

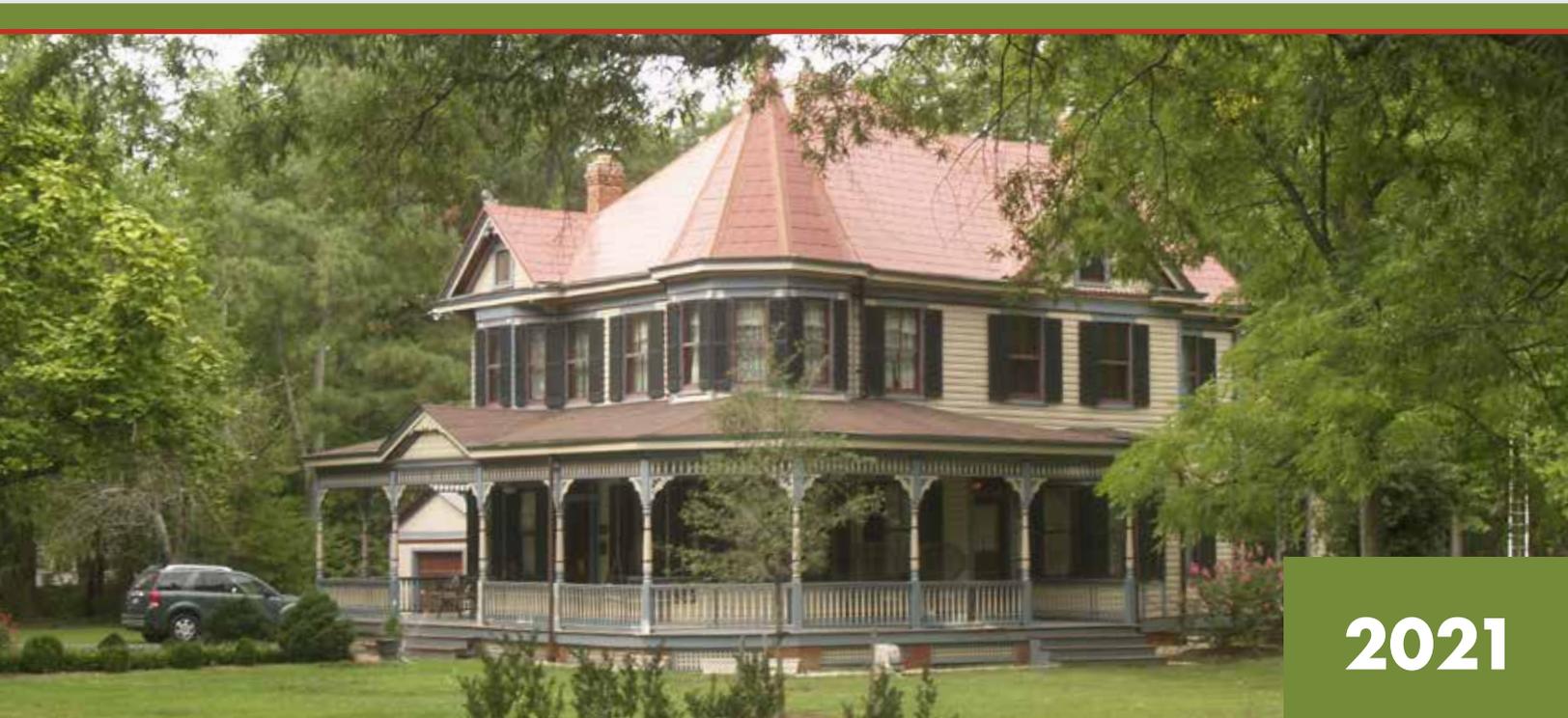


THE VILLAGE OF BRANDYWINE SIDEWALK AND STREETScape IMPROVEMENTS STUDY

30% DESIGN AND ENGINEERING REPORT



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department



2021

ABSTRACT

Date: October 2021

Title: The Village of Brandywine Sidewalk and Streetscape Improvements Study:
30% Design and Engineering Report

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Abstract: The Village of Brandywine dates to the early 19th century, and still has some characteristics of a small rural community. New planned developments will bring added housing, employment, and recreational opportunities to the area. There is a need to provide safe, accessible pedestrian and bicycle connections through the village and to new destinations such as the Southern Area Aquatics and Recreation Complex recently constructed on Missouri Avenue.

Black Swamp Creek Land Trust, Inc. requested engineering and design plans that will balance the needs of pedestrians and bicyclists and shape an environment that ensures bicycle and pedestrian circulation and safety for a 1.1-mile section of MD 381 (Brandywine Road), the main street of Old Brandywine Village, and approximately 0.83 miles northward along Missouri Avenue to US 301 (Crain Highway). Brandywine Road is a designated scenic and historic road, and all strategies for pedestrian, bicycle, and green infrastructure will need to be sensitive to and appropriate for its status. This report describes the goals, considerations, and recommendations for the 30% preliminary design and engineering plans and construction cost estimate developed for the Brandywine Sidewalk & Streetscape Improvements Project. This project was funded through the Planning Assistance to Municipalities and Communities (PAMC) Program administered by the Prince George's County Planning Department.



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The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department
14741 Governor Oden Bowie Drive
Upper Marlboro, MD 20772
www.pgplanning.org

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The Commission has three major functions:

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- The acquisition, development, operation, and maintenance of a public park system.
- In Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the County government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

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INTRODUCTION



The Village of Brandywine dates back to the early 19th century and still has some characteristics of a small rural community. New planned developments will bring added housing, employment, and recreational opportunities to the area. There is a need to provide safe and accessible pedestrian and bicycle connections through the village and to new destinations such as the Southern Area Aquatics and Recreation Complex recently constructed on Missouri Avenue.

The Brandywine Sidewalk & Streetscape Improvements Project is funded through the Planning Assistance to Municipalities and Communities (PAMC) program, administered through the Prince George's County Planning Department. The PAMC program offers planning, design, and technical and financial assistance for planning-related projects in response to specific requests from local municipalities and community organizations. The applicant for this PAMC project is Black Swamp Creek Land Trust, Inc., a 501(c)(3) nonprofit organization. Black Swamp Creek Land Trust, Inc. requested engineering and design plans that would balance the needs of pedestrians and bicyclists and shape an environment that ensures bicycle and pedestrian circulation and safety for a 1.1-mile section of MD 381 (Brandywine Road), the main street of Old Brandywine Village, and approximately 0.83 miles northward along Missouri Avenue to US 301 (Crain Highway). Brandywine Road is a designated scenic and historic road and all strategies for pedestrian, bicycle, and green infrastructure will need to be sensitive to and appropriate for this status. This report describes the goals, considerations, and recommendations for the 30% preliminary design and engineering plans and construction cost estimate developed for the Brandywine Sidewalk & Streetscape Improvements Project.

PROJECT DESCRIPTION



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2.1. PROJECT GOALS

The goals of the Brandywine Sidewalk & Streetscape Improvements Project are to:

1. Provide safe and accessible pedestrian and bicycle connections through Brandywine Village and to new destinations
2. Develop 30% preliminary design and engineering plans and construction cost estimate

The 30% preliminary design and engineering plans and construction cost estimate would be used to make the project eligible for funding for final design and construction.

2.2. PROJECT TEAM AND STAKEHOLDERS

All necessary project team members and stakeholders were identified at the initiation of the project. The list below includes each member or stakeholder and their roles and responsibilities:

- Black Swamp Creek Land Trust, Inc.
 - » Project applicant
- Maryland Department of Transportation State Highway Administration (MDOT SHA)
 - » Owns and maintains MD 381 (Brandywine Road) and MD 301 (Crain Highway)
- Prince George's County Department of Public Works & Transportation
 - » Owns and maintains Missouri Avenue
- Prince George's County Department of Parks and Recreation
 - » Maintains and develops parks, trails, and facilities within, and adjacent to, the project limits
- Prince George's County Planning Department
 - » Project administrator
- STV
 - » Lead project consultant
- Mercado Consultants
 - » Subconsultant to STV, responsible for field survey

2.3. SCOPE AND SCHEDULE

STV worked with the Prince George's County Planning Department to develop and refine the scope and schedule to complete the 30% preliminary design and engineering plans and construction cost estimate. The project scope included a stakeholder meeting, held on December 11, 2019, and a community meeting, held on September 17, 2020. Meeting minutes from the stakeholder meeting and comments from the community meeting are included in Appendix A and Appendix B. Multiple pedestrian and bicyclist improvements were developed for discussion at the stakeholder meeting and refined into recommendations presented at the community meeting.

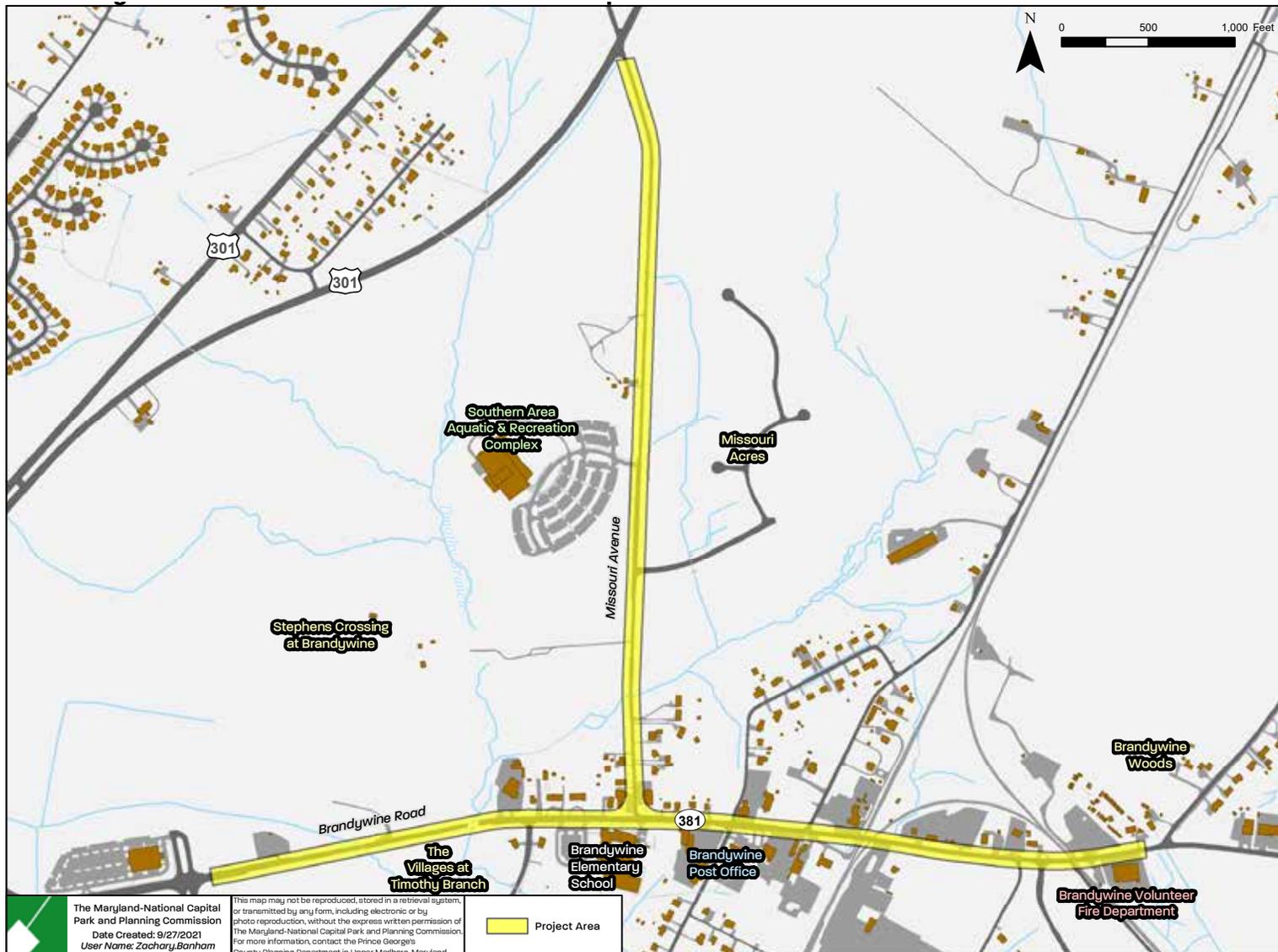
2.4. PROJECT LIMITS

The project limits are along MD 381 (Brandywine Road) between Mattawoman Drive and Tower Road (approximately 1.1 miles), and along Missouri Avenue from Brandywine Road to MD 301 (Crain Highway) (approximately 0.83 miles). The project limits are shown in Figure 1.

2.5. ROADWAY CLASSIFICATION

MD 381 (Brandywine Road) is an MDOT SHA roadway classified as Major Collector. The posted speed limit along MD 381 is 35 miles per hour. According to the MDOT SHA Internet Traffic Monitoring System (I-TMS), MD 381 had an average annual daily traffic of 10,620 east of MD 301 (Crain Highway) in 2019. The roadway has a varied width of 28–38.5 feet and consists of two lanes. Missouri Avenue is a Prince George's County road classified as a Local Road. There is a posted speed limit of 25 miles per hour and the roadway is two lanes wide.

Figure 1. Old Brandywine Revitalization: Street and Sidewalk Improvements



PROJECT CONSIDERATIONS

The following project considerations were investigated prior to developing design recommendations in order to provide better guidance and identify any project constraints.

3.1. RIGHT-OF-WAY

Computer Aided Drafting and Design (CADD) GIS-level sketch files of the existing right-of-way for through-highways along MD 381 and Missouri Avenue was obtained to determine if the project improvements could be proposed within available right-of-way owned by MDOT SHA and Prince George's County. A survey was conducted to identify existing roadway and roadside conditions along the project limits. The right-of-way files were reviewed with the survey and it was determined that the existing right-of-way width is less than the existing roadway width at various locations along MD 381 and Missouri Avenue. The proposed bicycle and pedestrian improvements are intended to be constructed within public right-of-way owned by MDOT SHA and Prince George's County. Due to the lack of available right-of-way along the project limits, it was determined that right-of-way acquisitions would be required to implement any pedestrian and bicycle improvements.

3.2. UTILITIES

Overhead utilities are present along both sides of the MD 381 and Missouri Avenue study corridors, as shown in Figure 2.

The project survey located utility poles along the project limits as well as limited manhole, meter, vault, and hydrant locations for underground utilities. The recommended improvements for this project should be designed to avoid impacts to utilities where possible.

Figure 2. Overhead Utilities



PROJECT CONSIDERATIONS

3.3. MAJOR STRUCTURES

The Timothy Branch crosses MD 381 approximately 950 feet west of the intersection with Missouri Avenue. MDOT SHA recently constructed a structure for the MD 381 Timothy Branch crossing as shown in Figure 3. The new structure provides approximately 36 feet of pavement width consisting of two 12-foot-wide lanes and two 6-foot-wide shoulders. The width of the new structure reduces options for additional pedestrian and bicycle improvements within the MD 381 roadway. It is likely that reconstruction of this structure to accommodate these improvements would not be a preferred option for stakeholders.

Figure 3. Timothy Branch Structure along MD 381



3.4 AT-GRADE RAIL CROSSINGS

Two at-grade rail crossings exist on MD 381 within the study limits: approximately 300 feet east of Cherry Tree Crossing Road and approximately 500 feet west of Tower Road. Both at-grade rail crossings are owned by CSX, and the crossing numbers are 532294G and 532285H as shown in Figure 4 from the USDOT Federal Railroad Administration (FRA) Safety Map.

Figure 4. At-Grade Rail Crossing FRA Safety Map

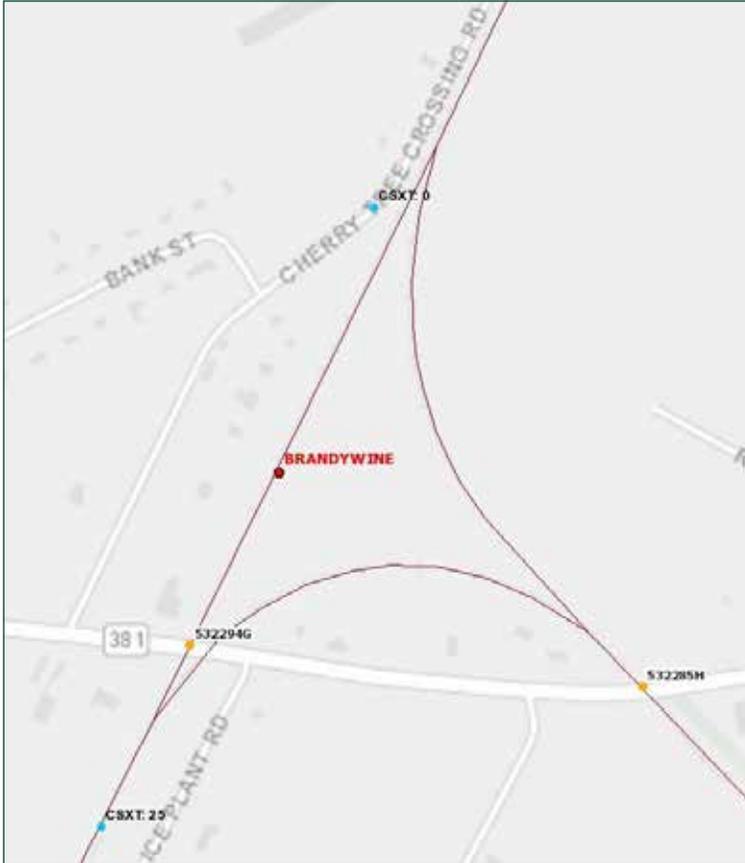
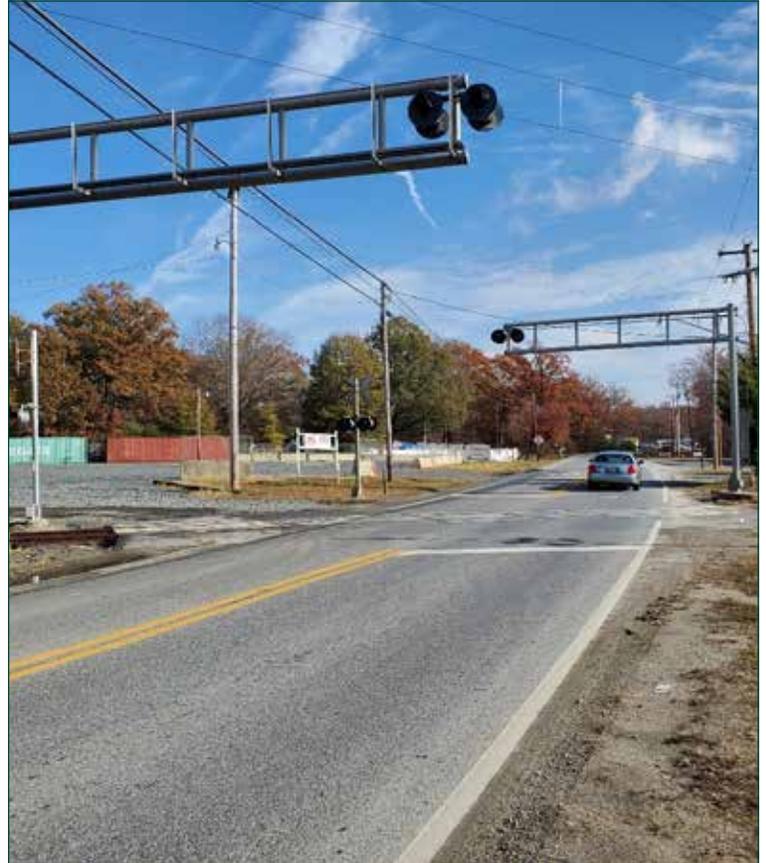


Figure 5. At-Grade Rail Crossing Safety Mitigations



Safety mitigations for the two at-grade crossings include overhead cantilever and pedestal mounted flashing beacons, signage, and associated pavement markings as shown in Figure 5. The existing safety mitigations are specific to vehicular traffic, and any pedestrian or bicycle improvement along MD 381 at these crossings may require additional safety mitigations. Any improvement proposed along MD 381 that crosses these at-grade rail crossings must be coordinated with CSX for review and approvals.

