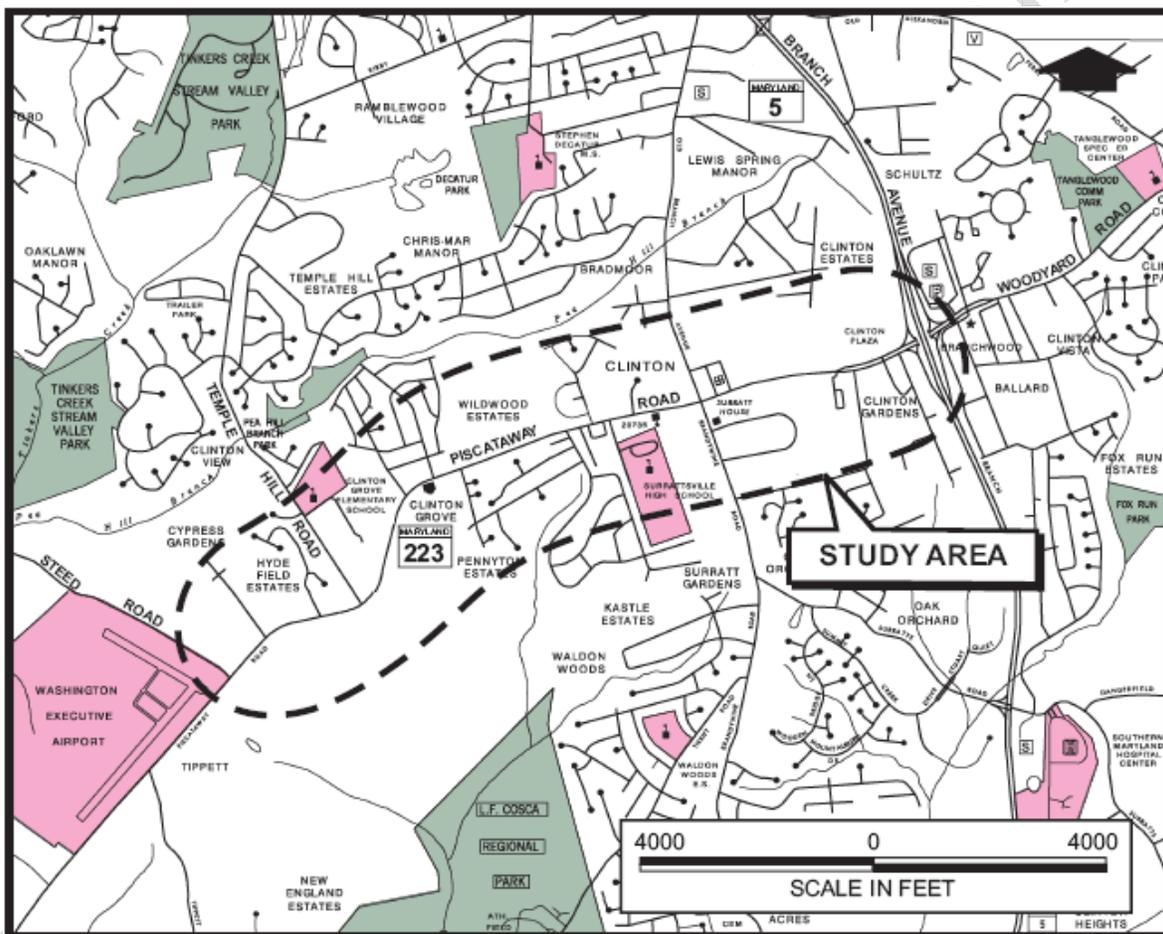


**MD 223 (Piscataway/Woodyard Road)
from Steed Road to MD 5 (Branch Avenue)
Prince George's County, Maryland
Project Number PG581A11**

PURPOSE AND NEED STATEMENT



**Maryland State Highway Administration
Office of Planning and Preliminary Engineering**

August 2008

MD 223 (Piscataway/Woodyard Road) from Steed Road to MD 5 (Branch Avenue)

Summary

Location

The limits of the MD 223 study corridor extend from Steed Road to MD 5 (Branch Avenue) in Prince George's County, Maryland, a distance of approximately 2.7 miles.

Existing Conditions

MD 223 (Piscataway/Woodyard Road) is a two-lane open section road from Steed Road to Gwynndale Drive and a four-lane closed section road from Gwynndale Drive to MD 5 (Branch Avenue). MD 223 is the primary east-west road serving Clinton, Maryland. Five signalized intersections are located along the study corridor. Along westbound MD 223, sidewalks are located from MD 5 to Surratts Village Drive. Along eastbound MD 223, continuous sidewalks begin at Surratts Village Drive and end at Old Branch Avenue/Brandywine Road. Intermittent sidewalks are located between Old Branch Avenue/Brandywine Road and MD 5. The eastern end of the study section accounts for numerous entrances onto MD 223. MD 223 provides connection to MD 210 via Livingston Road in the south and to MD 5 and MD 4 in the north.

MD 223, between Steed Road and MD 5, is functionally classified by the State Highway Administration (SHA) as a State Secondary Arterial, and as an Urban Other Principal Arterial by the Federal Highway Administration.

Smart Growth Considerations

The majority of the project corridor is within existing Priority Funding Areas (PFAs); however, the portion of the corridor between Glen View Drive and Steed Road (less than five percent of the project corridor) is not located within the PFA.

Project Background

The 2008 State Highway Needs Inventory (secondary system) for Prince George's County recommends upgrades along MD 223 from Temple Hill Road to MD 5. Consideration was given to terminating the current project at Temple Hill Road, but this led to concerns of impacts to the traffic operations at the MD 223/Steed Road intersection. Through discussions with Prince George's County, the project limits were extended further west to Steed Road.

The 2008 State Highway Needs Inventory (secondary system) for Prince George's County recommend upgrades to MD 223 from Temple Hill Road to Floral Park Road (west of the project limits) and MD 223 from MD 5 to MD 4 (east of the project limits). This project is only funded for project planning in the Consolidated Transportation Program.

The upgrades recommended for MD 223 are consistent with County's Master Plan, which has been recognized as needing major widening or a new alignment between MD 5 and Temple Hill Road.

Project Purpose

The purpose of the study is to:

- address the need for safety improvements and additional capacity to accommodate existing and future traffic volumes on MD 223;
- evaluate enhanced transportation network connectivity between MD 5 and Steed Road;
- address the pedestrian/bicycle safety and access issues to the residences, schools and places of worship within this section of MD 223;
- provide improved access to the business and residential communities in Clinton; and
- improve the east-west regional transportation network connectivity.

Project Need

This project is needed to address capacity and safety deficiencies that will occur as a result of planned and future development in and around the project area.

Two of the intersections along MD 223 within the study corridor currently operate at Level of Service (LOS) E, the second lowest rating for a highway facility, during the morning and evening peak hours. By operating at LOS E, unstable traffic flow exists and there are unacceptable delays and vehicle back-ups. The intersections warrant upgrades to address operations. Any conditions that cause traffic to slow typically result in queues, and excessive queues form at intersections. Side street operations are adversely impacted, travel speeds are reduced, and traffic volumes on local streets may increase as vehicles attempt to use alternative routes. Assuming area developer improvements are not made; seven intersections within the study corridor are expected to operate at LOS E or F (failing conditions) by 2030.

The rates for injury, property damage and total crashes were significantly high as compared to the statewide average crash rate for similarly designed highways under state maintenance from 2004 to 2006 through the corridor.

In addition, the corridor also lacks continuous sidewalks and bicycle facilities. Citizens have voiced their strong desires for upgraded, safe pedestrian and bicycle facilities for better access to the many community facilities within the project area (e.g., religious facilities, schools, a library, post office, etc.).

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A. INTRODUCTION

MD 223 (Piscataway/Woodyard Road) is a two-lane open section road from Steed Road to Gwynndale Drive and a four-lane closed section road from Gwynndale Drive to MD 5 (Branch Avenue). MD 223 is the primary east-west road serving Clinton, Maryland. Five signalized intersections are located along the 2.7-mile segment of the study corridor, from Steed Road to MD 5. Along westbound MD 223, sidewalks are located from MD 5 to Surratts Village Drive. Along eastbound MD 223, continuous sidewalks begin at Surratts Village Drive and end at Old Branch Avenue/Brandywine Road. Intermittent sidewalks are located between Old Branch Avenue/Brandywine Road and MD 5. MD 223 provides connection to MD 210 via Livingston Road in the south and to MD 5 and MD 4 in the north.

MD 223, between Steed Road and MD 5, is functionally classified by the State Highway Administration (SHA) as a State Secondary Arterial, and as an Urban Other Principal Arterial by the Federal Highway Administration.

B. PROJECT LOCATION

The limits of the MD 223 study corridor extend from Steed Road to MD 5 in Prince George's County, Maryland (see Figure 1). The logical termini discussion for this project is located in Appendix D. The study corridor consists of primarily residential and commercial uses.

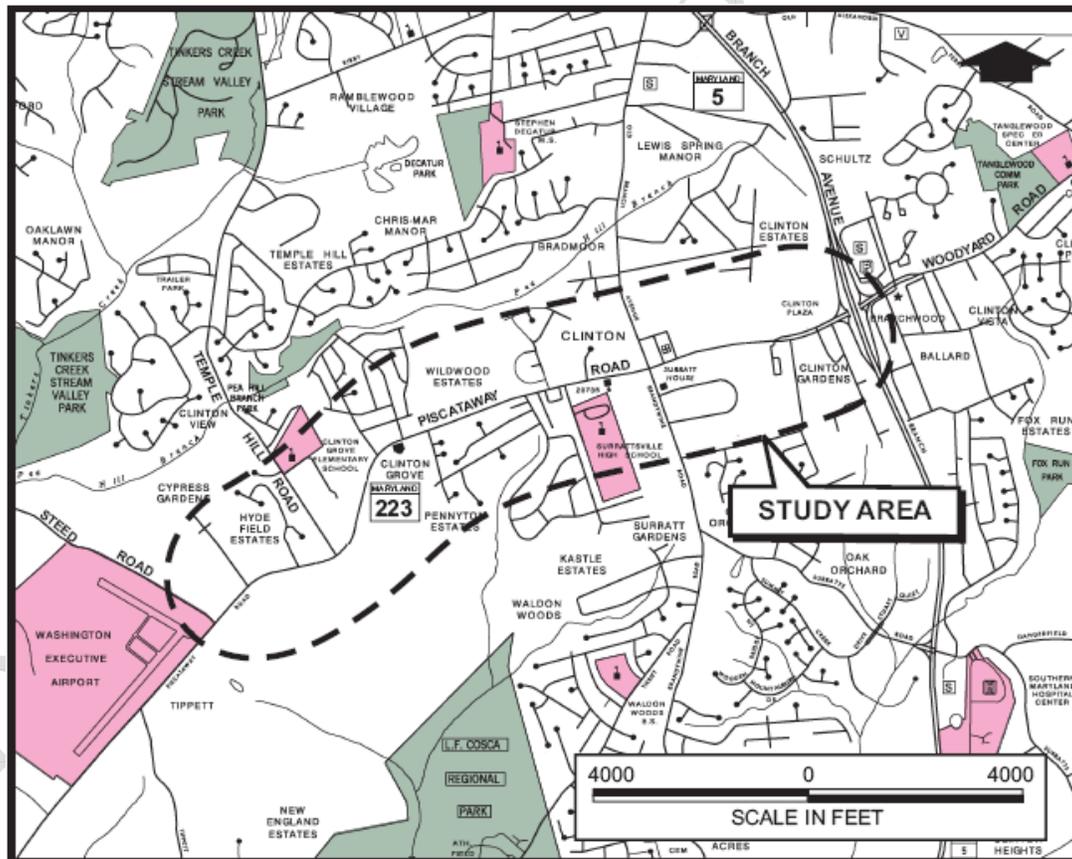


Figure 1. MD 223 Purpose and Need study corridor.

According to the U.S. Census Bureau's 2000 Census Tracts, the study corridor consists of approximately 2,300 households and 6,900 persons. Adjacent single-family neighborhoods

include Surratt Gardens, Pennyton Estates, Greenfield, and Wildwood Estates. One townhouse community, Clinton Dale Estate, is located west of Old Branch Avenue, both north and south of MD 223. Commercial land uses are adjacent to MD 223, east of Hardesty Drive to MD 5. The Woodyard Crossing commercial development anchors the northwest quadrant of the MD 223 and MD 5 interchange.

One transit route with a local option and an express option operated by the Washington Metropolitan Area Transit Authority (WMATA) (C11/C13-Clinton Line) and one transit route operated by the Prince George's County Department of Public Works and Transportation (30-Camp Springs/Clinton) provide regular service to the corridor. Both services provide connections between the County maintained Park-and-Ride lot on Stuart Lane and the Branch Avenue Metrorail Station.

