INTERSECTION ACCIDENT ANALYSIS

The accident analysis is based on data from January 1, 2004, to December 31, 2006, provided by the Maryland State Highway Administration Office of Traffic and Safety. Map 12 shows the number of accidents which occurred at the study area intersections, along with the number of injured pedestrians.

Accident data for each study area intersection are summarized in Table 9.

Table 9 Study Area Intersection Accidents, 2004–2006										
Intersection	Number of Accidents	Collision Type	Accident Time	Vehicle Type(s) Involved	Vehicle Movement Involved	Probable Cause	Injury to Person(s)?	Property Damage?	Fatality?	
Old Marlboro Pike at Ritchie Marlboro Road	13	Rear-end collision (6) Left-turn collision (2) Angle collision (5)	p.m. and 6 p.m.	Passenger vehicles (15) Light trucks (7) Other (7)	19 through movements 7 left turns	Influence of combined substance (1) Failure to give full attention (4) Failure to yield right-ofway (3) Too fast for conditions (1) Following too closely (1) Improper passing (1) Other/unknown (2)	7	6	O	
Old Marlboro Pike at Brown Station Road	2	Left-turn collision (1) left-turn collisions (2)	1 between 12:00 p.m. and 6:00 p.m. 1 between 6:00 a.m. and 12:00 p.m.	Passenger vehicles (2) Light truck (2) Other (1)	2 through movements 2 left turns	Failure to give full attention (1) Failure to yield right-ofway (1)	1	1	O	
Old Marlboro Pike at John Rogers Boulevard	O	NA	NA	NA	NA	NA	O	O	O	
Old Marlboro Pike at Rectory Lane	1	Rear collision (1)	1 between 12:00 p.m. and 6:00 p.m.	Passenger vehicles (2)	2 through movements	Other/unknown (1)	1	O	O	

Intersection	Number of Accidents	Collision Type	Accident Time	Vehicle Type(s) Involved	Vehicle Movement Involved	Probable Cause	Injury to Person(s)?	Property Damage?	Fatality?
Old Marlboro Pike and Main Street (MD 725) at Old Crain Highway and Trinity Lane	o	NA	NA	NA	NA	NA	0	o	O
Elm Street at Governor Oden Bowie Drive	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable	Data unavailable
Main Street (MD 725) at Water and Elm Streets	4	Sideswipe collision (1) Angle collision (1) Parked vehicle collision (2)	2 between 12:00 p.m. and 6:00 p.m. 2 between 6:00 a.m. and 12:00 p.m.	Passenger vehicles (2) Passenger buses (2) Light truck (1) Heavy truck (1) Other (1)	4 through movements 2 left turns	Failure to give full attention (2) Failure to keep right of center (1) Other/unknown (1)	0	4	O
Water Street at Judges Drive	2	Angle collision (1) U-turn collision (1)	1 between 12:00 a.m. and 6:00 a.m. 1 between 12:00 p.m. and 6:00 p.m.	Passenger vehicles (2) Light truck (1) Passenger bus (1)	2 through movements 1 right turn	Failure to yield right-of- way (1) Improper turn (1)	1	1	O
Water Street at MD 4 westbound ramps	4	Angle collision (2) Fixed-object collision (2)	2 between 12:00 p.m. and 6:00 p.m. 2 between 6:00 a.m. and 12:00 p.m.	Passenger vehicles (2) Light truck (2) Motorcycle/ moped (1) Heavy truck (1)	4 through movements 1 left turn	Improper turn (1) Improper parking (1) Other/unknown (2)	1	3	O
Water Street at MD 4 eastbound ramps	2	Rear-end collision (1) Angle collision (1)	2 between 12:00 p.m. and 6:00 p.m.	Passenger vehicles (3) Light truck (1)	3 through movements 1 left turn	Failure to give full attention (1) Other/unknown (1)	О	2	0
Pratt Street at Judges Drive	2	Parked vehicle collision (1) Fixed-object collision (1)	2 between 6:00 a.m. and 12:00 p.m.	Passenger vehicle (1) Heavy truck (1) Other (1)	1 through movement 1 other movement	Failure to give full attention (1) Other/unknown (1)	o	2	O
Main Street and Marlboro Pike (MD 725) at Governor Oden Bowie Drive	2	Pedestrian collision (1) Fixed-object collision (1)	1 between 12:00 p.m. and 6:00 p.m. 1 between 6:00 a.m. and 12:00 p.m.	Passenger vehicle (1) Light truck (1)	1 through movement 1 left turn	Influence of alcohol (1) Other/unknown (1)	1	o	O

