Description

Construction of a shared use path along the east side of a 0.46-mile-long section of Old Frederick Road (MD 355) in Clarksburg, Maryland. The project includes two sections, with a southern 835-feet long section between Stringtown Road and Spire Street in Historic Clarksburg and the northern 1,616-feet long section between approximately 467 feet north of Clarksburg Road (MD 121) up to Snowden Farm Parkway.

- Applicant: Montgomery County Department of Transportation
- Ten Mile Creek Area Limited Amendment
- Filing Date: April 9, 2020

Staff Recommendation: Approval to Transmit Comments

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Summary

The Montgomery County Department of Transportation (MCDOT) is proposing to construct a sidepath along the east side of Old Frederick Road (MD 355). The project is being designed for two discontinuous segments, with a southern 835-foot long segment running through Historic Clarksburg from Stringtown Road to Spire Street, and a northern 1,616-feet long section running from 467 feet north of Clarksburg Road to Snowden Farm Parkway. The total project length is 2,451 feet (0.46 miles). The project location is depicted in Figure 1. The proposed project will provide an eight-foot wide sidepath with a variable buffer (predominantly six feet in width) on the east side of Old Frederick Road. The project also includes some utility relocation, pedestrian lighting, and stream water restoration (in coordination with MCDOT’s MD 355-Clarksburg Road CIP Project, P508000-09, which was approved with comments by the Planning Board on April 26, 2018).

This project is included in the County Executive’s Recommended FY21 Capital Budget and FY21-26 Capital Improvements Program as CIP Project No. P501744. This project has been proposed to start planning and design beyond the 90% design stage in FY24 with construction expected to be completed in FY 25 and 26. The current project cost estimate is $6.398 million. The 90% design plans are provided as Attachment A to this report. This project is being submitted at the 90% design stage due to issues that developed during the design related to Historic Preservation which required significant modifications to the proposed project. More detail will be provided in the Historic Review section.
Mandatory Referral Review

This proposal for the construction of sidepath improvements is required to undergo the Mandatory Referral review process under the Montgomery County Planning Department’s Uniform Standards for Mandatory Referral Review. State law requires all federal, state, and local governments and public utilities to submit proposed projects for a Mandatory Referral review by the Commission. The law requires the Planning Board to review and approve the proposed location, character, grade and extent of any road, park, public way or ground, public (including federal) building or structure, or public utility (whether publicly or privately owned) prior to the project being located, constructed or authorized.

Planning staff acknowledges that the implementation of master plan transportation recommendations is a challenge faced by the applicant in developing design plans to convert desired master plan recommendations into engineering design drawings. The design process up to 35 percent (typical) design brings clarity with considerably more detail than considered during a master plan, and issues such as environmental impacts, historical impacts, and construction costs may introduce new factors that need to be weighed in developing a final design solution. It is hoped that the Mandatory Referral process aids in this process to develop an optimal or at least an improved design solution.

Recommendations

Staff recommends approval to transmit the following comment to the Montgomery County Department of Transportation:
MCDOT should consult with MDOT SHA to request the reduction of the existing posted speed limit on Old Frederick Road from 30 mph to 25 mph with the implementation of this project. This road has a 25-mph target speed set within the Master Plan of Highways and Transitways, and is an Urban Area as defined in the Montgomery County Road Code. Given its context and historic urban nature, we request that this potential speed limit reduction be considered as part of MDOT SHA’s Context Driven program (a copy of MDOT SHA’s current Context Driven brochure is included as Attachment B). The proposed improvements, in our view, will change the context and merit a potential speed limit reduction.

Proposal

Project Description

The Montgomery County Department of Transportation (MCDOT) is proposing to construct a sidepath along the east side of Old Frederick Road (MD 355). The project is being designed for two discontinuous segments, with a southern 835-foot long segment running through Historic Clarksburg from Stringtown Road to Spire Street, and a northern 1,616-feet long section running from 430 feet north of Clarksburg Road to Snowden Farm Parkway. The total project length is 2,451 feet (0.46 miles).

A project location map showing a more regional context and other transportation design projects is provided in Figure 2.

Clearly, MCDOT has been working on a series of interconnected CIP projects in Clarksburg that are focused on improving bicycle and pedestrian connections on both Clarksburg Road and Old Frederick Road. Mandatory Referrals have already occurred for projects 508000-03 (Clarksburg Road at Snowden Farm Parkway) and 508000-09 (Clarksburg Road at MD 355).
Old Frederick Road (MD 355) is classified in the Master Plan of Highways and Transitways as a two-lane business district street (with planned BRT in mixed traffic) between Stringtown Road and Snowden Farm Parkway. Currently, Old Frederick Road has narrow shoulders and short segments of sidewalk in the historic Clarksburg segment only. This project will significantly improve bike and pedestrian travel in the historic Clarksburg area.

The project is currently at the 90 percent design phase and the full design and construction of this project (excluding current design work) has been estimated to cost approximately $6.4 million. The full plan set is attached with this staff report at Attachment A.

**Project Background**

Old Frederick Road (MD 355) currently is generally characterized as a two-lane (12-foot wide travel lanes) road with mostly very narrow (one to three feet-wide) shoulders. One section in Historic Clarksburg between Clarksburg Square Road and Spire Street has a very wide (12-feet wide) paved shoulder in the northbound direction. At the northern end of the project approaching Snowden Farm Parkway, exclusive left and right-turn lanes are present in the northbound direction. Within historic Clarksburg, there is one 300-foot long stretch along the east side of the road (along three properties identified as 23315, 23321, and 23329 Old Frederick Road) where a five-foot wide sidewalk is provided of varying materials (brick on one property and concrete on the other two). The remainder of the project limits has no sidewalks or sidepaths. The posted speed limit along Old Frederick Road (MD 355) is 30 miles per hour (mph).

**Sidepath Design between Stringtown Road and Spire Street**

For the southern segment of this project through historic Clarksburg, the proposed 8-foot wide sidepath will have a 6-foot-wide buffer except along the frontage of 23111 Old Frederick Road, and one location at Station 499+70 where the sidepath avoids a utility pole.

**Sidepath Design between 467 feet north of Clarksburg Road and Snowden Farm Parkway**

The proposed 8-foot wide sidepath will start 467 feet north of Clarksburg Road (connecting to the sidepath being designed as part of the MCDOT Clarksburg Road at MD 355 Intersection project). Between Station 515+21 and 531+37 (a distance of 1,616 feet), the buffer will be 6 feet for most of the length, except for two locations—one between Station 522+89 and 523+80 (91 feet) where a retaining wall is proposed, and the second between Stations 528+60 and 530+25 (165 feet) to avoid impacting a stormwater pond near the MD 355/Snowden Farm Parkway intersection.

**Typical Cross Sections – Old Frederick Road**

Figures 3 through 5 show the proposed typical cross sections. While all cross sections show varying buffer widths between the curb and the sidepath, the buffer is typically 6’ wide except at pinch points.
Figure 3: Proposed Typical Cross Section – South of Clarksburg Road

Figure 4: Proposed Typical Cross Section Design – North of Clarksburg Road
Figure 5: Proposed Typical Cross Section Design – North of Clarksburg Road

NORTH OF CLARKSBURG ROAD NORMAL SECTION
EXISTING CURB SECTION
STA. 528+60 TO STA. 531+37
NOT TO SCALE

Figure 5: Proposed Typical Cross Section Design – North of Clarksburg Road

RETAINING WALL SECTION
STA. 522+89 TO STA. 523+80
NOT TO SCALE
Transportation Analysis

Design Elements - Transportation

1. **General Comment**: In general, the *minimum* sidepath width required by Montgomery Planning, consistent with the approved Bicycle Master Plan and the ongoing Complete Streets Design Guideline, is 10’; however, this minimum is reduced to 8’ in Special Protection Areas and areas of environmental concern, particularly through Montgomery Parks land. This project passes through two SPAs and through Historic Clarksburg, so the use of the 8’ width is acceptable for this project.