3.5 PREVIOUS PLANS AND STUDIES

There have been many recent planning efforts that include the Brandywine study area:

- 2014 *Plan Prince George's 2035 Approved General Plan*
- 2013 *Approved Subregion 5 Master Plan and Sectional Map Amendment*
- 2013 *Approved Subregion 6 Master Plan and Sectional Map Amendment*
- 2012 *Brandywine Revitalization and Preservation Study*
- 2012 *Rural Villages Study*
- 2012 *Brandywine Revitalization and Preservation Study*
- 2010 *Prince George's County Landscape Manual*
- 2010 *Prince George's County Approved Historic Districts and Sites Plan*
- 2009 *Prince George's Approved Countywide Transportation Master Plan*
- 2008 *Managing Wet Weather with Green Infrastructure, Municipal Handbook US EPA*
- 2000 *Maryland Stormwater Design Manual, Vol. I and II*

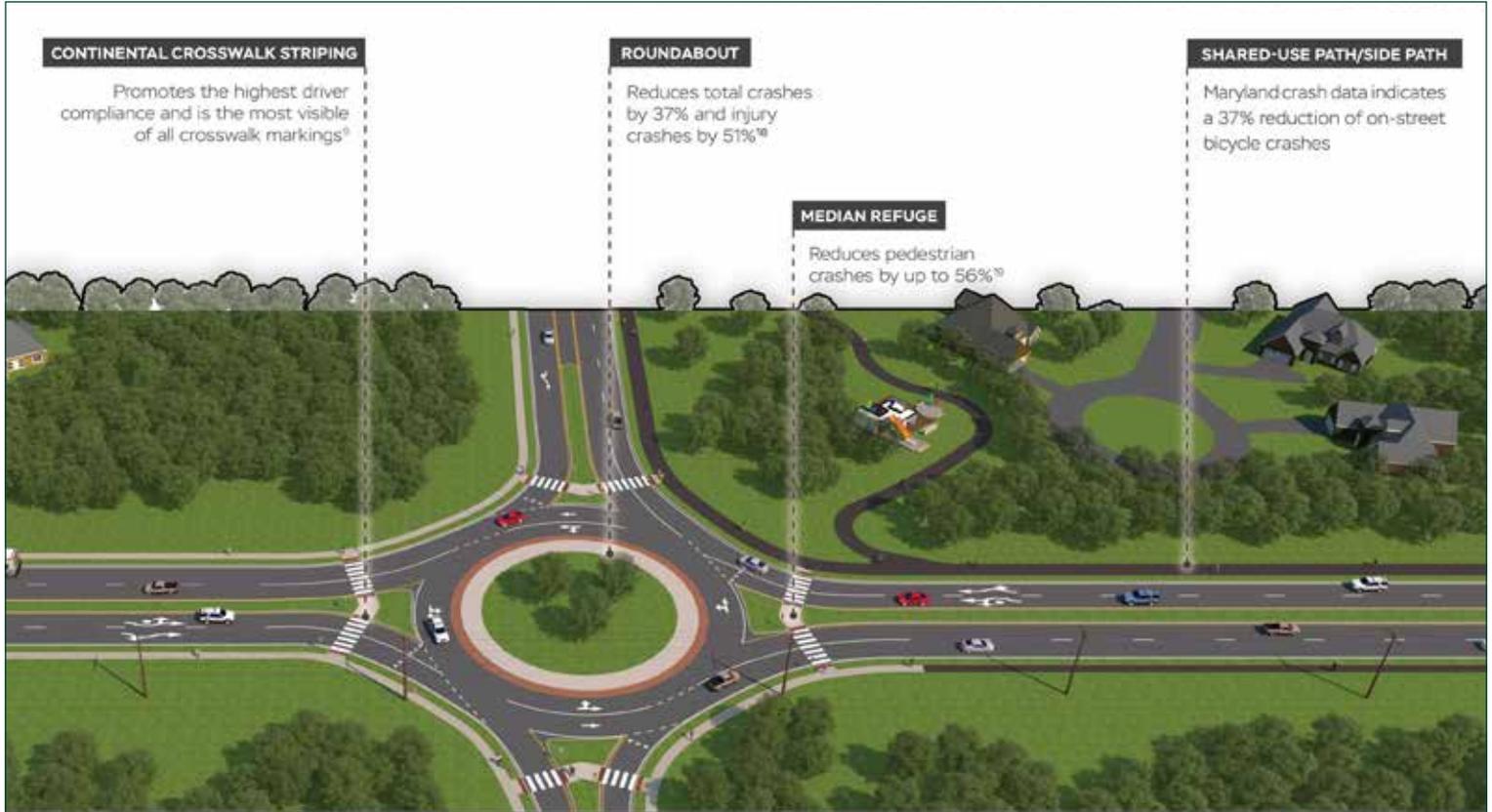
The recommendations from these plans and studies were considered in the development of design recommendations. The 2012 Brandywine Revitalization and Preservation Study includes strategies to improve the look and function of the public realm within the limits of this project, focusing on improving the Brandywine Road streetscape, pedestrian circulation, and safety. Design concepts recommended for pedestrian and bicyclist improvements in the 2012 Brandywine Revitalization and Preservation Study include a sidewalk along the north side of MD 381 and a shared-use path along the south side of MD 381 with a separate pedestrian/bicycle bridge over the Timothy Branch.

3.6 MDOT SHA CONTEXT GUIDE

MDOT SHA published Context Driven, Access and Mobility for All Users in 2019 (<https://experience.arcgis.com/experience/3476e680584c49e48303fe6d52ceeda9>), which establishes context zones based on land-use characteristics and provides design guidelines based on each zone that focus on creating safe, accessible, and effective multimodal transportation systems along MDOT SHA roadways. The Brandywine Sidewalk and Streetscapes Improvements Project limits are within the Suburban Context Zone. Safety countermeasures recommended for suburban contexts are shown in Figure 6 and include:

- Continental Crosswalk Striping
- Roundabout Intersections
- Median Refuges
- Shared-Use Paths/Side Paths

Figure 6. At-Grade Rail Crossing FRA Safety Map



3.7 PEDESTRIAN AND BICYCLE GENERATORS

There are several generators along the MD 381 and Missouri Avenue corridors including the following, which can be seen within the project limits in Figure 1:

- Southern Area Aquatics and Recreation Complex (SAARC)
- Missouri Acres Development
- Brandywine Elementary School
- Brandywine Post Office
- Chapel of the Incarnation
- MedStar Health
- Villages at Timothy Branch Development
- Stephen's Crossing Development
- Brandywine Post Office
- Sona Bank

PROJECT CONSIDERATIONS

The SAARC, shown in Figure 7, is a newly completed facility located on the west side of Missouri Avenue and owned by the Prince George's County Department of Parks and Recreation. A sidewalk has been constructed on the west side of Missouri Avenue along the property frontage but does not continue north to US 301 or south to MD 381.

Figure 7. Southern Area Aquatics & Recreation Complex



The Missouri Acres development, featuring 43 single-family homes, is currently under construction on the east side of Missouri Avenue, adjacent to SAARC. Brandywine Elementary School, shown in Figure 8, is located on the south side of the MD 381 at the Missouri Avenue intersection. MedStar Health, shown in Figure 9, is located at the western terminus of the study area at the Mattawoman Drive intersection. The Villages at Timothy Branch and Stephen's Crossing developments are planned developments proposed along Mattawoman Drive, both north and south of MD 381. The Chapel of the Incarnation, shown in Figure 10, is a historic property in the northwest corner of the intersection of MD 381 and Missouri Avenue.

These generators were considered in the recommended design to ensure that the improvements provide connectivity and safe access between destinations.

Figure 8. Brandywine Elementary School



Figure 9. MedStar Health



Figure 10. Chapel of the Incarnation



PROJECT CONSIDERATIONS

3.8 EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Limited, disconnected pedestrian and bicycle facilities are provided along MD 381 and Missouri Avenue within and adjacent to the project limits. Bicycle-compatible shoulders are provided along both directions of MD 381 west of Mattawoman Drive but do not continue east within the project limits. Bicyclists must travel within the travel lanes or narrow shoulders in spot locations. Sidewalk exists on the south side of MD 381 from Kathleen Lane to approximately 200 feet west of the Missouri Avenue intersection. There is an existing, marked pedestrian crossing across only the eastbound lanes of MD 381, west of the Missouri Avenue intersection and adjacent to the Brandywine Elementary School, that is signed as a school crossing as shown in Figure 11. This existing crosswalk does not connect to a shoulder or pedestrian facility on the north side of MD 381 and does not include an American's with Disabilities Act (ADA)-compliant sidewalk ramp connection to the existing sidewalk on the south side of MD 381.

As previously noted, the sidewalk was recently constructed as part of the SAARC facility along the west side of Missouri Avenue, which ends approximately 2,000 feet north of the intersection with MD 381. There are several businesses along MD 381, east of the Missouri Avenue intersection, with wide parking lots and access points that directly connect to the roadway pavement along MD 381 as seen in Figure 12. These create the potential for significant conflicts between future pedestrian and bicycle facilities along MD 381.

Figure 11. MD 381 School Crossing



Figure 12. Business Access Along MD 381



PROJECT CONSIDERATIONS

3.9 ENVIRONMENTAL CONSIDERATIONS

A desktop survey of various GIS databases was used to identify and document the environmental considerations for the implementation of bicycle and pedestrian improvements within the project limits.

Stormwater Management

The existing drainage along MD 381 within the project limits consists of open- and closed-section systems. Missouri Avenue is an open section within the project limits, except for the west side of the roadway along the limits of the SAARC property and the east side of the roadway within the limits of the Missouri Acres development. There are two existing MDOT SHA environmental site design stormwater management facilities within the project limits, best management practices (BMP) #161827 and #161826. They are located along MD 381, 0.25 miles west of Kathleen Lane (161826 along eastbound and 161827 along westbound) as shown in Figure 13. These facilities are grass swales and each treats one lane of Brandywine Road along their lengths and should be maintained in the final design.

Figure 13. Existing MDOT SHA Stormwater Management Facilities



Drainage issues were noted at the Community meeting along MD 381 including the intersection with Bank Street as shown in Figure 14.

Figure 14. Existing Drainage Issues at MD 381 and Bank Street



PROJECT CONSIDERATIONS

Forest Interior Dwelling Species

The forest surrounding the project limits is listed as Forest Interior Dwelling Species (FIDS) habitat, as shown in Figure 15. Any impact to the FIDS habitat may require on-site or off-site mitigation according to Prince George's County requirements.

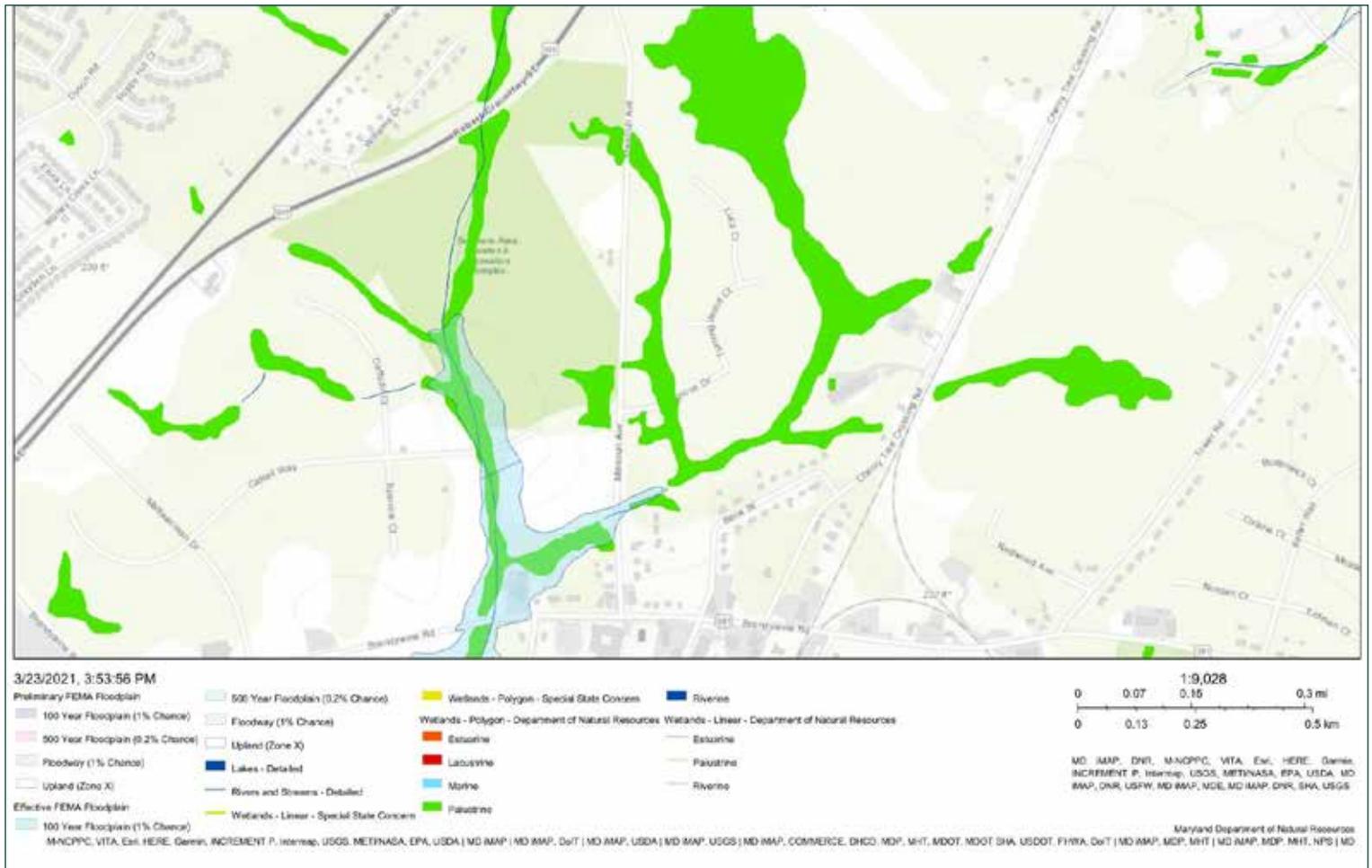
Figure 15. Existing Forest Interior Dwelling Species Habitat



Wetlands and Floodplains

The Timothy Branch is classified as Use I, which requires that any in-stream construction work not be conducted during the period of March 1 through June 15 of any year. Within the project limits the Timothy Branch includes a Federal Emergency Management Agency (FEMA)-regulated floodplain and adjacent wetlands that cross both MD 381 and Missouri Avenue, as shown in Figure 16.

Figure 16. Wetlands and Floodplains within the Project Limits

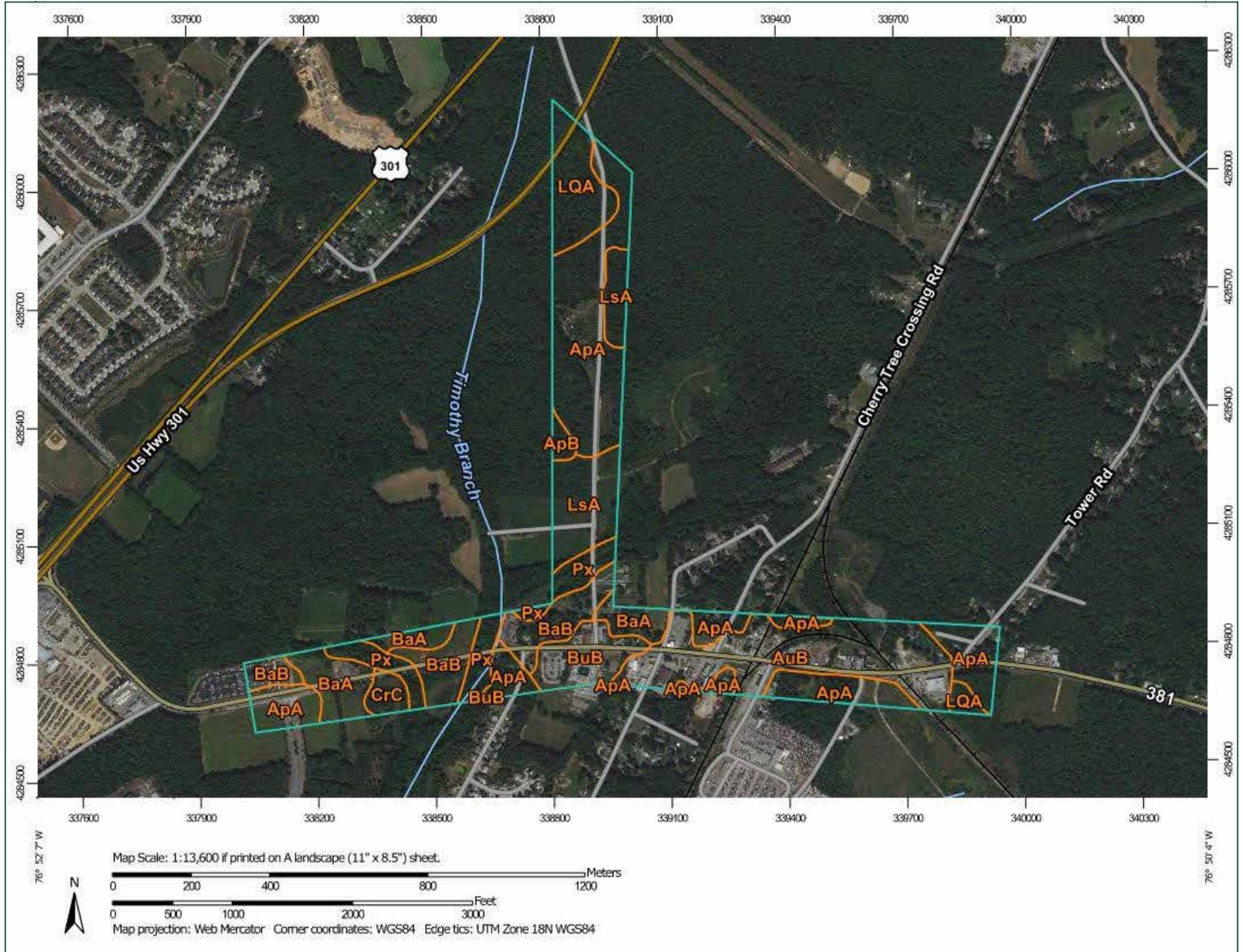


PROJECT CONSIDERATIONS

Soils

The soils within the project limits are poorly draining (C and D soils). Prior to final design geotechnical borings will be required to ensure feasibility of infiltration. See Figure 17 for the existing soil survey.

