THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MCPB
Item No. 18
9-19-02

September 13, 2002

MEMORANDUM

TO: Montgomery County Planning Board

VIA: Jeffrey Zyontz, Chief
County-wide Planning Division

Richard C. Hawthorne, Chief
Transportation Planning
County-wide Planning Division

Judy Daniel, Team Leader
Rural Team
Community-Based Planning Division

FROM: Daniel K. Hardy, Supervisor (301-495-4530)
Transportation Planning
County-wide Planning Division

Khalid Afzal, Team Leader
Georgia Avenue Team
Community-Based Planning Division

SUBJECT: MD 97 Brookeville Bypass DEIS Recommendations

Recommendation: Transmit the following comments to the State Highway Administration

1. The Montgomery County Planning Board recommends that the State Highway Administration (SHA) select Alternate 7 Modified, a western bypass of the Town of Brookeville, as the preferred alternate for the MD 97 Brookeville project planning study.

2. During the preparation of the Final Environmental Impact Statement, SHA should prepare an interagency memoranda of understanding defining the process to achieve the Smart Growth condition that requires a third-party easement to prohibit future access or widening.

3. Subsequent project planning and design activities should incorporate the following, prior to mandatory referral:

   a. Accommodation of safe pedestrian and bicycle crossings for the existing Oakley Cabin Trail and a potential future natural surface trail as described in the County-wide Park Trails Plan.

   b. Preservation of the archeological resources in the core areas of the Newlin/Downs Mill site

   c. Selection of a bridge, rather than a culvert, to cross Meadow Branch

   d. Mitigation strategies for parkland and wetlands impacts

   e. Identification of stormwater management pond locations

   f. Identification of construction impacts, including required staging areas

   g. Determination of ownership and maintenance responsibility for the portions of existing MD 97 to be bypassed

ORGANIZATION OF THIS REPORT

This report contains five sections:

- **Purpose of the briefing** and relationship to SHA decision-making process
- **Study background**
- **Why select a western bypass;** comparison to the eastern bypass (Alternate 5C) and No-Build (Alternate 1) options
- **Comparison of western bypass alternates;** pros and cons of Alternate 7, Alternate 8A, and Alternate 8B, and development of Alternate 7 Modified
- **Relationship to Smart Growth**
- **Next steps**

PURPOSE OF BRIEFING

The purpose of this briefing is to provide comments to SHA in the selection of a preferred alternate for the MD 97 Brookeville study, commonly known as the Brookeville Bypass. SHA completed a Draft Environmental Impact Statement (DEIS) in August 2001 and held a Location and Design Public Hearing on October 3, 2001. The DEIS findings are summarized in the Public Hearing Brochure, attached to copies of this memorandum distributed to Planning Board members. Others may pick up the Brochure at Room 105 in the Montgomery Regional Office, 8787 Georgia Avenue in Silver Spring or request the Brochure from SHA's project manager, Carmeletta Harris, at 1-800-548-5026.

Five alternates are described in the DEIS:

- The No-Build Alternate (Alternate 1)
- An eastern bypass alternate (Alternate 5C)
- Three western bypass alternates (Alternate 7, Alternate 8A, and Alternate 8B)

The locations of these alternates are shown in Exhibit 1. Each of the four build alternates are shown in greater detail in Attachments A through D.

After the October 3, 2001 Public Hearing, SHA performed additional archeological studies at the Newlin/Downs Mill site and the study team developed Alternate 7 Modified, which slightly realigns Alternate 7 to avoid the core areas of archeological interest.

STUDY BACKGROUND

The 1980 Olney Master Plan recommends the realignment of Georgia Avenue to the west of the Town of Brookeville. The Planning Board last reviewed the Brookeville Bypass in worksessions of October 12, 1992 and October 22, 1992. The purpose of these worksessions was to review comments on the M-NCPPC feasibility study of the Brookeville Bypass. The Planning Board recommended that SHA begin a project planning study to investigate conceptual details that the M-NCPPC feasibility study did not have resources to address.

SHA initiated the MD 97 Brookeville project planning study in January 1995. After an Alternates Public Meeting in May 1996, three build alternates (two western bypass alignments and one eastern bypass alignment) were retained for detailed study.

In early 1998, the study was delayed due to concerns regarding consistency with the 1997 Maryland Smart Growth and Neighborhood Conservation Act, which established Priority Funding Areas (PFA) where growth is to be encouraged through investment in public infrastructure. While the Town of Brookeville is located within a

PFA (because it is a municipal corporation), the majority of the bypass alternative alignments are not.

Following an agreement with local elected officials, the Maryland Department of Transportation, and the Governor's office, the study resumed in April 2000, with the establishment of four "smart growth" conditions. These conditions, and the means for meeting them, are described in the section of this memorandum on Relationship to Smart Growth.

WHY SELECT A WESTERN BYPASS

The alternates examined in the DEIS fall into three general categories; No-Build, eastern bypass, and western bypass. Staff believes that the differences among these three categories are substantive enough to briefly summarize the reasons why a western bypass should be selected before describing the more subtle differences between the western bypass alternates.

Staff believes that the purpose and need for a Brookeville Bypass has been established repeatedly from both civic and technical perspectives, through both our own Master Plan process and the NEPA process. Briefly, the purpose and need for the project are to resolve the incompatible nature of an important State highway serving the needs of 21st century travelers within the setting and alignment of an 18th century town. Therefore, the project aims to:

- protect the historic Town of Brookeville from the adverse effects of through traffic, and

- improve safety for travelers on MD 97 through Brookeville

Exhibit 2 provides a summary of the environmental impacts of each of the DEIS alternates. The No-Build alternate does not meet the purpose and need of the study. Each of the build alternates listed in Exhibit 2 do meet the purpose and need.

The eastern bypass alternate, Alternate 5C, was retained for detailed study as it avoids the Brookeville Historic District and minimizes the impacts on parkland resources. As shown in Exhibit 2, Alternate 5C passes through a more narrow portion of Reddy Branch Stream Valley Park, resulting in Section 4(f) resource acreage that is roughly an acre lower than the western bypass alternates.

However, Alternate 5C has several major disadvantages. It is more than twice as long as any of the western bypass alternates, resulting in a much larger project footprint. It requires purchase of five homes, whereas the western bypass alternates do not take any homes. At approximately $35M, Alternate 5C costs more than twice as much as any of the western bypass alternates. Alternate 5C is not consistent with the Olney Master Plan. Staff finds that these disadvantages clearly outweigh the parklands

and historic district minimization/avoidance features of Alternate 5C. Therefore, Alternate 5C should not be recommended.

