

July 18, 2003

**MEMORANDUM**

TO: Montgomery County Planning Board

VIA: Michael Riley, Acting Chief, Park Development Division (PDD) *M*

FROM: Dilip Pandya, Project Manager, PDD *DNP*

SUBJECT: Briefing: Rock Creek Trail Pedestrian Bridge

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**PURPOSE**

The purpose of this memorandum is to provide a status update of the facility plan for the Rock Creek Trail Pedestrian Bridge over Veirs Mill Road. In September, staff expects to present the completed facility plan and seek your approval to transmit it to the County Council with a request for a CIP amendment to fund design and construction of the bridge.

The Department is preparing an application for Transportation Enhancement grant funds to match local expenditures to design and construct the bridge. The grant application requires evidence that facility planning has been completed and that the County Council has approved design and construction funding for the project. The State of Maryland Highway Administration (SHA) will set the due date for grant applications when the Congress approves funding for the renewed program. Since SHA expects to establish an October or November due date for these grant applications, the Planning Board and County Council will need to act quickly so that the application can be completed and submitted on time.

**BACKGROUND**

The County Council approved the request for funds (\$333,000) to facility plan the Rock Creek Trail Pedestrian Bridge in the FY03 Capital Budget and FY03-08 Capital Improvements Program (CIP) with the expectation that the Department would take the steps necessary to submit a grant application this Fall.

Montgomery County's Department of Public Works and Transportation (DPWT) is working on our behalf with a design consultant to prepare the facility plan and grant application. Please see the attached letter from the Planning Board to County Council President Steven A. Silverman, dated February 15, 2002. Also see the attached Memorandum from County Executive Douglas M. Duncan to Steven A. Silverman, dated March 21, 2002.

## **PROJECT DESCRIPTION**

The purpose of the Rock Creek Trail Bridge over Veirs Mill Road near Aspen Hill Road is to provide a safe and high quality link between two separated segments of the popular Rock Creek Hiker/biker trail to better serve both the bicyclists and pedestrian in the Aspen Hill region of Montgomery County.

In the year 2000, the Aspen Hill Civic Association expressed their concerns regarding the intersection improvements at Aspen Hill Road and Veirs Mill Road. At the Montgomery County Planning Board Public hearing held November 16, 2000, Chairman Hussman expressed his concern for pedestrian safety at this intersection. It was suggested that the State procure funds for a pedestrian bridge to be built over Veirs Mill Road taking the Hiker/Biker trail away from the busy intersection. The state recommended that Montgomery County apply for improvement as an Enhancement Project through the Executive Committee review process.

## **PUBLIC PROCESS**

We have held two community meetings to obtain their input in developing the facility plan and cost estimate for the project. In addition, we also met with the Board of Directors of the Aspen Hill Civic Association on two separate occasions. The comments from these meetings are being addressed as the alternatives are developed

## **DESCRIPTION OF ALTERNATIVES**

### **Alternative 1**

This alternative is the No-Build option. While no impacts would be associated with this alternative, it would not meet the purpose and need of this project.

### **Alternative 2**

This alternative includes an extension of the trail along the parking area and driveway of the Aspen Hill Park outside the tree line, south along the existing Rock Creek Park property bordering Baltic Avenue to the west. The trail would then cross Veirs Mill Road, via elevated

structure, approximately 600-feet northwest of the Aspen Hill Road/Veirs Mill Road intersection. The trail would then ramp back down to the existing grade, and run along the southern edge of Veirs Mill Road for approximately 700 feet, tying back into the existing trail.

Beyond the benefits of increased safety to pedestrians and bicyclists crossing Veirs Mill Road, Alternative 2 provides a more direct connection of the trail. Further, this alternative would introduce fewer impacts to the environmentally sensitive areas of the Rock Creek Park than the more extensive Alternative 3 alignment.

### **Alternative 3**

This alternative proposes that the trail follow existing terrain within the Rock Creek Park, and cross Veirs Mill Road at a location approximately 900 feet west of the Aspen Hill/Veirs Mill Road intersection. The trail would then ramp back down to the existing grade, and run along the southern edge of Veirs Mill Road for approximately 1100 feet, tying back into the existing trail.

Like Alternative 2, this alternative provides a less intrusive structure and trail for the community of Aspen Hill Park. The bridge would be located further from the community sight lines and would eliminate much of the current pedestrian and bicycle traffic on its streets and sidewalks. Further, by locating the bridge closer to the city of Rockville limits, it favors the “gateway/monument” characterization some community members are seeking from the bridge design. Another benefit to the placement of the bridge in a location farther west is through the minimization of the potential impacts to residential properties, and potentially lower structure costs than Alternative 2.

### **Alternative 4**

The Alternative 4 alignment comes as close as possible to Baltic Avenue in the park’s existing right-of-way. Under Alternative 4, the path would follow outside the existing Rock Creek Park tree line, adjacent to the corner residence (5114 Adrian Street) and over Veirs Mill Road approximately 400 feet from the Aspen Hill Road/Veirs Mill Road intersection. The path would then continue, via a 500 foot elevated structure, southeast of Veirs Mill Road, tying into the existing trail.

This alternative has been designed with the same criteria as the two aforementioned alternatives. However, this alternative was designed to reduce impacts to the 100-year floodplain. The use of structure to the west of Veirs Mill Road would also avoid impacts to wetlands and does not require the crossing of the existing outfall. The main problem with this alternative is that the trail would be very close to the residents on Adrian Street.

### **Alternative 5 (Current Recommended Alternative)**

Alternative 5 was developed after the initial Public Meeting at the request of the Aspen Hill Civic Association to M-NCPPC in order to provide the community the most convenient access to the bridge crossing while maintaining a reasonable distance from adjacent homes. Alternative 5 also provides a connection to the trail and bridge crossing over Veirs Mill Road near the intersection with Aspen Hill Road and the proposed relocated bus stop related to the SHA widening. This provides residents with a safe alternative to the at-grade crossing when using transit stops along Veirs Mill Road.

The Alternative 5 alignment follows a similar path as Alternative 2 up to Adrian Street. The trail would then cross Veirs Mill Road with an elevated structure with a curve of a radius of 225', while descending at a 5% maximum slope to the south side of Veirs Mill Road. The bridge would be approximately 370 feet northwest of the Aspen Hill Road/Veirs Mill Road intersection.

Vertically, the trail would then ramp back down on structure to the existing grade, running along the southern edge of Veirs Mill Road for approximately 600 feet before tying back into the existing trail. Horizontally, after crossing Veirs Mill Road, the structure would curve back near the Veirs Mill Road/Aspen Hill Road intersection before tying into the existing path. This alternative includes sidewalk and stairway connections to the Adrian Street sidewalk on the north side and to the Veirs Mill Road bus stop on the south side of the intersection. If funds allow, this alternative would include a stair tower to the bridge on the southern side of Veirs Mill Road. The stair tower would have approximately 45 to 50 steps. It would connect to a sidewalk running along the shoulder for 340' to the intersection. The Department of Permitting Services (DPS) approved a flood plain impact study for Alternative 5 which proved that there would be no adverse impacts to the flood plain elevation. Preliminary Construction drawings for this preferred alignment are attached to this memorandum.

### **Issues and Impacts Summary**

The chart below provides comparisons of impacts for the proposed alternatives. These quantities are based on the conceptual level of alternatives development and GIS data provided by the County for alternatives 1 through 5. Alternative 5 was also based on a topographic survey.

<b>Issues and Impacts</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>	<b>Alternative 5</b>
Length of Bridge/ Curved Section	No Structure	750 feet of structure/ 75 feet of curved section	825 feet of structure/ 200 feet of curved section	700 feet of structure/ 200 feet of curved section	610 feet of structure/ 542 feet of curved section
Wetland Impacts	None Anticipated	None Anticipated	None Anticipated	None Anticipated	None Anticipated
Could function as a Gateway to Rockville	No Gateway functionality	1,615 feet to Rockville City Limits	1,350 feet to Rockville City Limits	1,860 feet to Rockville City Limits	1,790 feet to Rockville City Limits
Impacts to 100-year Floodplain from earthwork	No impacts	2,300 sqft – with structure on piers 15,300 sqft – retained	7,300 sqft – with structure on piers 20,300 sqft – retained	1,100 sqft – with structure on piers 11,100 sqft – retained	7,800 sqft – with structure on piers 27,600 sqft – retained
Parkland impacts (Property impacts to Rock Creek Park)	No impacts	33,500 sqft – parkland impact	53,500 sqft - parkland impact	29,600 sqft - parkland impact	81,900 sqft - parkland impact
Forest impacts /Specimen Tree	No impacts	26,000 sqft with piers to 30,000	46,000 sqft with piers to 50,000	12,000 sqft with piers to 15,000	7,900 sqft with piers to 57,900

<b>Issues and Impacts</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>	<b>Alternative 5</b>
Impacts		sqft retained/ Three Specimen Trees	sqft retained/ Three Specimen Trees	sqft retained/ Three Specimen Trees	sqft retained/ Three Specimen Trees

**PRELIMINARY COST ESTIMATES; FUNDING**

The facility planning cost estimate will be completed prior to the September 11 Planning Board meeting. The preliminary cost estimate is \$5.3 Million. This includes \$1.0 Million for design (including \$333,000 budgeted for facility plan), and \$4.3 Million for construction. In September, staff expects to seek an FY04 CIP amendment to program design and construction funding beginning in FY05. The County Council must approve the amendment this Fall in order to apply for grant funds. Grant funds may provide up to fifty percent of the cost for design and construction. If the grant is approved, construction must begin within eighteen months of the completion of a funding Memorandum of Understanding between the State and the Department.



OFFICE OF THE COUNTY EXECUTIVE  
ROCKVILLE MARYLAND 20850

Douglas M. Duncan  
County Executive

MEMORANDUM

March 21, 2002

TO: Steven A. Silverman, President, Montgomery County Council

FROM: Douglas M. Duncan, County Executive ORIGINAL SIGNED BY  
DOUGLAS M. DUNCAN

SUBJECT: Maryland-National Capital Park and Planning Commission Amendment  
to the FY03-08 CIP Submission  
Facility Planning: Non Local Parks. No. 958776, \$330,000

I support the request from the Maryland-National Capital Park and Planning Commission (M-NCPPC) to amend their FY03-08 CIP submission to incorporate a new project in the Facility Planning: Non Local Parks project. The planning would be for a proposed Rock Creek Hiker-Biker Trail bridge over Veirs Mill Road at Aspen Hill Road.

It is my understanding that M-NCPPC will apply for Federal Transportation Enhancement Act funds in November 2003 to cover eligible construction costs for this project, and that facility planning and design must be complete to apply. M-NCPPC has stated that there is also a possibility that anticipated proceeds from the Maryland State Highway Administration acquisition of some land parcels in Rock Creek Regional Park in that area could be used to help fund this project. We are currently looking into existing restrictions on the use of land sale proceeds in order to better understand how much of such proceeds might be applied to fund this project.

The request would add \$333,000 in Current Revenue: General to the PDF - \$200,000 in FY03 and \$133,000 in FY04, and would increase the FY03 appropriation by \$333,000. However, because we do not have available Current Revenue, I can only recommend approval of this project if the Council is able to identify funding for it or if M-NCPPC is able to accommodate the project by adjusting other work in their CIP.

DMD: mt

Attachment: M-NCPPC Amended FY03-08 CIP Request for Facility Planning: Non Local Parks

cc: Bette McKown, M-NCPPC





THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION  
Office of the Chairman, Montgomery County Planning Board

February 15, 2002

The Honorable Steven A. Silverman, President  
Montgomery County Council  
100 Maryland Avenue  
Rockville, Maryland 20850

Dear Mr. Silverman:

The Planning Board proposes to amend its FY03-08 CIP submission to incorporate a new project (\$333,000) in the Facility Planning: Non-Local PDF 958776 in FY03 and FY04, specifically, facility planning for a hiker-biker bridge over Veirs Mill Road to connect portions of the Rock Creek Trail.