2. **Posted Speed Limit on Old Frederick Road**: MCDOT should consult with MDOT SHA to request consideration to reduce the existing posted speed limit on Old Frederick Road from 30 mph to 25 mph with the implementation of this project. This road has a 25 mph target speed set within the Master Plan of Highways and Transitways, and is an Urban Area as defined in the Montgomery County Road Code.

Master Plan Conformance – Transportation

The project is in conformance with the 2018 Bicycle Master Plan and the 2018 Master Plan of Highways and Transitways (MPOHT). The 2018 Bicycle Master Plan recommends a sidepath on the east side of Old Frederick Road between Stringtown Road and Snowden Farm Parkway. It should be noted that this sidepath is planned on the west side of Old Frederick Road to the north of Snowden Farm Parkway, so a protected crossing (signal justified based on pedestrian/bicycle crossing needs) may be needed at this intersection in the future. The 2018 Master Plan of Highways and Transitways classifies Old Frederick Road between Stringtown Road and Snowden Farm Parkway as a two-lane business district street (with BRT in mixed traffic) with a master plan right-of-way of 50 feet. This section of Old Frederick Road is located within the Clarksburg Urban Road Code boundary. Old Frederick Road has a 25-mile per hour master planned target speed assigned by the MPOHT. Note that MPOHT designations on state roads regarding target speed are advisory only.

Historic Resources Analysis

The applicant contacted the Functional Planning and Policy (FPP) division in 2018 for a Mandatory Referral. In consultation with historic preservation staff, the applicant was instructed to conduct further archaeological investigations, consider additional permeable paving, and to revise their drainage plan to avoid known African American archaeological sites. The applicants have made the requested revisions and have been receiving feedback from the Historic Preservation Commission (HPC) regarding the appropriateness of the proposed project. The applicant is required to obtain approval from the HPC via an approved Historic Area Work Permit (HAWP) under the requirements of Chapter 24A of the County Code, as well as achieve compliance with Section 106 of the National Historic Preservation Act. All work done and described as follows has been to undertaken to meet Section 106 and to obtain approval for the HAWP.
Staff is supportive of the applicant’s overall proposal. The Clarksburg Master Plan and Hyattstown Special Study Area (1994), which amended the Clarksburg and Vicinity Master Plan (1968), called for an off-street sidepath along the existing road with vegetation against the edges in this location. In addition, the 10 Mile Creek Area Limited Amendment (2014), which amended the Clarksburg Master Plan and Hyattstown Special Study Area (1994) for the Ten Mile Creek Watershed, recommended a shared-use path in this location.

Most of the proposed work will occur within the public right-of-way, where previous alterations (i.e., road and sidewalk construction, road widening, regrading, landscaping) have occurred. In accordance with the Secretary of the Interior’s Standards for Rehabilitation #2 and #9, the addition of a shared-use path will not remove or alter character-defining features of the historic district. The introduction and/or replacement of modern transportation features and appurtenances within the public right-of-way will not detract from the district’s ability to convey its historical significance. Staff finds that increasing the connectedness of the historic district via a shared use path will create a more cohesive streetscape, with buildings that clearly relate and interact with one another.

**Archaeological Investigations in the Project Area**

The applicant has conducted archaeological investigations in compliance with Section 106 of the National Historic Preservation Act in consultation with the Maryland Historical Trust (MHT) and with the Montgomery County Historic Preservation Compliance Review Archaeologist. The methods used in investigations were consistent with MHT guidelines and identified five sites within the project area: 18MO742, 18MO743, 18MO744, 18MO745, and 18MO746. Of these, the consultant believed that three (18MO742, 18MO745, and 18MO746) warranted additional testing to determine their eligibility for the National Register of Historic Places (NRHP). Sites 18MO743 (a mid-19th through mid-20th century farmstead) and 18MO744 (a small concentration of late 18th- to 20th-century artifacts associated with the 19th-century residence of John Hurley) were found to have too little material and were too disturbed to retain any archaeological value.

NRHP evaluation testing at 18MO742 (the Neighborhood Site) looked for remains associated with the site of the late 19th-century Clarksburg Methodist Episcopal Church South and parsonage. This site is located on Montgomery County Parks land. The results showed that the site was heavily disturbed, but the consultant did find a small area underneath layers associated with demolition of the church and parsonage that contained early 19th-century artifacts. Based on this finding, the consultant recommended the site eligible for the NRHP. However, MHT did not concur, finding instead that the site yielded too little material and had too little physical integrity to contribute important information to the history of Clarksburg. Neither the Montgomery County Historic Preservation Compliance Review Archaeologist, nor Montgomery County Parks archaeologists dispute MHT’s findings.

NRHP evaluation testing at Site 18MO745 (the Sibley Site) investigated possible remains associated with a 19th-century domestic occupation. Testing showed that the site had been heavily disturbed; however, the archaeologists found an infilled cellar with a possible root cellar at its base. The cellar was part of a
house built before 1850 and demolished in the 20th century. The 20th-century fill contained some colonial-era artifacts, and the presence of a possible root cellar at the base of the larger cellar suggested that there might be other early features or artifact deposits buried underneath fill associated with the demolition of the house. Based on that, the consultant recommended the site to be eligible for the NRHP; however, MHT did not agree, arguing that the site is too disturbed and has too little material of interest to be eligible. In any case, the deposits the consultant felt were important are outside the area that would be impacted by construction of the shared use path.

NRHP evaluation testing of Site 18MO746 (the Wims Site) explored remains of a middle 19th-century house occupied by a succession of families including that of John Wims, an African American man who purchased the home in 1892. Testing showed that the site had been too heavily disturbed by demolition in the 20th century to retain any information potential, and MHT concurred with the consultant’s recommendation that the site is not eligible for the NRHP. However, MCDOT has been responsive to staff’s concerns that any stormwater management facilities or other construction should avoid this site entirely.

**Historic Preservation Commission Review**

Montgomery County/MCDOT SHA appeared before the Historic Preservation Commission (HPC) at the February 12, 2020 HPC meeting for a preliminary consultation. The applicant’s representatives in attendance were Dan Sheridan (Chief of Design Section, Division of Transportation and Engineering, MCDOT), Mark Bodmann (Project Engineer, Design Consultant, Wallace Montgomery), and Scott Rose (Project Manager, Wallace Montgomery). The HPC February 12, 2020 staff report can be viewed at the following link: [https://montgomeryplanning.org/wp-content/uploads/2020/02/II.A-Multiple-Addresses-Clarksburg.pdf](https://montgomeryplanning.org/wp-content/uploads/2020/02/II.A-Multiple-Addresses-Clarksburg.pdf)

The Commission recommended the following (with representative Dan Sheridan’s subsequent written responses in **BLUE**):

1. The Commissioners voiced support for the project but provided the following recommendations and comments:
   a. The proposed Colonial-style light fixtures will detract from the historic district, and alternatives should be explored.
      
      MCDOT consulted with Potomac Edison to find out if there are any other alternatives. Unfortunately, Potomac Edison only have two style, Colonial and Acorn post top. After meeting with members of the Clarksburg Historic District and based on their recommendation, MCDOT selected the Colonial post top. The Colonial post top style will also match with lighting on adjacent projects in Clarksburg area.

   b. Explore reducing the height of the retaining wall at 23415 Frederick Road (as depicted on Page 32 of the February 12, 2020 staff report).
      
