

ADA (Americans with Disabilities Act) standards apply to all federal properties and facilities open to the public. The Uniform Building Code (UBC) is the standard for construction within Lehman Township.

Energy Star requirements are the standard for compliance with federal energy conservation requirements. Voluntary sustainable / green standards beyond Energy Star requirements, such as LEED and the Sustainable Sites Initiative should be considered critically as beneficial goals for rehabilitating resources within Bushkill Village.

## 4.6 General Costs

Conceptual-level estimated costs are listed by element, and are supported by worksheets included at the end of this section.

The following narrative provides the assumptions and substantiation for the cost estimates as developed. Estimates are divided into administrative tasks (A) and major physical elements (1-17).

### Cost Methodology—Administrative Tasks

**A.1 Environmental Assessment (EA)** – It is anticipated that DEWA will perform the EA for all elements of the entire Bushkill Village cultural landscape—which may include specialized study elements such as wetland delineation; Phase 1 archaeology; and potentially other investigations. The funding for these clearance tasks can be a component of a federal transit / transportation application(s) for Bushkill Village improvements. These costs may be considered eligible as “community development” investments by potential partner agencies such as PA DCED—if they are presented as a priority project by the counties.

**A.2 Partner Coordination** – These periodic meetings will be attended by active partners at their costs as a task within their administrative processes.

#### **COSTS—ADMINISTRATIVE (estimated)**

A.1 Environmental Assessment (EA)	100,000 *
A.2 Partner Coordination	NA
A.3 Site Management	TBD
A.4 Feasibility Study (est. range)	60-100,000
A.5 Adopt BV Conservation Plan	NA
A.6 Cultural Landscape Assessment	60-75,000
A.7 Conservation Corridor Easements	NA
A.8 Partnership Outreach	NA
A.9 DEWA 50 <sup>th</sup> Anniversary	TBD
A.10 National Register Nomination (est.)	20,000
A.11 DEWA GMP Update (by DEWA)	TBD
A.12 Promote Bushkill Village	TBD
A.13 Funding Applications	100,000**

**Subtotal—Element A** **\$340,000-395,000**

#### **NOTES**

\* DEWA has identified that an EA for Bushkill Village might cost \$100,000.

\*\* Ten grant applications estimated at an average of \$10,000 for each preparation.

## COSTS—By CONCEPTUAL ELEMENT

1. Turn Store	NA
2. Peters House	1,500,000
3. Gas Station	320,000
4. Train Station Pavilion	125,000
5. Post Office	TBD
6. 209-Bushkill Falls Rd Intersection	(by DEWA)
7. Transit – Parking (near Turn Store)	365,000
8. Transit – Bus Stop / Pedestrian	95,000
9. Transit – Market Pavilion	515,000
10. Transit – Streetscape	705,000
11. Signage / Interpretive Exhibits (Design)	40,000
12. McDade Trail / Bushkill Bridge	(by DEWA)
13. Railroad Trail Loop / Trail Bridge	2,065,000
14. Grist Mill Pavilion	175,000
15. Mill Pond / Race (design only)	45,000
16. Bushkill Outreach Facilities (est.)	900,000
17. Visitor Center Bushkill Village (TBD)	1,350,000

## TOTAL COSTS—ELEMENTS (est.) \$ 8.2 M

**NOTE:** The total \$8.2 M includes “placeholder” budgets for #16-rehabilitating Bushkill Outreach and #17-a new visitor center in Bushkill as a subtotal of \$2,250,000. Neither element is currently identified in the DEWA GMP. The balance of Conceptual Alternative costs is estimated at \$6M. If these elements were completed over a 6-year period, the average annual cost is approximately \$1M/ year.

**A.3 Site Management** – The costs for LT to maintain the negotiated area of Bushkill Village will be borne by the municipality (and perhaps other partners) as a component of the Township park and open space budget. These annual operating costs need to be determined based on final description of DEWA-approved work.

**A.4 Feasibility Study**—The costs to study the rehabilitation feasibility of all or any of the village structures (Peters House, Gas Station, and Post Office) may be divided among several potential partners.

**A.5 Adopt the BVCS** – These administrative costs will be assumed by each partner to administer the adoption process.

**A.6 Cultural Landscape Assessment (CLA)** – The cost of professional services to perform this assessment is estimated. The funding for this task can be a component of a federal transit / transportation funding application(s), and possibly state funds. (TBD)

**A.7 Support Conservation Corridor Easements** – These administrative costs will be assumed by each partner.

**A.8 Partnership Outreach** – These tasks are administrative costs to be assumed by each partner.

**A.9 DEWA 50<sup>th</sup> Anniversary** – DEWA will take the lead responsibility for this task. LT is eligible to apply to DCNR under its CLI program for funds to help administer the public celebration of the landmark DEWA open space. Funding applicability will be determined through negotiation with DCNR.