The County Council is familiar with the history of this project:

- (1) On February 13, 2001, the County Council adopted Resolution 14-773 pertaining to the improvement of Veirs Mill Road/Aspen Hill Road intersection. Listed among the County Council's recommendations is "accommodation of a potential Rock Creek Hiker-Biker Trail bridge over Veirs Mill Road. The Council will seek State funding for this pedestrian/bicycle bridge."
- (2) On February 16, 2001, County Council President, Blair G. Ewing, wrote to Parker F. Williams, Administrator, State Highway Administration (SHA), that the County Council  
  
"is committed to seeking State funding to construct a bridge over MD 586 for the Rock Creek Trail, which would allow pedestrians and bikers to avoid the thousands of vehicles that pass through this intersection daily. We think it appropriate that the State fund this bridge under the Access 2000 program, and we hope it can be done on a schedule commensurate with the construction of the intersection improvements, that is during 2003."
- (3) On March 21, 2001, John D. Porcari, Secretary, Maryland Department of Transportation, wrote to County Council President, Blair G. Ewing, that  
"We are recommending that Montgomery County apply for the improvement as an Enhancement Project through the Executive Committee review process. . . It is

our intention to continue to coordinate with M-NCPPC and Montgomery County staff to develop a strategy to address the hiker-biker connection at Veirs Mill Road. We will also continue to investigate all funding sources available for this improvement.”

- (4) On January 8, 2002, Neil Pedersen (SHA) and Department staff discussed the project. Mr. Pedersen urged the Commission to submit an application for TEA funds in November 2003.

It is likely that the federal Transportation Enhancement Act will be reauthorized in Fall 2003 making more funds available for projects such as the hiker-biker bridge over Veirs Mill Road. To be eligible for those funds, projects must be in public ownership, design must be 35 percent complete, i.e. facility planning must be complete, and design and construction must be able to begin soon after award of the grant. Grants are fifty percent of the cost for remaining design and construction.

The Planning Board proposes to facility plan the hiker-biker bridge over Veirs Mill Road to connect portions of the Rock Creek Trail so that the project will be eligible for Transportation Enhancement Act funds by Fall 2003. We will be eligible to apply for TEA funds for this project if we can begin facility planning in FY03. The need for the project is described in part by Attachment 1, a letter from the Aspen Hill Civic Association to the County Council dated November 24, 2000.

The PDF proposes to fund facility planning with County Current Receipts in FY03 and FY04 so that facility planning can be completed in FY04 and an application filed for TEA funds in November 2002 (FY04). The Planning Board seeks these funds in addition to the level-of-effort funding already proposed in the FY03-08 program. FY02 facility planning projects in progress and expected to carry-over into FY03 are the Rock Creek Maintenance Yard renovation, Woodlawn Park Police Special Operations Program of Requirements, and Black Hills Regional Park hard surface trail renovation. The new FY03 appropriation funds further work on the Woodlawn Park Police Special Operations facility plan, a facility plan for a skateboard park at South Germantown Recreational Park, and a facility plan for a dog park at a site to be determined. New FY04 appropriation funds facility plans for the Magruder Branch Hard Surface Trail extension Capital Crescent Trail connector to Rock Creek Trail, and Wheaton hard surface trail extension to Randolph Road. Our original appropriation request for FY03 was \$135,000 and for FY04, \$145,000. The sum of these two requests (\$280,000) would not be sufficient to meet the \$333,000 needed for the hiker-biker bridge over Veirs Mill Road to connect portions of the Rock Creek Trail. The Commission cannot absorb this project in our current level-of-effort expenditure schedule because it would require elimination of part of our current FY02 program and all of the FY03 and FY04 programs proposed by the Planning Board prior to consideration of the hiker-biker bridge over Veirs Mill Road.

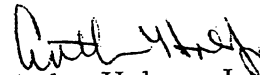
The Maryland State Highway Administration proposes to acquire 3.3 acres from Rock Creek Regional Park as part of its intersection improvement at Veirs Mill Road and Aspen Hill Roads. The acquisition is likely to occur in Fall 2002 (FY03). The estimated



cost of the acquisition is \$333,000. The acquisition may involve four parcels—some owned by Montgomery County and some by the Commission. It is possible that some or all of the proceeds from the sale of the property to the State could be earmarked for a portion of the local share of the project costs. Staff will pursue the viability of this option as the SHA project progresses.

Please note that this request is shown in the Facility Planning: Non-Local PDF. The text of this PDF has been changed slightly from our original November 1, 2001 submission. The Planning Board's acceptance of the County Executive's reduction to the Trails: Hard Surface Design and Construction PDF involved shifting two projects—Magruder Branch Trail and the Capital Crescent Trail connector to Rock Creek Trail -- back into the facility planning PDF so that facility plans could be finalized.

Yours truly,

  
Arthur Holmes, Jr.  
Chairman

**Attachments**

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Attachment 1



# ASPEN HILL CIVIC ASSOCIATION

November 24, 2000 00 NOV 28 9:13

034820

Montgomery County Council  
Mr. Michael L. Subin, Council President  
100 Maryland Avenue  
Rockville, MD 20850

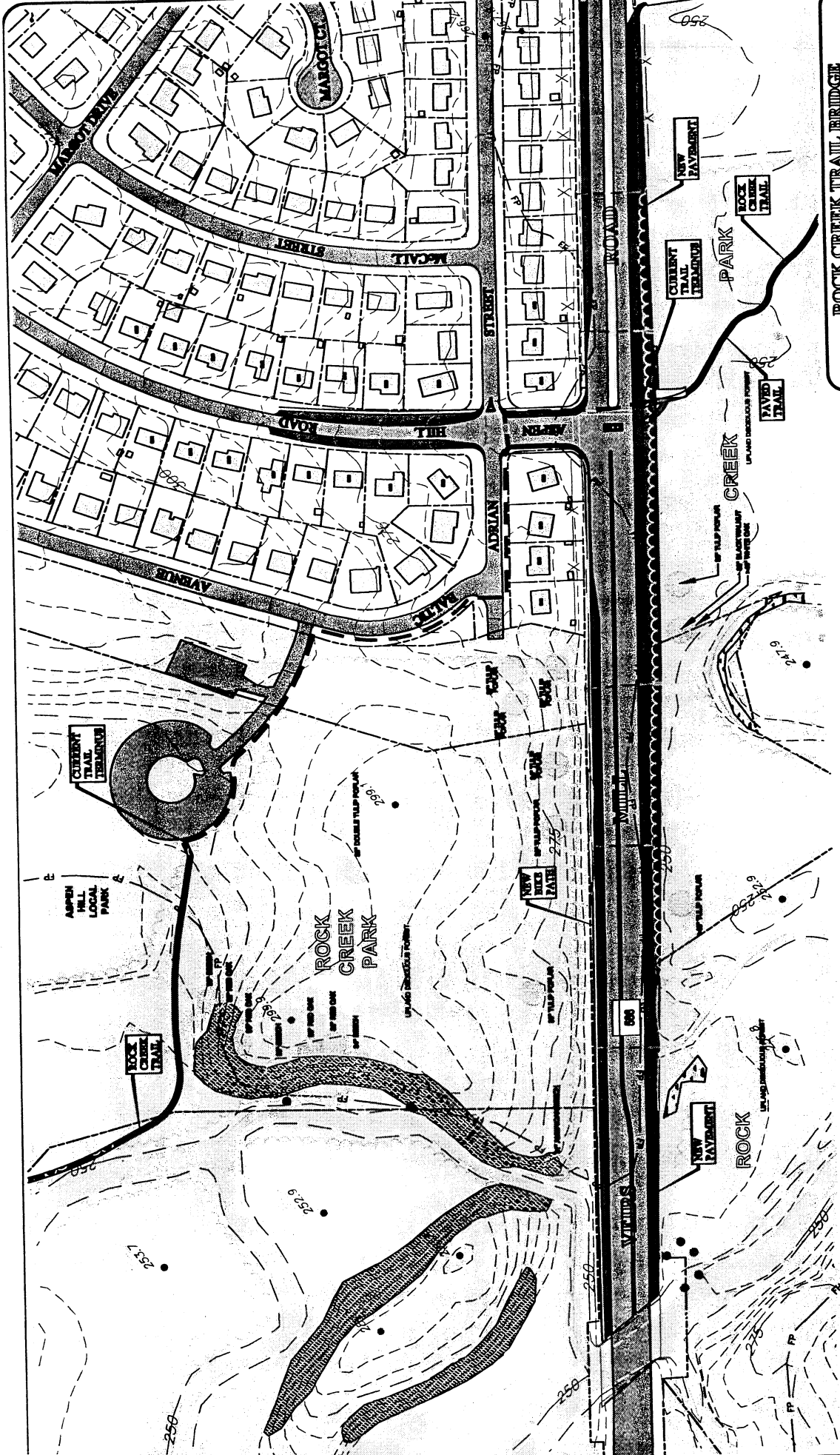
RE: Resolution regarding SHA Intersection Improvements,  
MD 586 (Veirs Mill Road) and Aspen Hill Road

Dear Council President Subin:

As President of the Aspen Hill Civic Association, I would like to express the concerns of our Association regarding the intersection improvements at Aspen Hill Road and Veirs Mill Road (MD 586). The boundaries of the Aspen Hill Civic Association include all of Aspen Hill Road and is bounded by Veirs Mill Road (MD 586) from Turkey Branch Parkway to the Rock Creek Stream. The Board of Directors and our members are well aware of the accidents, backups, and all around headaches that result from the amount of traffic driving through this intersection. I am sure you are aware that Aspen Hill Road is a major cross county route.

The Maryland State High Administration and Montgomery County Department of Park and Planning have been extremely generous in making themselves available to the Aspen Hill Civic Association to explain the two options for improvement of this intersection. The Aspen Hill Civic Association is very concerned because there is a large volume of bus, auto, bike, and pedestrian traffic in a very complicated intersection in limited space. Part of the Rock Creek Hiker Biker trail comes out of Aspen Hill Community Park, on to Baltic Avenue and Adrian Street, across Aspen Hill Road and then across Veirs Mill Road. This trail is highly utilized. Many families with small children use this trail in the evenings and on the weekends. Many employees from the Parklawn Drive area use this trail during workdays. This trail is used for marathons during workdays and weekends. The large volume and speed of traffic on Aspen Hill Road and Veirs Mill Road is a constant all day long, and of course, reaches a peak at rush hour. Careful attention must be made in making this intersection safe for all pedestrians, hikers, and bikers.

At the Montgomery County Planning Board Public Hearing held Thursday, November 16, 2000, Chairman Hussmann expressed his concern for pedestrian safety at this intersection. It was suggested that the State procure funds for a pedestrian bridge to be built over Veirs Mill Road taking the Rock Creek Hiker Biker trail away from this extremely busy intersection. The Aspen Hill Civic Association highly encourages this proposal.



**LEGEND**

--- PROPERTY LINE	--- CURRENT PROPOSED BRIDGE
--- PARK	--- NEW PROPOSED BRIDGE
--- POTENTIAL WETLANDS	--- MAINTENANCE LOCATIONS
--- RECORDARY BOUNDARY	--- EXISTING BRIDGE
--- LOT	--- LIMIT OF DISTURBANCE