Figure 17. Soil Survey within the Project Limits

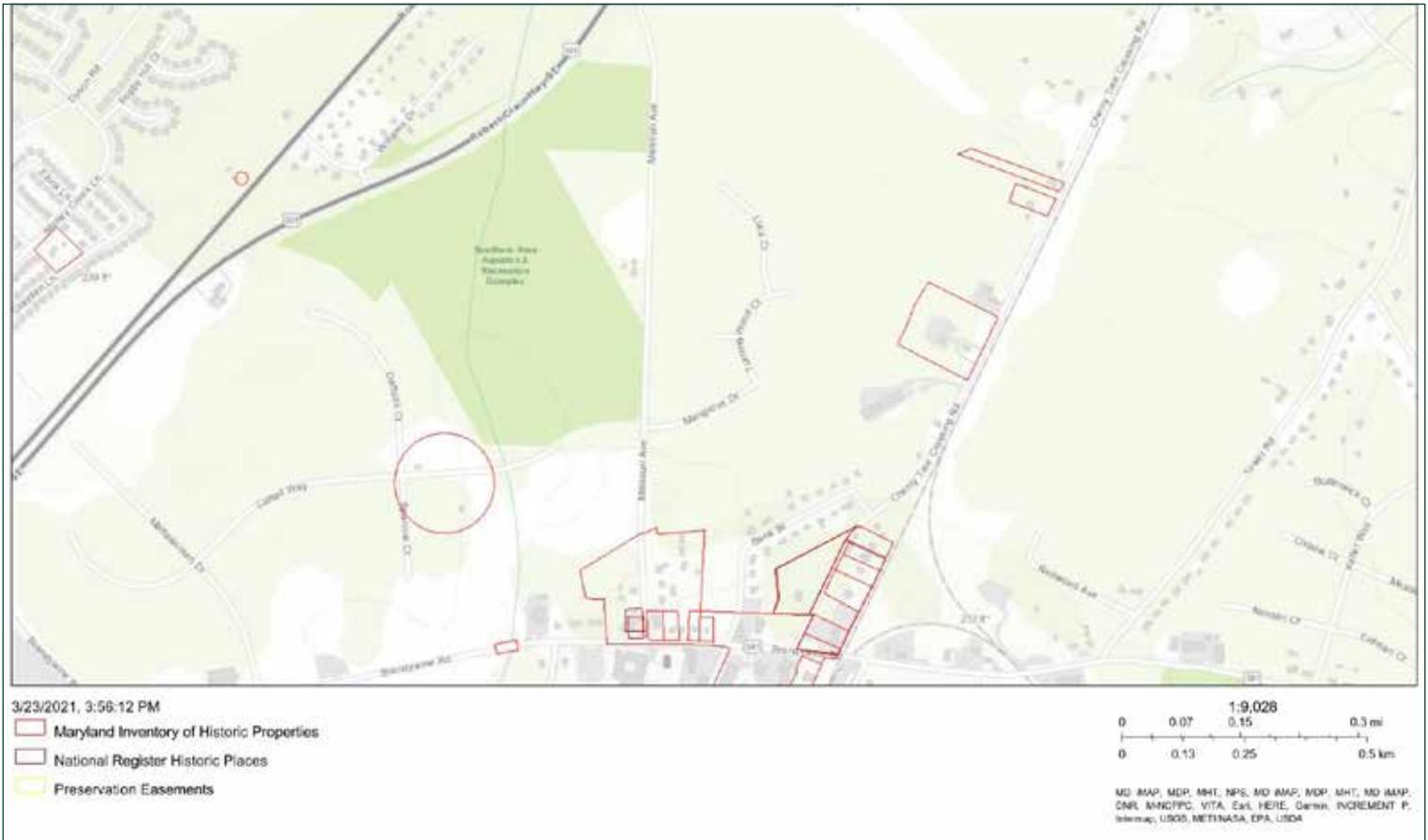


Historic Properties

There are two historic properties within the project limits as shown in Figure 18:

1. Brandywine Historic District - Brandywine Road/Missouri Avenue/Cherry Tree Crossing Road, 1872–1930
2. Chapel of the Incarnation - 14070 Brandywine Road, National Register of Historic Places, 1916

Figure 18. Historic Properties within the Project Limits



RECOMMENDED IMPROVEMENTS



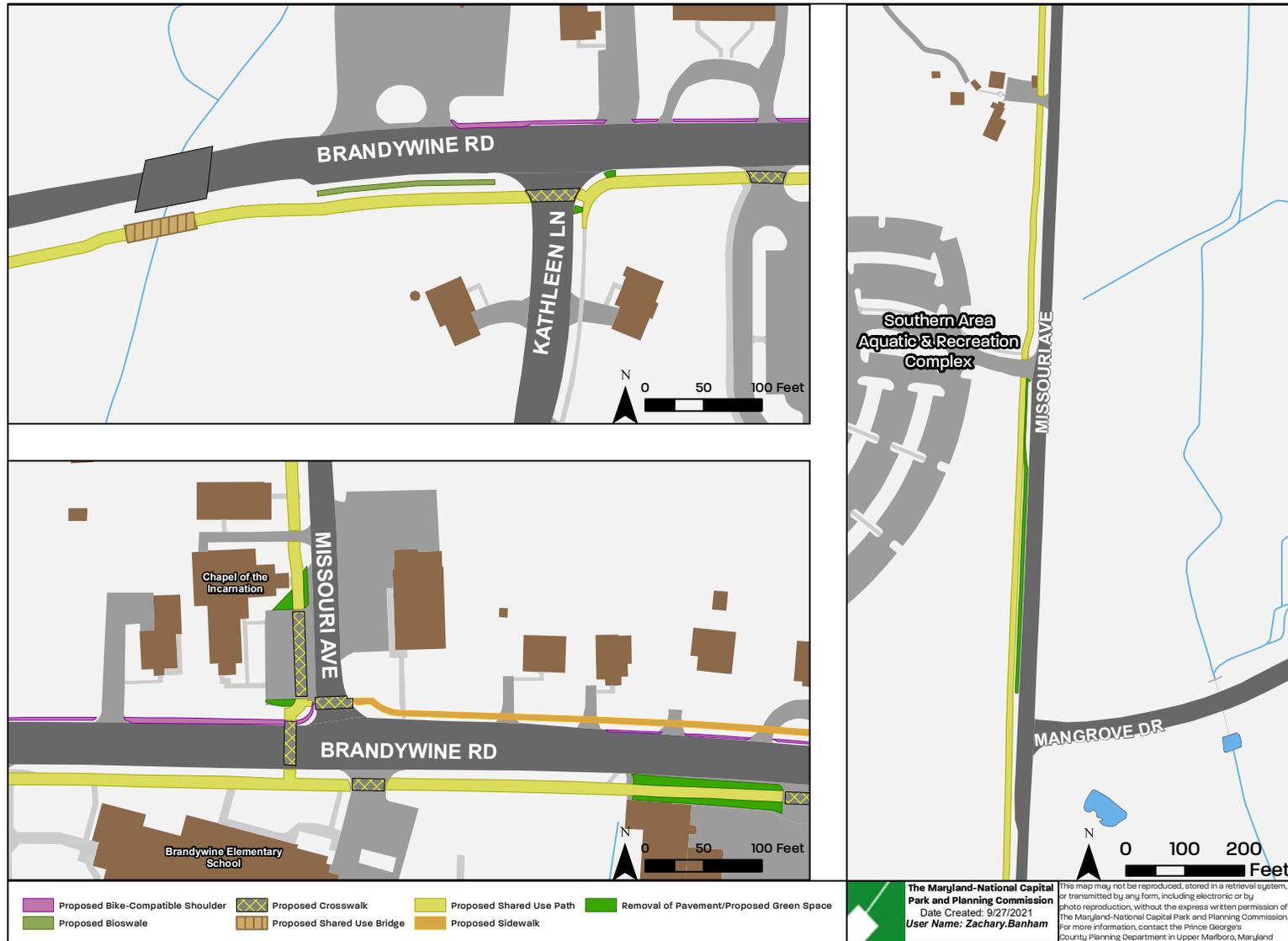
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Several alternatives were identified to meet the project goals of improving bicycle and pedestrian connectivity and safety. These alternatives were developed into recommended improvements based on feedback from stakeholders and the community as well as the project considerations described above. The recommended improvements are described in the following sections.

RECOMMENDED IMPROVEMENTS

Figure 19. Selected Old Brandywine Improvements



4.1. SHARED USE PATH

A 10-foot-wide shared-use path is recommended along the south side of Brandywine Road and the west side of Missouri Avenue. This recommendation is consistent with the 2012 Brandywine Revitalization and Preservation Study and the MDOT SHA Context Guide. The recommended shared use path along the south side of MD 381 would connect on the west side of the project limits with a future path along Mattawoman Drive that would run north-south between the Timothy Branch Development and the SAARC. The recommended shared use path on the west side of Missouri Avenue would connect to the shared use path on the south side of MD 381 with a crosswalk and ADA-compliant pedestrian ramps at the intersection of MD 381 and Missouri Avenue. The shared use path on the west side of Missouri Avenue would connect to the SAARC and replace the existing sidewalk in front of the facility.

Based on discussions with the MDOT SHA District 3 Office, a bicycle-compatible shoulder is also recommended along westbound MD 381 to accommodate on-road cyclists. A 4-foot shoulder is recommended on the north side of MD 381 per MDOT SHA design standards for 35-mile-per-hour roadways. Due to the width of the existing pavement on MD 381, the construction of additional pavement is necessary to provide the recommended 4-foot shoulder along the westbound direction.

The proposed shared-use path along the south side of MD 381 will require grade crossing panels and additional safety mitigations for the CSX at-grade crossings on the east end of the project limits.

To accommodate the full 10-foot-wide shared use path along the south side of MD 381 across the Timothy Branch, and avoid impacts to the new structure, a separate a shared-use-path bridge is recommended. The shared-use-path bridge would be constructed adjacent to and south of the new structure over the Timothy Branch. Examples of a shared-use path and the bridge are shown in Figures 20 and 21, respectively.

4.2. SIDEWALK

A sidewalk is recommended to provide additional pedestrian connectivity to the generators within the project limits. A sidewalk is recommended along the north side of MD 381 from Missouri Avenue east to Cherry Tree Crossing Road. The sidewalk will connect to the shared-use paths with a new crosswalk at the Missouri Avenue intersection and at the east end of the sidewalk termination around Cherry Tree Crossing Road.

4.3. CONTINENTAL CROSSWALKS

High visibility continental crosswalks are recommended at various roadway and driveway crossings throughout the project limits. Notable recommended continental crosswalk locations include:

- MD 381 at Mattawoman Drive East Leg
- MD 381 at Missouri Avenue West Leg
- MD 381 at Missouri Avenue North Leg
- Chapel of the Incarnation Parking Lot
- MD 381 West of Cherry Tree Crossing Road
- Brandywine Volunteer Fire Department Entrance

An operational and safety analysis should be performed prior to final design to determine if additional traffic control, such as stop signs or traffic signals should be installed at these proposed crossings. The proposed continental crosswalk locations can be seen in the 30% Preliminary Design and Engineering Plans in Appendix C.

4.4. DRIVEWAY/ACCESS CONSOLIDATION

The MD 381 corridor features several commercial properties in the vicinity, and to the east of, Missouri Avenue with frequent or wide driveway access points. Consolidating and reducing these access points would improve safety along the corridor by minimizing vehicular conflicts with pedestrians and bicyclists. Several driveways have been identified as opportunities for consolidation along the corridor, particularly in areas where a single property has multiple driveways or where adjacent parking lots are connected. Implementing this improvement would require significant coordination with property owners along the corridor. This coordination should emphasize the safety benefits and improvements to pedestrian and bicycle access which could result in increased business for the commercial property owners. One of the next steps in moving this project to final design and engineering should be further investigation and coordination with the property owners to determine the feasibility of driveway consolidation. The 30% Preliminary Design and Engineering Plans in Appendix C show the locations of these potential driveway consolidations. It should be noted that access point consolidation or reduction may not be feasible for certain properties such as Chapel of the Incarnation and the Brandywine Volunteer Fire Department. Additional treatments such as signing and continental crosswalks, as noted above, should be considered to enhance bicycle and pedestrian safety in these locations.

RECOMMENDED IMPROVEMENTS

4.5. STREETScape AMENITIES

To further enhance the experience for bicyclists and pedestrians, various streetscape amenities are recommended along the shared use paths and sidewalk. These amenities should be located in areas with open space and access to the pedestrian and bicycle generators. The selection of the type, specifications, and style of the streetscape amenities must be coordinated with the community and stakeholders and maintain the historical context of the project limits. Recommendations for streetscape amenities include the following:

- Street Furniture:

- » It is recommended that benches be installed throughout the project limits adjacent to the shared use paths and sidewalk to provide the community with locations to sit and congregate. The style of street furniture should be coordinated with the local communities to provide consistency but also connect with the scenic and historical nature of the corridor. Due to the lack of incorporated municipalities in the project limits, agreements for ownership and maintenance must be established to ensure a state of good repair for all proposed elements.
- » It is recommended that additional bicycle amenities such as lockers, racks, and bike repair stations be installed strategically along the shared use paths.

- Pedestrian Lighting:

- » Pedestrian-level lighting provides increased safety, security, and wayfinding for pedestrians. Pedestrian-level lighting with a historical context provided by stand-alone 12- to 16-foot-high poles with post-mounted luminaires is recommended to increase safety and comfort for pedestrians. The type and style of pedestrian lighting can be selected in the final design. It is recommended that the proposed lighting be dark-sky compliant due to the context of the project limits. The design and installation of pedestrian lighting along MD 381 is directed by the 2008 MDOT SHA Pedestrian Lighting Policy. This policy establishes the funding, design, construction, and maintenance standards for pedestrian level lighting by a local municipality along an MDOT SHA roadway. If the proposed pedestrian lighting system meets defined criteria, MDOT SHA will fund the design, 100 percent of the construction of conduit and handholes, and 50 percent of the construction of poles, foundations, wiring, luminaires, and controls. The local municipality will be responsible for the remaining construction funding, maintenance, and energy costs. If the local municipality elects to have the local utility company design and install the lighting system, the local municipality is responsible for the costs. The local municipality can execute an agreement with the local utility company to maintain the lighting as well. Due to the lack of incorporated municipalities in the project limits, an agency willing to own and maintain pedestrian lighting must be identified prior to final design to make this recommendation feasible.



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30% DESIGN AND ENGINEERING PLANS



Input from the community meeting was reviewed with the Community Planning Division and 30% Design and Engineering Plans were developed for the recommendations. The 30% Design and Engineering Plans were developed consistent with MDOT SHA CADD and construction document standards. The design and engineering plans reflect the various recommendations above. Proposed typical sections reflecting the shared-use path recommendation are shown in Figures 22 and 23, respectively.

30% DESIGN AND ENGINEERING PLANS

Figure 22. MD 381 (Brandywine Road) Proposed Typical Section

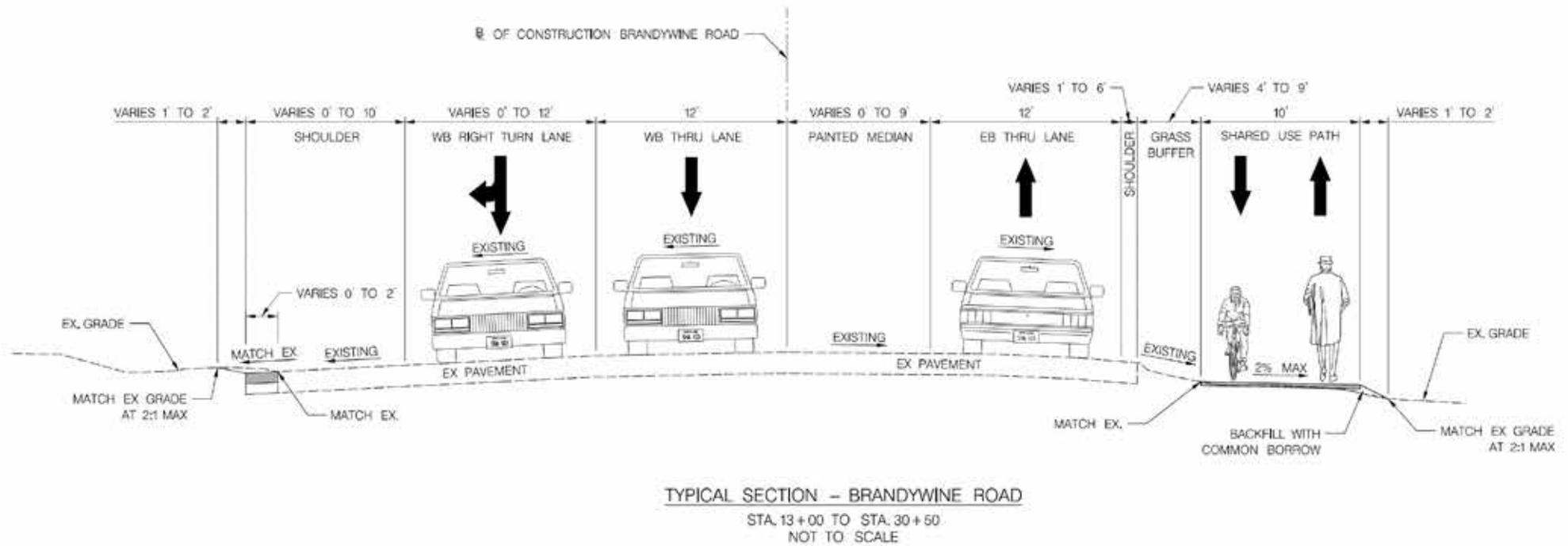
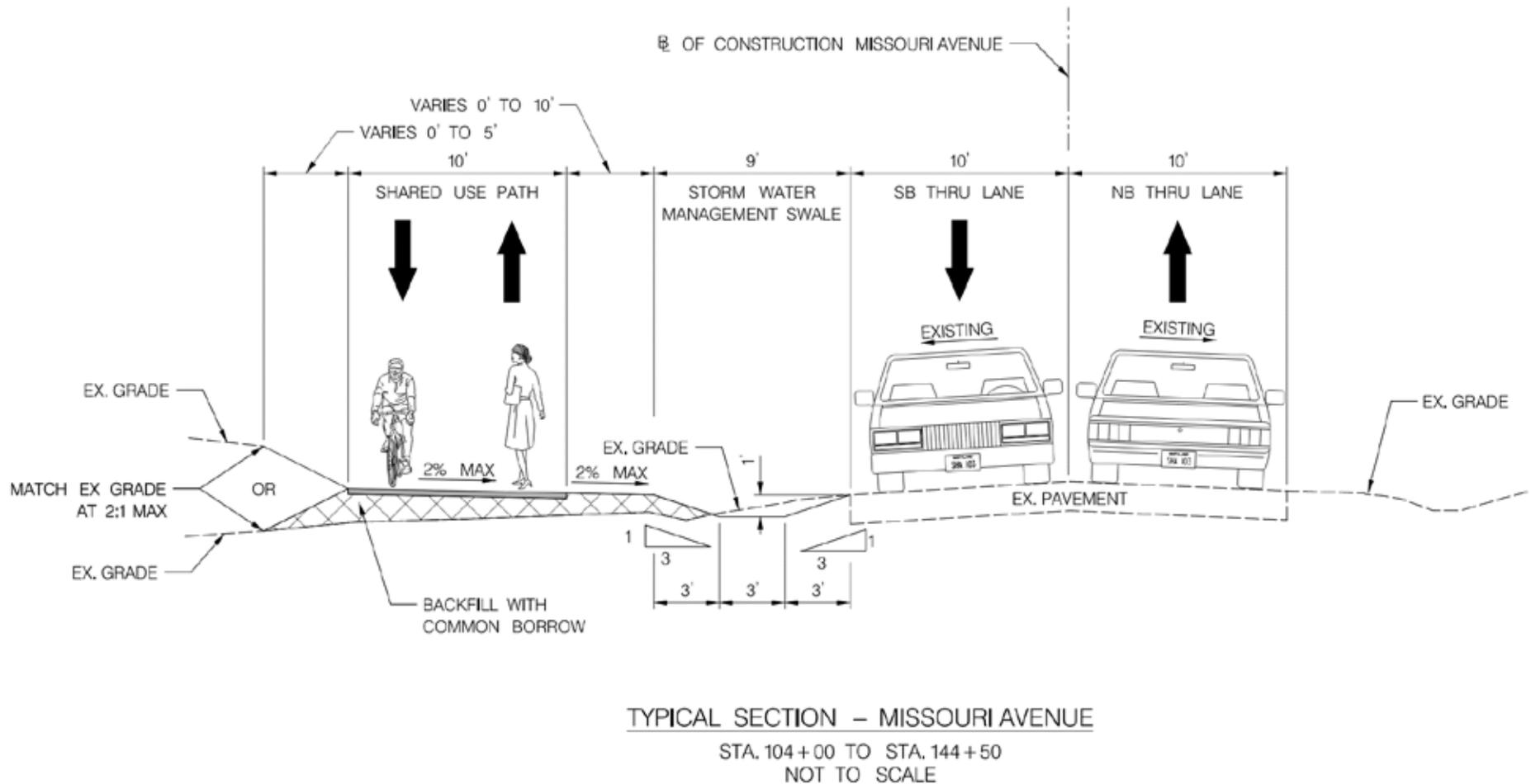


Figure 23. Missouri Avenue Proposed Typical Section



30% DESIGN AND ENGINEERING PLANS

The recommended improvements for this project were designed to avoid impacts to utilities where possible; however, some utility relocations will be required. Potential utility relocations that were identified in the preliminary design are shown in Table 1.