C. PROJECT BACKGROUND

Project History

In the late 1970's, SHA conducted a Project Planning Study for MD 223 from MD 5 to MD 4 and received location approval in December 1981. The Selected Alternate included the upgrade of MD 223 to a four-lane divided highway on new alignment in some areas to eliminate dangerous and sub-standard curves, as well as an interchange at MD 5.

Widening MD 223 from Temple Hill Road to MD 4 was the number one priority in the Prince George's County Transportation Priorities Letter in the early 1990's. This project was included in the Consolidated Transportation Program (CTP) for the first time in 1993 as a Project Planning Study. The study analyzed a multi-lane divided highway as a way to provide relief to traffic congestion and improve east-west travel through southern Prince George's County.

The 1993 planning study proposed to upgrade existing MD 223 from a two-lane undivided highway to a four-lane divided highway with a 20-foot median. However, separate from the Project Planning Study, SHA pursued safety improvements west of MD 5.

For the remaining portion of the planning study from MD 5 to MD 4, SHA held an Alternates Public Workshop in December 1994, a Town Hall meeting in January 1995, and a Focus Group meeting in February 1995. At these meetings, the public expressed opposition to any widening of MD 223 or to enhanced pedestrian facilities. Instead, the public asked for improvements to three intersections – Dower House Road, Rosaryville Road, and Old Alexandria Ferry Road. The scope of the improvements was significantly reduced, and SHA developed three intersections with no mainline widening to occur on MD 223 and received Location and Design approval. The planning study was dropped from the 1998-2003 CTP, and intersection improvements have been planned for Rosaryville Road and implemented at Dower House Road. Improvements at Old Alexandria Ferry Road are planned to occur by developers.

D. PURPOSE OF THE PROJECT

The primary purpose of this study is to address the need for safety improvements and additional capacity to accommodate existing and future traffic volumes on MD 223. This study will also evaluate enhanced transportation network connectivity between MD 5 and Steed Road. In addition, this project will address the pedestrian and bicycle safety and access issues to the

residences, schools and places of worship within this section of MD 223; provide improved access to the business and residential communities in Clinton; and improve the east-west regional transportation network connectivity.

Coordination with local transit authorities is underway to evaluate potentially desired bus pull-off locations and/or additional transit stops along the MD 223 study corridor. In addition, as part of this project, sidewalks and bicycle amenities will be evaluated to provide a well-connected community for citizens living and working in the study corridor. Improved transit, sidewalk and bicycle amenities will provide for greater accessibility to the various community facilities present along MD 223 between Steed Road and MD 5 (e.g., religious facilities, a library, schools, the Woodyard Crossing shopping center, and US Post Office).

E. NEED FOR THE PROJECT

There has been tremendous growth in the vicinity of the project area since the 1990's, when this project was last included in the Maryland Department of Transportation Consolidated Transportation Program (CTP). The residential development occurring in the area (*see Figure 5*) has greatly increased the volume of regional traffic on MD 223. Citizens commenting on this project have stressed the need for improvements along the MD 223 corridor, specifically regarding increased congestion and high crash rates.

Consistency with Master Plans

The *1993 Subregion V Master Plan and Sectional Map Amendment* (1993 Master Plan) completed by the Maryland-National Capital Park and Planning Commission (M-NCPPC), Prince George's County Planning Department, is the current master plan for the area. The 1993 Master Plan's goal for circulation and transportation is "to provide an efficient, effective transportation system to maximize accessibility and the movement of people and goods." In addition, MD 223 has been recognized as needing major widening (four- to six-lane divided roadway), or a new alignment, between MD 5 and Temple Hill Road in the County's Master Plan. Updating of the 1993 Master Plan is currently underway and is scheduled to be completed during 2009.

Regional Consistency

MD 223 is included in the 2008 State Highway Needs Inventory (HNI) (secondary system) for Prince George's County. The HNI recommends upgrades along MD 223 from Temple Hill Road to MD 5. Consideration was given to terminating the current project at Temple Hill Road, but this led to concerns of impacts to the traffic operations at the MD 223/Steed Road intersection. Through discussions with Prince George's County, the project limits were extended further west to Steed Road.

Separate projects are proposed for upgrades to MD 223 west and east of this project's limits. The HNI recommends upgrades to MD 223 from Temple Hill Road to Floral Park Road (west of this project's limits) and MD 223 from MD 5 to MD 4 (east of this project's limits). In addition, Prince George's County is evaluating upgrades to MD 223 in phases, where Phase 1 is this current project (MD 223 from Steed Road to MD 5), Phase 2 will be MD 223 from MD 5 to MD 4 and Phase 3 will be MD 223 from Steed Road to Floral Park Road.

Traffic Volumes (see Appendices A and B)

2007 Existing Conditions

The existing 2007 Average Annual Daily Traffic (AADT) volumes are higher along the eastern portion of the project limits from MD 5 to Gwynndale Drive with the volumes ranging from 40,400 to 20,000 vehicles per day (see Table 1). The western portion of the study area experience volumes ranging from 20,000 to 17,325 vehicles per day, from Gwynndale Drive to Steed Road, respectively. In addition, MD 223 experience approximately 7% truck traffic per day.

2030 No-Build Conditions

No-Build 2030 AADTs volumes from approximately MD 5 to Gwynndale Drive are projected to increase by approximately 27% to 50%, with AADTs ranging from 29,975 to 51,275 vehicles per day (see Table 1). The 2030 AADT volumes are projected to increase by approximately 50% to 60% between Gwynndale Drive to Steed Road. The larger percent increases are toward the western end of the study area. The MD 5/MD 223 interchange experiences a relatively smaller percentage of growth where much of the area is already built out and volumes are higher today.

Traffic Analysis

A Level of Service (LOS) analysis (see Table 2) was developed for existing 2007 and forecasted 2030 No-Build conditions in the study area (see Table 1). Level of Service is a rating system for measuring the quality of traffic flow. SHA's Critical Lane Volume (CLV) method was used for the intersection analyses.

The LOS analysis shows that currently 14% (2 of 14) (see Table 3) of the study area intersections have near failing LOS during the AM or PM peak hours (LOS E), based on their volume to capacity (v/c) ratio, not considering the roadway improvements to be done by area developers or the Prince George's County Department of Public Works and Transportation (DPW&T).

Improvements by area developers include intersection improvements along MD 223 at Woody Terrace, Old Branch Avenue/Brandywine Road, Temple Hill Road, Steed Road, and corridor improvements from Hardesty to Steed Road. The Prince George's DPW&T improvements include drainage improvements at Temple Hill Road. For further project detail, see section C. *Project Background – Related Projects.*

In the 2030 No-Build scenario, 50% (7 of 14) of the intersections in the AM peak hour and 43% (6 of 14) of the intersections in the PM peak hour are projected to have a failing or near failing LOS. With the improvements being made by area developers and the Prince George's DPW&T, 14% (2 of 14) of the intersections during the AM peak hour (Garden Drive/Surrattsville High School and Temple Hill Road) and 14% (2 of 14) of the intersections during the PM peak hour (Old Branch Avenue/Brandywine Road and Temple Hill Road) are projected to have a failing or near failing LOS in 2030.

Table 1: Existing (2007) and Future (2030) No-Build Average Annual Daily Traffic (AADT) Volumes

Roadway Segment and Intersection Location	AADT Volumes		
	Existing (2007)	No-Build (2030)	Rates
Mike Shapiro Drive / Simpson Lane to Clinton Park Shopping Center	20,125	26,625	+32%
Clinton Park Shopping Center to MD 5	25,750	32,825	+27%
MD 5 to Stuart Lane	40,400	51,275	+27%
Stuart Lane to Woody Terrace Road	38,450	49,150	+28%
Woody Terrace Road to Pine View Lane	35,850	46,300	+29%
Pine View Lane to Old Branch Avenue / Brandywine	25,125	34,888	+39%
Old Branch Ave/Brandywine to Garden Drive / Surrattsville High School	23,650	34,000	+44%
Garden Drive / Surrattsville High School to Hardesty Dr/Surrattsville Drive	22,150	32,350	+46%
Hardesty Drive / Surrattsville Drive to Church Entrance / Gwynndale Drive	21,275	31,375	+47%
Church Entrance / Gwynndale Drive to Dixon Drive / Prince George's County Health Center	20,000	29,975	+50%
Dixon Drive / Prince George's County Health Center to Greenfield Lane	19,150	29,075	+52%
Greenfield Lane to Temple Hill Road	19,075	29,000	+52%
Temple Hill Road to Steed Road	20,000	30,075	+50%
Steed Road	17,325	27,725	+60%

+ indicates an increase in future 2030 traffic volumes

Table 2: Level of Service (LOS) Rating System.

LOS	Traffic Flow	Delay
LOS A	free traffic flow	low volumes, minimal delays
LOS B	stable traffic flow	minor delays
LOS C	stable traffic flow, higher volumes	more delay noticeable though still acceptable
LOS D	approaching unstable traffic flow, heavy traffic volumes	significant delays
LOS E	unstable traffic flow	unacceptable delays and vehicle back-ups, intersection warrants
LOS F	unstable traffic flow	excessive delays and significant back-ups, intersection warrants

Table 3: MD 223 Level of Service (from Steed Road to Mike Shapiro Drive/Simpson Lane).

Intersection Location	Existing 2007		Future 2030 No-Build	
	AM	PM	AM	PM
	LOS(V/C)	LOS(V/C)	LOS(V/C)	LOS(V/C)
Mike Shapiro Drive/Simpson Lane^	A(0.46)	A(0.52)	A(0.61)	B(0.66)
Clinton Park Shopping Center	A(0.49)	A(0.51)	B(0.65)	B(0.65)
MD 5 (Branch Avenue)^	B(0.68)	C(0.74)	D(0.87)	D(0.88)
Stuart Lane	A(0.50)	B(0.63)	B(0.69)	C(0.81)
Woody Terrace Road	B(0.67)	B(0.70)	D(0.86)	D(0.90)
Pine View Lane^	A(0.56)	A(0.60)	C(0.74)	C(0.78)
Old Branch Avenue /Brandywine^	E(0.93)	D(0.90)	F(1.43)	F(1.38)
<i>Old Branch Avenue/Brandywine with developer proposed Improvements</i>	<i>A(0.58)</i>	<i>B(0.64)</i>	<i>C(0.80)</i>	<i>F(1.02)</i>
Garden Drive/Surrattsville High School	C(0.77)	A(0.45)	F(1.01)	B(0.68)
Hardesty Drive/Surrattsville Drive	A(0.46)	A(0.41)	B(0.87)	B(0.64)
Church Entrance/Gwynndale Drive	C(0.77)	C(0.81)	F(1.13)	F(1.33)
<i>Church Entrance/Gwynndale Drive with developer proposed Improvements</i>	<i>A(0.48)</i>	<i>A(0.47)</i>	<i>B(0.69)</i>	<i>C(0.76)</i>
Dixon Drive/Prince George's County Health Center	B(0.68)	C(0.73)	F(1.03)	F(1.17)
<i>Dixon Drive/Prince George's County Health Center with developer proposed Improvements</i>	<i>A(0.41)</i>	<i>A(0.44)</i>	<i>A(0.61)</i>	<i>B(0.69)</i>
Greenfield Lane	B(0.64)	B(0.63)	E(0.99)	E(0.99)
<i>Greenfield Lane with developer proposed Improvements</i>	<i>A(0.37)</i>	<i>A(0.36)</i>	<i>A(0.56)</i>	<i>B(0.56)</i>
Temple Hill Road^	B(0.72)	E(0.97)	F(1.23)	F(1.55)
<i>Temple Hill Road with developer proposed Improvements</i>	<i>B(0.65)</i>	<i>C(0.76)</i>	<i>F(1.06)</i>	<i>F(1.22)</i>
<i>Temple Hill Road with developer and Prince George's County proposed Improvements</i>	<i>A(0.59)</i>	<i>A(0.62)</i>	<i>E(0.97)</i>	<i>E(0.99)</i>
Steed Road^	D(0.87)	C(0.79)	F(1.32)	F(1.19)
<i>Steed Road with developer proposed Improvements</i>	<i>A(0.62)</i>	<i>A(0.53)</i>	<i>C(0.76)</i>	<i>C(0.74)</i>

^ Currently signalized

Safety

Crash data was collected on MD 223 from Steed Road to Mike Shapiro Drive/Simpson Lane from January 2004 through December 2006. The data portrays the crash experience by year, severity, collision type, location (see Appendix C), crash rate per 100 million vehicle miles of travel, and comparable weighted statewide average crash rate for all similarly designed highways under state maintenance (significantly high crash categories are indicated in bold along with an asterisk).

