

CHAPTER 4 – SOCIAL, ECONOMIC & ENVIRONMENTAL CONSIDERATIONS

4.1 INTRODUCTION

4.1.1 Environmental Classification and Lead Agencies

NEPA Classification and Lead Agencies

NYSDOT is the NEPA lead agency.

The project is considered to be a NEPA Class II action as defined by 23 CFR 771.117(c) (the 'C List'). This project meets the description of #3 of the 'C List': "Construction of bicycle and pedestrian lanes, paths and facilities." The project may affect an NRE site and the impact has yet to be determined. Potential impacts will be evaluated as more information becomes available. More information on this topic is included in Section 4.4.11. The project will be progressed as a Categorical Exclusion with documentation.

If it is determined that the action will have a significant impact on a property protected by 4(f), Section 106 or NHPA, the project will not qualify as a Categorical Exclusion. An Environmental Impact statement will be required, and will be subject to FHWA approval.

SEQR Classification and Lead Agencies

NYSDOT is the SEQR Lead Agency.

The Department had determined that this project is a SEQR Non-Type II (EA) Action. Non-Type II actions are those for which the environmental impacts are not clearly established, requiring an Environmental Assessment.

17 NYCRR Part 15(e) lists "The construction or reconstruction of bikeways, walkways, pedestrian bridges and the like..." as Type II Actions, which are those that do not have a significant effect on the environment. However, under 17 NYCRR Part 15.14(d)(6), a Type II Action can have "No effect on any district, site, building or structure that is listed, or may be eligible for listing, on the National Register of Historic Places..." This project may have an effect on an NRE site, and would therefore not meet the criteria for a Type II action.

4.1.2 Cooperating, Participating, and Involved Agencies

Involved and Interested Agencies

The following agencies have been identified as Involved and Interested Agencies under SEQR:

- Federal Highway Administration
- US Fish and Wildlife Administration

- US Army Corps of Engineers
- NYS Department of Environmental Conservation
- NYS Historic Preservation Office
- Binghamton Metropolitan Transportation Study
- Broome County
- City of Binghamton
- Town of Vestal
- Binghamton University (State University of New York)

4.2 SOCIAL

The purpose of this section is to describe the social environment of the area(s) to be affected by the alternatives under consideration, the setting of the affected environment, the beneficial and adverse social and related environmental effects of each alternative under consideration and the measures proposed to avoid or mitigate adverse impacts

4.2.1 Land Use

Comprehensive Plans and Zoning

The proposed construction of this Greenway segment is consistent with the Binghamton Metropolitan Transportation Study's (BMTS) *1999 Greenway Study*; the City of Binghamton's Local Waterfront Revitalization Plan, *Two Rivers, One Future*; the City's *Long Range Comprehensive Plan* (April 2003) and the BMTS's long range plan, *Transportation Tomorrow: 2030, Placemaking for Prosperity*.

The Local Waterfront Revitalization Plan states that:

"Route 434 is a major artery in the City that provides the primary route between the City of Binghamton and the Town of Vestal, as well as Binghamton University. Route 434, known locally as the Vestal Parkway, has limited shoulder widths and in many areas there is a substantial drop off between the roadway and the Susquehanna River. These roadway characteristics provide unsafe and detrimental conditions for bicyclers and walkers.

The City, working in coordination with the NYS Department of Transportation, has determined that improving pedestrian and bicycle opportunities, including the addition of designated bike lanes, is a top priority as future transportation improvements are considered and implemented along Route 434. The NYS Department of Transportation has agreed that any future improvements to Route 434 will take into consideration opportunities for alternative modes of transportation. The development of bike lanes along Route 434, in conjunction with the construction of a pedestrian bridge across the Susquehanna River would be an integral part of the larger proposed trail system that would link the entire lengths."

The City of Binghamton's Comprehensive Plan recommends that the City should continue developing an integrated waterfront trail:

"Multi-use trail networks are becoming increasingly popular in communities across the country, especially along waterfronts. Because of their continuous, linear nature, these corridors link communities and resources to each other. For many communities, these evolving corridors provide unique opportunities for both recreation and travel. They provide residents recreational opportunities like walking, roller blading, bicycling, or jogging...Trails also provide residents with a functional alternative to vehicle travel...Increasingly, communities are investing in fully integrated

and connected trail networks that offer routes for nonpolluting methods of travel, which can also reduce congestion, promote energy conservation, and improve air quality. These factors, in tandem with numerous nearby recreational opportunities, can enhance the quality of life for Binghamton residents.”

Zoning for the project area, according to the Broome County United Parcel Information System, is Residential Single Unit Dwelling (within the City of Binghamton), Community Business (Town of Vestal), Planned Development (at University Plaza, Town of Vestal), and Commercial Development (Town of Vestal).

4.2.2 Neighborhoods and Community Cohesion

Community Cohesion

The project will not bisect adjacent neighborhoods, change residential property values or relocate any residents.