Table 1. Potential Utility Relocations

Utility Relocation	Amount
Utility Pole	12
Utility Pole Down Guy	14
Hydrant	4

Prior to final design, a subsurface utility designation should be conducted and the local utility companies should be engaged to coordinate necessary relocations.

As previously noted, due to the lack of available right-of-way along the project limits, it was determined that right-of-way acquisitions would be required to implement any pedestrian and bicycle improvements. The proposed right-of-way has been noted in the 30% Design and Engineering Plans included in Appendix C.

5.1. STORMWATER MANAGEMENT

The recommendations of shared-use paths, sidewalks, and driveway consolidation will introduce additional impervious area and impact the existing drainage systems. Due to the sensitive environmental context of the project limits, a preliminary evaluation of the stormwater management requirements was conducted.

Stormwater Management Quality

The entirety of the project limits is within the Mattawoman Creek Watershed. Water Quality/Environmental Site Design to the maximum extent practicable is required for new and redeveloped impervious area. The water quality needs are included in Table 2.

Table 2. Water Quality Requirements

New Impervious (ac)	Reconstructed Impervious (ac)	Impervious Removal (ac)	Impervious Area Requiring Treatment (IART) (a+.5b-c) (acres)	Environmental Site Design Volume (ESDv) Required (cf) $(2.6*0.95*(a-c)+1*.95*.5*b)*3630$	Pe Required
2.05	0.33	0.02	2.20	18882	2.48

30% DESIGN AND ENGINEERING PLANS

Drainage patterns are assumed to be preserved as the open sections of Missouri Avenue, and open and closed sections along MD 381, as much as possible. Bioswales are proposed along the southbound side of Missouri Avenue. The bioswales are located between southbound Missouri and the shared use path and shown in the 30% Design and Engineering Plans included in Appendix C. Five bioswales are proposed along MD 381 at the following locations: Sta 21+25 to 23+00 eastbound; Sta. 23+40 to 25+00 eastbound, Sta 30+80 to 32+30 eastbound; Sta 49+50 to 50+60; and Sta. 49+75 to 51+50. The MD 381 facilities will treat one lane of MD 381 and the adjacent shared-used path. The proposed facilities will outlet into the existing culverts and storm drains.

Table 3 lists the facilities that will provide treatment.

Table 3. Water Quality Treatment

Proposed Treatment								
BMP	Length of Proposed BMP (lf)	Bottom Width (lf)	Width of Imp. Area to BMP (lf)	Imp. Area to BMP (ac)	Filter Area provided (ac)	Treatment provided (ac)	Pe Provided (15 ^{**} Af/DA)	ESDv Provided (cf)
Bioswale along Missouri	4000	3.0	22	2.02	0.28	2.02	2.0	14250
Bioswale Sta 21+25 to 23+00 EB	175	3.8	22	0.09	0.02	0.09	2.6	790
Bioswale Sta 23+40 to 25+00 EB	160	3.8	22	0.08	0.01	0.08	2.6	722
Bioswale Sta 30+80 to 32+30 EB*	150	4.0	34	0.12	0.01	0.12	1.8	713
Bioswale Sta 49+50 to 50+60 EB	112	2.0	22	0.06	0.01	0.05	1.4	266
Bioswale Sta 49+75 to 51+50 EB	75	2.0	10	0.02	0.00	0.02	2.6	154
Total						2.36	2.07	16740

*Swale is within the Timothy Branch Floodplain

30% DESIGN AND ENGINEERING PLANS

The proposed facilities listed above will fall short of the required Pe and ESDv treatment but exceed the IART. Opportunities for mitigation of the shortfall that can be investigated in final design are listed below:

1. Reduce the amount of impervious area
 - Perform a search within the project to reduce/remove existing impervious
 - Reduce proposed impervious (i.e., reduce the width of the path from 10 feet to 8 feet)
 - Use permeable pavement for shared use path
 - » Higher material costs than traditional permeable pavement
 - » Additional maintenance considerations
2. Perform a site search to install new stormwater management BMPs adjacent to the project
3. Perform a site search to install new BMPs within the watershed
4. If permitted by Prince George's County, request fee-in-lieu (~\$14,400/acre)
5. If permitted by MDOT SHA PRD, request a variance

Stormwater Management Quantity/Peak Management

Additional coordination with the County may be required; however, based on the watershed, peak management should not be required. The floodplain of Timothy Branch is forested/unimproved; therefore, the minor increases in discharge should be accommodated. It should be noted that in Prince George's County QP2 is not required. QP10 is required where there are downstream flooding issues or conveyance is inadequate. QP100 is generally required when existing homes or buildings downstream of the site are affected by the 100-year floodplain or known flooding problems exist.

PRELIMINARY CONSTRUCTION COST ESTIMATE



PRELIMINARY CONSTRUCTION COST ESTIMATE

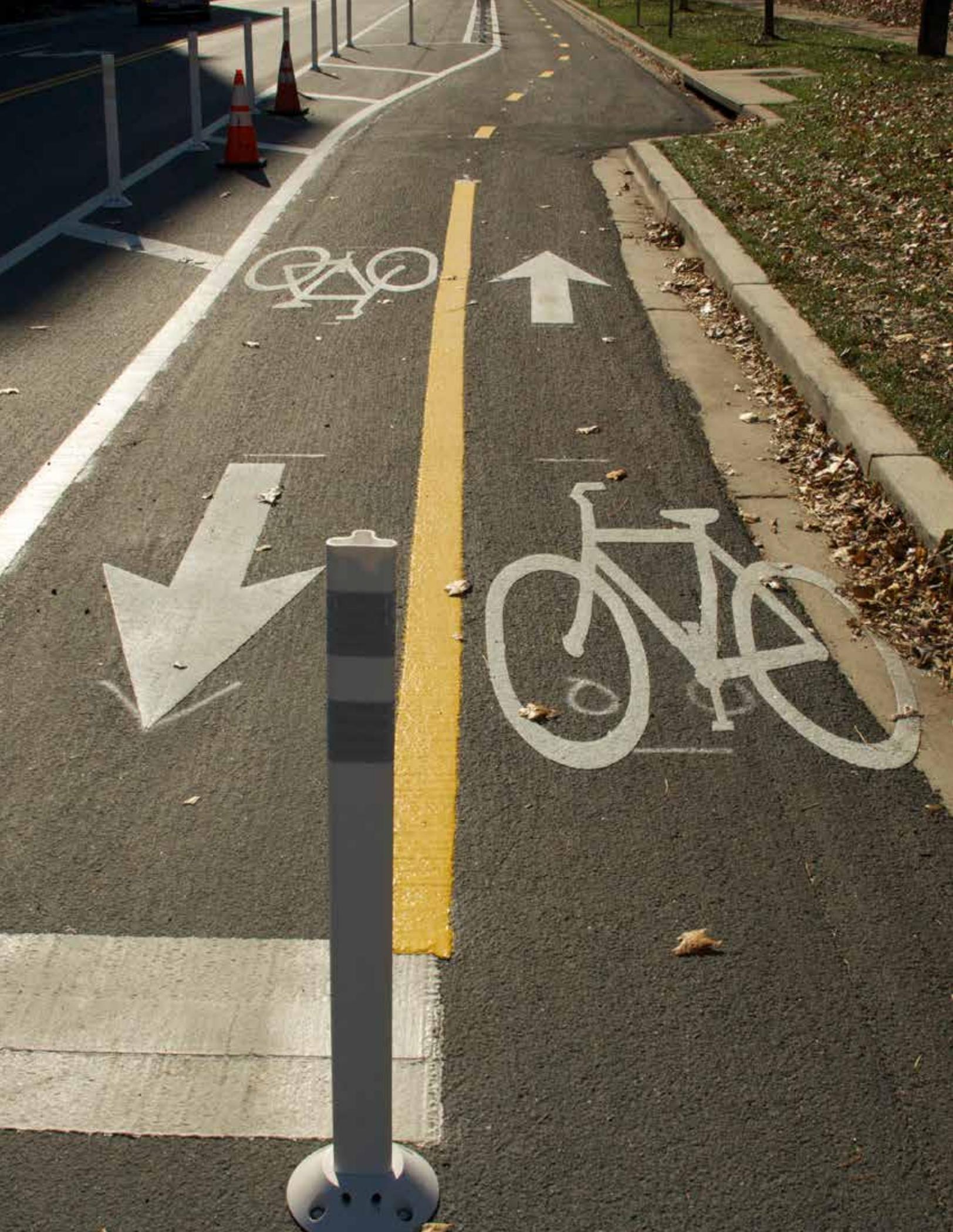
A preliminary construction cost estimate was developed based on the 30% Design and Engineering Plans. The estimate was prepared consistent with MDOT SHA category codes and guidelines. The estimated preliminary construction cost for the recommended alternative is \$5,014,000. Items such as final design and engineering, permitting, and forest mitigation have not been included in this estimate. Right-of-way acquisition costs are included in the preliminary construction cost estimate and are based on an average cost per square foot of land for various properties within the project limits. The average cost in 2021 dollars is \$3.12 per square foot. As such, the preliminary estimate is subject to change.

Table 4. Average Land Cost Per Sqaer Foot (SF)

Address		Land Value	Land Area (SF)	\$/SF
Brandywine Road	14068	\$78,700	22,500	\$3.50
	14110	\$89,400	64,033	\$1.40
	14102	\$77,900	18,874	\$4.13
	14062	\$105,700	53,579	\$1.97
	14066	\$81,200	35,389	\$2.29
	14124	\$322,800	47,480	\$6.80
	14145	\$146,900	54,450	\$2.70
Kathleen Lane	14101	\$83,300	20,797	\$4.01
	14100	\$83,200	20,000	\$4.16
Missouri Avenue	13905	\$135,200	131,551	\$1.03
	13900	\$78,200	20,245	\$3.86
	13904	\$81,900	38,886	\$2.11
	13816	\$80,200	30,268	\$2.65
Average				\$3.12

The detailed preliminary construction cost estimate is included in Appendix D.

NEXT STEPS



The development of 30% preliminary design and engineering plans and construction cost estimates will allow County, state, and local entities to become eligible for funding for final design and construction through various programs. The first step in the implementation of these recommendations is the identification of available funding sources for the recommendations. Several of the recommendations will require coordination and agreements with third parties and private property owners. As noted, there is no incorporated municipality within the project limits that could assume ownership and maintenance of recommendations that MDOT SHA would not typically assume. Champions must be identified, and coordination with Prince George's County DPW&T must be conducted to establish agreements and take on ownership and maintenance to make these community improvements a reality. Several decisions and coordination items that should be initiated prior to final design are listed below:

- Right-of-Way Acquisition
 - » Metes and Bounds Survey
- Utility Relocations:
 - » PEPCO
 - » WSSC Water
- Shared-Use Path At-Grade Rail Crossings with CSX
- Operational and safety analysis for proposed crosswalk location traffic control
- Driveway Consolidation:
 - » Locations for driveway consolidations must be confirmed
 - » Confirmed locations must be coordinated with property owners
- Streetscape Amenities:
 - » In general, ownership and maintenance agreements must be established for all landscaping/site design features.
 - » Agencies that will own and maintain street furniture and pedestrian lighting must be identified.
- Potential Permits and Approvals:
 - » MDE nontidal Wetland and Waterway Permit
 - » Erosion/Sediment Control and Stormwater Management
 - » Approvals from either MDOT SHA PRD or Prince George's County
 - » Roadside Tree Permit or Forest Conservation Act Approval
 - » Federal Emergency Management Agency CLOMR/LOMR only if project results in increases to water surface elevations
 - » National Pollutant Discharge Elimination System NOI
 - » MDOT SHA Access permit via SHA District 3 if project is developed by Prince George's County

APPENDIX A: STAKEHOLDER MEETING MINUTES



MEETING MINUTES

DATE OF MEETING: December 11, 2019
LOCATION AND TIME: M-NCPPC Lakeside Office
14422 Old Mill Road
Upper Marlboro, MD, 20772
12:00 PM to 2:00 PM
REFERENCE: Brandywine PAMC Project
SUBJECT: Agency Stakeholder Meeting

ATTENDEES:

(Sign-In Sheet Attached)

<u>NAME</u>	<u>REPRESENTING</u>
Bryan Barrett-Woods	M-NCPPC
Joanne Flynn	Black Swamp Creek Land Trust
Michael Guiliano	STV Incorporated
Don Herring	M-NCPPC
Anwar Karim	Prince George's County DPW&T
Karen Mierow	M-NCPPC
Kara Misner	STV Incorporated
Benjamin Ryan	M-NCPPC
Stephanie Walder	Prince George's County DPW&T
Seth Young	STV Incorporated

PURPOSE

The purpose of this meeting was to solicit input on design concepts, implementation strategies, and enhancements to pedestrian and bicyclist safety and mobility along the project roadways to gain an understanding of each agency's roles, concerns, plans, and funding opportunities.

MEETING SUMMARY

The following was discussed according to the agenda of the meeting:

1. Project Description:
 - a. The goal for the project is to enhance the streetscape to better accommodate and improve safety and mobility for pedestrians and bicyclists through the Village and to new destinations.
 - b. Ultimate deliverables are 30% Design Plans and Cost Estimate as necessary for funding eligibility.
2. Background Considerations:
 - a. Project constraints were noted including existing right-of-way, utilities, at-grade rail crossings, and major structures.



- b. It was noted that the existing right-of-way along Brandywine Road and Missouri Avenue is significantly limited and it will not be feasible to implement any bicycle and pedestrian improvements without purchasing additional right-of-way throughout the project limits.
 - i. The acquisition of right-of-way should be considered soon after the completion of the 30% Design and Engineering Plans.
 - ii. This project will identify the necessary right-of-way required to develop the selected alternative.
 - c. It was noted that the owners and users for the at-grade rail crossings will need to be identified.
 - d. Recommendations from the Brandywine Revitalization and Preservation Study were accounted for during the design alternative development.
 - e. It was noted that the Southern Area Aquatic & Recreation Complex (SAARC), Missouri Acres Development, Brandywine Elementary School, MedStar Health Center, and Timothy Branch Development will all be surrounding generators for pedestrian and bicycle traffic throughout the project corridor.
 - f. Don Herring noted that the SAARC will be opening in the late winter and that there will be a sneak preview event occurring on December 16, 2019.
 - g. Karen Mierow noted that plans, as well as a small recreation component, have been approved for the Missouri Acres development, but it is not known when construction will move forward for the project.
 - h. Bryan Barrett-Woods noted that the Stephen's Crossing development and the potential out parcel from Stephen's Crossing along Cattail Way must be considered in the project.
 - i. Joanne Flynn noted additional generators for the Brandywine PAMC project including the existing developments along Kathleen Lane, Cherry Tree Crossing, and the planned trails for the Stephen's Crossing and Timothy Branch developments.
 - j. Don Herring noted that an 8-10' trail along the east side of Mattawoman Drive is planned to be constructed to connect to the SAARC along Cattail Way.
3. Alternatives Discussion:
- a. Bicycle Facilities
 - i. Bike Lanes – This alternative would include the addition of 5 ft. bike lanes within the roadway along both sides of both Brandywine Road and Missouri Avenue within the project limits.
 - ii. Protected Bike Lanes – This alternative would include the addition of 5 ft. bike lanes and a 3 ft. buffer area between the travel lane and bike lane.
 - 1. Buffer areas can include additional treatments such as Flex Posts, Concrete Barriers, Planter Boxes, etc.
 - 2. This alternative would require a larger typical section than the bike lanes but would provide and increased level of comfort for both bicyclists and drivers.
 - iii. Cycle Track – This alternative would include the addition of two 5 ft. bike lanes in either direction on one side of the roadway, directly adjacent to one another with a 3 ft. buffer area between the outer most bike lane and the travel lane.
 - iv. Green paint for conflict areas and bike boxes may be incorporated with the three alternatives.



- b. Sidewalk
 - i. This alternative would include the addition of a minimum 5 ft. sidewalk on either side of the roadway while including a varied buffer area where feasible while minimizing the required right-of-way.
 - ii. It was noted that MDOT SHA often constructs sidewalk under right-of-entry agreements in lieu of purchasing fee simple right-of-way and it was asked if the County would consider this option.
 - 1. Stephanie Walder noted that the county typically will grant an agreement for MDOT SHA to install sidewalk.
 - iii. This alternative can be combined with other alternatives.

