complete	9/26/2022	
2. Review Background Information, WMATA Records	2		10/12/2022	
3. Submit Miss Utility Design Ticket, Request Records	2		10/12/2022	
4. Field Walk w/ City: Route Selection (New Ave Sec D)	3		10/21/2022	
5. Field Walk w/ City & other Stakeholders (MBT)	5		11/2/2022	
6. Submit Route Selection Memo (New Ave Sec D)	5		11/4/2022	
7. Perform Surveys, Prepare Utility Files & Base Maps	11		12/16/2022	
8. Submit Existing Conditions Memo w/ Recommendations (MBT)	12		12/21/2022	
9. Submit Preliminary (30%) Designs	18		2/1/2023	
10. Receive City/Agency Stakeholder Comments	22		3/1/2023	
11. Draft Concept Design Report	25		3/22/2023	
12. Final Concept Design Report, Plans & Estimates	28		4/12/2023	
13. Final Presentation	TBD		TBD	

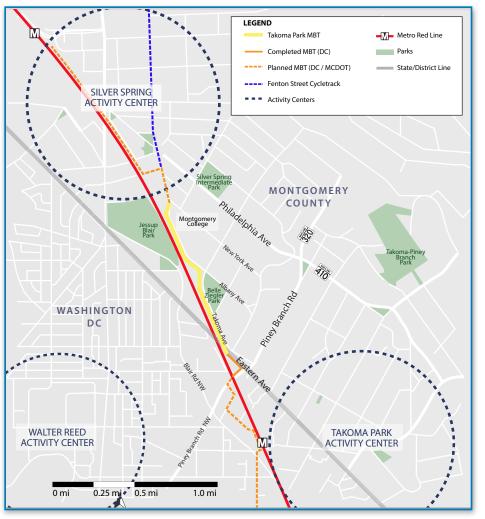
6. Next Steps

- Request record plans from utility owners and WMATA (MBT)
- Schedule Field walks
 - o Select Preferred Route for New Ave Section D
 - o Discuss objectives / requirements with WMATA, Montgomery College for MBT
- Schedule Topographic and Boundary surveys

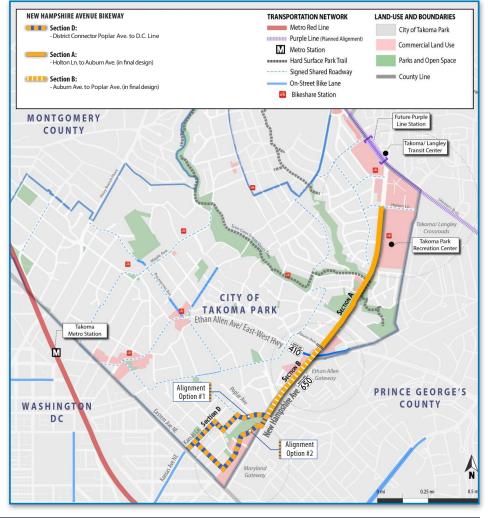
Attachment: Vicinity Maps



Takoma Park Metropolitan Branch Trail Upgrade



New Ave Bikeway–District Connector (Section D)



MWCOG TLC Program FY2023 Contract No. 21-093 **ROUTE SELECTION MEETING** AGENDA

Project:	New Ave Bikeway – District Connector (Section D) Preliminary (30%) Design
Date & Time:	Monday, October 10, 2022 - 11:30 AM Project Site

1. Introductions

2. Project Limits – Section D

- a. City's southern-most section of the New Ave Bikeway
 - i. Intersection of MD 650 / Poplar Ave thru low-volume neighborhood streets connecting to Kansas Lane (bike lanes) at DC line

3. Evaluate Route Options

- a. Route Option #1
 - i. Poplar Ave 4th Ave Westmoreland Ave Kansas Ln
- b. Route Option #2
 - i. MD 650 southbound (350') behind Takoma Tire & Auto (southwesterly direction) - Sligo Mill Rd - Paper Street - Westmoreland Ave - Kansas Ln

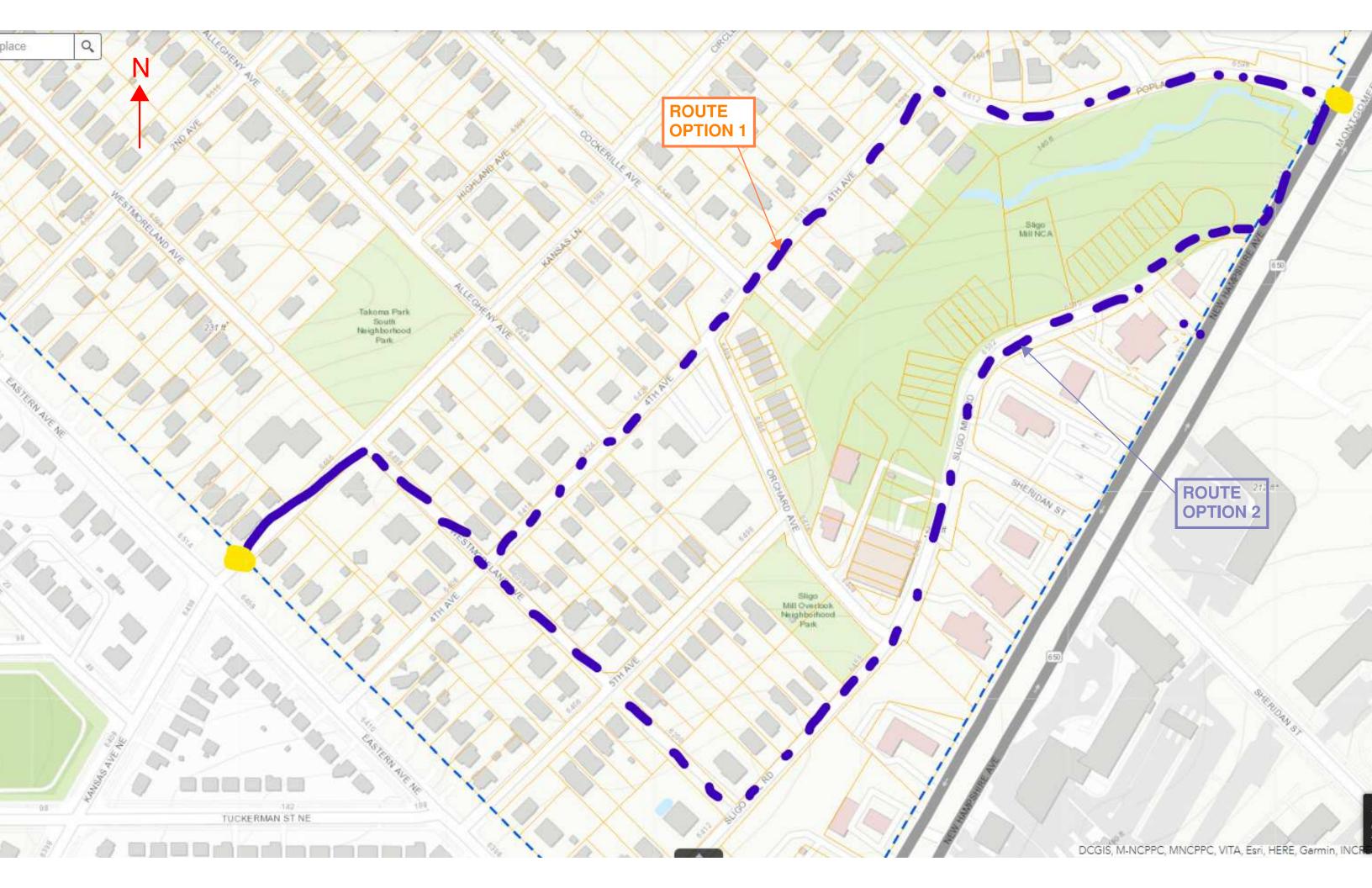
4. Select Preferred Route

5. Next Steps

- a. Prepare Route Selection Memo
- b. Commence Surveys, Utility Records Collection

Attachments: Map with Route Options







MEMORANDUM

700 East Pratt Street, Suite 500 Baltimore, MD 21202 Phone 410.728.2900 www.rkk.com

Date: October 13, 2022

To: City of Takoma Park, MD Mr. Alexander Freedman, Community Development Manager Ms. Daryl Braithwaite, Director of Public Works

> MWCOG Department of Transportation Planning Ms. Erin Morrow, Transportation Engineer

From: RK&K

Mr. Robert Gillespie, PE, Project Delivery Leader

Re: New Ave Bikeway Section D – District Connector: Route Selection

I. ATTENDEES

NAME	AGENCY	PROJECT ROLE	EMAIL
Alex Freedman	<u>City of Takoma Park,</u> <u>Planning & Community</u> <u>Development Division</u>	Project Manager	alexanderf@takomaparkmd.gov
Daryl Braithwaite	<u>City of Takoma Park</u> Public Works	Advisory / Support	darylb@takomaparkmd.gov
lan Chamberlain	City of Takoma Park Public Works	Advisory / Support	ianc@takomaparkmd.gov
Rob Gillespie	RK&K	Project Manager	rgillespie@rkk.com

II. BACKGROUND & PURPOSE OF MEETING

The New Ave Bikeway Section D – District Connector project is funded through the Metropolitan Washington Council of Governments (MWCOG) Transportation/Land-Use Connections (TLC) Grant Program and being developed in consultation with staff from the City of Takoma Park and other local stakeholders.

The objective of the project is to enhance bicyclist mobility by providing a safe, low-stress enjoyable bikeway connection from Poplar Avenue to the District of Columbia, while avoiding impacts to local neighborhoods, property, environmental resources and utilities.

A field meeting was scheduled to review existing site conditions and requirements to implement the New Ave Bikeway Section D – District Connector along two (2) potential routes and to select a preferred route for subsequent surveys and preliminary engineering. The attendees identified in Section I met at the corner of Poplar Avenue and New Hampshire Avenue (MD 650) to walk both potential routes on October 10, 2022.

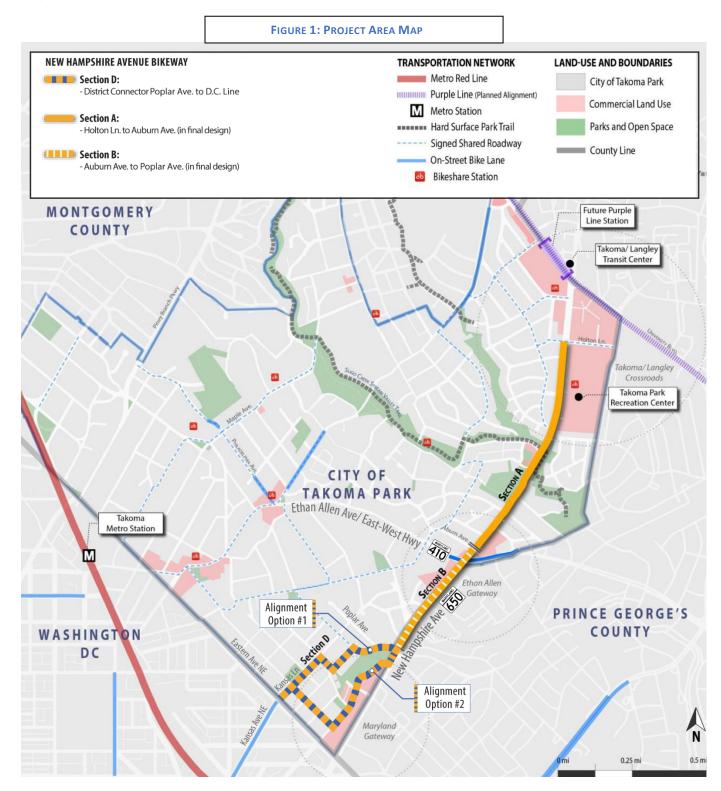
III.PROJECT LIMITS

The City of Takoma Park's New Ave Bikeway is divided into three (3) sections of the approximately 1.7 – mile corridor which extends along the southbound side of New Hampshire Avenue (MD 650) from Holton Lane south to Poplar Avenue and then through residential neighborhood City streets to the District of Columbia line. The division of the bikeway into smaller sections allows the City to pursue various grant funding opportunities to move the design and ultimately construction of the project forward. The sections are depicted in Figure 1, with the limits and design status described below:

- **SECTION A:** approximately 4,100 linear foot segment between Holton Lane to Auburn Avenue. Project is currently in final design.
- **SECTION B:** approximately 2,200 linear foot segment from Auburn Avenue to Poplar Avenue. Final Design completed in September 2022.
- SECTION D: approximately 2,650 linear foot segment from Poplar Avenue to the DC Line at Kansas Avenue NE. Preliminary design will be completed under this MWCOG TLC Grant by June 30, 2023.

Two potential routes were identified for the District Connector - Section D as depicted in Figure 1 and the attachment, with the limits described below:

- ALIGNMENT (ROUTE) OPTION # 1 begins at the northwest corner of the intersection of New Hampshire Avenue (MD 650) and Poplar Avenue. The route would continue west along Poplar Avenue for approximately 750 feet to the intersection of 4th Avenue, where it would continue south of 1,250 feet to the intersection of Westmoreland Avenue; continue west for 315 feet to Kansas Lane; and turn south along Kansas Lane for 375 feet to the DC line at the intersection of Eastern Avenue NE, where it would tie-into the existing bike lanes that continue south along Kansas Avenue NE.
- ALIGNMENT (ROUTE) OPTION # 2 begins at the northwest corner of the intersection of New Hampshire Avenue (MD 650) and Poplar Avenue. The route would continue south along MD 650 for approximately 350 feet, where it would turn in a south-westerly direction and extend for 325 feet along a vacant wooded lot that runs behind the Takoma Tire and Auto Shop and is shown on the Montgomery County / M-NCPPC GIS database as a future cul-de-sac extension of Sligo Mill Road; it would continue to the current dead end of Sligo Mill Road and extend south along Sligo Mill Road for 1,250 feet; then extend west for approximately 330 feet along a "paper street" with dedicated right of way for a future extension of Westmoreland Avenue to the intersection of 5th Avenue; continue north along Westmoreland Avenue for 655 feet to Kansas Lane; then turn south along Kansas Lane for 375 feet to the DC line at the intersection of Eastern Avenue NE, where it would tie-into the existing bike lanes that continue south along Kansas Avenue NE.