Intersection	Number of Accidents	Collision Type	Accident Time	Vehicle Type(s) Involved	Vehicle Movement Involved	Probable Cause	Injury to Person(s)?	Property Damage?	Fatality?
Marlboro Pike (MD 725) at Largo Road (MD 202)	4	Rear-end collision (1) Fixed-object collision (1) Angle collision (2)	4 between 12:00 p.m. and 6:00 p.m.	Passenger vehicles (8) Other (1)	5 through movements 1 left turn 1 right turn	Failure to give full attention (2) Improper turn (1) Other/unknown (1)	0	4	0
Marlboro Pike (MD 725) at US 301 (Crain Highway)	12	Rear-end collision (7) Left-turn collision (1) U-turn collision (1) Overturn collision (1) Other collision (1) Other collision (2)	5 between 12:00 p.m. and 6:00 p.m. 3 between 6:00 p.m. and 12:00 a.m. 4 between 12:00 a.m. and 6:00 a.m.	Passenger vehicles (10) Light trucks (3) Heavy trucks (2) Emergency vehicles (4) Other (7)	18 through movements 1 left turn	Influence of alcohol (1) Failure to give full attention (4) Failure to obey traffic signal (1) Too fast for conditions (1) Following too closely (2) Other/unknown (3)	6	6	O

Source: Maryland State Highway Administration

The intersection accident analysis shows that Upper Marlboro's roadways had relatively few accidents. Only 48 accidents occurred during the two-year analysis period. The highest number of accidents occurred at the major intersections of Old Marlboro Pike and Ritchie Marlboro Road and MD 725 and US 301, but two of the study intersections (Old Marlboro Pike at John Rogers Boulevard and Old Marlboro Pike/Main Street at Old Crain Highway and Trinity Lane) had no accidents during the analysis period.

The most common cited cause of accidents in Upper Marlboro was failure to give full attention, followed by failure to yield right of way. None of the accidents resulted in fatalities, and the majority (over 60 percent) resulted in property damage only.

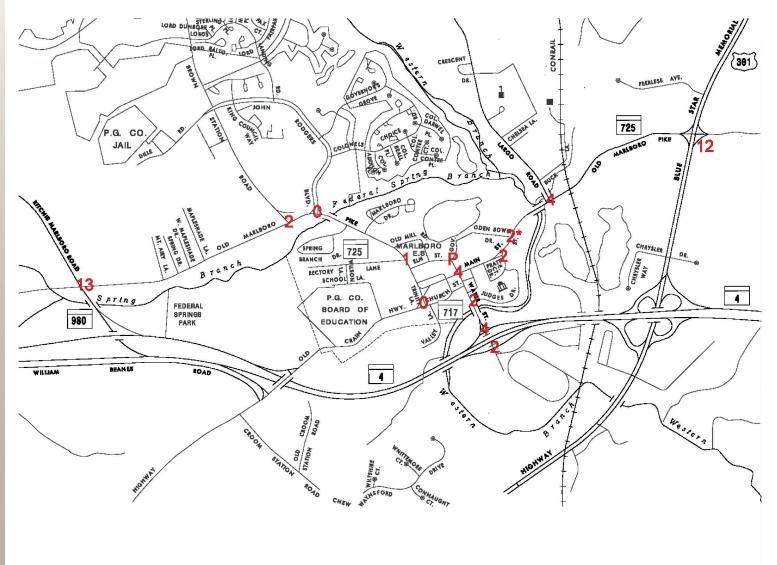
TRANSPORTATION STRENGTHS

Current strengths in Upper Marlboro's transportation and infrastructure network include:

