

EXHIBIT 6

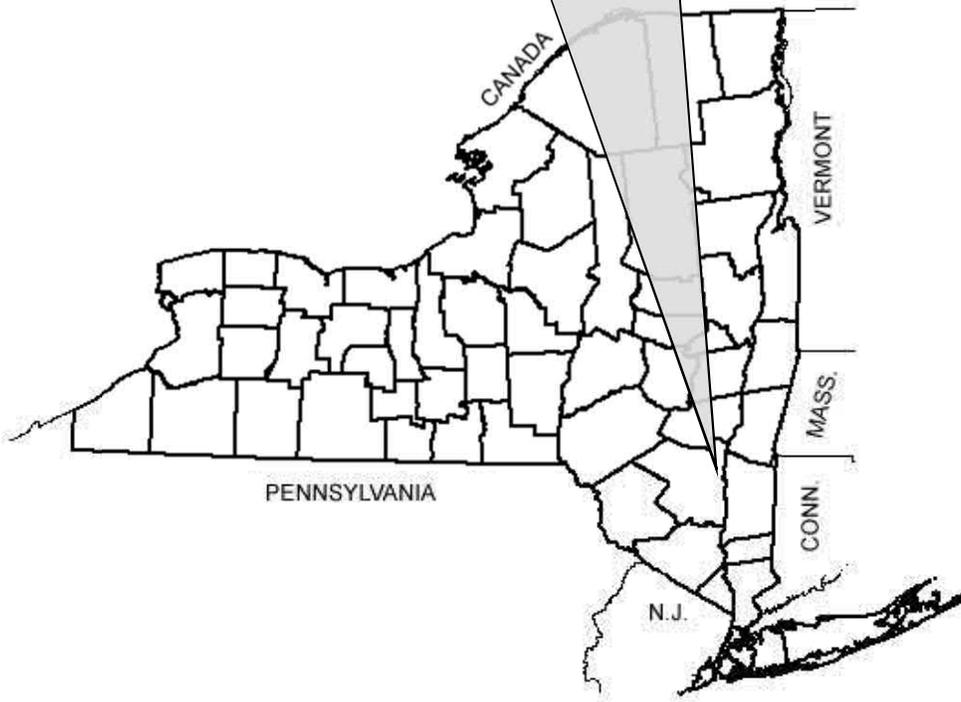
KINGSTON RAIL TRAIL, PIN 8758.04
FINAL DESIGN REPORT

TRANSPORTATION

FINAL DESIGN REPORT

January 2018

Kingston Rail Trail
P.I.N. 8758.04
City of Kingston, Towns of Ulster and Hurley
Ulster County, New York



PROJECT REPORT



ANDREW M. CUOMO
Governor

**Department of
Transportation**

MATTHEW J. DRISCOLL
Commissioner



**U.S. Department of Transportation
Federal Highway Administration**

This project is being designed using U.S. Customary units and the text of this report uses U.S. Customary units. The following table of approximate conversion factors provides the relationship between metric and U.S. Customary units for some of the more frequently used units in highway design. The table allows one to calculate the U.S. Customary Unit by multiplying the corresponding Metric Unit by the given factor.

	<u>Metric Unit</u>	x	<u>Factor</u>	=	<u>U.S. Customary Unit</u>
<u>Length</u>	kilometer (km)	x	0.621	=	miles (mi)
	meter (m)	x	3.281	=	feet (ft.)
<u>Area</u>	hectare (ha)	x	2.471	=	acres (a)
	square meter (m ²)	x	1.196	=	square yards (sy)
	square meter (m ²)	x	10.764	=	square feet (sf)
<u>Volume</u>	cubic meter (m ³)	x	1.308	=	cubic yards (cy)
	cubic meter (m ³)	x	35.315	=	cubic feet (cf)
<u>Speed</u>	kilometer per hour (km/h)	x	0.621	=	miles per hour (mph)
	meter per second (m/s)	x	3.281	=	feet per second (ft/s)

CERTIFICATION For Design Approval

PIN 8758.04
Kingston Rail Trail

City of Kingston, Towns of Ulster and Hurley
Ulster County, New York

I, Dennis Doyle, Director of Planning, being Ulster County's Responsible Local Official for the above-referenced locally administered federal aid project(s), hereby certify that to the best of my knowledge and belief:

- the project described in the Design Report is a true and accurate depiction of the proposed improvements;
- the project is consistent with the approved scope, including any and all approved scope changes;
- the project was developed in compliance with all applicable laws, including but not necessarily limited to the Americans with Disabilities Act;
- the project was developed in compliance with all environmental regulations, including but not necessarily limited to, the National Environmental Policy Act (NEPA) and the State Environmental Quality Review Act (SEQRA);
- public participation has been sought and all public input has been considered during project development;
- the final design is consistent with all commitments made as a result of public participation and coordination with regulatory and involved agencies (i.e. NYSDEC, NYCDEP, SHPO, railroads, utility companies, affected municipalities, etc.);
- all appropriate alternatives have been considered and evaluated;
- all proposed improvements within the project limits, regardless of fund source, have been disclosed and appropriately discussed in the Design Report;
- all property acquisitions have been identified and documented in the Design Report, and are necessary and appropriate for the project;
- utility relocations have been minimized and are necessary for the project, and coordination with affected utility owners has begun;
- all identified permits will be secured prior to advertising for bids;
- all required utility and railroad agreements will be approved by NYSDOT and fully executed prior to advertising for bids;
- and, the estimate accurately reflects the proposed work, is reasonable, and is broken into the appropriate shares.


Signature

January 24, 2017

Date

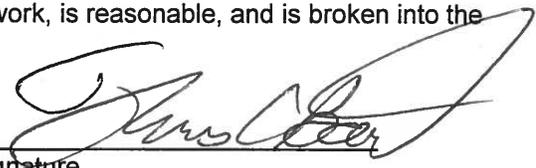
CERTIFICATION For Project Design

PIN 8758.04
Kingston Rail Trail

City of Kingston, Towns of Ulster and Hurley
Ulster County, New York

I, Thomas C. Baird, P.E., Associate, Barton & Loguidice, D.P.C., the responsible licensed professional for the design of the above-referenced locally administered federal aid project(s), hereby certify, by signing and affixing my professional stamp below, that to the best of my knowledge and belief:

- the project has been developed in accordance with applicable design standards and accepted engineering and/or architectural practice;
- all exceptions to accepted standards have been thoroughly analyzed, and their inclusion in the final design has been justified;
- all environmental issues have been addressed and all environmental regulations have been satisfied and appropriately documented in the Design Report;
- all proposed improvements within the project limits, regardless of fund source, have been disclosed and appropriately discussed in the Design Report;
- the rationale for all proposed improvements has been documented in the Design Report;
- all property acquisitions have been identified and documented in the Design Report, and are necessary and appropriate for the project;
- utility relocations have been minimized and are necessary for the project, and coordination with affected utility owners has begun;
- the final design is consistent with all commitments made as a result of public participation and coordination with regulatory and involved agencies, i.e. (NYSDEC, NYCDEP, SHPO, railroads, utility companies, affected municipalities, etc.);
- all required permits have been identified;
- and, the estimate accurately reflects the proposed work, is reasonable, and is broken into the appropriate shares.


Signature

01/25/2018
Date

LIST OF PREPARERS

Group Director Responsible for Production of the Design Approval Document:

Thomas C. Baird, P.E., Barton & Loguidice, D.P.C.

Description of Work Performed by Firm: Directed the preparation of the Design Approval Document in accordance with established standards, policies, regulations, and procedures, except as otherwise explained in this document.



Note: It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.

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CHAPTER 1 - EXECUTIVE SUMMARY

1.1. Introduction

This report will assess existing conditions, identify the project needs and objectives, analyze potential alternative solutions, and discuss the social, economic and environmental effects on the community resulting from the implementation of the feasible alternatives. This report has been prepared in accordance with the New York State Department of Transportation (NYSDOT) *Project Development Manual*.

The project is on the approved Statewide Transportation Improvement Program (STIP) and is identified as PIN 8758.04, Kingston Rail Trail. The project is located in the City of Kingston and the Towns of Ulster and Hurley, Ulster County, New York. The objectives of this project are to establish an off-road pedestrian/bicycle facility to provide alternative means of transportation and link the City of Kingston and the Towns of Hurley and Ulster.

The project is being progressed by Ulster County in coordination with the NYSDOT Region 8 and the Federal Highway Administration (FHWA). The project will be funded with federal STP Flex Funds and State Dedicated Funds provided via NYSDOT Region 8, with Ulster County as sponsor.

The project is qualified to progress as a National Environmental Policy Act (NEPA) C list Categorical Exclusion in accordance with the FHWA's regulations 23 CFR 771.117(c). FHWA will serve as the lead agency for NEPA.

The project is classified as a SEQR Unlisted Action in accordance with 6 NYCRR Part 617, State Environmental Quality Review (SEQR) Act. Ulster County will be the Lead Agency for SEQR through an uncoordinated review process.

1.2. Purpose and Need

1.2.1. Where is the Project Located?

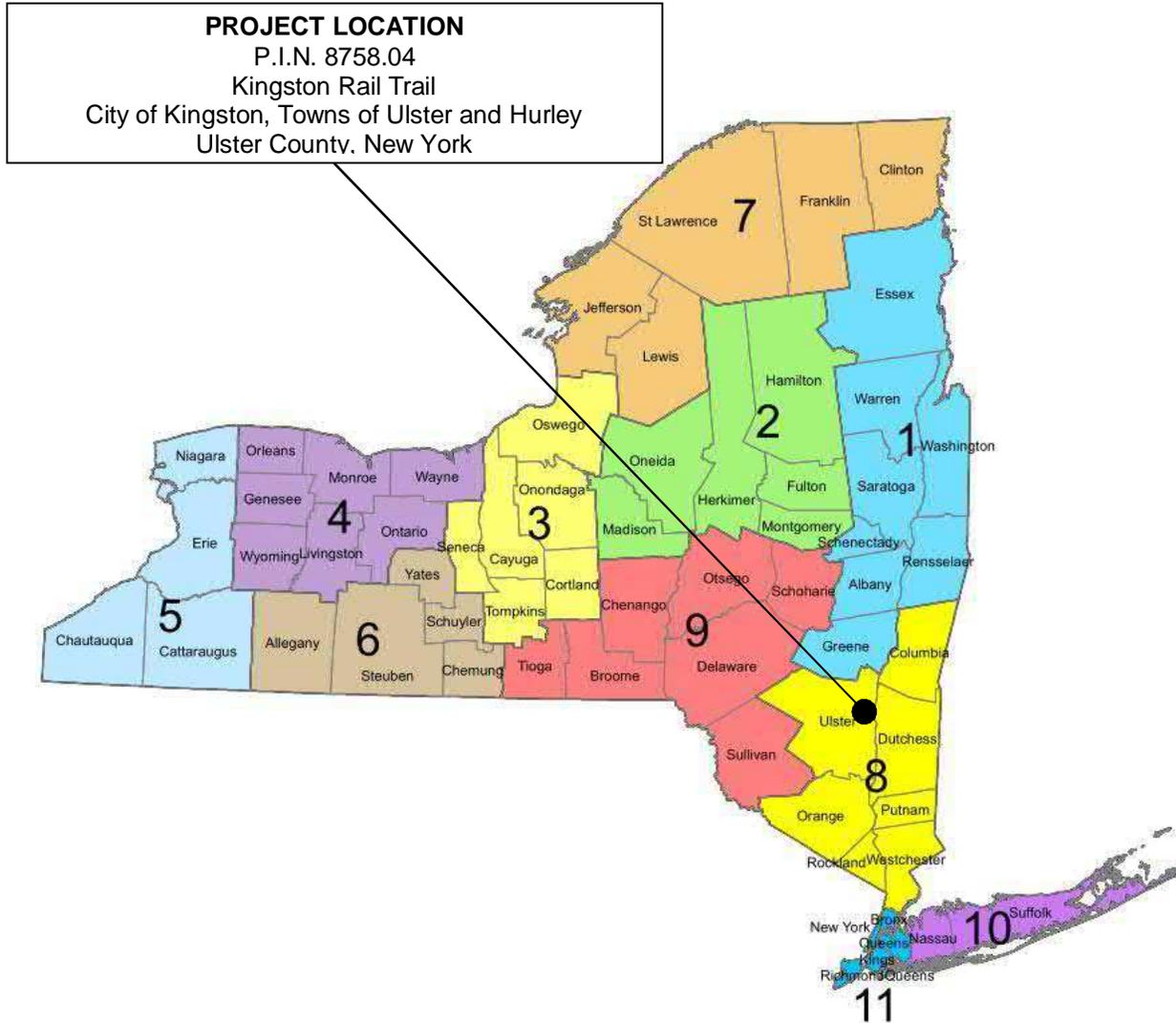


Figure 1 – New York State Map

PROJECT LOCATION
P.I.N. 8758.04
Kingston Rail Trail
City of Kingston, Towns of Ulster and Hurley
Ulster County, New York