COMPARISON OF WESTERN BYPASS ALTERNATES

Each of the three western bypass alternates described in the DEIS have relatively similar quantitative impacts, as presented in Exhibit 2. Staff finds that each of these three western bypass alternates would be consistent with the Olney Master Plan. The subtle differences between the western bypasses involve the connections to the existing roadway network and location of the alignment relative to adjacent natural resources, communities, and historic and cultural features.

Staff reviewed the western bypass alternates in a two-stage process. In the first stage, the three DEIS alternates were compared and public testimony was considered. This comparison led to the conclusion that Alternate 7 was generally the preferred alternate. Alternate 7, however, creates undesirable and avoidable impacts to the core areas of the Newlin/Downs Mill archeological site. Therefore, in the second stage of the process, Alternate 7 Modified was developed to realign a portion of the roadway to avoid those core areas.

Comparison of DEIS Alternates

The DEIS describes three western bypass alignment alternates. All three alternates have a similar southern terminus with a three-leg roundabout at Georgia Avenue at the northeast corner of the Longwood Community Center. The designs of these three alternates are influenced by the desire to avoid an area of wetlands (Wetland #12) in the Reddy Branch floodplain.

- Alternate 7, shown in Attachment B, is the easternmost of the western bypass alternates. It meets Brookeville Road at a four-leg roundabout, has a low-profile bridge crossing Reddy Branch, and passes east of Wetland #12. In Alternate 7, a 300' segment of existing Georgia Avenue including the bridge across the Reddy Branch is closed to vehicular traffic. Access to and from the north into Brookeville is provided via the roundabout at Brookeville Road.

- Alternate 8A, shown in Attachment C, follows an alignment to the west of Alternate 7. Like Alternate 7, Alternate 8A also includes a low-profile bridge over Reddy Branch. However, Alternate 8A passes west of Wetland #12. Access to and from the west on Brookeville Road is provided via a three-leg roundabout. Access to and from the north into Brookeville is provided via a three-leg roundabout at the northern bypass terminus. The Alternate 8A alignment requires closure of a 600' segment of existing Brookeville Road. Access to and from the west into Brookeville is achieved via a dog-leg movement between the two three-leg roundabouts on either side of Reddy Branch.

- Alternate 8B, shown in Attachment C, is the westernmost, and highest, of the western bypass alternates. The westerly alignment carries it higher along the western slope of the Meadow Branch valley. From this higher ground, Alternate 8B passes over both Brookeville Road and Reddy Branch with a single, higher-level bridge and travels west of Wetland #12. The northern bypass terminus consists of a three-leg roundabout with Georgia Avenue. No existing roadway segments are closed.

The relative impacts of the three western bypass alternates compared in the DEIS can essentially be summarized as follows:

- Each of the western bypass alternates would appropriately satisfy the study purpose and need

- Alternate 7, following the shortest alignment and with the smallest footprint, provides the least impact to parklands and interior forest cover and has the lowest capital cost

- Alternate 8B, following a more westerly and higher profile including a high-level bridge across Brookeville Road and Reddy Branch, provides the best protection of cultural resources, specifically the Newlin/Downs Mill site and the Oakley Cabin Trail.

Public Comment

SHA held a Location and Design Public Hearing on October 3, 2001. The summary of oral and written Public Hearing testimony is shown in Exhibit 3. The public testimony reinforced the finding that the eastern bypass should not be selected and that either Alternate 7 or Alternate 8B is the preferred western bypass alternative.

Testimony supporting Alternate 7 was received from both representatives of the Town of Brookeville and a representative of the Olney Village Civic Association. This concurrence from communities both east and west of the master plan bypass alignment represents a significant achievement.

SHA has also maintained a Focus Group of local residents, business, and civic representatives. The Focus Group has met on an approximately bi-monthly basis during the past several years.

Development of Alternate 7 Modified

The DEIS states that each of the western bypass alternates have some impact on the Newlin/Downs Mill archeological site. Because of this impact, further study, called a Phase II survey, to determine significance and mitigating action was required for any western bypass alternate selected. Further review suggested that the varying extent of archeological impacts and mitigation might be a determining factor in the

selection of a preferred alternate. SHA therefore postponed the selection of a preferred alternate to complete the Phase II survey work.

The Phase II survey, completed in July 2002, confirmed the hypothesis that Alternate 7 would cause far greater disruption to the core areas of the Newlin/Downs Mill site, specifically the mill site and miller's house, than would Alternate 8B. The Phase II survey also reports that avoidance of the core areas is the most desirable action, but that if these features cannot be avoided, the recommended mitigation is data recovery.

Staff believed that Alternate 7 could be refined to avoid the core areas of Newlin/Downs Mill and requested that SHA examine this possibility. SHA developed Alternate 7 Modified, which is the same as Alternate 7, except for:

- A slight shift of approximately 30' to the west in the vicinity of the Newlin/Downs Mill site, including a slightly sharper turn into the Brookeville Road roundabout

- A retaining wall on the south side of the portion of Brookeville Road adjacent to the Newlin/Downs Mill site.

These refinements protect the core area of the mill and the miller's house.

The Focus Group has continued to meet periodically as the Phase II archeological survey work has been conducted. The attendees at the most recent Focus Group meeting on July 14, 2002, unanimously endorsed the concept of Alternate 7 Modified.

Staff believes the Alternate 7 Modified alignment provides the best compromise between natural and cultural resource impacts for the Brookeville Bypass. Alternate 7 Modified does clip the southwest corner of the Brookeville Historic District (triggering the need for an Historic Area Work Permit), removes a portion of the Newlin/Downs Mill race, and requires realignment of the Oakley Cabin trail with an at-grade trail-crossing of MD 97. However, the primary objective for the Brookeville Bypass project is to preserve the historic resource that is the Town of Brookeville. Staff and Town representatives alike believe that Alternate 7 Modified achieves this objective.

Mitigating Actions

The Brookeville Bypass will create noticeable adverse impacts on the natural environment, parkland, historic and archeological resources. The roadway will divide two large forest stands in a biodiversity area, fragmenting forest interior spaces and accelerating the invasion of non-native species. The roadway will cross the Oakley Cabin Trail and impact portions of the Newlin/Downs Mill archeological site (outside those core areas protected by the development of Alternate 7 Modified).