- Good regional highway access via US 301, the MD 4/Water Street interchange, the Old Crain Highway/MD 4 interchange, and the Ritchie Marlboro Road/MD 4 interchange
- Public transit connections to Metrorail via "The Bus"
- Free shuttle bus service between downtown and satellite parking at the Equestrian Center
- The town core's walkable, pedestrian-scale environment
- Brick-paved, aesthetically-pleasing sidewalks



Regional Highway Access



Legend

- 2 Total Number of Accidents Accident data from January 1, 2004—December 31, 2006 Source: Maryland State Highway Administration
- * Pedestrian Injured
- P Accident Data Pending



Map 12: Mobile and Pedestrian Accidents

TRANSPORTATION WEAKNESSES AND THREATS

Existing weaknesses include:

- Lack of weeknight and weekend traffic, which may have a detrimental effect on retail establishments
- Lack of sidewalks on key town roadway segments along Judges Drive and portions of Main Street west of Water Street
- Lack of sidewalks in various locations outside the town limits along study area roadways
- Confusion caused by complicated intersection of Old Marlboro Pike and Old Crain Highway
- Congested traffic caused by detours through Upper Marlboro when a traffic incident occurs on US 301
- Cut-through traffic, including trucks, on Elm and Church Streets when Main Street becomes congested
- Poor drainage on Water Street during heavy rain events
- Need for select roadway resurfacing
- Lack of adequate wayfinding signs for visitors
- Lack of bicycle facilities
- Lack of traffic management for special events at the Equestrian Center/Show Place Arena
- Safety deficiencies along MD 4 between Water Street, Old Crain Highway, and Ritchie Marlboro Road

Threats include:

■ Identifying and securing funding sources for local, county and state infrastructure improvements



Increased cut-through traffic

- Lacking consensus on the redevelopment vision
- Potentially relocating several county government offices to Largo.

TRANSPORTATION OPPORTUNITIES

Long-term and short-term opportunities for improving Upper Marlboro's transportation and infrastructure network include:

- Optimizing signal timing and phasing at critical intersections
- Considering one-way traffic or pedestrianonly flow on select roadways
- Developing an on-road and off-road bicycle network
- Upgrading Marlboro Racetrack Road and/ or constructing the Ring Road to the east to divert traffic from downtown
- Extending Brown Station Road to Old Crain Highway
- Improving public parking management

- Using satellite parking and a shuttle to provide parking for government employees
- Constructing sidewalks (where necessary) and improving critical pedestrian crossings
- Considering underground parking
- Burying overhead utility wires underground



Extension of sidewalks

RECOMMENDATIONS

TRANSPORTATION AND INFRASTRUCTURE INITIATIVES

The following transportation recommendations were developed based on the traffic impact of proposed developments, identified system weaknesses, and consideration of long-range potential master-planned improvements. The recommendations call for various improvements and enhancements to roadways, parking, traffic signals, bicycle and pedestrian amenities, trails, transit, pedestrian and vehicular circulation, and wayfinding. Additionally, a future capacity analysis was performed to demonstrate the benefits of proposed improvements. It is important to qualify that any improvements on SHA or county roadways, including signals, sidewalks, and crosswalks, must first be coordinated with and approved by these agencies.

GOAL 1: IMPROVE VEHICLE ACCESS THROUGH UPPER MARLBORO AND RELIEVE TRAFFIC CONGESTION IN THE TOWN CORE.

Traffic congestion in Upper Marlboro is at its worst during peak morning and late afternoon travel times when thousands of employees and visitors are arriving and leaving the County Administration Building and county courts facilities. Congestion also occurs when large events are scheduled in town and at the Show Place Arena, as well as when accidents on US 301 and/or MD 4 require traffic to be detoured through town. The following action items can help alleviate this traffic congestion:

Action 1: Install new traffic signals at key intersections.

Upper Marlboro currently has two traffic signals in the town core. These signals are inadequate for peak periods of morning and evening traffic through the town. This results in congested roads as thousands of workers and visitors enter and leave Upper Marlboro each day. Pulsing the traffic with additional signals keeps traffic speeds lower and maintains staggered queuing at more intersections, which spreads the vehicle loads over a larger proportion of the street network. Optimal locations for the installation of new traffic signals include Water Street at the MD 4 interchange ramps, Judges Drive at Water Street, and Governor Oden Bowie Drive at Elm Street.