- c. Shared Use Path
 - i. This concept was included in the Brandywine Revitalization and Preservation Study and would include a 10 ft. wide Shared Use Path with a 5 ft. grass buffer along the south side of Brandywine Road and west side of Missouri Avenue.
 - 1. It was noted that the buffer area may vary to minimize impacts to utility and right-of-way.
 - 2. It was noted that the Timothy Branch Bridge was recently reconstructed. Options for crossing the Shared Use Path over the Timothy Branch without impacting the bridge include:
 - a. Transitioning the path to the existing shoulder on the bridge and installing flexposts along the shoulder lane line to provide delineation.
 - b. Constructing a new, separate bridge for the Shared Use Path on the south side of the Brandywine Road bridge.
 - ii. The stakeholders were asked if there is a preference for in-road bike facilities versus a Shared Use Path.
 - 1. Joanne Flynn asked if a Shared Use Path could be combined with Bike Lanes.
 - a. It was noted that the combination of a Shared Use Path and Bike Lanes is feasible but may not be practical from a benefit cost perspective.
 - b. The impacts and cost would be more significant, and the benefit would be the option for bicyclists to use either facility.
 - c. More experienced, long distance bicyclists would potentially use the in-road Bike Lanes and local users would more likely use the Shared Use Path.

- d. Consolidate Driveways
 - i. This alternative would consist of closing redundant access points along Brandywine Road.
 - 1. This would require future coordination and concurrence with property owners.
 - 2. Alternative would reduce motorist conflicts with pedestrians and bicyclists.
 - ii. This alternative can be combined with other alternatives.



- e. Streetscape Amenities
 - i. Street furniture and amenities such as trees, roadway lighting, benches, trash receptacles, bike racks, etc. can be added along Brandywine Road and Missouri Avenue.
 - 1. Amenities would be selected with a historic aesthetic.
 - ii. Anwar Karim noted that Prince George's county would be maintaining the lighting along Missouri Avenue if it were to be added.
 - iii. It was noted that the MDOT SHA Pedestrian Lighting Policy would require a local jurisdiction to provide funding and maintain the lighting.
 - 1. There are no incorporated municipalities within the project limits therefore the County may need to maintain any pedestrian lighting.
 - iv. Stephanie Walder noted that this project would be a good opportunity to propose intersection lighting at Brandywine Road and Missouri Avenue, but it is not clear that the county would recommend lighting throughout the entire corridor at this time.
 - v. It was suggested that enhanced treatments at intersections for bicyclists and pedestrians be considered such as lighting, midblock crossing warning devices, and stamped concrete crossings.
 - vi. It was noted that there is an additional eastbound lane along Brandywine Road between Kathleen Lane and the Elementary School that could be repurposed for pedestrian and bicycle facilities.
 - 1. Karen Mierow noted that they will contact the Elementary School to determine if this lane is necessary.
 - f. Other Alternatives
 - i. Stephanie Walder noted that the subgrade for the overall roadway conditions may need to be evaluated to accommodate certain alternatives.
 - ii. Don Herring noted that there is a high volume of dump trucks along the Brandywine corridor.
 - iii. Karen Mierow noted that there is a large section of the roadway that floods.
 - iv. Stephanie Walder inquired about the need to include Missouri Avenue in the project limits.
 - 1. It was noted that the goal would be to connect the generators along Brandywine Road to the future generators along Missouri Avenue including the SAARC and the Missouri Acres development.
 - 2. It was also noted that there is potential for development by M-NCPPC north of SAARC as well as communities along US 301 that would benefit from the connection.
4. Funding and Implementation
- a. STV noted that the ultimate deliverable for the project is 30% design and engineering plans and construction cost estimate which can be used to apply for funding.
 - b. Bryan Barrett-Woods asked if ADA funding from the State would be an option.
 - i. It was noted that Maryland Transportation Alternatives Program (TAP) or (USDOT) Transportation Investment Generating Economic Recovery (TIGER) grant funding would be options.



- ii. It was also noted that to qualify for grant funding the necessary right-of-way would need to be acquired.
- 5. Next Steps
 - a. The next steps for the project are the community meeting followed by the 30% Design and Engineering Plan and Report.
 - b. Joanne Flynn asked if there is a certain characteristic within this area that should be maintained.
 - i. It was noted that a historic/rural characteristic should be maintained.

APPENDIX B: COMMUNITY MEETING COMMENTS

APPENDIX B

#	Comment	From	Affiliation	Response/Resolution
1	It would be nice to have sidewalk on the same side as Medstar. More crosswalks to bank, etc.	Joyce Dowling	Community Resident	Additional sidewalk has been proposed on the north side of MD 381, east of Missouri Ave.
2	Sidewalks on both sides of road	Joanne Flynn	Applicant	Additional sidewalk has been proposed on the north side of MD 381, east of Missouri Ave.
3	More crosswalks	Joanne Flynn	Applicant	Additional crosswalks are proposed across MD 381 on the east leg of Mattawoman Drive, on the west leg of the Missouri Avenue intersection and east of Cherry Tree Crossing Road.
4	Bike and walk path needed	Todd Johnson	Community Resident	The shared use path will serve as a bicycle and pedestrian path.
5	Parking lot entrance	Todd Johnson	Community Resident	The drivewalk consolidation has been designed to maintain access to all existing parking lots.
6	Bank Street flooding	Todd Johnson	Community Resident	Drainage issues at the intersection of Bank Street and MD 381 have been noted in the report.
7	Will all of the street, business and residential lighting be Dark Sky Standard?	Roll Plot Sheet 1 of 8		Dark Sky approved lighting has been recommended in the report.
8	Is the proposed pavement in the Legend for sidewalk?	Roll Plot Sheet 2 of 8		The pavement on the north side of Brandywine Road is proposed to provide a bicycle compatible shoulder on the north leg.
9	Add a crosswalk on the north leg of Bank Street	Roll Plot Sheet 3 of 8		A crosswalk has been proposed on the north leg of Bank Street at MD 381.
10	The northeast quadrant of the intersection of Brandywine Road and Missouri Avenue is RR Zone and more residential is expected.	Roll Plot Sheet 3 of 8		Noted.
11	Will sidewalk on the north side of Brandywine Road from Missouri Avenue to Cherry Tree Crossing Road be added?	Roll Plot Sheet 3 of 8		Additional sidewalk has been proposed on the north side of MD 381, east of Missouri Ave to east of Cherry Tree Crossing Road.

#	Comment	From	Affiliation	Response/Resolution
12	Can the west leg crosswalk at the intersection of Brandywine Road and Missouri Avenue be combined with a speed hump?	Roll Plot Sheet 3 of 8		A raised crosswalk has not been proposed at this time due to the heavy truck volumes along MD 381.
13	There is an existing private ROW line in the northeast quadrant of the intersection of Brandywine Road and Missouri Avenue	Roll Plot Sheet 3 of 8		Noted, right-of-way lines for through highways have been included in the 30% Design and Engineering Plans as available.
14	Can a street crossing be added to the west leg of Brandywine Road at Tower Road for Tower Road, Horsehead Road? and future development?	Roll Plot Sheet 5 of 8		The eastern limits of the project are at Tower Road, proposed pedestrian facilities are not included outside of the project limits therefore a crosswalk at Tower Road is not proposed. A crosswalk can be added when a connecting facility is proposed.
15	Will there be a future sidewalk or path on the east side of Missouri Avenue?	Roll Plot Sheet 6 of 8		Future sidewalk on the east side of Missouri Avenue is dependant on the requirements for the Missouri Acres development.
16	The Draft Recommended Alternative is an alternative to what?	Roll Plot Sheet 5 of 8		The Draft Recommended Alternative is relative to the other alternatives investigated which were described at the Community Meeting
17	Add a crosswalk on the south leg of the intersection of Missouri Avenue and Crain Highway	Roll Plot Sheet 8 of 8		The northern limits of the project are at US 301 (Crain Highway), proposed pedestrian facilities are not included outside of the project limits therefore a crosswalk at US 301 is not proposed. A crosswalk can be added when a connecting facility is proposed.
18	Is there a path to Dyson Road along eastbound Crain Highway from Missouri Avenue?	Roll Plot Sheet 8 of 8		Dyson Road is outside the limits of this project.
19	If the curb line/edge of pavement is impacted, that may trigger the need to retrofit on road bike lanes. I have copied David Rodgers and Winstina Hughes to confirm.	Peter Campanides, P.E.	MDOT SHA	The need for additional on-road bike lanes was discussed with MDOT SHA District 3 Traffic and a bicycle compatible shoulder has been proposed along westbound MD 381.

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#	Comment	From	Affiliation	Response/Resolution
20	If a shared use path is the pursued recommendation, it needs to be a minimum of 10 ft wide.	Peter Campanides, P.E.	MDOT SHA	The proposed shared use path has been revised to be 10 ft. wide.
21	If there are any additional crossings being proposed along the project limits if it were possible to have your consultant perform a pedestrian count to determine where the points of interest in order to determine the safest locations for crossings to occur.	Peter Campanides, P.E.	MDOT SHA	Pedestrian counts were not included in the scope of this project. Data collection and analysis is recommended prior to final design to confirm recommendations.
22	Adequate street lighting can be installed to serve motorists and peds.		DPW&T	MDOT SHA does not typically install continous lighting, the County will need to propose pedestrian lighting based on the Pedestrian Lighting Policy or work with PEPCO for leased lighting with MDOT SHA concurrence.
23	If the SW is going to be publicly maintained, some sections are outside the ROW.		DPW&T	Right-of-way must be acquired in order to construct and maintain proposed design.
24	Stormdrain issues should be considered if the roadway section to be urbanized.		DPW&T	Existing stormdrain issues have been discussed in the report.
25	Did they not coordinate with the County regarding putting in a sidewalk/bike lane when they put the new bridge in? Or did the County waive the requirement?	Bernadette Kilcer	Community Meeting Chat	The engineering and design for the new bridge occurred severel years ago. This PAMC project began in 2019.
26	Why not include existing neighbor hoods, business and churches included as "generators"?	Joanne Flynn	Community Meeting Chat	All of those were considered. Major generators were identified as part of the presentation.
27	One factor that will significantly affect bike and pedestrian use is the speed limit on Brandywine Road. Recently, the traditional school speed limit was changed and raised to 35 mph. Why was this done, and it seems to go against upgrading walking and biking infrastructure.	Rich Dolesh	Community Meeting Chat	"We will coordinate with SHA regarding the speed limit. At this time we do not know why the posted speed limit was changed, but will follow up to determine. MOA was originally at 35 MPH, recently changed to 30 MPH"

#	Comment	From	Affiliation	Response/Resolution
28	Would any facility parking that is impacted by the design be given a redesign by the plan?	Franklin	Community Meeting Chat	Mitigations for parking facilities impacted by the design have been accommodated in the plans. Mitigations may include on-street parallel parking on the shoulder.
29	Will there be an on-going effort to clear away the rocks and debris in the existing bike lanes?	Brooks Family	Community Meeting Chat	Typically, street cleaning operations would clear debris from roadway and would be based on the County and MDOT SHA maintenance operations.
30	We have kids from the Tayman Farm Community off Cherry Tree Crossing Road and Dyson Rd. They ride their bikes down Cherry Tree Crossing which is not safe. Will you be able to have access from this area to Missouri Ave. to the Community center where they are going?	Bridgette Davis	Community Meeting Chat	Sidewalk is proposed along MD 381 from Cherry Tree Crossing Road to connect to the shared use path at Missouri Avenue.
31	In many other areas of the county, school speed limits are highly visible, enforced with speed cameras, and accepted by motorists. With a long history of heavy truck traffic on Brandywine Road and a history of other vehicles not abiding by the speed limit, this change was almost incomprehensible.	Rich Dolesh	Community Meeting Chat	School Speed Limits are deferred to MDOT SHA.
32	Has a Shared Use Path been considered to travel along 301?	Brooks Family	Community Meeting Chat	US 301 is outside of the limits of this project.

APPENDIX B

#	Comment	From	Affiliation	Response/Resolution
33	I walk several miles every day down Brandywine Heights Rd and onto Brandywine RD and walk to Kathleen Lane. The sidewalk in front of the school is great but a sidewalk in front of the salvage storage yard at Brandywine Heights Rd and Brandywine Rd would be great. However, there is an opaque fence for the storage yard which makes it impossible for motorists on Brandywine Rd going east to see walkers or bikers coming out of Brandywine Heights RD. I was hit by a van there several years ago. Can you work with the salvage storage yard to replace the fence with something more transparent?	Al	Community Meeting Chat	The sight distance issue at Brandywine Heights Road will be discussed with MDOT SHA.
34	Entrance consolidation a great idea IMHO	Franklin	Community Meeting Chat	Noted.
35	Can dark sky lighting standard be required please?	Joanne Flynn	Community Meeting Chat	Dark Sky approved lighting has been recommended in the report.
36	Was south side chosen due to current right of way available?	Joyce	Community Meeting Chat	The recommendation for a shared use path along the south side of MD 381 was selected based on a number of factors including right-of-way, generators and existing sidewalk locations.
37	Is drainage at Bank Street and Brandywine Road going to be addressed?	Franklin	Community Meeting Chat	Stormwater management issues have been discussed in the report.
38	Love the pedestrian, biker, equestrian bridge at Timothy Branch.	Joanne Flynn	Community Meeting Chat	Noted.

#	Comment	From	Affiliation	Response/Resolution
39	Is the pavement going to be water permeable? Some of the new trails are being built which enable water to pass through. Given the water issues we have in this area we REALLY need to make sure that we aren't adding to the problem.	Bernadette Kilcer	Community Meeting Chat	The current design includes standard impervious pavement. Permeable pavement has been noted as an option for final design to mitigate stormwater management issues. Permeable pavement requires additional maintenance to be effective and would require commitment from MDOT SHA and the County for maintenance.
40	Please mindful of the sight lines for cyclists attempting to cross Cherry Tree Crossing from Brandywine Road.	Brooks Family	Community Meeting Chat	Noted.
41	Can the plan contain more cross walks?	Joyce	Community Meeting Chat	Additional crosswalks are proposed across MD 381 on the east leg of Mattawoman Drive, on the west leg of the Missouri Avenue intersection and east of Cherry Tree Crossing Road.
42	Is anything "off road" being considered in this area, such as a bike/walking path from the SAARC to MedStar directly?	Todd	Community Meeting Chat	The limits of the project are along MD 381 and Missouri Avenue, therefore there are no 'off-road' connections under consideration at this time.
43	Sidewalks on both sides of the roads would be desirable and more crosswalks are needed - these could be speed hump/ crosswalks.	Joanne Flynn	Community Meeting Chat	Additional sidewalk and crosswalks have been included in the design.
44	I really like the bridge idea.	Des C	Community Meeting Chat	Noted.
45	Are there volume use projections based on the new housing developments coming in the area? new residents coming in?	Todd	Community Meeting Chat	Data collection and analysis was not included in the scope of this project. Data collection and analysis is recommended prior to final design to confirm recommendations.
46	Do any walking trails (nature) connect into these shared sidewalks?	Franklin	Community Meeting Chat	If there are existing walking trails, connections will be made to the new sidewalks / shared use path.

APPENDIX B

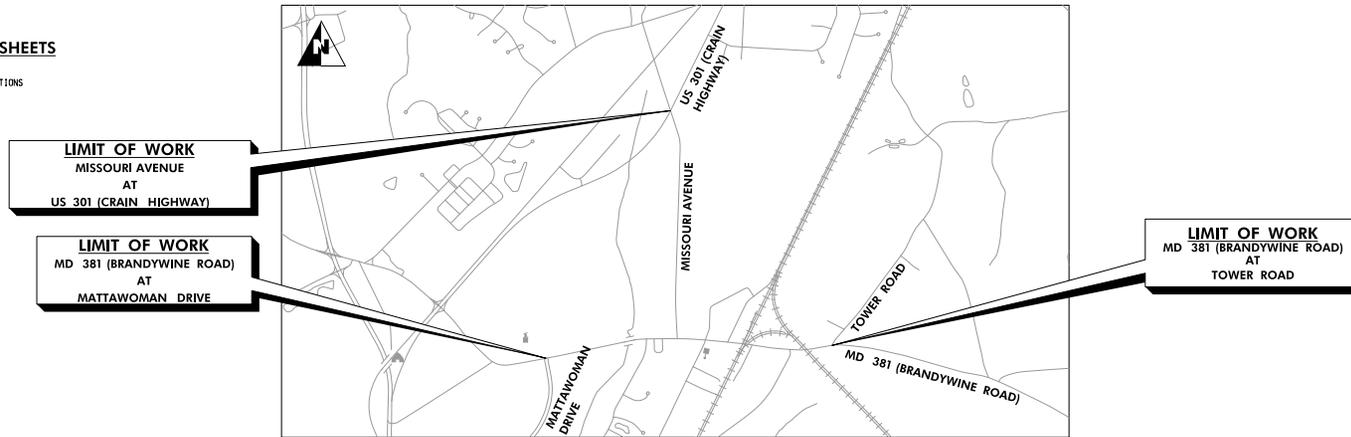
#	Comment	From	Affiliation	Response/Resolution
47	I like the shared use path and yes dark sky!	Des C	Community Meeting Chat	Noted.
48	Shared use super idea.	Franklin	Community Meeting Chat	Noted.
49	Who takes on the task of applying for the grants?	Franklin	Community Meeting Chat	Next steps for applying to grants will be coordinated between M-NCPPC, Prince George's County and MDOT SHA.
50	Yes, Dark sky / 100% cut-off lighting - can that be done with historic look?	Joyce	Community Meeting Chat	There are several dark sky compliant pedestrian lighting options that have historic designs that can be selected in final design.
51	I fully expect the ATVs to use a shared use path vice a bike lane/side walk. We need to make sure that the ATVs can't get on the trail. That is a recipe for disaster.	Bernadette Kilcer	Community Meeting Chat	Noted. There are options for vehicular restrictions that can be further investigated in final design.
52	Agree with banning ATVs.	Franklin	Community Meeting Chat	Noted.
53	In the introduction, the Black Swamp Creek Land Trust was listed but not mentioned as a partner. This study occurred because of their initial interest in keeping the historic and natural character of Brandywine and surrounding area. Interested residents and landowners--please check out their website and consider joining. Final comment: Great job by MNCPPC Planning Dept to host this virtual meeting. There were a few glitches, but for the most part it really worked well and has helped keep the community engaged and informed.	Rich Dolesh	Community Meeting Chat	Black Swamp Creek Trust was the applicant to the Planning Assistance to Municipalities and Communities program to fund this project.
54	Will there be pedestrian access from Dyson Rd to Brandywine Rd?	Tonya Smith	Community Meeting Chat	Dyson Road is outside the limits of this project.
55	I think a connection to Dyson Rd neighborhoods should be considered.	Joanne Flynn	Community Meeting Chat	Dyson Road is outside the limits of this project.