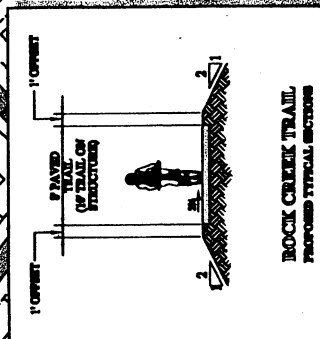
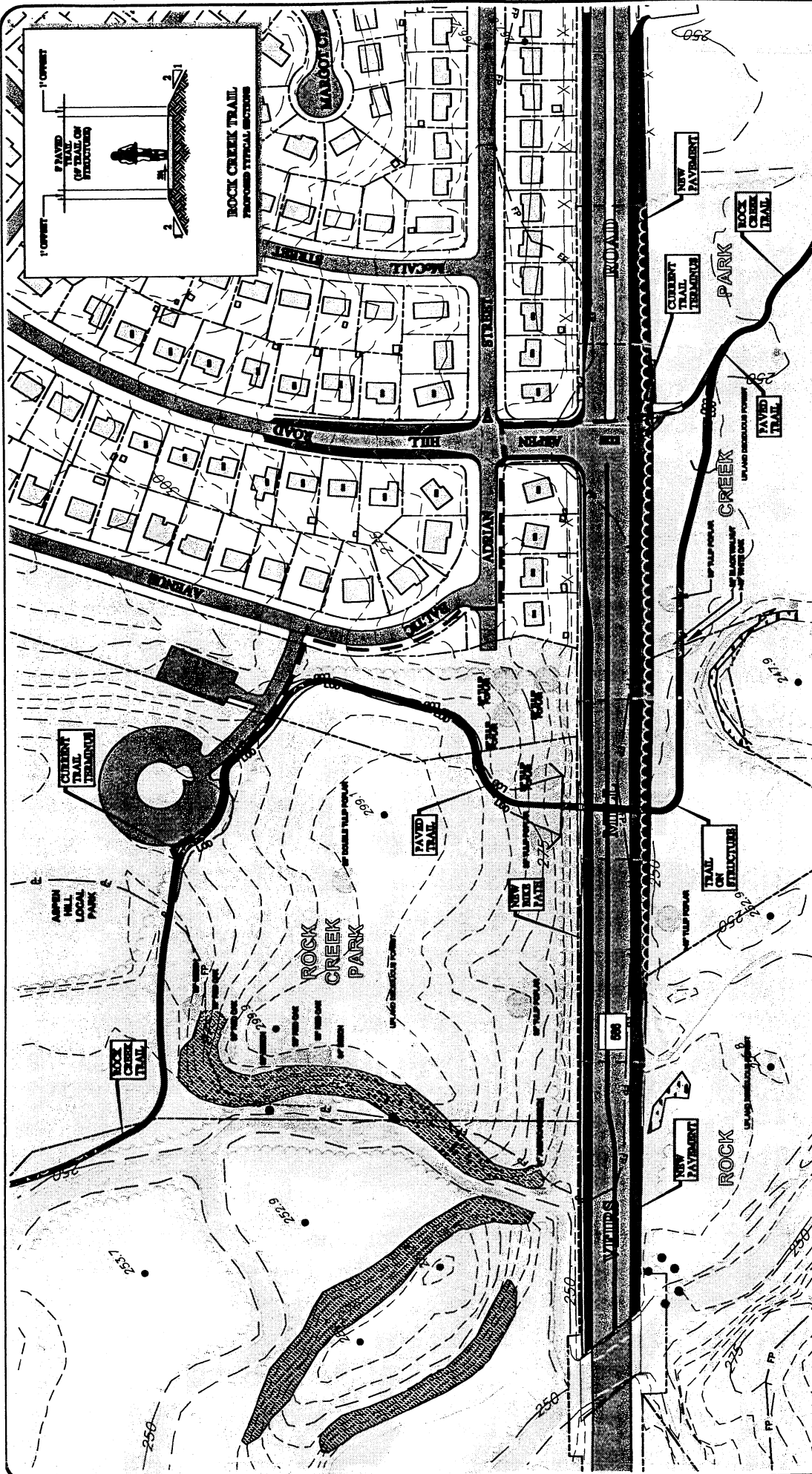
**SCALE IN FEET**

**URS**  
 CONSULTING ENGINEERS  
 1000 PAVAN DRIVE  
 SUITE 100  
 WESTWOOD, CA 94091  
 TEL: (415) 352-4000  
 FAX: (415) 352-4001  
 WWW.URS.COM

**ROCK CREEK TRAIL BRIDGE**  
 ALTERNATIVE 1 (NO-BUILD)

**URS**  
 CONSULTING ENGINEERS  
 1000 PAVAN DRIVE  
 SUITE 100  
 WESTWOOD, CA 94091  
 TEL: (415) 352-4000  
 FAX: (415) 352-4001  
 WWW.URS.COM



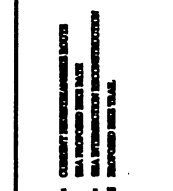


**ROCK CREEK TRAIL BRIDGE**  
RAILWAY WORKS-IN-PROGRESS

**ALTERNATIVE 2**

**URS**  
UNITED STATES OF AMERICA  
A COMMITMENT TO EXCELLENCE

DATE: \_\_\_\_\_  
SCALE: AS SHOWN  
PROJECT NO.: \_\_\_\_\_  
SHEET NO.: \_\_\_\_\_

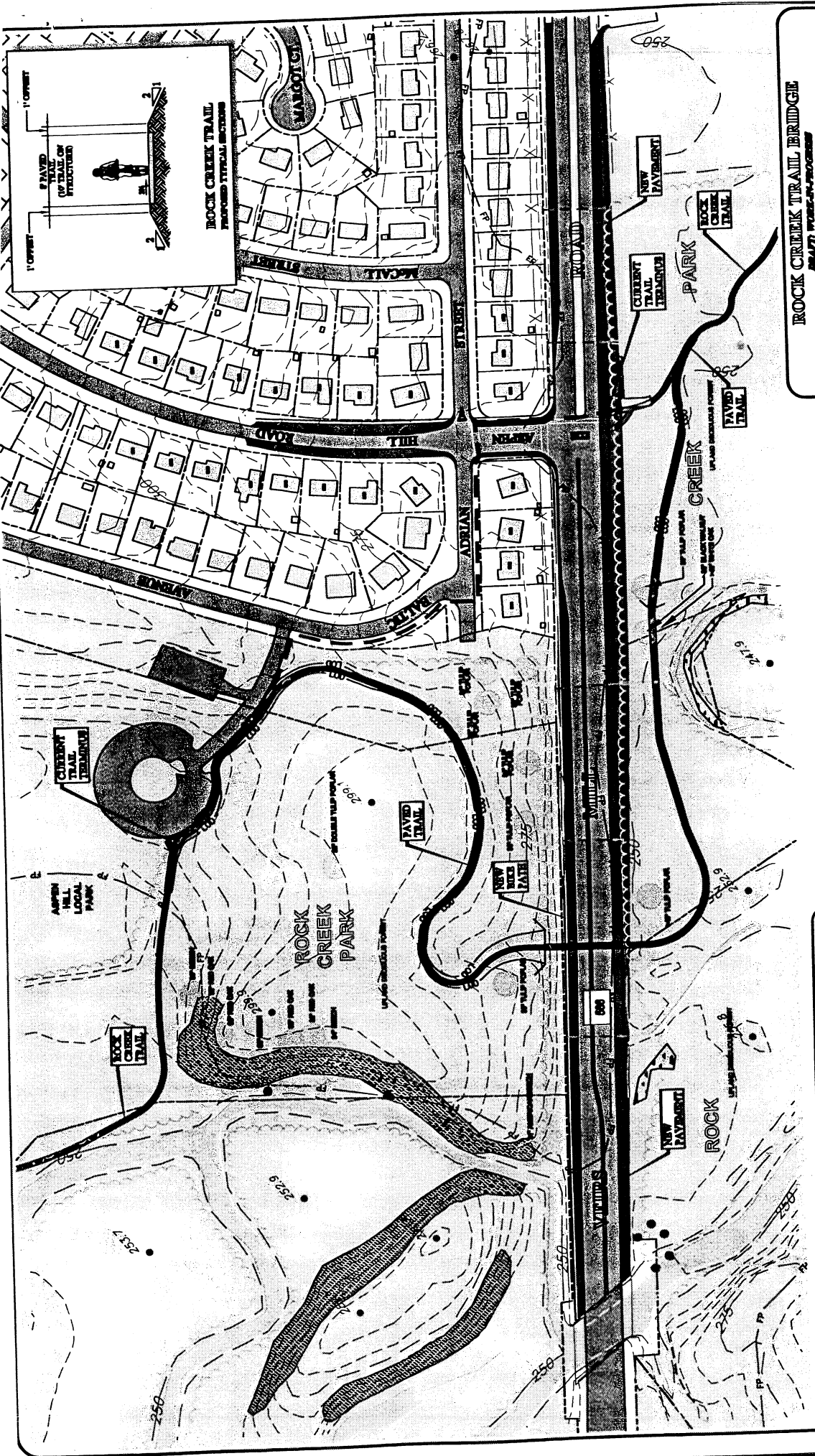


**LEGEND**

- PROPERTY LINE
- PAVED TRAIL
- EXISTING OR CRACK
- POTENTIAL TRAIL CROSSING
- PLANNED TRAIL CROSSING
- TRAIL ON EXISTING STRUCTURE
- TRAIL ON NEW STRUCTURE
- NEW PAVEMENT
- CURRENT TRAIL TERRAIN
- PARK
- UP AND DECIDUOUS FOREST
- UP AND CONIFER FOREST
- TRAIL ON EXISTING STRUCTURE
- TRAIL ON NEW STRUCTURE
- NEW PAVEMENT
- CURRENT TRAIL TERRAIN
- PARK
- UP AND DECIDUOUS FOREST
- UP AND CONIFER FOREST

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(2)



**ROCK CREEK TRAIL BRIDGE**  
ALTERNATIVE 3

	<b>URS</b>
DATE: 09/2000	PROJECT: ROCK CREEK TRAIL BRIDGE
DRAWN BY: J. BROWN	SHEET NO. 1 OF 1

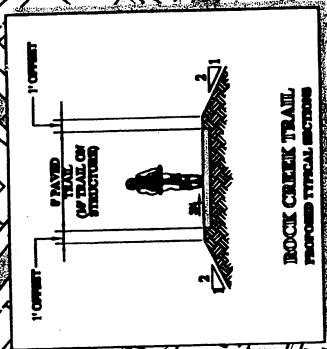
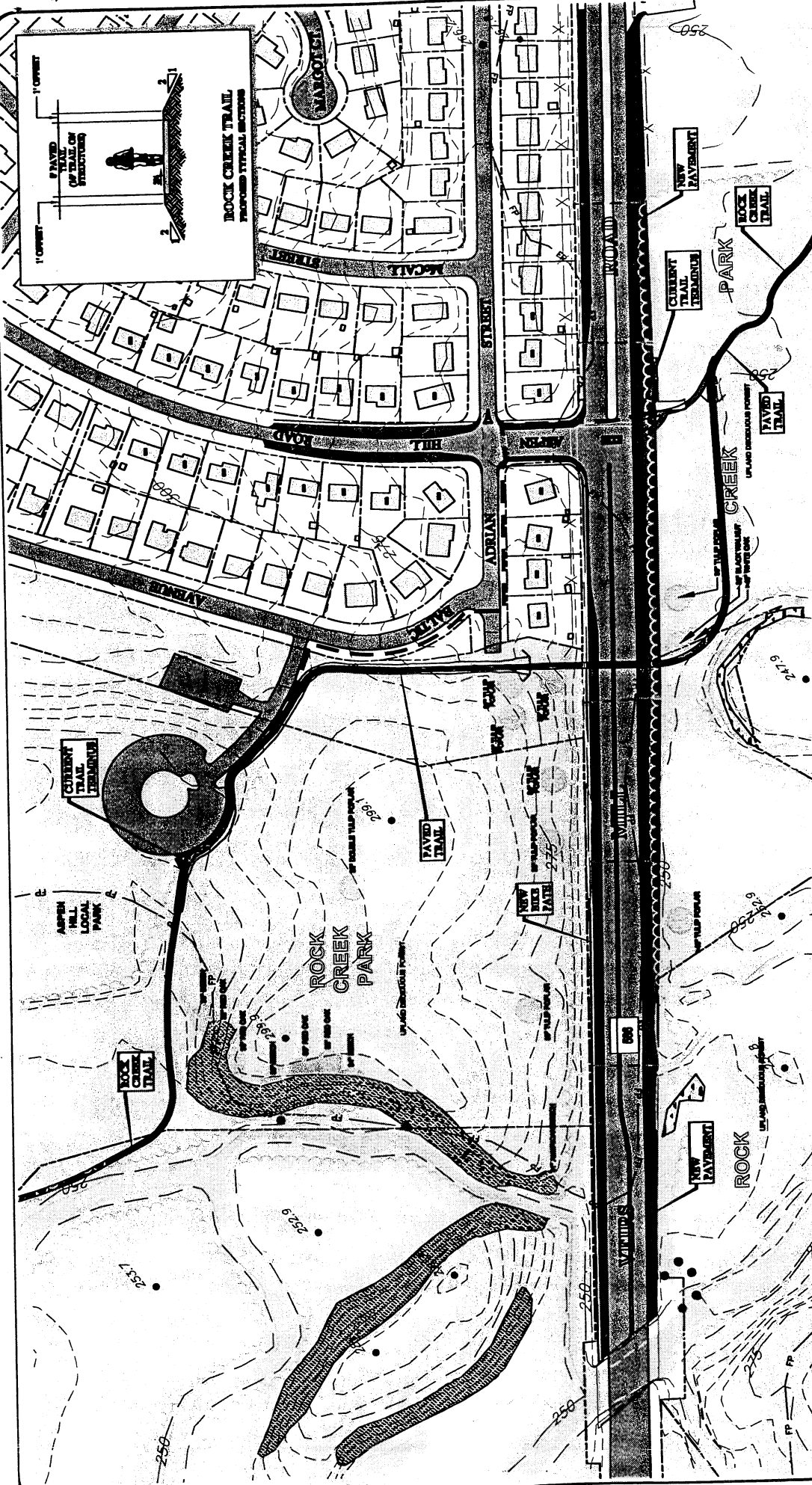