Action 2: Widen the Water Street bridge or construct a new parallel bridge.

The Water Street bridge over the Western Branch currently limits traffic flow at morning and afternoon peak rush hours as well as during large events held in town or at the Show Place Arena. This is caused by a transition from a two-lane, in-town roadway to a four-lane, out-of-town roadway at the two-lane Water Street bridge. To remedy this situation, four lanes on Water Street should be extended to either Judges Drive or the Church Street intersection with Water Street. This can best occur by adding a second two-lane bridge on the western side of the existing bridge at the Western Branch, which will allow traffic to continue using the existing bridge while the new bridge is constructed. This recommendation will need further study for its environmental impacts prior to implementation.

Action 3: Realign the Old Crain Highway/ Old Marlboro Pike/Main Street intersection to form a traffic circle or roundabout.

The current intersection configuration at Old Crain Highway, Old Marlboro Pike, and Main Street is perceived by many residents and visitors as awkward, hazardous, and confusing. This historic landmark gateway contains a monument to the Old Crain Highway corridor within a picturesque green ellipse, which is interrupted by Old Marlboro Pike to the north and a small intersecting side street to the south. It is these intersecting streets which cause the confusion for stops, through movements, and driver right-of-way. To eliminate this confusion, a new three-way traffic circle intersection alignment is recommended for this area. This solution will allow for free-flowing, trafficcalmed movement while maintaining Old Crain Highway's civic character. Existing driveway access should be retained, and the traffic circle should be designed to include the existing monument and ornamental plantings.

Action 4: Create a neighborhood street connection to Valley Lane from the Water Street and Judges Drive intersection.

The proposed new lane between Water Street at Judges Drive and Valley Lane is intended to help reduce the amount of cut-through traffic on Church Street from Old Crain Highway and Old Marlboro Pike to Water Street (to avoid the signalized intersection at Main and Water Streets). This new neighborhood street would be a two-lane local road connection that could directly link the Old Crain Highway users with the Judges Drive connection to courthouse parking. While this road alignment may be locally beneficial, it needs further detailed study to determine if it can be achieved with little or

no impact on the town lot parking area and the Trinity Church campus.

Action 5: Improve Valley Lane.

As the name implies, Valley Lane is a small, unimproved lane that currently accesses a few isolated homesteads and a small historic cemetery across a drainage divide on the southern side of Church Street. This is one of two routes that have been identified for potential improvements to provide access to a planned single-family residential site on lands along the northern side of the MD 4 corridor.

Action 6: Construct a new neighborhood street along the old railway right-of-way to connect the Valley Lane extension to Old Crain Highway.

Like Valley Lane above, the old railway line right-of-way crossing Old Crain Highway just west of Town Hall is the second point identified to provide future access to the planned single-family residential site on lands along the northern side of the MD 4 corridor. This new access point has been illustrated as a new street called Railroad Street, which will intersect with Valley Lane to form a new neighborhood entry and looping neighborhood street network.

Action 7: Use variable electronic message signs to direct traffic during special events and traffic incidents.

The town should coordinate with the Prince George's County Department of Public Works and Transportation to use variable message signs during special events in town and at the Show Place Arena or during traffic incidents on US 301 or MD 4 to direct traffic through and around town.

Action 8: Further study the possibility to realign Judges Drive to connect with Governor Oden Bowie Drive at Main Street/Marlboro Pike to create a four-leg signalized intersection.

The current northern portion of Judges Drive as it intersects with Courthouse Drive and Pratt Street is underutilized due to its low visibility and design. The northern portion of Judges Drive should be relocated to the site of the existing town maintenance facility, volunteer fire station, and Main Street public parking lot and should connect as a four-way intersection with Main Street and Governor Oden Bowie Drive. This could be achieved by relocating the town maintenance shop to the Town Hall site and moving the Upper Marlboro Volunteer Fire Department to a new facility (as indicated in the county's Capital Improvement Program).