During development of the FEIS, the study team will conduct subsequent evaluation of means by which SHA can best mitigate the adverse impacts of Alternate 7

Modified on environmental, historic, archeological, and recreational resources. Staff recommends that these means include:

- Acquiring replacement parklands of equivalent natural value, preferably within the Reddy Branch watershed

- Developing wetlands mitigation and stream reforestation areas within Reddy Branch Park, consistent with Policy for Parks guidance on non-park uses that serve the greater public interest.

- Consider extending the length of the structure carrying the Brookeville Bypass across Reddy Branch from approximately 100' in length to approximately 300' in length (to incorporate the entire length of the floodplain) and raising the elevation of the north end of the lengthened structure by approximately 3' to 5'. These changes, while increasing the project cost, would accomplish the following objectives:

    - Better preserve the integrity of the 100-year floodplain

    - Minimize the risk of flooding the bypass roadway

    - Enhance the ability for larger animal species to pass under the roadway

    - Improve opportunities for future natural surface trail connectivity on the north side of Reddy Branch as envisioned in the County-wide Park Trails Plan

- Designing the Brookeville Bypass roundabout junction with Brookeville Road to include the Oakley Cabin Trail connection and emphasize, through signs or landscaping, the location of the historic mill race parallel to and on the south side of Brookeville Road.

- Considering provision of interpretative materials such as information panels at the Newlin/Downs Mill archeological site.

- Providing stream restoration along the Reddy Branch within the stream valley park.

- Providing reforestation where pavement might be removed along the portion of existing Georgia Avenue, north of Reddy Branch, that will be closed to vehicular traffic

- Identifying areas for stormwater management and construction staging that avoid additional impacts to sensitive environmental and archeological resources, including and associated with the Newlin/Downs Mill site.

The current project mapping indicates that the Brookeville Bypass will cross Meadow Branch via a culvert. The DEIS indicates that selection of bridge structures and culverts will be made during the subsequent project design phase. Staff recommends that the Meadow Branch crossing be bridged to reduce impacts on hydrology and wildlife passage.

Other perspectives

Staff considered several other perspectives in weighing the pros and cons of the western bypass alternates.

Network connectivity

The primary objective of the Brookeville Bypass is to remove MD 97 traffic, or north-south traffic, from the Town of Brookeville. Traffic currently traveling east-west into, or through, the Town of Brookeville uses Brookeville Road to and from the west and Brighton Dam Road to and from the east.

The 1980 Olney Master Plan classified Brookeville Road and Brighton Dam Road as primary residential roadways (both with the designation P-23). The 1980 Plan envisioned a relocation of a portion of P-23 slightly to the north. To the east of MD 97, P-23 was reassigned to Bordly Drive as part of the Abrams property subdivision approval in 1993. To the west of MD 97, Brookeville Road was reclassified as a Rustic Road in the 1996 Rustic Roads Master Plan. Brighton Dam Road is currently classified as an Interim Rustic Road.

Staff believes that bypass alternates which either provide a roundabout connection to the bypass at Brookeville Road (Alternates 7, 7 Modified, and 8A) or via existing Georgia Avenue (Alternate 8B) both meet the intent of the master plan and serve local network connectivity needs.

Citizen testimony has raised the concern that the different western bypass alternates being considered could affect the desirability of Brookeville Road, Bordly Drive, and Brighton Dam Road as east-west cut-through routes. Staff recognizes the concern and concurs that the use of either rustic roads or primary residential roads by through traffic should be discouraged.

Staff finds that the effects of each western bypass alternative on east-west traffic will be minor, based on the level of connectivity retained in each option. The different connection options proposed in Alternates 7, 7 Modified, 8A, and 8B, have only minor effects on east-west travel time. For instance, the closure of a portion of existing Brookeville Road to vehicular traffic in Alternate 8A would increase the east-west travel distance by approximately one-fifth of a mile, or about one-half minute at 30 MPH. Similarly, the closure of a portion of Georgia Avenue in Alternates 7 and 7 Modified would increase travel distance for the motorist entering Brookeville from the north by about one-tenth of a mile, or about one-quarter of a minute at 30 MPH.

Rustic Road effects

Brookeville Road is a rustic road based both on its outstanding natural features and its historic value. The 1996 Rustic Roads Master Plan states that "the designation of this road as a rustic road is not to be used to affect in any way the Brookeville Bypass when that road is constructed". Staff believes that the differences in the effects of the different bypass alternatives should nonetheless be noted.

Each of the western bypass alternates has an adverse effect on the rustic nature of Brookeville Road, which is classified as a Rustic Road. Alternates 7, 7 Modified, and 8A both include a roundabout junction between Brookeville Road and the Brookeville Bypass, whereas in Alternate 8B the Brookeville Bypass crosses over Brookeville Road on a structure. Staff believes that neither Alternate 7 Modified nor Alternate 8B offers a clear advantage, as the roundabout construction would have a greater impact on the historic nature of the existing road alignment but the overpass would have a greater impact on the roadway viewshed.

Typical Section

Each of the bypass alternates was evaluated as an open-section (no curb-and-gutter) and as a closed-section (curb-and-gutter) roadway, as shown in Exhibit 4. The basic cross-section includes one travel lane in each direction and a five-foot paved shoulder to accommodate bicycle traffic. Because the curb and gutter act as a means to redirect errant vehicles back onto the roadway, the closed-section option has a smaller footprint in terms of graded area than the open-section. Pedestrian accommodations such as sidewalks are not included because the bypass is intended to have no adjacent land use or future access points.

Because the closed-section option has a more narrow footprint than the open-section option, it also generally has lower environmental impacts as identified in Exhibit 2. However, the capital cost and stormwater management needs are greater with a closed-section roadway. Because the area adjacent to the roadway is generally parkland or other open area, staff concurs with the study team recommendation to select an open-section roadway design.

Treatment of Portions of Existing MD 97 to be Bypassed

The Brookeville Bypass will carry MD 97 around the Town of Brookeville, removing the need for SHA ownership and maintenance of those portions of existing MD 97 that will be bypassed. Staff concurs with the 1980 Olney Master Plan recommendation that the portion of existing MD 97 between the two bypass termini should not be included in the Master Plan of Highways, indicating that the functional classification is lower than primary residential roadway. SHA is coordinating with DPWT and the Town of Brookeville to develop ownership and maintenance agreements for these roadway segments.

Alternate 7 Modified also proposes closure of a portion of MD 97 between Reddy Branch and the northern bypass terminus. As the ownership and maintenance agreements are developed, the desirability of retaining this link as a bikeway will be evaluated. If the pavement and bridge structure are to be removed entirely, staff recommends applying reforestation and stream restoration techniques.