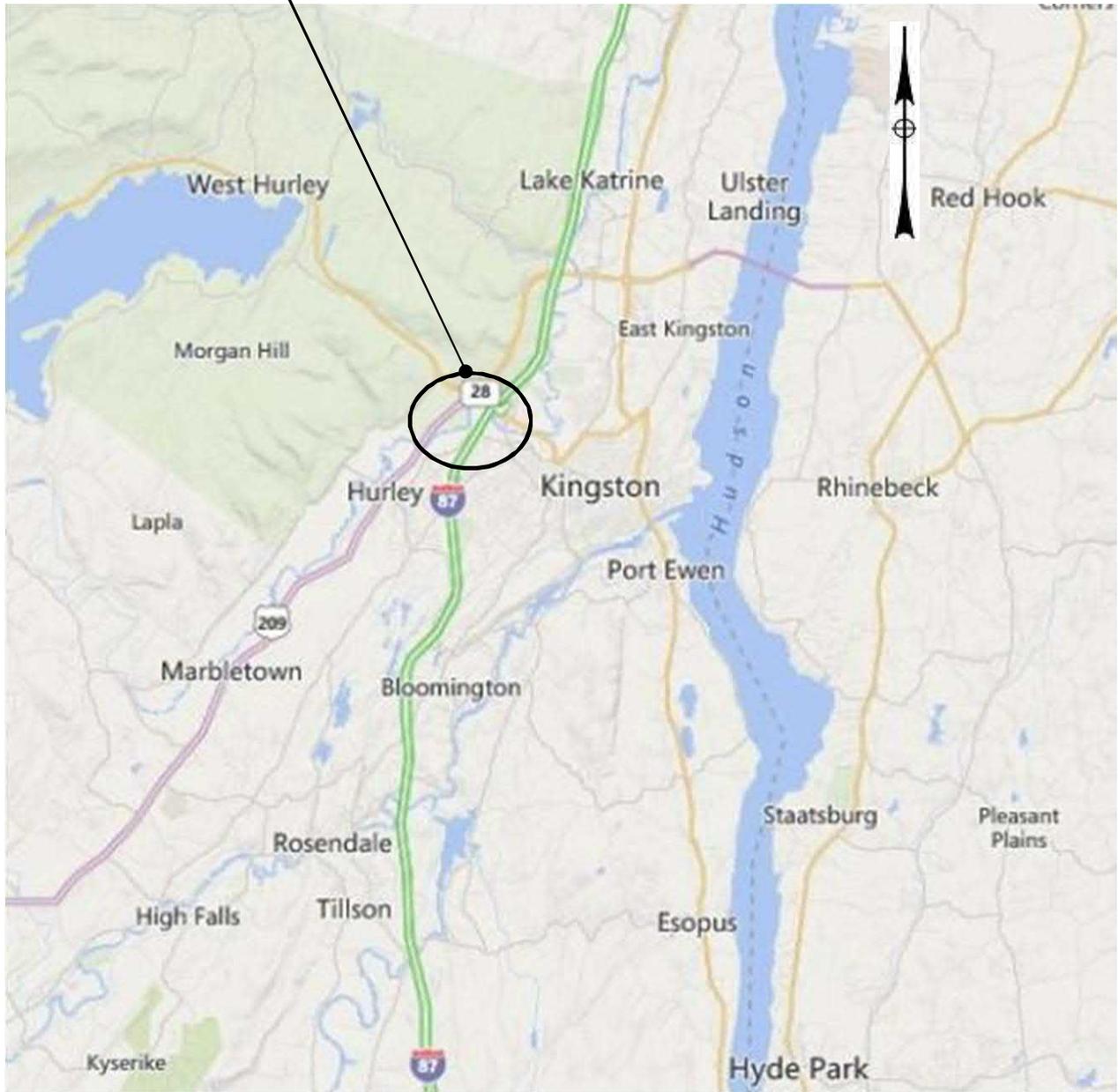


Figure 2 – Project Location Map

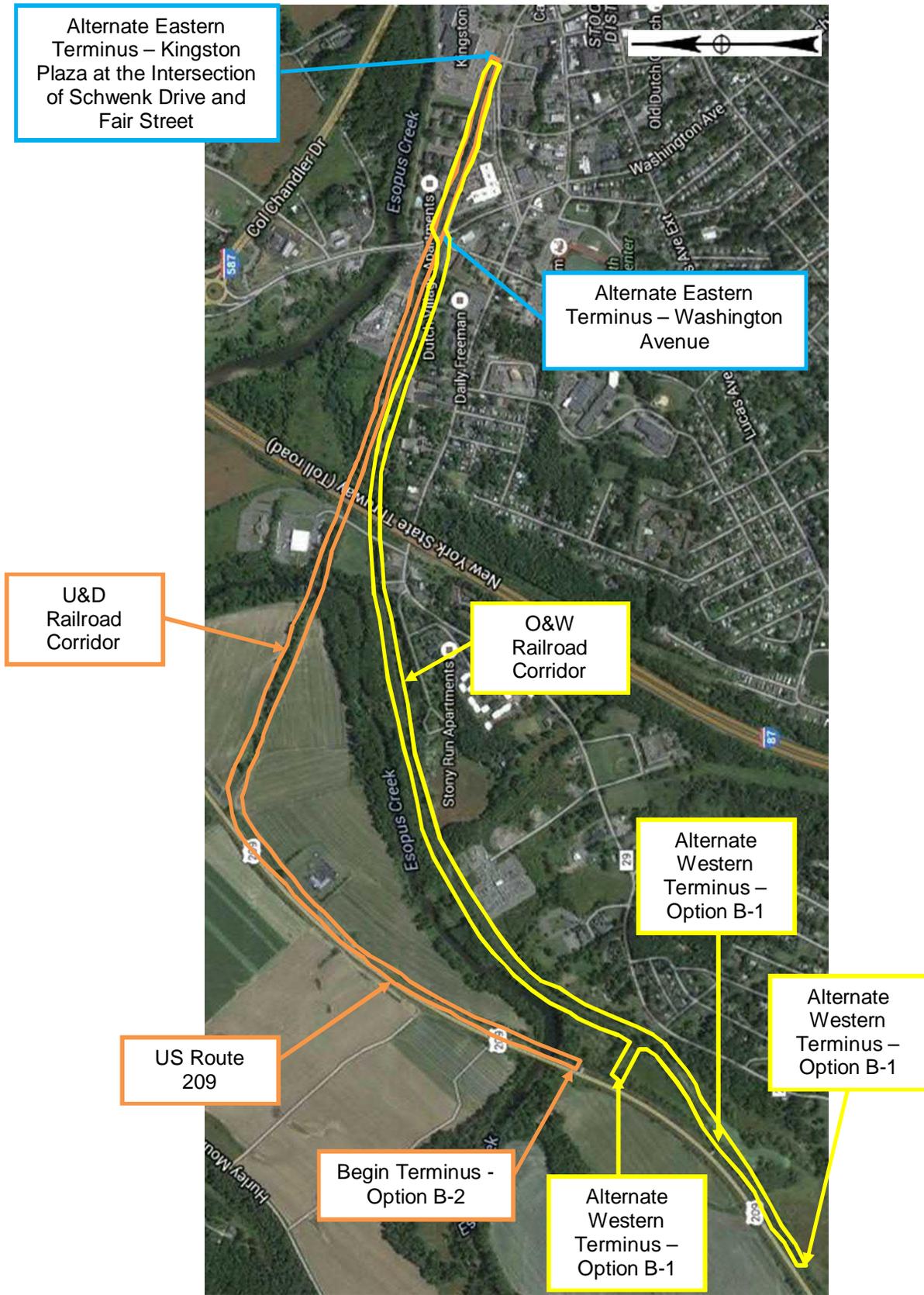


Figure 3 – Project Corridor Map

1.2.2. Why is the Project Needed?

The project will provide a critical non-motorized transportation link between the City of Kingston and the Towns of Hurley and Ulster that will allow City residents to directly access a key part of the County's growing multi-use trail network and O&W Rail Trail users safety access the City of Kingston. The project will link Kingston neighborhoods and businesses to the existing O&W Rail Trail (also known as the "Hurley Rail Trail" or "D&H Canal Heritage Corridor"), which currently extends approximately 13 miles from the Town of Hurley southwest through the Town of Marbletown and well into the Town of Rochester, where future additional trail links and extensions are being explored. The improved links and build-out of the O&W Rail Trail along the Route 209/ Rondout Creek corridor was identified in the 2008 *Ulster County Non-Motorized Transportation Plan* as a priority project. The project was recommended and placed on the County's Transportation Improvement Program (TIP) in 2010 and updated in 2014 and 2016.

The project will address the current lack of multi-modal friendly, dedicated non-motorized transportation alternatives for pedestrians or bicyclists to travel from the City of Kingston to the Town of Hurley and Route 209 Corridor and avoid the high speed and heavily trafficked roadways which link the municipalities and lack bicycle and pedestrian facilities.

In 2008, the Ulster County Transportation Council (UCTC) developed the *Non-Motorized Transportation Plan* in an effort to promote and advance a County-wide, sustainable non-motorized transportation system to "reduce fossil fuel consumption, enable freedom of mobility, encourage more physical activity, allow children to walk or bike to school, reduce traffic congestion, and create economic growth" through increased recreational tourism. The project is consistent with these identified *Non-Motorized Transportation Plan* goals and will advance efforts to link regional multi use trail segments and develop a seamless non-motorized transportation network throughout the County.

In 2015, UCTC adopted its *Year 2040 Long Range Transportation Plan* (LRTP) and gave extra attention to quality-of-life issues and non-motorized modes of transportation. The project is consistent with the LRTP in that it takes a step towards accomplishing the goals of the LRTP which include:

1. *Preserve existing transportation system while being adaptable to new, more efficient systems*
2. *Support the economic vitality of urbanized areas (City of Kingston)*
3. *Increase the safety and security of the transportation system for motorized and non-motorized users*
4. *Increase mobility and accessibility options*
5. *Enhance the integration and connectivity of the transportation system*
6. *Protect and enhance the environment, promote energy conservation, improve quality of life, promote consistency between transportation improvements*
7. *Promote efficient system management and operations*
8. *Maximize the utilization of federal aid programmed*

The project will utilize an abandoned railroad corridor to establish a safer off-road facility for pedestrians and bicyclists. In so doing, the project will help relieve traffic congestion, improve air quality, promote healthy lifestyles and active outdoor recreation, conserve energy, increase safety for pedestrians and bicyclists, support economic development and tourism, and encourage local spending by recreational users.

1.2.3. What are the Objectives/Purposes of the Project?

The primary objective of the project is to establish a safer off-road pedestrian and bicycle trail connecting the City of Kingston and the Towns of Hurley and Ulster. By doing so, the project will:

- Progress further towards a seamless non-motorized transportation network throughout Ulster County
- Provide safer, efficient, and accessible multi-modal connections to the schools, employers, businesses, and services in the City of Kingston and the Towns of Hurley and Ulster.
- Accomplish crossing the NYS Thruway/Interstate 87 ("I-87") for pedestrians and bicyclists
- Create a significant multi-use trail hub in the City of Kingston and support development of the "Kingston Greenline" network of trails and complete streets

1.3. What Alternative(s) Are Being Considered?

Three alternatives, including the null, are being considered for the project. The following is a summary of the alternatives considered:

- **Alternative A – No Build “Null”** – Under this alternative, no improvements to the existing corridors would take place, and pedestrians and bicyclists will have to find alternate routes to travel between the Town of Hurley and the City of Kingston. This alternative does not meet the identified project objectives and is not consistent with the vision of Ulster County; therefore, it is not considered feasible and is removed from any further project consideration.
- **Alternative B – Reconstruction** – This alternative would include the construction of a dedicated off-road multi-use trail with a surface material that would be fully accessible for all non-motorized users. Safety improvements in the form of signage and pavement striping would be installed at street crossings. Two (2) potential reconstruction options, B-1 and B-2, are proposed in accordance with the project’s design criteria. A brief discussion of each option is as follows:
 - **Dedicated Multi-Use Trail along O&W Railroad Corridor (Option B-1, O&W Corridor)**
– This alternative is proposed to follow the abandoned Ontario & Western (O&W) Railroad corridor for 1.8 miles from the existing O&W Rail Trail along US Route 209, through the existing I-87 underpass, to Washington Avenue (State Bicycle Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue. Right-of-Way (“ROW”) acquisitions and easements from Central Hudson Gas & Electric (“CHG&E”), Adirondack Transit Lines, and Ulster Savings Bank will be required as part of this option. East of Washington Avenue, extending the trail approximate 0.37 miles to Schwenk Drive and Fair Street was investigated where additional property investigations and encroachment issues would need to be resolved.
 - **Dedicated Multi-Use Trail along U&D Railroad Corridor (Option B-2, U&D Corridor / US Route 209 ROW)** – This alternative would begin at the existing O&W Rail Trail along US Route 209, cross the Esopus Creek via a new pedestrian bridge adjacent to the existing US Route 209 structure, and extend north approximately 0.77 miles along the east side of US Route 209 to the intersection of the county-owned Ulster & Delaware (U&D) Railroad corridor. This alternative would then extend approximately 1.0 mile east along the U&D Railroad corridor to Washington Avenue (State Bicycle Route 28). The existing U&D Railroad trestle bridge (C9 Bridge) over the Esopus Creek would need to be rehabilitated and adapted to accommodate bicyclists and pedestrians. Included in this option is a potential trailhead on the west side of Washington Avenue. East of Washington Avenue, extending the trail approximate 0.37 miles to Schwenk Drive and Fair Street was also investigated where additional property investigations and encroachment issues would need to be resolved. Along US Route 209, the trail would be located within the NYSDOT Right-Of-Way offset from the edge of the roadway pavement a minimum of ten (10) feet.

See **Chapter 3 – Alternatives** for an in-depth discussion and comparison of all alternatives.

1.4 How will the Alternative(s) Affect the Environment?

Exhibit 1.4-A Environmental Summary					
NEPA Classification	Class II C List CE	BY	FHWA	Date	
SEQR Type:	Unlisted Action	BY	Ulster County	Date	3/15/2016

Exhibit 1.4-B Environmental Comparison of Feasible Alternatives			
Category	Feasible Alternatives		
	Null (Alternative A)	Reconstruction (Alternative B)	
		Option B-1, O&W Corridor	Option B-2, U&D Corridor / US Route 209 ROW
Wetland impacts	None	Not Significant	Not Significant
100-year floodplain impact	None	Not Significant	Not Significant
Archeological Sites impacted	None	None	None
Section 106 / Section 4(f) impacts	None	None	None
Impact to forested areas	None	TBD w/ survey	TBD w/ survey
Noise Impacts	None	Temporary	Temporary
Property impacts	None	249,600 SF (5.73 Acres)	None
Construction Cost	None	\$1,689,000	\$5,391,000
Total Project Cost	None	\$2,124,000	\$6,391,000

Anticipated Permits, Certifications, and Coordination:

NYSDEC:

- Environmental Conservation Law-Stream Disturbance Permit, Article 15
- Water Quality Certification (Section 401)
- State Pollution Discharge Elimination System (SPDES)

NYSTA:

- Occupancy and Work Permit or Memorandum of Agreement

USACE:

- U.S. Army Corps of Engineers, Section 404 Nationwide Permit #3 - Maintenance Projects
- U.S. Army Corps of Engineers, Section 404 Nationwide Permit #14 – Linear Transportation Projects

Coordination with:

- Federal Highway Administration
- New York Natural Heritage Program
- New York State DOT Regional Design Bureau (Region 8)
- New York State DOT Local Projects Unit (Region 8)

1.5. What Are The Costs & Schedules?

Design Approval is anticipated for February 2017 with construction scheduled to start in May 2018. Based on the preferred alternative, as discussed in Chapter 3, construction duration will be approximately 5 months.

Exhibit 1.5-A Project Schedule	
Activity	Date Occurred/Tentative
Public Information Meeting	December 2015
Design Approval	February 2018
Right of Way Acquisition Authorized	March 2018
Letting	November 2019
Construction Begins	March 2019
Construction Completed	August 2019

EXHIBIT 1.5-B COMPARISON OF ALTERNATIVES CONSTRUCTION PROJECT COSTS		
ACTIVITIES	OPTION B-1, O&W	OPTION B-2, U&D
	O&W RAIL TRAIL TO WASH. AVE.	O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:		
CLEARING & GRUBBING:	\$ 50,000	\$ 25,000
EARTHWORK:	\$ 150,000	\$ 174,000
SUBBASE:	\$ 130,000	\$ 122,000
PAVEMENT:	\$ 230,000	\$ 210,000
GUIDERAIL & FENCE	\$ 110,000	\$ 358,000
DRAINAGE	\$ 150,000	\$ 20,000
LIGHTING	\$ 30,000	\$ 25,000
WORK ZONE TRAFFIC CONTROL:	\$ 20,000	\$ 50,000
EROSION CONTROL:	\$ 30,000	\$ 30,000
LANDSCAPE:	\$ 50,000	\$ 50,000
STRUCTURES	\$ 250,000	\$ 3,000,000
TRAILHEAD/PARKING LOT	\$ 80,000	\$ 80,000
SIDEWALK:	\$ 20,000	\$ 20,000
SUBTOTAL CONSTRUCTION ITEMS:	\$ 1,300,000	\$ 4,164,000
CONTINGENCY (15% @ DESIGN APPROVAL)	\$ 195,000	\$ 625,000
SUBTOTAL (2017 DOLLARS):	\$ 1,495,000	\$ 4,789,000
FIELD CHANGE ORDER (USE 5%)	\$ 75,000	\$ 240,000
SURVEY	\$ 30,000	\$ 90,000
MOBILIZATION (4%)	\$ 59,000	\$ 192,000
SUBTOTAL (2017 DOLLARS):	\$ 1,659,000	\$ 5,311,000
EXPECTED INFLATION AWARD AMOUNT (2018) +1.5%	\$ 30,000	\$ 80,000
TOTAL PROJECT CONSTRUCTION COSTS (2018 DOLLARS):	\$ 1,689,000	\$ 5,391,000
ENGINEERING	\$ 220,000	\$ 500,000
CONSTRUCTION INSPECTION & ADMINISTRATION	\$ 130,000	\$ 500,000
ROW INCIDENTALS AND ACQUISITIONS	\$ 85,000	\$ -
TOTAL COSTS:	\$ 2,124,000	\$ 6,391,000

1.6. Which Alternative is Preferred?

Based on the investigations, discussion herein, official and public input, and consideration of the social, economic and environmental impacts, the alternative that best meets the project objectives is Alternative B – Reconstruction utilizing Option B-1, O&W Railroad corridor terminating at Washington Avenue. This alternative was selected based on multiple factors, including relative cost, trail usability, project feasibility, and public input.

The “Null” or No-Build alternative (Alternative A) was dismissed as this option does not satisfy the project objectives.

Two different reconstruction options for Alternative B were investigated (Options B-1 and B-2) and presented at the Stakeholder Meeting as well as the Public Informational Meeting (PIM).