Action 9: Transform Main and Pratt Streets into a one-way couplet.

Pratt Street and Main Street each currently operate as a two-way parallel street; however, the intersections of these two streets have limited sight distance visibility and Pratt Street is too narrow for the parallel parking and two vehicle lanes that it currently accommodates. Traffic has been observed to stop at the west end of Pratt Street and congest along eastbound Main Street when opposing traffic is approaching from the east on Pratt Street. Pratt Street should be converted to the eastbound portion of a short, one-way couplet and paired with an equal portion of Main Street converted to oneway westbound with parallel parking. The two roads would be redesigned to create an east end elliptical roundabout, so that businesses on either side of the one-way system are still as visible and accessible as they are today. This

transportation solution also would create a new civic space/gateway like that at the Old Crain Highway Monument on the west end of town.

Action 10: Construct Brown Station Road Extension between Old Marlboro Pike and Old Crain Highway and establish stop control at the new intersection with Old Crain Highway.

Brown Station Road is planned for extension through a full four-way intersection at Old Marlboro Pike, ending in a three-way "T" intersection favoring Old Crain Highway traffic movement and flowing directly into town. The project is not scheduled or budgeted as of this 2008 plan; however, the Brown Station Road extension should be considered in this plan because it has the potential to make currently inaccessible sites on the Sasscer Farm property accessible for future residential development that will tie into the Rectory Lane and School Lane neighborhood areas. The Upper Marlboro Advisory Committee favors a new traffic circle—rather than a "T" intersection—at the intersection of Brown Station Road and Old Crain Highway. This circle would help calm traffic while maintaining flow and help divert through traffic from town via Old Crain Highway and Old Marlboro Pike. Instead, traffic would be encouraged to loop around the circle and continue up Brown Station Road to points north, essentially bypassing the residential part of the town.

Action 11: Realign the intersection of Marlboro Race Track Road and Largo Road (MD 202) at Marlboro Pike (MD 725).

The current misalignment of Marlboro Race Track Road with Largo Road (MD 202) and Marlboro Pike (MD 725) creates a hazardous intersection at the eastern edge of Upper Marlboro. County road plans identify the need to realign and relocate MD 202; however, no schedule or funding has been identified at the time of this planning process. In the short term, the northern portion of Marlboro Race Track Road should be relocated to the east to align with the current MD 202/725 signalized intersection in the vicinity of Tommy's Auto Repair. Ultimately this initiative would benefit the entire Upper Marlboro area by easing congestion during peak hours on Main Street and Water Street.

Action 12: Construct a new frontage road along the southern side of MD 4 as part of a future development adjacent to the Prince George's County Equestrian Center.

A new frontage road is envisioned along the southern side of MD 4 (Pennsylvania Avenue) on the site of the current county park-and-ride overflow shuttle lots. This roadway would facilitate new development overlooking the MD 4 corridor while also providing a second street linkage between Water Street and Race Track Road that bypasses the Water Street and Judges Drive or Water Street and Main Street intersections.

Action 13: Realign and improve the intersection of Water Street and the Show Place Arena entrance at the MD 4 eastbound ramps with a traffic circle.

A new traffic circle and entry road frontage road along the Equestrian Center track is envisioned with the new gateway hotel and retail development recommended for the remote parking area and shuttle site. The new traffic circle is intended to better define the roadway linkages through the area while providing another themed entry to and from Upper Marlboro and the Equestrian Center/ Show Place Arena complex.

GOAL 2: IMPROVE THE AVAILABILITY AND APPEARANCE OF TOWN CORE PARKING.

Action 1: Create a surface parking lot or deck on Water Street to support new mixed-use infill.

To facilitate future mixed-use infill development along the east side of Water Street, the existing Water Street parking lot will have to be released by the county for shared public-private use and/ or private development of a two- to three-level parking structure. A portion of the spaces will be lost to facilitate the private development of an 80-foot-deep site for a Water Street frontage building. The final land use mix and density will establish the need for either a surface lot or low-structured parking resource. If surface parking can accommodate the development then pervious paving materials, screening, planted islands, and lighting that complies with the Dark Sky Initiative should be incorporated in the design of the surface parking lot.