**A.10 National Historic Register Nomination** – This estimate was included to identify professional services costs, if DEWA does not perform this task in-house.

**A.11 DEWA GMP Update** – This task will be performed by DEWA with a consultant, based upon funding secured through the DOI budget.

**A.12 Market Bushkill Village** – This task will initially begin as an in-house administrative task by LT, DEWA and other partners. DCNR Conservation Landscape mini-grant funds may be appropriate for LT to conduct portions of this task. PMVB may be of assistance as the region Tourism Promotion Agency (TPA).

## Cost Methodology – by Element

Elements are listed by number and name.

### **1 Turn Store**

This resource is now proceeding as an exclusively private development. Costs NA.

### **2 Peters House**

Costs were separated into building rehabilitation and site improvements. Costs to rehabilitate the garage structure were not included. Costs for sidewalks, fences and street trees along the Peters house highway frontage are itemized in Element 10 – Streetscape Improvements. Estimates assume complete stabilization of the exterior by DEWA under a separate project. Estimates assume a complete rehabilitation of the structure interior, utilities and fixtures for ADA accessibility and energy conservation compliance by a DEWA partner. Feasibility study costs are estimated to be funded by applications by LT, PC and other partners. Rehabilitation design and construction costs are assumed to be funded by a institutional partner (TBD) – with DEWA review and LT / PC support.

### **3 Gas Station**

Costs were separated into building rehabilitation and site improvements. Costs for any potential environmental remediation were not included. Costs for sidewalks, fences and street trees along the US Route 209 roadway frontage are itemized in Element 10 – Streetscape Improvements. Costs to complete the connection to the McDade trail are assumed to be included in the DEWA project to construct the McDade Trail Bridge over the Bushkill Creek (Element

12.) Costs estimates for professional design / engineering are shown, but will be borne by the selected DEWA concessionaire (TBD) – as well as costs of building rehabilitation, site improvement costs, and any special outfitting.

#### **4 Train Station Pavilion**

Costs are based on the preliminary estimates developed for the 2010 DCNR grant application by LT. General assumptions were made about the subsurface conditions. Minimum required ADA compliance items were included to create the Pavilion as a discrete “early implementation” project. Other trail, walkway connections, and site improvements are itemized under Element 13 – Railroad Trail / Bridge.

Costs need to be refined based on design development and final documentation. LT will cover costs that exceed the DCNR application total. This element is eligible for other funding sources to supplement the project if necessary. Design costs were shown in the application as 15% of the total project, based on the DCNR standard procedure. DCNR allows up to 20% design costs for complex projects, such as this federal installation.

#### **5. Post Office**

Costs were not calculated based on the projected demolition of this structure.

#### **6. US Route 209/ Bushkill Falls Rd Intersection**

This element has been completed by DEWA to redesign and construct traffic capacity, safety at this intersection. These improvements are considered “basic” and did not include pedestrian crossings or context-sensitive treatments (such as pedestrian “plazas” at the three corners,) which are included in Element 10 – Streetscape Improvements.

#### **7 Transit – Parking (Turn Store)**

Estimates for parking improvements on DEWA land (adjacent to the

Turn Store) relate directly to serving visitors who arrive in Bushkill by individual motor vehicle, transit bus, or bicycle. The parking area is envisioned as a facility south of the Turn Store, where transit buses currently turn around.

Costs are itemized to include parking / access improvements, pedestrian facilities, lighting, and signage – as well as allowances for stormwater BMP improvements that integrate with Turn Store stormwater BMP improvements. Funding partners for these improvements are envisioned to be FHWA and FTA, but may include LT and other state partners.

#### **8. Transit – Bus Stop / Pedestrian**

Costs for the Bus Stop and related pedestrian improvements include the paved shoulder pull-off for buses, pedestrian paving area under the Market Pavilion and associated visitor amenities, including signage. Streetscape improvements in this block are itemized in Element 10. Structure costs for the Market Pavilion are itemized under Element 9.

#### **9. Transit – Market Pavilion**

Estimates for this element include design and construction of the structure and associated facilities, including electric service. Costs for the walking surface below the canopy and associated visitor amenities are included in Element 8 – Transit Bus Stop / Pedestrian. An allowance is included to account for a stormwater BMP treatment (design TBD.) Funding partners for these improvements are envisioned to be FHWA and FTA through LT.