There were 293 total police reported crashes, of which rear end collisions (30%) and angle collisions (21%) were the most frequent type. Opposite direction collisions, rear end collisions, sideswipes, left turn collisions, and angle collisions all had a rate that was significantly high compared to the respective statewide averages. The rates for injury, property damage and total crashes were also significantly high.

Some high crash rate areas, as seen in Figure 2, include the stretch of MD 223 between Garden Drive and Old Branch Avenue, MD 223 between Old Branch Avenue and Pine View Lane, and the intersection of MD 223 at Pine View Lane. None of the intersections within the study corridor are classified as a Candidate Safety Location (2007 Five Percent Report, FHWA). Many citizens have commented that due to the numerous community facilities within the study corridor (e.g., churches, schools, library, post office, etc.), dangerous driving conditions are created by the high number of turning movements occurring in and out of these facilities from the main roadway.

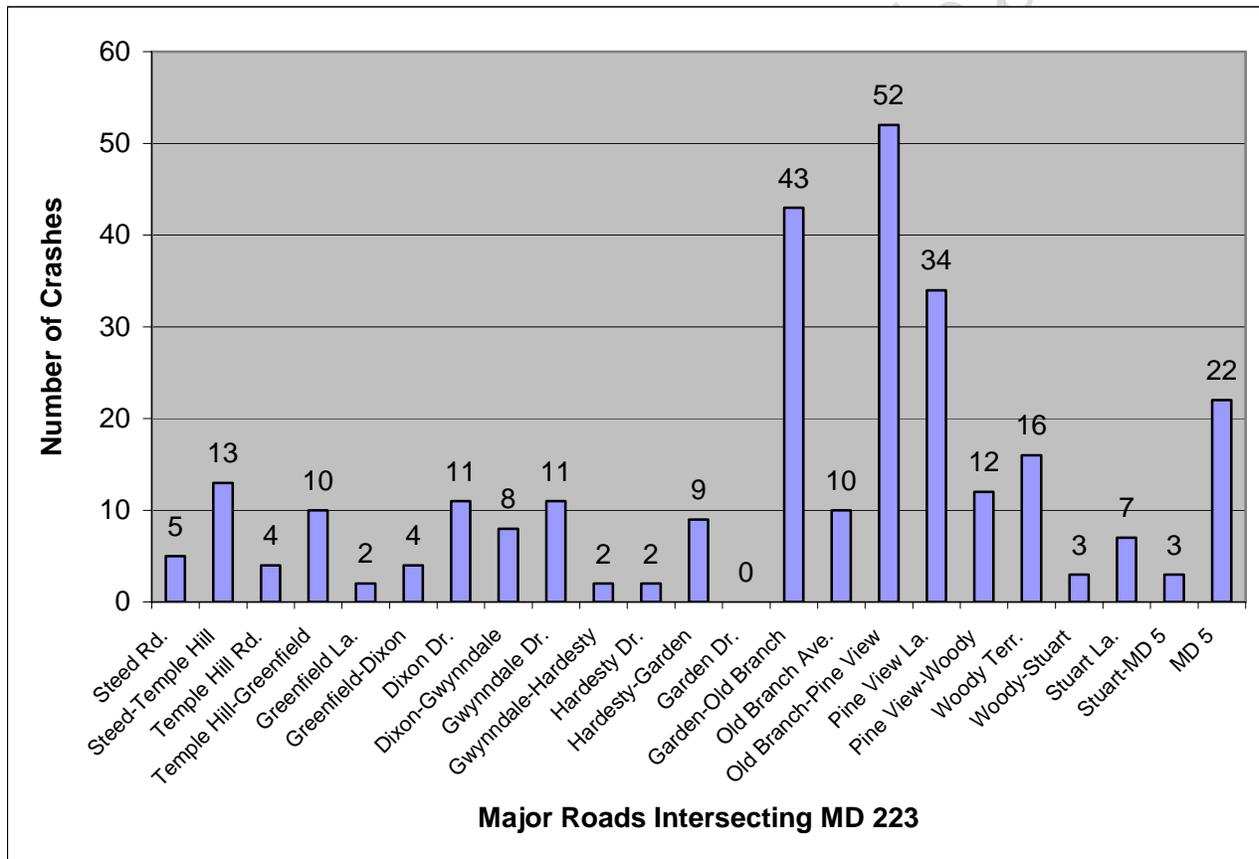


Figure 2. Number of crashes by location (2004 – 2006) along MD 223 from Steed Road to Mike Shapiro Drive/Simpson Lane.

Land Use Planning and Development Activity

Priority Funding Areas

The study corridor is predominantly contained within Prince George’s County’s Certified Priority Funding Area (PFA), with the exception of Glen View Drive to Steed Road (see Figure

3). The 1993 *Subregion V Master Plan's* "Circulation and Transportation" section recognizes the need for major widening (four- to six-lane divided roadway), or a new alignment, along MD 223 between MD 5 and Steed Road in Clinton, Maryland. Therefore, the project is consistent with County master plans and Maryland's policies.

Land Use

Land use in the study corridor primarily consists of residential and commercial uses, with some institutional and wooded areas interspersed (*see Figure 4*). This pattern is expected to continue in the foreseeable future. The majority of commercialized properties are located directly adjacent to MD 223 and extend east from the MD 223/Brandywine Road intersection to the MD 223/MD 5 (Branch Avenue) interchange. A large portion of the commercialized area is occupied by the Clinton Plaza, located in the northwest quadrant of the MD 223/MD 5 interchange. There is a portion of the project area that contains active agricultural land, located near Steed Road, along eastbound MD 223. Coordination with the US Department of Agriculture is on-going and will continue throughout the project planning process.

Growth and Development Activity

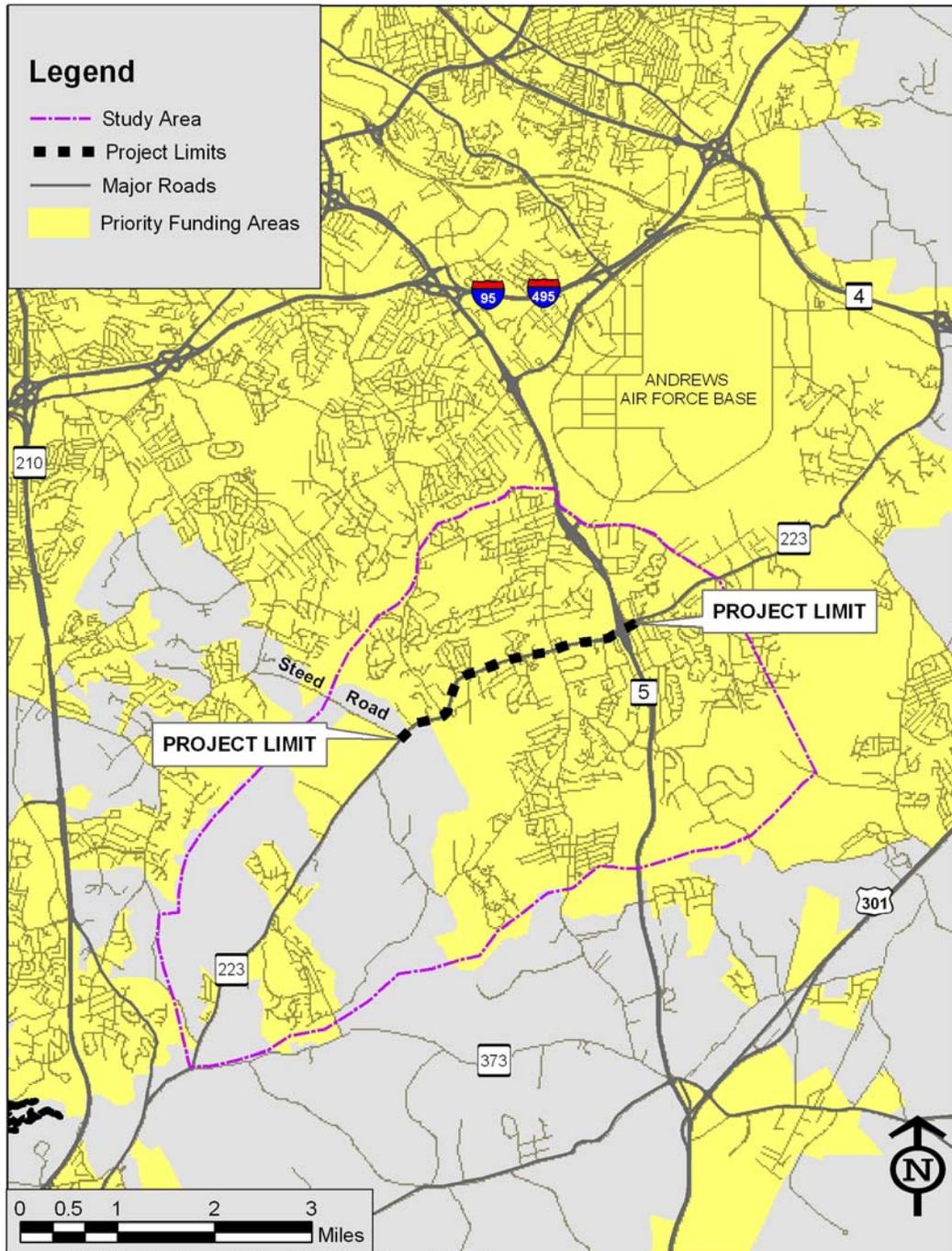
During the last several decades, as the Washington metropolitan suburbs grew south along the MD 5 corridor and around Andrews Air Force Base, Clinton has been a prime location for subdivision development. In 1991, almost half of the future housing construction contained in the region's development pipeline was located in the Clinton area. MD 223 has long been recognized as an important cross-county route.

Between 2000 and June 2007, 3,590 new lots were created through the subdivision process within the area of traffic influence of the study corridor (*see Figure 5*). These lots were part of final subdivision plans approved by the Prince George's County Planning Board. Growth in the area of influence has increased rapidly in the past three years (*see Figure 6*). While 563 lots were created between 2000 and 2003, 3,027 lots were created between 2004 and the first five months of 2007.

Major residential developments closest to the MD 223 study corridor include the following:

- Bevard Farms North - Residential Estate, north side of Piscataway Road, east of Mary Catherine Drive,
- Bevard Farms East - Residential low development, east side of Piscataway Road, north of Mary Catherine Drive, and
- Bevard Farms West - Residential Estate, north side of Piscataway Road, east of Gallahan Road.
- Clinton Gardens – Residential development, south of Woodyard Road, approximately 500-feet west of Branch Avenue.
- Woodburn Estates – Rural Residential development, east of Tippet Road and south of Piscataway Road.
- Rivergate Estates – Residential development, north end of Glissade Drive, north of Piscataway Road.
- Timber Ridge – Rural Residential development, east of Brandywine at intersection with Den Lee Drive.

MD 223 Project Planning Study Priority Funding Areas



Sources: 2006 Maryland Property View GIS, Prince George's County
Maryland Department of Planning, 1998

Figure 3. Priority Funding Areas map.

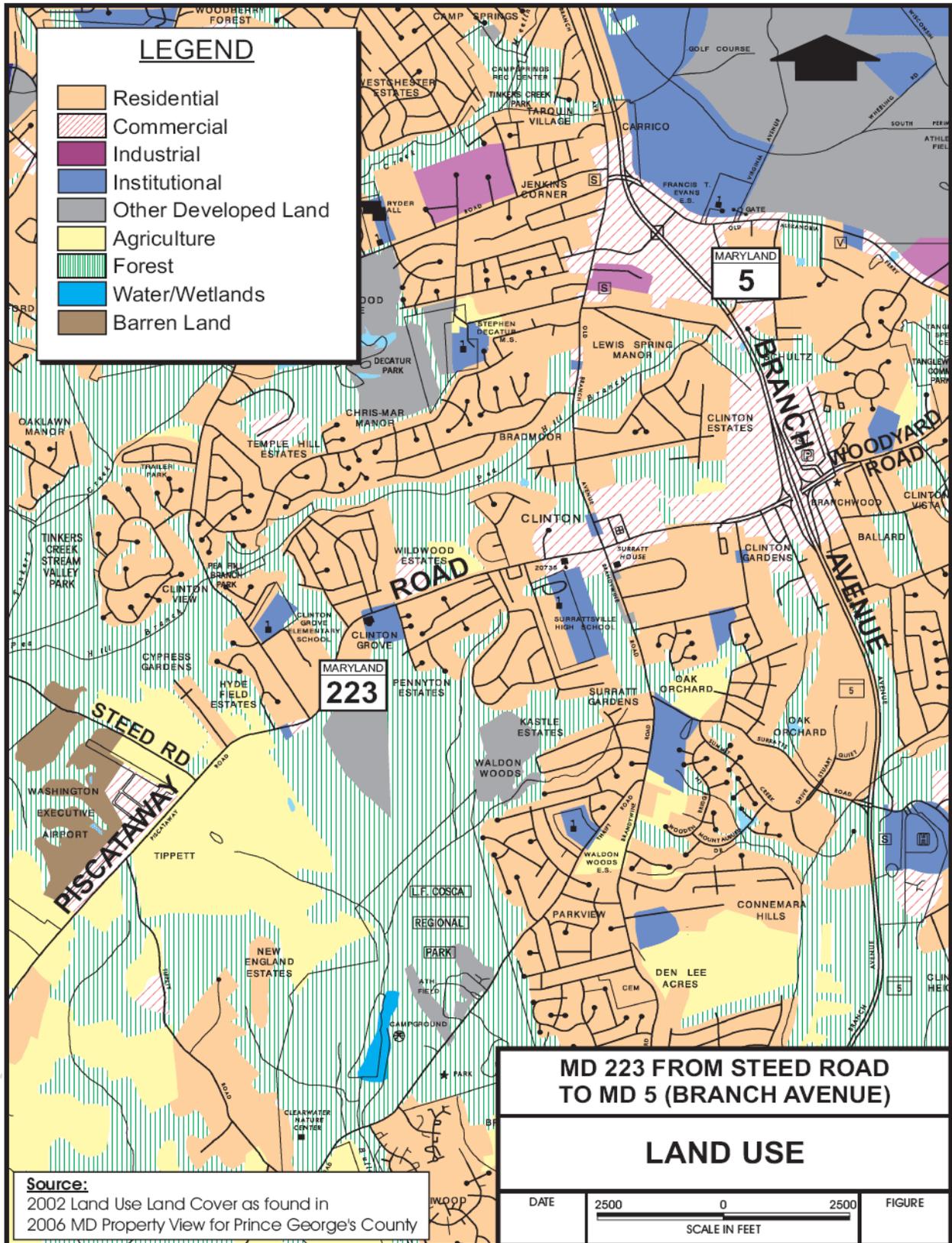


Figure 4. Land Use map.