General Alternative Comparison

Option B-1, O&W	Option B-2, U&D/Route 209
<ul style="list-style-type: none"> • No Esopus Creek Crossing 	<ul style="list-style-type: none"> • Requires 2 Esopus Creek Crossings
<ul style="list-style-type: none"> • Meets Project Schedule 	<ul style="list-style-type: none"> • Schedule Delays of Two to three years expected due to Esopus Creek Crossings
<ul style="list-style-type: none"> • Acquisitions/Easements Required 	<ul style="list-style-type: none"> • No Property Acquisitions
<ul style="list-style-type: none"> • Minor Wetland Impacts 	<ul style="list-style-type: none"> • Minor Wetland Impacts
<ul style="list-style-type: none"> • No Effect on Historic Properties 	<ul style="list-style-type: none"> • No Effect on Historic Properties
<ul style="list-style-type: none"> • Coordination with CHG&E for its Project in the Corridor 	<ul style="list-style-type: none"> • Requires Permits from NYSDOT
<p>Estimated Total Project Cost = \$2,124,000</p>	<p>Estimated Total Project Cost = \$6,391,000</p>

The preferred B-1 Reconstruction option was selected based on the discussions at these meetings and the social, economic, and environmental impact assessments and investigations performed during the preliminary design process. Based on these preliminary design investigations, construction costs, and discussions at the Stakeholder meeting and the PIM, the most feasible alternative was identified as Option B-1, O&W Corridor. Please also refer to Chapters 3, 4, and 5 where more detailed discussions on the project are located.

In Summary, Option B-1 is the preferred option since it:

- Meets the project objectives, proposed budget, and schedule
- Utilizes an unimproved abandoned railroad corridor currently informally used by walkers, runners, and bicyclists
- Has logical access points and links to existing multi-use trail
- Is not overly complicated from an engineering and construction perspective
- Offers the most direct route from the City of Kingston to the O&W Rail Trail

1.7. Who Will Decide Which Alternative Will Be Selected And How Can I Be Involved In The Decision?

This project will involve ongoing correspondence with all of the following:

- Applicable State and federal agencies (e.g., NYSDOT, NYSDEC, ACOE, SHPO, NHP, FHWA)
- Local elected officials
- Local property owners
- Emergency services
- Schools

Exhibit 1.7 Public Involvement Plan Schedule of Milestone Dates	
Activity	Date Occurred/Tentative
Project Stakeholder Meeting	October 13, 2015
Public Information Meeting	December 8, 2015

One (1) Stakeholder Meeting occurred on October 13, 2015. The meeting was held to present the possible alternatives proposed for the Kingston Rail Trail to the stakeholders and address any and all suggestions and concerns about the project to Ulster County representatives. The majority of the meeting focused on Option B-1, O&W Corridor since that was the alignment that affected the stakeholders present at the meeting. The stakeholders were not opposed to the project so long as their rights as property owners were not infringed upon. CHG&E stated that they are in the early stages of plan development for rebuilding its transmission facilities along the O&W Corridor, north of the substation. Coordination with CHG&E is ongoing to ensure both projects are technically feasible, compatible, and will not result in re-work as a result of construction operations. All information and sign-in sheets from the meeting are located in Appendix G.

One (1) Public Informational Meeting (PIM) was held on December 8, 2015. At the PIM, residents, stakeholders, and business owners were able to learn about the alignment options and express their opinions, suggestions, and concerns about the project to Ulster County representatives. Each alternative and corresponding options were discussed and the preferred, most feasible option was identified as the O&W Route (Alternative B-1). One aspect of the project that drove marked conversation was the eastern terminus location at Washington Avenue. The public was concerned about trail users crossing Washington Avenue without some type of traffic control device for assistance. As a result of the dialogue and discussions between County officials, crossing options are being investigated as part of the project. There were no written comments received from any participants as a result of the December PIM. All information and sign-in sheets from the meeting are located in Appendix G.

- Public comments were solicited and requested to be sent to:

Mr. Christopher White, Deputy Director of Planning
PIN 8758.04
Telephone: (845) 340-3338
Email: cw@co.ulster.ny.us

Mailing Address:
Ulster County Planning Department
244 Fair Street, PO Box 1800
Kingston, New York 12402

The remainder of this report is a detailed technical evaluation of the existing conditions, the proposed alternatives, the impacts of the alternatives, copies of technical reports and plans and other supporting information.

CHAPTER 2 - PROJECT CONTEXT: HISTORY, TRANSPORTATION PLANS, CONDITIONS AND NEEDS

This chapter addresses the history and current status of the project site, including the existing conditions, deficiencies, and needs for the proposed trail corridor.

2.1. Project History – The project was highlighted in Ulster County's 2008 Non-Motorized Transportation Plan ("NMTP"), which was prepared by the Ulster County Transportation Council. During the public input and consideration of NMTP goals and projects, the link between the O&W Rail Trail (also known as the "Hurley Rail Trail" or "D&H Canal Heritage Corridor") to the City of Kingston was identified as a priority project which served to advance Ulster County's development of an interconnected, seamless multi-use trail network for pedestrians and bicyclists.

The project was included on the State Transportation Improvement Plan ("STIP") in 2010 at which time the County released an RFQ for engineering design. After selecting an engineering firm, the County was unable to negotiate a fee for the design and ROW services within the existing STIP budget. The project did not advance, and design was delayed pending additional funding.

In 2014, Ulster County amended the STIP to add additional funding to the project in order to move forward, and selected an engineering consultant to work with the County on evaluation of two potential alternative routes after releasing another RFQ for an engineering consultant.. The TIP was further updated in 2016 to reflect increased estimates for construction.

2.2. Transportation Plans and Land Use

2.2.1. Local Plans for the Project Area – A three-story, 65,145 square foot senior housing development with 58 units is proposed currently in the project area just east of I-87. A roadway to access the proposed development will need cross both the former O&W ROW and the U&D ROW. This roadway would affect both trail options. The housing development also proposes to utilize the O&W ROW for an emergency access road connecting the development to Washington Avenue. This emergency access road is to be donated to the County of Ulster upon authorization of right-of-way acquisition and would be available for trail use except during emergencies. The emergency access road would affect Option B-1. The housing project applicants are aware of the trail proposal as is the City of Kingston Planning Board. Final approvals have not yet been granted. In addition to the senior housing proposal, CHG&E, the local utility, is proposing to rebuild a portion of the circuits that occupy the O&W ROW where it currently has fee ownership. This re-construction is under the jurisdiction of the NYS Public Service Commission. This re-construction has the potential to impact Option B-1 of the trail project. CHG&E is aware of trail project.

2.2.1.1. Local Master Plan – Ulster County's Year 2040 Long Range Transportation Plan's goals and objectives include the following:

- System preservation
- Economic vitality
- Safety
- Security
- Mobility & Reliability
- Accessibility & Connectivity
- Protect & enhance the environment

This project will help to meet these objectives and is consistent with the Ulster County's Long Range Transportation Plan.

In addition to the Long Range Transportation Plan, Ulster County's Non-Motorized Transportation Plan (2008) strives to establish a "multiuse trail system that would be comparable to an interstate highway system for bicyclists and pedestrians countywide and connecting to adjacent counties." The three goals of the Non-Motorized Transportation Plan are: "Build a connected non-motorized transportation system in Ulster

County, increase the number of people walking and bicycling for transportation and recreation in Ulster County, and ensure public perception that Ulster County is making facilities and programs available for safer bicycling, walking, and trails.” This project will help to achieve the goals of the Non-Motorized Transportation Plan.

2.2.1.2. Local Private Development Plans – At this time, there are no known local private development plans within the project area.

2.2.2. Transportation Corridor

2.2.2.1. Importance of the Project Route Segment –

O&W Corridor: The proposed rail trail along the O&W Railroad corridor, from the existing to the O&W Rail Trail on US Route 209 to Washington, would provide a connection between the City of Kingston and the Towns of Hurley and Ulster, thus meeting one of Ulster County’s goals laid out in the Long Range Transportation Plan (LRTP). Additionally, the project segment would be constructed on the previously disturbed existing railroad ballast, thus preserving existing transportation systems and meeting another goal in Ulster County’s LRTP.

U&D Corridor / US Route 209 ROW: The proposed rail trail along US Route 209 and the U&D Railroad corridor, from the existing O&W Rail Trail to either Washington Avenue or extending to Kingston Plaza the intersection of Schwenk Drive and Fair Street, would provide a connection between the City of Kingston and the Towns of Hurley and Ulster as well as utilize former transportation ROW and related infrastructure.

Both options would either connect to the existing sidewalk system at Washington Avenue or Kingston Plaza, thus providing a logical terminus location and allowing for the potential connection between the City of Kingston and future trail development.

2.2.2.2. Alternate Routes – There are no reasonable or feasible alternate routes to the two corridors being studied.

2.2.2.3. Corridor Deficiencies and Needs – The conditions of the O&W Railroad corridor as well as U&D Railroad corridor, in the project area were examined by field inspections on May 1, 2015. The existing railroad corridors would be fully accessible and fairly level, as well as provide a scenic trail route through the City of Kingston, the Town of Ulster, and the Town of Hurley.

To help identify key areas and major features along the corridors, a horizontal alignment has been established along the centerline of both proposed alternatives. Refer to Figure 3 for a location map of the project corridor.

O&W Corridor

The proposed O&W Corridor alignment will encroach on properties owned CHG&E and Ulster Savings Bank. The existing narrow grass path between the O&W Rail Trail parking lot and the I-87 underpass runs adjacent a series of utility poles. The project team has met with CHG&E and the designs of this project are continuously communicated to them to ensure adaptability and to ensure the construction of this trail results in no impacts to their power systems and access for maintenance. Adjacent to the I-87 underpass, the trail will cross a private commercial driveway, which will require signage and pavement markings. It is not expected that pedestrian crossing signals would be required at this location although cautionary signage will be installed.



Existing O&W Corridor (facing east)

Beyond the I-87 underpass, the alignment proceeds onto Ulster Savings Bank's ROW. The narrow grassed path between the underpass and Washington Avenue is heavily vegetated and runs adjacent to wetland areas.



Large wetland adjacent to the O&W Corridor (facing east)



Existing narrow path along O&W Corridor (facing west)

Trail Needs:

The proposed segment, when completed, would provide a continuous regional trail system connecting the City of Kingston to the O&W Rail Trail, which links to the Towns of Hurley, Marletown and Rochester. The trail would contribute to Ulster County's goal of creating a seamless, interconnected non-motorized trail network throughout the county with multiple points of connectivity. The proposed trail width, under either option will need to be a minimum of ten (10) feet in width and of a durable and fully accessible surface. (See Appendix A for typical sections).

Surface Needs:

The proposed multi-use trail needs to be ADA compliant and fully accessible and available for all modes of non-motorized transportation. In order to provide continuity within the O&W Rail Trail, the surface treatment of the proposed trail should match the adjacent and abutting systems. It is likely that asphalt concrete pavement will be the surface of choice as it will be consistent with the abutting trail network. (See Appendix A for trail typical sections).

Bridge and Road Crossing Needs:

The proposed O&W alignment would require improvements to minor bridges already existing along the corridor. There are two (2) steel and timber structures used for maintenance vehicle access, with stone abutments located along the preferred alignment. Rehabilitation of the structures is necessary and the extent of rehabilitation will be detailed during Final Design.

The trail will need to pass under I-87 through the existing underpass at Milepost 90.64. There is no work expected to be required on the I-87 underpass.



Steel and Timber Bridge along the O&W Corridor

The proposed option will require a mid-block crossing at a private road, adjacent to the I-87 underpass. The crossing will include signage and pavement markings to provide a clearly defined crossing and high visibility to motorists. A road crossing at Washington Avenue to connect the trail to the existing sidewalk system on the east side of Washington Ave is available at Schwenk Drive. This discussion is included in Chapter 3.

Drainage Needs:

The major drainage needs are primarily in low lying portions of the corridor where over time sheet flow into these areas has developed into rills and concentrated flow causing erosion and movement of soil. There are areas that stormwater from adjacent parcels are improperly draining onto the ROW as well. There are cross culverts along the O&W Corridor east of the substation that are deteriorated and partially collapsed. There is a large box culvert with signs of erosion and scour at the outlet. Each structure will be assessed to determine if rehabilitation or replacement is necessary during the design process and the appropriate permit obtained (if required). It is not expected that the existing substructures will require replacement. Drainage paths and established conveyance of stormwater runoff that currently exists within the rail bed corridor will be maintained as feasible. Improved outfall conditions and erosion protection and other best management practices will be implemented to collect and divert water to designed outfalls.



Outlet of large box culvert along O&W Corridor



Trail washout along O&W Corridor near substation

Parking/Information System Needs:

Signage and interpretive information, including maps and trail safety rules, would be needed for the proposed trail segment to maintain the continuity of the trail system and the destinations it links. Ulster County is utilizing the existing O&W Rail Trail parking lot as a key parking area and trail entry node at the western terminus. Additional trailhead parking will be developed at Washington Avenue and parking amenities and orientation signage will be needed.

Landscape Needs:

Clearing of some existing shrubs and selective removal of trees would be required in order to provide adequate vertical and horizontal clearance for the trail, and provide viewsheds at optimal locations and sight distance at road and driveway crossings. Parking lot landscaping will be needed for delineation and managed parking at the trailheads.

U&D Corridor / US Route 209 ROW

The U&D Corridor alternative would begin at the existing O&W Rail Trail parking lot adjacent to US Route 209 and would cross the Esopus Creek via a new pedestrian structure adjacent to US Route 209.

From the Esopus Creek, the trail would proceed north, parallel to US Route 209 along the east side within the highway ROW, to the intersection of the U&D Railroad corridor after crossing the existing driveway for the New York State Police Kingston barracks. This section is flat and free of vegetation with enough right-of-way width to provide at least 25 feet of offset from Route 209. The trail would then proceed east along the existing U&D Railroad corridor toward Kingston. This area is relatively level but the existing railroad ballast is elevated and narrow as it was constructed as a single-track corridor. The multi-use trail would be constructed on the elevated ballast and across the C9 Railroad Trestle bridge.



Intersection of U&D Railroad and US Route 209 (facing west)



U&D Railroad (facing east)

Trail Needs:

This alternative would provide a continuous regional trail system connecting the City of Kingston to the Towns of Hurley, Marletown, and Rochester meeting Ulster County's goal of creating a seamless non-motorized trail network throughout the county. The City of Kingston's Greenline Project and future County trail development will also help to further link this project with other County rail trails.

Surface Needs:

The proposed multi-use trail needs to be ADA compliant and fully accessible for all modes of non-motorized transportation. In order to provide continuity within the O&W Rail Trail, the surface treatment of the proposed multi-use trail needs to match the asphalt pavement construction of the existing abutting trail segment (See Appendix A for trail typical sections).

Bridge and Road Crossing Needs:

In order to create a continuous multi-use route, the trail would need to cross the Esopus Creek in two (2) locations and pass under I-87 through the existing underpass at Milepost 90.68. A new pedestrian/bicycle structure spanning approximately 280 feet in length would be required adjacent to the existing structure which carries US Route 209 over the Esopus Creek.

B&L structural engineers have investigated adding an additional lane to the existing US Route 209 bridge by widening it to the east. Review of the original construction plans and bridge inspection records have determined that due to the existing bridge superstructure configuration and construction, adding an additional lane or attaching to the outside (eastern side) bridge girder is not structurally feasible without substantial and expensive modifications. Therefore, a separate independent structure would be required to cross the Esopus Creek.

The existing U&D Railroad bridge (also known as the C9 Bridge) would need to be rehabilitated and adapted in order for the multi-use trail to cross the Esopus Creek a second time. This 3-span, truss structure extends approximately 300 feet. Additionally, depending on which eastern terminus is the most feasible, the proposed route may cross Washington Avenue and terminate at the existing sidewalk system on the east side of Washington Avenue or extend to Kingston Plaza. A discussion on the extension to Kingston Plaza is included in Chapter 3.



Existing U&D Railroad Bridge (facing east)



Proposed location of new pedestrian bridge (facing north)

Drainage Needs:

There are no noticeable drainage needs such as the mitigation of washouts or significant erosion taking place along the U&D Corridor. Improved stormwater outfall conditions, erosion protection, slope stabilization, and other best management practices would be implemented to collect and convey stormwater along the existing swales and to sheet flow conditions.