IV.EXISTING CONDITIONS

The existing conditions for both Section D route options mostly follow established City of Takoma Park residential neighborhood streets with variable width, on-street parking and limited right of way with adjacent property features, including steep slopes, retaining walls, fences, landscaping and driveways. The exception being that for Route Option #2, there is a 350 feet segment of the Bikeway that would follow adjacent to the southbound MD 650 travel lanes within MDOT SHA right of way and adjacent to M-NCPPC (Parks) property with

sensitive environmental features. The existing conditions for each major segment associated with both routes are described below:

<u>Poplar Avenue (Route Option # 1)</u>: variable width sidewalk (4-5 feet wide) and street parking on both sides. There are on-street parking restrictions in some locations. The roadway width west of the signalized intersection with MD 650 is 24-26 feet wide with adjacent steep slopes and no additional right of way behind the sidewalks. See Photo 1.



• <u>4th Avenue from Poplar Ave to Cockerille Ave (Route Option # 1)</u>: This segment includes a 5-foot wide concrete sidewalk along the

east side of 4th Avenue with adjacent slopes and no right of way behind the sidewalk. There is street parking permitted on the west side of the street.

- <u>4th Avenue from Cockerille Ave to Westmoreland Ave (Route Option # 1)</u>: This segment is very narrow at 22'-23' wide with variable width sidewalk and street parking on both sides (typical) with no additional right of way behind the sidewalk.
- <u>Southbound New Hampshire Ave (Route Option # 2)</u>: This segment includes a 5-foot wide sidewalk with no buffer adjacent to the southbound MD 650 travel lanes with adjacent traffic barrier w-beam (guardrail) protecting steep slopes with forest stands within the Takoma Branch Stream Valley. See Photo 2.
- <u>Planned Extension of Sligo Mill Rd (Route Option # 2)</u>: This segment includes a vacant wooded area that extends from southbound MD 650 travel lanes in a southwesterly direction behind the Takoma Tire and Auto Shop to what is shown on the Montgomery County / M-NCPPC GIS database as a planned

PHOTO 2: SOUTHBOUND MD 650

development and extension of Sligo Mill Road from the current intersection with Sheridan Street approximately 550 feet terminating as a cul-de-sac. As shown in the attached map, the planned parcels and cul-de-sac are shown within M-NCPPC (Parks) property.

• <u>Sligo Mill Rd (Route Option # 2)</u>: There is sporadic sidewalk along Sligo Mill Road beginning on the east side at Sheridan Street extending to Orchard Avenue. The section of Sligo Mill Road from Orchard Avenue to the DC Line at Eastern Avenue NE does not have any pedestrian or bike facilities. However, the City is completing design for a 5 foot wide sidewalk along the west side of Sligo Mill Road within these limits. The retrofit of the 5 foot wide sidewalk requires a reduction to the curb-to-curb roadway width to avoid property and utility impacts.

- <u>Extension of Westmoreland Ave / "Paper Street" (Route Option # 2)</u>: This segment is undeveloped with several mature trees surrounding the adjacent properties at 6414 Sligo Mill Road, 6411 5th Avenue and 6413 5th Avenue.
- Westmoreland Ave between 5th Ave and 4th Ave (Route Option # 2): This roadway segment is narrow at 23'-24' wide with street parking on both sides, no existing sidewalk and adjacent steep grades with very limited right of way.
- Westmoreland Ave between 4th Ave and Kansas Ln (Route Options # 1 and # 2): This roadway segment is very narrow at 18' wide, with street parking on the south side and sidewalk (typical) on both sides with no additional right of way behind the sidewalk. See Photo 3.
- <u>Kansas Ln between Westmoreland Ave and Eastern Ave</u> <u>NE (Route Options # 1 and # 2)</u>: This roadway segment is narrow at 22' wide with street parking on the east side and sporadic, variable width sidewalk (2.5'-4') on both sides with no additional right of way behind the sidewalk. See Photo 4.



PHOTO 3: WESTMORELAND AVE AT KANSAS LN



PHOTO 4: KANSAS LN LOOKING TOWARDS EASTERN AVE NE

V. EVALUATION OF OPTIONS & RECOMMENDATIONS

After completion of the field walk of both potential routes on October 10, 2022, the following considerations were provided for selecting a preferred route for preliminary design:

- ALIGNMENT (ROUTE) OPTION # 1
 - o **Pros:**
 - Avoids environmental impacts, including forest stand and the Takoma Branch stream valley
 - Entire route follows low-volume, low-speed side streets
 - Does not require permit-approval from MDOT SHA or M-NCPPC



- o Cons:
 - Narrow streets with limited right-of-way not feasible for retrofit of consistent bicycle facilities:
 - Requires combination of shared use path, where space allows and share the road signing where space does not allow

Note: A potential sub-alternate for Route Option # 1 was identified as extending the Section D Bikeway south along 4th Avenue from Westmoreland Avenue to Eastern Avenue NE, where District DOT has planned multi-modal improvements.

- ALIGNMENT (ROUTE) OPTION # 2
 - **PROS:** None were identified
 - o Cons:
 - Southbound MD 650: Implementation of shared use path (8' wide effective with 1'-2' wide buffer) for approximately 350 feet requires the following:
 - Environmental impacts to forest stand and the Takoma Branch stream valley
 - Utility impacts to overhead facilities and a large vault located behind the traffic barrier w-beam



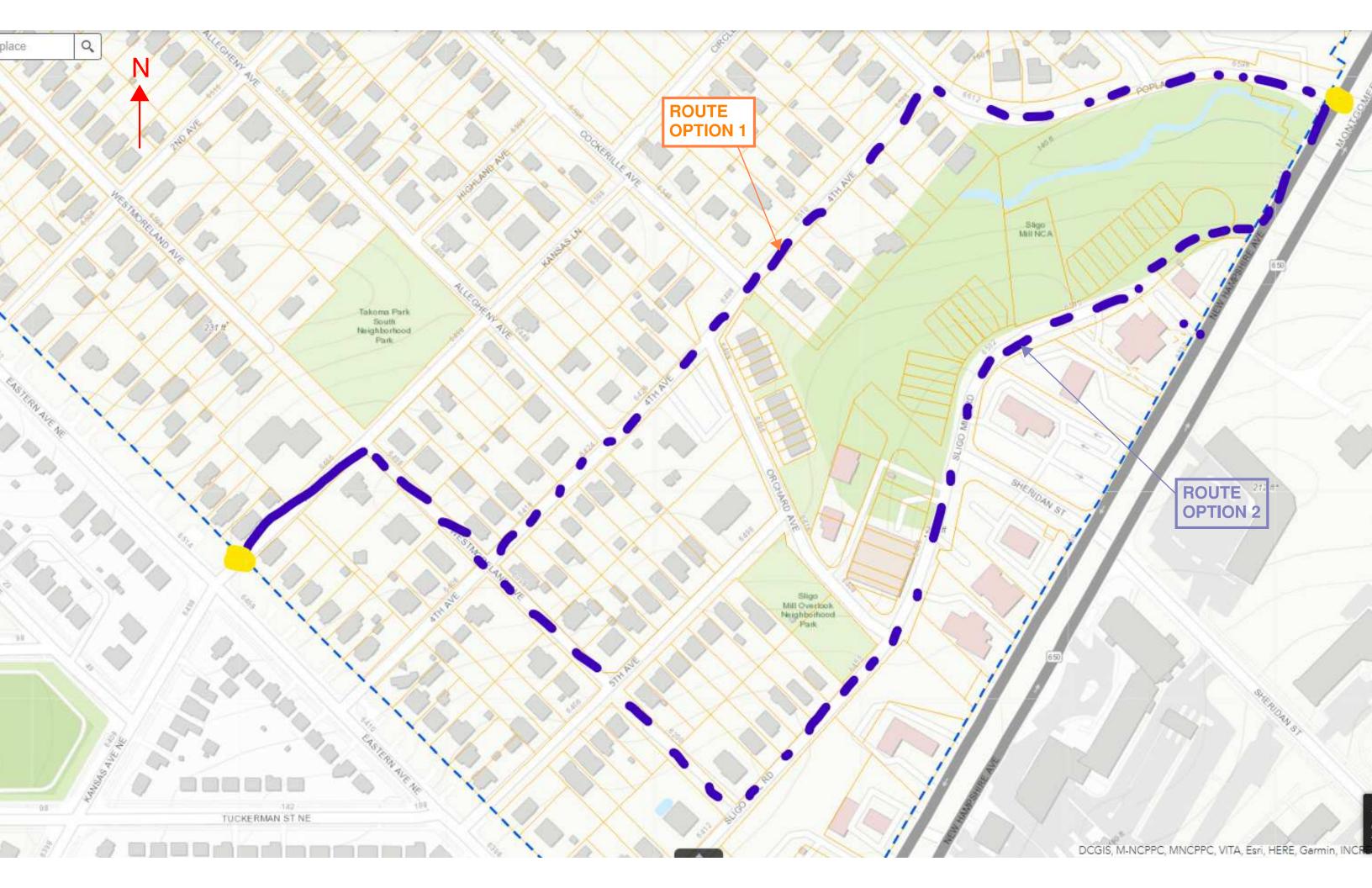
PHOTO 5: SOUTHBOUND MD 650 LOOKING NORTH AT POPLAR AVE

- Narrowing of southbound MD 650 travel lanes
- MDOT SHA and M-NCPPC design reviews and permit-approvals
- Planned Extension of Sligo Mill Rd:
 - Environmental impacts to forest stand
 - M-NCPPC design reviews and permit-approvals
 - Potential bikeway impacts from future development
- Extension of Westmoreland Ave / "Paper Street"
 - Tree impacts on public / private property
 - Potential bikeway impacts from future road improvement
- Sligo Mill Rd (Orchard Ave to DC Line):
 - City has a separate sidewalk improvement project in design that includes reducing the roadway width to retrofit a 5 foot wide sidewalk with no buffers. The roadway width accommodates street parking on one side and one travel lane.
 - o Reducing the roadway width any further is not viable
 - Widening the sidewalk another 3 feet towards properties would require impacts to property and utilities

- Narrow streets with limited right-of-way not feasible for retrofit of consistent bicycle facilities:
 - Requires combination of shared use path, where space allows and share the road signing where space does not allow

The design team selected Alignment (Route) Option # 1 as the preferred alternative for preliminary design of the New Ave Bikeway Section D – District Connector. A sub-alternate to Option # 1 that extends the Section D Bikeway south along 4th Avenue from Westmoreland Avenue to Eastern Avenue NE, where District DOT has planned multi-modal improvements, will also be identified on the preliminary design plans.

Attachment Route Options Map with Montgomery County / M-NCPPC GIS data



APPENDIX B

Preliminary Design Plans

THE CITY OF TAKOMA PARK AND THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS (MWCOG) NEW AVE BIKEWAY SECTION D DISTRICT CONNECTOR **MWCOG CONTRACT NO. 21–093**

INDEX OF SHEETS

SHEET NO.	DRAWING NO.	SHEET NAME
1	TS-01	TITLE SHEET
2	AB-01	NOTES, ABBREVIATIONS, AND SYMBOLS
3	GS-01	GEOMETRY SHEET
4	HT-01	TYPICAL SECTIONS
5–9	HD-01 TO HD-05	PLAN SHEETS





P: 410.728.2900 700 East Pratt Street, Suite 500 | Baltimore, MD 21202

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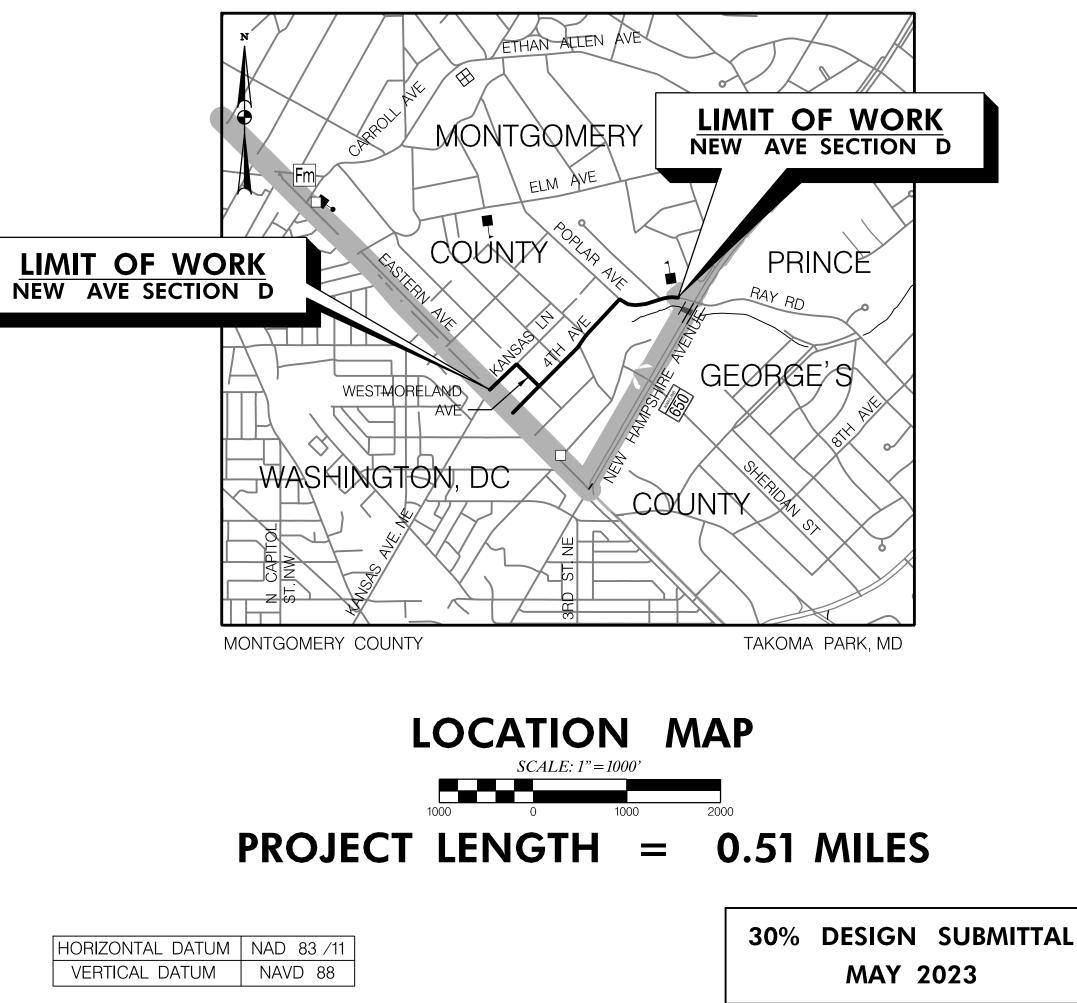
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ABBREVIATIONS