SMART GROWTH CONSISTENCY

As part of the Maryland Smart Growth and Neighborhood Conservation Act passed in October 1997, Montgomery County identified Priority Funding Areas (PFA) where state investment in infrastructure is considered consistent with desired development patterns. By policy, all municipal corporations, such as the Town of Brookeville, are considered PFAs. The alignment for most of the Brookeville Bypass alternates, however, lies outside any PFA.

In 1999, the Maryland Department of Transportation, the Governor's office, and local elected officials agreed that the Brookeville Bypass could be considered consistent with Smart Growth policies if four conditions were met during design and construction:

- Under local ordinance, Montgomery County is to adopt, through appropriate enforceable action, restrictions that will prevent this bypass from allowing sprawl development. Any capacity a bypass might add to the road network cannot be used to allow development outside the current boundaries of the Town of Brookeville.

- Permanent easement to be held by an entity such as the Maryland Environmental Trust must border the entire roadway to ensure no future access, widening, or connection to the bypass is possible.

- If for any reason these controls fail, Montgomery County will reimburse the State for the full cost of the bypass.

- Montgomery County, the Maryland Department of Transportation, and Howard County Government will work out a safe traffic calming point north of the bypass, which limits traffic capacity to the current capacity of MD 97 through Brookeville.

The first condition has been addressed by Montgomery County by incorporation into the Annual Growth Policy. Staff concurs with the State Highway Administration that the last condition is met through the establishment of roundabouts as the traffic control devices for bypass junctions.

The definition of permanent easement and the identification of the entity responsible for maintaining that easement has not yet been developed. SHA has been working with the Maryland Environmental Trust to develop appropriate interagency agreements to ensure that this Smart Growth criterion is met. Staff requests that this

issue be resolved and draft memoranda of understanding be available for review as part of the Final Environmental Impact Statement.

NEXT STEPS

The remaining steps in the implementation process include:

- Development of agency consensus on a preferred alternate during spring 2002, including
    - Presentation to the County Council (scheduled for September 24)
    - Formal designation of a preferred alternate by SHA's Administrator (October 2002)
    - Completion of a Final Environmental Impact Statement identifying the preferred alternate (Winter 2003), and
    - Location and Design Approval of the preferred alternate by the Federal Highway Administration (Spring 2003)
- Engineering, expected to take two to three years, and
- Construction, expected to take two years

The project has only been funded through project planning. The engineering and construction phases will require funding through the state's Consolidated Transportation Plan adoption process.