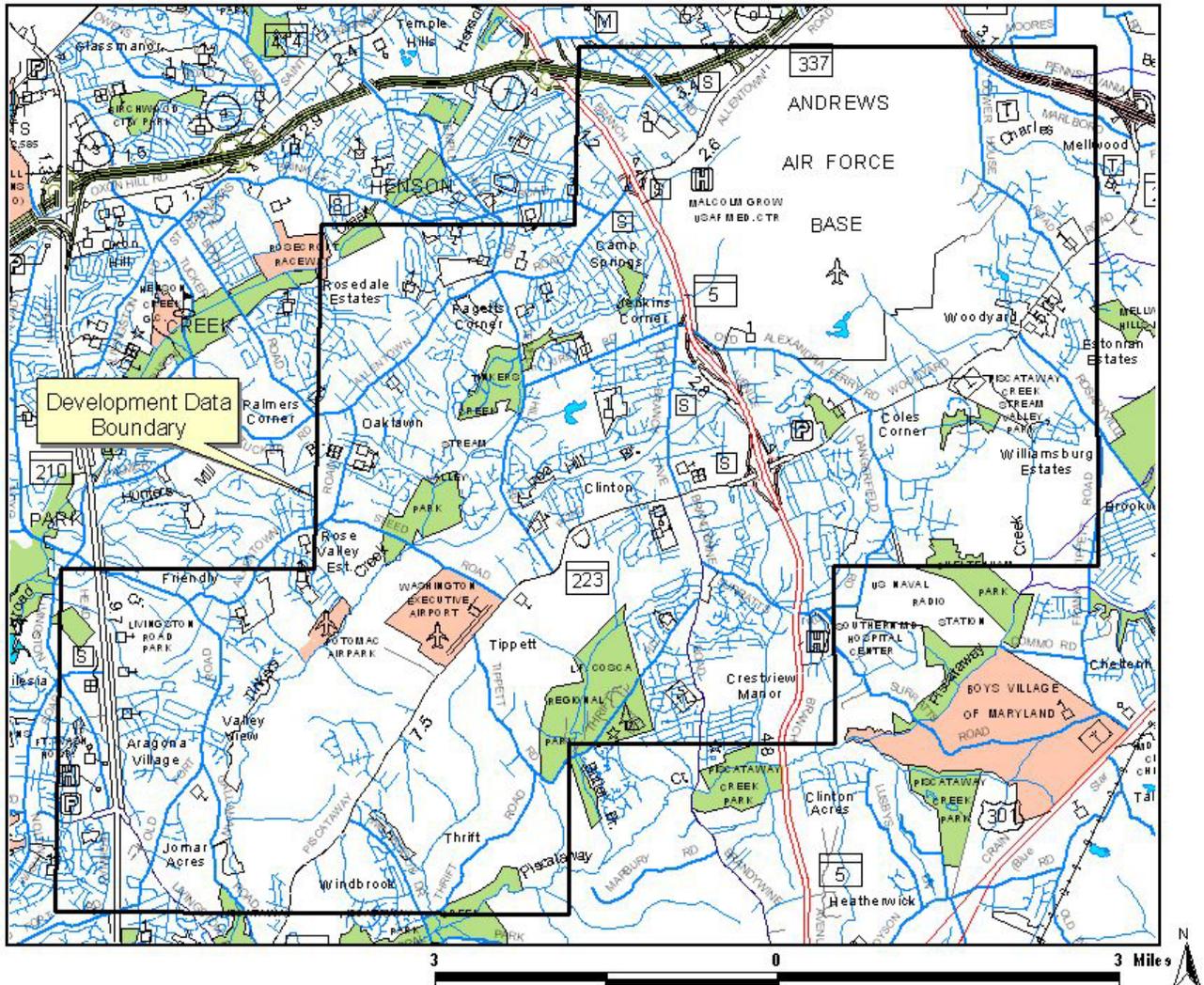


Figure 5. Development Boundary map.

**The boundary was created using property tax maps (Tax Maps 96-99, 106-108, 115-117, 123-125, 132-133) that sufficiently covered Area of Traffic Influence. This boundary was used in obtaining information on final subdivision lots from the Prince George's County Development Activity Management System database. All development information obtained is within Councilman District No. 9.*

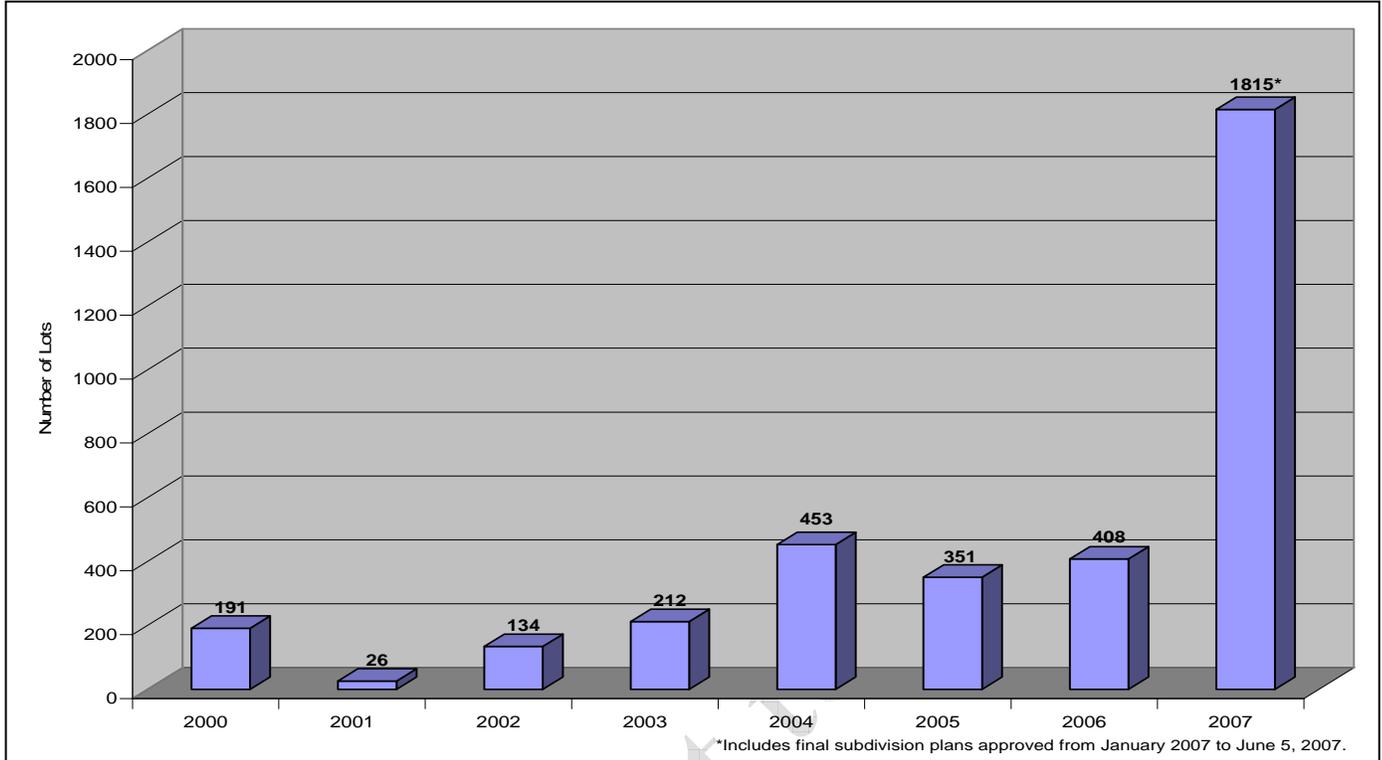


Figure 6. Final Subdivision Lots Approved Within Area of Influence of MD 223 from Steed Road to Mike Shapiro Drive/Simpson Lane (Tax Maps 96-99, 106-108, 115-117, 123-125, 132-133).

Related Transportation Projects

Developer Projects:

1) *Bevard Farms North/East/West:*

Prior to the issuance of any building permits within the subject properties, the following road improvements shall (a) have full financial assurances, or (b) have been permitted for construction through the operating agency's access permit process, and (c) have an agreed-upon timetable for construction with the appropriate operating agency:

- **MD 223/Old Branch Avenue/Brandywine Road:** Reconstruct the intersection to provide two through lanes, an exclusive right-turn lane, and an exclusive left-turn lane on both the eastbound and westbound MD 223 approaches, and provide an exclusive through lane, an exclusive right-turn lane, and an exclusive left-turn lane on both the northbound and southbound Old Branch Avenue/Brandywine Road approaches. Modify traffic signal, signage, and pavement markings as needed.
- **MD 223/Temple Hill Road:** Construct a second through lane along the southbound/westbound MD 223 approach. Modify signals, signage, and pavement markings as needed.
- **Hardesty Drive to Steed Road:** widen to provide a four-lane open section with four-

foot shoulders.

- **MD 223/Steed Road:** Reconstruct the intersection to provide a shared through/right-turn lane and a shared through/left-turn lane on the southbound MD 223 approach; a shared through/right-turn lane, an exclusive through lane, and an exclusive left-turn lane on the northbound MD 223 approach; and an exclusive left-turn lane and shared through/right turn lane on the Steed Road approach. Modify signals, signage, and pavement markings as needed. Construction is currently anticipated to begin by the end of 2008, pending design approval.

2) *Clinton Gardens:*

Prior to the issuance of any building permit on the subject property, the following improvements at the intersection of MD 223 and Woody Terrace shall (a) have full financial assurances, (b) have been permitted for construction, and (c) have an agreed-upon timetable for construction with the appropriate operating agency:

- Install a traffic signal at the intersection of MD 223 and Woody Terrace, in accordance with the standards of the SHA. Construction is anticipated to begin in spring 2008.

Prince George's County:

1) *MD 223 at Temple Hill Road Drainage Improvements:*

To eliminate the deep ditch on the east side of the road and to provide drainage improvements, a right turn lane approach to MD 223, sidewalk installation, roadway repaving and restriping, and upgrading of streetlights is currently being constructed by the County. Construction was completed in spring 2008.

Maryland State Highway Administration:

1) *MD 5 Corridor Transportation Study:*

The MD 5 Corridor Transportation Study is listed in the Primary Development and Evaluation Program of 2008-2013 Consolidated Transportation Program. Study to enhance mobility on MD 5 from the US 301 interchange at T.B. to north of I-95/I-495 (Capital Beltway). Interchanges previously proposed at Surratts Road and Burch Hill/Earnshaw Drive have not been implemented and are being incorporated into a separate corridor planning effort. As part of this study, SHA will assess the feasibility of developing Express Toll Lanes (ETL) on the MD 5 corridor. There are currently six alternatives recommended for detailed study. Three of the alternates retained for detail study impact MD 223. These alternates involve priced and non-priced managed lanes (Alternatives 5, 6, 8) and all have similar implications:

- Providing direct access ramps between the MD 5 lanes and MD 223
 - One Ramp would be provided for the southbound MD 5 traffic to access MD 223
 - Second ramp would be provided for traffic to access northbound MD 5 from MD 223
- Providing direct access to the county Park and Ride lot on Stuart Lane

The MD 5 Corridor Transportation Study is only funded for planning.