Parking/Information System Needs:

Signage and interpretive information, including maps and safety suggestions/rules, would be needed for the proposed trail segment to maintain the continuity of the trail system and the destinations it links. The existing O&W Rail Trail parking lot would be a key parking area and trail entry node at the western terminus. Additional trailhead parking would be developed at either Washington Avenue or Kingston Plaza, depending on which alternate terminus is selected. Parking amenities and orientation signage would also be needed.



Possible location for trailhead parking along Wash. Ave.

Landscape Needs:

Clearing of minor amounts of vegetation, including scrub-brush and trees, would be required to provide adequate clearance to the trail, develop viewsheds at scenic locations, and provide improved sight distance at road and driveway crossings.

2.2.2.4. Transportation Plans – This project is on the approved 2017-2020 NYSDOT Statewide Transportation Improvement Program (STIP).

2.2.2.5. Abutting Trail Segments and Future Plans for Abutting Trail Segments -

Option B-1, (O&W Corridor) and Option B-2, (U&D Corridor) at the western terminus would connect to the existing O&W Rail Trail, a 10 ft. wide asphalt paved trail, which extends from the Esopus Creek at the Hurley town limit to the O&W Rail Trail in the Towns of Marletown and Rochester. The western terminus will also provide access to the existing O&W Rail Trail parking lot on US Route 209. There are three (3) potential links to the O&W trail at the western terminus. These are discussed in Chapter 3.

The project objective for the eastern terminus of the project is to extend to at least Washington Avenue (State Bicycle Route 28) with an alternative connection extending to the Kingston Plaza. Extension of the trail to the Kingston Plaza would provide connectivity with the Kingston Greenline and other County trails, including the future Ulster County Rail Trail Project, also known as the "Kingston Midtown Linear Park." As the proposed project is progressed through the preliminary design process, the eastern terminus will be determined based on many factors as discussed in Chapter 3. Under Option B-1, the O&W Corridor may terminate at the intersection with Washington Avenue or cross Washington Avenue via a traffic control device and connect to the sidewalk system on the east side of Washington Avenue or extend across Washington Avenue, follow the U&D Corridor and connect to the sidewalk system and existing public parking areas at Kingston Plaza. Under Option B-2, the U&D Corridor would extend from US Route 209 to Kingston Plaza. Crossing Washington Avenue is included in each option at the intersection of Schwenk Drive and Washington Ave.

2.3. Transportation Conditions, Deficiencies and Engineering Considerations

2.3.1. Traffic and Safety Operations and Maintenance Operations

2.3.1.1. Functional Classification and National Highway System (NHS) –

Exhibit 2.3.1.1 Classification Data		
Route(s)	US Route 209	Washington Avenue
Functional Classification	Urban Principal Arterial	Urban Minor Arterial
National Highway System (NHS)	Yes	Yes
Designated Truck Access Route	Yes	Yes
Qualifying Highway	Yes	Yes
Within 1.0 mile of a Qualifying Highway	Yes	Yes
Within the 16 ft. vertical clearance network	No	No

2.3.1.2. Control of Access – US Route 209 and Washington Avenue within the project limits are not access controlled.

O&W Corridor is an abandoned railroad corridor that is not developed and can be accessed without restriction at the western terminus, private properties, the private road for Adirondack Trailways, and Washington Avenue.

U&D Corridor / US Route 209 ROW will proceed north, parallel to US Route 209, and then proceed east along the county-owned U&D Corridor. The entire project corridor can be accessed, without restriction, at US Route 209, the private road for Adirondack Transit Lines, Washington Avenue, and at Kingston Plaza.

2.3.1.3. Traffic Control Devices –

O&W Corridor: There are no traffic control devices within the corridor limits.

U&D Corridor / US Route 209 ROW: There are rail crossing signs located on US Route 209, the private commercial driveway adjacent to I-87, and on Washington Avenue. The rail crossing signs on US Route 209 are equipped with beacons where the U&D Railroad crosses.

2.3.1.4. Intelligent Transportation Systems (ITS) – There are no ITS systems in operation or planned for the project area.

2.3.1.5. Speeds and Delay – Existing speed and delay data was not collected for this project as the proposed Kingston Rail Trail is located on an abandoned railroad bed and is isolated from vehicular traffic. There are no on-road segments proposed for any phase of this project.

There are two (2) roadways located within the project limits. The speed limit for US Route 209, located near the western terminus for both options, is posted at 55 mph. The posted speed limit for Washington Avenue, located at the eastern terminus and proposed trailhead, is 30 mph.

2.3.1.6. Traffic Volumes – Traffic data was not collected for this project because the proposed option will be constructed along a railroad bed and, with the exception of at-grade road crossings, is isolated from vehicular traffic. There are no on-road segments proposed for this project.

2.3.1.6.(1) Existing traffic volumes –

Ulster County compiled the traffic data from the NYSDOT Traffic Data Viewer and provided the existing traffic volumes for the project area. The data for Washington Avenue was collected in July of 2010 and the study area was between the intersection of Washington Avenue and Hurley Avenue and the Town of Ulster limit. The information indicates an existing AADT of 22,010 vehicles (2010).

Traffic data was also collected for US Route 209 in December of 2012. The study area was from Wynkoop Road to Route 28. The data indicates an existing two-way AADT of 13,789 vehicles.

A check of the NYSDOT Traffic Data Viewer for Schwenk Drive indicates an existing two-way AADT of 11,850 vehicles. The study was conducted in April of 2013 and the study area for Schwenk Drive is between Washington Avenue and Clinton Avenue.

See Appendix C for traffic data information.

2.3.1.6.(2) Future no-build design year traffic volume forecasts – Not applicable

2.3.1.7. Level of Service and Mobility – Not applicable

2.3.1.8. Safety Considerations, Crash History and Analysis – A significant concern expressed at the PIM was providing a dedicated crossing at the eastern terminus at Washington Avenue. To address the concern, a fully actuated standard traffic signal at the intersection of Washington Avenue and the entrances to the Super 8 Hotel and Ulster Savings Bank was considered. This intersection location, adjacent to the proposed parking area and trailhead, provides the opportunity to connect the new trail to the existing sidewalks along the east side of Washington Ave. The traffic signal would control all four vehicular approach legs, including crosswalks, pedestrian signal heads, and countdown timers, to provide dedicated signal phases for all pedestrian and vehicular movements through the intersection. Upon further review, the proposed traffic and pedestrian signals have been removed from consideration at the Washington Ave and Ulster Savings Bank Driveway due to the close proximity of the Washington Ave and Schwenk Drive traffic signal (approximately 700 ft.), required lane modifications to Washington Ave, and the associated costs involved with the installation of the traffic signal.

Accident history was requested for the roadway segments within the project area. According to the accident data, there were approximately 100 accidents adjacent to the project area within the 3-year period between October 2011 and February 2015. Of those accidents, there were two (2) accidents that were related to pedestrians and zero (0) accidents related to roadway geometry. The majority of vehicular accidents was caused by left turn, right turn, right angle, overtaking, rear end, head on, and sideswipe collisions. The accidents involving pedestrians occurred because the pedestrian was attempting to cross the street at a location other than an intersection. Although an accident analysis was not performed, it is apparent that there were no accidents that would have the potential to create problems for future pedestrians and bicyclists.

2.3.1.9. Existing Police, Fire Protection, and Ambulance Access – The City of Kingston is serviced by the Mobile Life Support Services, City of Kingston Fire & Rescue Services, the Kingston Police Department, the Ulster County Sheriff's Office, and the New York State Police.

The Town of Ulster is serviced by the Town of Ulster Police Department, the Ulster County Sheriff's Office, the New York State Police, the Bloomington Fire Department, the East Kingston Fire Department, the Ruby Fire Department, the Spring Lake Fire Department, and Ulster Hose #5.

The Town of Hurley is serviced by the Hurley Fire Department, the West Hurley Fire Department, Ulster County Sheriff's Office, and the New York State Police. There are currently no specific restrictions on police, fire, and ambulance access on the roadways in the project area.

2.3.1.10. Parking Regulations and Parking Related Conditions – Parking is not permitted along US Route 209 or Washington Avenue within the project corridor.

The western terminus for the project will tie into the existing O&W Rail Trail where a parking lot of approximately 20 spaces is located on US Route 209 adjacent to the Esopus Creek.

2.3.1.11. Lighting – Lighting does not exist within the existing O&W Corridor or U&D Corridor. There is no lighting along US Route 209, but street lights are located along Washington Avenue and Schwenk Drive.

2.3.1.12. Ownership and Maintenance Jurisdiction – See Appendix D for table of Maintenance Jurisdiction.

2.3.2. Multimodal

2.3.2.1. Pedestrians – There are no existing accommodations for pedestrians throughout the project area. Pedestrians may utilize various on-street routes within the project area, providing connections to surrounding communities, landmarks, parks, schools, and other multi-use trails.

2.3.2.2. Bicyclists – Bicyclists may utilize various on-street routes throughout the project area, providing connections to surrounding communities, landmarks, parks, schools, and other multi-use trails. Washington Avenue is designated as State Bicycle Route 28, and the proposed project will provide a connection between the O&W Rail Trail, along US Route 209, and Washington Avenue.

2.3.2.3. Transit – The Ulster County Area Transit (UCAT) operates the Kingston to Ellenville route, utilizing US Route 209 which connects Ellenville, Kerhonkson, Hurley, and Kingston. Adirondack Transit Lines is a private transit operator which provides service along the Washington Avenue corridor.

2.3.2.4. Airports, Railroad Stations, and Ports –

O&W Corridor: This corridor is an abandoned railroad bed and has not been in service since 1957 when a bankruptcy judge ordered liquidation and the railroad was shut down. There are no existing railroad crossings or connections to operational rail lines.

U&D Corridor / US Route 209 ROW: This abandoned railroad corridor is owned by Ulster County and has not run freight or regular passenger service in more than four decades. The corridor is currently permitted for use to a private, tourism railroad operator, which, during certain weekends, runs tourist passenger trains from Kingston Plaza to the Town of Ulster.

There are no airports or port entrances within the project limits.

2.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, State Lands) – The proposed western terminus of both the O&W and the U&D Corridors is a connection with the existing O&W Rail Trail along US Route 209.



O&W Rail Trail parking lot (South along US Route 209)

There are two options for the eastern terminus. The first extends from Washington Avenue to Kingston Plaza, at the intersection of Schwenk Drive and Fair Street, and the second terminates at Washington Avenue. Both termini include a potential trailhead near Kingston Plaza or on the west side of Washington Avenue under the two options respectively.

2.3.3. Infrastructure

2.3.3.1. Existing Highway and Trail Section

2.3.3.1.(1) Right-of-Way (ROW) –

- (a) O&W Corridor – Since the abandonment of the Railroad, the O&W Corridor was sold to private landowners and, as a result, the available ROW width is not consistent throughout the project limits. Central Hudson Gas & Electric owns the portion of the O&W between the O&W Rail Trail and the I-87 underpass. Impacts to landowners adjacent to the existing O&W Corridor, such as Adirondack Transit Lines, will be minimized as much as feasible. Ulster Savings Bank owns the portion of the O&W between the I-87 underpass and Washington Avenue.
- (b) U&D Corridor / US Route 209 ROW – the U&D Railroad corridor is owned by Ulster County and is permitted for use by a private, part-time tourism railroad operator. US Route 209 is owned and maintained by NYSDOT.

2.3.3.1.(2) Lanes and Shoulders –

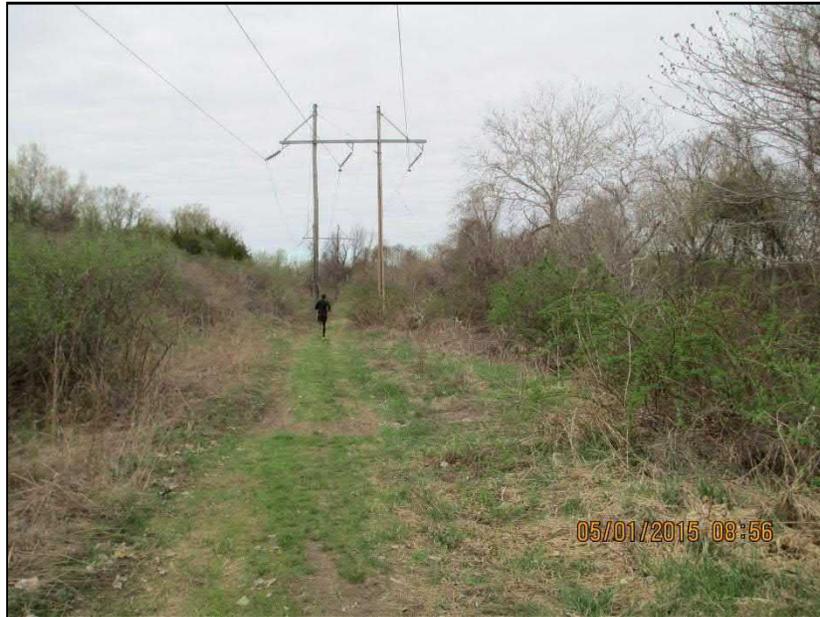
- (a) Trail Corridor – There are no existing defined lanes or shoulders along the unpaved O&W or U&D Railroad corridors. The existing O&W Railroad corridor is currently used and maintained as an informal trail for walkers, joggers, and mountain bikers. The underlying land owners have allowed public access along the unimproved corridor.
- (b) US Route 209 consists of two (2) 12 ft. lanes with 10 ft. shoulders.
- (c) Washington Avenue consists of four (4) 12 ft. lanes with a 6 ft. shoulder on the west side and 1 ft. shoulder with curb on the east side.

2.3.3.1.(3) Curbed/Uncurbed – There is no existing curbing along either potential trail corridors. The only location where there is existing curbing within the project limits is along the east side of Washington Avenue.

2.3.3.1.(4) Median – No medians exist within the project limits.

2.3.3.1.(5) Grades and Curves –

O&W Corridor: The trail corridor is located on an abandoned railroad and the grades are fairly level with gradual horizontal curves. Over time, the existing corridor has received little to no surface repairs which have resulted in minor undulations. There are no existing non-standard trail grades or curves within the project limits.



Approximate grade along existing O&W Corridor

U&D Corridor / US Route 209 ROW: This corridor is located adjacent to US Route 209 and proceeds on an existing rail bed. The grades are fairly level with gradual horizontal curves. There are no existing non-standard trail grades or curves within the project limits.



Horizontal curve and approximate grade along existing U&D Corridor

In situations where grades exceed 5.0% for short sections, the following grade and distance restrictions will be utilized:

- 5-6% for up to 800 ft.
- 7% for up to 400 ft.
- 8% for up to 300 ft.
- 9% for up to 200 ft.
- 10% for up to 100 ft.
- 11+% for up to 50 ft.

Additional discussions on these two options are in Section 3.3.3.1.(5).

2.3.3.1.(6) Intersection Geometry and Conditions - There are no existing trail intersections within the project limits. However, there are two (2) locations where the proposed trail alignments cross existing vehicular roadways. Both the O&W and U&D Corridors cross the private roadway for the Adirondack Transit Lines/ Pointe of Praise Church and Washington Avenue. Traffic volumes on the private roadway are very low and sight distance is adequate based on the project's design criteria.

The grade of the existing terrain at the intersection with Washington Avenue is fairly level and, therefore, sight distance is adequate. Washington Avenue is a heavily trafficked (AADT > 22,000 vehicles), four-lane, urban minor arterial roadway. A discussion about different traffic control devices to assist potential trail users with crossing Washington Avenue is included in the Section 3.3.1.3.(1).

2.3.3.1.(7) Parking – Parking is restricted along US Route 209 and Washington Avenue within the project corridor. At the terminus of the existing O&W Rail Trail adjacent to the Esopus Creek, there is a parking lot consisting of approximately 20 spaces.

2.3.3.1.(8) Roadside Elements -

- (a) Snow Storage - There are no defined snow storage areas within the project area. Snow storage is generally accommodated adjacent to the roadways.
- (b) Sidewalks - There are no sidewalks within the project limits
- (c) Driveways – There is one private access driveway within the project limits for Option B-1 and one private driveway within the project limits for Option B-2.

O&W Corridor – The proposed multi-use trail will cross an access path to a pump house, located on Rolling Meadows Water Corporation (“Rolling Meadows”) property, which is accessed on a daily basis by maintenance trucks.