**LEGEND**

--- PROPERTY LINE	- - - CEMENT PAVED/PAVEMENT STRIPS
--- TRAIL	--- NEW PAVED TRAIL
--- POTENTIAL TRAIL	--- EXISTING TRAIL
--- PAVEMENT IMPROVEMENT	--- MAINTENANCE LOCATIONS
--- FP - FILL	--- PUMP BLOWN SAND
--- LOO - LINE OF INTERFERENCE	

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**LEGEND**

--- PROPOSED TRAIL	--- CURRENT IMPROVEMENTS NOTES
--- EXISTING TRAIL	--- EXISTING TRAIL
--- EXISTING ROAD	--- EXISTING ROAD
--- EXISTING PARK	--- EXISTING PARK
--- EXISTING PAVEMENT	--- EXISTING PAVEMENT
--- EXISTING CONCRETE	--- EXISTING CONCRETE
--- EXISTING ASPHALT	--- EXISTING ASPHALT
--- EXISTING GRAVEL	--- EXISTING GRAVEL
--- EXISTING SAND	--- EXISTING SAND
--- EXISTING ROCK	--- EXISTING ROCK
--- EXISTING DIRT	--- EXISTING DIRT
--- EXISTING VEGETATION	--- EXISTING VEGETATION
--- EXISTING TREES	--- EXISTING TREES
--- EXISTING SHRUBS	--- EXISTING SHRUBS
--- EXISTING HERBACEOUS	--- EXISTING HERBACEOUS
--- EXISTING WETLANDS	--- EXISTING WETLANDS
--- EXISTING WATERSHED	--- EXISTING WATERSHED
--- EXISTING FLOODPLAIN	--- EXISTING FLOODPLAIN
--- EXISTING EROSION CONTROL	--- EXISTING EROSION CONTROL
--- EXISTING UTILITIES	--- EXISTING UTILITIES
--- EXISTING POWER LINES	--- EXISTING POWER LINES
--- EXISTING TELEPHONE LINES	--- EXISTING TELEPHONE LINES
--- EXISTING CABLE TV LINES	--- EXISTING CABLE TV LINES
--- EXISTING GAS LINES	--- EXISTING GAS LINES
--- EXISTING WATER LINES	--- EXISTING WATER LINES
--- EXISTING SEWER LINES	--- EXISTING SEWER LINES
--- EXISTING STORM SEWER LINES	--- EXISTING STORM SEWER LINES
--- EXISTING RAILROADS	--- EXISTING RAILROADS
--- EXISTING AIRPORTS	--- EXISTING AIRPORTS
--- EXISTING PORTS	--- EXISTING PORTS
--- EXISTING CANALS	--- EXISTING CANALS
--- EXISTING DAMS	--- EXISTING DAMS
--- EXISTING BRIDGES	--- EXISTING BRIDGES
--- EXISTING TUNNELS	--- EXISTING TUNNELS
--- EXISTING STRUCTURES	--- EXISTING STRUCTURES
--- EXISTING BARRIERS	--- EXISTING BARRIERS
--- EXISTING SIGNAGE	--- EXISTING SIGNAGE
--- EXISTING FURNITURE	--- EXISTING FURNITURE
--- EXISTING LIGHTING	--- EXISTING LIGHTING
--- EXISTING SECURITY	--- EXISTING SECURITY
--- EXISTING SAFETY	--- EXISTING SAFETY
--- EXISTING ACCESSIBILITY	--- EXISTING ACCESSIBILITY
--- EXISTING HISTORIC	--- EXISTING HISTORIC
--- EXISTING CULTURAL	--- EXISTING CULTURAL
--- EXISTING SCIENTIFIC	--- EXISTING SCIENTIFIC
--- EXISTING EDUCATIONAL	--- EXISTING EDUCATIONAL
--- EXISTING RECREATION	--- EXISTING RECREATION
--- EXISTING ARTS	--- EXISTING ARTS
--- EXISTING COMMUNITY	--- EXISTING COMMUNITY
--- EXISTING ECONOMIC	--- EXISTING ECONOMIC
--- EXISTING ENVIRONMENTAL	--- EXISTING ENVIRONMENTAL
--- EXISTING SOCIAL	--- EXISTING SOCIAL
--- EXISTING POLITICAL	--- EXISTING POLITICAL
--- EXISTING LEGAL	--- EXISTING LEGAL
--- EXISTING REGULATORY	--- EXISTING REGULATORY
--- EXISTING STANDARD	--- EXISTING STANDARD
--- EXISTING BEST PRACTICES	--- EXISTING BEST PRACTICES
--- EXISTING INNOVATION	--- EXISTING INNOVATION
--- EXISTING LEADERSHIP	--- EXISTING LEADERSHIP
--- EXISTING PARTNERSHIP	--- EXISTING PARTNERSHIP
--- EXISTING COLLABORATION	--- EXISTING COLLABORATION
--- EXISTING TRANSPARENCY	--- EXISTING TRANSPARENCY
--- EXISTING ACCOUNTABILITY	--- EXISTING ACCOUNTABILITY
--- EXISTING INTEGRITY	--- EXISTING INTEGRITY
--- EXISTING ETHICS	--- EXISTING ETHICS
--- EXISTING VALUES	--- EXISTING VALUES
--- EXISTING BELIEFS	--- EXISTING BELIEFS
--- EXISTING ATTITUDES	--- EXISTING ATTITUDES
--- EXISTING BEHAVIORS	--- EXISTING BEHAVIORS
--- EXISTING EMOTIONS	--- EXISTING EMOTIONS
--- EXISTING THOUGHTS	--- EXISTING THOUGHTS
--- EXISTING FEELINGS	--- EXISTING FEELINGS
--- EXISTING OPINIONS	--- EXISTING OPINIONS
--- EXISTING BELIEFS	--- EXISTING BELIEFS
--- EXISTING VALUES	--- EXISTING VALUES
--- EXISTING BELIEFS	--- EXISTING BELIEFS
--- EXISTING ATTITUDES	--- EXISTING ATTITUDES
--- EXISTING BEHAVIORS	--- EXISTING BEHAVIORS



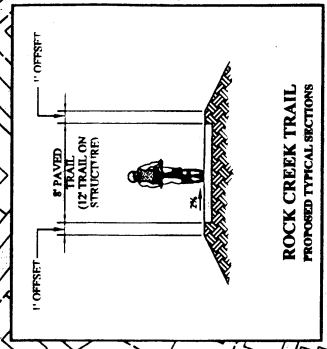
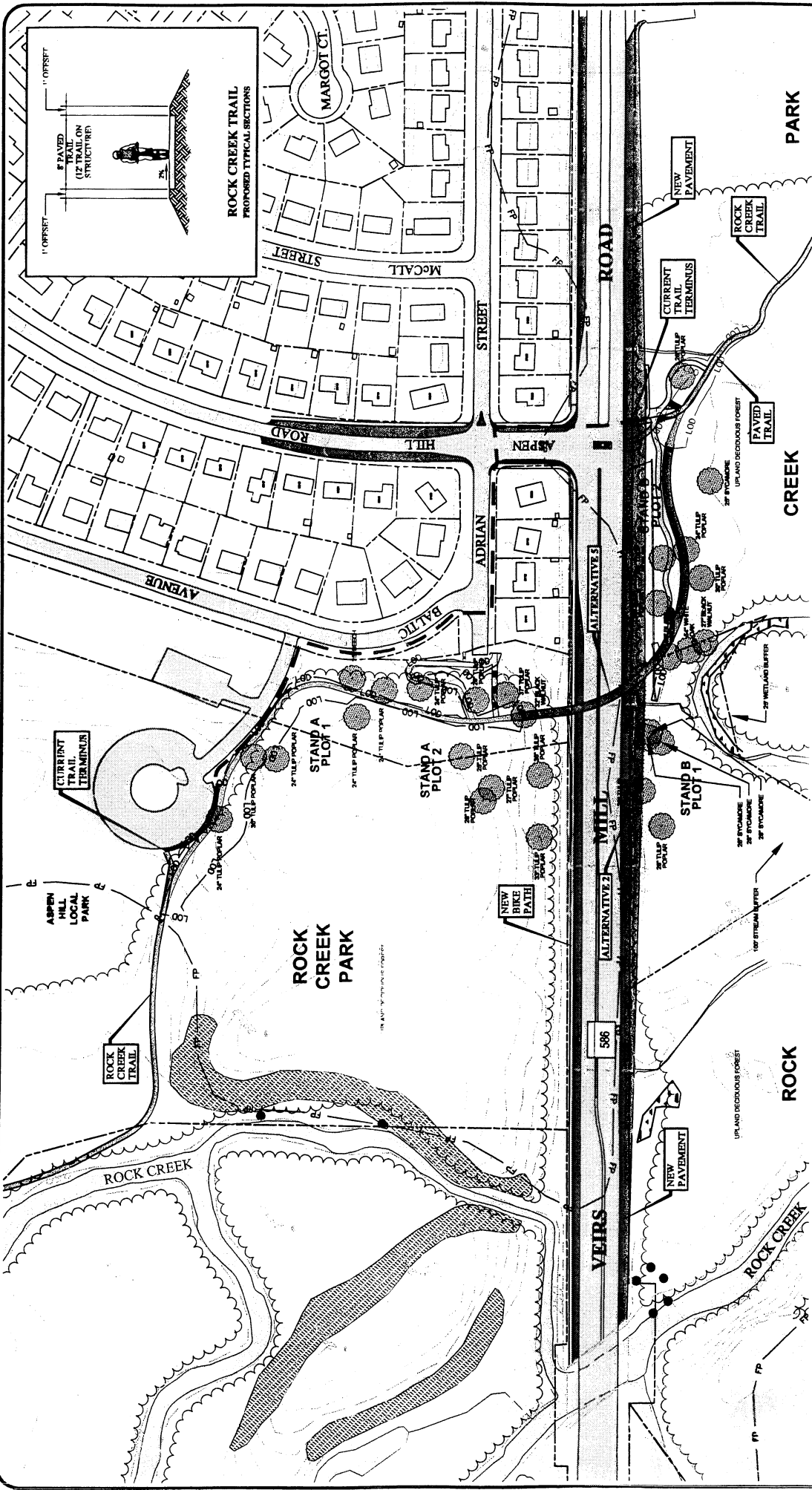
**ROCK CREEK TRAIL BRIDGE**  
 BRIDGE PROJECT PROGRESS

**ALTERNATIVE 4**

**URS**  
 CONSULTING ENGINEERS  
 1000 EAST 17TH AVENUE, SUITE 1000  
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 WWW.URS.COM

DATE: 04/30/03  
 DRAWN BY: J. L. HARRIS  
 CHECKED BY: J. L. HARRIS  
 ALL RIGHTS RESERVED

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**LEGEND**

- PROPERTY LINE
- PAVE
- STRIPES FOR CROSSING
- INTERMEDIATE WETLANDS
- PERVIOUSLY NONPERVIOUSLY
- LIBRARY OF RESTRICTIONS
- 1:00
- SIGNIFICANT TREE
- TRAIL LINE
- MANIFESTEDITY LOCATION
- STEEP SLOPE AREAS
- CURRENT PROHIBITION/RESTRICTIONS
- SUA PROPOSED BIKE PATH
- SUA INTERSECTION RESTRICTION
- PROPOSED BIKE PATH

**ROCK CREEK TRAIL BRIDGE**  
DRAFT: WORK-IN-PROGRESS

**ALTERNATIVE 5**

DATE: APRIL 2003  
SCALE: AS SHOWN  
JOB NUMBER: 050500000

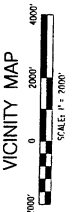
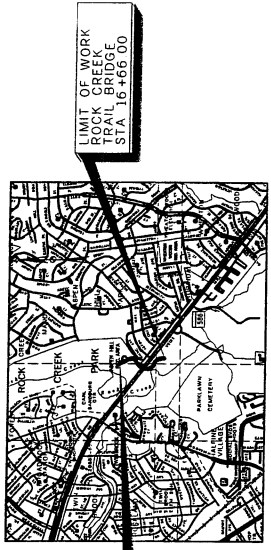
URS  
Professional Services Corporation  
1000 WEST 10TH AVENUE, SUITE 1000  
DENVER, COLORADO 80202  
TEL: 303.733.1000 FAX: 303.733.1001

2003-07-07 8:10am G:\user\20828120\CAD\p05crk.dwg - Color-17x11

# MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

## ROCK CREEK TRAIL BRIDGE AND TRAIL APPROACHES

STATION 0+00 TO STATION 16+66  
LENGTH = 0.32 MILES



### INDEX OF SHEETS

- 1 TITLE SHEET
- 2 TYPICAL SECTIONS
- 3-4 TRAIL PLANS
- 5-6 TRAIL PROFILES
- 7 BRIDGE GENERAL PLAN
- 8 BRIDGE ELEVATION
- 9 BRIDGE TYPICAL SECTION
- 10 BRIDGE TYPICAL SUBSTRUCTURE DETAILS

### GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY, AND WASHINGTON SUBURBAN SANITARY COMMISSION.
2. FOR TYPES OF STORM DRAIN STRUCTURES, REFER TO THE MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION BOOK OF STANDARDS FOR HIGHWAY AND IN STRUCTURES, UNLESS OTHERWISE NOTED.
3. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK OR CONCRETE SHALL BE USED. THE CHOWN OF THE PIPES, WHEN INVERT SLOPES WOULD BE GREATER THAN 1:50 A SPECIAL IN STRUCTURE SHALL BE CONSTRUCTED AS NOTED.
4. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STOF DRAIN STRUCTURES WHEN NECESSARY TO MEET THE DESIGN CONDITIONS, AS APPROVED BY MONTGOMERY COUNTY DEPART OF PUBLIC WORKS AND TRANSPORTATION'S PROJECT INSPECTOR. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAIN FROM AVAILABLE RECORDS. THE CONTRACTOR MUST OBTAIN EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TRENCHING, IF CLEARANCES ARE INSUFFICIENT. CLEARANCES INCHES, WHICHEVER IS LESS. CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
5. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF ANY TYPE OF INTERFERENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
6. CALL WES UTILITY AT 1-800-287-7777, 48 HOURS PRIOR TO START OF WORK. THE EXCAVATOR MUST BE A LICENSED PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE EXCAVATOR. THE EXCAVATOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REQUIREMENTS OF CHAPTER 35A OF THE MONTGOMERY COUNTY CODE.
7. CLEARING IS TO BE LIMITED TO THE 'LOD' LINE AS SHOWN ON THE PLANS.
8. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PRE POSITIVE DRAINAGE.
9. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR TRIMMING OF TREES. THE PERMIT MUST BE OBTAINED FROM THE PERMITS DIVISION OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WIL SERVICE, TELEPHONE 301-854-6060.
11. WHERE CURB AND GUTTER ENDS ARE EXPOSED, PROVIDE A 2% W/EN SECTION AT 2% SLOPE.

**NOT FOR CONSTRUCTION**

**ALL RIGHT OF WAY LIMITS  
SHOWN ARE APPROXIMATE**

30% SUBMITTAL  
JULY 17, 2003

RECOMMENDED FOR APPROVAL

CHECK, Design Section

CHECK, Division of Engineering Services

MONTGOMERY COUNTY  
DEPARTMENT OF PUBLIC WORKS  
TRANSPORTATION DIVISION  
ROCKVILLE, MARYLAND

Developed By: JMP Drawn By: JML Checked By: JML

TITLE SHEET

ROCK CREEK TRAIL BRIDGE

SCALE: AS SHOWN  
MDCPS S.C. SHEET  
Project No. 003327  
MDCP/ST/WR/ING

### SOILS LEGEND

	A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8, A-9, A-10, A-11, A-12, A-13, A-14, A-15, A-16, A-17, A-18, A-19, A-20, A-21, A-22, A-23, A-24, A-25, A-26, A-27, A-28, A-29, A-30, A-31, A-32, A-33, A-34, A-35, A-36, A-37, A-38, A-39, A-40, A-41, A-42, A-43, A-44, A-45, A-46, A-47, A-48, A-49, A-50, A-51, A-52, A-53, A-54, A-55, A-56, A-57, A-58, A-59, A-60, A-61, A-62, A-63, A-64, A-65, A-66, A-67, A-68, A-69, A-70, A-71, A-72, A-73, A-74, A-75, A-76, A-77, A-78, A-79, A-80, A-81, A-82, A-83, A-84, A-85, A-86, A-87, A-88, A-89, A-90, A-91, A-92, A-93, A-94, A-95, A-96, A-97, A-98, A-99, A-100
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U.S. GEOLOGICAL SURVEY  
NATIONAL ENGINEERING CENTER  
P.L. PLASTICITY INDEX  
P.C.C. POINTS PER CIRC 1001

M.D. MARYLAND DEPARTMENT OF TRANSPORTATION  
RESOLUTION F-80 METHOD C

UNLESS OTHERWISE NOTED ON PLANS, ALL SOIL SAMPLES FOR BORING OR TESTS SHALL BE TAKEN AT THE BOTTOM OF THE BOREHOLE. SOIL SAMPLES SHALL BE TAKEN AT THE BOTTOM OF THE BOREHOLE. SOIL SAMPLES SHALL BE TAKEN AT THE BOTTOM OF THE BOREHOLE.

### OWNER / PERMIT APPLICANT

M-NCPPC  
PARKSIDE HEADQUARTERS  
3500 BURNETT AVENUE, ROOM B107  
BETHESDA, MARYLAND 20814  
301-452-2335

IT IS THE RESPONSIBILITY OF PERMITEE/OWNER OF THIS SITE TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

TYPE OF PERMIT	REQD.	PERMIT NO.	EXPIRATION DATE	RESTRICTION DATES
1. Floodplain Disturbance	X			
2. M.D.E. a. Corps of Engineers	X			
3. M.D.E. b. County Certification	X			
4. M.D.E. c. County Safety	X			
5. M.D.E. d. State Access Permit	X			



PREPARED BY  
URS  
HUNT VALLEY, MARYLAND

MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control/Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTICE: THESE PERMITS ARE NOT VALID UNLESS THE PERMITTEE HAS OBTAINED ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

### MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION MAINTENANCE CERTIFICATION

I HEREBY CERTIFY THAT THE MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION WILL ASSUME MAINTENANCE RESPONSIBILITIES FOR ALL STORMWATER MANAGEMENT FACILITIES WITHIN THE ACCORDING STREET EXTENDED RIGHT OF WAY AND SHOWN HEREON IN ACCORDANCE WITH THE MEMORANDUM OF UNDERSTANDING BETWEEN THIS DEPARTMENT AND THE DEPARTMENT OF PERMITTING SERVICES AND EXECUTIVE REGULATIONS 5-50 AND 36-90. IF, FOR ANY REASON, FUTURE IMPROVEMENTS TO THE ROADWAY ARE PLANNED THAT WOULD IMPACT THE STORMWATER MANAGEMENT FACILITIES INCLUDED HEREIN, THIS DEPARTMENT WILL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES DURING THE PLANNING OR EARLY DESIGN STAGE FOR SUCH IMPROVEMENT.

### OWNER / DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

### DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS FOR EROSION AND SEDIMENT CONTROL, MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION STORM DRAIN DESIGN CRITERIA DATED AUGUST, 1988.

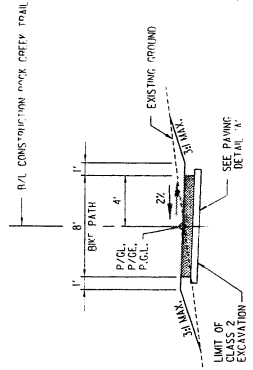
I FURTHER CERTIFY THAT THE TOTAL AMOUNTS OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAVE BEEN COMPUTED TO BE --- CUBIC YARDS OF EXCAVATION AND --- CUBIC YARDS OF FILL AND THAT THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE A MAXIMUM OF --- SQUARE FEET OR --- ACRES.

DATE \_\_\_\_\_ ENGINEERING SERVICES \_\_\_\_\_

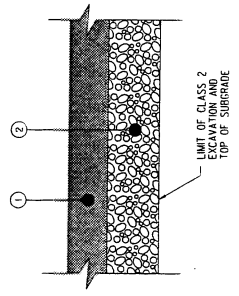
DESIGN ENGINEER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

PRINTED NAME AND TITLE \_\_\_\_\_ REGISTRATION NUMBER \_\_\_\_\_

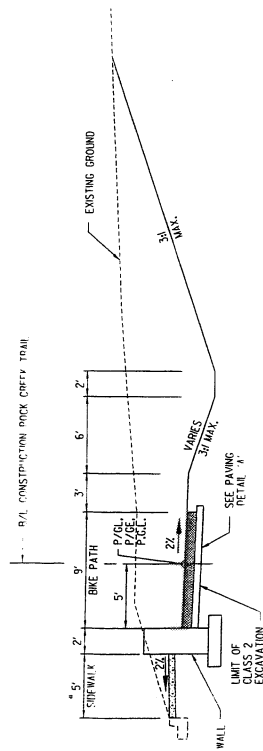




**ROCK CREEK TRAIL**  
 STA. 2+38 TO STA. 2+90  
 STA. 4+30 TO STA. 4+17  
 STA. 14+21 TO STA. 14+46  
 NOT TO SCALE



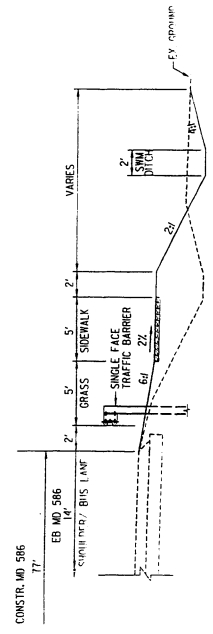
**ROCK CREEK TRAIL**  
 STA. 0+00 TO STA. 1+21  
 NOT TO SCALE



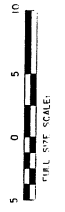
**ROCK CREEK TRAIL**  
 STA. 1+21 TO STA. 2+38  
 STA. 2+50 TO STA. 4+3  
 NOT TO SCALE

- LEGEND**
- ① 3/4" MAX. ASPHALT SUPERPAVE 12.5 mm FOR SURFACE  
 -FC10-22, LEVEL 2 PROVIDED IN 2 LIFTS
  - ② 4" BASE COURSE USING GRAINED AGGREGATE

**PAVING DETAIL 'A'**  
 1/2" MAX. ASPHALT SUPERPAVE  
 NOT TO SCALE



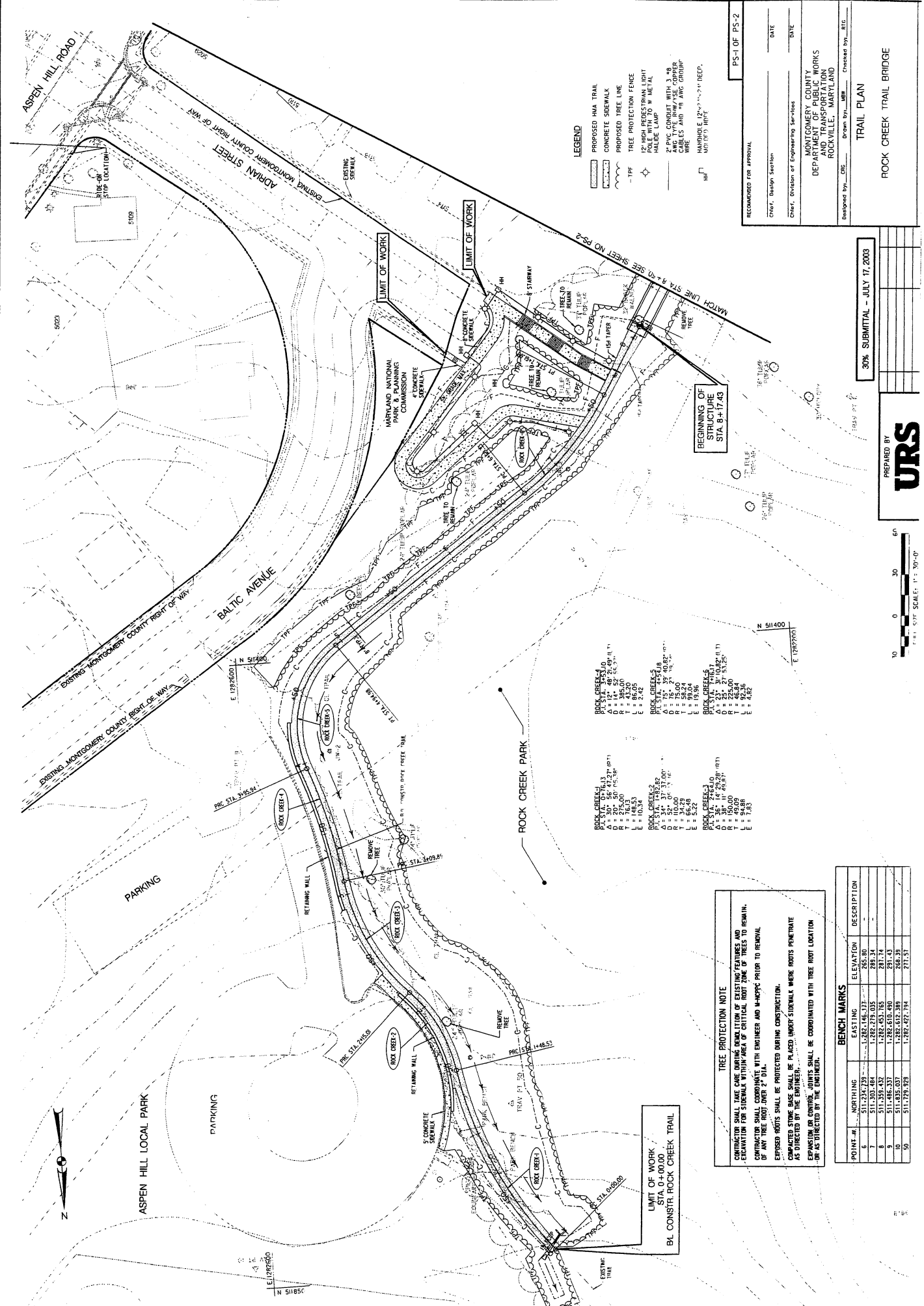
**MD 586 SIDEWALK AND SWM DITCH**  
 STA. 19+40 TO STA. 20+10  
 NOT TO SCALE