G. PUBLIC INVOLVEMENT

An Informational Public Workshop was held on the 17th of April 2008, where comments were received from citizens on the Purpose and Need for the project. The community received the project well with a vast majority of people being in favor of the project. The majority of the citizens encouraged the study and hoped that the project gets funded for design and construction. Some major concerns expressed during the workshop were in regards to safety, significant delays entering and exiting driveways and side streets, congestion caused by churches along the stretch, and a lack of sufficient lighting, pavement/lane markings and signals.

H. ENVIRONMENTAL INVENTORY

The following summary of environmental features (*see Figure 7*) was determined using available data and field reconnaissance. The environmental inventory focused on identifying features within a 0.25 mile buffer around the study corridor.

Socioeconomic Resources

Community Resources

Community resources, such as schools, religious facilities, emergency and public safety services, libraries and post offices were identified.

Five schools were identified within the 0.25 mile buffer of the study corridor, including three private schools, Independent Baptist Academy, St. John the Evangelist Roman Catholic Elementary School, and Hopewell Academy (also serves as the Christ Episcopal Church), and two public schools, Clinton Grove Elementary School (2006-2007 enrollment of 558 students) and Surrattsville Senior High School (2006-2007 enrollment of 1,414 students).

Thirteen religious facilities were identified within the 0.25 mile buffer of the study corridor, including Mt. Ennon Baptist Church, Greater Refuge Ministry Church of God, First New Horizon Baptist Church, Independent Baptist Church (which also serves as the Independent Baptist Academy), From the Heart Church Ministries, Christ Episcopal Church, St. John the Evangelist Roman Catholic Church, Center of Praise & Worship, Christ Temple Church, Antioch Baptist Church, Lords Church and Christian Center, New Life Christian Church, and Clinton Baptist Church.

Other community resources identified include the Clinton Plaza Shopping Center, the Clinton Volunteer Fire Department (Co. #25), a US Post Office, the Surratt's Clinton Branch Library, the Pine View Nursing Home and the American Legion for Disabled Veterans. In addition, approximately eleven disabled veteran residences were identified. A Park & Ride is located off of Stuart Lane in the southeast quadrant of the MD 5 (Branch Avenue)/MD 223 interchange.

Existing and Proposed Pedestrian and Bicyclist Amenities

The PGAtlas indicates that there are existing and proposed pedestrian and bicyclist amenities within the study area. Currently, a hiker/equestrian/mountain bike trail exists southwest of the study area. A connection to this trail is proposed from MD 223, running south along Dixon

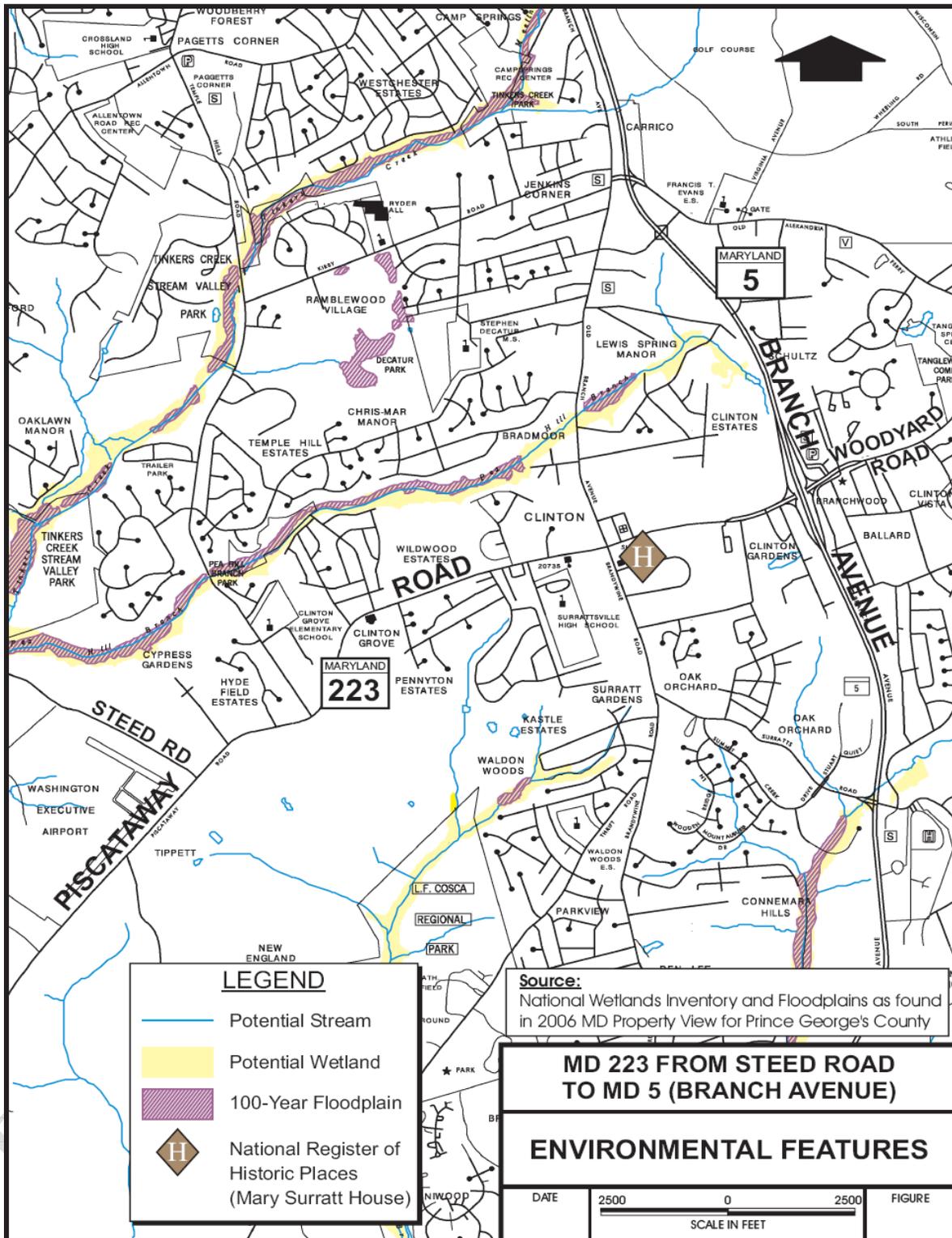


Figure 7. Environmental Features map.

*This map does not reflect potential wetland and Waters of the US locations identified during subsequent field reviews.

Drive, through the Berger Estate and Cosca Regional Park. Shared-use roadways (bike paths that share on-street travel lanes with vehicles) are proposed along Steed Road, Old Branch Avenue/ Brandywine Road and the entire section of MD 223 within the study area. To the east of the study area, from MD 5 to MD 4, there is an existing bike route along MD 223 (classified as a shared-use roadway) that provides access to various religious facilities, parks and schools. A bike lane (roadway designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists) is proposed from MD 223 north along Temple Hill Road.

Environmental Justice Communities

Based on an initial review of census data, Environmental Justice populations may be present in the study area. The SHA will continue to research the socioeconomic characteristics of the study area to ensure that no low-income or minority populations are disproportionately or adversely affected.

Natural Environmental Resources

Rare, Threatened and Endangered Species

Coordination with Maryland Department of Natural Resources (DNR) and US Fish and Wildlife Service (FWS) indicates that there are no State or Federal records for rare, threatened or endangered species within the project area.

Surface Waters, Wetlands and 100-Year Floodplains

Based on PGAtlas GIS data, the study area is located within two watersheds, partitioned by MD 223 (Piscataway Road). Piscataway Creek watershed is located primarily to the south of Piscataway Road and Tinkers Creek watershed mostly to the north (PGAtlas.com) (see Figure 7). Two surface waters were identified along the outer edges of the study area. Pea Hill Branch, a tributary of Tinkers Creek, runs just north of and parallel to MD 223, and Butler Branch, a tributary of Piscataway Creek, runs just south of and parallel to MD 223.

The DNR's Fisheries Service has documented spawning activities of anadromous fish species (herring and white perch) in Piscataway Creek. Both surface waters and their tributaries are classified as Use I streams (Water Contact Recreation, Protection of Nontidal Warm water Aquatic Life). Fish species within these streams should be adequately protected by the Use I instream work prohibition period (March 1 through June 15, inclusive), sediment and erosion control methods, and other Best Management Practices typically used for protection of stream resources. Unnamed tributaries to these surface waters are adjacent to the project area. A field review identified one potential Waters of the US adjacent to the roadway. Future field reviews with the Maryland Department of the Environment and the US Army Corps of Engineers will be conducted to verify the exact location and determine potential impacts to this resource.

No 100-year floodplains were identified within the project area. National Wetland Inventory mapping as well as a windshield survey conducted on April 13, 2007, identified wet ditches paralleling MD 223 and potential wetland areas adjacent to MD 223. A subsequent field review identified approximately ten potential wetlands adjacent to or near the roadway. Actual wetland locations will be delineated in accordance with the *US Army Corps of Engineers (COE) Wetland Delineation Manual* (Department of the Army, 1987) and *Rapanos 2007* during Stage II. Proposed modifications within wetland or instream areas may require permits from the MDE and

the US Army Corps of Engineers (COE).

Woodlands and Specimen Trees

Forested areas are scattered throughout the study area, some of which are identified as Green Infrastructure by MD Property View GIS data. Further coordination with DNR will help verify the presence of Green Infrastructure corridors, hubs, and gaps. During future field reviews, specimen trees will be surveyed and documented as part of the project's Environmental Inventory.

Potential Hazardous Materials

The Clinton Volunteer Fire Department, as well as other existing commercial properties such as gas stations adjacent to MD 223, may generate, handle or store hazardous materials. Coordination with The Maryland Department of the Environment (MDE) has determined that they have no records on file concerning the location of hazardous waste sites, registered underground storage tanks (USTs) or leaking USTs within the project area. Further coordination with the County concerning potential hazardous materials will continue as the study progresses.

Cultural Resources

A cultural resource assessment identified one National Register of Historic Places (NRHP)-listed historic structure within the study area. This site, the Mary Surratt House and Tavern (PG:81A-7), is located in the southeast quadrant of the MD 223-Woodyard Road/Old Branch Avenue-Brandywine Road intersection and has an MHT easement. The site is noted for the apparent involvement of its owner, Mary Surratt, in Abraham Lincoln's assassination. The site is currently owned and operated as a museum by the Maryland-National Capital Parks and Planning Commission (M-NCPPC).

Three non-NRHP-listed historic resources within the study area include the Berger Estate (81A-017) and the Gardiner House/Lucas House (81A-008), which were both part of working farms (PGAtlas.com and MHT), and the Clinton Colored School (Rosenwald) (PG:81A-13), which is the present site of the Clinton American Legion Post #259. The site's significance relates to the progress of African-American education.

In addition, portions of the project area have a high potential to contain prehistoric archeological resources, such as undisturbed areas including the wooded area east of MD 223 near Temple Hill Road and the wooded area north of MD 223 opposite from Surratts Gardens. However, because of the late date of development in this area (mid-to-late twentieth-century) and the fact that the earlier structures appear to have been set back from the road, the immediate road corridor has a low potential to contain historic period archeological resources. Undisturbed land in the vicinity of the Brandywine Road/MD 223 intersection could contain resources associated with the early occupation of this area.

As the project progresses, project plans will be evaluated to determine the specific need for further archeological investigations. Coordination with the MHT and the M-NCPPC will continue throughout the project regarding eligibility and effects.

I. CONCLUSION

The primary purpose of this study is to assess the need for safety improvements and additional capacity to accommodate projected traffic volumes and address identified safety concerns on MD 223. The traffic volumes on this roadway are expected to increase significantly in the future as a result of planned development. The growth affecting the corridor is expected to continue and the operational aspects of MD 223 between Steed Road and MD 5 are projected to be inadequate to handle the traffic generated by 2030. In addition, this project would provide improved access to the business and residential communities as well as improve the east-west regional transportation network connectivity.