U&D Corridor / US Route 209 ROW – The proposed route for Option B-2, U&D will run parallel to US Route 209 along the east side. The route will cross the driveway for the NY State Police Kingston barracks.

- (d) Clear Zone - The existing clear zone width for the O&W Railroad corridor is approximately 3 - 5 ft. The objects defining the clear zone are trees and other vegetation, slope, and rock cuts.

The existing clear zone width for the U&D Railroad corridor is approximately 10 ft. The objects defining the clear zone are trees, vegetation and steep slopes.

The existing clear zone width for US Route 209 is approximately 50' in areas not shielded by guiderail.

2.3.3.2. Geometric Design Elements Not Meeting Standards

2.3.3.2.(1) Critical Design Elements – There are no non-standard multi-use trail features for both option alignments.

2.3.3.2.(2) Other Design Parameters - There are no non-conforming features for both option alignments.

2.3.3.3. Pavement and Shoulder – The existing railroad project corridor does not contain any existing pavement or shoulders.

2.3.3.4. Drainage Systems

2.3.3.4.(1) Type – O&W Railroad Corridor:

From the alternate western terminus at the underpass below US Route 209 to the access path to the pump house, the existing O&W Corridor utilizes fill slopes to allow water to runoff into the adjacent wetlands or vegetated areas. The profile is generally flat with grades less than 1%. The access path connecting the O&W Corridor to the water pump house, which is another option for the proposed trail to tie into the existing O&W Rail Trail, also utilizes fill slopes along both sides in order to allow water to flow into the adjacent vegetated areas or wetlands. From the pump house access path to the substation, the trail is between a cut slope on the east side and a fill slope on the west side. Water flows across the trail and down the fill slope into the Esopus Creek. There are no clearly defined ditches along the cut slope and as a result, stormwater runoff has developed its own conveyance ditches, rills, and gullies. A clearly defined ditch will need to be installed along the cut slope in order ensure consistent positive drainage flow to proper outfalls. From the substation to the existing underpass below I-87, the side slopes transition to fill slopes along both sides of the existing path. Water flows off the path and down the existing embankments. The existing culverts installed in this area will be investigated further to determine whether or not they are functioning satisfactorily. The profile remains generally level throughout. Once passing under I-87, the existing path remains elevated with fill slopes along both sides which allow water to flow into the adjacent vegetated areas or wetlands. The profile remains generally flat with grades less than 1%.

U&D Corridor / US Route 209 ROW:

The area along the east side of US Route 209 consists of an unobstructed flat grassed area, approximately 65 ft. in width. Currently, water flows off US Route 209 and infiltrates within the grassed area. The profile throughout this section is gently sloping to level with grades of approximately 1% or less. The proposed trail would follow the U&D Railroad corridor from US Route 209 to the project terminus at either Washington Avenue or Kingston Plaza. The profile throughout the rail corridor is also generally level with grades of approximately 1% or less. Between US Route 209 and the I-87 underpass, the corridor is comprised of railroad ballast, rails and ties narrowly built up on steep embankments. A portion of the stormwater infiltrates the railroad ballast and eventually is conveyed to the embankment slopes and the agricultural fields. However, in most locations the ballast is clogged or partially clogged, with soil and other organic matter. This causes stormwater to pond between the existing rails.



Vegetation on U&D Railroad corridor (looking east)

Between the I-87 overpass and Washington Avenue, the existing railroad corridor exhibits similar characteristics. The corridor is elevated with steep fill slopes along both sides. There is an excess amount of vegetation growing on the ballast as well as along the side slopes. This organic material would need to be removed from the ballast to provide a stable, sustainable base for an asphalt paved trail. Once stormwater runoff drains from the elevated areas, it is conveyed to the wooded areas or wetlands adjacent to the corridor through depressions and swales and along the toe of the embankment.

2.3.3.4.(2) Condition/Deterioration - The existing drainage system along the O&W Corridor is generally in good condition with isolated areas of erosion, side slope failures, and subgrade settlement. A defined drainage system is needed to collect and convey water effectively and properly through the trail corridor.

The existing drainage system along US Route 209 and the U&D Corridor appears to be functioning satisfactorily with minor issues at isolated locations. There does not appear to be any significant areas of drainage system deterioration along the corridor.

2.3.3.5. Geotechnical – There are no known special geotechnical concerns with the soils or rock slopes within the project area.

2.3.3.6. Structure –

2.3.3.6.(1) Description:

Option B-1 –O&W Railroad Corridor:

There is one (1) existing bridge within the project limits along the O&W Railroad Corridor, as described below;

(a) I-87 over the O&W Railroad Corridor – Bridge @ Sta. OW 89+25

Located at approximately Sta. OW 89+25, the abandoned rail bed crosses under I-87 at Milepost 90.64 by way of a single span, multiple steel girder superstructure supported on concrete substructures. Under the bridge, the horizontal clearance between abutment faces is greater than 16 ft., and the vertical clearance below the beam low chord is approximately 20 ft.



I-87 over the existing O&W Railroad corridor (looking east)

Option B-2 –U&D Railroad Corridor:

Option B-2 has two (2) existing structures within the project limits along the U&D Railroad corridor, as described below:

(a) U&D Railroad Corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

Located at approximately Sta. UD 71+50, the U&D Railroad corridor is carried over the Esopus Creek by Ulster County Rail Bridge C9. The existing bridge consists of three (3) spans; one (1) steel through truss span and two (2) multiple steel girder spans. The superstructure is supported on a combination of concrete and stone masonry substructures. The steel truss has a span of approximately 215 ft. and the adjacent multiple steel girder sections have spans of approximately 44.5 ft. Controlled by the truss span, the existing bridge has a horizontal clearance of approximately 14 ft. and a vertical clearance of approximately 20 ft.



U&D Railroad corridor over the Esopus Creek (Bridge C9)

(b) Interstate 87 over the U&D Railroad Corridor – Bridge @ Sta. UD 80+25:

Located at approximately Sta. UD 80+25, the abandoned rail bed crosses under I-87 by way of a single span, multiple steel girder superstructure supported on concrete substructures. Under the bridge, the horizontal clearance between abutment faces is greater than 16 ft. and the vertical clearance below the beam low chord is approximately 20 ft.



I-87 over existing U&D Railroad corridor (looking east)

2.3.3.6.(2) Clearances (Horizontal/Vertical):

Option B-1 – Multi-Use Trail along the O&W Railroad Corridor

(a) I-87 over the O&W Railroad Corridor – Bridge @ Sta. OW 89+25

The horizontal clearance at the existing underpass, between concrete abutment faces, is greater than 16 ft. The vertical clearance at the existing underpass, above the abandoned rail bed to the steel beam low chord elevation, is greater than 20 ft.

Option B-2 – Multi-Use Trail along the U&D Railroad Corridor

(a) U&D Railroad Corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

The horizontal clearance at the existing truss structure is approximately 14 ft. The vertical clearance at the existing truss, controlled by the top chord lateral bracing, is approximately 20 ft.

(b) I-87 over the U&D Railroad corridor – Bridge @ Sta. UD 80+25:

The horizontal clearance at the existing underpass, between concrete abutment faces, is greater than 16 ft. The vertical clearance at the existing underpass, above the abandoned rail bed to the steel beam low chord, is greater than 20 ft.

2.3.3.6.(3) History & Deficiencies –

Option B-1 – Multi-Use Trail along the O&W Railroad Corridor

(a) I-87 over the O&W Railroad Corridor – Bridge @ Sta. OW 89+25

NYS DOT inventory or other record information for the bridge states that the structure was constructed in 1953 and last inspected in July of 2014. A detailed discussion of the condition and deficiencies of the structure is included in Section 2.3.3.6.(4).

Option B-2 – Multi-Use Trail along the U&D Railroad Corridor

(a) U&D Railroad Corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

Record plans for the existing bridge are not available; however the structure is reported to be approximately 100 years old. The private tourism railroad operator performed significant structural repairs on the bridge and reconstructed the deck between 2011 and 2012.

(b) I-87 over the U&D Railroad Corridor – Bridge @ Sta. UD 80+25:

NYS DOT inventory or other record information for the bridge states that the structure was constructed in 1953 and last inspected in July of 2014. A detailed discussion of the condition and deficiencies of the structure is included in Section 2.3.3.6.(4).

2.3.3.6.(4) Inspection –

Option B-1 – Multi-Use Trail along the O&W Railroad Corridor

(a) I-87 over the O&W Railroad Corridor – Bridge @ Sta. OW 89+25

According to the bridge data provided by the NYS DOT, the structure was last inspected in July of 2014 and received a NYS condition rating of 4.76 which is considered deficient according to

the NYSDOT. A deficient condition rating indicates minor deterioration that requires corrective rehabilitation to restore the structure.

Option B-2 – Multi-Use Trail along the U&D Railroad Corridor

(a) U&D Railroad Corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

This bridge is not included on the NYSDOT Biennial Inspection; however it has been evaluated several times by County Engineers and engineering consultants. Records indicate the bridge was last inspected in November 2016 by Peak Engineering, PLLC. The bridge was found to be in good condition and adequate to carry locomotive loading as approved in a previously completed load ratings. Maintenance items were recommended to keep the bridge functioning.

(b) I-87 over the U&D Railroad Corridor – Bridge @ Sta. UD 80+25:

According to the bridge data provided by the NYSDOT, the structure was last inspected in July of 2014 and received a NYS condition rating of 4.78 which is considered deficient according to the NYSDOT.

2.3.3.6.(5) Restrictions – There are no load postings or other restrictions at any of the structures.

2.3.3.6.(6) Future Conditions – No actions are proposed for the structures that carry I-87 over the O&W and U&D Railroad corridors. These structures are owned and maintained by NYS. If no actions are taken for the Ulster County Rail Bridge C9, the bridge would continue to deteriorate and require regular maintenance to keep the bridge operational for occasional locomotive loading.

2.3.3.6.(7) Waterway – There is one (1) waterway within the project limits that is classified as a navigable waterway according to New York State Law known as the lower Esopus Creek, which flows from the Ashokan Reservoir and into the Hudson River Estuary. The overall appearance and characteristics of the Esopus Creek will remain unchanged as a result of this project. The Lower Esopus has been designated as an inland waterway under the NYS Coastal Zone Program.

2.3.3.7. Hydraulics of Bridges and Culverts – A hydraulic analysis was not required to evaluate the existing bridges. There are no known special hydraulic concerns with the project limits and the proposed project is not anticipated to have any effects of the hydraulics of the Esopus Creek. If modifications to the existing bridges, that would affect the existing hydraulic functions, are required, or the construction of any new bridges are required, a hydraulic analysis would be prepared.

2.3.3.8. Guide Railing, Median Barriers, and Impact Attenuators –

Along the O&W Corridor, there is one location of guiderail within the project limits. See Exhibit 2.3.3.8(1) below for a summary of the existing guide railing. Rail is also located along the Adirondack Transit Lines commercial driveway. Sections of W-beam rail are located along both the eastern and western sides of the driveway. The rail system appears to be functioning as designed in shielding errant vehicles from the adjacent wetlands and fixed objects (utility poles).

Median barrier and impact attenuators are not present within the project limits.

Exhibit - 2.3.3.8(1) Existing Guide Railing		
Type	Location/Side	Approx. Length
W-Beam Guide Rail	Commercial driveway (west side)	330 ft.
W-Section Guide Rail	Commercial driveway (east side)	565 ft.

Option B-2, U&D Corridor / US Route 209 ROW: There are two locations of varying types of guiderail within the project limits. See Exhibit 2.3.3.8(2) below for a summary of the existing guide railing. Along US Route

209, there is one (1) segment of box beam guide rail within the project limits. The guiderail is located along US Route 209 at the existing bridge over the Esopus Creek. The apparent intended use is to shield errant vehicles from the steep embankment. The guiderail appears to be functioning as designed.

Guide rail is also located along the Adirondack Transit Lines commercial driveway. Sections of W-beam rail are located along both the eastern and western sides of the driveway. The railing appears to be present to shield errant vehicles from adjacent wetlands and utility poles and appears to be functioning as designed.

Median barrier and impact attenuators are not located within the project limits.

Exhibit - 2.3.3.8(2) Existing Guide Railing		
Type	Location/Side	Approx. Length
Box Beam Guide Rail	US Route 209 at bridge over Esopus Creek (East side)	650 ft.
W-Beam Guide Rail	Commercial driveway (west side)	330 ft.
W-Section Guide Rail	Commercial driveway (east side)	565 ft.

2.3.3.9. Utilities –

Along the O&W Corridor, CHG&E owns and maintains overhead electric lines along the abandoned railbed and is in the process of design upgrades and possible relocation of the existing lines and supporting structures. The Rolling Meadows Water Company also maintains water lines that cross the O&W corridor. These are the only known utilities located within the project corridor.

Exhibit - 2.3.3.9 Existing Utilities		
Owner	Type	Location
CHG&E	Overhead Electric	Parallels O&W Corridor
Rolling Meadows Water Co.	Underground Transmission Line	Runs parallel to access path to the pump house

Along the U&D Corridor / US Route 209 ROW, there are no known utilities located within the project corridor.

2.3.3.10. Railroad Facilities –

O&W Corridor: The existing O&W Railroad corridor is an abandoned railroad corridor and has not been used as such since 1957 when a bankruptcy judge ordered liquidation and termination. There are no existing railroad crossings or connections to operational rail lines.

U&D Corridor / US Route 209 ROW: The existing U&D Railroad corridor within the project limits is permitted for use from Ulster County to a private tourism railroad operator through December 2020. The operator occasionally runs tourist passengers from Kingston Plaza, through the City of Kingston to the Town of Ulster and returns. It is anticipated that railroad operations will remain in the U&D Corridor based on an Ulster County Legislature policy passed in December 2015.

2.3.4. Landscape and Environmental Enhancement Opportunities –

2.3.4.1. Landscape

2.3.4.1.(1) Terrain – The terrain along both the O&W and U&D rail corridors is primarily level and gradually descends as the trail proceeds east towards the City of Kingston. The project area can generally be classified as “rolling” terrain.

2.3.4.1.(2) Unusual Weather Conditions - The project area is located within the northern temperate climate zones and can undergo severe winters and summer heat waves; however, specific trail features will not be required to account for unusual climatic conditions. Portions of both trail corridors lie within the 100 year flood plain.

2.3.4.1.(3) Visual Resources – The proposed project follows either the abandoned O&W Railroad corridor or US Route 209 and U&D Railroad corridor. Both options pass through various land uses and natural environments such as farms, forests and wetlands.

2.3.4.2. Opportunities for Environmental Improvements – All attempts to provide improvements to the environment, in accordance with the funding and scope of the project, will be completed.

CHAPTER 3 – ALTERNATIVES

This chapter discusses the alternatives considered and examines the engineering aspects for all feasible alternatives to address project objectives in Chapter 1 of this report.

3.1. Alternatives (and Segments) Considered and Eliminated from Further Study

Null Alternative (Alternative A) – Under this alternative, a trail corridor would not be delineated or established. The Null (no action) Alternative does not meet the project objectives and is not consistent with the vision of Ulster County, the project funding, and the IPP; therefore, it is not considered feasible and is removed from any further project consideration.

Washington Avenue to Kingston Plaza Segment – Option B-1 (O&W Corridor)

A segment of the project includes extending the trail from Washington Avenue to Kingston Plaza under Option B-1, O&W Corridor. This additional segment, which would extend from the current eastern terminus location at Washington Avenue, over the existing active U&D railroad line, to Kingston Plaza, has been determined not to be feasible at this time due the tourism railroad operations, right-of-way encroachments and impacts, the potential schedule implications from railroad concerns and right-of-way, and estimated construction costs. The estimated cost to extend the trail from the east side of Washington Avenue to Kingston Plaza would cost approximately \$375,000.