DKH:cmd

MD 97 Brookeville Bypass DEIS Recommendations.doc

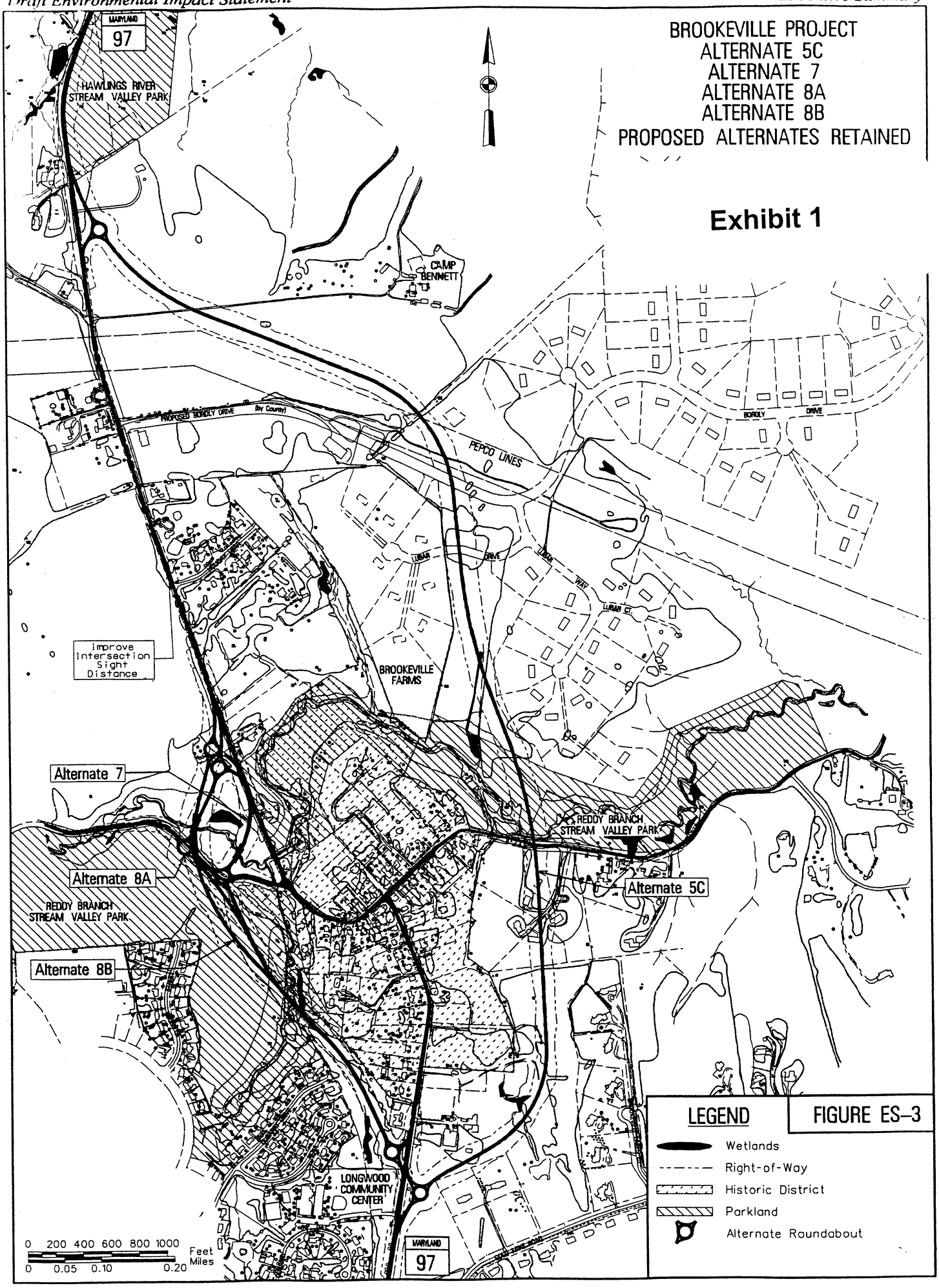

BROOKEVILLE PROJECT
ALTERNATE 5C
ALTERNATE 7
ALTERNATE 8A
ALTERNATE 8B
PROPOSED ALTERNATES RETAINED
Exhibit 1
MARYLAND 97
HAWLINGS RIVER STREAM VALLEY PARK
CAMP BENNETT
PROPOSED BORDLY DRIVE (By County)
PEPCO LINES
BORDLY DRIVE
LUNAR DRIVE
LUNAR WAY
LUNAR CT.
Improve Intersection Sight Distance
BROOKEVILLE FARMS
Alternate 7
Alternate 8A
REDDY BRANCH STREAM VALLEY PARK
Alternate 8B
REDDY BRANCH STREAM VALLEY PARK
Alternate 5C
LONGWOOD COMMUNITY CENTER
MARYLAND 97
0 200 400 600 800 1000 Feet
0 0.05 0.10 0.20 Miles
LEGEND
Wetlands
Right-of-Way
Historic District
Parkland
Alternate Roundabout
FIGURE ES-3

Exhibit 2

ALTERNATES CARRIED FORWARD FOR DETAILED STUDY (October 2000)

	Alternate 5C East Bypass		Alternate 7 West Bypass		Alternate 8A At-Grade West Bypass		Alternate 8B Grade Separated West Bypass	
	Open Section	Closed Section	Open Section	Closed Section	Open Section	Closed Section	Open Section	Closed Section
	2.12	2.12	0.72	0.72	0.85	0.85	0.87	0.87
	$ 34.2	$ 34.8	$ 12.2	$ 12.7	$ 13.4	$ 13.5	$ 16.7	$ 16.9
	Socio-Economic Resources							
	5	5	0	0	0	0	0	0
	1	1	0	0	0	0	0	0
	26	26	11	11	13	13	13	13
	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	4.55	3.80	5.30	4.84	5.87	5.34	6.29	5.64
	0	0	1.82 [3]	1.82 [3]	1.42 [3]	1.42 [3]	1.58 [3]	1.55 [3]
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	0	0	1	1	2	2	1	1
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	8	8	10	10	10	10	10	10
	Natural Resources							
	25.88	23.21	4.47	4.25	4.90	4.75	4.64	4.33
	5.63	4.74	1.38	1.24	3.96	3.72	5.28	4.73
	0.21	0.15	0.12	0.13	0.10	0.10	0.16	0.16
	1,590	1,321	1,356	1,358	1,284	1,291	1,449	1,411
	2.59	2.44	3.29	3.27	2.98	2.93	3.29	3.17
	11.50	9.56	8.62	8.04	10.95	10.33	11.79	10.85

clude additional length for traffic roundabouts

Exhibit 3

MD 97 Brookeville Public Hearing
Summary of Citizen Comments

Summary of 23 Testimonies

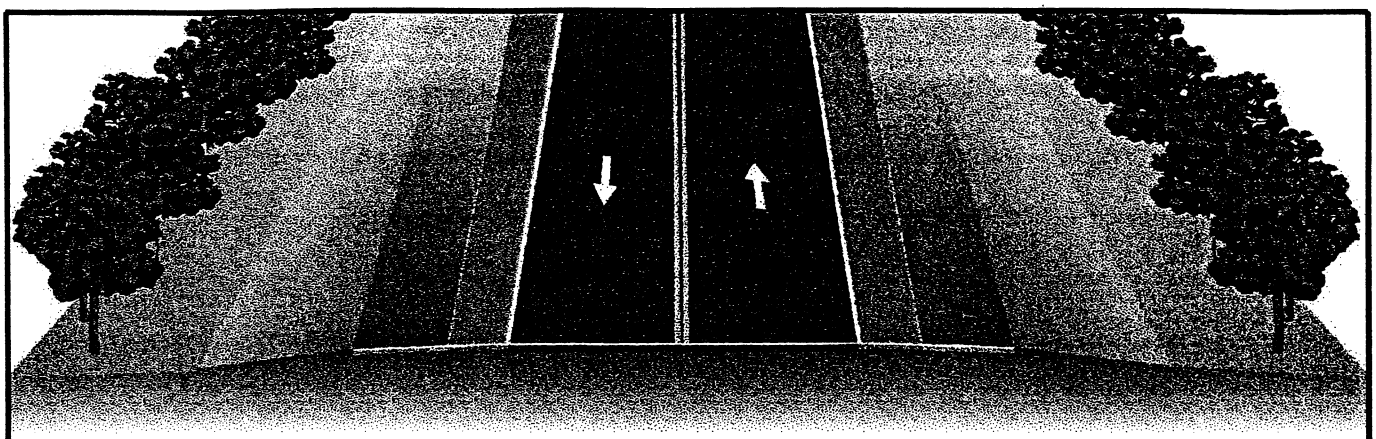
Alternate 1 (No Build)	In Favor of Alternate 2	Against Alternate 0
Alternate 5C (Eastern Alignment)	In Favor of Alternate 0	Against Alternate 9
Alternate 7 (Western Alignment)	In Favor of Alternate 9	Against Alternate 2
Alternate 8A (Western Alignment)	In Favor of Alternate 0	Against Alternate 1
Alternate 8B (Western Alignment)	In Favor of Alternate 2	Against Alternate 0