Draft-Subject to Change

APPENDICES

<i>Appendix A</i>	<i>Traffic Volumes</i>
<i>Appendix B</i>	<i>Average Annual Daily Traffic (AADT)</i>
<i>Appendix C</i>	<i>Crash Data (2004 – 2006)</i>
<i>Appendix D</i>	<i>Logical Termini</i>

APPENDIX A: TRAFFIC VOLUMES

Existing (2007) Traffic Volumes (Sheet 1 of 5):

MD 223 Purpose & Need Study

AADT VOLUMES (EXISTING 2007)

AM PEAK HOUR VOLUMES

PM PEAK HOUR VOLUMES

	18,600	
2,550		2,075
Mike Shapiro	1,200	150
	1,150	1,725
	20,125	
	20,125	
6,125		0
Clinton Park Shopping Center E	250	0
	5,875	0
	25,750	
30,900		74,750
MD 5	12,600	4,200
	24,600	6,850
	40,400	

	825		490
25	R 10	T 810	L 5
	5	R 5	T 175
	165	L	
Mike Shapiro			Simpson Ln
150	L 20	T 5	R 35
	T 125		
	1100		500
	1100		500
80	R 5	T 1095	L 0
	0	R 0	T 0
	0	T 0	L 0
	0	L	
Clinton Park Shopping Center Entrance			
105	L 0	T 0	R 0
	T 105		
	1200		575
	1200		575
5200	R 515	T 610	L 75
	240	R 3585	T 3975
	150	L	
MD 5			MD 5
2050	L 150	T 1660	R 1950
	T 240		
	1000		1500

	740		975
80	R 30	T 390	L 20
	10	R 15	T 140
	115	L	
Mike Shapiro			Simpson Ln
190	L 145	T 0	R 165
	T 45		
	850		1000
	850		1000
500	R 200	T 650	L 0
	0	R 0	T 0
	0	T 0	L 0
	0	L	
Clinton Park Shopping Center Entrance			
50	L 0	T 0	R 0
	T 50		
	700		1300
	700		1300
3025	R 350	T 250	L 100
	160	R 1825	T 2085
	100	L	
MD 5			MD 5
4750	L 890	T 2660	R 3085
	T 1200		
	1550		1425

Existing (2007) Traffic Volumes (Sheet 2 of 5):

AADT VOLUMES (EXISTING 2007)			MD 223 Purpose & Need Study AM PEAK HOUR VOLUMES			PM PEAK HOUR VOLUMES		
0	40,400	2,750	0	1000	1500	30	1550	1425
	R 0	T 1000		L 0	250 R		L 0	150 R
					0 T			30 T
					0 L			0 L
	0	2,350			250			180
		Stuart Lane			Stuart Lane			Stuart Lane
0	400		0	L 0	T 1250	0	L 0	T 1275
				T 0	R 75		T 0	R 25
				R 0			R 0	
	38,450				1325			1300
	38,450				1325			1300
4,650		4,750	70	R 50	T 770	225	R 155	T 1245
				L 180	125 R		L 150	30 R
					10 T			25 T
					40 L			85 L
	3,150	2,550			175			140
	Mall Entrance	Woody Terrace			Woody Terrace			Woody Terrace
1,200	1,900		75	L 50	T 1150	180	L 85	T 1185
				T 10	R 40		T 25	R 70
				R 15			R 70	
	35,850				1200			1300
	35,850				1200			1300
3,075		2,625	435	R 205	T 575	430	R 335	T 930
				L 45	45 R		L 135	50 R
					30 T			25 T
					25 L			25 L
	10,275	1,850			100			100
	Mall Entrance	Pine View Lane			Pine View Lane			Pine View Lane
2,250	225		590	L 500	T 655	640	L 500	T 750
				T 15	R 5		T 35	R 5
				R 75			R 105	
	26,200				65			175
					675			825
					860			
					1060			

Future (2030) No-Build Traffic Volumes (Sheet 1 of 5):

MD 223 Purpose & Need Study

AADT VOLUMES (2030 No-Build)

	24,975		
2,850	1,325	200	2,350
Mike Shapiro	Simpson Ln		
	1,275	1,900	
	26,825		
	26,825		
6,750	275	0	0
Clinton Park Shopping Center Entrance			
	6,475	0	
	32,825		
	32,825		
131,275	13,875	8,075	109,875
MD 5	MD 5		
	28,000	12,400	
	51,275		

AM PEAK HOUR VOLUMES (2030 No-Build)

1185				725			
	R	T	L		R	T	L
	10	1170	5		5	180	190
25				5			
				5			
				180			
	Mike Shapiro			Simpson Ln			
	L	T	R	L	T	R	L
	20	5		10	700	30	40
165		140					
	1490			740			
	1490			740			
	R	T	L		R	T	L
	5	1485	0		0	0	0
105					0	0	0
					0	0	0
	Clinton Park Shopping Center Entrance			Clinton Park Shopping Center Entrance			
	L	T	R	L	T	R	L
	0	0		100	740	0	0
115		115					
	1600			840			
	1600			840			
	R	T	L		R	T	L
	585	815	200		430	4590	330
6415					330	4590	5350
	MD 5			MD 5			
	L	T	R	L	T	R	L
	160	2075		1240	250	465	2740
2605		370					
	1515			1955			

PM PEAK HOUR VOLUMES (2030 No-Build)

1070				1355			
	R	T	L		R	T	L
	35	1015	20		10	15	125
90					15		150
					125		
	Mike Shapiro			Simpson Ln			
	L	T	R	L	T	R	L
	160	0		40	1185	160	180
210		50					
	1190			1385			
	1190			1385			
	R	T	L		R	T	L
	250	940	0		0	0	0
580					0	0	0
					0	0	0
	Clinton Park Shopping Center Entrance			Clinton Park Shopping Center Entrance			
	L	T	R	L	T	R	L
	0	0		330	1385	0	0
55		55					
	995			1715			
	995			1715			
	R	T	L		R	T	L
	400	385	210		335	2650	230
4040					2650		3215
					230		
	MD 5			MD 5			
	L	T	R	L	T	R	L
	1010	4125		990	370	590	4925
6555		1420					
	2035			1950			

Future (2030) No-Build Traffic Volumes (Sheet 2 of 5):

MD 223 Purpose & Need Study

AADT VOLUMES (2030 No-Build)				AM PEAK HOUR VOLUMES (2030 No-Build)				PM PEAK HOUR VOLUMES (2030 No-Build)													
51,275				1515				1955													
0	0	2,575	3,025	0	R 0	T 1515	L 0	275	R 0	T 0	L 0	275	35	R 0	T 2035	L 0	170	R 35	T 0	L 0	205
Stuart Lane				Stuart Lane				Stuart Lane													
0 450				0 L 0				0 L T R 85				0 L T R 30									
49,150				1515				1765				2035									
49,150				1515				1765				2035									
5,150	3,475	2,800	5,250	85	R 65	T 1220	L 230	140	R 10	T 45	L 195	250	R 170	T 1700	L 165	35	R 30	T 95	L 160		
Mall Entrance Woody Terrace				Mall Entrance Woody Terrace				Mall Entrance Woody Terrace													
1,325 2,100				80 L 55				220 L T R 285				220 L T R 270									
46,300				1280				1625				1870									
46,300				1280				1625				1870									
14,400	11,325	2,050	2,925	500	R 245	T 985	L 50	50	R 35	T 30	L 115	475	R 370	T 1350	L 150	55	R 30	T 30	L 115		
Mall Entrance Pine View Lane				Mall Entrance Pine View Lane				Mall Entrance Pine View Lane													
2,475 275				650 L 550				725 L T R 195				725 L T R 195									
35,675				1100				1250				1495									
35,675				1100				1250				1495									

Future (2030) No-Build Traffic Volumes (Sheet 3 of 5):

MD 223 Purpose & Need Study

AADT VOLUMES (2030 No-Build)			
34,100			
20,975	4,775	9,150	23,425
Old Branch Ave		Brandywine Rd	
	7,875	5,950	
34,000			
34,000			
0	0	2,200	2,750
0		Garden Dr./ Surrattsville Highschool	
	0	550	
32,350			
1,550	1,225	150	225
Hardestry Dr		Surratts Vill. Dr.	
	325	75	
31,375			

AM PEAK HOUR VOLUMES (2030 No-Build)			
1000		1645	
R	T	L	
55	755	190	
830			
Old Branch Ave		Brandywine Rd	
L	T	R	
90	190	260	640
505	225	400	1125
1240		1785	
1240		1785	
R	T	L	
0	920	320	
0			
Garden Dr./ Surrattsville Highschool		Garden Dr./ Surrattsville Highschool	
L	T	R	
0	0	140	460
0	1620	1760	1760
980		1760	
980		1760	
R	T	L	
35	930	15	
50			
Hardestry Dr		Surratts Vill. Dr.	
L	T	R	
75	5	10	30
120	40	15	1680
975		1705	

PM PEAK HOUR VOLUMES (2030 No-Build)			
1550		1295	
R	T	L	
105	1005	440	
630			
Old Branch Ave		Brandywine Rd	
L	T	R	
210	520	285	1245
1220	490	255	775
1735		1315	
1735		1315	
R	T	L	
0	1695	40	
0			
Garden Dr./ Surrattsville Highsch		Garden Dr./ Surrattsville Highsch	
L	T	R	
0	0	5	45
0	1280	1285	1285
1705		1285	
1705		1285	
R	T	L	
95	1590	20	
115			
Hardestry Dr		Surratts Vill. Dr.	
L	T	R	
40	5	5	30
65	20	20	1230
1620		1255	

Future (2030) No-Build Traffic Volumes (Sheet 5 of 5):

MD 223 Purpose & Need Study

AADT VOLUMES (2030 No-Build)

	29,000		
15,475	7,200	0	0
Temple Hill Road			
	8,275	0	
	30,075		
	30,075		
6,050	4,200	0	0
Steed Road			
	1,850	0	
	27,725		

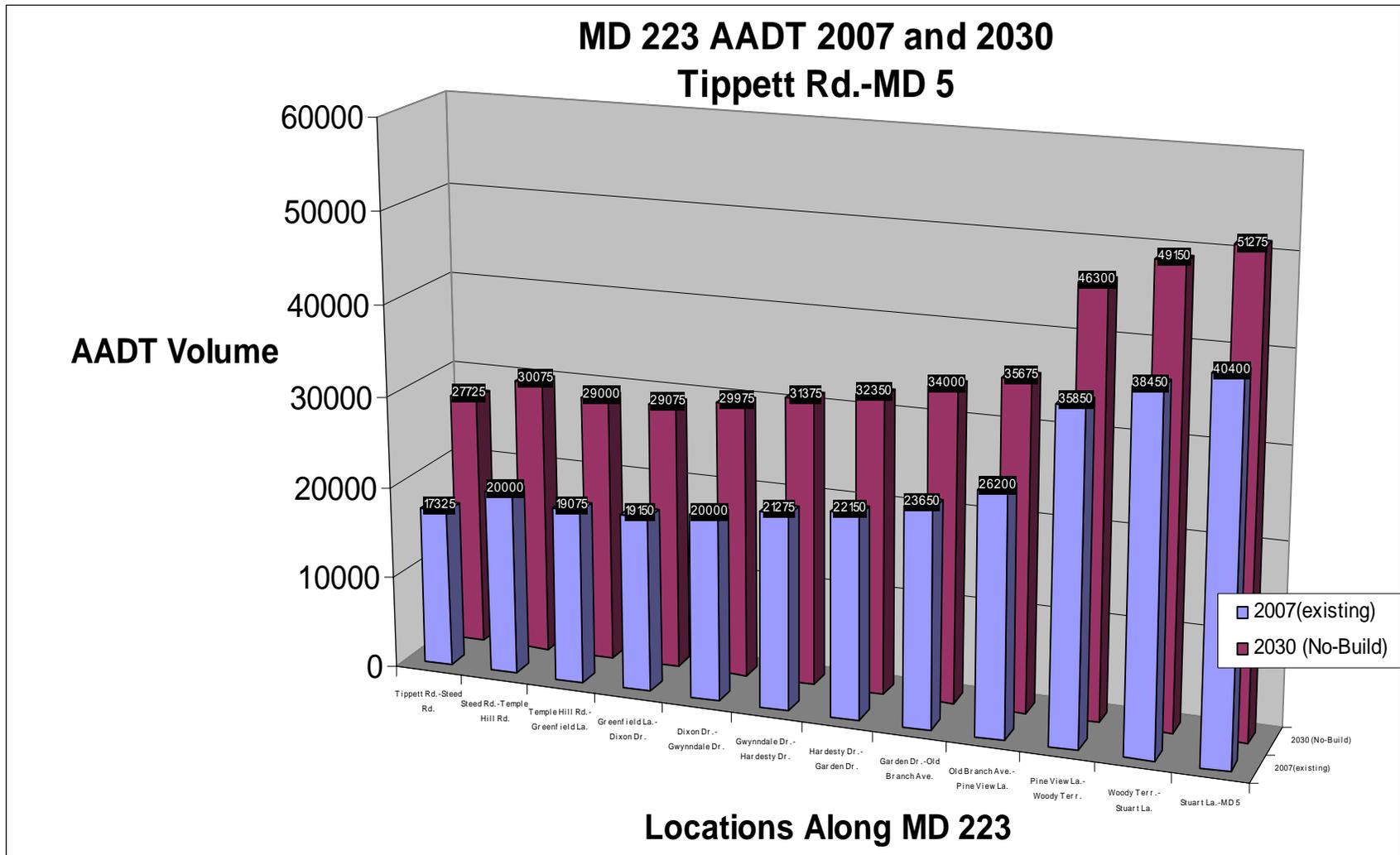
AM PEAK HOUR VOLUMES (2030 No-Build)