The project will improve community cohesion, providing residents with additional modal choices for transportation. It will enhance access to retail facilities, Binghamton University, downtown Binghamton, MacArthur Park, MacArthur Elementary School and other resources in and near the project limits.

It is not anticipated that the project will have any effect on property values. The facility will be constructed almost entirely within public right-of-way. Any right-of-way takings will be minor strips. Under the Preferred Alternatives, only four commercial properties will be subject to minor right-of-way acquisitions.

The project will improve pedestrian and bicycle accessibility and mobility, both for recreational and commuting purposes. The trail will connect to the greater Greenway network, including the Chenango Riverwalk, an existing bicycle and pedestrian facility in the City of Binghamton. The trail will also intersect with existing Broome County (B.C. Transit) bus routes and the Binghamton University Off-Campus Transit (O.C.C.T.) routes. B.C. Buses are equipped with bicycle carriers, and both cyclists and pedestrians will have the option to use public transit in conjunction with the trail.

MacArthur Elementary School staff, students and parents will benefit from the additional modal choices for transportation to and from the school. The trail will furnish the opportunity for physical education and wildlife or habitat education. Binghamton University staff and students will also benefit from the additional modal choices for transportation to and from the campus.

Access to MacArthur Park, and recreational opportunities associated with the park, will be enhanced.

Home and Business Relocations

This project will not cause adverse impacts to neighborhood character and stability. None of the feasible alternatives will require displacement of residences or businesses, and there will be no relocation impacts.

4.2.3 Social Groups Benefited or Harmed

Elderly and/or Disabled Persons or Groups

A review of US Census data for the City of Binghamton, utilizing data from the 2000 US Census, indicates that there is a slightly higher population of elderly and disabled persons in the city, when compared to the national average. While the Town of Vestal has a relatively low population of disabled persons, the population of elderly persons is also slightly higher than the national average.

Exhibit 4.2.3 -1 Population of Elderly and Disabled Persons (Percent)			
Social Characteristics	City of Binghamton	Town of Vestal	U.S.
Disability Status	24.8	12.2	19.3
65 Years and Over	17.6	15.8	12.4
<i>U.S. Census Bureau, Census 2000 Demographic Profile Highlights</i>			

The existing corridor is deficient in accommodations for the disabled and elderly, due to the absence or limited availability and connectivity of sidewalks and crosswalks. This project proposes new paved pedestrian surfaces and crosswalks that will improve access for elderly and disabled users, particularly within the Phase III segment, where access to an established commercial/retail area will be greatly enhanced.

The proposed trail will intersect with an existing public bus route (B.C.Transit). B.C. Transit reports that most of their fixed route buses are accessible to people using mobility aid devices, those who have difficulty climbing stairs, and those using service animals.

Pedestrian accommodations on the trail will meet the proposed ADA guidelines, with the possible exception of the approaches to the overpass crossing Route 434. Geometric constraints may require a slope in excess of the ADA maximum running slope of 8.33% for 60 m (200 ft.) for these segments of the trail. The segments will be clearly marked with signage to notify trail users of the conditions.

Transit Dependent, Pedestrians, and Bicyclists

The Rt. 434 Greenway will benefit the transit dependent, pedestrians and bicyclists by furnishing a safe separate bicycle and pedestrian facility. The trail will intersect with an existing public bus route (B.C.Transit). B.C. Transit buses are equipped with bicycle racks, and both pedestrians and cyclists will be able to use the trail in conjunction with the public transit system.

There are a number of pedestrian and bicycle generators in the corridor served by the proposed trail, including Binghamton University, a retail shopping area, a residential area, MacArthur Park and MacArthur Elementary School. The trail will connect, on its eastern terminus, to the S. Washington Street pedestrian bridge, which furnishes access to downtown Binghamton, to the existing Chenango Riverwalk, and to a continuing network of bicycle and pedestrian routes.

A Pedestrian Generator Checklist is included in Appendix F.

Low Income, Minority and Ethnic Groups (Environmental Justice)

This project is partially located in an area identified by NYSDEC as a potential Environmental Justice Area. A map of Environmental Justice Areas is included in Appendix B. The scope of the project actions are limited and will not have an adverse human health or environmental effect on minority or low-income populations. To the contrary, the project is expected to benefit these populations. Low income populations, in particular, will benefit from low-cost travel and recreation (walking, bicycling) that intersects with existing public transit systems.

Consistent with Executive Order 12898 and FHWA Guidance on Environmental Justice, the project has not directly or indirectly used criteria, methods or practices that discriminate on the basis of race, color, national origin or income level. Whenever feasible, mitigation measures outlined or analyzed in this document address significant adverse environmental effects on minority and low-income populations.

4.2.4 School Districts, Recreational Areas, and Places of Worship

School Districts

The proposed project corridor is primarily within the Binghamton City School District and is adjacent to MacArthur Elementary School. Students living more than 1 mile from the school qualify for district-provided transportation. Sidewalks exist along the south side of Vestal Avenue project corridor and are used by students from the adjacent neighborhoods. It is not anticipated that this project will have any adverse impacts on the school. In the long-term, effects will be positive with additional modal choices for students and staff to get to and from school. The trail may also furnish opportunities for physical education and habitat/ wildlife education.