AASHTO	American Association of State Highway
	Transportation Officials
ADT	Average Daily Traffic
AHD	Ahead
APPROX	Approximate
₿ or B/L	
BK	Back /Book
BIT	Bituminous
	Bituminous Concrete
B.M.	
BOT.	
	Center of Curve
	Corrugated Aluminum Pipe
	Corrugated Aluminum Pipe Arch
	Cable Television
	California Bearing Ratio
©.B.R	5
CL.	
	Chainlink Fence
	Corrugated Metal Pipe
C.O.	
COMB.	
CONC.	
CONSTR	
COR	
CORR	
	.Corrugated Polyethylene Pipe – Type 'S'
	. Corrugated Steel Pipe – Aluminized Type 2
	Corrugated Steel Pipe Arch –
	Aluminized Type 2
DC	Degree of Curve
D.H.V	Design Hourly Volume
D.I.	Drop Inlet
DIA	_ Diameter
D.O	Double Opening
Ε	East
Ε	_ Electric
	External Distance
EA	
EB	
ELEV	
ES	
EX or EXIST_	
FT	-
F or FL	
	Flat Bottom Ditch
	Fire Hydrant
FWD.	-
G	
G.V.	
Н.В	
	High Density Polyetheylene

HDWL.	
HERCP	Horizontal Ellipitical Reinforced
	Concrete Pipe
HP	-
IN	
I.S.T	Inlet Sediment Trap
INV	Invert
J.B.	_Junction Box
К	_K Inlet
L	_ Length
LF	
	Liquid Limit
LP	
L.P	
LT	
MAC	
	Moisture Content
MAX	
	Maximum Dry Content
MOD,	
MIN	
N	
	Northbound
NE	
N.P	Non-Plastic
O.C	_On Center
OHE	Overhead Electric
O.M	_Optimum Moisture
PAV' T	Pavement
PC	Point of Curvature
PCC	Point of Compound Curvature
	Point of Crown
P⁄GE	Profile Grade Elevation
	Profile Ground Elevation
	_ Profile Grade Line
	Profile Ground Line
	Plasticity Index
	Point of Intersection
	- Point On Curve
	Point On Tangent
	Polyvinyl Chloride Profile Wall Pipe
PROP	
	Point of Reverse Curve
PT	
	Point of Tangency
	Point of Vertical Curve
	Polyvinyl Chloride
	Point of Vertical Intersection
PVRC	Point of Vertical Reverse Curve
PVT	Point of Vertical Tangency
R	
R.F	Rock Fragments
RT	
	<u> </u>



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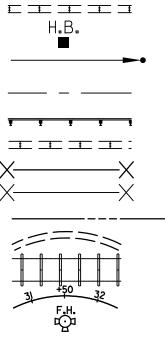
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CONVENTIONAL SIGNS

RW or R/W...Right of Way RCP Reinforced Concrete Pipe RCPP......Reinforced Concrete Pressure Pipe R.Q.D.Rock Quality Designation R.M.Rootmat SSouth SAN.Sanitary Sewer SB or S/B Southbound S.D.Storm Drain S.D.D. Surface Drain Ditch S/ESuper Elevation SF _____Silt Fence SFSquare Feet SHT. _____Sheet SPP Structural Steel Plate Pipe SPPA Structural Steel Plate Pipe Arch S.P.T.Standard Penetration Testing SRP Steel Spiral Rib Pipe -Aluminized Type 2 SRPA Steel Spiral Rib Pipe Arch -Aluminized Type 2 SSD Stopping Sight Distance SSFSuper Silt Fence STD.Standard STA.Station SO. _____Single Opening SY _____ Square Yards SWM Stormwater Management ... Tangent __ Telephone T.C. _____ Top of Cover T.G. _____ Top of Grate T or TL Traverse Line T.M. _____ Top of Manhole TRAV. Traverse T.S. _____Top of Slab T.S. _____Topsoil TYP.....Typical U.D. Under Drain U.G. Underground U.P. Utility Pole USDA _____United States Department of Agriculture VCL _____Vertical Clearance V.C.L. Vertical Curve Length WWater WWest WBWestbound WB_____ Wetland Buffer W.M. Water Meter W.S. _____Wrapped Steel WUS _____ Waters of the United States W.V. _____Water Valve

PROPOSED MEDIAN BARRIER ELECTRICAL HAND BOX – SIGNALS FLOW LINE	₽ <u>-</u> ₽ <u>-</u> ₽ <u>-</u> ₽ <u>-</u> H.B. ■
STATE, COUNTY OR CITY LINES PROPOSED TRAFFIC BARRIER	
EXISTING TRAFFIC BARRIER PROPOSED FENCE LINE EXISTING FENCE LINE RIGHT OF WAY LINE EXISTING ROADWAY	
RAILROAD BASE LINE OR SURVEY LINE FIRE HYDRANT	→ +50 3) F.H. EQ ¹
HISTORIC BOUNDARY	\frown
WETLAND BOUNDARY	\bullet \bullet \bullet



GENERAL NOTES

- ADMINISTRATION BICYCLE POLICY AND DESIGN GUIDELINES.
- MARYLAND MUTCD.
- 83/2011 AND VERTICAL DATUM IS BASED ON NAVD 88.
- UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
- 5. MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
- COORDINATE WITH PROPERTY OWNERS TO MAINTAIN INGRESS/EGRESS DURING THE ENTRIE PERIOD OF CONSTRUCTION.
- 7. RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS.
- ACCURACY OF SAID LOCATIONS.
- AND FEDERAL REQUIREMENTS.

PROPOSED PIPE / CULVERT]=]
EXISTING PIPE / CULVERT	
EXISTING DROP INLET	$\overline{}====$
UTILITY POLE	
WETLAND	
WETLAND BUFFER	— в —
WATERS OF THE U.S	, wus
HEDGE /TREE LINE	
CONIFEROUS TREE	
GROUND ELEVATION	
GRADE ELEVATION	DATUM LINE

1. THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2012 PUBLICATION OF AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES" AND THE 2015 MARYLAND STATE HIGHWAY

2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND BOOK OF STANDARDS FOR HIGHWAYS & INCIDENTAL STRUCTURES, AND THE

3. LIMITED TOPOGRAPHIC AND PROPERTY SURVEYS WERE COMPLETED BY CDDI IN DECEMBER 2022. HORIZONTAL DATUM IS BASED ON NAD

4. CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK. THE EXCAVATOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE

REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION SHALL BE

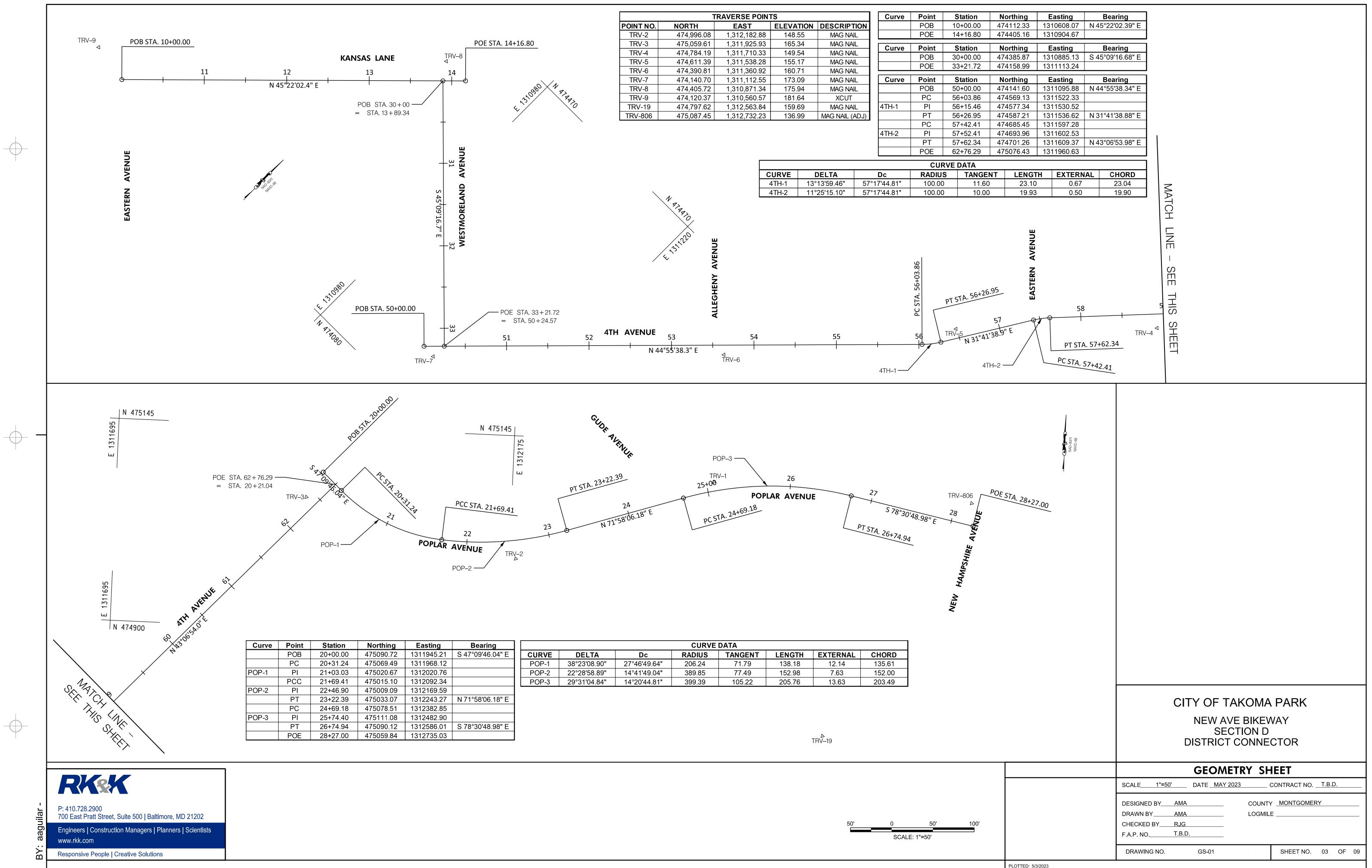
6. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ALL PROPERTIES WITHIN THE PROJECT LIMITS AND SHALL

8. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE

9. THE DESIGN OF THIS PROJECT HAS INCORPORATED FACILITIES TO ACCOMODATE PERSONS WITH DISABILITIES IN COMPLIANCE WITH STATE