Summary of 17 Written Comments

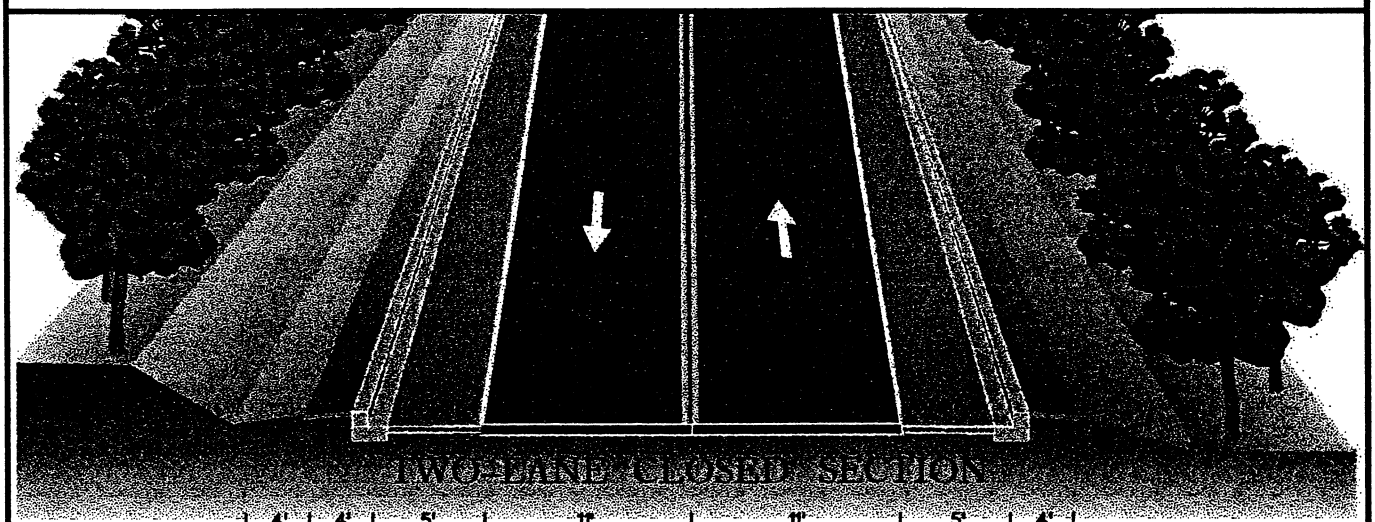
Alternate 1 (No Build)	In Favor of Alternate 2	Against Alternate 0
Alternate 5C (Eastern Alignment)	In Favor of Alternate 2	Against Alternate 3
Alternate 7 (Western Alignment)	In Favor of Alternate 5	Against Alternate 1
Alternate 8A (Western Alignment)	In Favor of Alternate 0	Against Alternate 3
Alternate 8B (Western Alignment)	In Favor of Alternate 6	Against Alternate 2

I. TYPICAL SECTIONS RECOMMENDED FOR DETAILED STUDY

Due to the Smart Growth agreement criteria established to comply with the Smart Growth Legislation, a two-lane typical section was chosen and two options (open section and closed section) are being considered for each of the four Build Alternate (Alternates 5C, 7, 8A and 8B. Impact quantities for both typical sections for each of the four build alternates are provided in Section IV and Section V of this DEIS.



TWO–LANE OPEN SECTION



TWO–LANE CLOSED SECTION

TWO–LANE OPEN SECTION

This typical section consists of two 11–foot travel lanes, 10–foot graded shoulders (5–foot paved), and safety grading (6–foot for 40 mph and 10–foot for 50 mph). The 5–foot paved shoulder is wide enough to safely accommodate bicycle traffic.

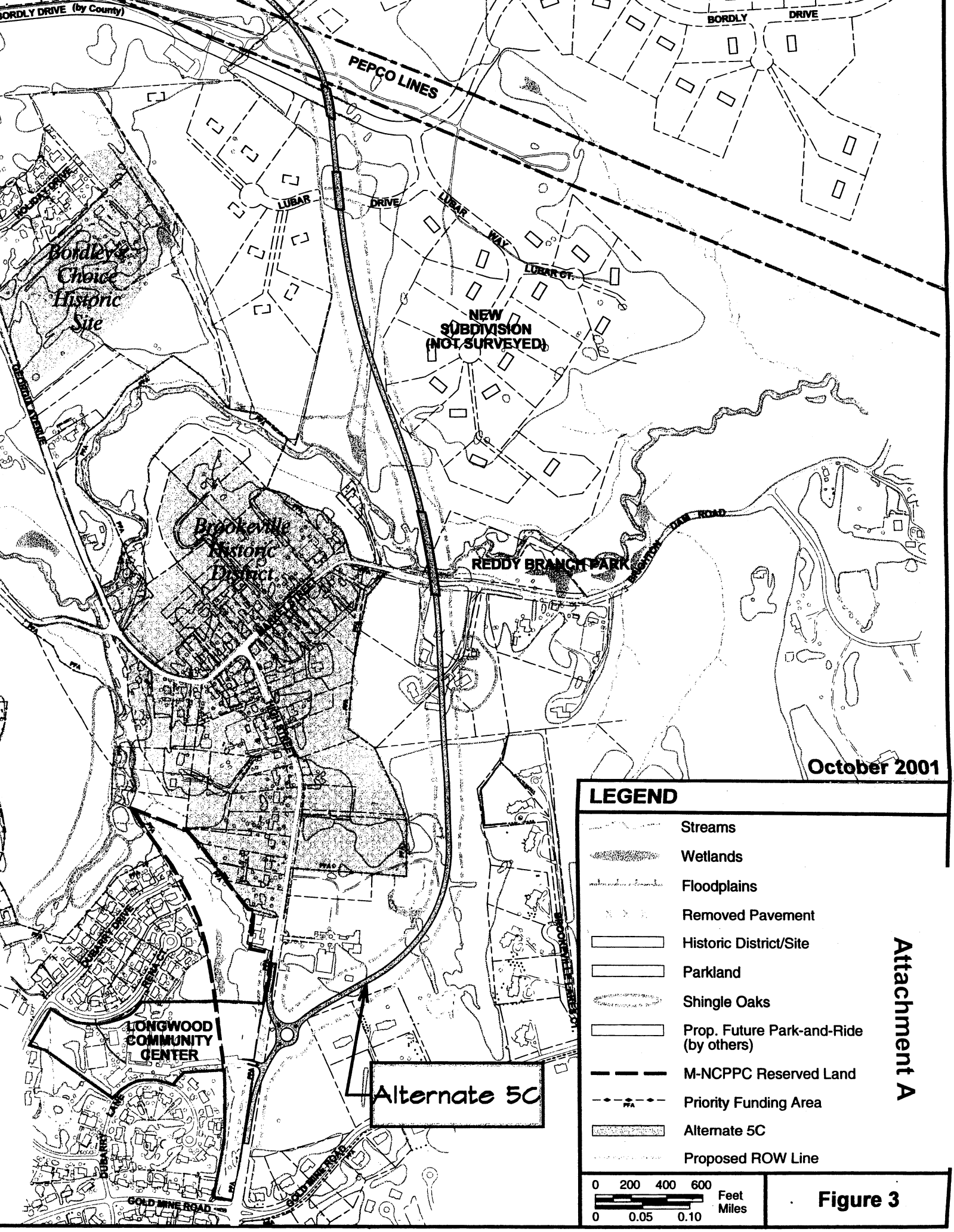
TWO–LANE CLOSED SECTION

This typical section consists of two 11–foot travel lanes, 5–foot paved shoulders with mountable curb and gutter, 4–foot of curb backing and 4–foot slope. Again, the 5–foot paved shoulder is wide enough to safely accommodate bicycle traffic.