Small portions of the westernmost project corridor fall within the Johnson City Central School District and Vestal Central School district. Vestal Hill Elementary School is approximately 0.8 km (½ mile) south of the proposed trail. There are also several private schools near the project corridor, including the Susquehanna School and the Hillel Academy of Broome County, both south of the project corridor. It is not anticipated that any of these schools will be negatively impacted by the project.

A map of School Districts and Schools is included in Appendix B.

Recreational Areas

The proposed project corridor will pass along the perimeter of MacArthur Park. The project will have positive effects on the park, with additional modal choices and recreation opportunities for park patrons. None of the park's current uses or facilities will be negatively impacted by this project.

Places of Worship

There are a number of places of worship located near the project corridor, and a map of their locations is included in Appendix B. It is not anticipated that any of the Places of Worship will be adversely affected by the project. In some cases, the proposed trail may furnish additional modal choices for people traveling to and from these locations.

4.3 Economic

4.3.1 Regional and Local Economies

According to the City of Binghamton's Office of Economic Development, the area has been subject to 'industrial contraction' since the 1980s. Subsequent population decreases were realized, but the area still offers a comparatively lower cost of living and recent regional trends indicate growth in the transportation, food distribution, and tourism industries. The proposed project, as part of a greater regional trail system, would contribute toward efforts to attract tourists and new residents to the area.

Binghamton University, a NY State University System campus, is located at the western terminus of the project. With a student population of over 13,000, the University figures prominently in the local and regional economy. The proposed project would serve this community by furnishing it with an additional modal choice for commuting, and enhanced recreational opportunities.

The project does not fall within an Empire Zone (economic development zone).

4.3.2 Business Districts

Established Business Districts

Discussions with the Binghamton Economic Development Office, in July 2009, indicate that there is a "Southside Commons Business District" centered at the intersection of Vestal Avenue and Pennsylvania Avenue. While the project will not directly affect the business district, the easternmost portion of the proposed trail is within 380 yards (350 m) from the business district. They are connected by sidewalks, and are within easy walking or cycling distance.

Effects on Business Districts

Long-term impacts to the existing business district are anticipated to be positive. This determination is based upon improvements to bicycle and pedestrian movement, with increased peripheral foot and bicycle traffic generated from the proposed trail, and improvements to the aesthetics of the roadway corridor.

4.3.3 Specific Business Impacts

Established Businesses

Established businesses are concentrated primarily near the western terminus of the project area, along Route 434, and are widely varied in terms of products and services.

Business within University Plaza include casual dining restaurants, office space, a gym, a portrait studio, and a bank, amongst others. University Plaza Apartments (off-campus student housing) are also located

on this site. Other businesses on or near this section of Route 434 include casual and fast food restaurant franchises, real estate and professional offices, a clothing store, a nursery school, the FOX 40 WICZ television studio, and a Residence Inn (hotel).

Effects Assessment

This project will not impact the character of existing businesses, nor impact traffic volumes or parking in or near the project corridor. It is anticipated that some area business will benefit from improved multi-modal access. Businesses may elect to furnish bicycle racks on their premises to attract and accommodate patrons riding bicycles.

4.4 Environmental

4.4.1 Wetlands

State Freshwater Wetlands

There are no NYSDEC regulated freshwater wetlands or regulated adjacent areas (100ft) within the project area, as per the NYSDEC Freshwater Wetlands Maps for Broome County, Binghamton West quadrangle, as of March 2009. A site visit was performed to verify this. No further investigation is required and Environmental Conservation Law, Article 25, is satisfied.

State Tidal Wetlands

A review of the NYSDEC GIS wetland data files indicates that there are no NYSDEC jurisdictional tidal wetlands or regulated adjacent areas within or near the project limits, and ECL Article 24 does not apply.

Federal Jurisdiction Wetlands

A wetland delineation was performed in June 2009, finding that federal jurisdictional wetlands exist within the proposed project area. The Wetland Delineation Report is included in Appendix B. These wetlands will be taken into consideration when designing the project, and impacts will be avoided or reduced where practicable.

It is anticipated that a Blanket Section 401 Water Quality Certification will apply to this project, since the work required will meet the requirements of a Section 404 or Section 10 Nationwide Permit #23 (Approved Categorical Exclusions - Construction of bicycle and pedestrian lanes, paths and facilities.). A Pre-Construction Notification will not be required.

Concurrence from the FHWA and US Army Corps of Engineers (ACOE) will be sought once the full extent of any wetland impacts is ascertained. Mitigation to minimize impacts may be required. Work will not commence until necessary permits are acquired, and work will adhere to any conditions set forth by the permit requirements.

Executive Order 11990

Because this project will be progressed under a Nationwide Permit #23, it is excluded from a Programmatic Wetland Finding, and an Individual Wetland Finding will be required, unless the Federal Highway Administration (FHWA) determines that a Programmatic Finding will be allowed.