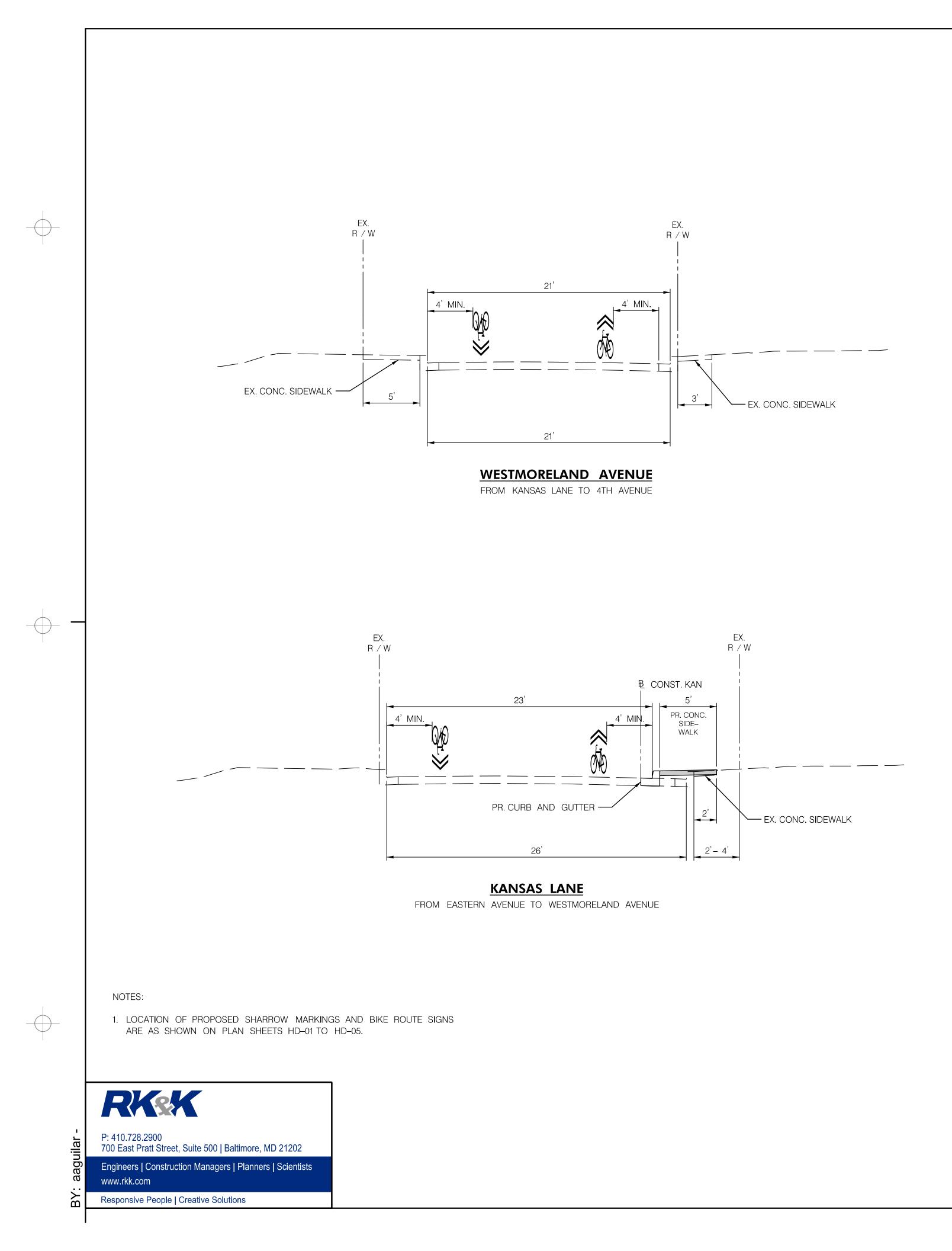
CITY OF TAKOMA PARK NEW AVE BIKEWAY SECTION D DISTRICT CONNECTOR							
NOTES AND ABBREVIATIONS SHEET							
SCALE NTS DATE MAY 2023 CONTRACT NO. T.B.D.							
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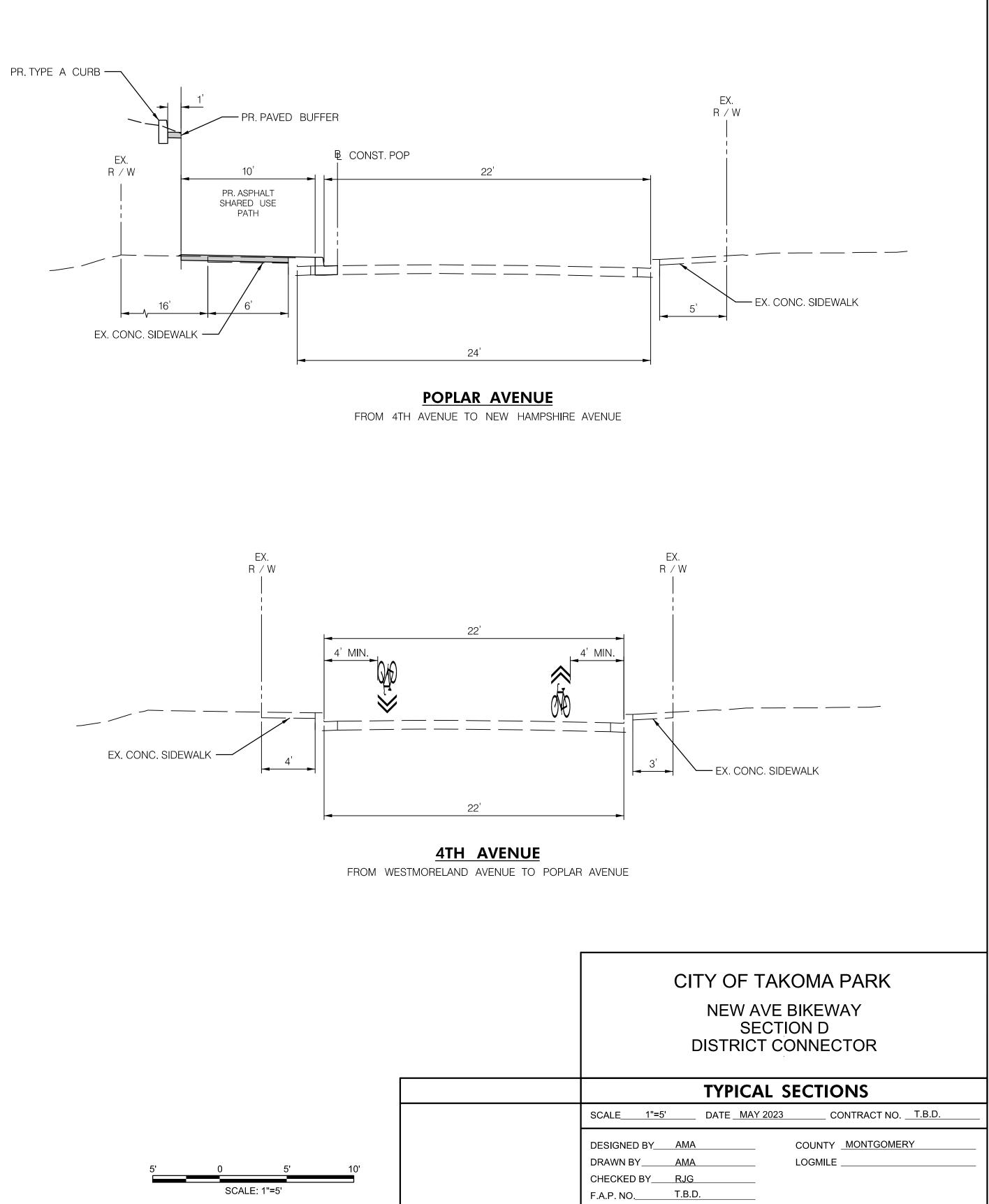
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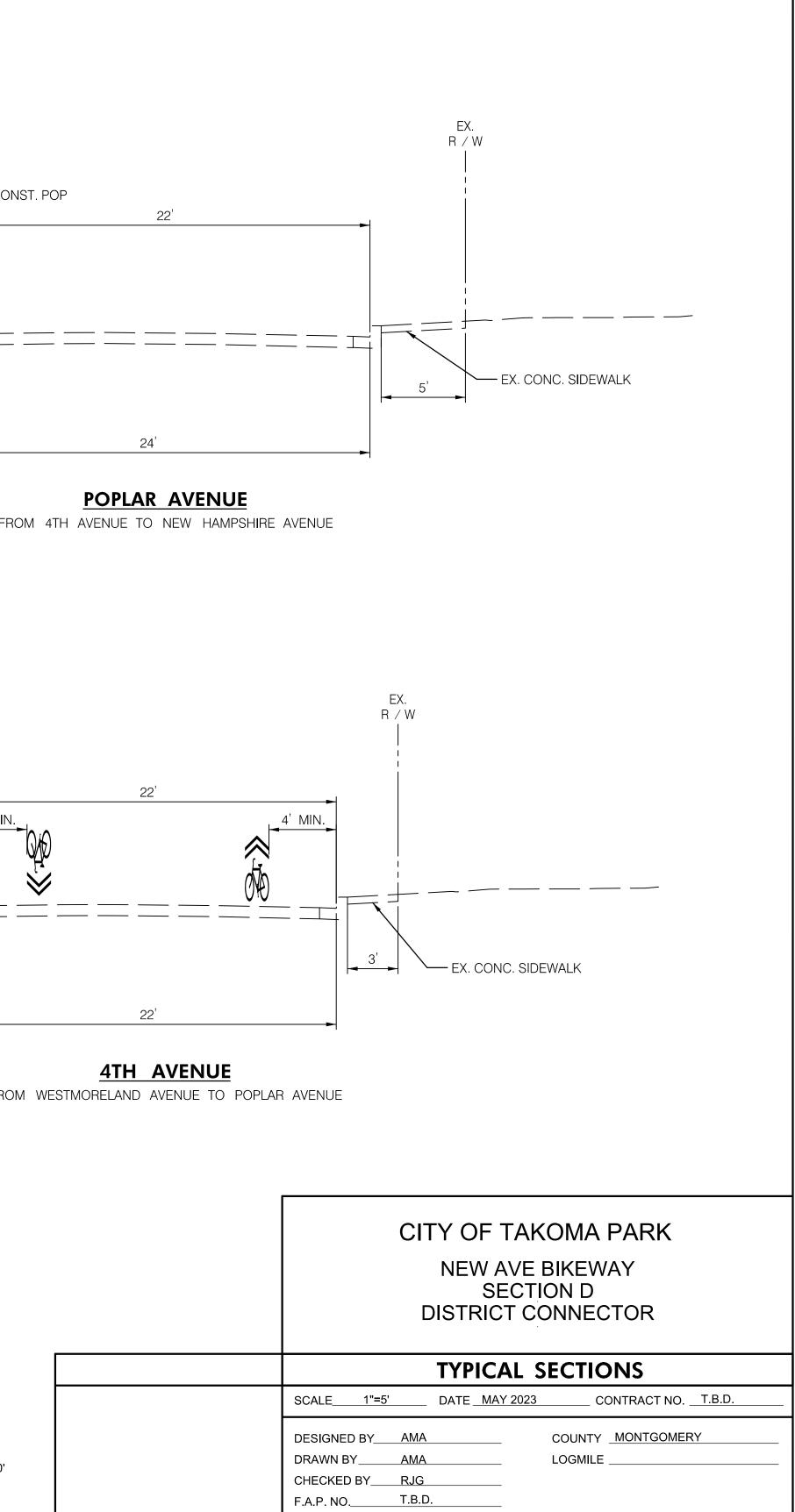