APPENDIX C: 30% DESIGN AND ENGINEERING PLANS

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT MD 381 (BRANDYWINE ROAD) FROM MATTAWOMAN DRIVE TO TOWER ROAD AND MISSOURI AVENUE FROM MD 381 (BRANDYWINE ROAD) TO US 301 (CRAIN HIGHWAY)

INDEX OF SHEETS

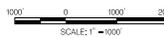
- 1 TITLE SHEET
- 2-4 TYPICAL SECTIONS
- 5-13 PLAN SHEETS



PRINCE GEORGES COUNTY

HORIZONTAL DATUM	NAD 83/91
VERTICAL DATUM	NAVD 88

LENGTH OF PROJECT:
MD RTE. 381 = 1.10 MILES
MISSOURI AVENUE = 0.9 MILES



30% PRELIMINARY

STV 100 Years
7125 Ambassador Road, Suite 200
Baltimore, Maryland 21244
www.stv.com

DESIGN		
Landscape Architect	Date	Checked By:
Architect	Date	Checked By:
Engineer	Date	Checked By:
Engineer	Date	Checked By:
Drawn By	Date	Checked By:

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 95321
Expiration Date 01/06/2022



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Prince George's County Planning Department
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www.mnccpp.org
(301) 952-3646

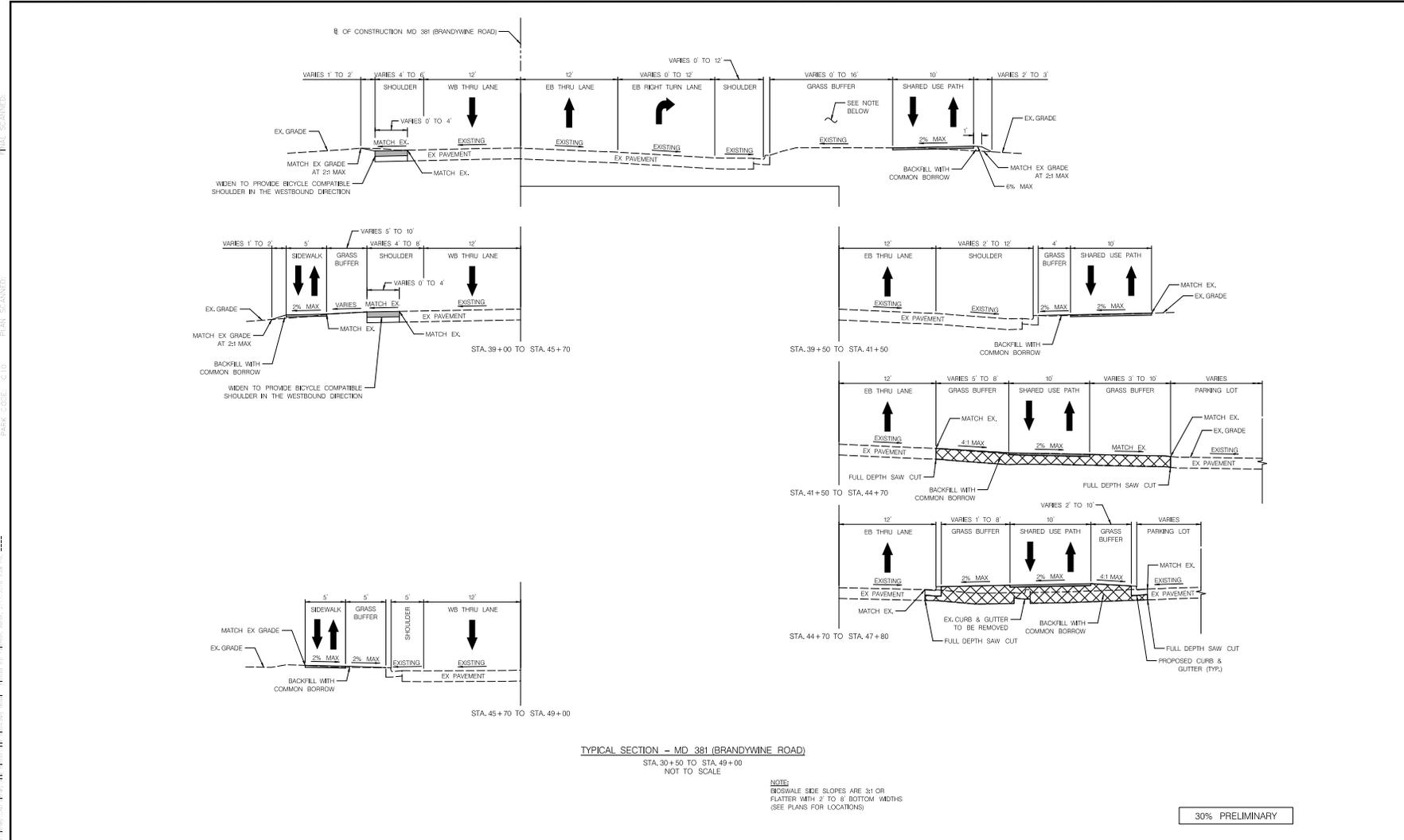
REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Division Chief	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **TI-01**
SHT. # 1_ of 13
TITLE SHEET

APPENDIX C



STV 100 Years
7125 Ambassador Road, Suite 200
Baltimore, Maryland 21244
www.stv.com

DESIGN		
Landscaping Architect	Date	Checked By:
Architect	Date	Checked By:
Engineer	Date	Checked By:
Drawn by	Date	Checked By:

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 95201
Expiration Date 01/06/2022

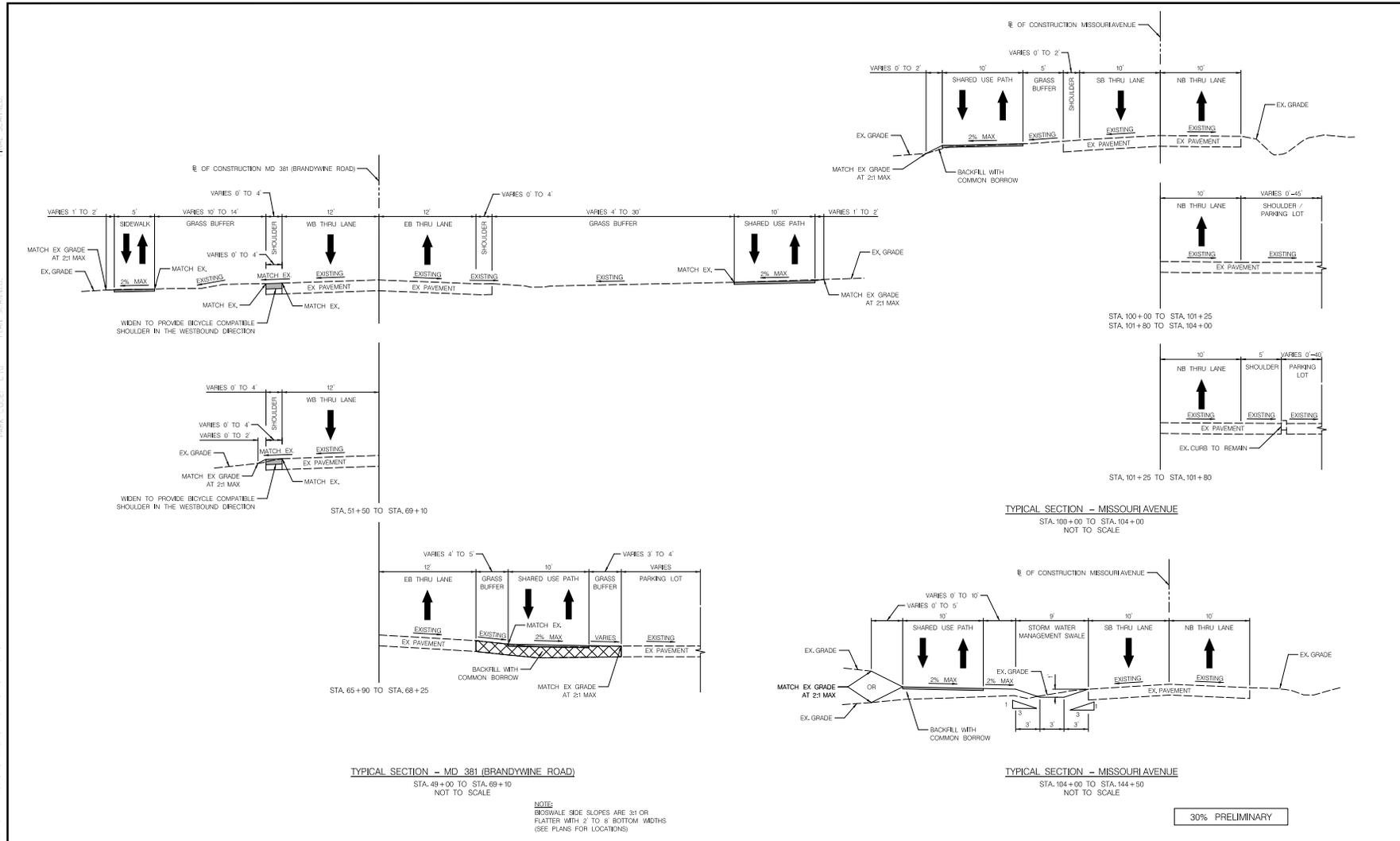
The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department
www.mnccpp.org
(301) 952-6646

REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Division Chief	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **TS-02**
SHT. # 3 of 13
TYPICAL SECTIONS



STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stvinc.com
 DESIGN
 Landscape Architect Date Checked By:
 Architect J. GORDON Date Checked By: B. YOUNG
 Engineer J. GORDON Date Checked By: S. YOUNG
 Drawn by:

STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stvinc.com

DESIGN		
Landscape Architect	Date	Checked By:
Architect	Date	Checked By:
Engineer	Date	Checked By:
Drawn by:	Date	Checked By:

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 35321
 Expiration Date 01/06/2022

The Maryland-National Capital Park and Planning Commission
 Prince George's County Planning Department
 Community Planning Division
 www.mnccpg.org
 (301) 952-3646

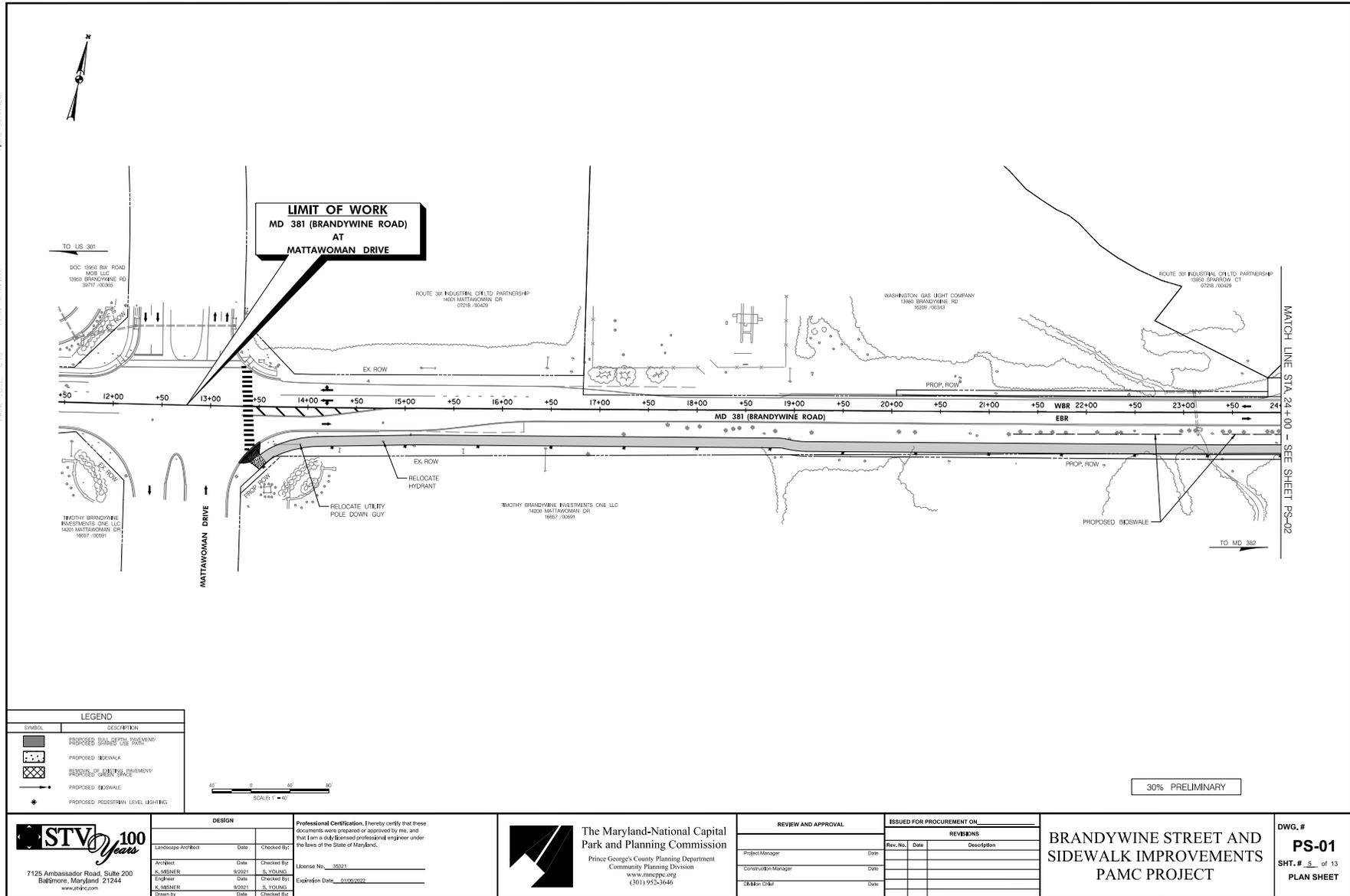
REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Client Chief	Date

ISSUED FOR PROCUREMENT ON		
Rev. No.	Date	
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **TS-03**
 SHT. # 4 of 13
TYPICAL SECTIONS

APPENDIX C



LEGEND	
SYMBOL	DESCRIPTION
[Solid Grey Box]	PROPOSED DUAL DEPTH PAVEMENT/ PROPOSED SHARED USE PATH
[Dotted Box]	PROPOSED SIDEWALK
[Cross-hatched Box]	PROPOSED SIDEWALK PAVEMENT
[Dashed Line]	PROPOSED EBSWALE
[Star Symbol]	PROPOSED PEDESTRIAN LEVEL LIGHTING



30% PRELIMINARY

STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stv.com

DESIGN			
Landscape Architect	Date	Checked By:	
Architect	Date	Checked By:	
Engineer	Date	Checked By:	
Engineer	Date	Checked By:	
Drawn by	Date	Checked By:	

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 35291
 Expiration Date: 01/06/2022

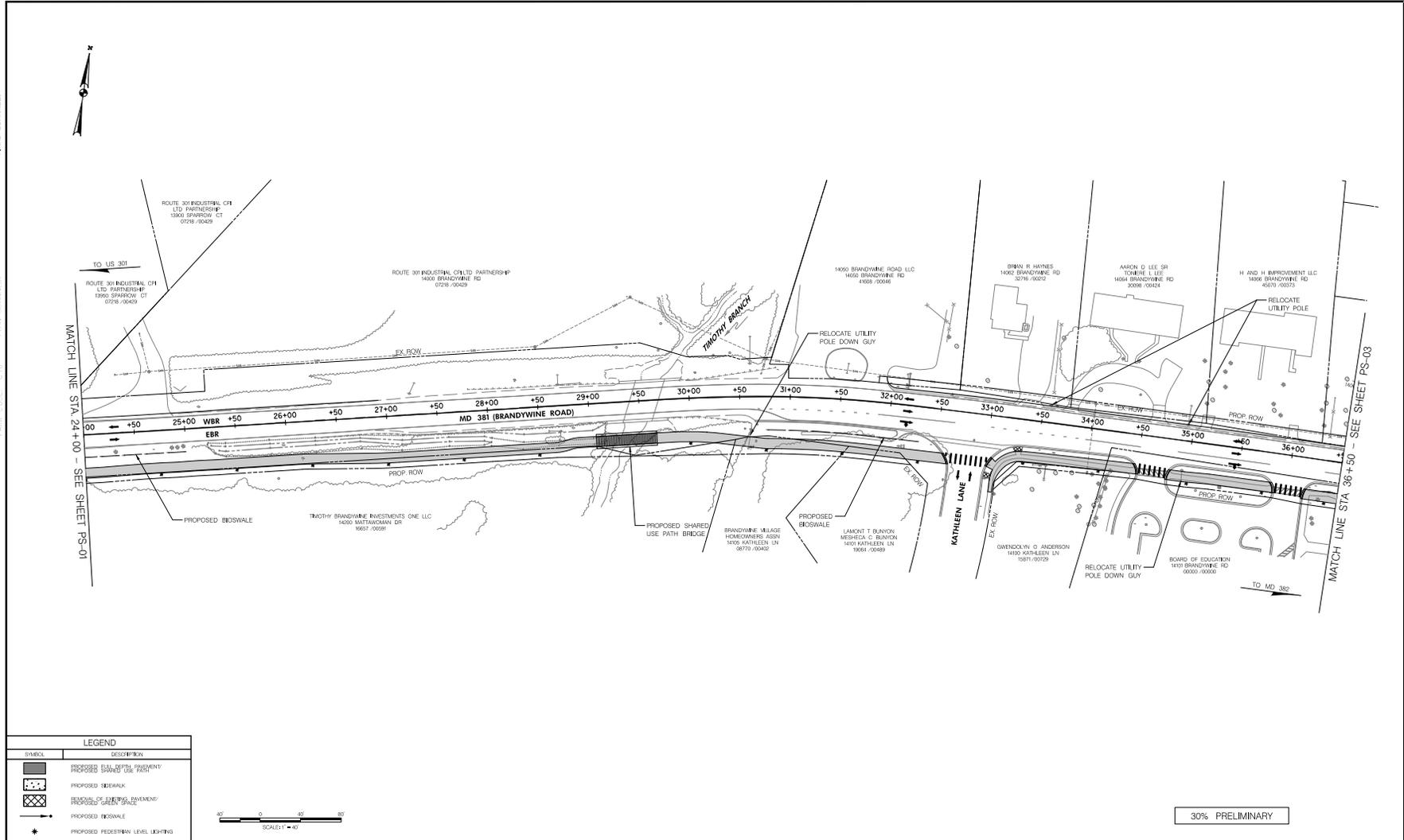
The Maryland-National Capital Park and Planning Commission
 Prince George's County Planning Department
 www.mnppc.org
 (301) 952-3446

REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Commission Chief	Date

ISSUED FOR PROCUREMENT ON		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **PS-01**
 SHT. # 5 of 13
 PLAN SHEET



30% PRELIMINARY

LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED FULL DEPTH PAVEMENT
	PROPOSED SHARED USE PATH
	PROPOSED SIDEWALK
	PROPOSED FULL DEPTH PAVEMENT / PROPOSED GREEN SPACE
	PROPOSED BIOSWALE
	PROPOSED PEDESTRIAN LEVEL LIGHTING



STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stv.com

DESIGN		
Landscape Architect	Date	Checked By
K. MINER	9/20/21	S. YOUNG
Engineer	Date	Checked By
K. MINER	9/20/21	S. YOUNG
Drawn by	Date	Checked By

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 38321
 Expiration Date: 01/05/2022

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 Prince George's County Planning Department
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 www.pmgpc.org
 (301) 952-3646