      The maximum height of the retaining wall is 6 foot above grade.
      
      In order to reduce the height of the wall a design change is needed. The change would require either a reduced path width or a reduced buffer width. A design revision will
also impact current drainage and require redesign effort. MCDOT did investigate a wall height reduction and does not recommend a reduction in either the path or the buffer.

c. Concerns were expressed regarding altering the relationship of houses along Frederick Road to the street, due to the construction of retaining walls in front of the houses. The applicant should explore the introduction of stairs within the retaining walls to retain the relationship.

There currently is no pedestrian access to the front of 23407 and 23415, except across a grass slope. Pedestrian access currently is from the side of both houses (23407 & 23415) and will continue to be from the side. MCDOT can revise the design and add stairs in front of house. However, MCDOT will need to consult with SHA to see if SHA will allow a stair connection through the wall. Also, MCDOT will need to contact with property owners to find and verify if the stair option is preferred.

d. Consider reduction of the paved area and driveway width at 23421 Frederick Road (as depicted on Page 34 of the February 12, 2020 staff report).

MCDOT agreed with your recommendation. Coordination with the current property owner will be needed to reduce the driveway width due the commercial use of the driveway and type of vehicles requiring access.

e. Consider working with property owners to reduce the number of curb cuts and/or combine driveways.

MCDOT will consider your comments. MCDOT Property Acquisition personnel will contact the property owners to determine if driveways can be combined. Also, MCDOT will change the design to reduce the width of the driveways where possible.

f. Explore minimizing the amount of pavement directly adjacent to the proposed shared use path and/or in front of the houses.

MCDOT will review the construction plans and verify if the amount of pavement can reduce. As stated above MCDOT will reduce the driveway widths where possible.

g. Concrete with exposed aggregate should be used in lieu of plain concrete.

Exposed aggregate concrete is not a standard material for sidewalks. Typically, if an owner requests a non-standard material the owner must agree to a Maintenance and Liability agreement. It is unclear what entity would be required to maintain the exposed aggregate. Tinted or stained concrete can be used as an aesthetic alternative.

h. Explore differing border materials along the proposed shared use path to achieve the required 8’ minimum width.

The County doesn’t recommend combination of materials due to the difficulty of maintenance for the path. Separate materials will cause differential settlement along the edge of the path and will create uneven pavement after couple of years.

i. Consider preserving the existing concrete stair along Frederick Road (as depicted on Page 27 of the February 12, 2020 staff report).

MCDOT agrees with your recommendation. The specification and plans within the contract will be amended to direct the contractor to remove and salvage the existing
The contractor will coordinate with MNCCCP to have the stairs taken to a preferred location.

j. Reduce the height of all proposed retaining walls and soften the retaining walls’ appearance, where possible.

Please see response to previous comment regarding the height of retaining walls. Wall heights will be minimized based on adjacent grades. The face of the retaining walls will be changed to a plain concrete as requested. Notes for use of the concrete form liner will be removed. MCDOT recommends consideration be given to the finish due to potential graffiti and other possible abuse on a non-textured surface.

The Historic Preservation Commission recommended that the applicants return for a second preliminary consultation prior to filing their final HAWP application. The applicants stated that they would coordinate with the HPC staff and supervisor for further instruction after the Planning Board hearing for the Mandatory Referral.

Environmental Analysis

Environmental Guidelines

A Natural Resources Inventory and Forest Stand Delineation (NRI/FSD) #420182000 was approved by Staff on February 8, 2019. A Forest Conservation Application was submitted as part of a Mandatory Referral application.

Forest Conservation

The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law. See the Forest Conservation staff report (Part A) for a complete analysis.

The Application proposes to remove approximately 1.18 acres and retain 0.00 acres of the 1.18 acres of existing forest on the Property, resulting in a 1.55-acre planting requirement. Approximately 0.48 acres of the forest clearing is necessary for the stream restoration work and that forest will be replanted after the work is complete. The Applicant proposes to meet the remaining 1.07 acre forest planting requirement through purchasing credits in an offsite forest conservation bank.

Water Quality

This project is located within the Ten Mile Creek and the Clarksburg Special Protection Areas and on publicly owned property, so it is required to obtain approval of a water quality plan under Section 19-62(c) of the Montgomery County Code. This section of the code states:

(c) Publicly owned property. Before engaging in any land-disturbing activity on publicly owned property in an area designated as a special protection area, the applying agency or department should prepare a combined preliminary and final water quality plan.
As part of the requirements of the Special Protection Area law, a SPA Water Quality Plan should be reviewed in conjunction with a Mandatory Referral. Under Section 19-65, the provision of the law, the Montgomery County Department of Permitting Services (MCDPS) and the Planning Board have different responsibilities in the review of a Water Quality Plan. MCDPS has reviewed and conditionally approved the elements of the Water Quality Plan under its purview. The Planning Board’s responsibility is to determine if environmental buffer protection, SPA forest conservation and planting requirements, and limits on impervious surfaces have been satisfied.

**MCDPS Special Protection Area Review Elements**

In a letter dated April 18, 2019 (later revised via email), MCDPS has conditionally approved the elements of the SPA Preliminary/Final Water Quality Plan under its purview.

**Planning Board Special Protection Area Review Elements**

The Application meets all applicable requirements of Chapter 19, the Environmental Guidelines, the Clarksburg SPA, and the 10 Mile Creek Area Limited Amendment Master Plan. The Application meets the requirements of Chapter 22A of the Montgomery County Forest Conservation Law. See the Forest Conservation staff report (Part A) for a complete analysis.

**Montgomery Parks Analysis**

Due to limited right-of-way, nearby natural resources, and historic protections in the project area, locations for potential environmental site design storm water management practices for this site are extremely limited. An estimated cost to provide SWM for points of investigation 2-5 in this project was applied to an outfall improvement project to be performed in the same watershed in order to meet SWM requirements. The proposed outfall improvement will be built at approximate Sta. 507+50 Lt. at the southeast corner of the intersection of Frederick Road (MD 355) and Clarksburg Road (MD 121) in a channel that ultimately discharges to the same unnamed tributary to Ten Mile Creek as POIs 2-5. Both conceptual and technical designs for the channel work associated with this outfall were reviewed by staff from Montgomery Parks and the proposed improvements will provide channel stabilization and improved floodplain access, translating to water quality improvements downstream.

**Community Outreach and Notification**

This application was noticed in accordance with the Uniform Standards for Mandatory Referral Review. MCDOT held a public meeting for this project at Little Bennett Elementary School on November 7, 2018.

**Conclusion**

Based on information provided by the applicant and the analysis contained in this report, staff concludes that the proposed MD 355 – Clarksburg Shared Use Path Improvements project can be designed as submitted one comment for future actions by the applicant as detailed on pages 3 and 4 of this staff report.
Attachment

A. Proposed Project Plans
INDEX OF SHEETS

146,909

100 EDISON PARK DR., 4TH FLOOR

"2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL"

PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF COMPLIANCE WITH THE STATE OF MARYLAND'S REQUIREMENTS.

DATE

DIVISION OF TRANSPORTATION ENGINEERING

EDR

R S. R.

PERMITTING

NOTE: DRAFT SHEET SHEETS MUST BE SUBMITTED TO THE CONSTRUCTION INSPECTOR AT THE PRECONSTRUCTION MEETING.