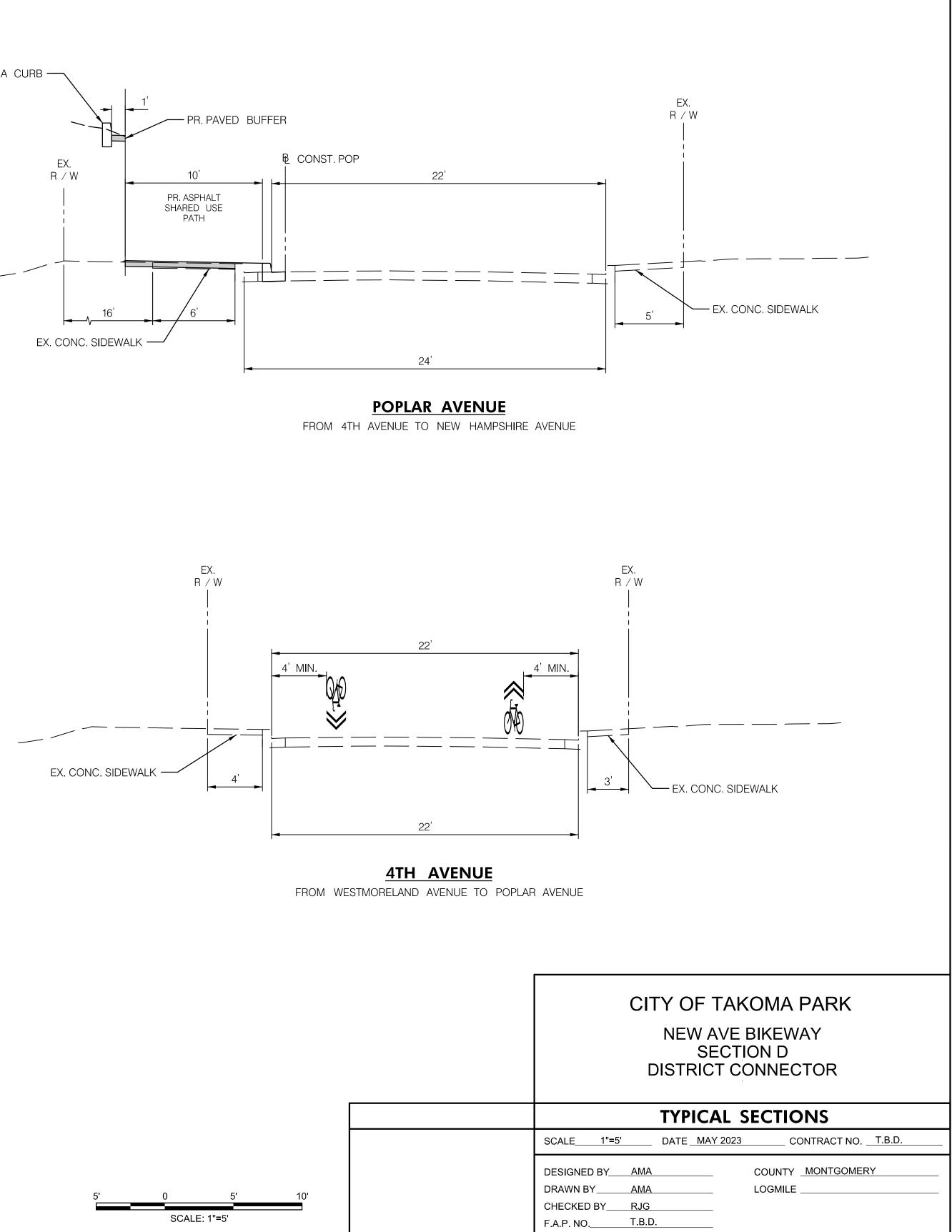
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94" E	CURVE	DELTA	Dc	RADIUS	TANGENT	LENGTH	EXTERNAL	CHORD		
	POP-1	38°23'08.90"	27°46'49.64"	206.24	71.79	138.18	12.14	135.61		
	POP-2	22°28'58.89"	14°41'49.04"	389.85	77.49	152.98	7.63	152.00		
	POP-3	29°31'04.84"	14°20'44.81"	399.39	105.22	205.76	13.63	203.49		
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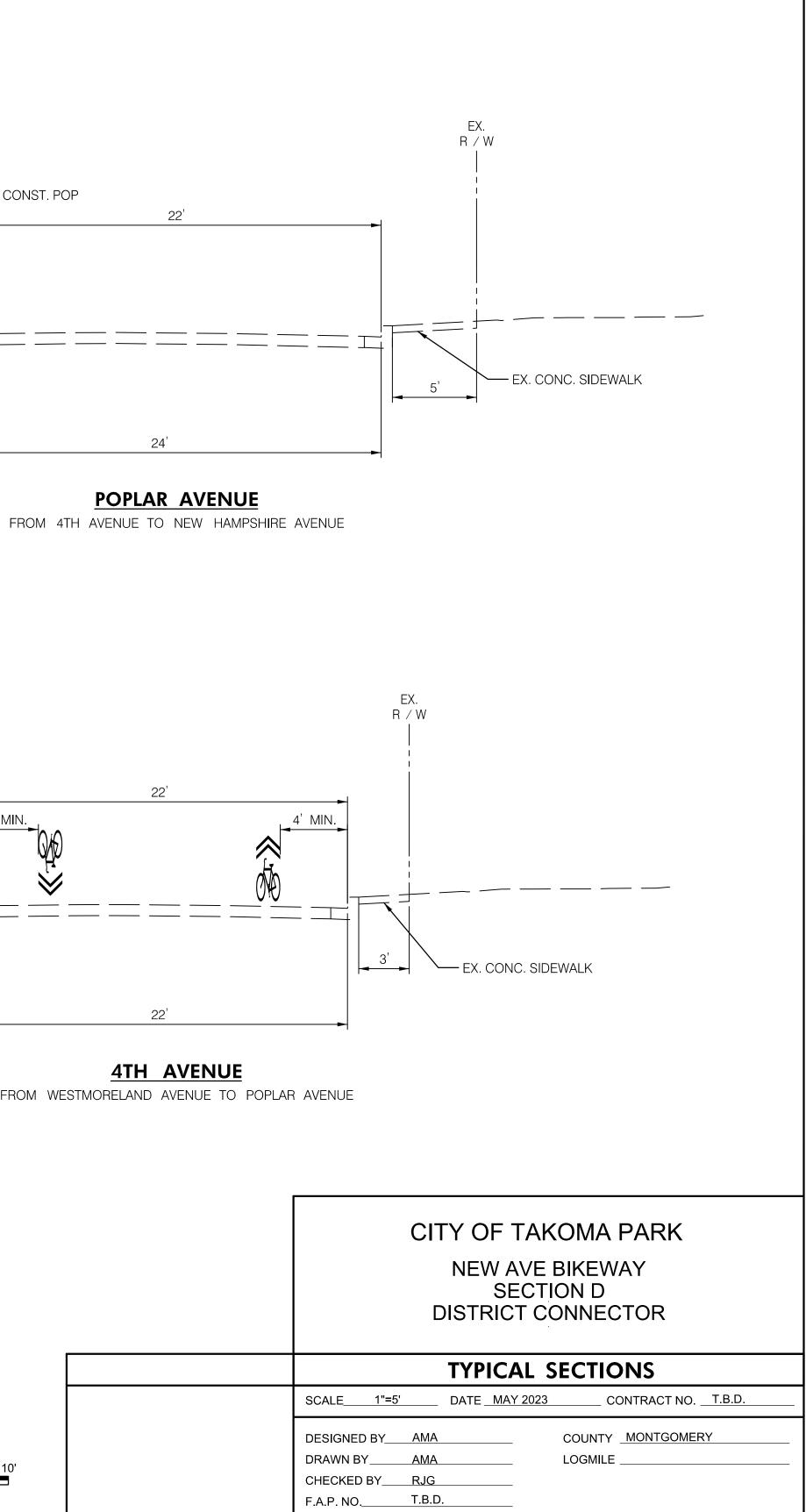
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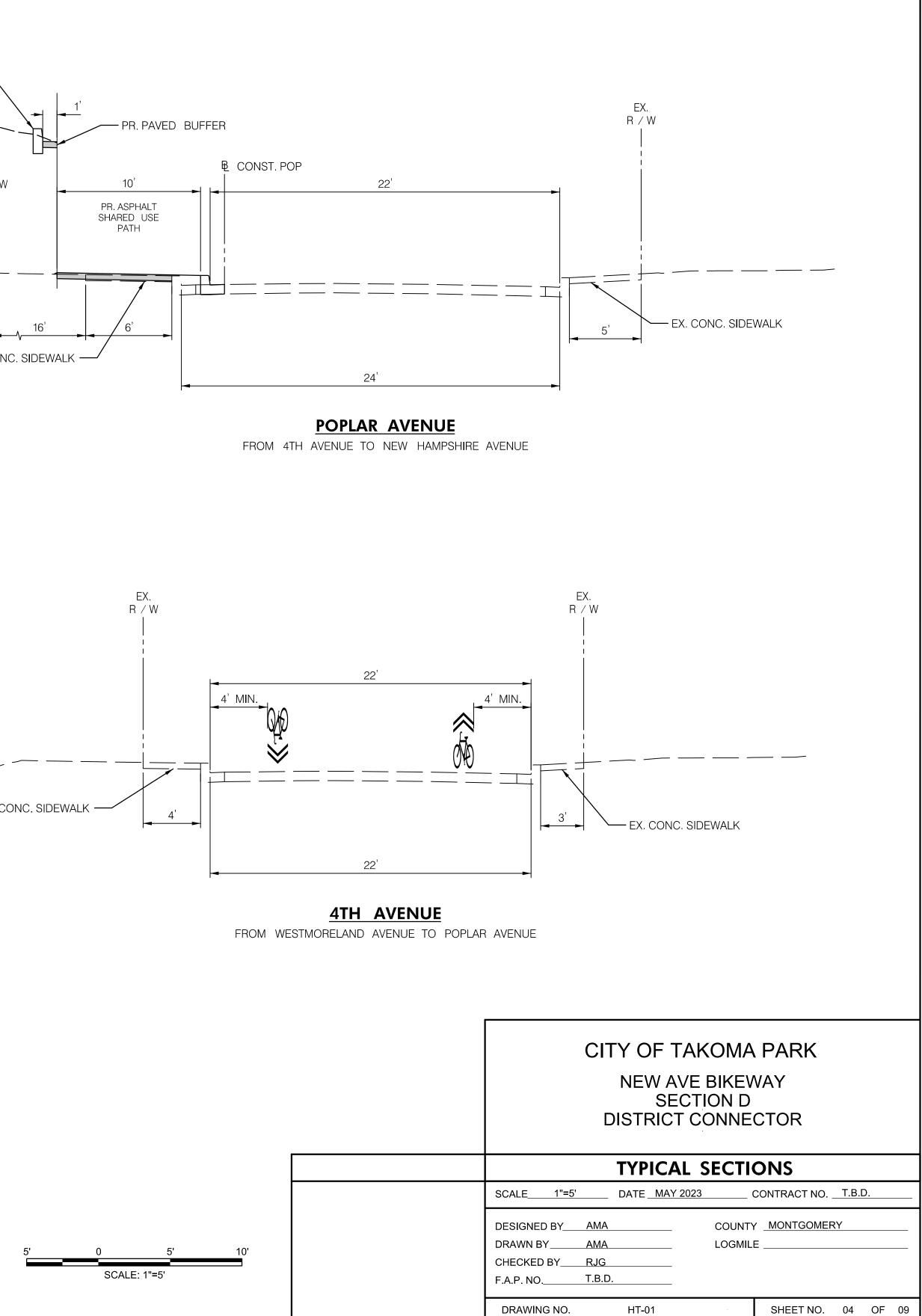








