

Hillandale Transportation Planning Analysis

As part of the White Oak LATIP Cost Estimating Analysis, MCDOT evaluated the White Oak policy area and identified intersection needs. However, in the Hillandale area, near MD 650 and Powder Mill Road, findings differed somewhat between the LATIP analysis and the July 2014 White Oak Science Gateway Master Plan analysis. Further intersection-specific analysis is recommended to resolve the differences.

Gannett Fleming, Inc. and Greenman Pedersen, Inc. (GF/GPI) has been requested to provide a scope of services to conduct engineering and transportation planning analysis for the Hillandale area of White Oak. The ultimate goal of this task is to evaluate potential intersection treatments in the Hillandale area to achieve Subdivision Staging Policy (SSP) adequacy at the intersection of MD 650 and Powder Mill Road and the intersection of MD 650 and Elton Road, while considering impacts to residents and businesses in the area.

The scope below details the tasks needed to complete this effort.

SCOPE OF WORK

A. Intersection Improvements

As part of a potential redevelopment in the area, a number of treatments were proposed to address capacity along Powder Mill Road and were approved by the County. However, consideration of a proposed slip ramp connecting Elton Road straight to the I-495 Outer Loop was deferred. Such a treatment would bring the intersections at MD 650 and Powder Mill Road and MD 650 and Elton Road into SSP compliance.

GF will develop and evaluate concepts for a proposed slip ramp to connect Elton Road to the I-495 Outer Loop. In addition, concepts will be developed and evaluated at the following locations to help achieve SSP adequacy and reduce neighborhood congestion to help achieve SSP adequacy and reduce neighborhood cut-through traffic:

- MD 650 and Powder Mill Road
- MD 650 and Elton Road
- Riggs Road and Powder Mill Road
- Extension of Powder Mill Road to the I-495 Outer Loop
- New left turn from southbound MD 650 onto the I-495 Outer Loop
- Additional options as identified

The conceptual design efforts for each intersection will include the following:

- Field visit
- Review previous HCM analysis and update M-NCPPC model, if necessary
- Identify up to three design alternatives
- Prepare background CADD data
- Draft concept alternative layout

- Conduct HCM analysis for the performance threshold of 80 sec/veh delay from SSP
- Estimate right-of-way impact including conceptual total property takes, if any
- Evaluate impacts to cut-through traffic through the Hillandale neighborhood: quantify existing and future patterns; define a mitigation plan if applicable
- Prepare cost estimate

B. Traffic Counts

In order to adequately develop concepts for and analyze the locations identified above, intersection weekday peak hour turning movement counts and weekday peak hour origin-destination (OD) studies will be obtained in the Hillandale neighborhood and along MD 650.

Turning movement counts will be performed at:

1. MD 650 at Oakview Drive
2. Powder Mill Road at Greenacres Drive
3. Powder Mill Road at Hillandale Shopping Center
4. Powder Mill Road at Sweetbriar Parkway
5. Powder Mill Road at Kimloch Road
6. Powder Mill Road at Riggs Road
7. Elton Road at Hillandale Shopping Center

OD studies will be performed at:

1. MD 650 at Elton Road
2. MD 650 at Powder Mill Road
3. MD 650 and ramp onto Outer Loop (SBR)
4. Powder Mill Road at Green Forest Drive
5. Riggs Road at Forest Hill Drive (any entering/exiting Forest Hill)
6. Riggs Road at Forestdale Drive (any entering/exiting Forestdale)
7. Riggs Road at Wooded Way (any entering/exiting Wooded Way)

C. Meetings

Based on discussions with MCDOT staff, it is assumed two people will attend up to six meetings which would include team meetings and meetings with outside agencies such as the MDOT SHA, Prince George's County Department of Public Works & Transportation, and other agencies. In addition, we will prepare for and attend a public open house in support of this effort. It is assumed that graphic support for these meetings will be minimal since we will reuse the planning design work prepared within the study. GF will prepare draft meeting minutes for MCDOT review and distribution.

D. Deliverables:

- Technical report including summary of findings
- Overall map with improvement locations
- Concept design drawings for each location/alternative

- Summary of cost estimate

E. Schedule

- May- Data collection (after NTP)
- June/July- Data Evaluation
- Aug/Sep- Refining recommendations
- Sep/Oct- Concept Drawings, cost estimation
- Nov- Final Report Completion

F. Assumptions

- NTP will be achieved in time for counts to occur prior to school letting out for the summer
- Previous HCM analysis files of the intersections will be provided
- Base mapping with existing features will be generated with GIS/SHA aerial
- County GIS maps will be used for ROW estimate
- Estimate will utilize SHA Major Quantities Estimate methodology for planning level projects and contingencies will be used to establish costs for utility, stormwater management, structure, and/or environmental impacts