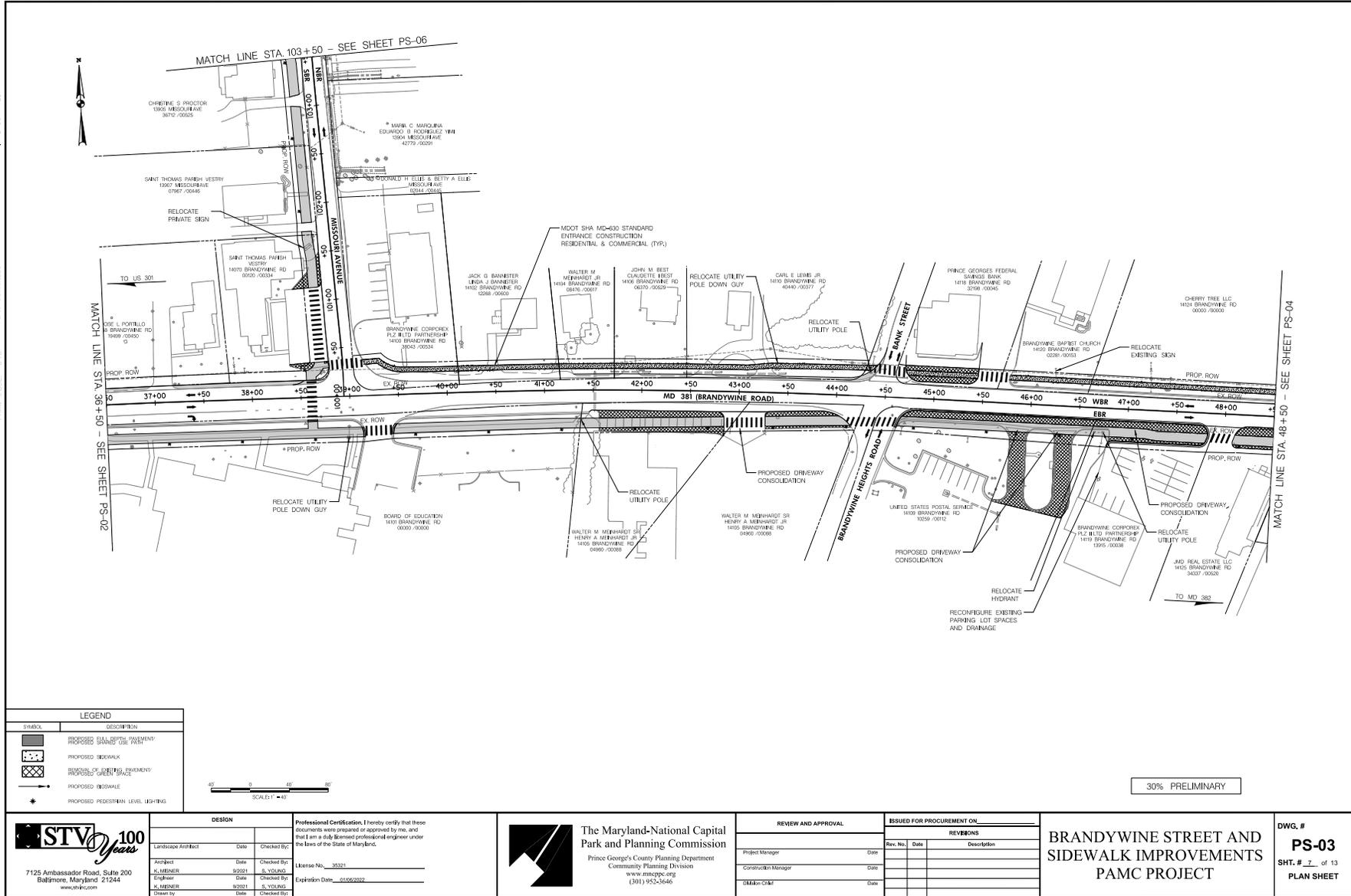
REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
SEAL/Stamp	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **PS-02**
 SHT. # 6 of 13
 PLAN SHEET

APPENDIX C



LEGEND	
SYMBOL	DESCRIPTION
[Pattern]	PROPOSED 8" DEPTH PAVEMENT
[Pattern]	PROPOSED 4" DEPTH PAVEMENT
[Pattern]	PROPOSED SIDEWALK
[Pattern]	RELOCATED EXISTING PAVEMENT
[Pattern]	PROPOSED SIDEWALK
[Symbol]	PROPOSED PEDESTRIAN LEVEL LIGHTING



30% PRELIMINARY

STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stv.com

DESIGN		
Landscape Architect	Date	Checked By:
Architect	Date	Checked By:
Engineer	Date	Checked By:
Electrician	Date	Checked By:
Drawn by	Date	Checked By:

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 95201
 Expiration Date: 01/06/2022

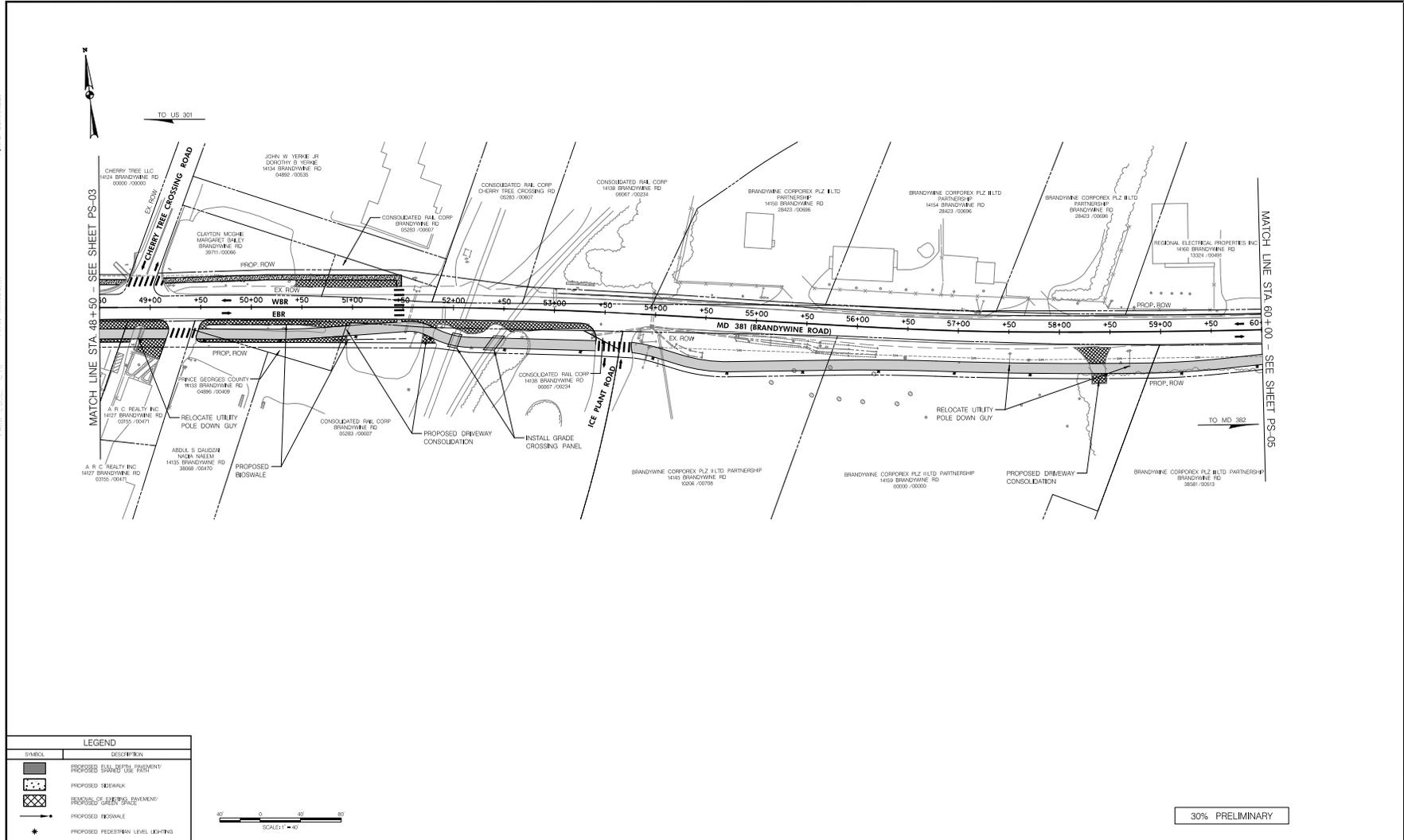
The Maryland-National Capital Park and Planning Commission
 Prince George's County Planning Department
 Community Planning Division
 www.mnccpp.org
 (301) 952-6646

REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Division Chief	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **PS-03**
 SHT. # 7 of 13
 PLAN SHEET



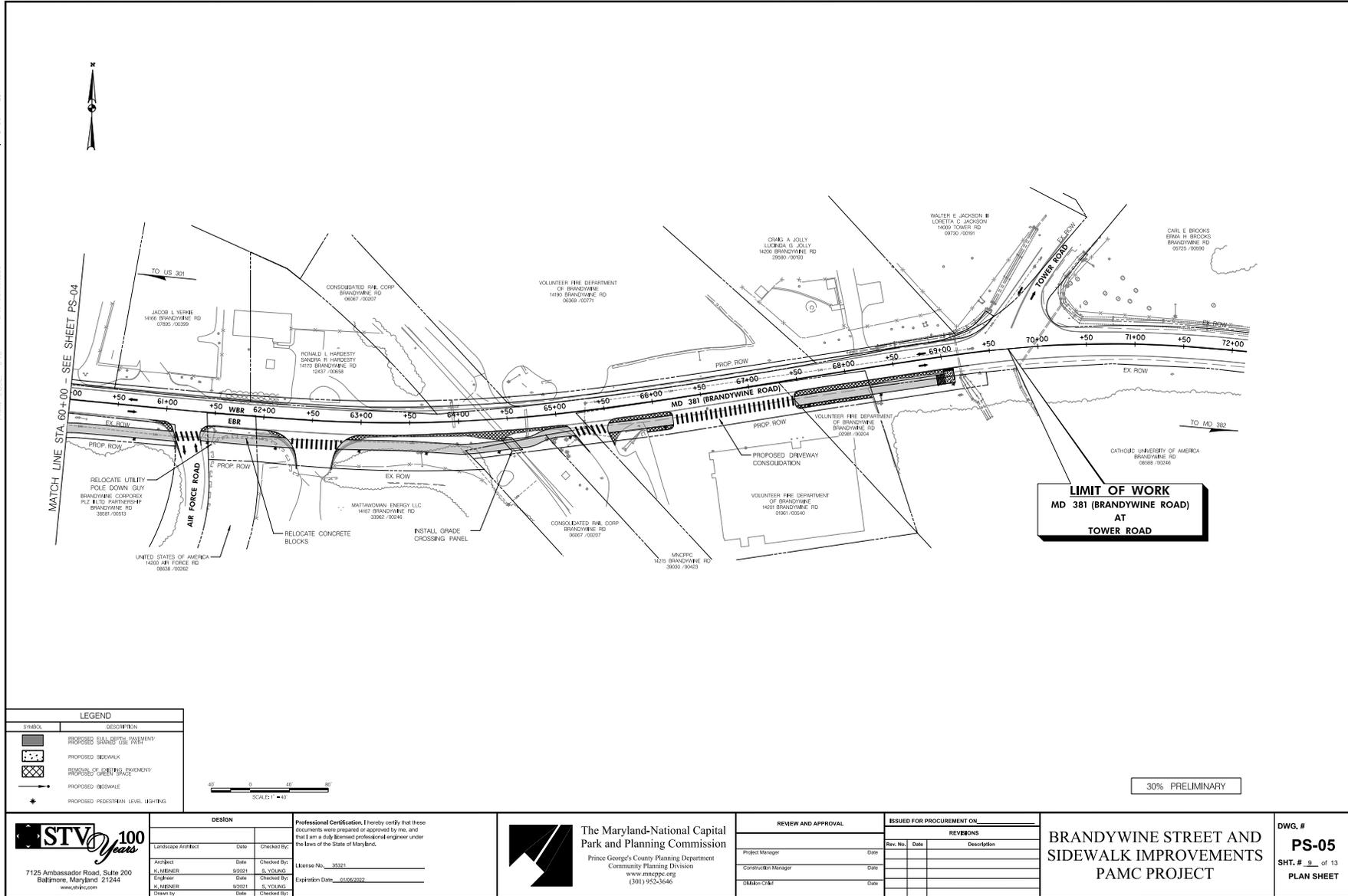
LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED SUB-CURB PAVEMENT
	PROPOSED BRANDED USE PATH
	PROPOSED SIDEWALK
	PROPOSED PLANTER PAVEMENT
	PROPOSED GREEN SPACE
	PROPOSED CURBSWALE
	PROPOSED PEDESTRIAN LEVEL LIGHTING



30% PRELIMINARY

 7125 Ambassador Road, Suite 200 Baltimore, Maryland 21244 www.stv.com	DESIGN Landscape Architect: _____ Date: _____ Checked By: _____ Architect: _____ Date: 9/20/21 Checked By: S. YOUNG Engineer: _____ Date: _____ Checked By: _____ Designer: _____ Date: 9/20/21 Checked By: S. YOUNG Drawn by: _____ Date: _____ Checked By: _____	Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 38521 Expiration Date: 01/05/2022	 The Maryland-National Capital Park and Planning Commission Prince George's County Planning Department Community Planning Division www.mnppc.org (301) 952-3646	REVIEW AND APPROVAL Project Manager: _____ Date: _____ Construction Manager: _____ Date: _____ SHEET CHG: _____ Date: _____	ISSUED FOR PROCUREMENT ON <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">REVISIONS</th> </tr> <tr> <th>Rev. No.</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS			Rev. No.	Date	Description										BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT	DWG. # PS-04 SHT. # <u> </u> of 13 PLAN SHEET
	REVISIONS																					
Rev. No.	Date	Description																				

APPENDIX C



LEGEND	
SYMBOL	DESCRIPTION
[Pattern]	PROPOSED SIAL DEPTH PAVEMENT
[Pattern]	PROPOSED GRANITE USE PAVEMENT
[Pattern]	PROPOSED SIDEWALK
[Pattern]	PROPOSED CURB AND GUTTER PAVEMENT
[Symbol]	PROPOSED SIDEWALK LIGHTING



30% PRELIMINARY

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 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stv.com

DESIGN		
Landscape Architect	Date	Checked By:
Architect	Date	Checked By:
Engineer	Date	Checked By:
Designer	Date	Checked By:

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 95321
 Expiration Date: 01/06/2022



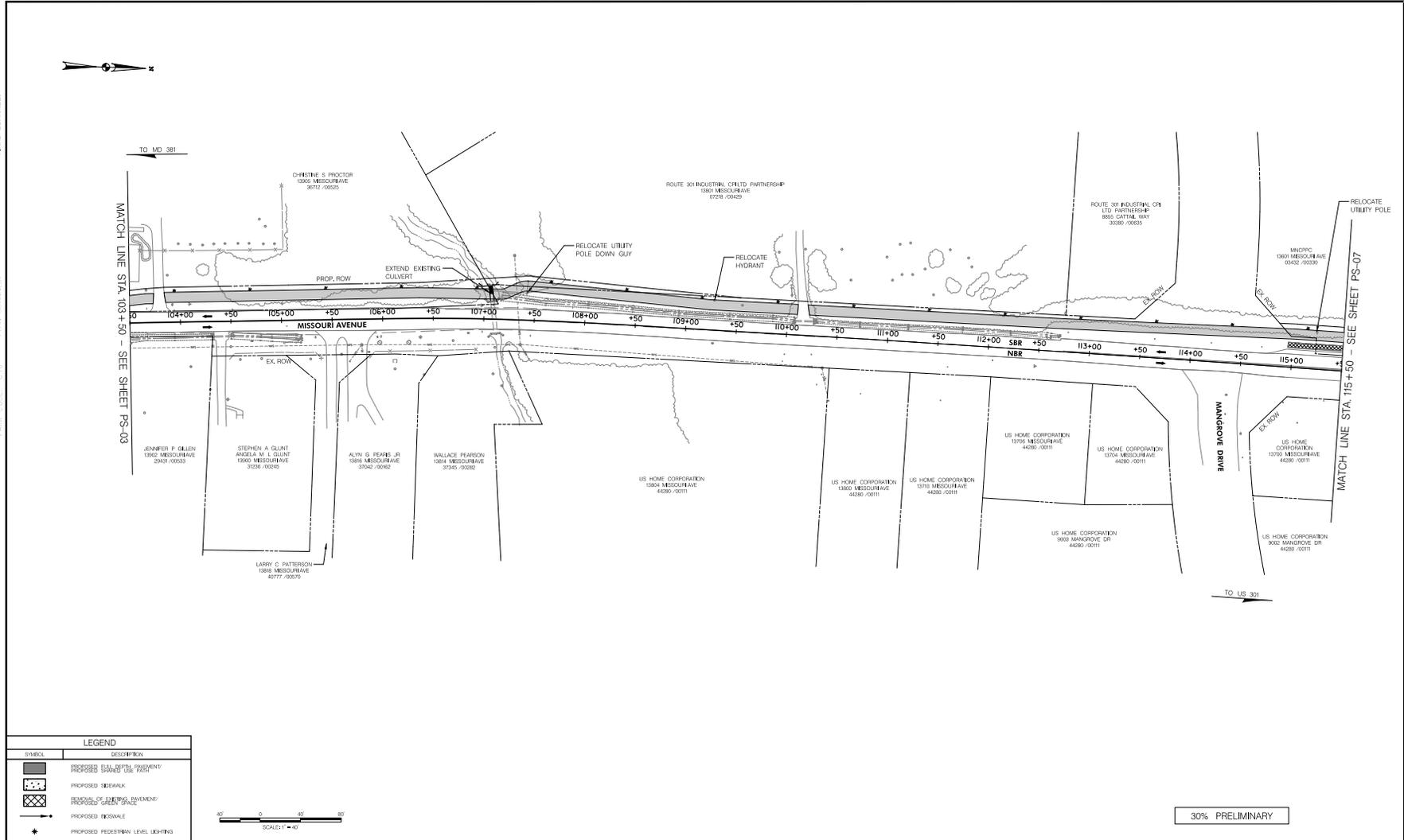
The Maryland-National Capital Park and Planning Commission
 Prince George's County Planning Department
 Community Planning Division
 www.mnccpp.org
 (301) 952-6646

REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
Division Chief	Date

ISSUED FOR PROCUREMENT ON		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS
 PAMC PROJECT

DWG. # **PS-05**
 SHT. # 9 of 13
 PLAN SHEET



LEGEND	
SYMBOL	DESCRIPTION
	PROPOSED SUBSIDIARY PAVEMENT
	PROPOSED SANDED USE PATH
	PROPOSED SIDEWALK
	PROPOSED PLANTING PAVEMENT
	PROPOSED CURB
	PROPOSED SIDEWALK
	PROPOSED PEDESTRIAN LEVEL LIGHTING



30% PRELIMINARY

STV 100 Years
 7125 Ambassador Road, Suite 200
 Baltimore, Maryland 21244
 www.stv.com

DESIGN		
Landscape Architect	Date	Checked By:
K. MEINER	9/20/21	S. YOUNG
Engineer	Date	Checked By:
K. MEINER	9/20/21	S. YOUNG
Drawn by:	Date	Checked By:

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 38521
 Expiration Date: 01/05/2022