If an Executive Order (EO) 11990 Wetland Finding is required, it will need to be approved by the FHWA, stating and supporting that (1) there are no practicable alternatives to construction in the wetland(s), and (2) the proposed action includes all practicable measures to minimize harm to the wetland(s) which may result from such use.

Mitigation Summary

All appropriate measures will be taken to avoid and minimize any wetland impacts.

If impacts to wetlands are 0.04 ha (0.10 ac) or less, and a Nationwide Permit applies to the proposed activities, no wetland mitigation/monitoring plan will be required for the project. It appears that wetland impacts resulting from the Preferred Alternatives will be very minor, approximately 0.004 ha (0.01 ac), and will not require mitigation.

If it is determined during design that impacts will exceed 0.04 ha (0.10 ac), wetland mitigation will be required. Coordination with the US Army Corps of Engineers (ACOE) will determine the amount of compensatory wetland creation that will be required. A wetland monitoring plan will be prepared for any proposed wetland creation areas. Coordination with the ACOE will determine the frequency of the reports and the information required.

4.4.2 Surface Waterbodies and Watercourses

The project activities do not involve excavation in, or the discharge of dredged or fill material into, Waters of the U.S.. No permits under this Section are anticipated.

Surface Water Classification and Standards

Based upon a review of the NYSDEC GIS data maps, there are several regulated streams within the project limits. Four of the streams are unnamed tributaries of the Susquehanna River, and one is known as Bayless Creek. All of the streams are rated Class C and are not 303(d) segments, according to the Final New York State 2008 Section 303(d) List of Impaired Waters.

The Susquehanna River is not within the project area, but the tributaries crossing through the project area drain in to it. The Susquehanna River is rated Class A.

A map of Surface Water Classifications is included in Appendix B.

The best usages for Class/Standard "A" waters are: source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The water quality is suitable for fish propagation and survival.

The best usage for Class/Standard "C" waters is fishing. Water quality is suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

The New York State Department of Conservation (NYSDEC) will be consulted to determine any restrictions to construction activities due to fish spawning seasons or other water quality concerns.

Stream Bed and Bank Protection

The Susquehanna River is not within the project area, but it is a Class A protected stream and is adjacent to the project area. Provisions will be made to avoid or mitigate impacts to the Susquehanna.

4.4.3 Wild, Scenic, and Recreational Rivers

State Wild, Scenic and Recreational Rivers

There are no NYSDEC Designated, Study or Inventory State Wild, Scenic or Recreational Rivers within or adjacent to the proposed project site. No further review is required.

National Wild and Scenic Rivers

The project does not involve a National Wild and Scenic River, as shown by the Nationwide Rivers Inventory List of National Wild and Scenic Rivers. No further review is required.

Section 4(f) Involvement

The proposed project does not involve work in, or adjacent to, a wildlife or waterfowl refuge. No further consideration is required.

4.4.4 Navigable Waters

State Regulated Waters

There are no state regulated navigable waters located within the project's area of potential effect.

Office of General Services Lands and Navigable Waters

There are no OGS underwater holdings located within the project's area of potential effect.

Rivers and Harbors Act – Section 9

Since the project does not involve the construction or modification of any bridge, dam, dike, or causeway over any navigable water of the United States, Section 9 is not applicable.

Rivers and Harbors Act – Section 10

Since the project does not involve the creation of any obstruction to the navigable capacity of any of the waters of the United States, or in any manner alter or modify the course, location, condition, or capacity of any navigable water of the United States, Section 10 is not applicable.

4.4.5 Floodplains**State Flood Insurance Compliance Program**

The proposed project, in some locations, is within the 100-year floodplain of the Susquehanna River, as indicated by FEMA on its GIS data base, and shown on the 100-Year Floodplain map in Appendix B. In accordance with the provisions of 6 NYCRR 502 - Flood Plain Management for State Projects, this action will consider and evaluate the practicality of alternatives to any floodplain encroachments. The evaluation will determine if (1) a significant encroachment exists, (2) there is significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles, (3) there are significant impacts on natural beneficial floodplain values.

A floodplain hydraulic analysis will be performed during final design.

Executive Order 11988

In order to comply with EO 11988, there will be an evaluation of potential effects of any actions taken within the floodplain, and alternatives to avoid any adverse effects shall be considered. If the project alternatives require the use of a floodplain, there will be an attempt to minimize potential impacts, and consistent with the regulations issued in accord with section 2(d) of this Order, the Department will prepare and circulate a notice containing an explanation of why the action is proposed to be located within the floodplain.

4.4.6 Coastal Resources**State Coastal Zone Management Program**

The proposed project is not located in a State Coastal Zone Management (CZM) area, according to the Coastal Zone Area Map from the NYS Department of State's Coastal Zone Management Unit.

Significant Coastal Fish and wildlife Habitat

The project is not located in or near a Significant Coastal Fish and Wildlife Habitat, as defined by the NYSDOS Division of Coastal Resources and Waterfront Revitalization. No further action is required.