· Earthwork and Clearing	\$ 30,000
· Pavement Structure (Base & Asphalt)	\$ 75,000
· Guiderail & Fence	\$ 20,000
· Drainage, Lighting	\$ 20,000
· Work Zone Traffic Control	\$ 20,000
· Landscaping and Vegetation	\$ 15,000
· Signage	\$ 10,000
· Contingencies (15%)	\$ 50,000
· Survey and ROW Mapping	\$ 20,000
· Engineering	\$ 35,000
· Construction Inspection & Administration	\$ 35,000
· Right of Way	\$ 45,000
Total Estimated Costs:	\$375,000

This segment has been dismissed from the project at this time. However, the proposed project will not preclude the development of this section when funding is available and/or policy updates are concluded.

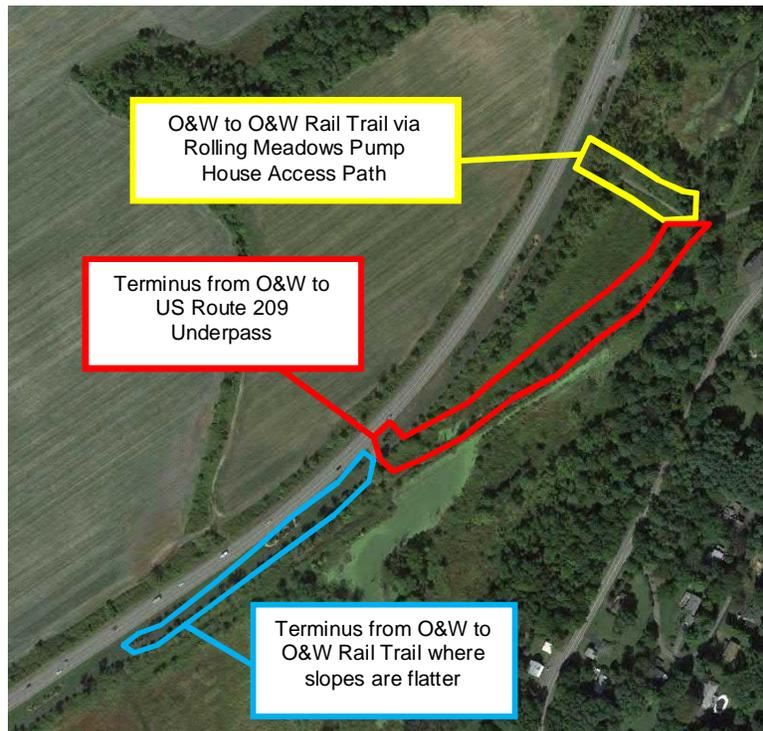
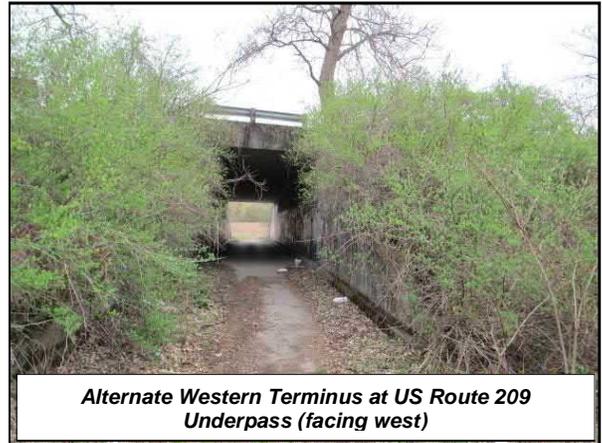
3.2. Feasible Build Alternatives

3.2.1. Description of Feasible Alternatives

- **Dedicated Multi-Use Trail along the former O&W Railroad Corridor (Option B-1, O&W Corridor)** – The proposed alternative would follow the abandoned Ontario & Western (O&W) Railroad corridor for 1.8 miles from the existing O&W Rail Trail, located along US Route 209, through the existing I-87 underpass, to Washington Avenue (State Bicycle Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue. The total length of the proposed alternative is 1.8 miles. This proposed alternative would require Right-of-Way acquisitions and easements from CHG&E, Adirondack Transit Lines, and Ulster Savings Bank.

The O&W option has three possible western termini locations. One possibility is for the trail to connect to the O&W Rail Trail via an access path that leads to a pump house on the Rolling

Meadows Right-of-Way (See below). The second location is for the trail to run parallel to the existing O&W Rail Trail for a short segment along the O&W Corridor in order to terminate near the existing underpass below US Route 209 (see below). This option would allow for future possible extensions of the trail on the west side of US Route 209. This option would also include a connection to the O&W Rail Trail accomplished by traversing the slope adjacent to the underpass structure. Due to the elevation difference between the O&W Rail Trail and the proposed trail elevation at the US Route 209 underpass, a third option was investigated that extends the trail further south where the grade separation is less and connecting to the existing O&W Rail Trail may be more reasonable and feasible.



The existing terrain between the underpass and the Rolling Meadows access path is level, but narrow and heavily overgrown. There are wetland areas along both sides of the existing path.

The investigated western terminus for Option B-1, O&W Corridor, that utilizes Rolling Meadows ROW, is not considered feasible due to schedule, cost, and potential environmental impacts. To accomplish the rise in grade, a substantial amount of embankment material would be required that would impact wetlands and the existing floodplain impacts. This western terminus option was also

eliminated from further study since it would impact an existing water pump station and associated well heads, and involves right-of-way impacts.

The alternate western terminus for Option B-1 that extends to the flatter slopes was eliminated from consideration due to the environmental impacts that would occur as a result. A large NYSDEC wetland (KW-18) is mapped in the vicinity of the potential terminus. In order to minimize impacts, the trail extension will not be pursued.

· **Dedicated Multi-Use Trail along U&D Railroad Corridor (Option B-2, U&D Corridor / US Route 209 ROW)** – This alternative is proposed to begin at the existing O&W Rail Trail parking lot along US Route 209, cross the Esopus Creek via a new pedestrian/bicycle bridge adjacent to the existing US Route 209 structure, extend north approximately 0.77 miles along the east side of US Route 209 to the intersection of the county-owned Ulster & Delaware (U&D) Railroad corridor. This alternative would then extend approximately 1.0 miles east along the U&D Railroad corridor to Washington Avenue (State Bicycle Route 28) in the City of Kingston.

Along US Route 209, the trail would be located within the NYSDOT ROW offset from the edge of the roadway pavement a minimum of ten (10) feet. There is ample space to construct the trail on the east side of US Route 209 without the need for any ROW acquisitions. Along the U&D Corridor, the trail would utilize the existing rail bed.

Under this option the existing U&D Railroad trestle bridge (C9 bridge) over the Esopus Creek would need to be rehabilitated to accommodate bicyclists and pedestrians since railings and a sustainable ADA compliant surface would be required. Included in this option is a potential trailhead on the west side of Washington Avenue.

A dedicated multi-use trail (rail with trail) built along the existing single-track U&D Railroad Corridor was examined and determined not feasible due to excessive costs and environmental impacts to adjoining wetland areas. The existing rail bed is raised and to widen the rail bed to accommodate both uses with the proper railway offsets and clear area would have significant environmental impacts on adjacent wetlands. Additionally, the costs to develop a rail with trail corridor are not consistent with the economic constraints of this project.

EXHIBIT 3.2.1-A COMPARISON OF ALTERNATIVES CONSTRUCTION PROJECT COSTS		
ACTIVITIES	OPTION B-1, O&W	OPTION B-2, U&D
	O&W RAIL TRAIL TO WASH. AVE.	O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:		
CLEARING & GRUBBING:	\$ 50,000	\$ 25,000
EARTHWORK:	\$ 150,000	\$ 174,000
SUBBASE:	\$ 130,000	\$ 122,000
PAVEMENT:	\$ 230,000	\$ 210,000
GUIDERAIL & FENCE	\$ 110,000	\$ 358,000
DRAINAGE	\$ 150,000	\$ 20,000
LIGHTING	\$ 30,000	\$ 25,000
WORK ZONE TRAFFIC CONTROL:	\$ 20,000	\$ 50,000
EROSION CONTROL:	\$ 30,000	\$ 30,000
LANDSCAPE:	\$ 50,000	\$ 50,000
STRUCTURES	\$ 250,000	\$ 3,000,000
TRAILHEAD/PARKING LOT	\$ 80,000	\$ 80,000
SIDEWALK:	\$ 20,000	\$ 20,000
SUBTOTAL CONSTRUCTION ITEMS:	\$ 1,300,000	\$ 4,164,000
CONTINGENCY (15% @ DESIGN APPROVAL)	\$ 195,000	\$ 625,000
SUBTOTAL (2017 DOLLARS):	\$ 1,495,000	\$ 4,789,000
FIELD CHANGE ORDER (USE 5%)	\$ 75,000	\$ 240,000
SURVEY	\$ 30,000	\$ 90,000
MOBILIZATION (4%)	\$ 59,000	\$ 192,000
SUBTOTAL (2017 DOLLARS):	\$ 1,659,000	\$ 5,311,000
EXPECTED INFLATION AWARD AMOUNT (2018) +1.5%	\$ 30,000	\$ 80,000
TOTAL PROJECT CONSTRUCTION COSTS (2018 DOLLARS):	\$ 1,689,000	\$ 5,391,000
ENGINEERING	\$ 220,000	\$ 500,000
CONSTRUCTION INSPECTION & ADMINISTRATION	\$ 130,000	\$ 500,000
ROW INCIDENTALS AND ACQUISITIONS	\$ 85,000	\$ -
TOTAL COSTS:	\$ 2,124,000	\$ 6,391,000

3.2.2 Preferred Alternative

Based on the investigations, discussion herein, official and public input, and taking into consideration the social, economic and environmental impacts, the alternative that best meets the project objectives is Alternative B – Reconstruction.

Two different reconstruction option concepts (B-1 and B-2) were investigated and presented at the Stakeholder Meeting and the Public Informational Meeting (PIM). Both of the proposed reconstruction options include the construction of a dedicated multi-use trail along either the O&W Railroad Corridor, extending from the existing O&W Rail Trail to Washington Avenue, referred to as “Option B-1,” or along US Route 209 and the U&D Railroad corridor, extending from the existing O&W Rail Trail parking lot to Washington Avenue, referred to as “Option B-2.” Based on the detailed investigations, project schedule requirements, construction costs, and discussion at the PIM, the most reasonable and feasible alternative was identified as Option B-1, O&W Corridor.

3.2.3. Design Criteria for Feasible Alternative(s)

3.2.3.1. Design Standards - The project design criteria is based upon:

- AASHTO *Guide for the Development of Bicycle Facilities*, 4th ed. 2012
- NYSDOT *Highway Design Manual (HDM)*, 2006
- AASHTO *Policy on Geometric Design of Highways and Streets* 6th ed., 2011
- NYSDOT *Bridge Manual (BM)* 4th ed., 2006
- FHWA *Manual on Uniform Traffic Control Devices (MUTCD)*, 2009
- NYS Supplement to the MUTCD
- AASHTO *Guide for Park and Ride Facilities*, 2nd ed., 2004

3.2.3.2. Critical Design Elements -

Exhibit 3.2.3.2-A Kingston Rail Trail Multi-Use Facility Design Criteria			
Element		Standard	Proposed
A.	Minimum Design Speed	18 MPH	18 MPH
B.	Multi-Use Trail Width: Minimum Recommended	8.0 ft.* 10.0 – 14.0 ft.*	10.0 ft.* 10.0 ft.*
C.	Multi-Use Trail Shoulder Width Minimum Recommended	2.0 ft. 3.0 – 5.0 ft.	2.0 ft.
D.	Distance between edge of trail and top of slope without barrier	5.0 ft.	5.0 ft.
E.	Maximum Grade	5%	5.0%
F.	Minimum Horizontal Radius	60 ft.	8 ft.**
G.	Design Superelevation: Minimum Maximum	1.0% 2.0%	1.0%
H.	Stopping Sight Distance	125 ft.	138 ft.
I.	Minimum Lateral Clearance w/ barrier w/ post mounted signs	1.0 ft. 2.0 ft.	2.0 ft. 2.0 ft.
J.	Minimum Vertical Clearance (bridges & tunnels)	10.0 ft.	10.0 ft.
K.	Bridge Structure Capacity (trail)	85 psf/H-10 (Pedestrian) HL-93 (Vehicular)	85 psf/H-10 (Pedestrian) HL-93 (Vehicular)
L.	Minimum Rail Height	55 in.	55 in.
M.	Signage	MUTCD and the NYS Supplement to the MUTCD	MUTCD and the NYS Supplement to the MUTCD
N.	Pedestrian Accommodations	HDM Ch. 18 & ADAAG	HDM Ch. 18 & ADAAG

**Per AASHTO, in rare circumstances, a reduced width of 8–0" may be adequate in areas of limited physical width or other obstructions.*

*** Non-standard feature*

3.2.3.3. Other Design Parameters –

Design Storm for drainage is 10 year.

Based on guidance from the AASHTO *Guide for the Development of Bicycle Facilities* and Chapter 17 of the NYSDOT HDM, safety rail will be included for the following conditions:

When a clear area of 5 ft. at a maximum slope of 1:6 cannot be achieved and

- Slope is equal to or steeper than 1:3 for a vertical drop of 6 ft. or greater
- Slope is equal to or steeper than 1:3 adjacent to a parallel body of water or other substantial obstacle
- Slope is equal to or steeper than 1:2 for a vertical drop of 4 ft. or greater
- Slope is equal to or steeper than 1:1 for a vertical drop of 1 ft. or greater

3.3. Engineering Considerations

3.3.1. Operations (Traffic and Safety) & Maintenance

3.3.1.1. Functional Classification and National Highway System - This project will not change the functional classification of the roadways.

3.3.1.2. Control of Access - Access for pedestrians and bicyclists to the Kingston Rail Trail will be provided at the project termini at the existing O&W Rail Trail parking area along US Route 209 and at the future eastern trailhead connection at Washington Avenue.

Conceptual Trailhead at Washington Avenue (Eastern Terminus)



Access control bollards will be installed to prohibit vehicular access to the trail at project termini and all road crossings.

3.3.1.3. Traffic Control Devices

3.3.1.3.(1) Traffic Signals – A traffic control device was considered on Washington Avenue within the project area to assist pedestrian crossing movements and vehicular turning movements from the various access points on Washington Avenue. The need for this was expressed by local officials, as well as the

public and backed with strong support by the others in attendance during the Public Informational Meeting (PIM). The primary concern expressed was for the safety of trail users crossing Washington Avenue and the need for some type of traffic control device for assistance. With the potential for many users being visitors to the area, the lack of familiarity was also a concern. As a result of the dialogue and discussions between county officials and the design team, various traffic signal control options were investigated as part of the project.

To provide a mid-block pedestrian crossing of Washington Avenue at the existing railroad crossing a pedestrian-activated hybrid beacon (HAWK Signal) was investigated. The HAWK Signals have gained popularity within recent years as a traffic control device for pedestrian mid-block crossing locations. Although, due to the atypical signal heads, signal operation, and the high volume multi-lane approaches on Washington Avenue, it was determined that the HAWK signal is not a recommended option.

Mid-block pedestrian crossings are sometimes used on roadways in between intersections and / or traffic signal systems. However, Washington Avenue in this location is four (4) lanes wide and is heavily traveled with no median to utilize as a pedestrian refuge. Additionally, there are multiple access points in close proximity to where a mid-block crossing would be placed. For these reasons a mid-block crossing is not recommended for this location.

To address the crossing concern expressed at the PIM. A feasible and reasonable option is to install a fully actuated standard traffic signal at the intersection of Washington Avenue with the entrances to the Super 8 Hotel and Ulster Savings Bank. This intersection location, adjacent to the proposed parking area and trailhead, provides the opportunity to connect the new trail to the existing sidewalks. The traffic signal would control all four vehicular approach legs, including crosswalks, pedestrian signal heads, and countdown timers to provide dedicated signal phases for all pedestrian and vehicular movements through the intersection. Coordination with adjacent signalized intersections (Washington Ave & Hurley Avenue/Schwenk Drive and Washington Ave & North Front Street) would be required due to existing queuing at the Schwenk Drive and Washington Ave intersection.

Upon further review, the proposed traffic and pedestrian signals have been removed from consideration at the Washington Ave and Ulster Savings Bank Driveway due to the close proximity of the Washington Ave and Schwenk Drive traffic signal (approximately 700 ft.), required lane modifications to Washington Ave, and the associated costs involved with the installation of the traffic signal.