SCALE: 1" = 2000' STATION 531+37

119X1511

NOTE: DRAFT SHEET SHEETS MUST BE SUBMITTED TO THE CONSTRUCTION INSPECTOR AT THE PRECONSTRUCTION MEETING.

WALLACE MONTGOMERY

MD 355 - CLARKSBURG

C. I. P. PROJECT NO. 501744

VISIBILITY MAP

90% SUBMITTAL

VEINITY MAP

LIMIT OF WORK

C. I. P. PROJECT NO. 501744

MD 355 (FREDERICK ROAD)

STA. 531+37

LIMIT OF WORK

C. I. P. PROJECT NO. 501744

MD 355 (FREDERICK ROAD)

STA. 515+21

LIMIT OF WORK

C. I. P. PROJECT NO. 501744

MD 355 (FREDERICK ROAD)

STA. 495+29

LIMIT OF WORK

C. I. P. PROJECT NO. 501744

SHAARED USE PATH

STA. 495+29 TO STA. 531+37

C. I. P. PROJECT NO. 501744

495+29 TO 531+37

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING

MD 355 - CLARKSBURG

SHARED USE PATH

STA. 495+29 TO STA. 531+37

C. I. P. PROJECT NO. 501744

90% SUBMITTAL

OWNER'S / DEVELOPER'S CERTIFICATION


CABINET OF TRANSPORTATION CHIEF ENGINEER OF TRANSPORTATION ENGINEERING

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

MD 355 - CLARKSBURG

SHARED USE PATH

STA. 495+29 TO STA. 531+37

C. I. P. PROJECT NO. 501744

90% SUBMITTAL

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING

MD 355 - CLARKSBURG

SHARED USE PATH

STA. 495+29 TO STA. 531+37

C. I. P. PROJECT NO. 501744

90% SUBMITTAL
NAVD 88 VERTICAL DATUM: NAD 83/91 HORIZONTAL

88 GAITHERSBURG, MD 20878
100 EDISON PARK DRIVE, 4TH FLOOR
DEPARTMENT OF TRANSPORTATION
MONTGOMERY COUNTY

FILE: CIP PR. # 501744
FILE: PLOTTED: 9/16/2019

CIP PROJECT NO. 50800

V10 = 4.43 FPS
Q10 = 31.53 CFS

M:\PROJ\214013.0010\Highways\Cadd-Drainage\pSR-P002_MD355.dgn
09/2019
SHARED USE PATH
MD 355 - CLARKSBURG

NOTE:
ADD MATERIAL TO ROOF AS SHOWN ON PLANS. PLACED TO MATCH IN THE SIDE OF POOL WITH 3' FLOODPLAIN

A-A RIFLE TYPICAL SECTION
NOT TO SCALE

B-B POOL TYPICAL SECTION
NOT TO SCALE

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

OVERBANK STAKEOUT TABLE

NATIVE RIPARIAN SEED MIX

90% SUBMITAL

PLAN SHEET SR-03
STREAM RESTORATION TYP. SECTIONS
MD 355 - CLARKSBURG
SHARED USE PATH

NOTE:
ADD MATERIAL TO ROOF AS SHOWN ON PLANS. PLACED TO MATCH IN THE SIDE OF POOL WITH 3' FLOODPLAIN

A-A RIFLE TYPICAL SECTION
NOT TO SCALE

B-B POOL TYPICAL SECTION
NOT TO SCALE
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2 TO 3 IN STONE EARTH DIKE
ON 6 IN CENTERS
OUTLET ISOMETRIC VIEW
WEIR CREST (LEVEL)
MAXIMUM DRAINAGE AREA =
STORAGE VOLUME -
APPROVED PLAN.
CROSS SECTION.
REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE
MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND BAFFLE BOARD MINIMUM OF 12 INCHES INTO
PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.

MARYLAND DEPARTMENT OF ENVIRONMENT

U.S. DEPARTMENT OF AGRICULTURE

APPROVED PLAN.
UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF
SECTION B-4 VEGETATIVE STABILIZATION.
MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND
WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION
COMPACT FILL.

MD 355 - CLARKSBURG
SHARED USE PATH
NOTES AND DETAILS 5G-03 of 19
EROSION AND SEDIMENT CONTROL
90% SUBMITTAL
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, AND SHARED USE PATH TO BE CONSTRUCTED BY C.I.P. PROJECT NO. 501744 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

LIMIT OF WORK
C.I.P. PROJECT NO. 501744
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 495-29
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY CIP PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

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SCALE: 1"=20'
90% SUBMITTAL

LIMIT OF WORK
C.I.P. PROJECT NO. 501744
MD 355 - CLARKSBURG
SHARED USE PATH STA. 503+64
C.I.P. PROJECT NO. 508000
CLARKSBURG ROAD AT MD 355
STA. 503+64

NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SCALE: 1"=20'

NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SCALE: 1"=20'

NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SCALE: 1"=20'
LIMIT OF WORK
C.I.P. PROJECT NO. 501744
MD 355 - CLARKSBURG
SHARED USE PATH STA. 515 + 21
C.I.P. PROJECT NO. 508000
CLARKSBURG ROAD AT MD 355
STA. 515 + 21

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<td>658</td>
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<td>654</td>
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<tbody>
<tr>
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<tr>
<td>TOP ELEV.</td>
</tr>
<tr>
<td>STA. 518+40, RT</td>
</tr>
<tr>
<td>STA. 518+11, RT</td>
</tr>
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</table>

**NOTE:**
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP. TEMPORARY GUTTER RAMP SHOWN IS REQUIRED BY C.I.P.
2. PIPE SLOPE DRAIN, STORAGE PROVIDED (CF)
3. STANDARD CURB & GUTTER, SHARED USE PATH REQUIRE SHOULDER STABILIZATION
4. EXTEND CURB & GUTTER DESIGN BEYOND LIMIT OF WORK AS NEEDED TO LANDSCAPING

**EROSION AND SEDIMENT CONTROL PLANS PHASE 1 - SC-07 OF 19**

**MD 355 - CLARKSBURG**

**SHARED USE PATH**

**STA. 514+800 TO STA. 519+00**

**90% SUBMITTAL**

**Dwg. No.**

**Chief, Division of Engineering Services**

**Chief, Design Section**

**RECOMMENDED FOR APPROVAL**

**APPROVED**

**Tuesday, September 17, 2019 AT 03:34 PM**

**DATE**

**CHECKED BY**

**CHECKED BY**

**DRAWN BY**

**PLOTTED**

**FILE:**

**FILE:**

**C.I.P. PR. # 501744**

**PROJECT NO. C.I.P. 501744**

**SCALE: 1"=20'**

**NOTE:**

1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP. TEMPORARY GUTTER RAMP SHOWN IS REQUIRED BY C.I.P.
2. PIPE SLOPE DRAIN, STORAGE PROVIDED (CF)
3. STANDARD CURB & GUTTER, SHARED USE PATH REQUIRE SHOULDER STABILIZATION
4. EXTEND CURB & GUTTER DESIGN BEYOND LIMIT OF WORK AS NEEDED TO LANDSCAPING

**EARTH Dike (ED)**

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<tr>
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**TEMPORARY ASPHALT BERM (TAB)**

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<td>0.66 AC</td>
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**INLET PROTECTION (IP)**

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**PIPE SLOPE DRAIN (PSD)**

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<tr>
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<td></td>
<td>2.07 AC</td>
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**AREA**

**WEIR ELEV.**

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<tr>
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<tbody>
<tr>
<td>STA. 518+79, RT</td>
</tr>
<tr>
<td>STA. 518+07, RT</td>
</tr>
</tbody>
</table>