Action 2: Create a new surface parking lot on the northeastern corner of Old Mill Road and Elm Street that will support the adaptive use of the Old Marlboro Academy.

With adaptive use of the Old Marlboro Academy/ Old Marlboro High School there will be a need for additional parking spaces on the site. To the west of the school site is an adjoining vacant property that can be designed to accommodate between 75 and 100 parking spaces in a two-bay parking lot with service access for the new civic reuse. Pervious paving materials, screening, planted islands, and lighting that complies with the Dark Sky Initiative should be incorporated in the design of the surface parking lot.

Action 3: Pursue shared parking legislation and agreements and reconfigure existing parking to optimize both public and private surface and structured parking resources.

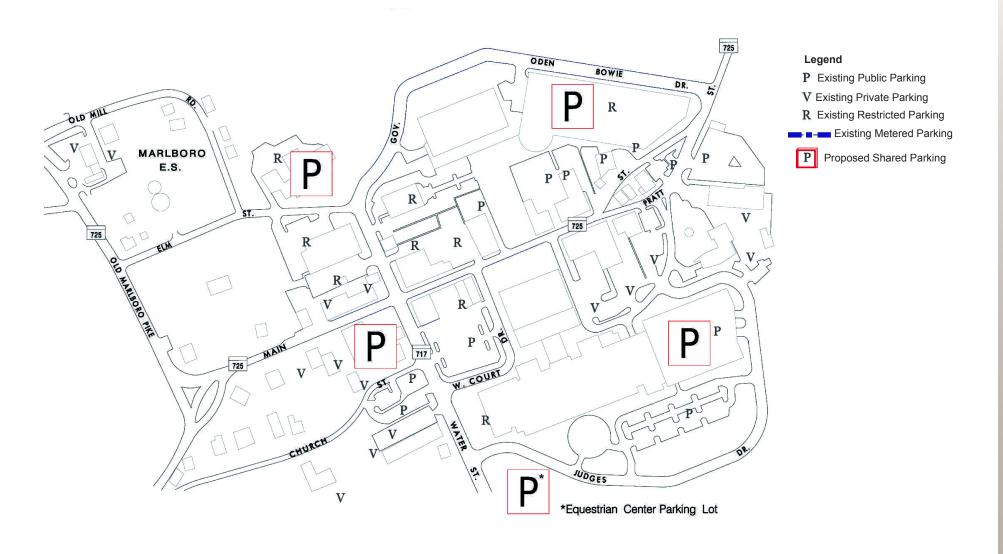
Existing parking in the town core is scattered among surface lots and metered spaces along major streets. The town can make more efficient use of town core parking resources by supporting legislation that would encourage shared parking agreements between uses that have different hours of activity. This is particularly applicable in a mixed-use environment. Within the town core, parking should be consolidated into centralized, shared, consumer-oriented facilities in each downtown grid block.

Map 13 shows the proposed shared parking approach. A reduction of approximately 30 percent in parking spaces can be achieved through shared parking arrangements.

Action 4: Develop clear, consistent, and permanent wayfinding signage of the proper scale for motorists.

Town core parking can be made more accessible through a signage system that directs motorists to town parking facilities. Signs highlighting centralized parking also can encourage a "park once" approach whereby visitors park and have an easy walk to all destinations within Upper Marlboro's town core. This signage should be coordinated with wayfinding signage for pedestrians.

Action 5: Enhance town public surface parking lots through new paving and





striping, landscape screening, lighting, and signage.

The town currently owns and maintains the Church Street surface parking lot, which has been minimally improved with a gravel surface and curb stops. This lot has the potential to achieve greater capacity and ADA accessibility—along with an improved appearance—with the addition of pervious paving materials, perimeter screening, planted islands or bioswales, and lighting which complies with the Dark Sky Initiative guidelines. New paving and striping also could help provide additional spaces for infill development at the corner of Main and Water Streets.

GOAL 3: Increase walkability within Upper Marlboro by providing continuous pedestrian connections and a pleasant streetscape environment.

Action 1: Improve the town core streetscape.