State Coastal Erosion Hazard Area

The proposed project is not located in or near a Coastal Erosion Hazard Area.

Waterfront Revitalization and Coastal Resources Program

According to NYS DOS "List of Approved Coastal Local Waterfront Revitalization Programs (LWRPs)," dated September 2007, the proposed project is located in a Local Waterfront Revitalization Area. The City of Binghamton has an approved Local Waterfront Revitalization Program (LWRP), and this project will contribute to improved waterfront recreation, as described in the plan:

"The City, working in coordination with the NYS Department of Transportation, has determined that improving pedestrian and bicycle opportunities, including the addition of designated bike lanes, is a top priority as future transportation improvements are considered and implemented along Route 434. The NYS Department of Transportation has agreed that any future improvements to Route 434 will take into consideration opportunities for alternative modes of transportation. The development of bike lanes along Route 434, in conjunction with the construction of a pedestrian bridge across the Susquehanna River would be an integral part of the larger proposed trail system that would link the entire lengths."

Coordination with the city will continue throughout the project, including a formal notification that the project will occur within the boundaries of its LWRP, and requesting the municipality's coastal consistency determination.

Federal Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act (CBIA)

The proposed project is not located in, or near a coastal area under the jurisdiction of the Coastal Barrier Resources Act (CBRA) or the Coastal Barrier Improvement Act (CBIA).

4.4.7 Groundwater Resources, Aquifers, and Reservoirs**Aquifers**

NYSDEC GIS data files have been reviewed and it has been determined that the proposed project is not located in an identified Primary Water Supply or Principal Aquifer Area. No further investigation for NYSDEC-designated aquifers is required.

A review of the EPA-designated Sole Source Aquifer (SSA) Areas indicates that the proposed project is located within the SSA Boundary of the Clinton Street Ballpark Aquifer. Coordination with EPA and preparation of a Groundwater Assessment Report is not required, since the project scope consists of work that does not require a Federal Sole Source Aquifer Section 1424(e) review by FHWA and EPA, pursuant to Executive Order 12372.

Drinking Water Supply Wells (Public and Private Wells) and Reservoirs

There are no municipal drinking water wells, wellhead influence zones, or reservoirs within or near the project area, according to NYS GIS data.

4.4.8 Stormwater Management

This project will disturb more than one acre and will require a SPDES permit. The project is required to assess the requirements for stormwater management practices. Erosion and sedimentation control measures will be incorporated into the project. Erosion and sedimentation control plans will be developed which control erosion with straw or hay mulch, erosion control fabric, and temporary seeding, and control sedimentation with silt fence, check dams in ditches and culvert outlets, inlet protection, and temporary sedimentation/detention ponds. Permanent stormwater management practices will be incorporated into the project.

According to NYSDEC's 303(d)/TMDL list (2008), the project corridor is not adjacent to, or discharging runoff to, a TMDL Watershed or a listed 303(d) waterbody. Portions of the Susquehanna River within Broome County are identified as "Other Impaired Waterbody Segments Not Listed Because Development of a TMDL is Not Necessary" because a "...TMDL has already been established for the segment/pollutant." Section 303(d) of the Clean Water Act stipulates that impaired waters that do not require a TMDL are not included on the Section 303(d) List.

It is not anticipated that a NYSDEC Protection of Waters permit will be required for this project. Although a permit is not required, this project should not contravene the water quality standards of the nearby Susquehanna River and its tributaries. During construction, precautions will be taken to prevent contamination of the river and tributaries by silt, sediment, fuels, solvents, lubricants, or any other pollutants. Promptly after construction, care will be taken to stabilize all disturbed areas.

4.4.9 General Ecology and Wildlife Resources

Habitat Areas, Wildlife Refuges, and Wildfowl Refuges

The proposed project does not involve work in, or adjacent to, a wildlife or waterfowl refuge. No further consideration is required.

Endangered and Threatened Species

According to the NYSDEC GIS information database, there is a possibility that several rare and possibly state-protected animal species are located in or near the proposed project area. NYSDEC will be contacted to identify the species, and a site species assessment will be performed to confirm their presence. If the presence is confirmed, NYSDOT will take appropriate measures during design and construction to ensure that impacts to it are avoided or minimized.

According to the US Fish and Wildlife State and County Species listings, there are no Federally-protected, threatened, or endangered species located in Broome County.

Invasive Species

A review of the existing corridor and NYSDOT GIS data did not indicate any significant presence of known invasive species within the right-of-way. Precautions will be taken to prevent the introduction of invasives, intentionally or accidentally, during project design and construction.

Roadside Vegetation Management

Existing roadside vegetation consists primarily of maintained lawn areas and wooded areas. Efforts will be made to replace wildlife-supporting vegetation that is removed in the course of construction.

4.4.10 Critical Environmental Areas

Critical Environmental Areas

The proposed project does not involve work in or near a Critical Environmental Area.

State Forest Preserve Lands

The proposed project does not involve work in or near state forest preserve lands.