**MATCH LINE STA.**

| STA. 515+21, RT |
| STA. 518+40, RT |
| STA. 518+11, RT |
| STA. 518+64, RT |
| STA. 518+63, RT |
| STA. 518+13, RT |
| STA. 519+00, RT |

**DATE:**

**CHECKED BY:**

**DRAWN BY:**

**PLOTTED:**

**FILE:**

**FILE:**

**C.I.P. PROJECT NO. 508000**

**PROJECT NO. C.I.P. 508000**

**SCALE: 1"=20'**

**NOTE:**

1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP. TEMPORARY GUTTER RAMP SHOWN IS REQUIRED BY C.I.P.
2. PIPE SLOPE DRAIN, STORAGE PROVIDED (CF)
3. STANDARD CURB & GUTTER, SHARED USE PATH REQUIRE SHOULDER STABILIZATION
4. EXTEND CURB & GUTTER DESIGN BEYOND LIMIT OF WORK AS NEEDED TO LANDSCAPING

**EARTH Dike (ED)**

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<tbody>
<tr>
<td></td>
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<td>663.6 FT.</td>
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**INLET PROTECTION (IP)**

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<tbody>
<tr>
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**TEMPORARY ASPHALT BERM (TAB)**

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<td></td>
<td>6.55 AC</td>
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**INLET PROTECTION (IP)**

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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0.19 AC</td>
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**PIPE SLOPE DRAIN (PSD)**

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<td>0.18 AC</td>
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**AREA**

**WEIR ELEV.**

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<tbody>
<tr>
<td>STA. 518+79, RT</td>
</tr>
<tr>
<td>STA. 518+07, RT</td>
</tr>
</tbody>
</table>

**MATCH LINE STA.**

| STA. 515+21, RT |
| STA. 518+40, RT |
| STA. 518+11, RT |
| STA. 518+64, RT |
| STA. 518+63, RT |
| STA. 518+13, RT |
| STA. 519+00, RT |

**DATE:**

**CHECKED BY:**

**DRAWN BY:**

**PLOTTED:**

**FILE:**

**FILE:**
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.
**NOTE:**

1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

---

### EROSION AND SEDIMENT CONTROL PLANS PHASE 1 - SC-09 OF 19

**MD 355 - CLARKSBURG**

**SHARED USE PATH**

**STA. 523+00 TO STA. 528+00**

---

### Table: Inlet Protection (Ip)

<table>
<thead>
<tr>
<th>ID NO</th>
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<td>CP 2</td>
<td>STA 522+56</td>
<td>1 EA</td>
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### Table: Earth Dike (Ed)

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<tbody>
<tr>
<td>ED 1</td>
<td>STA 524+02 TO 528+56 RT</td>
<td>663.0 FT.</td>
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---

**SCALE: 1"=20'**

**SAME DAY STABILIZATION**

**A-2**

**TEMPORARY ASPHALT BERM PHASE 1**

**STA. 523+00 TO STA. 528+00**

**LENGTH:** 16 FT.

---

**EXISTING RIGHT OF WAY**

**EARTH DIKE (ED)**

<table>
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<th>LENGTH</th>
<th>TOP ELEV.</th>
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</thead>
<tbody>
<tr>
<td>ED 2</td>
<td>STA 524+02 TO 528+56 RT</td>
<td>658.3 FT.</td>
<td>0.41</td>
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**LEGEND**

- **CIP**: CURB & INLETS PROTECTION (Phase 1)
- **MIN**: MINIMUM
- **MAX**: MAXIMUM
- **TOP**: TOP ELEVATION
- **SS**: STORM SEWER
- **ED**: EARTH DIKE
- **CP**: CURB PROTECTION (Phase 1)

---

**ATTACHMENTS**

- SHEET SC-08 INITIAL
- SHEET SC-10 INITIAL
NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.

NOTE:

MATCH LINE STA. 5 2 8.

EXISTING RIGHT OF WAY

WOODCREST AT LITTLE BENNETT
HOME OWNERS ASSOCIATION, INC.

WASHINGTON MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION
1200 EAGLE PARK DRIVE, 100 FLOOR
GUAUNDENBURG, MD 20878

EROSION AND SEDIMENT CONTROL
PLANS PHASE 1 - SC-10 OF 19
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 528+00 TO STA. 532+50
1. CONSTRUCTION ACTIVITIES INCLUDING THE INSTALLATION OF TRENCHES AND SEDIMENT CONTROL MEASURES SHOULD NOT BEGIN UNTIL ALL NECESSARY PERMITS AND CONSTRUCTION PADS FOR MAIN AND SIDE STREETS HAVE BEEN ACQUIRED. ALL DAMAGES TO TREES SHOULD BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO TREES THAT RESULT FROM CONSTRUCTION AND SHOULD CONDUCT A PRE-CONSTRUCTION MEETING ON SITE WITH THE SEDIMENT CONTROL INSPECTOR. THE CONTRACTOR SHOULD STAY WITHIN THE LIMITS OF THE CONSTRUCTION AREA AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WINDWISHER POSSIBLE.


3. LANDSCAPING PROJECT 508000 BEFORE THIS PROJECT.


5. A TRIBUTARY TO BE RESTORED, CONSTRUCTION SHOULD TAKE PLACE ON THE TRIBUTARY BEFORE WORK IN THE MAIN STEM STARTS. THE TRIBUTARY CONFLUENCY CONSTRUCTION IN THE TRIBUTARY, INCLUDING PUMP AROUND THE TRIBUTARY TWO TIMES BEFORE WORK IN THE MAIN STEM STARTS. WORK ON THE TRIBUTARY SHOULD BE PUMPED AROUND THE WORK AREA IN THE MAIN STEM.

6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS TO AND MAINTAINING ALL GATES AND GATEWAY CONTROL. WORK ON THE TRIBUTARY SHOULD CONTINUE TO BE PUMPED AROUND THE WORK AREA IN THE MAIN STEM.

7. AFTER CONSTRUCTION, ALL DISTURBED AREAS SHOULD BE RECODIFIED AND RENOTIFIED AS PER THE PLANNING.

90% SUBMITTAL
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP,
   INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING
   PLANS.

90% SUBMITTAL

DATE: NAV 8/29 WORKCENTRAL MD 355 - CLARKSBURG
SHARED USE PATH
STA. 494+50 TO STA. 498+00

LIMIT OF WORK
C.I.P. PROJECT NO. 501744
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 495+39
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

18" RCP
15" RCP
18" RCP

EX. 16" PCCP (71-4921A)

SCALE: 1"=20'

SAME DAY STABILIZATION

EROSION AND SEDIMENT CONTROL PLANS PHASE 2 - SC-13 OF 19
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 498+00 TO STA. 501+50

PLAN SHEET SC-13 FINAL
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SEE NOTE 1.

18" RCP

M.B. INV EX.

502
+50

8 -1

503
+50

18" RCP

M.B. INV EX.

504
+50

SEE NOTE 1.