The town core streetscape environment has the potential to be a pleasurable experience for pedestrians, due in large part to its small scale and civic and natural amenities. The streetscape can be enhanced by sidewalk improvements, crosswalks, benches, trash cans, plantings, and uniquely-themed banners that help express the character of Upper Marlboro. The streetscape appearance also can be improved by consolidating utility poles and wires and/or relocating utilities either underground or to the rear of the properties, whichever alternative can

best be accommodated by the budget. While this is primarily an aesthetic improvement, it is also functional in that underground utilities fail less in storms and are easier to access on the ground.

Action 2: Develop a wayfinding system for pedestrians in the town core.

Wayfinding signage helps pedestrians orient themselves to and navigate their environments. This is particularly important in the town core, where visitors unfamiliar with the town come to government facilities daily. A coordinated system of pedestrian-scaled signage can help visitors identify optimal routes to town core destinations, services, and amenities.



Comparable Town Core Streetscape Treatment

Action 3: Improve the three-way crosswalk at the intersection of Elm Street and Governor Oden Bowie Drive.

With future redevelopment of the Old Marlboro Academy site, the intersection of Elm Street and Governor Oden Bowie Drive will see increased pedestrian activity. This will require the redesign of street curbs, sidewalks, and ADA access ramps to allow pedestrian circulation at three points rather than the two that are provided today. Crosswalk materials should establish a standard for Upper Marlboro. This intersection also will need to be signalized for greater pedestrian and vehicular safety.

Action 4: Make walkway extension improvements along Old Marlboro Pike, Main Street, and Old Crain Highway and create new neighborhood crosswalks at the Spring Branch Road, Old Mill Road, and Rectory Lane intersections with Old Marlboro Pike.

Walkways linking the town core with the neighborhood areas to the west are virtually nonexistent in Upper Marlboro, with the exception of an east-side walkway along Old Marlboro Pike. Residents would like better connections with the town core and open space amenities through new sidewalk extensions and/or trails along Old Marlboro Pike, Main Street, and Old Crain Highway out to the Boys and Girls Club park. To access the walkway improvements, new crosswalks and ADA access ramps are needed at the Spring Branch Road, Old Mill Road, and Rectory Lane intersections, along with the Old Crain Highway gateway intersection. Many of these crosswalks will only link existing residential roadways and may need partial walkways constructed on neighborhood

streets to qualify as crosswalks under current safety requirements. If so, residents have indicated that sidewalks should be kept to minimum standards to reduce the perceived loss of front yard spaces.

Action 5: Develop an interconnected sidewalk/walkway/trail system that links to important town destinations.

Pedestrian activity can be encouraged through creation of a walkway system that connects important buildings, civic uses, recreational amenities, bus stops, and residential neighborhoods. This system will provide key linkages between the town core and adjacent neighborhoods, ensuring continuous, safe sidewalks and encouraging more users to frequent town core businesses and recreational amenities. The walkway system should connect the Western Branch, Schoolhouse Pond, Depot Pond, Judges Drive, Racetrack Road, Brown Station Road Extension, and trail links to the Clagett and Smith infill sites.

Action 6: Encourage bicycle use by providing designated bike lanes and bike racks at public buildings and parking lots.

As more people seek alternatives to automobile use, many communities have constructed designated bike lanes to provide safe riding spaces for cyclists. These bike lanes may be part of the roadway or separated from the roadway by a narrow landscaped or hardscape buffer. Upper Marlboro should provide on-street designated bike lanes or "share the road" lanes that accommodate cars and bicycles along Main and Water Streets. In addition, cyclists need bicycle racks when they reach their destinations. All public buildings and parking lots should be

equipped with bicycle racks to provide secure parking for cyclists.

Action 7: Upgrade and brand a unique town trolley.

A town trolley can be integrated into the existing bus routes that serve Upper Marlboro. This trolley would run between major town destinations and the Show Place Arena/ Equestrian Center Complex, essentially serving as a town core shuttle for residents, workers, and visitors. The unique appearance of a trolley would help reinforce Upper Marlboro's small-town character. The trolley route should have new bus stops, bus shelters, and real-time "next bus" information.