Agenda Item Summary Report

Meeting Date: 9/12/24	**Submitted by:** **Dylan Galloway TA** **Steve Brayman DPW**
Item Title: EcoSite Proposal	
Work Session Item [] **Council Meeting Item [X]**	**Documentation Attached:** Yes

Recommended Action:

It is the recommendation of the Town Administrator and the Director of Public Works to accept the proposal and authorize the Town Administrator to execute any documentation to move this initial study forward.

Item Summary:

Town vendor Ecosite will lead a project involving watershed assessment, geotechnical analysis, and stream restoration analysis, coordinating with subcontractors Geotech Engineers, Inc. and Hanover Land Services (HLS). The scope includes developing a watershed drainage map, conducting hydrology and hydraulics evaluations, and reviewing original building construction and County building code requirements. Geotech Engineers will assess subsurface conditions and settlement issues, while HLS will evaluate stream stability and recommend stabilization measures. Ecosite will oversee the subcontractors' work, prepare progress reports, and ensure final integration of findings. The project will span over a 6–8-month time span with a total budgeted amount of the $36,172.

This proposal excludes environmental studies, dewatering, and detailed cost estimates. Staff envisions these and other aspects will be developed in future phases of work.

Town staff was informed that the General Assembly, through Delegate Ivey's office, was awarded $500,000 for this project. Details of this funding have not yet been received by the Town. The state funding is anticipated to cover the cost of this proposal and future work via reimbursement to the Town.

Budgeted Item: Yes [ ] No [ ] NA [X] reimbursable **Budgeted Amount:** $36,172 **One-Time Cost:** YES **Ongoing Cost: To Be Covered by State Funding**	**Continued Date:**
Council Priority: Yes [X] No [ ]	**Approved Date:**

BACKGROUND

A number of concerns have arisen within the Cheverly Gardens subdivision along Forest Road between Woodway Place and Cedar Street. These concerns included visible settlement of the front and rear yards, possible soil slippage from the front to the rear of the lots and visible stream erosion at the outfall of the 30-inch outfall storm drain.

Ecosite conducted an initial visual inspection of the area and we identified a number of issues which include:

- Compliance of site grading with MNCPPC site grading criteria, and County grading ordinance.
- Evident settlement of the front of the properties especially the driveways to the garages.
- Excessive stream and bank erosion where the 30" storm drain pipe discharges in the rear of 6441 and 6443 Forest Rd.
- Steep slope conditions behind 6455 Forest Rd.
- We met with the resident of 6445 Forest Rd who informed us of the soil around her property experiencing sliding to the back of her property. We could not confirm this by visual observation and it would require a geotechnical investigation.

1. Compliance of site grading with MNCPPC site grading criteria.
   Ecosite observed some issues related to site grading. MNCPPC criteria requires that a positive grade, typically 4-5 % away for the ground floor and a distance of 10-15 ft be provided. This criteria was missing from some properties.

2. Evident settlement in front of properties, specially the driveways to the garages. As shown in Figure 1, below, the driveway has settled 6 inches or more in front of the garage door. A geotechnical investigation is recommended to determine if soil settlement is finished, or whether to anticipate additional settlement.

3. Excessive stream and bank erosion.
   As shown in Figure 2 below, excessive stream and bank erosion is occurring where the 30" storm drain pipe discharges in the rear of 6441 and 6443 Forest Rd. The issue will require a geomorphic investigation to identify appropriate restoration measures and anticipated cost.

4. Steep slope conditions behind 6455 Forest Rd. As shown in Figure 3 below. This condition limits the use of this part of the property and could be improved by creating a series of terraces to provide some level ground. However, this approach would require a geotechnical investigation to evaluate the soil conditions and strength.

Ecosite has developed the scope of work described below that will serve to quantity the extend of these concerns and provide a preliminary cost estimate to alleviate the problems.

SCOPE OF WORK

The proposed work will be conducted in five (5) major tasks which include:

- Task 1 - Project Coordination

- Task 2 – Watershed Assessment
    - Drainage Area
    - H&H
    - Compliance with County Grading Ordinance
- Task 3 - Geotechnical Assessment
- Task 4 - Stream Assessment & Restoration

Task 1 – Project Coordination
Ecosite will lead the project and coordinate the work elements conducted by two subcontractors, Geotech Engineers, Inc., and HLS (Hanover Land Services). Ecosite will conduct the watershed assessment which includes; 1) the development of a watershed drainage area map, 2) development of watershed hydrology and hydraulics (H&H) report, and 3) evaluation of compliance with County grading ordinance.

Ecosite will issue a subcontract to Geotech engineers for the conduct of a geotechnical analysis. Ecosite will coordinate with Geotech Engineers during the conduct of the evaluation and review the information developed by Geotech to insure the completeness and quality of the work.

Ecosite will also issue a subcontract to HLS to conduct a geomorphic stability assessment of the stream at the outfall of the 30-inch culvert pipe below Forest Rd. Ecosite will coordinate with HLS during the conduct of the assessment and review the information developed by HLS to insure the completeness and quality of the work.