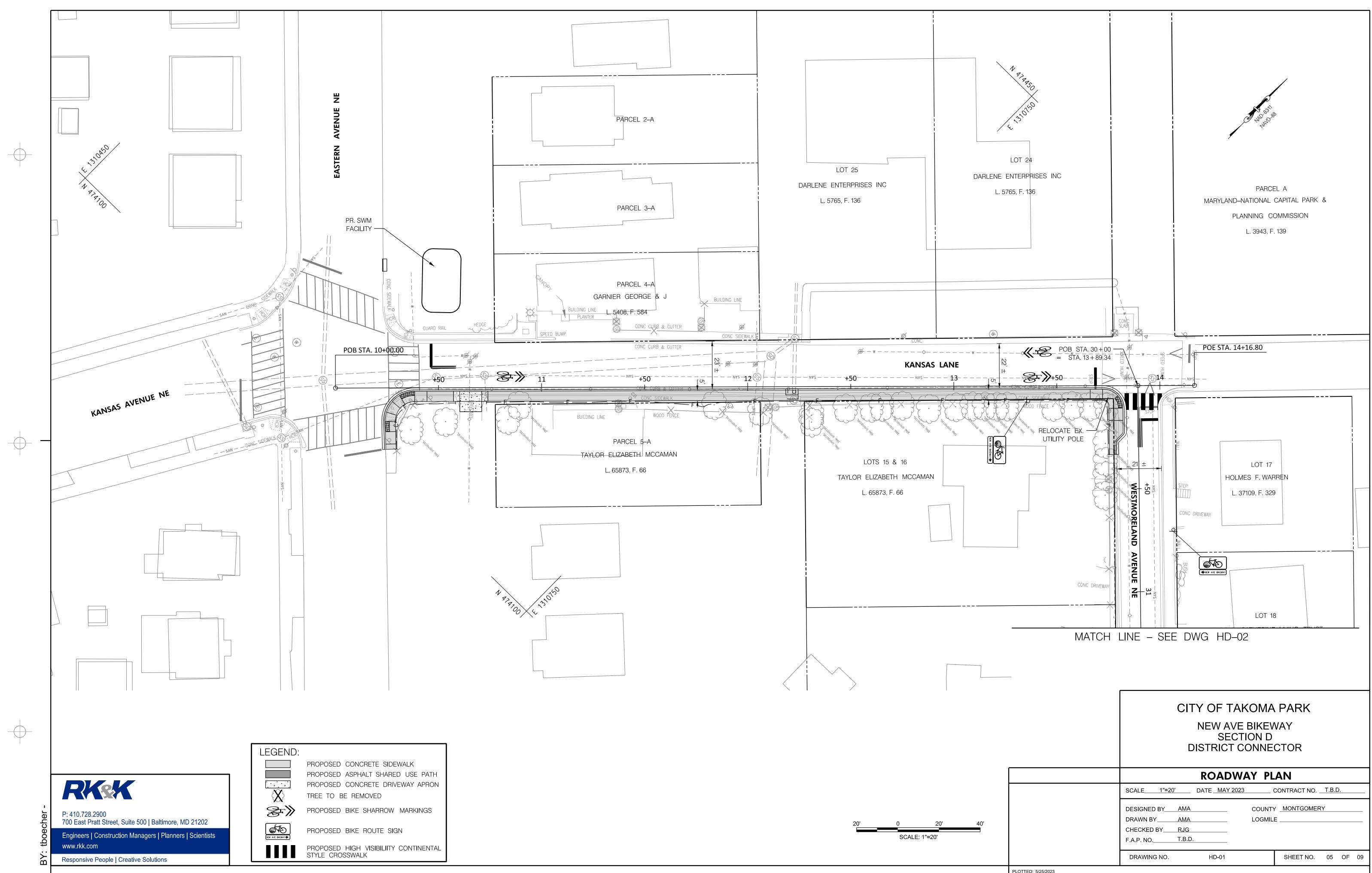




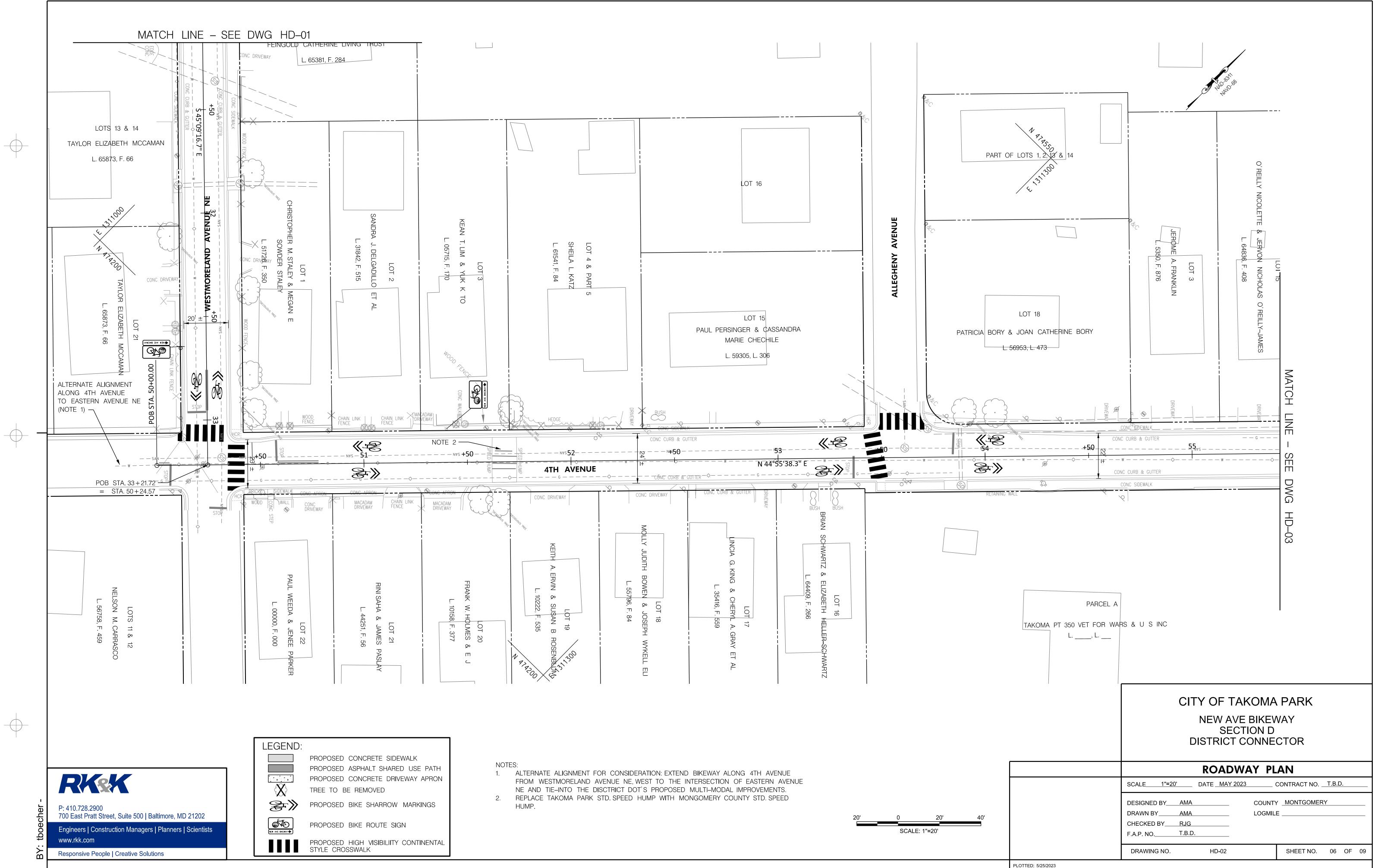
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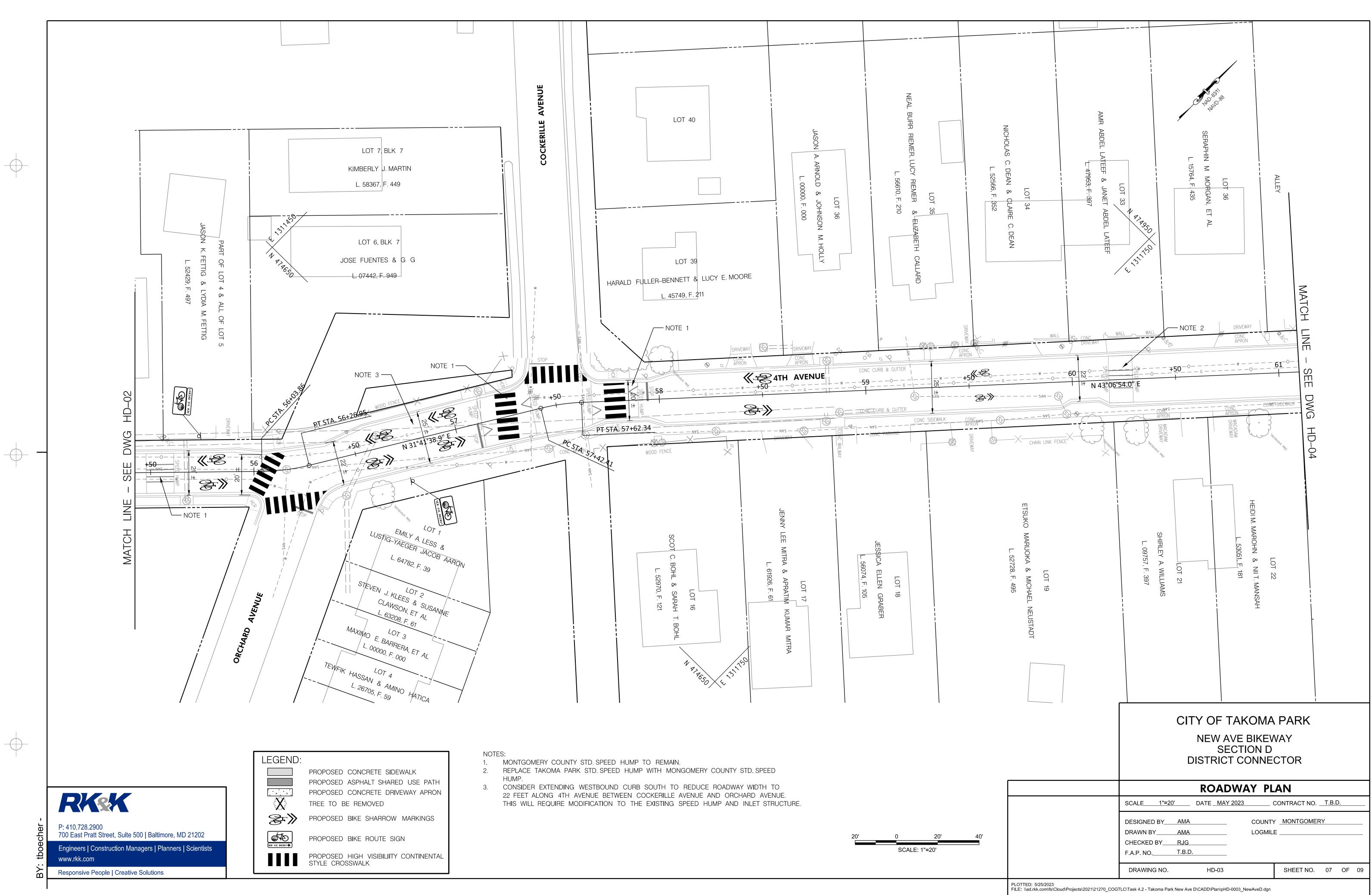
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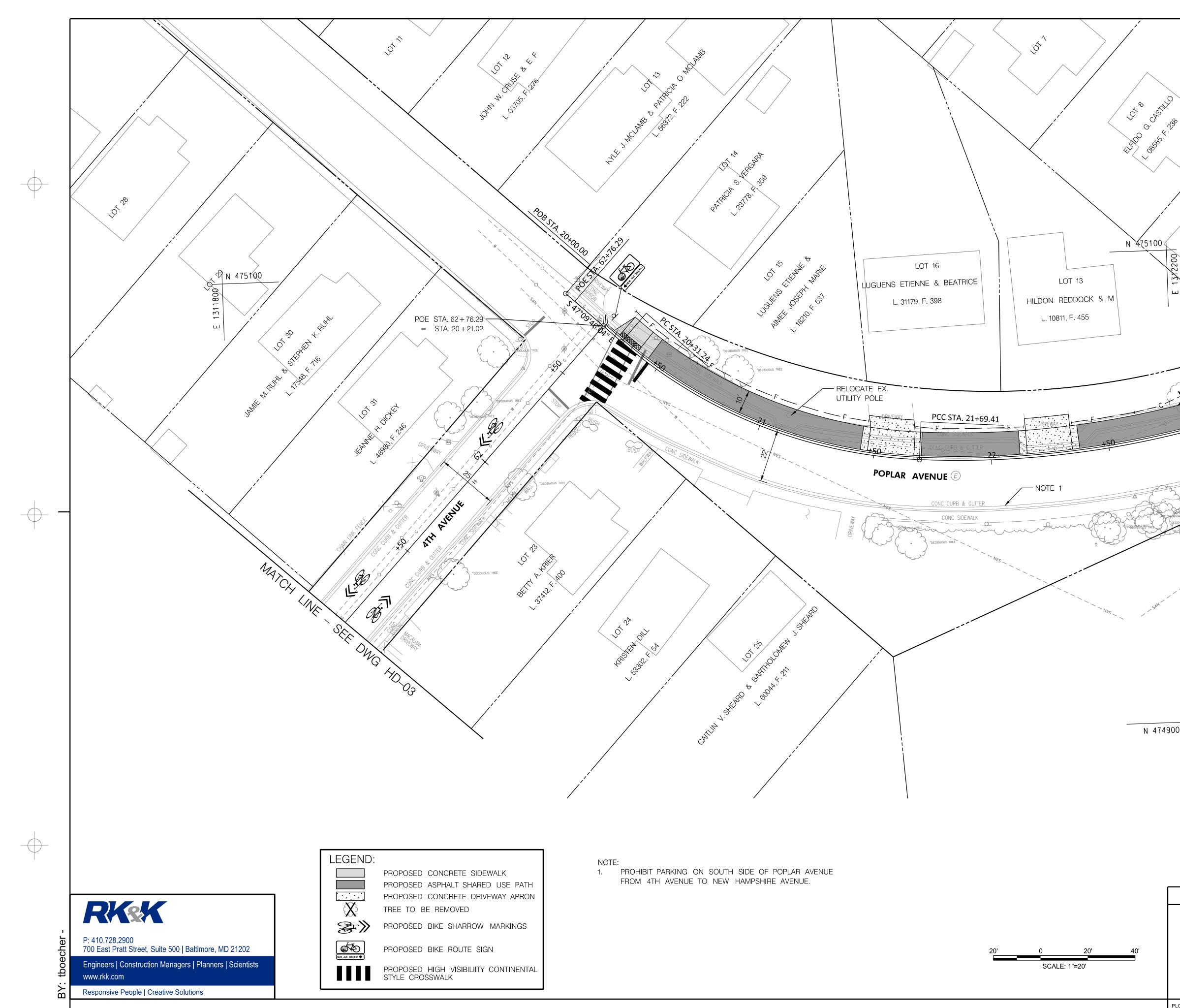


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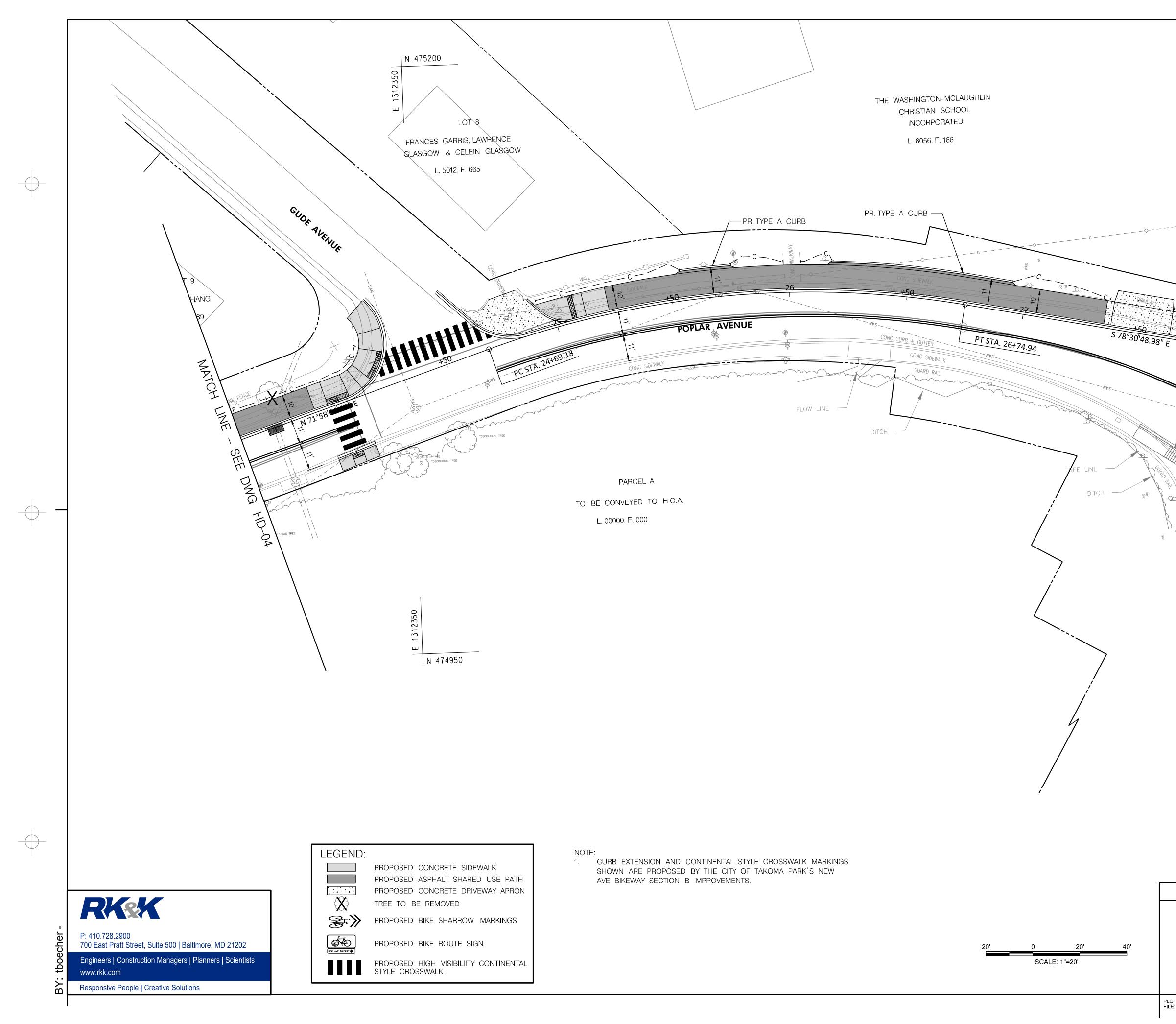


