

Proposed Project

Project Number: LPX3_13
Subwatershed: Little Patuxent 3

Project Type: New Pond
Project Size: 0.75 acres

Project Location: At Boca Raton Drive along Congressional Court.



Project Description: Currently, the storm drains within this housing community outfall into a stream. This project would involve adding a new wet pond to control runoff from the storm drain system that outfalls to this open space. As no structure presently exists, excavation and grading would be performed and an embankment would be built. A forebay would be constructed at the inflow to the pond to allow settlement of suspended solids.

Because the project is a wet pond and is located near private residences, property owners would be kept informed and involved in the planning and design process. If this project is not completed, an alternate reforestation / riparian buffer replacement (BF1) is proposed.

Project Benefits:

- Peak Flow** This project would attenuate peak flows and allow settlement of sediment and some pollutants.
- Water Quality** Reducing peak flows would reduce the amount of suspended sediment in the stream.

Project Constraints:

- Environmental** Stream/wetland permitting may be necessary and stream closure periods may affect timing of work.
- Property Ownership** This project is located on County owned natural resource open space property (Turf Valley Overlook) and the Boones Lane forest conservation easement. The David Force Stream Valley Park is the downstream adjacent property.
- Facility Access** Many potential access points are available. Access can be gained directly to the open space via Boca Raton Drive, Congressional Court or Boones Lane.
- Design / Construction** Access may present a constraint if the right-of-way along Boca Raton Drive or Congressional Court are not large enough to allow the necessary equipment. If site is accessed from Boones Lane minor trees removal may be necessary.

Proposed Project

Upper Little Patuxent

Project Number: LPX3_13
Subwatershed: Little Patuxent 3

Project Type: New Pond
Project Size: 0.75 acres

Cost Detail:

| ITEM | QTY | UNITS | UNIT COST | TOTAL |
|--|-------|---------|-------------|--------------------|
| Site Work | | | | |
| Clear and Grub | 0.7 | AC | \$5,000.00 | \$3,700 |
| Pavement / Sidewalk Removal | | SY | \$7.50 | \$0 |
| Curb-Gutter Removal | | LF | \$10.00 | \$0 |
| Remove Pilot Channels | | LF | \$6.00 | \$0 |
| Remove Barrel Pipe | | LF | \$77.00 | \$0 |
| Pond Construction | | | | |
| Grading and Excavation (Class I) | 8,890 | CY | \$30.00 | \$266,700 |
| Hauling and Disposal | 8,890 | CY | \$20.00 | \$177,800 |
| Embankment | 1,220 | CY | \$60.00 | \$73,200 |
| Forebay | 115 | CY | \$45.00 | \$5,175 |
| Safety Bench | 250 | CY | \$30.00 | \$7,500 |
| Riser | 1 | LS | \$10,000.00 | \$10,000 |
| Outflow Pipe | 50 | LF | \$80.00 | \$4,000 |
| Outlet Protection | 1 | LS | \$8,000.00 | \$8,000 |
| Rip Rap Stabilization | | LF | \$50.00 | \$0 |
| SWM Landscaping | 2,590 | SY | \$10.00 | \$25,900 |
| Direct Construction Subtotal | | | | \$581,975 |
| Indirect Costs | | | | |
| E/SC, MOT, MOS (20% of Directs, maximum of \$50,000) | 1 | LS | \$50,000.00 | \$50,000 |
| Construction Stakeout (\$1,000/Day) | 5 | Day | \$5,000.00 | \$5,000 |
| Base Construction Cost | | | | \$636,975 |
| Mobilization (10% of Directs or \$1,000) | | | | \$58,198 |
| Subtotal | | | | \$695,173 |
| Contingency (30%) | | | | \$208,552 |
| Construction Subtotal | | | | \$903,724 |
| Env'tl Studies / Permitting (5% of Construction, minimum \$5,000 maximum \$15,000) | | | | \$15,000 |
| Engineering and Surveys (25% of Construction or \$75,000 maximum) | | | | \$75,000 |
| Total Capital Cost | | | | \$993,724 |
| Operations and Maintenance Costs | | | | |
| Annual Maintenance | 6 | Percent | \$34,919 | |
| Discount Rate | 5 | Percent | | |
| Expected Life | 20 | Years | | |
| Net Present Value of O&M Costs | | | | \$435,162 |
| Life Cycle Cost | | | | \$1,428,900 |