PREPARED BY  
**URS**

30% SUBMITTAL - JULY 17, 2003

RECOMMENDED FOR APPROVAL	
Chief, Design Section	DATE
Chief, Division of Engineering Services	DATE
MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION ROCKVILLE, MARYLAND	
Designed by: CRE	Drawn by: MBR
Checked by: RTE	
TYPICAL SECTIONS	
ROCK CREEK TRAIL BRIDGE	



PS-1 OF PS-2

RECOMMENDED FOR APPROVAL

DATE

DATE

Chief, Design Section

Chief, Division of Engineering Services

MONTGOMERY COUNTY  
DEPARTMENT OF PUBLIC WORKS  
AND TRANSPORTATION  
ROCKVILLE, MARYLAND

Developed By: CRE, Dr. Ann By, MBP, Checked By: RTE

TRAIL PLAN

ROCK CREEK TRAIL BRIDGE

30% SUBMITTAL - JULY 17, 2003

PREPARED BY

**URS**



ROCK CREEK-1

P	14.5	355.10
O	14.5	355.10
D	14.5	355.10
F	20.5	355.10
T	20.5	355.10
L	2.42	

ROCK CREEK-2

P	15.5	395.00
O	15.5	395.00
D	15.5	395.00
F	21.5	395.00
T	21.5	395.00
L	2.42	

ROCK CREEK-3

P	16.5	435.00
O	16.5	435.00
D	16.5	435.00
F	22.5	435.00
T	22.5	435.00
L	2.42	

**TREE PROTECTION NOTE**

CONTRACTOR SHALL TAKE CARE DURING REMEDIATION OF EXISTING FEATURES AND EXCAVATION FOR SIDEWALK WITHIN AREA OF CRITICAL ROOT ZONE OF TREES TO REMAIN.

CONTRACTOR SHALL COORDINATE WITH ENGINEER AND M-HEPC PRIOR TO REMOVAL OF ANY TREE.

EXPOSED ROOTS SHALL BE PROTECTED DURING CONSTRUCTION.

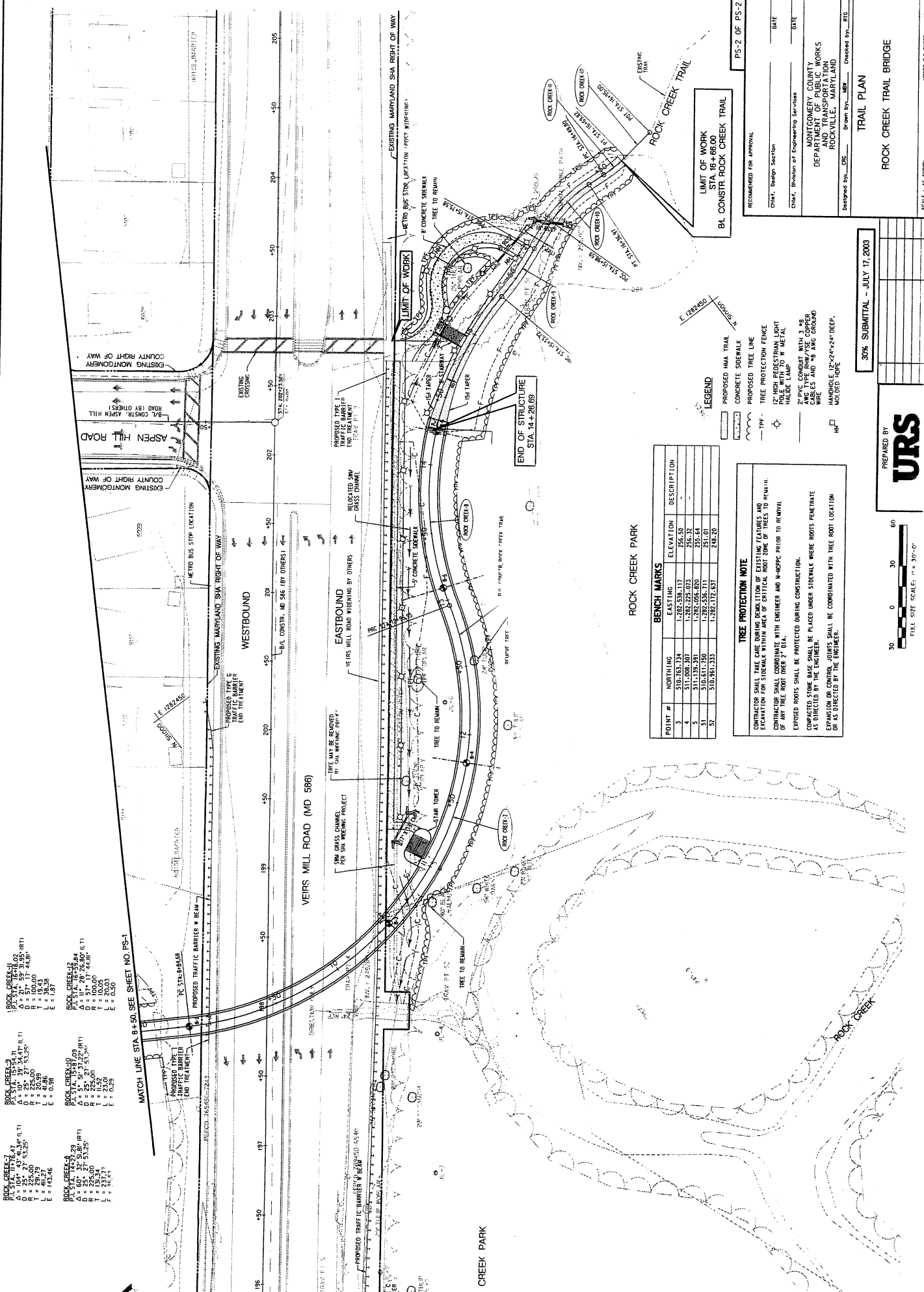
COMPACTED STONE BASE SHALL BE PLACED UNDER SIDEWALK WHERE ROOTS PENETRATE AS DIRECTED BY THE ENGINEER.

EXPANSION OR CONTRACTION JOINTS SHALL BE COORDINATED WITH TREE ROOT LOCATION OR AS DIRECTED BY THE ENGINEER.

**BENCH MARKS**

POINT #	NORTHING		EASTING	ELEVATION	DESCRIPTION
	1	2			
6	511,234.739	1,882,116.172	265.80		
7	511,203.484	1,882,219.035	288.34		
8	511,252.437	1,882,451.765	287.74		
9	511,255.037	1,882,612.389	266.39		
50	511,229.928	1,882,427.794	271.57		

LIMIT OF WORK  
BL CONSTR. ROCK CREEK TRAIL



ROCK CREEK-7

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

ROCK CREEK-8

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

ROCK CREEK-9

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

ROCK CREEK-10

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

ROCK CREEK-11

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

ROCK CREEK-12

A	101.47	51.81	(R 1)
B	25.27	53.25	
C	20.93	51.00	
D	20.93	51.00	
E	40.86	51.00	
F	40.86	51.00	

MATCH LINE STA. 8+50. SEE SHEET NO. PS-1

**BENCH MARKS**

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
3	510.153.734	1.282.538.117	256.50	
4	510.153.734	1.282.538.117	256.50	
5	511.138.301	1.282.538.117	256.50	
6	510.611.190	1.282.538.117	251.01	
7	510.611.190	1.282.538.117	251.01	
8	510.861.333	1.282.172.637	248.20	

**TREE PROTECTION NOTE**

CONTRACTOR SHALL TAKE CARE DURING DEMOLITION OF EXISTING FEATURES AND EXCAVATION FOR SIDEWALK WITHIN AREA OF CRITICAL ROOT ZONE OF TREES TO REMAIN. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND M-APPIC PRIOR TO REMOVAL OF ANY TREE ROOT OVER 2" DIA.

EXPOSED ROOTS SHALL BE PROTECTED DURING CONSTRUCTION.

COMPACTED STONE BASE SHALL BE PLACED UNDER SIDEWALK WHERE ROOTS PENETRATE AS DIRECTED BY THE ENGINEER.

EXPANSION OR CONTROL JOINTS SHALL BE COORDINATED WITH TREE ROOT LOCATION OR AS DIRECTED BY THE ENGINEER.

**LEGEND**

- PROPOSED HMA TRAIL
- CONCRETE SIDEWALK
- PROPOSED TREE LINE
- TREE PROTECTION FENCE
- 12" HIGH PEDESTRIAN LIGHT HALF BOLLARD W/ METAL HALVE LAMP
- 2" PVC CONDUIT WITH 3 # AWG TYPE RHW/AISE COPPER WIRES AND #8 AWG GROUND WIRE
- HANDHOLE 12"x24"x24" DEEP.
- HP

**LIMIT OF WORK**  
STA. 16+66.00  
BL CONSTR. ROCK CREEK TRAIL

RECOMMENDED FOR APPROVAL  
PS-2 OF PS-2

Chief, Design Section  
DATE

Chief, Division of Engineering Services  
DATE

MONTGOMERY COUNTY  
DEPARTMENT OF PUBLIC WORKS  
ROCKVILLE, MARYLAND

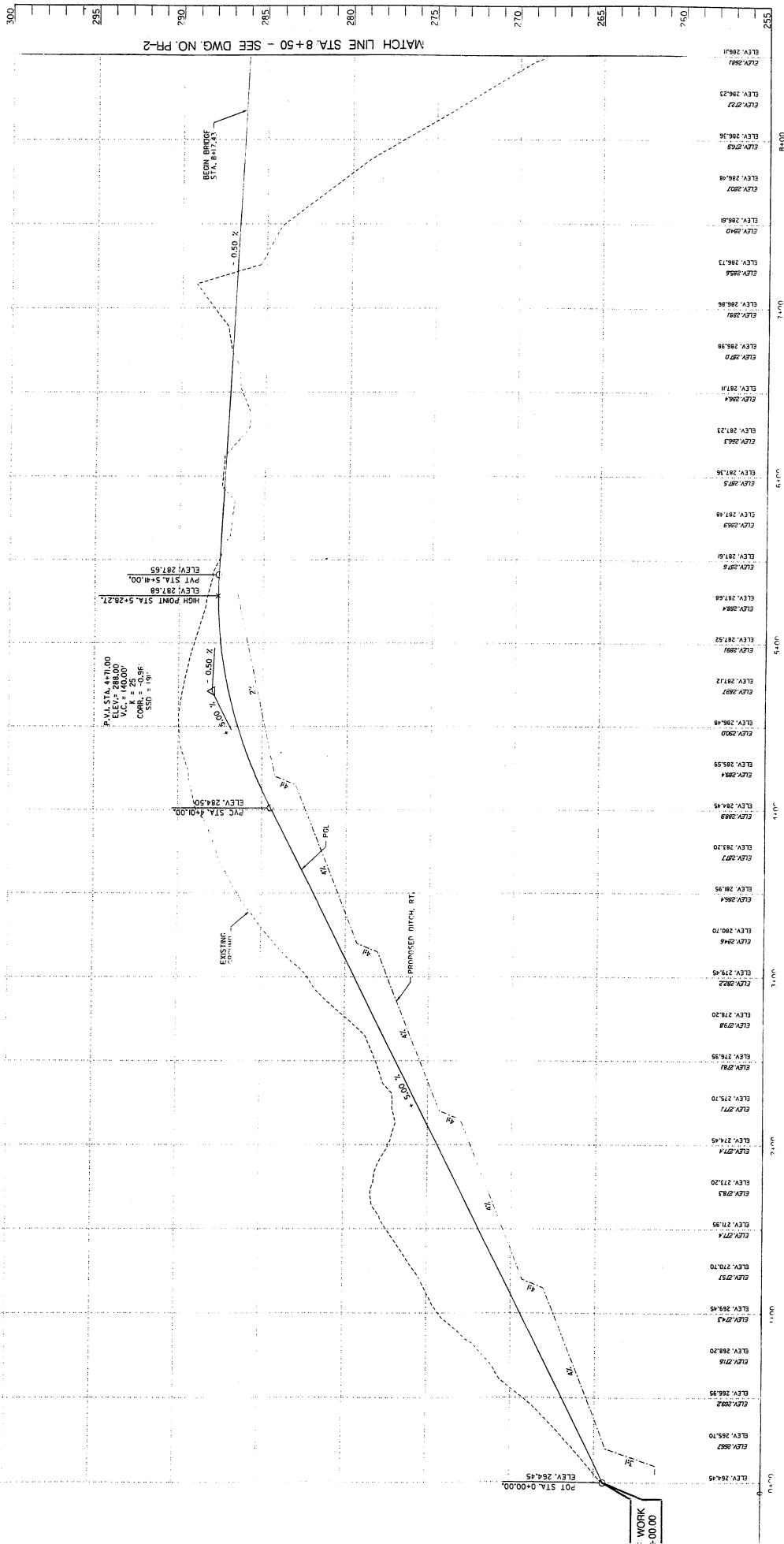
Designed by: BB Drawn by: BB Checked by: RTD