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 Prince George's County Planning Department
 Community Planning Division
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 (301) 952-3646

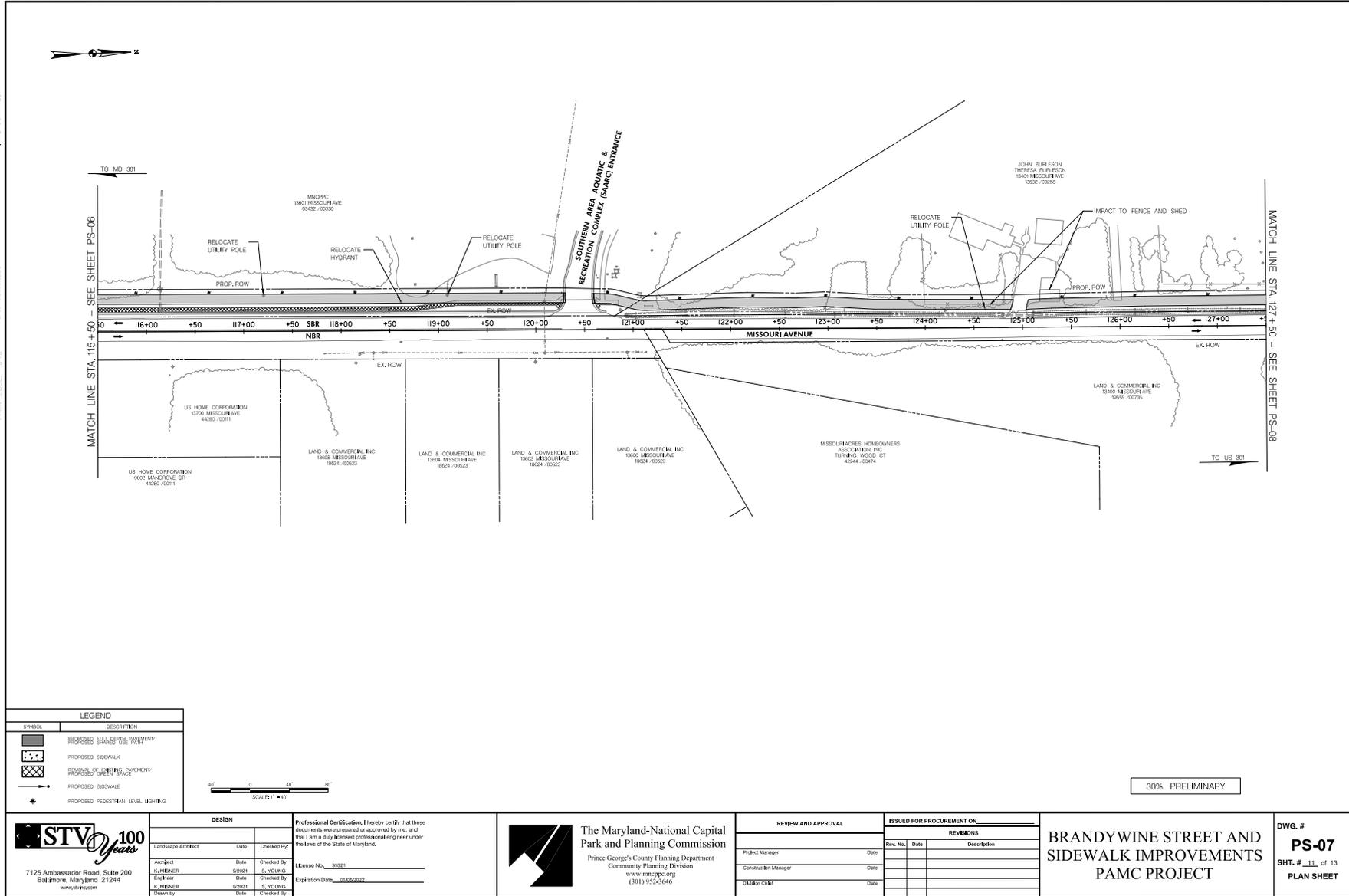
REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
SEAL & CHIEF	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

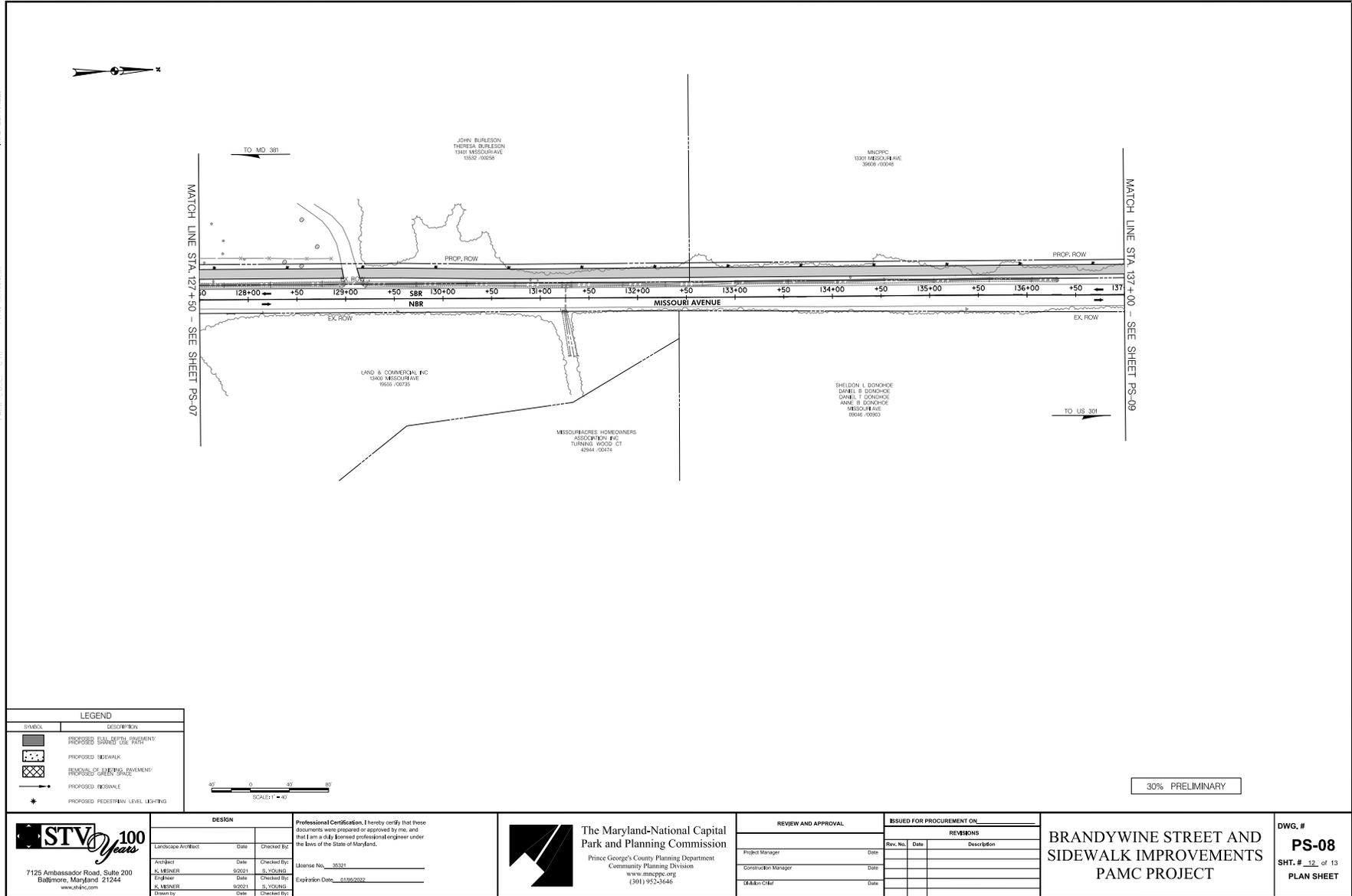
DWG. # **PS-06**
 SHT. # 10 of 13
 PLAN SHEET

APPENDIX C



30% PRELIMINARY

<p>7125 Ambassador Road, Suite 200 Baltimore, Maryland 21244 www.stv.com</p>	<p>DESIGN</p> <p>Landscape Architect Date Checked By:</p> <p>Architect Date Checked By:</p> <p>Engineer Date Checked By:</p> <p>License No. 95201</p> <p>Expiration Date 01/06/2022</p>	<p>Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.</p>	<p>The Maryland-National Capital Park and Planning Commission</p> <p>Prince George's County Planning Department Community Planning Division www.mnccpp.org (301) 952-6646</p>	<p>REVIEW AND APPROVAL</p> <p>Project Manager Date</p> <p>Construction Manager Date</p> <p>Division Chief Date</p>	<p>ISSUED FOR PROCUREMENT ON</p> <table border="1"> <thead> <tr> <th>Rev. No.</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Rev. No.	Date	Description										<p>BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT</p>	<p>DWG. # PS-07</p> <p>SHT. # 11 of 13</p> <p>PLAN SHEET</p>
	Rev. No.	Date	Description																



DESIGN		
Landscape Architect	Date	Checked By
K. MINER	9/20/21	S. YOUNG
Engineer	Date	Checked By
K. MINER	9/20/21	S. YOUNG
Drawn by	Date	Checked By

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 38521

Expiration Date: 01/05/2022



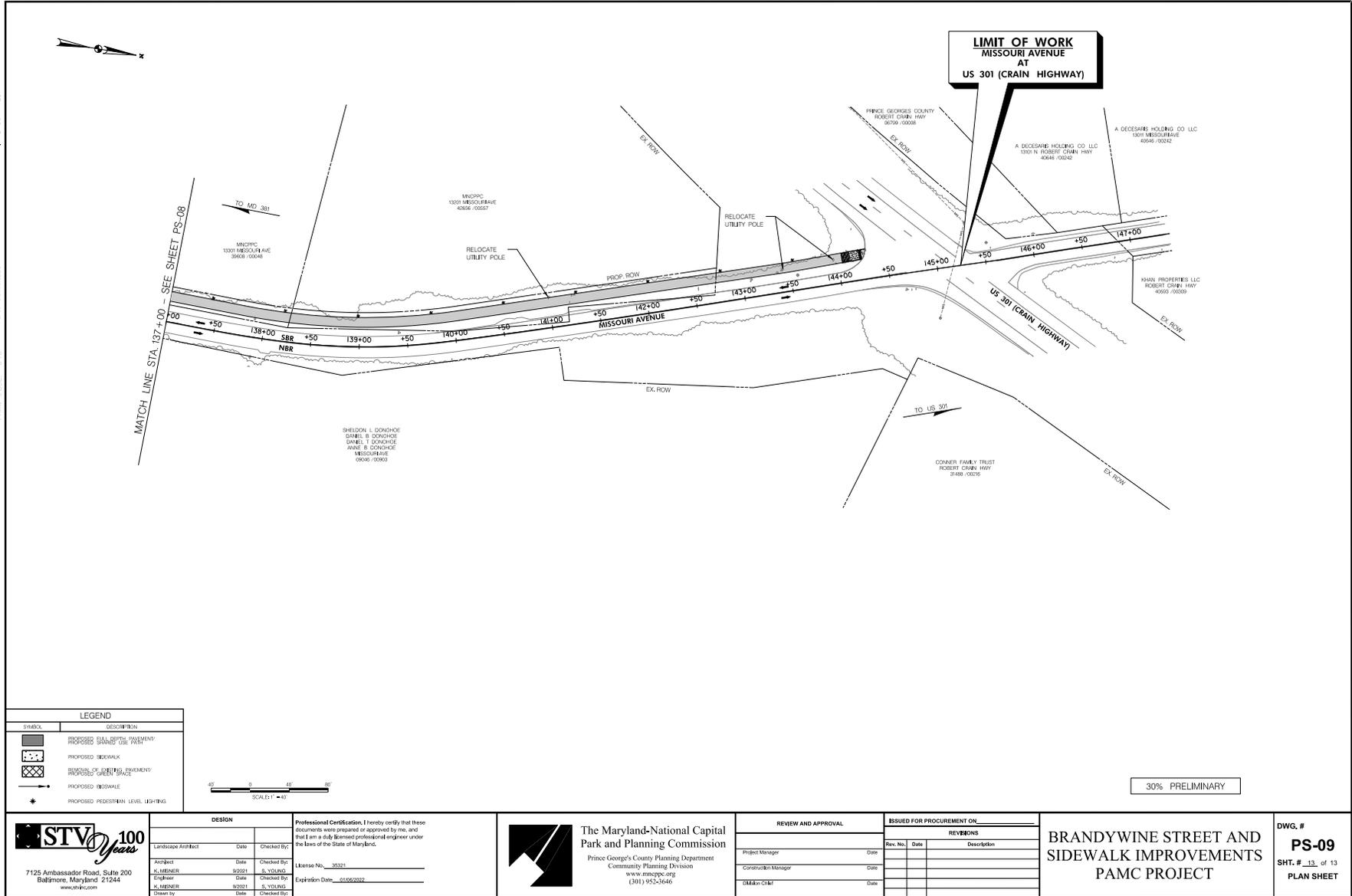
REVIEW AND APPROVAL	
Project Manager	Date
Construction Manager	Date
SEAL & SIGN	Date

ISSUED FOR PROCUREMENT ON		
REVISIONS		
Rev. No.	Date	Description

BRANDYWINE STREET AND SIDEWALK IMPROVEMENTS PAMC PROJECT

DWG. # **PS-08**
SHT. # 12 of 13
PLAN SHEET

APPENDIX C



APPENDIX D: PRELIMINARY CONSTRUCTION ESTIMATE

APPENDIX D

ITEM NO.	CATEGORY CODE NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	TOTAL COST
CATEGORY 1 - PRELIMINARY						
	120500	MAINTENANCE OF TRAFFIC (5% OF CATEGORIES 2-8)	1	LS	\$153,000.00	\$153,000.00
CATEGORY 1=						\$153,000.00
CATEGORY 2 - GRADING						
	201032	CLASS 2 EXCAVATION	595	CY	\$30.00	\$17,850.00
	202065	COMMON BORROW	685	CY	\$25.00	\$17,125.00
	210011	REMOVAL OF EXISTING COMBINATION CURB & GUTTER	490	LF	\$15.00	\$7,350.00
	210019	SAW CUTS	2,755	LF	\$2.00	\$5,510.00
	210026	REMOVAL OF EXISTING SIDEWALK	40	CY	\$125.00	\$5,000.00
CATEGORY 2=						\$52,835.00
CATEGORY 3 - DRAINAGE						
	300000	STORMWATER MANAGEMENT & OUTLET STRUCTURES	2.36	AC	\$75,000.00	\$177,000.00
	300000	EROSION AND SEDIMENT CONTROL	7	AC	\$20,000.00	\$140,000.00
	300000	DRAINAGE	1	LS	\$40,000.00	\$40,000.00
CATEGORY 3=						\$357,000.00
CATEGORY 4 - STRUCTURES						
	400000	PEDESTRIAN BRIDGE	1	LS	\$105,000.00	\$105,000.00
CATEGORY 4=						\$105,000.00
CATEGORY 5 - PAVING						

ITEM NO.	CATEGORY CODE NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	TOTAL COST
	504538	SUPERPAVE ASPHALT MIX 12.5MM FOR SURFACE, HDFV, PG 64S-22, LEVEL 2	95	TON	\$75.00	\$7,125.00
	504560	SUPERPAVE ASPHALT MIX 19.0MM FOR BASE, PG 64S-22, LEVEL 2	155	TON	\$125.00	\$19,375.00
	520113	6 INCH GRADED AGGREGATE BASE COURSE	715	SY	\$12.00	\$8,580.00
	549601	5 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	15	LF	\$1.20	\$18.00
	549613	15 INCH YELLOW PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	65	LF	\$12.50	\$812.50
	549617	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES	1,765	LF	\$15.00	\$26,475.00
	561118	8 INCH PORTLAND CEMENT CONCRETE PAVEMENT FOR DRIVEWAY MIX 9	40	SY	\$150.00	\$6,000.00
		CATEGORY 5=				\$68,385.50

APPENDIX D

ITEM NO.	CATEGORY CODE NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	TOTAL COST
CATEGORY 6 - SHOULDERS						
	634301	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH MINIMUM DEPTH	560	LF	\$32.00	\$17,920.00
	655105	5 INCH CONCRETE SIDEWALK	5,340	SF	\$8.00	\$42,720.00
	655120	DETECTABLE WARNING SURFACE FOR CURB RAMPS	980	SF	\$35.00	\$34,300.00
	656491	ASPHALT SIDEWALK	2,900	TON	\$225.00	\$652,500.00
		CATEGORY 6=				\$747,440.00
CATEGORY 7 - LANDSCAPING						
	704345	PLACING FURNISHED TOPSOIL 4 INCH DEPTH	1,775	SY	\$7.00	\$12,425.00
	708220	TURFGRASS SOD ESTABLISHMENT	1,775	SY	\$5.00	\$8,875.00
		CATEGORY 7=				\$21,300.00
CATEGORY 8 - TRAFFIC						
	800000	PEDESTRIAN LIGHT POLES	129	EA	\$10,000.00	\$1,290,000.00
	800000	SIGNING	1	LS	\$34,000.00	\$34,000.00
	800000	UTILITY RELOCATION	1	LS	\$164,000.00	\$164,000.00
	800000	GRADE CROSSING PANELS	55	TF	\$1,000.00	\$55,000.00
	800000	GRADE CROSSING WARNING SYSTEM	2	EA	\$50,000.00	\$100,000.00
	800000	STREET FURNITURE	40	EA	\$1,500.00	\$60,000.00
		CATEGORY 8=				\$1,703,000.00
SUBTOTAL						\$3,207,960.50

ITEM NO.	CATEGORY CODE NO.	DESCRIPTION	QTY.	UNIT	UNIT COST	TOTAL COST
RIGHT OF WAY			227,630	SF	\$3.00	\$682,890.00
CONTINGENY					35.0%	\$1,122,786.18
TOTAL PROJECT COST						\$5,013,636.68

ACKNOWLEDGMENTS

SPECIAL THANKS

Black Swamp Creek Land Trust, Inc.

CONSULTANT TEAM

STV, Inc.

Mercado Consultants

RJM Engineering

PRINCE GEORGE'S COUNTY PLANNING DEPARTMENT

Andree Green Checkley, Esq., *Planning Director*

Derick Berlage, *Acting Deputy Director*

Kipling Reynolds, AICP, *Chief*, Community Planning Division

PROJECT TEAM

Frederick Stachura, Esq., *Supervisor*, Neighborhood Revitalization Section, Community Planning Division

Karen Mierow, AICP, *Planner Coordinator*, Neighborhood Revitalization Section, Community Planning Division

Wendy Irminger, *Planner Coordinator*, Neighborhood Revitalization Section, Community Planning Division

Don Herring, *Senior Planner*, Park Planning and Development, Prince George's County Department of Parks and Recreation

RESOURCE TEAM

Daniel Hartmann, *Publications, Web, and Office Services Manager*, Management Services Division

Robert Getz, *Publications Specialist*, Publications and Graphics Section, Management Services Division

Carly Brockinton, *Publications Specialist*, Publications and Graphics Section, Management Services Division

Prince George's County Department of Public Works & Transportation

Maryland State Highway Administration



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department