3.3.1.3.(2) Signs: New signs will be installed in accordance with the National Manual of Uniform Traffic Control Devices (MUTCD), the New York State Supplement to the MUTCD, and the *AASHTO Guide for the Development of Bicycle Facilities*, 4th ed. (2012). Signs will also be installed to inform motorists and trail users of the approaching intersections.

3.3.1.3.(3) Pavement Striping: Crosswalk pavement striping and, if necessary, edge line striping to delineate narrow sections of trail width will be installed within the project limits.

No modifications to pavement striping on adjacent roadways will be required as part of this project.

3.3.1.4. Intelligent Transportation Systems (ITS) – No ITS measures are proposed.

3.3.1.5. Speeds and Delay -

3.3.1.5.(1) Proposed Speed Limit – The trail corridor will not have a posted speed limit however a design speed of 18 MPH per the *AASHTO Guide for the Development of Bicycle Facilities* was used to develop the design criteria for the project.

The speed limit on the roadways within the project limits will not be changed.

3.3.1.5.(2) Travel Time Estimates – Travel time estimates are not applicable for a trail project.

3.3.1.6. Traffic Volumes – Traffic data was not collected for this project due to the fact that the proposed Kingston Rail Trail will be constructed along an existing rail bed and, with the exception to intersection

crossings, is isolated from vehicular traffic. There are no on-road segments proposed for this phase of the project. Each road/multi-use trail intersection will be signed and striped to allow safer movement of multi-use trail users.

3.3.1.7. Level of Service and Mobility – Not applicable.

3.3.1.7.(1) At Project Completion & Design Year – Not applicable

3.3.1.7.(2) Work Zone Safety & Mobility –

A. Work Zone Traffic Control Plan – Traffic will be maintained throughout the length and duration of construction in accordance with the requirements of Section 619 of the New York State Standard Specifications, The National Manual of Uniform Traffic Control Devices (MUTCD), and the NYS Supplement to the MUTCD.

Traffic along existing streets, roadways, and access drives impacted by the construction of the Kingston Rail Trail would generally be handled with a short term lane closure or shoulder restriction.

B. Special Provisions - Due to the close proximity to residential homes and the ability to maintain traffic with acceptable delays during the daylight hours, night time construction will not be utilized. The use of time related provisions will be evaluated during final design. The work zone traffic control will need to be coordinated with local officials and residents.

C. Significant Projects - Ulster County has determined that the subject project is not significant per 23 CFR 630.1010.

3.3.1.8. Safety Considerations, Crash History and Analysis – At access points to the trail, a controlled access gate would be installed to prohibit use by motorized vehicles, but would provide access for emergency and maintenance vehicle access.

3.3.1.9. Impacts on Police, Fire Protection and Ambulance Access - Refer to Section 3.3.1.7(2) for a discussion of the anticipated impacts during construction. Construction activities will be coordinated with emergency services throughout the duration of the project.

3.3.1.10. Parking Regulations and Parking Related Issues – Existing parking regulations and facilities will not be affected by this project.

3.3.1.11. Lighting – Further investigation will be performed during Final Design to determine whether or not proper lighting will be necessary.

3.3.1.12. Ownership and Maintenance Jurisdiction –

Refer to Appendix D for a maintenance jurisdiction map and table.

Ulster County owns the existing 1.0 mile segment of the U&D Railroad corridor and will continue their ownership of the corridor for the foreseeable future. Right-of-Way acquisitions and easements will be required from CHG&E, Adirondack Transit Lines, and Ulster Savings Bank for Option B-1 along the O&W corridor. Ulster County will obtain the necessary agreements in order to construct and maintain the proposed Kingston Rail Trail along the abandoned O&W Corridor. One such arrangement that will be required is an "Occupancy and Work Permit" from the New York State Thruway Authority (NYSTA) or a Memorandum of Agreement. Coordination with NYSTA is on-going to ensure a permit will be obtained.

3.3.2. Multimodal

3.3.2.1. Pedestrians - The proposed trail will enhance pedestrian amenities by creating a safer and dedicated public facility for pedestrian usage where one did not previously exist other than informally. It

will also lengthen and help to connect the existing trail network within Ulster County potential future connections to the proposed Ulster County Rail Trail Project (or “Kingston Midtown Linear Park”) as well as other future trail connections.

3.3.2.2. Bicyclists – The proposed trail will enhance bicyclist amenities by creating a safer and dedicated public facility for bicyclist usage where one did not previously exist other than informally. The proposed trail will also make an important linked connection between the O&W Rail Trail and Washington Avenue which is part of State Bicycle Route 28. It will also lengthen and help to connect the existing trail network within Ulster County to potential future connections to the proposed Ulster County Rail Trail Project (also known as the “Kingston Midtown Linear Park”).

3.3.2.3. Transit – No changes are proposed.

3.3.2.4. Airports, Railroad Stations, and Ports –

Option B-1, O&W Corridor – The existing O&W Railroad corridor is an abandoned railroad corridor and has not been used as such since 1957 when a bankruptcy judge ordered liquidation and the railroad was shut down. There are no existing railroad crossings or connections to operational rail lines.

Option B-2, U&D Corridor / US Route 209 ROW – The existing U&D Railroad corridor within the project limits is permitted for use from Ulster County to a private tourism railroad operator, which has a permit until December 31, 2020, and runs tourist passenger trains from Kingston Plaza to the Town of Ulster and back.

There are no airports or port entrances within the project limits or that would be affected by this project.

3.3.2.5. Access to Recreation Areas (Parks, Trails, Waterways, and State Lands) – Public access to the trail network within Ulster County will be enhanced. The trail will allow the City of Kingston residents to directly access the O&W Rail Trail for the first time on a dedicated pedestrian and bicycle trail. The trail may also open opportunities for recreational access to the lower Esopus Creek.

3.3.3. Infrastructure

3.3.3.1. Proposed Highway and Trail Section – Refer to Appendix A for typical sections of the trail as proposed under the feasible alternative.

3.3.3.1.(1) Right-of-Way (ROW) –

Option B-1, O&W Corridor - Proposed ROW acquisitions are anticipated to be needed for the feasible Option B-1, O&W Corridor. Ulster County will need to acquire ROW from CHG&E, Adirondack Transit Lines, and Ulster Savings Bank. Coordination with project stakeholders that included the commercial property owners was initiated early in the project at a stakeholders meeting to listen to concerns, comments and suggestions and to coordinate the progression of the project. It is also anticipated that either a Use & Occupancy Permit or Memorandum of Agreement will also be required between Ulster County and the NYSTA for the portion of the O&W corridor that lies within the NYSTA ROW for the existing underpass structure to I-87.

Option B-2, U&D Corridor / US Route 209 ROW – Right-of-Way acquisitions are not anticipated to be needed for along the U&D Railroad Corridor or along US Route 209.

3.3.3.1.(2) Lanes and Shoulders –

- (a) Trail Corridor – Option B-1, along O&W - The completed trail will include a 10 ft. wide paved multi-use trail with 2 ft. wide grassed shoulders.
- (b) Trail Corridor – Option B-2 along U&D – The completed trail will include a 10 ft. wide paved multi-use trail with 2 ft. wide grassed shoulders.
- (c) US Route 209 – There are no proposed changes within the project limits

- (d) Washington Avenue – The existing lane and shoulder widths will remain unchanged as a result of this project.

3.3.3.1.(3) Curb – The trail corridor will not have curbs within the project limits.

3.3.3.1.(4) Median – A right-in / right-out style turn median will be installed within the proposed trailhead at Washington Ave to control turning movements into and out of the parking area.

3.3.3.1.(5) Grades and Curves –

- (a) Option B-1, O&W Corridor - Trail Corridor along O&W – The trail alignment is generally level with a maximum grade of 5%. The horizontal alignment of the trail consists of tangent sections connecting standard (and above) curves.
- (b) Option B-2, U&D Corridor – Trail Corridor along U&D – The trail alignment is generally level with a maximum grade of 3.9%. The horizontal alignment of the trail consists of tangent sections connecting standard (and above) curves.

3.3.3.1.(6) Intersection Geometry and Conditions – The eastern trailhead intersection will consist of a right-in entrance and a right-out exit and will prohibit left turns. This will reduce impacts to the existing traffic pattern on Washington Ave. Pedestrians will also be prohibited from crossing Washington Ave within the vicinity of the trailhead intersection. Pedestrians will be required to travel to the intersection of Schwenk Drive and Washington Ave to cross.

3.3.3.1.(7) Parking - Parking is restricted along US Route 209 and Washington Avenue within the project corridor and will not be changed as part of this project.

A trailhead and parking area is proposed at the Washington Avenue eastern termination point. It is anticipated that the lot will accommodate 9 vehicles. The exact details of the parking lot and trailhead will be determined during final design. (See rendering below and on page 3-3).



Conceptual Trailhead at Washington Avenue

3.3.3.1.(8) Roadside Elements –

- (a) Snow Storage - – The County intends to maintain the trail 12 months out of the year including the removal of snow. Snow storage for the trail will be immediately adjacent to the 10 foot paved width and 2 foot wide shoulders.
- (b) Sidewalks - No sidewalks are proposed within the project limits. Pedestrians and bicyclists will be accommodated on the proposed trail.
- (b) Driveways – The only driveway located within the project limits is located along the U&D Corridor where the trail would cross the driveway for the NYS Police Kingston Barracks Department on Route 209.
- (c) Clear Zone – The design clear zone width along the trail systems will be a minimum of 2 ft. Additional clearance to fixed objects or obstructions will be provided wherever feasible.

3.3.3.2. Special Geometric Design Elements

3.3.3.2.(1) Non-Standard Features – Based on the Design Criteria established for this project, the following non-standard features exist within the project limits. Please refer to Appendix F for non-standard feature justifications.

- Horizontal Radius – There are multiple locations where the minimum proposed horizontal radius along the preferred alternative is less than the recommended minimum of 60 ft.
 - Short horizontal radii are necessary to facilitate the construction of the switchback and maintain ADA compliant longitudinal grades. The switchback alignment curves are also associated with lower bicycle speeds and compliant curve warning signs will be placed to appropriately notify trail users of the curves ahead.
 - Additionally, there are short horizontal radii located immediately approaching the proposed parking area at the eastern termination along Washington Avenue to allow implementation of parking area and the trailhead. These curves are along level ground and easily seen by the approaching users and entering an area with a stop condition. Appropriate signage will be installed to warn bicyclists of the curves ahead.

This project is a multi-use trail construction project that does not include any roadway work except for minor shoulder work along Washington Ave at the proposed trailhead location.

3.3.3.2.(2) Non-Conforming Features – There are no non-conforming features proposed under Options B-1.

3.3.3.3. Pavement and Shoulder – The proposed trail section along the corridor is 14 ft. wide, consisting of 10 ft. wide asphalt concrete paved multi-use trail and flanked by 2 ft. wide grassed shoulders. See the typical sections in Appendix A for the proposed trail section.

3.3.3.4. Drainage Systems – All new trail pavement for the proposed project will be designed and constructed with a minimum 1% cross slope to achieve positive surface drainage and sheet flow along the vegetated surfaces adjacent the trail. Existing drainage swales and patterns within the project limits will either be maintained or the proper accommodations will be installed as necessary to convey the positive flow of any existing or proposed runoff. The proposed design will incorporate sheet flow, open channel flow through ditches and swales that will outlet to the existing drainage outfalls throughout the corridor.

New culverts will be installed where the trail crosses existing drainage patterns, ditches, or creeks and as necessary at proposed low points in the trail profile.

The existing steel and timber structures with stone abutments that cross minor water courses will be replaced as part of the Option B-1 alternative. The structures will be designed to accommodate construction equipment (to build the trail), emergency response and fire fighting vehicles, and snow removing and maintenance vehicles.

3.3.3.5. Geotechnical – There are no known special geotechnical concerns with the soils or rock slopes within the project area. Soil borings will be progressed if necessary during final design.

3.3.3.6. Structures –

3.3.3.6.(1) Description of Work –

Option B-1 – Multi-Use Trail along the O&W Railroad Corridor

Under Option B-1, there are no proposed bridges within the project limits along the O&W Railroad Corridor. This option would include construction of the proposed Kingston Rail Trail under an existing bridge to remain, as described below; however structural modifications to the existing bridge will not be required.

(a) I-87 over existing O&W Railroad corridor – Bridge @ Sta. OW 89+25

The proposed Kingston Rail Trail will cross under I-87 by way of the existing underpass. The proposed project will retrofit the trail through the underpass and is not anticipated to impact the structure.

Option B-2 – Multi-Use Trail along the U&D Railroad Corridor / US Route 209 ROW

Option B-2 would include the construction of one (1) new bridge along US Route 209 and the rehabilitation of one (1) existing railroad bridge along the U&D Railroad Corridor. This option would also include construction of the proposed Kingston Rail Trail under an existing bridge to remain; structural modifications to the existing bridge will not be required.

(a) Kingston Rail Trail over Esopus Creek – Proposed Bridge @ Sta. UD 14+00

Option B-2 would include the construction of a pedestrian bridge to carry the proposed Kingston Rail Trail over the Esopus Creek. The proposed pedestrian structure would be constructed adjacent to the existing vehicular bridge that carries US Route 209 over the Esopus Creek (BIN 1040790).



Location of Potential Bridge over the Esopus Creek adjacent to existing US Route 209 Bridge under Option B-2

- (1) Type of bridge, number of spans, etc. – The potential pedestrian/bicycle bridge would consist of two (2) equal spans with a total length of approximately 276'-0" (measured from the centerline of bearings), similar to the adjacent vehicular bridge. The proposed structure would consist of a multiple steel girder superstructure with a cast-in-place concrete deck supported on cast-in-place concrete substructures. Based on record drawings for BIN 1040790, it is assumed that the proposed pedestrian bridge would be founded on piles. Subsurface conditions would be investigated further during final design.
 - (2) Width of travel lanes, shoulders, and sidewalks – The transverse bridge section would carry a clear width of 14'-0" to match the proposed trail approaches. The bridge would include provisions for standard bridge rail, resulting in an out-to-out width of 17'4".
 - (3) Utilities carried – There would be no utilities carried by the proposed bridge.
- (b) U&D Railroad Corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

Option B-2 would include the rehabilitation of the Ulster County Rail Bridge C9 over the Esopus Creek, located at approximately Sta. UD 71+50. Rehabilitation of the existing structure for use as a pedestrian bridge would include the following work items: removal of existing rail and timber ties, concrete substructure repairs, masonry stone repointing, replacement of truss and girder bearings, installation of a new continuous structural deck (likely timber) and installation of bridge rail.

- (1) Type of bridge, number of spans, etc. – The proposed pedestrian bridge would retain the existing superstructure, substructures and span configuration as described in Section 2.3.3.6.(1). A continuous structural deck and bridge rail would be carried across the proposed bridge.
 - (2) Width of travel lanes, shoulders, and sidewalks – Due to width restrictions of the existing truss, the transverse bridge section would carry a clear width of approximately 10'-0" after the installation of standard bridge rail. The proposed structure width is less than the proposed trail approach width of 14'-0".
 - (3) Utilities carried – There would be no utilities carried by the proposed bridge.
- (c) I-87 over the U&D Railroad corridor – Bridge @ Sta. UD 80+25:

The proposed Kingston Rail Trail will cross under I-87 by way of the existing underpass. The proposed project will retrofit the trail through the underpass and will not impact the structure.

3.3.3.6.(2) Clearances (Horizontal/Vertical) –

Option B-1 – Multi-Use Trail along the O&W Railroad corridor

- (a) I-87 over existing O&W Railroad corridor – Bridge @ Sta. OW 89+25

No changes are proposed to the existing horizontal or vertical clearance at the existing underpass.

Option B-2 – Multi-Use Trail along the U&D Railroad corridor

- (a) Kingston Rail Trail over Esopus Creek – Proposed Bridge @ Sta. UD 14+00

The proposed horizontal clearance (rail-to-rail) at the bridge structure located at Sta. UD 14+00 will be 14 ft. to match the approach trail and shoulder width. There will be no vertical clearance restriction above the Kingston Rail Trail at this location.