30% SUBMITTAL - JULY 17, 2003

PREPARED BY  
**URS**

SCALE: 1" = 30'-0"

TRAIL PLAN  
ROCK CREEK TRAIL BRIDGE



PR-1 OF PR-2

RECOMMENDED FOR APPROVAL

Client, Design Location: \_\_\_\_\_ DATE: \_\_\_\_\_

Checked by: \_\_\_\_\_

Checked by: \_\_\_\_\_

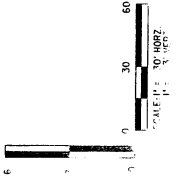
Montgomery County  
 Department of Public Works  
 1500 Transylvania Road  
 Rockville, Maryland

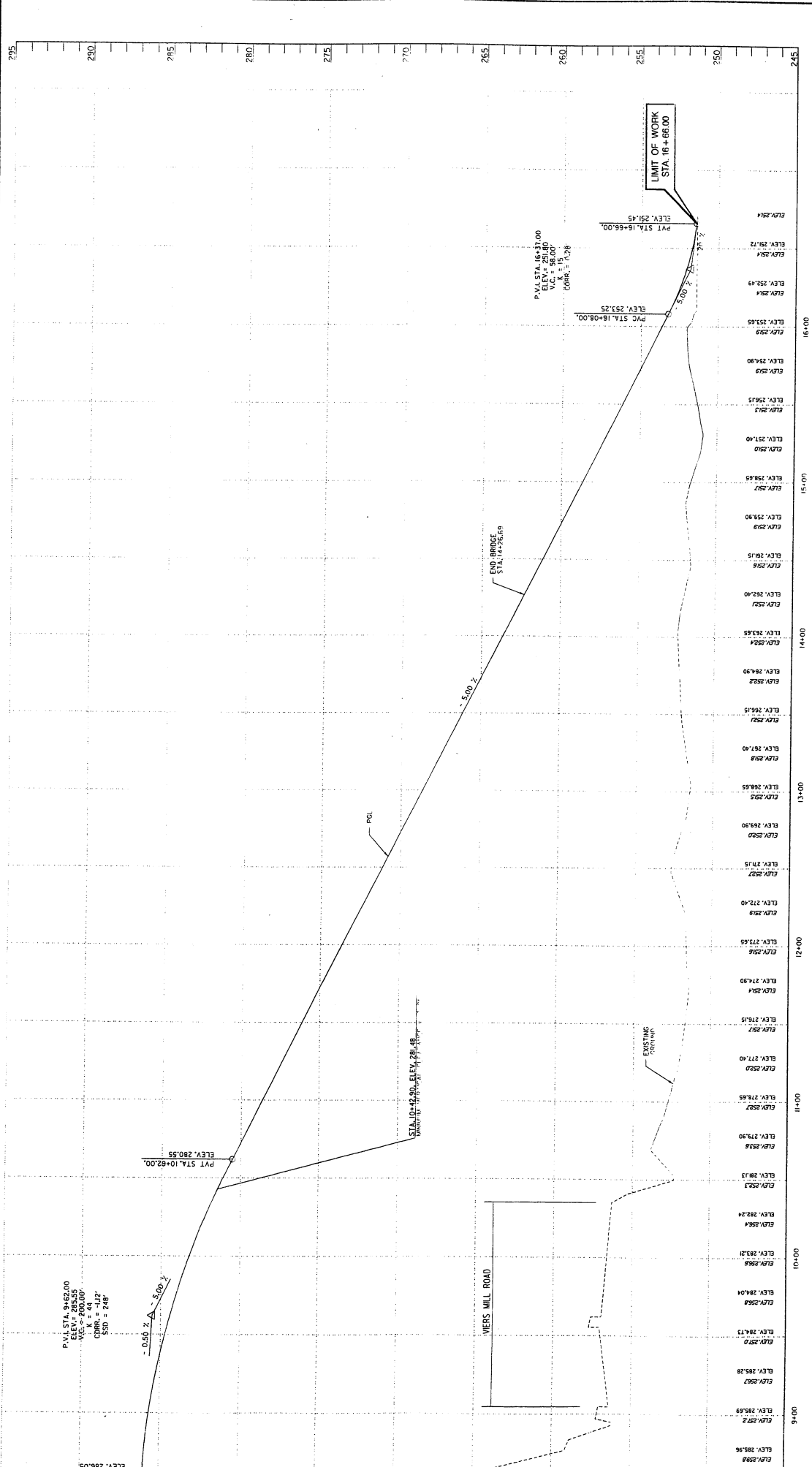
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

STATE: MARYLAND

30% SUBMITTAL - JULY 17, 2003

PREPARED BY  
**URS**





PR-2 OF PR-2

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ DATE \_\_\_\_\_

Chief, Division of Engineering Services \_\_\_\_\_ DATE \_\_\_\_\_

MONTEGOMERY COUNTY  
DEPARTMENT OF PUBLIC WORKS  
AND TRANSPORTATION  
ROCKVILLE, MARYLAND

Designed by: CGC Drawn by: MMW Checked by: BIS

**TRAIL PROFILE**  
**STA. 8 + 50 TO STA. 16 + 66**  
**ROCK CREEK TRAIL BRIDGE**

30% SUBMITTAL - JULY 17, 2003

PREPARED BY  
**URS**  
HINT VALLEY, MARYLAND

SCALE: 1" = 30' HORIZ.  
1" = 5' VERT.

0 30 60

**GENERAL NOTES**

- SH-1 SPECIFICATIONS DATED JANUARY, 2009.
- REVISIONS THEREOF AND ADDITIONS THERETO AND SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION.
- AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 2002 FOR DESIGN.
- CONCRETE DESIGN SERVICE LOAD METHOD:  $f_c = 4,200$  PSI
- BRIDGE DECK SLAB SUPPORTED BY STRONGPIER 71 SHALL BE 13.50 FT.
- REINFORCING STEEL DESIGN:  $f_s = 24,000$  PSI.
- STRUCTURAL STEEL DESIGN ELASTIC DESIGN METHOD.
- 65 PSF OF PEDESTRIAN LOADING BRIDGE IS CAPABLE OF CARRYING 410 VEHICLES.
- ALL CONCRETE FOR ABUTMENT BACKWALLS AND PARAPETS AT ABUTMENTS AND ENTIRE SUPERSTRUCTURE SHALL BE MIX NO. 6 (4,500 PSI).
- ALL OTHER STRUCTURE CONCRETE SHALL BE MIX NO. 3 (3,500 PSI).
- ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH A 1/4" X 1/4" RADIUS. UNLESS OTHERWISE NOTED EXCEPT FOR 1/2" X 1/2" RADIUS CHAMFER STRIPS.
- ALL DIMENSIONS SHALL BE AS NOTED BY THE FOLLOWING NOTATION ON THE PLANS AND NOT CHAMFER.
- STRUCTURAL STEEL SHALL CONFORM TO A 709, GRADE 50.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60.
- ALL SPICES, NOT SHOWN, SHALL BE LAPPED AS PER BAR LAP CHARTS.
- MINIMUM COVER FOR ANY BAR SHALL BE 2" UNLESS OTHERWISE NOTED.
- WITH THE EXCEPTION OF THE BOTTOMS AND SIDES OF FOOTINGS WHICH SHALL HAVE 3" MINIMUM COVER.
- FOR TIES AND STRIPS, STANDARD AD BENDING TOLERANCES ARE INDICATED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL AD BENDING TOLERANCES.
- ONLY GRADE 60 MAY BE USED ON THIS PROJECT.
- ENTIRE SUPERSTRUCTURE (INCLUDING PARAPETS) AND ABUTMENT BACKWALLS SHALL BE FINISHED WITH AN ALUMINUM ANODIZED ALUMINUM BRIDGE SEAT AREA PARAPET PORTION OF WING WALLS.
- ALL KEYS ARE NOMINAL SIZE.
- UNLESS OTHERWISE INDICATED, ALL UNFINISHED AND HORIZONTAL CONSTRUCTION JOINTS SHALL BE INTENTIONALLY LEFT UNFINISHED.

- SPECIFICATIONS:**
- REINFORCING STEEL:
  - LOADING:
  - CONCRETE:
  - CHAMFER:
  - STRUCTURAL STEEL:
  - REINFORCING STEEL:

- KEYS:**
- DEWITT'S BORING LOCATION
  - B-1 AND DESIGNATION
  - DEWITT'S TEST HOLE LOCATION
  - TH-1 AND DESIGNATION

UNLESS OTHERWISE INDICATED, ALL UNFINISHED AND HORIZONTAL CONSTRUCTION JOINTS SHALL BE INTENTIONALLY LEFT UNFINISHED.

FOR UTILITY WORK, SEE UTILITY SHEETS AND UTILITY STATEMENT IN THE SPECIFICATIONS.

ADEQUATE CARE SHALL BE TAKEN TO PROTECT CERTAIN TREES ADJACENT TO THE CONSTRUCTION AREA. SEE TRAIL PLAN SHEETS.

30% SUBMITTAL - JULY 17, 2003

PREPARED BY  
**URS**  
1000 VALLEY VIEW, MARYLAND

SCALE: 1" = 20'

DATE

DATE

DATE

DATE

DATE

DATE

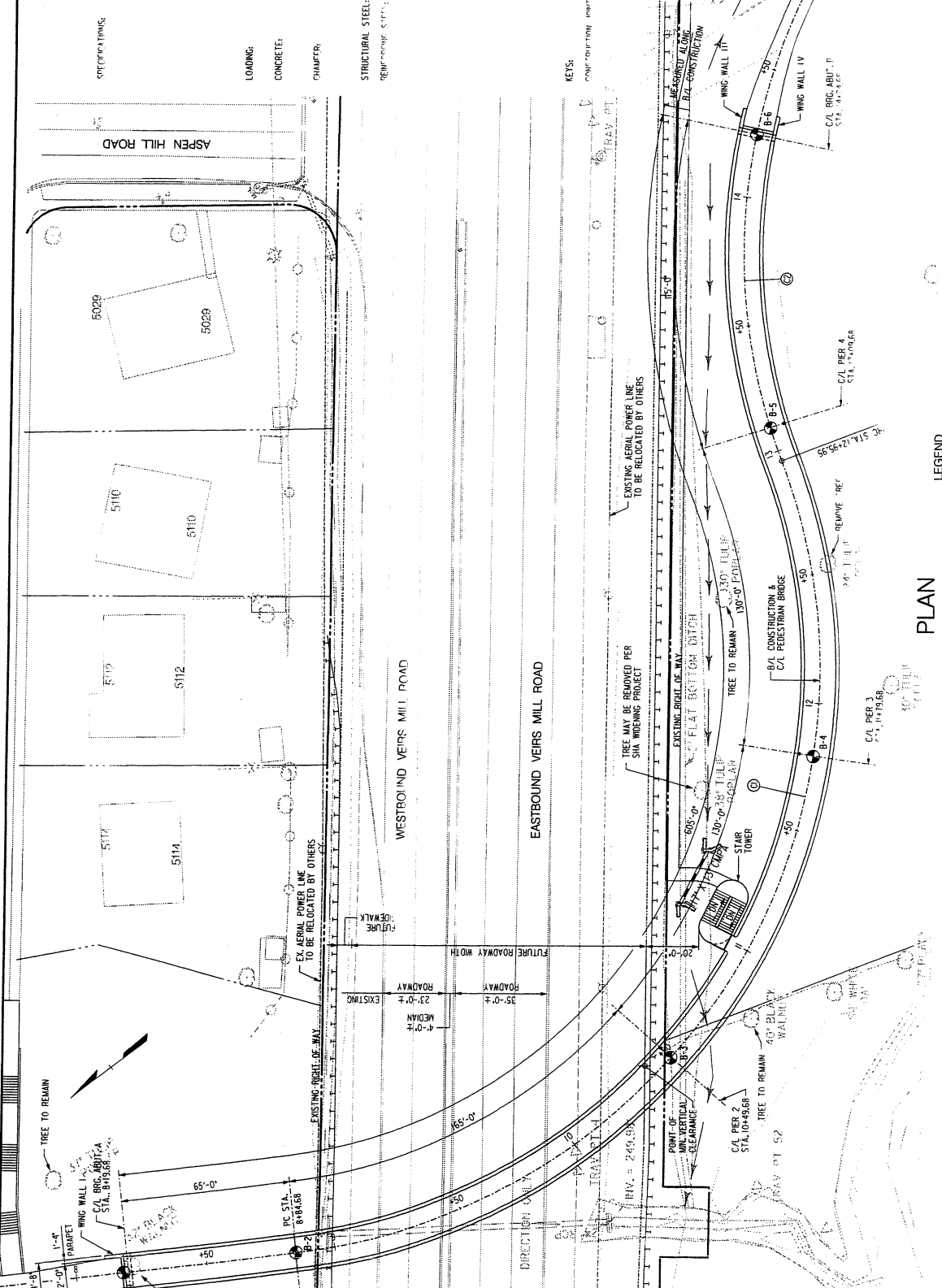
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**LEGEND**