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APPENDIX C

Preliminary Construction Estimate

E:		PRELIMINARY ENGINEER'S ESTIMA May 2023	AIE			8
тем	MDOT SHA CCS		QUANTITY	UNITS	UNIT PRICE	TOTAL ESTIMATE
101	110100	CLEARING AND GRUBBING	1	LS	\$5,000.00	\$5,000.00
102	130875	MOBILIZATION AND DEMOBILIZATION	1	LS	\$28,000.00	\$28,000.00
103	130840	CONSTRUCTION STAKEOUT	1	LS	\$10,000.00	\$10,000.00
104	120500	MAINTENANCE OF TRAFFIC	1	LS	\$30,000.00	\$30,000.00
105	120784	TEMPORARY ORANGE CONSTRUCTION FENCE	1,000	LF	\$3.50	\$3,500.00
106	100000	TREE PROTECTION FENCING (CONTINGENT)	600	LF	\$6.00	\$3,600.00
				SL	JBTOTAL CATEGORY 1	\$80,100
201	201030	CLASS 1 EXCAVATION	292	CY	\$75.00	\$21,930.56
202	201031	CLASS 1 -A EXCAVATION (CONTINGENT)	30	CY	\$90.00	\$2,700.00
203	202050	SELECT BORROW FOR CLASS 1-A EXCAVATION (CONTINGENT)	30	CY	\$70.00	\$2,100.00
204	202065 203030	COMMON BORROW TEST PIT EXCAVATION	199 10	CY CY	\$40.00 \$160.00	\$7,960.00 \$1,600.00
205	203030		10			
	1			1	JBTOTAL CATEGORY 2	\$36,290
301	302418	18 INCH REINFORCED CONCRETE PIPE, CLASS IV	16	LF	\$100.00	\$1,600.00
302	374005	STANDARD 5 FT COG INLET-MINIMUM DEPTH	1	EA	\$8,000.00	\$8,000.00
303	374100	S FOOT COG/COS OPENING STANDARD SINGLE OPENING TYPE K INLET OPEN END GRATE - MINIMUM DEPTH	1	EA	\$7,000.00	\$7,000.00 \$4,000.00
304 305	378175 379120	STANDARD SINGLE OPENING I YPE K INLET OPEN END GRATE - MINIMUM DEPTH STANDARD TYPE S INLET, DOUBLE GRATE TANDEM - MINIMUM DEPTH	1	EA EA	\$4,000.00 \$6,000.00	\$6,000.00
305	390620	NO. 7 AGGREGATE FOR STORMWATER MANAGEMENT FACILITIES	10	CY	\$110.00	\$1,100.00
307	390630	NO. 57 AGGREGATE FOR STORMWATER MANAGEMENT FACILITIES	40	CY	\$100.00	\$4,000.00
308	390650	COARSE SAND FOR STORMWATER MANAGEMENT FACILITIES	10	CY	\$130.00	\$1,300.00
309	390660	BIORETENTION SOIL MIX	50	CY	\$120.00	\$6,000.00
310	390665	STORMWATER MANAGEMENT FACILITY AS-BUILT CERTIFICATION	1	LS	\$5,000.00	\$5,000.00
				ડા	JBTOTAL CATEGORY 3	\$44,000
501	504500	SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG 64S-22, LEVEL 2	48	TON	\$200.00	\$9,699.97
502	504560	SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG 64S-22, LEVEL 2	82	TON	\$250.00	\$20,537.08
503	520111	4 INCH GRADED AGGREGATE BASE COURSE	959	SY	\$14.00	\$13,429.11
504	549603	5 INCH YELLOW PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	786	LF	\$4.00	\$3,144.00
505	549609	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS	191	LF	\$15.00	\$2,865.00
506 507	549417 549617	16 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	39 216	LF LF	\$15.00 \$22.00	\$585.00 \$4,752.00
507	549617	WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	216	SF	\$30.00	\$6,480.00
509	561119	6 INCH PORTLAND CEMENT CONCRETE PAVEMENT FOR DRIVEWAY MIX 9	186	SY	\$190.00	\$35,382.22
	501115		100		JBTOTAL CATEGORY 5	\$96,874
	<u> </u>					
601	634204	TYPE A CURB ANY HEIGHT OR DEPTH	100	LF	\$120.00	\$12,000.00
602 603	634301 634331	STD. TYPE A COMBINATION CURB AND GUTTER, 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH STD. TYPE C COMBINATION CURB AND GUTTER, 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH	1,091 153	LF LF	\$38.00	\$41,458.00
603	655104	5 INCH CONCRETE SIDEWALK	3,372	SF	\$35.00 \$8.00	\$5,355.00 \$26,976.00
605	655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	177	SF	\$34.00	\$6,018.00
606	600000	POROUS FLEXIPAVE SIDEWALK (CONTINGENT)	200	SF	\$32.00	\$6,400.00
	1				JBTOTAL CATEGORY 6	\$86,20
				1		
701	704345 705500	PLACING FURNISHED TOPSOIL 4 INCH DEPTH	147 147	SY	\$8.00	\$1,178.67
702	705500	TURFGRASS ESTABLISHMENT ROOT ZONE PRUNING (CONTINGENT)	147	SY LF	\$8.00 \$25.00	\$1,178.67 \$3,750.00
705	700000		130			
					JBTOTAL CATEGORY 7	\$6,107
801	801130	SQUARE PERFORATED TUBULAR STEEL SIGN POSTS	5	EA	\$200.00	\$1,000.00
802	801135	SQUARE TUBULAR STEEL ANCHOR BASES	5	EA	\$200.00	\$1,000.00
803	801605	SHEET ALUMINUM SIGNS	20	SF	\$100.00	\$1,983.33
					JBTOTAL CATEGORY 8	\$3,983
				SUB-T	OTAL (CAT. 1 THRU 8)	\$353,562
				ATIONS	30% CONTINGENCY	\$106,06
			UTILITY RELOC		6% OF CAT. 1 THRU 8) CONSTRUCTION COST	\$21,21
				TOTAL	CONSTRUCTION COST	\$480,84

2. Right of Way Acquisitions are not anticipated and therefore costs are excluded. Right of Entry Agreements may be required. 3. Root Zone Pruning, Tree Protection Fencing and Porous Flexible Sidewalk are contingent items and will be used as directed by the City Arborist.

APPENDIX D

Preliminary Agency and Community Comments, Responses

New Ave Bikeway – Section D Community Route Walk

December 10, 2022 @ 1:00pm

Attendees:

- Alex Freedman (Host, City of Takoma Park)
- Randy Gibson (Councilmember, Ward 3)
- Cindy Dyballa (Councilmember, Ward 2)
- Paul Weeda (Ward 3)
- Jim Hahn (Ward 2)
- Heather Hahn (Ward 2)
- Ashley Brookshier (Ward 3)
- Lori Bowes (Ward 5)
- Neal Riemer (Ward 3)

Feedback: (*RK&K's responses in blue text*)

- 1. Mixed reactions about the utilization of the M-NCPPC conservation land -
 - Some were interested in exploring that option, because it would be less disruptive to the neighborhood and offer a good connection to the environment, including what appears to be an access point on via Cockerille Ave to 4th Ave.
 - Most were not interested in the added cost, engineering challenges, permitting challenges, and expanded timeline of trying to negotiate with M-NCPPC → "Don't let perfect be the enemy of the good."

Response: One of the main reasons for selecting Option #1 was to avoid impacts to M-NCPPC property, which as noted, would include significant added costs and timeline for design and permitting approvals to mitigate environmental (forest stand and Takoma Brach stream valley) and utility impacts.

- Suggestion that the north side of Poplar might be the more useful side to have facilities on. Response: We concur and this is in agreement with our preliminary field review. We will further evaluate during preliminary design.
- Interest in seeing separate walking and biking facilities, when combined into a single sidewalk/trail, if space allows. – Response: Based on very limited right of way through the project corridor, including constraints to maintain existing street parking, etc., we do not anticipate providing separate facilities for walking and biking to be feasible.
- 4. Where hardened protective lanes aren't possible, would some sort of barrier, like bollards or wheel stops be possible? Response: This will be investigated further during detailed design; however, there is very limited ROW and roadway width in existing conditions.
- 5. Existing sidewalk network through the neighborhood is a little "disjointed" Response: This is acknowledged and was observed through our field investigations and may be explained as the City's best efforts to shoe-horn in sidewalk retrofit improvements on one side of the street or the other where impacts to right of way, utilities, etc. could best be avoided / minimized.
- Concern from neighbors (as represented by the one neighbor on the walk) for cut through traffic

 Response: The proposed bikeway improvements will not increase vehicular traffic through
 the project limits.

- 7. Recognition that where 4th Ave narrows, there may need to be different infrastructures from the wider sections. Response: This was observed from our field investigations. To retrofit the bikeway improvements within the neighborhood while avoiding property and utility impacts and retaining wall construction, we anticipate using sharrows in locations with limited ROW and shared use paths in locations with available ROW.
- 8. Orchard & 4th Ave and Westmoreland & Kansas are both informal school bus pick-up spots; currently kids just stand, lingering at the corner, for pick-up.- Response: Both of these locations have existing sidewalk. We can investigate the provision of bus stop pads / wider sidewalk where feasible and where existing right of way permits.
- 9. Westmoreland & 4th Ave is a tight corner as currently designed; concern that a harder corner may invite a lot of conflict with vehicles. Response: We do not anticipate that we will make the curb radii any less at this intersection. We are proposing a sharrow at both legs of this intersection and do not anticipate impacts to the existing curb/sidewalk.
- 10. Intersection of Kansas Ln and Westmoreland is challenging: -
 - Drivers regularly blast through the stop signs on Kansas Ln
 - There is a blind corner, obscured by fence and evergreen shrubs
 - The sidewalks on Kansas, between Eastern and Westmoreland are comically bad on both sides, and the non-sidewalks mouth of the parking area on the north side of the street is functionally a gutter, which becomes impassible when it rains.

Response: Kansas Lane has a speed bump installed at this intersection which should prevent vehicles from speeding through this intersection. We will review this speed bump and ensure it meets current City / County standards. Due to limited ROW we do not anticipate the ability to relocate the fence or evergreen shrubs on the southern corner. We observed the same issues with the existing sidewalk along Kansas Lane; the existing "sidewalk" on the east side of Kansas Lane could be widened / retrofitted as a shared use path, but would also require eliminating street parking for this stretch. This will be discussed further with the City to confirm feasibility to eliminate the street parking.

- 11. The tour passed two neighbors at two different houses on 4th Ave who asked what was going on

 both shared excitement about the idea of a bike route along the street. Great!
- 12. There was a general recognition that, from a topography perspective, the route down 4th Ave to Westmoreland was the flattest and most viable route. Response: Comment acknowledged. We will identify on the preliminary design plans a sub-alternate for the bikeway that extends south along 4th Avenue to the intersection with Eastern Avenue, where District DOT is planning multi-modal improvements.
- 13. Concern that any hardscaping should not negatively impact stormwater issues, or actively help with remediation. Response: Concept stormwater design will be performed in conjunction with the proposed improvements. Any necessary stormwater improvements will be established with the proposed design.
- 14. General concern was voiced about losing street parking, particularly for houses without offstreet driveways. – Response: This is observed and is one of the reasons why sharrows are being considered through these areas with limited ROW and existing parking.

Project:	Takoma COGTL	C New Ave Section D	
Date:	March 2023		
Reviewer:	City of Takoma	Park	
Comment ID	Sheet No. / Drawing No.	Comment	Response
1	HD-01	Can you clarify if the intention is to remove parking on either side of the street? If parking is to be removed from one side or another, there is an interest in removing it from the north side of the street (already limited)	Parking is only available on one side of the street and the intention is to keep this parking. Parking on the other side violates the minimum offsets from crosswalks, driveways, etc.
2	HD-01	There is a utility pole here that currently makes this very ADA in-accessible. Can you confirm in this new design whether this would become ADA accessible?	We are proposing to relocate this utility pole.
3	HD-02	Is it possible to re-design this to be a better speed bump? Right now it has a double-bump that is unpleasant for all users. Are there designs that would be more bike compliant?	We have replaced the Takoma Park standard speed humps with more bike friendly Montgomery County standard speed humps.
4	HD-02	Is there an opportunity to bump out this corner to narrow 4th Ave down to 20 or 22ft?	Based on auto turn analysis it is not recommended to install a speed bum here. A passenger vehicle will be able to navigate the intersection but a SU-40 vehicle will not.
5	HD-03	Is it possible to re-design this to be a better speed bump? Right now it has a double-bump that is unpleasant for all users. Are there designs that would be more bike compliant?	We have replaced the Takoma Park standard speed humps with more bike friendly Montgomery County standard speed humps.
6	HD-03	Is it possible to re-design this to be a better speed bump? Right now it has a double-bump that is unpleasant for all users. Are there designs that would be more bike compliant?	We have replaced the Takoma Park standard speed humps with more bike friendly Montgomery County standard speed humps.
7	HD-03	Is there an opportunity to bump out this corner to narrow 4th Ave down to 20 or 22ft? Maybe even expand the whole curb between this corner and orchard, removing parking?.	Based on auto turn analysis it is not recommended to install a speed bum here. A passenger vehicle will be able to navigate the intersection but a SU-40 vehicle will not.
8	HD-04	Is there an opportunity to bump out this corner to narrow Poplar Ave down to 20 or 22ft?	Based on auto turn analysis it is not recommended to install a speed bum here. A passenger vehicle will be able to navigate the intersection but a SU-40 vehicle will not.
9	HD-04	Can this be turned into a higher-visibility style crosswalk, like a continental design?	Will comply.