Ecosite will prepare a monthly progress report that documents the status of the Forest Road Assessment and identifies any issues that arise from the work and the manner in which they are addressed. Upon completion of the 3 tasks, Ecosite will prepare a final report that integrates the findings of the assessment.

Task 2 – Watershed Assessment
Ecosite will conduct a watershed assessment that includes the following subtasks;

- Delineation of watershed area and preparation of a watershed map.
- Development of watershed hydrology and hydraulics (H&H) report. This report will include a soils map of the watershed, and using the soils map data, watershed slope and land cover data, Ecosite will calculate the hydrologic conditions and peak runoff rates for the 1, 2, 10, and 100-year storm events. The hydrologic data will then be sued to evaluate the adequacy of the existing drainage network of inlets, pipe sizes and discharge points.
- Evaluation of compliance with County grading ordinance.

Task 3 – Geotechnical Assessment
The existing houses along East Forest Road in Cheverly, MD, exhibit signs of differential settlement, including unleveled sidings and ground surface depressions. Our proposed scope of service is to conduct a site evaluation of these lots to estimate potential future settlement issues.

Ecosite will retain the services of Geotech Engineers, Inc (GTI) to conduct the geotechnical assessment in accordance with the attached proposal in Attachment A. A total of (8) test soil borings are planned at the locations shown on the attached plan to explore the subsurface

conditions. Six borings are planned for the assessment of the existing buildings. Two borings are for the swm retrofit purposes. Laboratory tests will be conducted for identification of soils. A geotechnical engineering report will be prepared to include the following:
a. Estimated subsurface conditions within the site.
b. Foundation settlement estimation, including the long term settlement.
c. Earthwork requirements. Comments on suitability of on-site soils for reuse as controlled fill and backfill will be included.
d. Seismic soil classification including seismic soil coefficients.
e. Recommendations for swm retrofit.
f. Geotechnical engineering considerations during construction.

The following services are not included in this proposal: environmental study, dewatering, wetland or asbestos study, construction inspection, cost or quantity estimates and other professional engineering services not mentioned above. The required Standard Erosion Control Plan and submittal to SCD for review and approval. It is anticipated that the proposed limit of disturbance will not exceed 5,000 square feet, otherwise a full blown E&S plan might be required. The plan will address the erosion and sediment requirements to improve the storm drain system, and flooding conditions. A sequence of construction, construction access, and applicable notes and details will be provided on the erosion and sediment control plan.

Task 4 – Stream Assessment & Restoration

Ecosite will retain the services of HLI (Hanover Land services) to conduct a watershed assessment of an Unnamed Tributary to Lower Beaverdam Creek. This assessment is to include recommendations for addressing watershed areas of concern identified through a comprehensive field investigation. Ecosite has identified an unstable outfall located behind 6443 and 6445 Forest Road within the Cheverly Gardens subdivision. Site conditions include exposed geotextile fabric, active erosion along the right bank, instream riprap and development of a point bar on the inside of the meander bend caused by a shift in the waterway toward the right bank. Flow from this outfall ultimately enters a 60-inch culvert which traverses under John Hanson Highway (MD Rt. 50). The outfall channel is in the MDOT SHA Right-Of-Way (ROW) and will require communication with MDOT SHA for approval.

HLS will provide an assessment of the area bounded by the outfall behind 6443 and 6445 Forest Road to the 60-inch culvert. This assessment will include a preliminary assessment of the channel stability within this reach, potential project constraints/concerns, preliminary limits of environmental review for a NRI submission, environmental permitting requirements, identification of alternatives to address channel stability and a preliminary cost estimate for each alternative. Detailed services to be provided for this proposal are listed in the Scope of Work below.

This work will include the following tasks:

- Field measurement of the length of stream from the stormwater outfall behind 6443 and 6445 Forest Road to the 60" culvert at John Hanson Highway (MD Rt. 50).
- Preliminary field assessment of channel stability from outfall behind 6443 and 6445 Forest Road to the 60" culvert at John Hanson Highway (MD Rt. 50).
- Identification of initial project site constraints and concerns.

- Determine a preliminary NRI limits of analysis for assessment of environmental resources.
- Determine the environmental permits that will be required for an outfall stabilization project including identification of the regulatory agencies.
- Complete a preliminary assessment report with an Alternatives Analysis including a preliminary engineer's cost estimate for each alternative.
- Submit a proposal for completion of 30%, 70% and 100% design plan set for submission to Town of Cheverly and regulatory agencies.

SCHEDULE

The schedule for the project is presented by Task in Table 1 below;

Table 1. Project Schedule

TASK	**Completion Schedule**
Task 1 – Project Coordination	8 weeks
Task 2 – Watershed Assessment	4 weeks
Task 3- Geotech Assessment	6 weeks
Task 4 - Stream Assessment & Restoration	6 weeks