EX. 16" PCCP (71-4921A)
**LIMIT OF WORK**
C.I.P. PROJECT NO. 501744
MD 355 - CLARKSBURG
SHARED USE PATH STA. 515 + 21
C.I.P. PROJECT NO. 508000
CLARKSBURG ROAD AT MD 355
STA. 515 + 21

**OVERVIEW**
- **C.I.P. PR. # 501744**
- **FILE:** PLOTTED Tuesday, September 17, 2019 AT 03:35 PM
- **FILE:** PLOTTED Tuesday, September 17, 2019 AT 03:35 PM

**NOTE:**
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.
4. SEE NOTE 1.

**SCALE:** 1" = 20'

**NOTES**
- **PILOT PROTECTION 35**
- **LEGEND**
- **PILE PROTECTOR 35**
- **LIMIT OF DISTURBANCE**
- **PIPE SLOPE DRAIN PHASE 1**
- **STRUCTURE PHASE 1**
- **CURB INLET PROTECTION PHASE 1**
- **TEMPORARY STONE OUTLET**
- **EARTH DIKE PHASE 1**
- **STANDARD INLET PROTECTION INITIAL**
- **EROSION AND SEDIMENT CONTROL PLAN**
- **SHARED USE PATH**

**EROSION AND SEDIMENT CONTROL PLANS PHASE 2 - SC-15 OF 19**
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 514 + 50 TO STA. 519 + 00

**FILE:**
- **CIP**
- **L**
- **E 12 22 00**
- **N 5 73 6 00**
- **STA. 515 + 21**

**DATA:**
- **NAVD 88 VERTICAL**

**DRAWN TO:** NAVD 88 VERTICAL

**NAVD 88 VERTICAL DATUM: NAD 83/91 HORIZONTAL**

**GAITHERSBURG, MD 20878**
100 EDISON PARK DRIVE, 4TH FLOOR
DEPARTMENT OF TRANSPORTATION
MONTGOMERY COUNTY

**FILE:**
- **PLOTTED:** Tuesday, September 17, 2019 AT 03:35 PM
- **C.I.P. PR. # 501744**
- **FILE:**
- **PLOTTED:** Tuesday, September 17, 2019 AT 03:35 PM

**DATE**
- **08/2019**

**SUBMITTAL**
- **90% SUBMITTAL**
- **09/2019**

**NOTE:**
- **SEE NOTE 1.**
- **CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.**
- **NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.**
- **FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.**
- **SEE NOTE 1.**

**TABLE:**

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<td>12' 42&quot;</td>
<td>STA. 516 + 00</td>
<td>1 EA</td>
<td>0.14</td>
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**PLANS:**
- **HORIZONTAL**
- **VERTICAL**

**DRAWN TO:** NAVD 88 VERTICAL

**DATE**
- **09/2019**

**EROSION AND SEDIMENT CONTROL PLANS PHASE 2 - SC-15 OF 19**
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 514 + 50 TO STA. 519 + 00

**FILE:**
- **CIP**
- **L**
- **E 12 22 00**
- **N 5 73 6 00**
- **STA. 515 + 21**

**DATA:**
- **NAVD 88 VERTICAL**

**DRAWN TO:** NAVD 88 VERTICAL

**DATE**
- **09/2019**

**SUBMITTAL**
- **90% SUBMITTAL**
- **09/2019**

**NOTE:**
- **SEE NOTE 1.**
- **CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.**
- **NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.**
- **FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.**
- **SEE NOTE 1.**

**TABLE:**

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<tbody>
<tr>
<td>12' 42&quot;</td>
<td>STA. 516 + 00</td>
<td>1 EA</td>
<td>0.14</td>
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**PLANS:**
- **HORIZONTAL**
- **VERTICAL**

**DRAWN TO:** NAVD 88 VERTICAL

**DATE**
- **09/2019**

**SUBMITTAL**
- **90% SUBMITTAL**
- **09/2019**

**NOTE:**
- **SEE NOTE 1.**
- **CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.**
- **NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.**
- **FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.**
- **SEE NOTE 1.**
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

PLAN SHEET SC-16 FINAL

EROSION AND SEDIMENT CONTROL PLANS PHASE 2 - SC-16 OF 19
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 519+00 TO STA. 523+50
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SCALE: 1" = 20'
NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP, CURB INLET PROTECTION PHASE 1, SUPER SILT FENCE PHASE 1, STRUCTURE PHASE 1, TEMPORARY STONE OUTLET INLETS AND STORM DRAIN TO BE CONSTRUCTED BY C.I.P. PROJECT 508000 BEFORE THIS PROJECT.
2. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT.
3. FOR FOREST CONSERVATION MEASURES, REFER TO LANDSCAPING PLANS.

SCALE: 1" = 20'
NEW:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP.
   REMOVE AND INSTALL TO BE CONSTRUCTED BY C.R.P.
2. GUTTER INLET TO BE CONSTRUCTED BY C.R.P.
3. EROSION AND SEDIMENT CONTROL PLANS IN TIME.
   REFER TO LANDSCAPING PLANS.

NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP.
   REMOVE AND INSTALL TO BE CONSTRUCTED BY C.R.P.
2. GUTTER INLET TO BE CONSTRUCTED BY C.R.P.
3. EROSION AND SEDIMENT CONTROL PLANS IN TIME.
   REFER TO LANDSCAPING PLANS.

SCALE: 1"=20'

90% SUBMITTAL

EROSION AND SEDIMENT CONTROL
PLANS PHASE 2 - SC-19 OF 19
MD 355 - CLARKSBURG
SHARED USE PATH
STA. 194+50 TO STA. 200+20

NOTE:
1. CURB & GUTTER, SHARED USE PATH, TEMPORARY CURB RAMP.
   REMOVE AND INSTALL TO BE CONSTRUCTED BY C.R.P.
2. GUTTER INLET TO BE CONSTRUCTED BY C.R.P.
3. EROSION AND SEDIMENT CONTROL PLANS IN TIME.
   REFER TO LANDSCAPING PLANS.
SEQUENCE OF CONSTRUCTION
1. The contractor shall complete the following work with the required control of traffic following the Table of Standard Details below. The contractor shall ensure that the work progresses at a rate sufficient to ensure the orderly and safe movement of traffic during construction. The contractor shall follow the MDOT SHA standards for temporary traffic control devices. Temporarily placed devices shall be removed when the work is complete or at the end of each day work progresses.
2. Work shall take place between the hours of 7 a.m. and 7 p.m. Work shall take place on days when the weather permits the safe and orderly movement of traffic.
3. The contractor shall ensure that all temporary traffic control devices are in place and fully functioning prior to the start of the work.
4. The contractor shall complete the work within the time frame specified in the contract documents.
5. The contractor shall notify the MDOT SHA of any changes to the construction schedule.
6. The contractor shall ensure that all temporary traffic control devices are removed at the end of each day work progresses.
7. The contractor shall ensure that all temporary traffic control devices are placed in accordance with the MDOT SHA specifications.
8. The contractor shall ensure that all temporary traffic control devices are removed at the end of each day work progresses.

MD 355 - CLARKSBURG
SHARED USE PATH
90% SUBMITTAL
**Chamfer Criteria**

All exposed edges of concrete shall have a 3/4" x 3/4" chamfer.

**Soil Bearing Pressure - S = 3,000 P.S.F. (Assumed)**

**50 Year Recurrence Interval**

- 100 MPH - Overhead and Cantilever Structures
- 100 MPH - Ground Mount Sign Supports

The contractor shall be governed by the standards and requirements of the following:

- AASHTO - "Standard Specifications for Structural Supports for Highway Signs and Retroreflective Sheeting for Use on Highway Signs" (July 2008)
- ASTM - "Standard Specifications for Highway Signs and Retroreflective Sheeting for Use on Highway Signs" (July 2008)
- MD Mutcd - "Standard Specifications for Highway Signs and Retroreflective Sheeting for Use on Highway Signs" (July 2008)

**Classification of Signs**

Each sign shall be identified as follows:

- Instructional Signs
- Regulatory Signs
- Guide Signs
- Overview Signs
- Responsive Signs
- Project Requirements

**Responsive Signs**

- Regulatory signs shall include the requirements of all applicable regulatory signs as shown in the plan and shall be the responsibility of the contractor to locate and protect all existing facilities that may be affected by this work.