#### **10. Transit – Streetscape**

Estimates for streetscape elements include: walkways, street trees, and amenities along segments of US Route 209 and Bushkill Falls Road. These segments are subdivided by block and by side of both streets. Costs reflect a variety of materials – based upon anticipated type/volume of use and character of each block. Funding partners for these improvements are envisioned to be FHWA and FTA, through LT.

## **11 Signage / Interpretive Exhibits**

Estimates to design and document a comprehensive signage system and interpretive system for the Bushkill Village cultural landscape are included as a lump sum allowance under this element.

A fraction of the costs to fabricate / install the comprehensive system are assigned to each element to enable the signage to be installed as each discrete element is implemented. Funding partners for signage costs are envisioned to be FHWA and FTA as integral parts of the transportation improvements.

## **12 McDade Trail / Bushkill Bridge**

DEWA has completed the design and EA for this new trail structure and construction funding has been requested from DOI by DEWA. If this funding is not forthcoming, LT can serve as an applicant for TA, DCNR and DCED funding for this high-priority transportation structure.

## **13 Railroad Loop Trail / Bridge**

Estimates for the Railroad Trail and Bridge include grading, trail surface construction (sub-base, stone dust and a segment of wetland boardwalk. Costs for the new bridge structure over the Little Bushkill Creek are estimated based on gross square footage and include super and sub-structures.

Costs of user amenities are included (benches, interpretive signs, etc.) The cost of eventually replacing the Creek Road Bridge over the Little Bushkill Creek with a new span that includes a pedestrian facility is not itemized.

## **14 Grist Mill Pavilion**

Costs are estimated for a new interpretive pavilion structure at the site of the former grist mill – including foundations and superstructure. A stone dust paving is included for the area under canopy. An allowance for electric service is included.

Associated sitework, and interpretive signage are included. Pedestrian

access to this location is itemized in Element 13 – Railroad Trail Loop / Bridge, since the loop trail will pass through this site.

#### **15 Mill Pond / Race**

Cost allowances to re-grade and seed this area with minor stabilization of the extant race and dam structures are included in Element 7 – Transit Parking (Turn Store). Design / engineering allowances are included based on the concept to use this area to serve as a stormwater BMP facility and potential as a shallow ice skating pond in the winter months.

#### **16 Bushkill Outreach Facilities / Utilities**

This is an estimated allowance for this element to serve as a “placeholder” that identifies the need to address the long term issues (for Bushkill Outreach to continue to use the current facilities) during the anticipated GMP Update process.

#### **17 Visitor Center – Bushkill Village**

This estimate is based on a square footage cost “placeholder” for a new facility that is currently determined to be needed, but will be assessed as a potential new park improvement during the anticipated GMP Update process.

### **Costs—General Notes**

**Funding Applications** – Costs were estimated for professional services to prepare grant applications and to assist to negotiate funding partnerships. Applications costs may range between \$7,000 and 15,000 each, depending upon the complexity of the proposal and the funding source requirements. An average of \$10,000 was used as a basis to estimate the cost for any application. Ten applications were estimated to be needed over a 6-year period

**Design / Engineering** – Costs for design / engineering services are included per each element. These estimates for most elements were based on a transportation industry average of 20% of the project total for federally-funded projects.

All EA professional services were identified as a separate line item (to be conducted by DEWA). Under federally-funded transportation projects, the 80% dedicated toward construction also includes up to 15% of that subtotal toward construction inspection services. It must be determined if DEWA will assume any inspection responsibilities for any of the project elements.

**Building Rehabilitation** – Estimates were based on gross square footage takeoff from aerials that were multiplied by number of floors and by costs per square foot – in a range that varies based on the significance of each building.

**Transportation-related Elements** – Elements 7, 8, 9, 10 are all totally transportation-related improvements that are eligible for FHWA and/or FTA funding. (This does not preclude components of other major elements also being eligible for these same funding sources.)

**Cost Updates**—Costs were developed based on similar federally-funded projects in the general region during 2011 and 2012. Original cost estimates were adjusted—based on a 3% annual inflation estimate for 2016.

Assumptions, quantities and unit costs should all be revisited critically as a part of preparing any grant application—as goals, priorities, the design development process, and unit costs will all be subject to change as the program progresses.

## Cost Worksheets

Cost worksheets are included in this section to provide detail backup to support preliminary cost projections in Section 4.6.