4.4.11 Historic and Cultural Resources

National Heritage Areas Program

The proposed project will not impact areas identified by the National Park Service as National Heritage Areas.

National Historic Preservation Act – Section 106 / State Historic Preservation Act – Section 14.09

Because the project is a federally funded action, the Department will be following the Section 106 Process of the National Historic Preservation Act. This ensures compliance with the NYSHPA Section 14.09 process.

Architectural Resources

An architectural survey was performed, by the Public Archaeology Facility of Binghamton University, as part of a Cultural Resource Reconnaissance Survey, dated March 18, 2009. Portions of this report are included in Appendix B.

The survey identified three properties that are eligible for inclusion in the National Register, within the project's area of potential effect. These are three private residences, located at 999 Vestal Avenue, 1001

Vestal Avenue and 1003 Vestal Avenue. They are characterized as “high style, architect designed homes on large landscaped lots” and the report indicates that they would contribute to a proposed ‘Vestal Avenue Historic District.’ The report identifies potential impacts to the properties if there are alterations to the front lawns.

The Preferred Alternative (sub-alternative D1) will pass approximately 40 m (130 ft.) from the backs of these homes. A vegetated buffer of approximately 20 m (65 ft.) will be left intact. It is not anticipated that this project will affect these homes, or that it will alter any of the characteristics that qualify the properties for inclusion in the National Register, in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.

Archaeological Resources

A Phase I archeological survey was conducted in 2009, by the Public Archaeology Facility of Binghamton University, to determine the presence of archeological resources. The report indicates that cultural resources were associated with two sites, only one of which is identified as having research potential. The report recommends avoiding the site, or conducting further archaeological work if it cannot be avoided.

At the time of writing, a Phase II archaeological site examination is being conducted to more precisely determine the locations, quantity and significance of the resources associated with the identified site. This report will make it possible to fully identify and evaluate potential impacts from the project alternatives. Recommendations from the site examination report will be used to determine what avoidance or mitigation measures will be appropriate if the preferred alternative might affect these resources. A Section 4(f) evaluation for Involvement with Archaeological Resources will be prepared if these resources will be affected by the preferred alternative.

Historic Bridges

There are no bridges over 50 years old or listed on NYSDOT’s Historic Bridge Inventory that are located within the project’s area of potential effect. The South Washington Street pedestrian bridge, located just east of the project, is listed on the National Register of Historic Places. It will not be affected by the proposed trail.

Historic Parkways

This project does not have to potential to impact any Historic Parkways.

Native American Involvement

The project lies within the tribal interest areas of the Delaware-Mohican, Onondaga and Tuscarora tribes. These tribes will be consulted to identify and protect important Native American cultural places that could potentially be affected by the proposed work.

In accordance with the American Indian Religious Freedom Act of 1978 (amended 1994), the project alternatives are being advanced such that they will not interfere with Native Americans’ inherent right of freedoms, including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rights.

The Department will follow the Section 106 Process of the National Historic Preservation Act (36 CFR 800). This ensures compliance with the Archaeological Resources Protection Act. The Act for the Preservation of American Antiquities does not apply, since the proposed project does not lie within Federal or Native American-owned property.

Section 4(f) Involvement

Three properties that are eligible for inclusion in the National Register of Historic Places are located within the project's area of potential effect. These properties consist of three residences, located at 999 Vestal Avenue, 1001 Vestal Avenue and 1003 Vestal Avenue. They are characterized as "high style, architect designed homes on large landscaped lots" and the report indicates that they would contribute to a proposed 'Vestal Avenue Historic District.'

The Preferred Alternative (Sub-alternative D1) will pass approximately 40 m (130 ft.) from the backs of these homes. A vegetated buffer of approximately 20 m (65 ft.) will be left intact. It is not anticipated that this project will affect these homes, or that it will alter any of the characteristics that qualify the properties for inclusion in the National Register, in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. No further consideration is required.

The Vestal Avenue Historic District Inventory Form is included in Appendix B.

4.4.12 Parks and Recreational Resources

State Heritage Area Program

The proposed project will not negatively impact areas identified by the New York State Office of Parks, Recreation and Historic Preservation as State Heritage Areas.

The nearby Susquehanna State Heritage Area encompasses three distinct areas, one of which falls within the downtown portion of the City of Binghamton. While the project is not in the State Heritage area, it may contribute to improved access for visitors traveling to and from the State Heritage Area.

National Heritage Areas Program

The proposed project will not impact areas identified as National Heritage Areas.

National Registry of Natural Landmarks

There are no listed nationally significant natural areas within, or adjacent to, the project area.

Section 4(f) Involvement

The proposed project is located adjacent to MacArthur Park, a significant publicly owned park.

FHWA has prepared a negative declaration/Section 4(f) statement and determination to address independent bikeway and pedestrian walkway projects which require the use of recreation and park areas. This negative declaration/preliminary Section 4(f) document is only applicable under the following conditions:

- The project is an independent bikeway or walkway construction project which requires the use of recreation and park areas established and maintained primarily for active recreation, open space, and similar purposes.
- The official having specific jurisdiction over the Section 4(f) property has given his approval in writing that the project is acceptable and consistent with the designated use of the property and that all possible planning to minimize harm has been accomplished in the location and design of the bikeway or walkway facility.