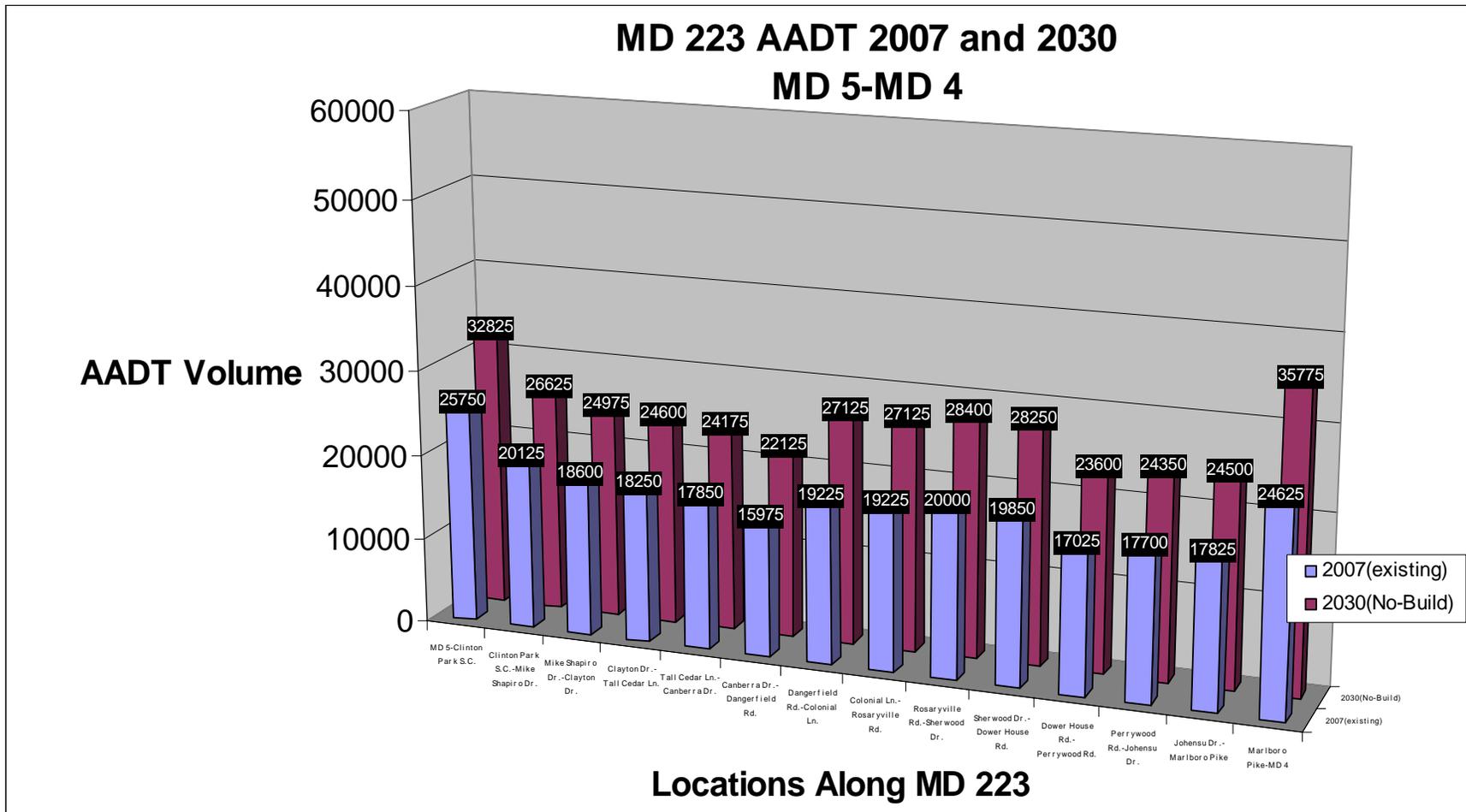
	940		1480	
	R T L		0 R	
1210	315 625 0		0 T 0	
			0 L	
Temple Hill Road				
450	L 315		L T R 0	
	T 0		895 1165 0	
	R 135			
	760		2060	
	760		2060	
	R T L		0 R	
260	145 615 0		0 T 0	
			0 L	
Steed Road				
245	L 190		L T R 0	
	T 0		115 1870 0	
	R 55			
	670		1985	

PM PEAK HOUR VOLUMES (2030 No-Build)

	1535		1205	
	R T L		0 R	
655	335 1200 0		0 T 0	
			0 L	
Temple Hill Road				
965	L 365		L T R 0	
	T 0		320 840 0	
	R 600			
	1800		1160	
	1800		1160	
	R T L		0 R	
200	165 1635 0		0 T 0	
			0 L	
Steed Road				
240	L 165		L T R 0	
	T 0		35 995 0	
	R 75			
	1710		1030	

**APPENDIX B: AVERAGE ANNUAL
DAILY TRAFFIC (AADT)**





APPENDIX C: CRASH DATA (2004 – 2006)

MD 223, Steed Road to MD 5: Purpose and Need Statement Appendix C: Crash Data (2004 – 2006)

Location: MD 223 FROM STEED ROAD TO SIMPSON LANE

Logmile: From 004.75 To 007.65 Length: 2.90

County: Prince George's Period: January 1, 2004 To December 31, 2006

Note(s):

Type Controls: 8U-52% 6U-31% 5U-17%

* Significantly Higher than Statewide

YEAR ▶	2004	2005	2006	TOTAL	STUDYRATE	STWDRATE
FATAL		2		2	2.7	1.2
NO. KILLED		2		2		
INJURY	44	34	35	113	150.4 *	98.4
NO. INJURED	65	55	53	173		
PROP DAMAGE	51	62	65	178	237.0 *	135.4
TOTAL ACC	95	98	100	293	390.1 *	235.0
RATE	389.1	394.0	387.2			
WAADT	23000	23500	24400			
VMT(millions)	24.4	24.9	25.8	75.1		
OPPOSITE DIR	5	10	9	24	32.0 *	11.0
REAR END	23	32	33	88	117.2 *	81.1
SIDESWIPE	9	7	10	26	34.6 *	16.2
LEFT TURN	20	7	8	35	46.6 *	27.0
ANGLE	21	22	18	61	81.2 *	42.9
PEDESTRIAN	2	4	2	8	10.7 *	6.2
PARKED VEH	1			1	1.3	5.1
FIXED OBJECT	3	8	9	20	26.6	26.8
OTHER	11	8	11	30	39.9	12.5
U-TURN	1	1	3	5		
BACKING	1	1	1	3		
ANIMAL			1	1		
RAILROAD						
EXPL./FIRE						
OVERTURN	1			1		
OTHER/UNK	8	6	6	20		
TRCK REL ACC	2	1	5	8	10.7	14.8
NIGHTTIME	19	21	19	59	20 %	32 %
WET SURFACE	22	33	27	82	27 %	28 %
ALCOHOL REL	2	3	5	10	3 %	8 %
INTERSEC REL	33	36	43	112		
TOTAL VEH	202	195	201	598		
TOTAL TRUCKS	2	1	5	8		
PERCENT TRKS	1.0	0.5	2.5	1.3		

Comments:

MD 223, Steed Road to MD 5: Purpose and Need Statement Appendix C: Crash Data (2004 – 2006)

Location: MD 223 FROM STEED ROAD TO SIMPSON LANE

Logmile: From 004.75 To 007.65 Length: 2.90

County: Prince George's

Period: January 1, 2004 To December 31, 2006

Note(s):

SEVERITY	Fatal	Injury	P-Damage	Total	DAY OF THE WEEK							UNK
Accidents	2	113	178	293	SUN	MON	TUE	WED	THU	FRI	SAT	UNK
Veh Occ	2	166	.....		20	41	43	47	44	45	53	
Pedestrian		7	.....		.....	.....	.....	.....	.....	.....	.....	.....

MONTH OF THE YEAR												CONDITION:	DRIVER	PED	
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	UNK	Normal:	233	6
22	20	26	22	26	25	26	28	28	27	21	22		ALCOHOL:	8	2
.....												Other:	52	2	

TIME	12	01	02	03	04	05	06	07	08	09	10	11	UNK	VEHICLES INVOLVED PER ACCIDENT						TOTAL	
AM:	2	1	2	1	3	3	7	11	15	15	13	21		1	2	3	4	5	6+	UNK	598
PM:	25	21	22	26	18	22	17	19	10	5	4	10		33	221	33	6				

VEHICLE TYPE		SURFACE	MOVEMENTS											
4 M_Cycle/Moped	1 Trk_Trailer	82 WET	NORTH			SOUTH			EAST			WEST		
345 Passenger Veh	3 Passenger Bus	209 DRY	LF	ST	RT	LF	ST	RT	LF	ST	RT	LF	ST	RT
97 Light Truck	5 School Bus	2 SNO/ICE	26	194	5	33	147	2	25	40	3	11	38	5
7 Heavy Truck	18 Emergency Veh	MUD	.....										
118 Other Types	.....	OTHER	OTHER MOVEMENTS 69											

PROBABLE CAUSES			COLLISION TYPES		FAT	INJ	PROP	TOTAL
4 Inf. of Drugs	Improper Parking		OPPOSITE DIR	RELATED:		3	3	6
7 Inf. of Alcohol	Passenger Interfere/Obstr.			UNRELATED:	1	6	11	18
Inf. of Medication	Illegally in Roadway		REAR END	RELATED:		15	12	27
1 Inf. of Combined Substance	Bicycle Violation			UNRELATED:		25	36	61
3 Physical/Mental Difficulty	Clothing not Visible		SIDESWIPE	RELATED:		1	8	9
4 Fell Asleep/Fainted etc.	Smog, Smoke			UNRELATED:		2	15	17
157 Fail to give full attent.	Sleet, Hail, Frz. Rain		LEFT TURN	RELATED:		10	9	19
Lic. Restr. Non-comply	Blowing Sand, Soil, Dirt			UNRELATED:		7	9	16
41 Fail to Yield Rightofway	Severe Crosswinds		ANGLE	RELATED:		15	19	34
Fail to Obey Stop Sign	Rain, Snow			UNRELATED:		11	16	27
1 Fail to Obey Traffic Sig	Animal		PEDESTRIAN	RELATED:			1	1
4 Fail to Obey Other Contr.	Vision Obstruction			UNRELATED:		6	1	7
3 Fail to Keep Right of Ctr	Vehicle Defect		PARKED VEH.	RELATED:				
Fail to Stop for Sch. Bus	Wet			UNRELATED:			1	1
Wrong Way on One Way	Icy or Snow Covered		OTHER CT	RELATED:		2	9	11
2 Exceeded Speed Limit	Debris or Obstruction			UNRELATED:		5	14	19
7 Too Fast for Conditions	Ruts, Holes, Bumps		F| BRIDGE	01				
8 Followed too Closely	Road Under Construction		I| BUILDING	02			1	1
3 Improper Turn	Traffic Cntrl Device Inop.		X| CULVERT/DITCH	03			1	1
3 Improper Lane Change	Shoulders Low, Soft, High		E| CURB	04		1	4	5
Improper Backing			D| GUARDRAIL/BARRIER	05			1	1
2 Improper Passing	43 Other or Unknown		| EMBANKMENT	06				
Improper Signal			O| FENCE	07				
			B| LIGHT POLE	08				
			J| SIGN POST	09		2	2	4
			E| OTHER POLE	10	1		1	2
			C| TREE/SHRUBBERY	11		2	2	4
			T| CONSTR. BARRIER	12				
			S| CRASH ATTENUATOR	13				
			| OTHER FIXED OBJECT			2	2	2

WEATHER	ILLUMINATION	TOTALS
228 CLEAR/CLDY	222 DAY	
2 FOGGY	12 DAWN/DUSK	
59 RAINING	50 DARK - LIGHTS ON	2004 95
4 SNOW/SLEET	9 DARK - NO LIGHTS	2005 98
OTHER	OTHER	2006 100

MD 223, Steed Road to MD 5: Purpose and Need Statement Appendix C: Crash Data (2004 – 2006)

Location: MD 223 FROM 50' NORTH OF SIMPSON LANE TO MD 4

Logmile: From 007.66 To 012.48 Length: 4.82

County: Prince George's Period: January 1, 2004 To December 31, 2006

Note(s):