MD 97 BROOKEVILLE PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT / SECTION 4(f) EVALUATION

TYPICAL SECTIONS

Exhibit 4


BORDLY DRIVE (by County)
PEPCO LINES
BORDLY
DRIVE
LUBAR
DRIVE
LUBAR
WAY
LUBAR CT.
NEW
SUBDIVISION
(NOT SURVEYED)
Bordley's
Choice
Historic
Site
Brookeville
Historic
District
REDDY BRANCH PARK
BROOKEVILLE
LONGWOOD
COMMUNITY
CENTER
Alternate 5C
GOLD MINE ROAD
October 2001
LEGEND
Streams
Wetlands
Floodplains
Removed Pavement
Historic District/Site
Parkland
Shingle Oaks
Prop. Future Park-and-Ride
(by others)
M-NCPPC Reserved Land
Priority Funding Area
Alternate 5C
Proposed ROW Line
0 200 400 600
Feet
0 0.05 0.10
Miles
Figure 3
Attachment A

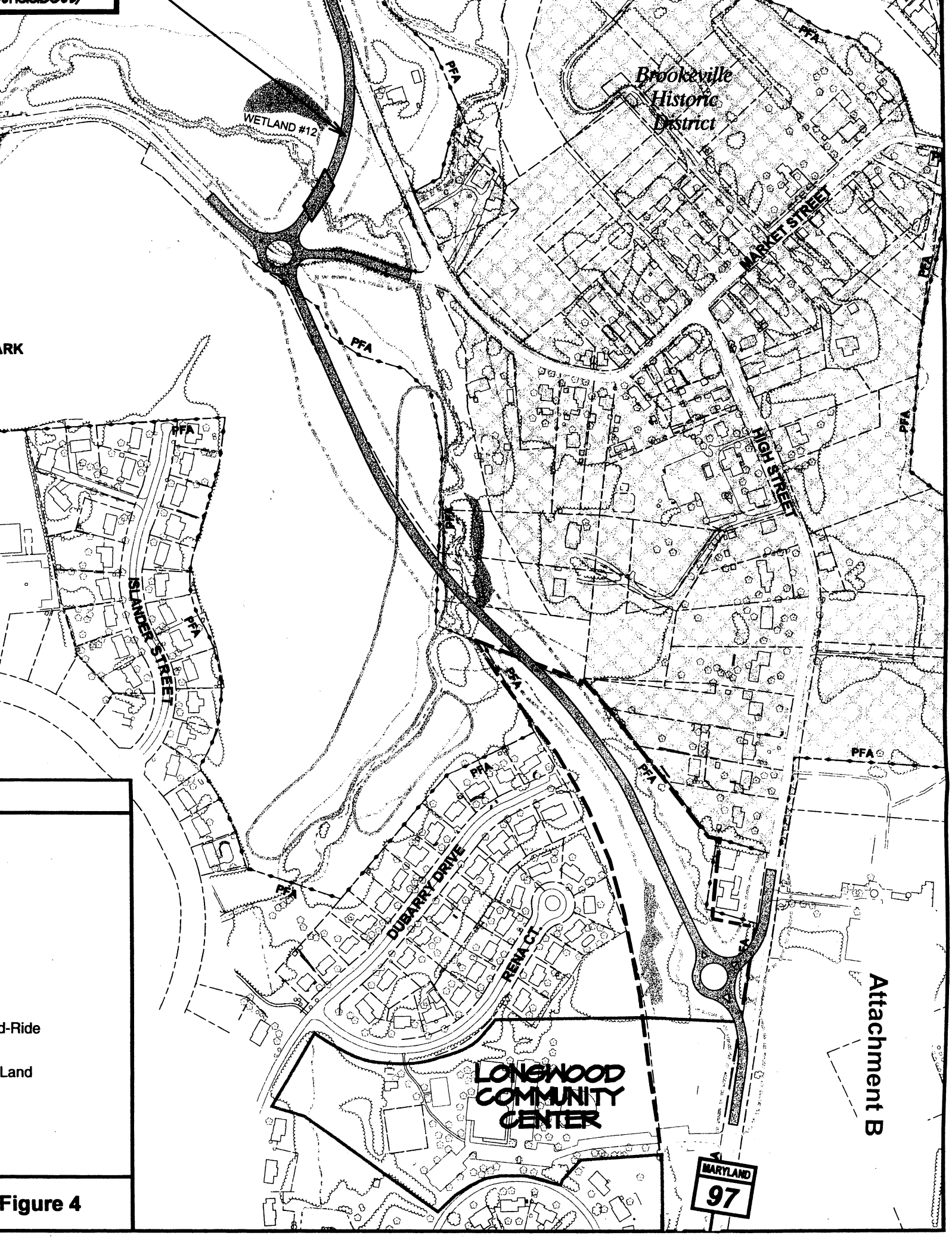
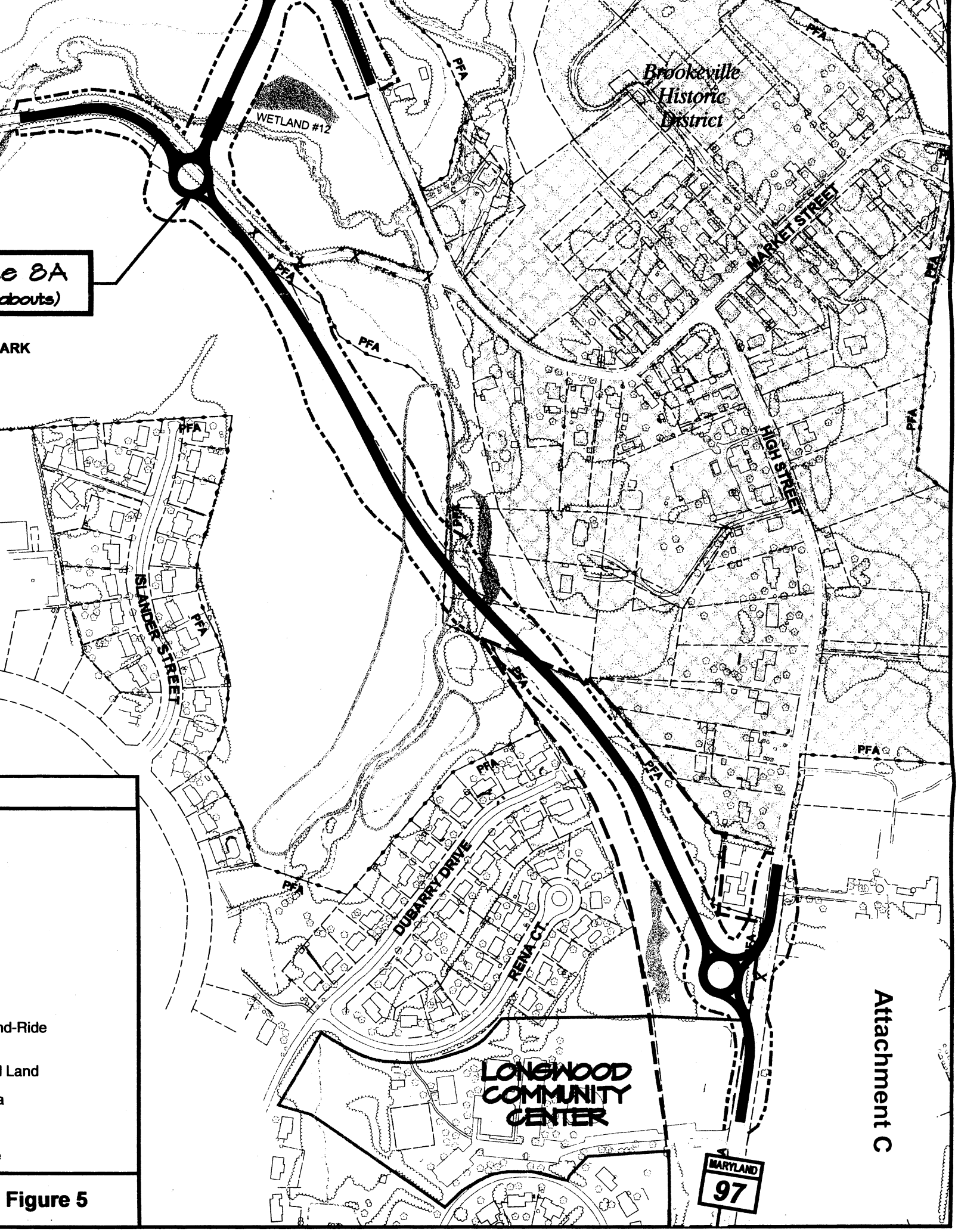
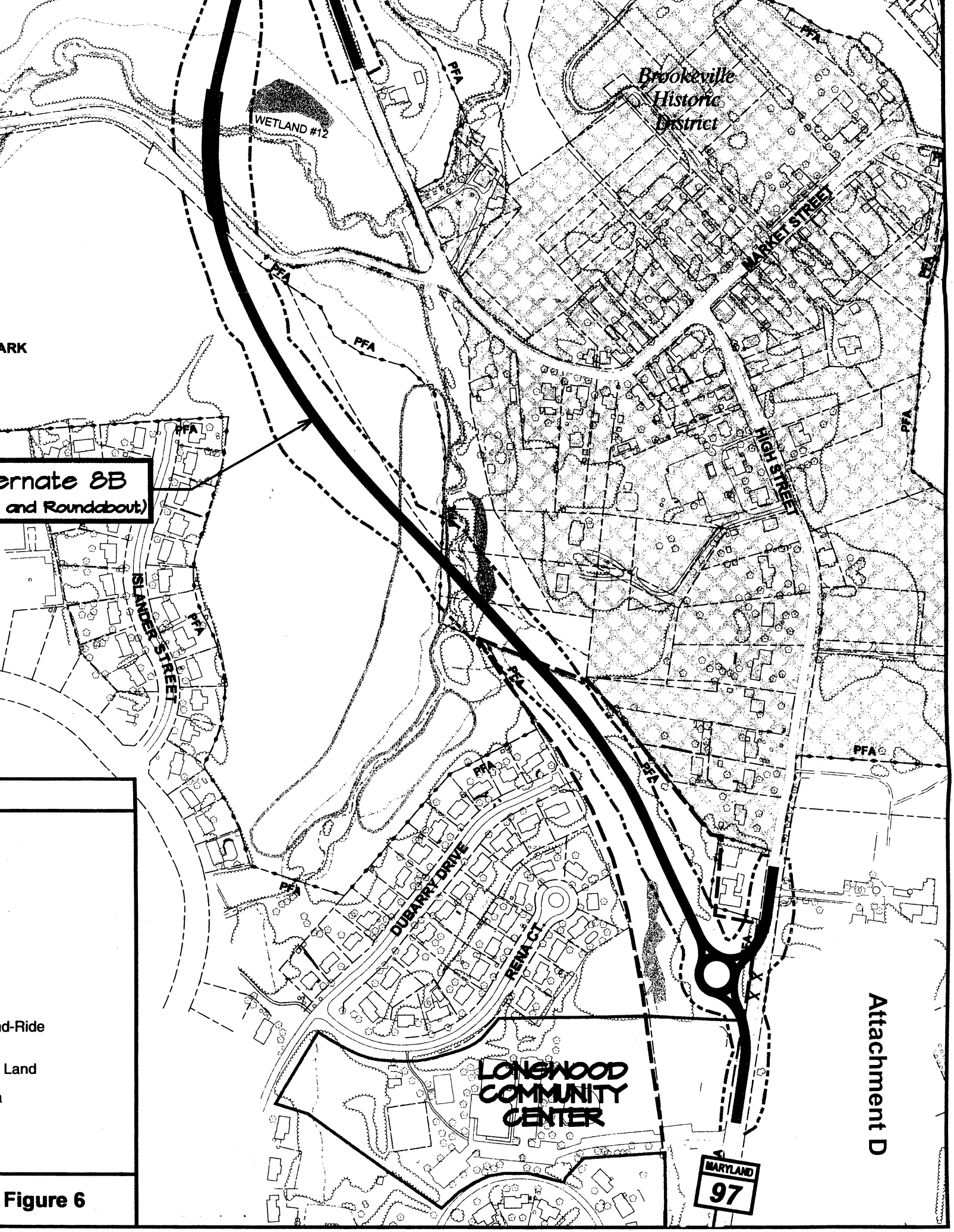

WETLAND #12
PFA
Brookeville Historic District
MARKET STREET
HIGH STREET
ISLANDER STREET
DUBARRY DRIVE
RENA CT.
LONGWOOD COMMUNITY CENTER
MARYLAND 97
Attachment B
d-Ride
Land

Figure 4



Attachment C

Figure 5



Attachment D

Figure 6