The proposed project will meet these conditions, since it will enhance access and recreational activities at the park, without having any adverse effect on existing uses or facilities. The written approval of the City of Binghamton Parks & Recreation Department will be sought to confirm that harm has been minimized.

Section 6(f) Involvement

The project does not impact parklands or facilities that have been partially or fully federally funded through the Land and Water Conservation Act. A grant of \$109,810 was awarded to the City of Binghamton on 10/29/01 for "Susquehanna and Chenango River Trail Development" but it does not appear that the funds were applied to land or facilities in the immediate area. No further consideration under Section 6(f) is required.

Section 1010 Involvement

According to the National Park Service 'Appropriations for Grants' list, no Urban Park and Recreation Recovery Program funds have been applied to any property that will be affected by this undertaking.

4.4.13 Visual Resources

Effects Assessment

The proposed project will run adjacent to NYS Route 434 (a four-lane principal arterial) and adjacent to Vestal Avenue (a collector).

Primary viewer groups of the project will include highway users, residential occupants, MacArthur Park patrons and trail patrons.

The at-grade trail sections will have relatively minor impacts on the visual environment. Visual impacts of the at-grade trail portion on Route 434 will be negligible to motorists. The proposed at-grade pavement section skirting MacArthur Park will be visible, but not intrusive, and can effectively be screened with

vegetation. The proposed at-grade pavement section on Vestal Avenue will be approximately twice as wide as the existing sidewalk section, running along the same alignment. This change will be noticeable to residents of the area and possibly to motorists on Vestal Avenue, but would not change the visual character of the residential neighborhood through which Vestal Avenue runs.

The elevated trail sections and the overpass, with its north and south approach ramps, will have the greatest visual impact on the corridor. The new vertical structures will be noticeable to highway users on Route 434, patrons of MacArthur Park, and, to a lesser extent, viewers on the school playing fields.

The aesthetics of the elevated trail sections and overpass will be developed during design. Patterned or textured concrete or M.S.E.S. walls will be used for retaining structures. For consistency and clarity, the same pattern or a complementing pattern should be carried throughout the project on all vertical structures. Because traffic on Route 434 travels at a relatively high rate of speed, a highly detailed pattern would not be apparent to drivers, and the wall face will not be visible to trail patrons. Since the wall face will be at the edge of pavement in places, and may be subject to vehicular crashes, certain textures will be avoided. Deeply textured walls can result in more vehicular body damage in a crash due to increased friction. Textures and patterns should preferably be low relief and feature rounded or beveled leading edges to avoid wheel snagging. Textures or patterns that feature upward-sloping edges in the direction of travel will also be avoided, since they can contribute to wheel climb and vehicle rollover.¹

The overpass will be the most visible element of the project. This can be used to advantage, since it can locate and, in a sense, "advertise" the trail to passers-by. The overpass could serve as a landmark or gateway structure, and the addition of signage mounted on the bridge to identify the trail to passing motorists would help to make it familiar to a larger population.

The overpass will be visible to viewers on the Susquehanna River and S. Washington Pedestrian Bridge, but it will be screened by vegetation along the riverbank, and it will not be prominent. From the City of Binghamton, the overpass will be just visible and distant. Trail patrons on the overpass will have good views of the Susquehanna River, City of Binghamton and S. Washington Street pedestrian bridge. The railing and enclosure of the bridge should be as unobtrusive as possible to capitalize on these views.

There are no other dominant or significant views or vistas from the project area. In addition, there are no other significant vantage points from which the proposed trail will be visible, or any areas requiring subsequent visual analysis.

The westernmost portion of the project (Phase III) will have the least impact on the visual environment. This area is characterized by commercial structures, parking lots, higher density housing, and heavy motor vehicle traffic. The introduction of an at-grade or slightly elevated trail in this visual context will be negligible.

To enhance the visual corridor of the proposed trail alignment, trees and shrubs will be planted, and views available to trail patrons will be identified and preserved. Some new views of the Susquehanna River may be created by selectively removing some shoreline vegetation.

¹ *Crash Testing Of Various Textured Barriers*, State Of California Department Of Transportation Materials Engineering And Testing Services, September 2002

4.4.14 Farmlands

Based on a review of the NYS Agricultural District Maps for Broome County, the proposed project is not located in or adjacent to an Agricultural District.

Federal Prime and Unique Farmland

The proposed project activities will not convert any prime or unique farmland, or farmland of state or local importance, as defined by the USDA Natural Resources Conservation Service, to a nonagricultural use.

4.4.15 Air Quality

The project is considered an exempt project as per Table 2 in Section 93.126 of 40 CFR (Bicycle and Pedestrian Facilities).