- DEWITT'S BORING LOCATION
- B-1 AND DESIGNATION
- DEWITT'S TEST HOLE LOCATION
- TH-1 AND DESIGNATION

**NOTES:**

- FOR UTILITY WORK, SEE UTILITY SHEETS AND UTILITY STATEMENT IN THE SPECIFICATIONS.
- ADEQUATE CARE SHALL BE TAKEN TO PROTECT CERTAIN TREES ADJACENT TO THE CONSTRUCTION AREA. SEE TRAIL PLAN SHEETS.

**PLAN**

**ROCK CREEK TRAIL BRIDGE CURVE DATA**

CURVE C1		CURVE C2	
P.L. STA.	11+26.47	P.L. STA.	11+27.29
$\Delta$	104°43'41.34" (L)	$\Delta$	80°32'54.84" (R)
D	25°27'53.25"	L	25°27'53.25"
T	291.79'	L	124.34'
L	41.27'	R	225.00'
R	225.00'	R	35.53'
E	147.46'		

UNLESS OTHERWISE INDICATED, ALL UNFINISHED AND HORIZONTAL CONSTRUCTION JOINTS SHALL BE INTENTIONALLY LEFT UNFINISHED.

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ADEQUATE CARE SHALL BE TAKEN TO PROTECT CERTAIN TREES ADJACENT TO THE CONSTRUCTION AREA. SEE TRAIL PLAN SHEETS.

30% SUBMITTAL - JULY 17, 2003

PREPARED BY  
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1000 VALLEY VIEW, MARYLAND

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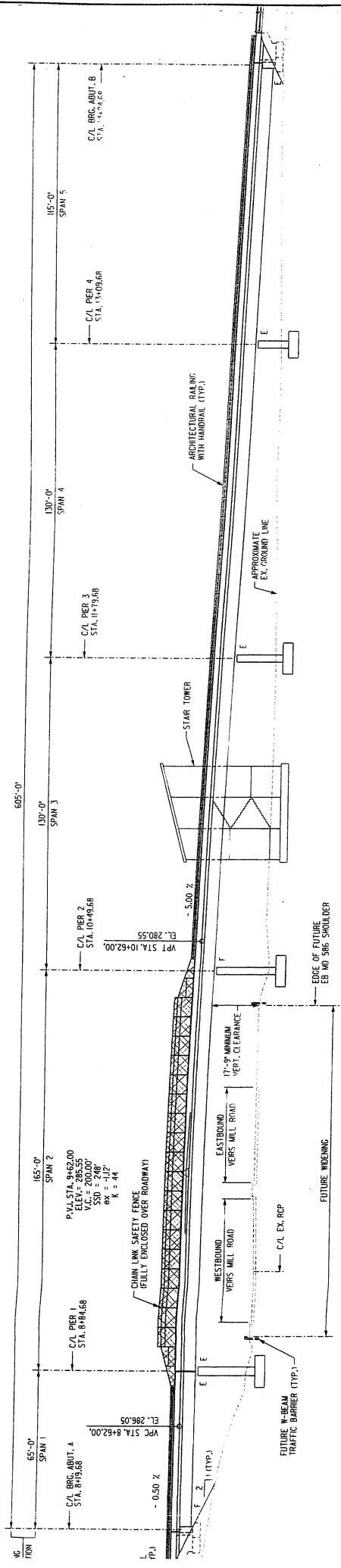
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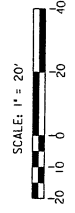


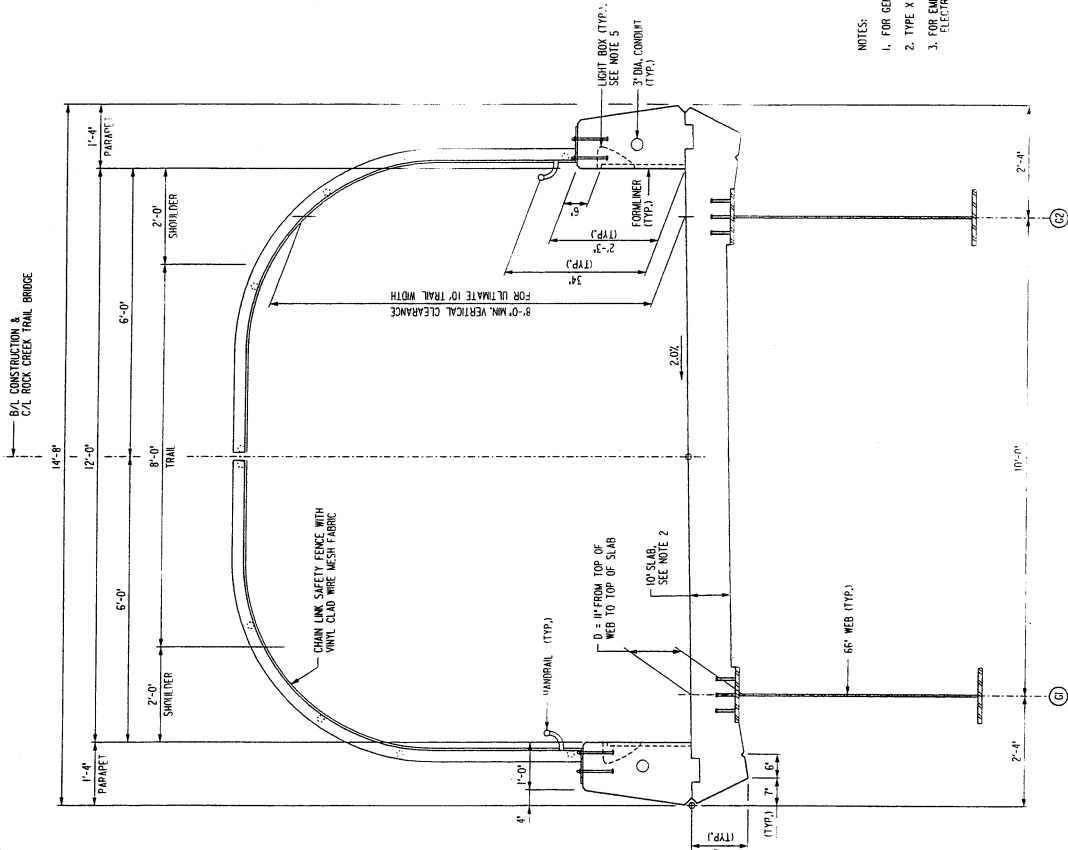
## ELEVATION DEVELOPED ALONG B/L CONSTRUCTION

NOTES:  
 1. FOR GENERAL NOTES, SEE DWG. NO. S-4  
 2. FROM TYPICAL SECTIONS, SEE DWG. NO. S-3

DWG. NO. S-2	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	DATE
Chief, Division of Engineering Services	DATE
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND TRANSPORTATION ROCKVILLE, MARYLAND	
Designed By: BCL	Checked By: _____
Drawn By: SKL	
<b>STEEL GIRDER BRIDGE NO. M-XXX          ON ROCK CREEK TRAIL          OVER VEHS. MILL ROAD (MD 686)          ELEVATION</b>	
SCALE: AS NOTED Project No. 03544 MDCPS S.C. SHEET # OF 03 CONTRACT DRAWING NO. 02	

30% SUBMITTAL - JULY 17, 2003





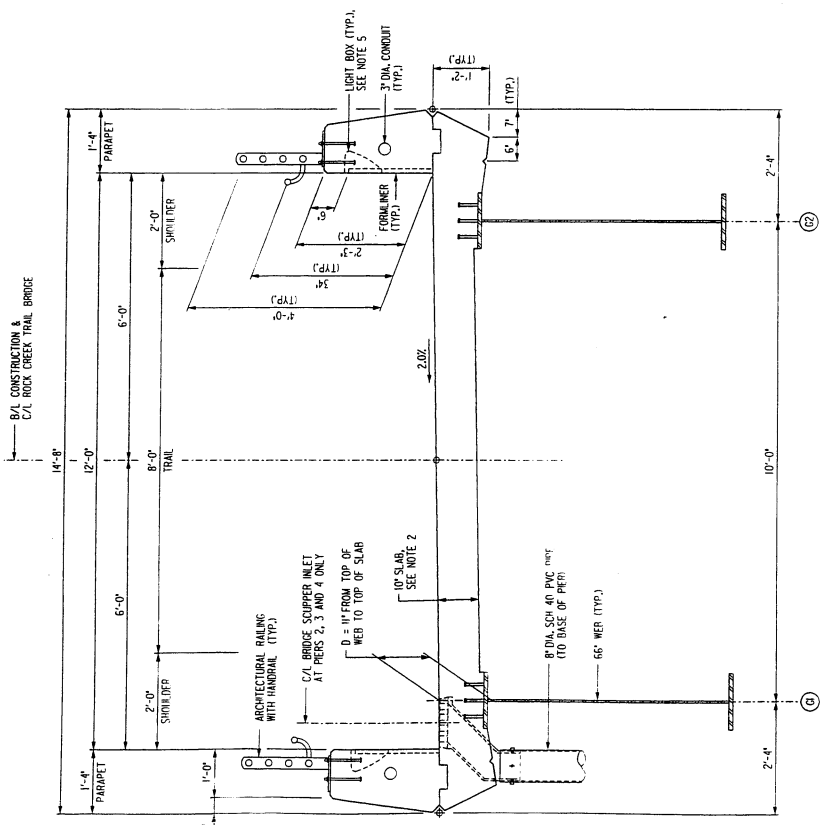
### TYPICAL SECTION OVER ROADWAY

LOOKING STATION AHEAD

- NOTES:
- FOR GENERAL NOTES, SEE DWG. NO. S-1.
  - TYPE X SLAB, SEE STD. NO. BR-558161-79-05.
  - FOR EMBEDDED LIGHT BOX LOCATIONS, SEE ELECTRICAL DRAWINGS.

### NORMAL TYPICAL SECTION

LOOKING STATION AHEAD



30% SUBMITTAL - JULY 17, 2008



PREPARED BY  
**URS**  
HUNT VALLEY, MARYLAND

NO.	REVISION	DATE	BY

STEEL GIRDER BRIDGE NO. M-XXX  
ON ROCK CREEK TRAIL  
OVER VEERS MILL ROAD (MD 586)  
TYPICAL SECTION

DESIGNED BY: BOM    DRAWN BY: SKL    CHECKED BY: ...  
MONTGOMERY COUNTY PUBLIC WORKS  
DEPARTMENT OF ROADS AND DESIGN  
ROCKVILLE, MARYLAND  
PROJECT NO. 09032T  
MCP'S S.C. SHEET ... OF ...  
MCP DRAWING NO. ... OF ...

DWG. NO. S-3  
RECOMMENDED FOR APPROVAL  
DATE  
DATE