**Project Requirements**

All signs on this project shall be fabricated to meet the requirements of the following standards and specifications:

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LANE USE & SUPPORT TO SNOWDEN FARM PARKWAY

MATCH LINE STA. 24"x24" 4 S.F.

HATCHED CROSSWALK
PAVEMENT MARKING DETAIL
SCALE: NOT TO SCALE

18" SOLID WHITE THERMOPLASTIC PAVEMENT MARKINGS (STOP LINE)

THERMOPLASTIC PAVEMENT MARKINGS
5" SOLID DOUBLE YELLOW

PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKINGS

REMOVABLE PAVEMENT MARKINGS TO EXISTING PAVEMENT MARKINGS TO

NOTE: DRAWN TO SCALE 1"=20'

APPROVALS

DATUM: NAD 83/91 HORIZONTAL
NAVD 88 VERTICAL

501+00 TO 505+00

90% SUBMITTAL

DATE: 09/2019

NO.            REVISION                   DATE        BY

90% SUBMITTAL

DEFINED BY: WES 503 J.L.R.

J.D.W.

M.B.

9/16/2019

1/27/2020

PROPOSED SIGN

LANE USE & SUPPORT

DATE: 09/2019

501+00 TO 505+00

NOTE: DRAWN TO SCALE 1"=20'

APPROVED

DEPARTMENT OF TRANSPORTATION
150 EDISON PARK DRIVE, 1ST FLOOR
GROVESVILLE, MD 20878

PLOTTER: CHIEF, DIVISION OF ENGINEERING SERVICES

SIGNING & PAVEMENT MARKING PLANS

RENOVATION Of 504 EOGST. HANDicap PARKING SPACES

DIVISION CHIEF

ASST. DIV. CHIEF

OFFICE DIRECTOR

PIANO: M.B.

MARKING THE THERMOPLASTIC (TYVEK) MARKING

REMOVABLE PAVEMENT MARKINGS TO EXISTING PAVEMENT MARKINGS TO

NOTE: DRAWN TO SCALE 1"=20'

APPROVED

DEPARTMENT OF TRANSPORTATION
150 EDISON PARK DRIVE, 1ST FLOOR
GROVESVILLE, MD 20878

PLOTTER: CHIEF, DIVISION OF ENGINEERING SERVICES

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OFFICE DIRECTOR

PIANO: M.B.
**Legend**

1. **Solid White Thermoplastic**
2. **Solid Yellow Thermoplastic**
3. **Solid Yellow Thermoplastic for 12" Line**
4. **5" Solid Double Yellow Thermoplastic**
5. **5" Solid Yellow Thermoplastic**
6. **5" Dashed Yellow Thermoplastic**
7. **5" Solid White Thermoplastic**
8. **24" Solid White Thermoplastic**
9. **24" Solid White Thermoplastic - Vertical**
10. **5" Solid White Thermoplastic - Vertical**

**Signs on One New 100 Edison Park Drive, 4th Floor**

**Replacement Existing Signs**

**Support**

**Support to Existing Sign**

**Support to Proposed Sign**

**Arrow**

**Lane Use**

**Be Removed & Support**

**Directions**

**Install 1" Hole Perforated Plastic Tree Cover**

**90% Submittal**

**Approvals**

- Office Director
- Assistant Division Chief
- Team Leader
- Division Chief
- Department of Transportation
- Maryland

**Date**

- 09/16/2019

**Match Line STA 519**

**Pavement Markings**

- 12" Solid White Thermoplastic
- PAVEMENT MARKINGS (3' LINE, 9' SPACE)
- 5" Dashed White Thermoplastic
- 5" Solid White Thermoplastic
- 24" Solid White Thermoplastic
- 5" Solid Yellow Thermoplastic - Vertical
- 5" Solid Double Yellow Thermoplastic
- 5" Dashed Yellow Thermoplastic
- 5" Solid White Thermoplastic - Vertical
- 24" Solid White Thermoplastic - Vertical
- 5" Solid White Thermoplastic - Vertical

**To Stringtown Road**

**To Snowden Farm Parkway**

**Location Map**

**Plan Sheet SN-2.3**

**Signing and Pavement Marking Plans**

**MD 355 - Clarksburg**

**Shared Use Path**

**STA. 514+50 to STA. 523+50**
**INDEX OF QUANTITIES**

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<td>13</td>
<td>4&quot;x4&quot; WOOD SUPPORT</td>
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</table>
1. **GFI RECEPTACLES SHALL BE WIRED WITH #10 AWG WIRE BETWEEN THE CONNECTOR KIT AND THE RECEPTACLE.**

2. **BASE MOUNTED PEDESTAL SHALL HAVE A SPLIT PANEL TO PROVIDE PHOTO CELL CONTROL FOR THE 240V LIGHTING FOR FUTURE MAINTENANCE.**

3. **ALL SOIL REMOVED FOR HANDHOLE INSTALLATION MUST BE COVERED TO PREVENT EROSION. ALL SOIL NOT USED FOR BACKFILL MUST BE REMOVED ON THE SAME WORKING DAY.**

4. **ALL SOIL REMOVED FOR ROADWAY CROSSINGS MUST BE COVERED ON THE SAME WORKING DAY.**

5. **CONDUCTORS SHALL NOT BE SPLICED EXCEPT IN STRUCTURES AND MANHOLES. ALL MANHOLES, CONDUITS UNDER PAVEMENTS, LIGHTING STRUCTURES, ETC, SHALL BE STAKED OUT AND EVERY LOCATION APPROVED BY THE ENGINEER BEFORE ANY WORK IS COMPLETED.**

6. **THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING AND PROPOSED UTILITIES, LIGHTING CONDUITS, AND CIRCUITS PRIOR TO COMMENCING WORK.**

7. **THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IN CASE OF DAMAGE TO AN EXISTING FACILITY.**

8. **ALL TRENCHING MUST BE BACKFILLED AND RESTORED TO ITS ORIGINAL CONDITION ON THE SAME WORKING DAY.**

9. **UPON RECEIVING NOTICE TO PROCEED THE CONTRACTOR SHALL ARRANGE A MEETING WITH THE LOCAL UTILITY ENGINEER BEFORE ANY WORK IS COMPLETED.**

10. **ALL CONNECTIONS BETWEEN GROUND ROOD AND GROUND CABLE SHALL BE EXOTHERMIC WELDS.**

11. **BASE MOUNTED PEDESTAL SHALL HAVE A SPLIT PANEL TO PROVIDE PHOTO CELL CONTROL FOR THE 120V GFI CIRCUITS, BUT NO PHOTO CELL CONTROL FOR THE 120V GFI CIRCUITS.**

12. **10 FEET OF SLACK WIRING AND ENSURE THAT POWER IS AVAILABLE WHEN REQUIRED.**

13. **COMPANY (POTOMAC EDISION POWER), THE PROJECT ENGINEER TO DETERMINE THE LOCATION OF AVAILABLE POWER.**

14. **EROSION. ALL SOIL NOT USED FOR BACKFILL MUST BE REMOVED ON THE SAME WORKING DAY.**

15. **THE CONSTRUCTION SHOULD BE MADE TO THE SPECIFICATIONS OF THE NATIONAL ELECTRIC CODE.**

16. **THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING AND PROPOSED UTILITIES, LIGHTING CONDUITS, AND CIRCUITS PRIOR TO COMMENCING WORK.**

17. **ALL CONNECTIONS BETWEEN GROUND ROOD AND GROUND CABLE SHALL BE EXOTHERMIC WELDS.**

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20. **THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING AND PROPOSED UTILITIES, LIGHTING CONDUITS, AND CIRCUITS PRIOR TO COMMENCING WORK.**
Montgomery County Department of Parks

DE deciduous plants - (2" caliper or larger)

September 2008

Detail No.