4.4.16 Energy

An energy assessment is not required for the proposed project since it is not expected to:

- a. Increase or decrease VMT;
- b. Generate additional vehicle trips;
- c. Significantly affect land use development patterns;
- d. Result in a shift in travel patterns; or
- e. Significantly increase or decrease vehicle operating speeds.

Therefore, the project will not significantly affect energy consumption.

4.4.17 Noise

This project is not a Type I project and does not require a traffic noise analysis as per 23 CFR 772.

4.4.18 Asbestos

Screening

An asbestos screening has been performed for this project and it has been determined that there is little likelihood of encountering asbestos material, since the scope of this project is limited and does not involve underground utilities, bridges, large culverts, or structure demolitions.

Assessment and Quantification

Asbestos assessment and Quantification will not be necessary for this project, as Asbestos Containing Material is unlikely to be encountered.

Mitigation Summary

No special site specific variances are anticipated for this project. Existing Departmental blanket variances or existing variances will be sufficient for this project.

4.4.19 Hazardous Waste and Contaminated Materials

Screening

A Hazardous Waste/Contaminated Materials Site Screening has been conducted in accordance with NYS DOT Environmental Procedures Manual, Chapter 5, in order to document the likely presence or absence of hazardous/contaminated environmental conditions. A hazardous/contaminated environmental condition is the presence or likely presence of any hazardous substances or petroleum products (including products currently in compliance with applicable regulations) on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.

The Hazardous Waste/Contaminated Materials Site Screening included a review of NYSDEC regulatory data files and a site 'walkover' in September 2008.

No hazardous waste/contaminated materials were identified within or adjacent to the project area during the course of the Hazardous Waste/Contaminated Materials Site Screening. The potential risk for involvement with documented or undocumented inactive hazardous waste/contaminated materials is low. The Department does not believe that additional studies or investigations are warranted.

Mitigation Summary

No hazardous waste/contaminated materials were identified in the Hazardous Waste/Contaminated Materials Site Screening. No remediation activities are likely warranted for this project.

4.5 Construction Effects

Construction Impacts

Construction of the project could potentially and primarily impact:

Cultural resources – A Phase I archaeological survey was performed in March 2009. A Phase II archaeological site examination is underway to determine the

presence and significance of archaeological resources. At the conclusion of this study, potential impacts can be fully evaluated.

- Surface waters – The proximity of the Susquehanna River, and presence of several of its tributaries within the project area, make them susceptible to erosion impacts during construction.
- Noise and dust – Certain alignments would involve construction in residential areas, where residents may be sensitive to these nuisance issues.
- Traffic – Construction of an overpass to cross Route 434 will temporarily impact traffic. Emergency vehicles use this route.

Mitigation Measures

- Cultural resources – Once the full extent and significance of archaeological resources is determined, potential impact to them will be considered in the selection of a preferred alternative. Report recommendations for the avoidance or mitigation of impacts to resources will be followed.
- Surface waters – Erosion and sediment control plans will be developed to ensure that surface waters are protected.
- Noise and dust – Work in residential areas will be subject to work hour restrictions, and wetting the exposed construction area will be recommended to control potential dust impacts.
- Traffic – A plan will be developed to minimize impacts to traffic, and minimize the period of disruption to traffic. Access for emergency vehicle will be maintained at all times.

4.6 Indirect (Secondary) Effects

Indirect Socioeconomic Effects

No negative indirect effects are anticipated. Improved inter-modal mobility and options will give residents and visitors more opportunities for social, recreational and economic interaction. Encouraging bicycle and pedestrian movement will contribute to neighborhood connectivity, and encourage people to be less automobile dependent.

No residential, and very little commercial property will need to be acquired for the Preferred Alternatives. It will not result in socio-economic shifts. Any unavoidable environmental impacts will be mitigated.

4.7 Cumulative Effects

Cumulative effects are defined as “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7)”.

Past, present, and reasonably foreseeable actions that are related to this projects include the construction of other Greenway segments, and development generated or influenced by this project. The geographic area of effect associated with the proposed project includes the entire Greenway corridor.

The proposed action is part of the larger Greater Binghamton Greenway project, portions of which have already been constructed, while others will be constructed at a later date. The cumulative impact of full build out was considered in the 1999 BMTS Greenway Plan.

Two concurrent development projects should be considered in evaluating the cumulative effects of this action. PIN 9045.04, Rte. 201 over Vestal Road & Rte. 434, to be built in 2010, abuts the project limits on the western end.

A mixed use student housing community, comprised of residential and commercial development, is to be located near the eastern terminus of the project. This development will ultimately accommodate 700 residents and a variety of businesses. University Plaza, an existing residential and commercial development, will also be connected with the Greenway and be a significant generator of users. The proposed trail will provide a multi-modal linkage between Binghamton University, University Plaza, downtown Binghamton and the SUNY Binghamton Downtown Academic Center, which opened in 2007. While the proposed action will improve access to existing and proposed developments, it is not anticipated that the construction of the trail will directly or indirectly result in any new proposed development.

At this time, no significant cumulative effects relating to this project have been identified.