Type Controls: 5U-9% 9U-1% 8U-90%

* Significantly Higher than Statewide

YEAR ▶	2004	2005	2006	TOTAL	STUDYRATE	STWDRATE
FATAL		1	1	2	2.2	1.2
No. KILLED		1	1	2		
INJURY	37	32	30	99	108.8 *	77.3
No. INJURED	60	47	50	157		
PROP DAMAGE	42	28	29	99	108.8	102.3
TOTAL ACC	79	61	60	200	219.7 *	180.8
RATE	266.6	202.8	191.6			
WAADT	16800	17100	17800			
VMT (millions)	29.6	30.1	31.3	91.0		
OPPOSITE DIR	4	8	12	24	26.4 *	10.8
REAR END	13	23	11	47	51.6	58.4
SIDESWIPE	4	4	1	9	9.9	8.2
LEFT TURN	14	10	7	31	34.1 *	14.9
ANGLE	15	6	11	32	35.2	33.5
PEDESTRIAN	2		2	4	4.4	3.9
PARKED VEH					0.0	5.5
FIXED OBJECT	13	6	13	32	35.2	28.0
OTHER	14	4	3	21	23.1	9.5
U-TURN	1	1		2		
BACKING		1		1		
ANIMAL	1		1	2		
RAILROAD						
EXPL./FIRE						
OVERTURN			1	1		
OTHER/UNK	12	2	1	15		
TRCK REL ACC		3	5	8	8.8	11.2
NIGHTTIME	19	15	19	53	26 %	32 %
WET SURFACE	13	7	11	31	15 %	28 %
ALCOHOL REL	2	5	4	11	5 %	8 %
INTERSEC REL	43	18	25	86		
TOTAL VEH	142	128	112	382		
TOTAL TRUCKS		3	5	8		
PERCENT TRKS	0.0	2.3	4.5	2.1		

Comments:

MD 223, Steed Road to MD 5: Purpose and Need Statement Appendix C: Crash Data (2004 - 2006)

Location: MD 223 FROM 50' NORTH OF SIMPSON LANE TO MD 4 Logmile: From 007.66 To 012.48 Length: 4.82
 County: Prince George's Period: January 1, 2004 To December 31, 2006 Note(s):

SEVERITY	Fatal	Injury	P-Damage	Total	DAY OF THE WEEK							UNK
Accidents	2	99	99	200	SUN	MON	TUE	WED	THU	FRI	SAT	UNK
Veh Occ	2	153			23	32	25	29	24	29	38	
Pedestrian		4										

MONTH OF THE YEAR													CONDITION: DRIVER	PED	
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	UNK	Normal:	152	3
11	10	18	24	24	18	19	13	16	17	16	14		ALCOHOL:	11	
													Other:	37	1

TIME	12	01	02	03	04	05	06	07	08	09	10	11	UNK	VEHICLES INVOLVED PER ACCIDENT							
AM:	4	5	3	6	3	4	12	13	11	5	4	13		1	2	3	4	5	6+	UNK	TOTAL
PM:	10	11	8	14	12	21	12	9	7	4	6	3		45	134	16	4	1			382

VEHICLE TYPE		SURFACE		MOVEMENTS											
8 M_Cycle/Moped	2 Trk_Trailer	31 WET		NORTH			SOUTH			EAST			WEST		
221 Passenger Veh	1 Passenger Bus	166 DRY		LF	ST	RT	LF	ST	RT	LF	ST	RT	LF	ST	RT
60 Light Truck	5 School Bus	3 SNO/ICE		23	119	3	13	117	2	11	23	1	12	16	
6 Heavy Truck	3 Emergency Veh	MUD		.....										
76 Other Types		OTHER		OTHER MOVEMENTS 42											

PROBABLE CAUSES			COLLISION TYPES		FAT	INJ	PROP	TOTAL
2 Inf. of Drugs	Improper Parking		OPPOSITE DIR	RELATED:		3	3	6
8 Inf. of Alcohol	Passenger Interfere/Obstr.			UNRELATED:	1	12	5	18
1 Inf. of Medication	Illegally in Roadway		REAR END	RELATED:		7	5	12
Inf. of Combined Substance	Bicycle Violation			UNRELATED:		14	21	35
2 Physical/Mental Difficulty	Clothing not Visible		SIDESWIPE	RELATED:			4	4
5 Fell Asleep/Fainted etc.	Smog, Smoke			UNRELATED:		2	3	5
92 Fail to give full attent.	Sleet, Hail, Frz. Rain		LEFT TURN	RELATED:		18	10	28
Lic. Restr. Non-comply	Blowing Sand, Soil, Dirt			UNRELATED:		1	2	3
34 Fail to Yield Rightofway	Severe Crosswinds		ANGLE	RELATED:		12	11	23
Fail to Obey Stop Sign	1 Rain, Snow			UNRELATED:		3	6	9
1 Fail to Obey Traffic Sig	1 Animal		PEDESTRIAN	RELATED:		1		1
2 Fail to Obey Other Contr.	Vision Obstruction			UNRELATED:		3		3
5 Fail to Keep Right of Ctr	1 Vehicle Defect		PARKED VEH.	RELATED:				
Fail to Stop for Sch. Bus	1 Wet			UNRELATED:				
Wrong Way on One Way	Icy or Snow Covered		OTHER CT	RELATED:	1	4	3	8
1 Exceeded Speed Limit	Debris or Obstruction			UNRELATED:		7	6	13
5 Too Fast for Conditions	Ruts, Holes, Bumps		F | BRIDGE		01		1	1
4 Followed too Closely	Road Under Construction		I | BUILDING		02			
2 Improper Turn	Traffic Cntrl Device Inop.		X | CULVERT/DITCH		03		2	2
1 Improper Lane Change	Shoulders Low, Soft, High		E | CURB		04	1	1	2
1 Improper Backing			D | GUARDRAIL/BARRIER		05	1	2	3
1 Improper Passing	29 Other or Unknown		| EMBANKMENT		06		1	1
Improper Signal			O | FENCE		07	1	3	4
			B | LIGHT POLE		08	1	3	4
			J | SIGN POST		09	1		1
			E | OTHER POLE		10	2	4	6
			C | TREE/SHRUBBERY		11	5	3	8
			T | CONSTR. BARRIER		12			
			S | CRASH ATTENUATOR		13			
			| OTHER FIXED OBJECT					

WEATHER	ILLUMINATION	TOTALS	
172 CLEAR/CLDY	128 DAY		
2 FOGGY	19 DAWN/DUSK		
23 RAINING	47 DARK - LIGHTS ON	2004	79
3 SNOW/SLEET	6 DARK - NO LIGHTS	2005	61
OTHER	OTHER	2006	60

Crash Summary
Number of Crashes by Type (2004-2006)
along MD 223 from Steed Road to Mike Shapiro Drive/Simpson Lane

Type of Crash	2004	2005	2006	TOTAL	STUDY RATE	STATE RATE
Fatal	-	2	-	2	2.7	1.2
Number Killed	-	2	-	2	-	-
Injury	44	34	35	113	150.4*	98.4
Number Injured	65	55	53	173	-	-
Property Damage	51	62	65	178	237.0*	135.4
Total Crashes	95	98	100	293	390.1*	235.0
Rate	389.1	394.0	387.2	-	-	-
Weighted AADT	23,000	23,500	24,400	-	-	-
VMT (millions)	24.4	24.9	25.8	75.1	-	-
Opposite Direction	5	10	9	24	32.0*	11.0
Rear End	23	32	33	88	117.2*	81.1
Sideswipe	9	7	10	26	34.6*	16.2
Left Turn	20	7	8	35	46.6*	27.0
Angle	21	22	18	61	81.2*	42.9
Pedestrian	2	4	2	8	10.7*	6.2
Parked Vehicles	1	-	-	1	1.3	5.1
Fixed Object	3	8	9	20	26.6	26.8
Other	11	8	11	30	39.9	12.5
Truck Related Crashes	2	1	5	8	10.7	14.8
<i>*Significantly high crash categories</i>						

APPENDIX D: LOGICAL TERMINI

Western Terminus

The intersection of MD 223 (Piscataway Road) and Steed Road is proposed as the southern / western terminus for the MD 223 (Piscataway Road) Project Planning Study. Steed Road is designated by the Subregion V Master Plan as a collector road. The area near this proposed western terminus currently consists of a mixture of agricultural, forest, and barren land. A previous upgrade to MD 223 occurred in 1969, which had limits of MD 5 to Steed Road.

The intersection of MD 223 and Steed Road is a reasonable western terminus because there are no congestion related issues on MD 223 west of this location. East of Steed Road to Hardesty Drive, traffic volumes are relatively consistent; however, west of Steed Road, there is the largest drop in traffic volumes throughout the project area. Existing traffic volumes west of Steed Road drop by nearly 13.5 percent to 17,325 AADT, while 2030 no-build traffic volumes west of Steed Road drop by nearly 8 percent to 27,725 AADT.

The 2008 State Highway Needs Inventory (secondary system) for Prince George's County recommends upgrades along MD 223 from Temple Hill Road to MD 5. Consideration was given to terminating the current project at Temple Hill Road, but this led to concerns of impacts to the traffic operations at the MD 223/Steed Road intersection. Through discussions with Prince George's County, the project limits were extended further west to Steed Road. Separate projects are proposed for upgrades to MD 223 west and east of this project's logical termini. The 2008 State Highway Needs Inventory (secondary system) for Prince George's County recommends upgrades to MD 223 from Temple Hill Road to Floral Park Road (west of this project's limits) and MD 223 from MD 5 to MD 4 (east of this project's limits). In addition, Prince George's County is evaluating upgrades to MD 223 in phases, where Phase 1 is this current project (MD 223 from Steed Road to MD 5), Phase 2 will be MD 223 from MD 5 to MD 4 and Phase 3 will be MD 223 from Steed Road to Floral Park Road.

Eastern Terminus

The MD 5 (Branch Avenue) / MD 223 (Woodyard Road) interchange is proposed as the eastern terminus of the MD 223 (Piscataway Road) Project Planning Study. MD 5 is presently designated by the Subregion V Master Plan as a limited-access, six-lane divided freeway in the area of the interchange. The existing land use adjacent to the proposed eastern terminus is exclusively commercial. A major community activity center, The Clinton Plaza Shopping Center, as well as other major commercial retailers and a large Park and Ride lot are located directly west of this interchange. MD 5 interchange provides motorists with a direct link to major commuter destinations in the area, such as Andrews Air Force Base and I-95/I-495 (Capital Beltway) to the north.

The MD 5 / MD 223 interchange is a reasonable eastern terminus because MD 5 is a major crossroad with heavy traffic movements. In the westbound direction along MD223 between MD 5 and Stuart, AADTs are 40,400 for 2007 (existing) and are projected to be 51,275 in 2030 (no-build). Congestion related issues drop off just east of MD 5, shown by a reduction in AADT between MD 5 and Clinton Park S.C. to 25,750 in 2007 (existing) and 32,825 in 2030 (no-build).

MD 223, Steed Road to MD 5: Purpose and Need Statement Appendix D: Logical Termini

Futhermore, AADTs continue to drop off along MD 223 until the next major crossroad (MD 4), which is located approximately five miles east of MD 5.

MD 5 interchange on MD 223 is a reasonable eastern terminus for the following reasons:

1. MD 5 is a six-lane limited access freeway (major crossroad) with heavy traffic movements that traverses the Subregion.
2. Between MD 5 and Stuart Lane (west direction along MD 223), AADT's are 40,400 for 2007 (existing) and are projected to be 51,275 in 2030 (no-build). Congestion related issues drop off just east of MD 5, shown by a reduction in AADT between MD 5 and Clinton Park S.C. to 25,750 in 2007 (existing) and 32,825 in 2030 (no-build). Futhermore, AADTs continue to drop off along MD 223 until the next major crossroad (MD 4), which is located approximately five miles east of MD 5. (or stated as, Average Daily Traffic (ADT) drops by 36 percent along MD 223 east of MD 5)
3. MD 5 interchange with MD 223 provides a direct link to major commuter destinations in the area such as Andrews Air Force Base and I-95/I-495 (Capital Beltway) to the north.
4. Many destination points are located at the MD 5 / MD 223 interchange area (e.g., Clinton Plaza, Park and Ride, etc.).
5. A project planning study is ongoing along MD 5.

Steed Road is a reasonable western terminus for the following reasons:

1. There are no congestion related issues on MD 223 west of this location. West of Steed Road, AADT for 2007 (existing) and 2030 (no-build) numbers drop to the lowest levels (17,325 and 27,725, respectively) in the project area.
2. The next major crossroad (Gallahan Road) along MD 223 west of Steed Road is more than three miles away and has a limited impact on the study corridor.
3. West of Steed Road, MD 223 is a two-lane County Master Plan designated Historic Road (Map 30), defined as: "a public or private road which has been documented by historic surveys, and which maintains its historic alignment and historic landscape context through views of natural features, historic landscape patterns, historic sites and structures, historic farmstead groupings, or rural villages."