10	HD-04	Can you clarify what the intention for parking is on Poplar. Right now it is allowed on the north side and some of the south side. With the extension of the curb on the north side, it seems like maybe parking on the south side will need to be more restricted to certain areas or removed entirely?	We are proposing to remove this parking entirely.
11	HD-05	Is there an opportunit to narrow this whole block of Poplar down to 21 or 22ft?	We have changed the proposed width to 22 feet.
12	HD-05	southern corner? And then adding a high-visibility crosswalk? If narrowing the	Based on auto turn analysis and the proximity to New Hampshire Avenue it is not recommended to modify the intersection any further.
13	HD-05		We are proposing to no longer have this structure with the narrowing of the roadway.

Project:	Takoma COGTLO	C New Ave Section D	
Date:	March 2023		
Reviewer:	MNCPPC		
Comment ID	Sheet No. / Drawing No.	Comment	Response
1	General	Given that the shared use path on Poplar Ave is substandard, that the driveway at the northeast corner of Poplar Ave and Gude Ave creates an additional conflict point that may reduce visibility and that the transition from the shared use path on Poplar Ave to the on-road bikeway on 4th St is a bit awkward, consider converting the Poplar Ave shared use path to a sidewalk and providing an on-street neighborhood greeneway on Poplar Ave. To achieve this, the travel speeds on Poplar Ave will need to be reduced with traffic calming.	We do not believe a neighborhood greenway is appropriate on Poplar Ave from Gude Ave to New Hampshire Ave. The MCDOT Bicycle Master Plan states neighborhood greenways should be applied to streets with low volumes (less than 3,000 ADT) and are paralle to major roadways. This street is perpendicular to New Hampshire Ave and it is estimated the ADT is above the minimum threshold. This can be investigated further during subsequent design phases to determine viability of Neighborhood Greenway for this segment.
2	General	In order for the Mandatory Referral process to proceed smoothly, the Applicant should pursue a Forest Conservation Exemption request (if applicable). Projects of this type usually pursue an exemption under 22A(5)(f) - a governmental project reviewed for forest conservation purposes by the State Department of Natural Resources under the Code of Maryland Regulations; or 22A(5)(e) - a State, County, or municipal highway construction activity that is subject to Section 5-103 of the Natural Resources Article of the Maryland Code, or Section 22A-9. All requirements of an exemption for a County or municipal highway construction activity are detailed in Section 22A-6(d) and Section 22A-9;	Will pursue forest conservation exemption during subsequent design phases.
3	General	Although further details will be confirmed at a later stage, please provide as much expected environmental information in the proposal as possible (tree protection measures, tree removals, supplemental/replacement planting, swm, any master plan recommendations, etc).	Tree removals and SWM locations are shown on plans, master plan recommendations are included in report. Additional tree protection details and SWM details will be provided during subsequent design phases.
4	5	The new curb ramp is not oriented perpendicularly to the receiving pad on the east side of Westmorland.	Curb ramp is oriented perpendicular to receiving pad. Do not recommend reconstructing corner and receiving end and increasing LOD.
5	5	If feasible, a 6ft sidewalk along the Kansas Lane roadway would be preferred. Perhaps Kanasa Lane could be narrowed to 21 total feet.	Will coordinate with DPW if they would prefer 6 ft sidewalk and narrower roadway.

6	General	Speed humps installed in the City of Takoma Park can be quite disruptive to bicycle travel on shared streets. Recommend that speed humps be evaluated for bicycle use and re-designed to conform to MCDOT design standards for similar county roads. Locations - 4th Avenue between Poplar Avenue and Cockerille Avenue and 4th Avenue between Orchard Avenue and Allegheny Avenue. An alternative would be to modify the existing speed humps to provide cutouts for bicyclists.	We have recommended that speed humps be converted to more bike-friendly MCDOT speed humps.
7	5,6	Were alternative routes to the Eastern Avenue/Kansas Lane intersection considered for the bike route? Why not use 4th Avenue to Eastern, and then construct a sidepath along the north side of Eastern avenue to Kansas lane?	This route has a significant difference in elevation climb. DPW reviewed the alternative routes considering aspects such as elevation climb and ROW and determined the route shown is preferred.

Project:	Takoma COGTL	C New Ave Section D		
Date:	March 2023			
Reviewer:	Public Commen	ts		
Comment ID	Sheet No. / Drawing No.	What do you like most about the proposed initial design concept?	What would you change about the proposed initial design concept?	Additional Comments
1		I think a bike path is a great idea	Keep it on flat parts of the area	Is it all the proposed roads to become cycle tracks? Would the tracks be protected? Would parking, stopping & standing to be enforced if it's on an unprotected track
2		The Poplar Ave section with a true bikeway.	I hate the sharrows. As a regular rider and bike commuter, I find that sharrows do nothing to protect me. They're hardly worth the paint, which fades. The segment should be realigned to cross Poplar, enter the woods just west of New Hampshire Ave, cross Takoma Branch, and then use the old Sligo Mill Road asphalt right-of-way in the woods (degraded at the lower end) to travel up the comfortable grade of that historic road, all the way to the new traffic signal at Eastern Avenue, then continue on Sligo Mill Road in DC to Chillum Road, where a left turn can lead one on Peabody to 3rd St NE with connections to the node at Fort Totten, or a right turn leads one block to the Kansas Ave bike route. A Sligo Mill Road alignment will better serve future mixed use development on lower New Hampshire Ave, will provide a shady respite for cyclists climbing the grade, and will provide better connections between Langley Park and Fort Totten. Besides that, the proposed segment D would put cyclists in conflict with evening peak hours cut-through traffic. Please ditch this proposed route and follow the Sligo Mill Road alignment. It worked for horses, so it will work for bikes!	Please text me at 2404721560 if you would like me to show you what I'm talking about.
3		Information shown to drivers to watch out for bicyclists	l am doubtful a protected bike lane would be politically feasible due to it being a car dependent area	
4		Nothing—it's not needed.	Cancel it.	
5		I like that the route is the least hilly alternative.	Make backstreets limited one-way hours, as mornings are heavily trafficked with somewhat fast drivers.	
6		Making it safer to bike and enabling me to have a more direct route to my work in DC.		
7		Simple	Can't think of anything	

8	We need more bikeways	We need sidewalks along with the bikeways. Bikes are dangerous when everyone has to walk on the street since there are no sidewalks. It is ludicrous that my children cannot walk to spring park or their bus stop without walking in the road multiple times. Adding more fast moving bikes will be dangerous for everyone, especially on steep hills like on Kansas Ave.	
9	A Connect to the Sligo bike trail is great	Add in speed bumps or something to slow cars as this is a busy road	Kansas Lane to Poplar is used by motorists to connect to New Hampshire in a shortcut. They speed way to fast and slowing mechanisms need to be put in place along side this bike route for the sake of pedestrians (and lots of kids!) and bikers alike
10	I appreciate the attention to safety and the connection to existing bike lanes DC.	Bike lanes should be paired with continuous sidewalks so that pedestrians can walk safely without having to enter the bike lane.	
11	The area needs development and investment that is pedestrian/bike friendly in the neighborhood. NH Ave and Eastern Ave are underdeveloped and overlooked by the City of Takoma Park, Washington, DC and MD SHA.	4th Ave is a disaster from a pedestrian and vehicular traffic perspective. There are no sidewalks on both sides of the street, so pedestrians are always arbitrarily crossing back and forth across the street. It's a busy vehicular cut through street, that the City of Takoma Park has failed to address meaningfully despite resident complaints. As a cyclist myself, it's clear that putting bike lanes on 4th Ave is a bad idea, until (at a minimum) there are sidewalks on both sides of the street. Otherwise, pedestrians will be regularly stepping into the bike moving lanes.	The proposed route along Sligo Mill and behind Jiffy Lube is by far a better conceptual route. However, I suspect that resources won't be mobilized to do the engineering and works necessary to develop this route, because the area is essentially a "forgotten corner" of Takoma Park. The shame is that using the sub-optimal route along 4th will negatively impact the neighborhood and make the route less desirable and less used by cyclists.
12	The intersection of 4th and Poplar can feel dangerous as many cars traveling from New Hampshire speed through the stop sign and cut through to Eastern The proposal would make it safer to bike and walk and would hopefully slow down traffic passing through. I bike to work along this route every week day morning and afternoon and the proposed lanes will make this much safer!	. No change but consider the Takoma public schools bus stop at 4th and Orchard st	
13	Bikers will be protected on main thoroughfares where people frequently driv less than safely	e Nothing	
14	I would ride it all the time! New Hampshire is a death trap for cyclists but th only way to get up north to Sandy Spring and Olney!	e Of course, I hope the project continues along New Hampshire one day to White Oak!	

15	For the most part it has limited disruption to the existing streets which seems appropriate since it's a stretch of <25mph roads with many road calming features throughout	I would just stencil the bike sharing chevrons and put up the bike lane signs and be done with it. It's not clear why the additional sidewalks along Poplar & Kansas are needed as part of this scope and those seem like they will delay the objective to demarcate specific bike lanes on the existing roads. If the goal is to build bike lanes, then it seems like this can be done relatively quickly and at fraction of the cost associated with widening sidewalks, moving utilities and removing trees.	I am concerned cost and delays given that the broader New Ave Bikeway process seems to have been ongoing for a decade now with \$1.7m spent on feasibility studies. Section D focuses on quiet residential streets where car traffic flows at <25mph so it's not clear why the city needs to do anything beyond providing signage and/or adding bike sharing chevrons to the road. While I don't have strong views on whether or not more bikes ought to flow through the community (sure, why not), I am concerned about the slow pace of public works in general and Takoma Park in particular. While I have no experience in city planning and road engineering, I think it would make sense to consider whether bikes could just align into Poplar and Kansas from New Hampshire and Eastern respectively without the need for further extensive capital works. Have the pro and cons of that been considered vs the additional financial cost of the sidewalk/shared use projects?
16	Continuity between bike routes. Like that it goes through path of least resistance because neighborhood is so hilly. And like that it goes along parks.	Nothing	Currently don't bike down that section of New Hampshire because it feels very unsafe to cycle with cars speeding.

APPENDIX E

Stormwater Management Calculations

							Sediment for State				view																								
							'M Calcu	lator Co	ndensed	l Forma	t				Job #																				
			Project D			Takoma Park New Ave D Contract # Date: 4/5/2023 Montgomery County Designed by: MYS									4/5/2023 MYS	C	Clear Input Cells																		
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			nt Classificati ion Activities:	on for the		STEP 1 Site / Drainage Area Dat										Impervic	ous Area	STEP 3 STEP 4 STEP 2 Required ESD Volume Reduction from bus Area Requiring Treatment (IART) Treating (ESD _V reduceda) Redevelopment (ESD _{V RE-DEVL}) (for Redevelopment Classification when ΔAi<0) Classification when ΔAi				STEP 5 Required ESD Volume for treating New Development (ESD _{V NEW}) for I													
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POI	SWM Study Area	Existing Impervious Surface Area	Percent Existing Impervious ness	Developmen t Classificatior for Re-construc -tion	Conditio	h l	Existing Imp. Area within LOD	Propose d Imp. Area within LOD	Area for which WQ is Not Req'd (i.e. 3.3.A Waiver)	Loss of Existing Water Quality (Area)	ESD _v / WQ _v		Re- constructe d Imp. Area Already Treated (Area)	Ex. Imp. Area outside of LOD Shifted in/out of POI	Will POI qualify for a Cp _v Waiver under Section 3.3.B of the	from Redevelop For Re-devi Classificatio IART _{RE-DEVL} = 50 (A _{EI} - A _{MI} - A _R For New Dev Classificatio	'l vn, D% of _{RECI}) v'l vn,	IART from New Development: For Re-dev'l Classification, IART _{NEW} = $\Delta Ai = A_{p_i} \cdot A_{Ei}$ For New Dev'l Classification,	Total IART: IART = IART _{RE-DEV'L} + IART _{NEW} + A _{Li}	P _E	R _v	ESD _{V RE-DEV'L}	Pr	olied t roject	ucedAi	P	ESD ^{V medireedal}	cedAi	V NEW for Waiver	ESD _{V NEW}	Sc A	No Imp (i oil Grou	· D	Reduc	ct
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5	0.12	0.10	83.3%	Re-dev'l	1.00	1.00	0.10	0.12	0.00	0.00	0.0	0.0	0.00	0.00		0.05		0.02	0.07	1.00	0.95	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	N/A I	N/A	• N	A N	/A 0	> N/A	A N/A	0			0.02	2.00 0).(
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r or ion		P _E	R _v	ESD _{V SHIFT}	ESDV Loss	ESD _{V POI}	1-Year Management Requirement		Fa	cific R ctor (Group	S)	-	Recharge Volume (Re _{v NEW}) for New Development	Loss of Existing Recharge Volume (Rev Loss)	Fotal Required Recharge /olume (Rev)				
v	ESD _{V NEW}				ш		1-Year Manag Requirement	###	###	S ###	###	Weighted S							
	cubic feet	in.		cubic feet	cubic feet	cubic feet		ac.	ac.	ac.	ac.	in.	Re _{v NEW} cubic feet	Re _{v Loss} cubic feet	Re _v cubic feet				
/A	0	2.60	0.95	0	0	0	<i>\$</i> ₽	0.00	0.00	0.00	0.00	0.00	0	0	0				
/A	0	2.60	0.95	0	0	9 6;	v_0	0.00	0.00	0.00	0.00	0.00	0	0	0				
/A	0	2.60	0.95	0	0	0	v_0	0.00	0.00	0.00	0.00	0.00	0	0	0				
95	^{9}o	2.60	0.95	0	0	o_6	40	0.00	0.01	0.00	0.00	0.26	6	0	9				
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