The Maryland-National Capital Park and Planning Commission

NOTE:
1. stakes and wires must be removed no later than 12 months after planting.
2. planting hole shall be dug by a backhoe or other machine and finished by hand.
3. if surrounding soil is compacted as determined by M-NCPPC planning dept inspector, an area up to 5 times the dia. of the root mass shall be excavated or rototilled to a 1' depth and the soil shall be amended.
4. do not damage or cut leader.
5. root flair even with level of undisturbed ground.

Native soil with inoculant

Typical arborite guying material

Installation

Surveyors flagging (white)

6' hardwood stake at 90° angle to wire (2' into undisturbed earth), 3 stakes per tree

Cut burlap, rope and wirebasket from top 1/2 of ball

3" shredded mulch tapered to 0" at the trunk

Prune only dead, decayed, broken, crossing and inward growing branches (never prune leader)

Certification of qualified professional

6-27-19

Final forest conservation plan notes

MD 355 - Clarksburg

Shared use path
**NOTES**

1. Tree holes may be combined with sediment control practices.
2. Location and timing of planting should be coordinated with field and arterial grades.
3. Properly sized and shaped planting holes should be dug prior to installing protective devices.
4. Root damage must be avoided.
5. Protection device is required.
6. Properly sized and shaped planting holes should be dug prior to installing protective devices.

**EXISTING GRADE / UNDISTURBED SOIL**

- **1.** STAKES AND WIRES MUST BE REMOVED NO LATER THAN 12 MONTHS AFTER PLANTING.
- **2.** PLANTING HOLE SHALL BE DUG BY A BACKHOE OR OTHER MACHINE AND FINISHED BY HAND.
- **3.** IF SURROUNDING SOIL IS COMPACTED AS DETERMINED BY M-NCPPC PLANNING DEPT INSPECTOR, AN AREA UP TO 5 TIMES THE DIA. OF THE ROOT MASS SHALL BE EXCAVATED OR ROTOTILLED TO A 1' DEPTH AND THE SOIL SHALL BE AMENDED.
- **4.** DO NOT DAMAGE OR CUT LEADER.
- **5.** ROOT FLAIR EVEN WITH LEVEL OF UNDISTURBED GROUND.

**TYPICAL ARBORTIE GUYING MATERIAL**

- **6' HARDWOOD STAKE AT 90 DEGREE ANGLE TO WIRE (2' INTO UNDISTURBED EARTH), 3 STAKES PER TREE**
- **CUT BURLAP, ROPE AND WIRE BASKET FROM TOP 1/2 OF BALL**
- **3" SHREDDED MULCH TAPERED TO 0" AT THE TRUNK**

**PRUNE ONLY DEAD, DECAYED, BROKEN, CROSSING AND INWARD GROWING BRANCHES (NEVER PRUNE LEADER)**

**SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL**

- **IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. 3/4" (19.05MM) WIDE 900 LB. BREAK STRENGTH.**
- **ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.**
- **FOLD ENDS OF ARBORTIE BACK. SECURE TO STAKE WITH 1" GALVANIZED ROOFING NAIL OR USE A KNOT.**

**ARBORTIE FASTENED TO TREE AND STAKES IN A MANNER WHICH SUPPORTS TREE MOVEMENT**

**ROOT PRUNING DETAIL**
### SUMMARY OF EARTHWORK

#### Excavation
- **Total Class 1 Excavation**: 828 C.Y.
- **Total Class 2 Excavation**: 6,350 C.Y.
- **Total Erosion & Sediment Control Excavation**: 738 C.Y.
- **Total Class 1 Excavation Available for Embankment**: 320 C.Y.
- **Total Class 2 Excavation Available for Embankment**: 2,222 C.Y.

#### Embankment
- **Total Common Borrow Required**: 0 C.Y.
- **Total Borrow Densified (20%)**: 0 C.Y.
- **Total Select Borrow Required**: 0 C.Y.
- **Total Capping Borrow Required**: 0 C.Y.
- **Total Common Borrow Required**: 0 C.Y.
- **Total Common Borrow Required**: 0 C.Y.

#### Proposal Quantities
- **Total Borrow**: 6,350 C.Y.
- **Total Erosion & Sediment Control**: 738 C.Y.

### GRADING TABLE

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<td>BORROW</td>
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</table>

#### Stage 1

- **Excavation**
  - Total Class 1 Excavation: 0 C.Y.
  - Total Class 2 Excavation: 828 C.Y.
  - Total Erosion & Sediment: 0 C.Y.

- **Embarkment**
  - Total Common Borrow Required: 0 C.Y.
  - Total Borrow Densified (20%): 0 C.Y.
  - Total Select Borrow Required: 0 C.Y.
  - Total Capping Borrow Required: 0 C.Y.

#### Stage 2

- **Excavation**
  - Total Class 1 Excavation: 0 C.Y.
  - Total Class 2 Excavation: 6,350 C.Y.
  - Total Erosion & Sediment: 738 C.Y.

- **Embarkment**
  - Total Common Borrow Required: 0 C.Y.
  - Total Borrow Densified (20%): 0 C.Y.
  - Total Select Borrow Required: 0 C.Y.
  - Total Capping Borrow Required: 0 C.Y.
The Highway Plans.

The orientation of view does not match the orientation of this note:

MD 355 (FREDERICK RD)

Curve Data

E = 11.72'
CH = 497.62'
T = 249.91'
L = 498.35'
R = 2,658.00'
D = 2°09'20.6"

Delta = 10°44'32.5" RT. (Working Line)

Retaining Wall

Front Face of Wall

Proposed

Existing

Total Length of Retaining Wall 1 = 134'-5"}

Plan (SCALE: 1" = 10')

Elevation (SCALE: 1" = 10')

90% Submittal

MD 355 - CLARKSBURG

Shared Use Path
1. AUGUR HOLES FOR PROPOSED CAISSONS. ROCK SOCKETS SHALL BE PROVIDED WHERE INDICATED BY CORING INTO EXISTING ROCK. SEE CAISSON INSTALLATION NOTES ON DRAWING RW1-2.
2. INSTALL STEEL SOLDIER PILES AND PLACE CONCRETE IN CAISSON TO THE SPECIFIED ELEVATION.
3. POUR REMAINDER OF CONCRETE FACING AND CAP FOR THE WALL.
4. INSTALL NEW RAILING ON TOP OF RETAINING WALL.

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

**CAISSON CONNECTION DETAIL**

**CAISSON REINFORCEMENT DETAIL**

**DRAINAGE PANEL DETAIL**

**LAGGING CONNECTION DETAIL**

**LAGGING DETAIL**

**STUD SPACING DETAIL**

**CAISSON REINFORCEMENT DETAIL**

**SCALE: 1" = 1'-0"**

**SCALE: AS NOTED**

**NOTES:**

1. DRAIN PIPES NOT SHOWN FOR CLARITY.
2. INSTALL STEEL SOLDIER PILES AND PLACE CONCRETE IN CAISSON TO THE SPECIFIED ELEVATION.
3. POUR REMAINDER OF CONCRETE FACING AND CAP FOR THE WALL.
4. INSTALL NEW RAILING ON TOP OF RETAINING WALL.