(b) U&D Railroad corridor over the Esopus Creek – Bridge C9 @ Sta. UD 71+50

The proposed horizontal clearance (rail-to-rail) at the bridge structure located at Sta. UD 71+50 will be a minimum of 10 ft., depending on the bridge rail system utilized. The horizontal clearance will be less than the 14 ft. approach trail and shoulder width; however a 10 ft. minimum clearance will still allow access by a maintenance or emergency vehicle. No changes are proposed to the vertical clearance between the trail surface and the top of the truss at this location.

(c) I-87 over the U&D Railroad corridor – Bridge @ Sta. UD 80+25:

No changes are proposed to the existing horizontal or vertical clearance at the existing underpass.

3.3.3.6.(3) Live Load – Under Option B-2, the new and rehabilitated bridges would be designed for pedestrian loading (85 psf) and H-10 vehicular loading for the occasional emergency or maintenance vehicle.

3.3.2.6.(4) Associated Work – Under Option B-2, standard pedestrian/bicycle bridge and approach railing, along with standard termini/end sections, would be installed at the new and rehabilitated bridges along the U&D Railroad Corridor.

3.3.3.6.(5) Waterway – The Esopus Creek is a navigable waterway according to New York State Law.

3.3.3.7. Hydraulics of Bridges and Culverts – A hydraulic analysis was not required to evaluate the proposed alternatives. There are no known special hydraulic concerns with the project limits and the proposed project would not have adverse effects of the hydraulics of the Esopus Creek. Based on the selected alternative, a hydraulic analysis would be prepared during final design if deemed necessary.

3.3.3.8. Guide Railing, Median Barriers, and Impact Attenuators – There are no proposed changes to the existing guide rail within the project area.

3.3.3.9. Utilities – Refer to Section 2.3.3.9 for a tabulation of existing utilities within the project area.

Coordination with all utility owners has been initiated and will be continued through the preliminary design stage. Upon design approval granted, utility impacts will be finalized and all necessary utility agreements will be in place prior to project authorization to advertise.

The proposed project will impact utilities within the corridor and will require permanent and temporary relocations.

Coordination with CHG&E has been on-going to ensure relocation occurs without delay to construction of the project.

3.3.3.10. Railroad Facilities – No railroad facilities have been proposed. The O&W Railroad corridor has been abandoned since 1957. No tie removal will be necessary for the preferred alternative, Option B-1, O&W Railroad corridor.

3.3.4. Landscape and Environmental Enhancements –

3.3.4.1. Landscape Development and Other Aesthetics Improvements – Landscaping development techniques will be employed to assure that the completed project is aesthetically pleasing. Plantings and turf establishment will be used for slope stabilization of new embankment surfaces or to

repair any areas that are disturbed during the construction of the project. Pedestrian and bicyclists views will include wooded forests along the preferred alternative's alignment. Two or three scenic views may also be "opened up" at various locations still to be determined.

3.3.4.2. Environmental Enhancements – Refer to Chapter 4 for complete discussion.

3.3.5. Miscellaneous –

3.3.5.(1) NYS Smart Growth Public Infrastructure Policy Act (SGPIPA) – the Smart Growth Screening Tool and Smart Growth Attestation form for the preferred alternative has been completed for this project and is included in Appendix I.

CHAPTER 4 - SOCIAL, ECONOMIC and ENVIRONMENTAL CONDITIONS and CONSEQUENCES

4.1. Introduction

The purpose of Chapter 4 is to identify the social, economic, and environmental consequences of this project; to identify avoidance or mitigation measures if necessary; to satisfy the applicable social, economic, and environmental laws; and to identify all permits and approvals that may be required prior to project construction.

4.1.1. Environmental Classification

4.1.1.1. NEPA Classification - The project qualifies to be progressed as a C List Categorical Exclusion under the provisions of the National Environmental Policy Act (NEPA), as defined by the Federal Highway Administration (FHWA) in 23 CFR 771. The Federal Environmental Assessment Worksheet (FEAW) is included in Appendix B. The FHWA will be the lead agency for NEPA.

4.1.1.2. SEQR Project Classification - In accordance with 6 NYCRR Part 617, "Procedures for Implementation of State Environmental Quality Review Act" Ulster County has determined on March 15, 2016 in Resolution #168 that the proposed project qualifies as an Unlisted Action. The proposed trail project does not meet any of the criteria included on the Type II list and does not exceed a threshold contained in the Type I list in section 617.4. Ulster County has declared itself lead agency and has issued a Negative Declaration as part of Resolution #168 and that an Environmental Impact Statement will not be prepared.

4.2. Social

4.2.1. Land Use

Option B-1, O&W Corridor: The proposed multi-use trail will utilize the abandoned O&W Railroad corridor. The project area is heavily vegetated and bisected by a foot path over the abandoned railroad. Currently, the land is utilized as an informal trail by walkers, runners, and bicyclists. The project corridor is owned and maintained by CHG&E from the western terminus to the I-87 overpass. CHG&E has transmission facilities throughout the project area as well as a substation adjacent to the proposed project alignment. CHG&E is in the early stages of plan development for rebuilding approximately 28 miles of their transmission facilities, beginning at the substation and proceeding north. Coordination with CHG&E has been on-going to ensure that both projects are technically feasible and compatible. The land between I-87 and Washington Avenue is owned by Ulster Savings Bank but is only utilized as an informal trail. The potential eastern terminus at Washington Avenue is adjacent to two hotels. Outreach to the hotel management has been on-going to ensure the construction of the proposed multi-use trail is mutually beneficial. Refer to Appendix H for Right-of-Way information.

Option B-2, U&D Corridor / US Route 209 ROW: The proposed multi-use trail would follow along the east side of US Route 209 then will utilize the county-owned U&D Railroad corridor. The U&D Corridor is utilized by the Catskill Mountain Railroad for seasonal events such as "The Polar Express." The corridor runs adjacent to agricultural land from the western terminus at the existing O&W Rail Trail parking lot on US Route 209 to the C9 Bridge over the Esopus Creek. From the C9 Bridge to Washington Avenue, the project area extends through wooded areas as well as developed parts of the City of Kingston. The potential eastern terminus at Washington Avenue is adjacent to two hotels. Outreach to the hotel management has been on-going to ensure the construction of the proposed multi-use trail is mutually beneficial.

4.2.2. Neighborhoods and Community Cohesion

This project would provide significant benefits to surrounding municipalities in Ulster County, including improved alternatives for multi-modal transportation, enhanced recreational opportunities, improved public health, and economic development and tourism benefits. The construction of the proposed Kingston Rail Trail will foster a sense of community by instituting alternative means of transportation for the general public in multiple municipalities. A Public Informational Meeting was held on December 8, 2015 to receive the community's feedback about the proposed project and to help the team address any concerns raised. The project received strong community support at this meeting. The project is consistent with the Ulster County's Long Range Transportation Plan as well as the Non-Motorized Transportation Plan which states that safer pedestrian and bicycle accommodations are a top priority. The main objective for both plans is to further develop and connect the County's trail network into a county-wide, sustainable non-motorized transportation system that will "reduce fossil fuel consumption, enable freedom of mobility, encourage more physical activity, allow children to walk or bike to school, reduce traffic congestion, and create economic growth" through increased recreational tourism.

4.2.3. General Social Groups Benefitted or Harmed

This proposed project would benefit all social groups and provide increased opportunities for persons with disabilities/ mobility impairment as well as residents or visitors who may not have motor vehicles. The existing O&W Rail Trail is used by a wide-range of residents and visitors and is accessible to persons of all ability levels and mobility abilities. Unfortunately, the City of Kingston residents typically need to drive to the trailhead as improved, accessible, and safer pedestrian routes from the City do not currently exist. The project will provide opportunities for Ulster County residents, including senior citizens and youth, to be more physically active, which will positively impact public health. The project will also allow expanded options for children and families to walk or bike to school, community facilities and other locations. The trail will be an important new connection for urban neighborhoods to open spaces and nature, which is also a key goal of the Ulster County Open Space Plan (2007).

4.2.4. Social Districts, Recreational Areas, and Places of Worship

There would be no permanent adverse impacts on any schools, recreation areas, churches, or businesses. The recreation facilities of Forsyth Park and Dietz Stadium, owned by the City of Kingston and used by the Kingston School District, will have easy access to the trail facilities. In addition to the recreational facilities located within the project area, the Pointe of Praise Church, located adjacent to Adirondack Transit Lines, will have easy access to the multi-use trail. There will be minimal temporary negative impacts during construction, but no permanent negative impacts are anticipated as a result of the proposed project. All construction operations will be contained to the corridor so there should be no impact to the traveling public. However, during all phases of construction, provisions will be made to maintain access to all side roadways, adjacent businesses, and residences. It is anticipated that trail development will have a positive impact on the City of Kingston, which currently has limited ADA-compliant trail facilities, as well as directly benefit nearby residents and neighborhoods.

4.3. Economic

This proposed Kingston Rail Trail will not negatively impact the local economy. To the contrary, this project and potential future phase connections, as well any future links, will provide an economic boost to the many local businesses within the project vicinity, such as two nearby hotel facilities and proximate restaurants. The project will boost local tourism and promote spending by recreational users. The trail construction will also create temporary contract and employment opportunities for area businesses and workers.

4.3.1. Regional and Local Economies

The proposed Kingston Rail Trail project will not negatively impact the regional or local economy. To the contrary, this project and any future connections would provide an economic boost to Ulster County. The project advances the County's goal of further developing and linking its trail network so that it becomes a world-class tourism destination linking the Walkway Over the Hudson to the Ashokan Reservoir and making the City of Kingston a future hub of three rail trails.

4.3.2. Specific Businesses Impacted

Central Hudson Gas and Electric (CHG&E) owns the property and has several transmission facilities along the O&W Corridor, between the western terminus to the I-87 underpass. The preferred alignment will proceed within CHG&E's Right-of-Way and a permanent easement will need to be acquired. The multi-use trail project will have a positive impact on CHG&E by establishing a paved surface that maintenance vehicles will use to access the facilities within their ROW.

Ulster Savings Bank owns the property between I-87 and Washington Avenue on the O&W Corridor, will have a positive impact from the completion of the project. Ulster Savings Bank will be able to utilize a paved trail surface between Washington Avenue and their property as an emergency access to their property.

Two adjacent hotel facilities (Super 8 and Best Western Plus), located along Washington Avenue, could benefit from their proximity to the future trail. Both businesses have been contacted and will be consulted throughout the project to ensure the trail benefits and does not negatively impact their respective operations.

4.3.2.1. Impacts on Existing Highway / Related Businesses – There are no impacts on highway related businesses in the project area as there are no commercial driveway crossings.

4.3.2.2. Impacts on Established Business Districts – There are no established business districts within or adjacent to the project limits.

4.3.2.3. Relocation Impacts – No residential or commercial properties will be displaced as a result of this project.

4.4. Environmental

4.4.1. Wetlands

4.4.1.1. State Freshwater Wetlands –

Option B-1, O&W Corridor: There is one New York State Department of Environmental Conservation (NYSDEC) regulated wetland identified as KW-18 in the project limits for Option B-1, O&W. This has a wetland class of 2 and is approximately 57 acres in size. For a wetland class 2, the proposed project must minimize degradation to, or loss of, any part of the wetland or its adjacent area and must minimize any adverse impacts on the functions and benefits that the wetland provides.

A wetland delineation was conducted by Foit-Albert Associates, P.C. in August 2015 to evaluate both alternatives and assess the project impact on existing wetlands utilizing wetlands data provided by Central Hudson Gas and Electric and captured by VHB, Inc. In October 2016, these wetland boundaries were confirmed and adjusted by a member of B&L's Ecology Group. The total anticipated impact to the State regulated wetland is less than 0.10 acre pending final design. The majority of the work will be conducted in existing rights-of-way (ROW) and previously disturbed and existing trail areas.

Option B-2, U&D Corridor / US Route 209 ROW: Will have no direct impacts on any NYSDEC regulated wetlands.

4.4.1.2. State Tidal Wetlands - This project is not located in an area under the influence of tidal waters and does not involve NYSDEC Tidal Wetlands. Therefore, no further review is required.

4.4.1.3. Federal Jurisdiction Wetlands – Based on National Wetland Inventory (NWI) mapping information, there are several wetland areas situated along the project corridor for both alternatives that have the potential to be impacted by the project. Additionally, the mapping identifies the Esopus Creek and its un-named tributaries situated within the project area as “permanent, non-tidal bodies of water.” Based on the preliminary designs for both alternatives, the disturbance is above the US Army Corps of Engineers (USACE) threshold and will require a Nationwide Permit. Both alternative options are anticipated to meet the conditions for a Nationwide #14 Permit from the USACE to cover any wetland and water impacts that may result. This permit and a Section 401 Water Quality Certification, if needed, will be obtained through the Joint Application Permit (JAP) process.

Option B-1, O&W Corridor alternative has no direct impacts to the Esopus Creek, but will have impacts on adjacent wetlands.

Option B-2, U&D Corridor includes a new pedestrian bridge over the Esopus Creek, rehabilitation to the existing C-9 railroad bridge, and will also have impacts on adjacent wetlands.

4.4.1.4. Executive Order 11990 – This order was enacted to minimize the destruction, loss or degradation of federal-jurisdictional wetlands. A field survey was performed at the project site and it was determined that there are federal-jurisdictional wetlands as defined by the USACE which will be affected by this project. The Esopus Creek and its un-named tributaries are considered “Waters of the United States” and fall under USACE jurisdiction. Therefore, a Programmatic EO 11990 Wetlands Finding will be required due to the fact that the project is federally-aided, involves fill in wetlands requiring a USACE Section 404 permit and a NYSDEC Article 24 permit.

4.4.1.5. Mitigation Summary – Pending final design, minor impacts to federal and state jurisdictional wetlands are proposed. There is no practicable alternative to construction in either of the alternatives and all practicable measures to minimize harm to the wetlands will be incorporated into the design.

Current Federal and State Standards for Highway Construction and/or Improvements mandate minimum standards that will be used for this project. Every effort will be made to avoid wetland impacts or to minimize wetland impacts. However, based on the Standards, minor areas along both alternatives will be impacted and cannot be avoided.

In order to minimize impacts to the wetlands, the side-slopes of the fill will be established at as steep a slope as possible while still considering user safety. The offset, or space, between the trail and the edge of the embankment will be kept to a minimum as per federal, state and local guidelines with regards to safety.

4.4.2. Surface Waterbodies and Watercourses - The project area for both alternative routes is located within a suburban/rural area and the surface water generally drains to a combination of open and closed drainage features maintained by Ulster County. The closed drainage system discharges to locations along portions of Esopus Creek and its tributaries within the project corridor. Areas of open water drainage features occur at various locations along the project corridor. The surface water drainage mainly discharges into Esopus Creek and ultimately discharges to the Hudson River.

4.4.2.1. Surface Water Classification and Standards – The NYSDEC requires a Section 401 Water Quality Certification (WQC) for all federal and state aided projects with a disturbance to a watercourse, including its bed and banks. The NYSDEC stream classification for the water bodies identified in the project area for both alternatives, as contained in 6 NYCRR, Chapter X and Part 701, are shown in Tables A and B below.

Table A
Surface Water Classifications – Option B-1, O&W

Stream	Class	Standard	Impact
Unnamed Tributary and enters Esopus Creek from the south (Regulation 861-104)	C	C	New or rehabilitation of culvert
Unnamed Tributary and enters Esopus Creek from the south (Regulation 861-110)	D	D	New or rehabilitation of culvert

Table B
Surface Water Classifications – Option B-2, U&D

Stream	Class	Standard	Impact
Esopus Creek (Regulation 861-3)	B	B(T)	Rehabilitation of railroad bridge and new trail bridge
Unnamed Tributary and enters Esopus Creek from the south (Regulation 861-104)	C	C	New or rehabilitation of culvert

The best use of Class B waters is primary and secondary contact recreation and fishing, and the waters are suitable for fish propagation and survival. The best use of Class C waters is fishing, and the waters are suitable for fish propagation and survival. The water quality is also suitable for primary and secondary recreation contact. The best use of Class D waters is fishing.

It is noted that a significant portion of the project area is serviced by an open drainage system that drains through overland flows within the project corridor. It is also noted that the Towns of Hurley, Ulster, and the City of Kingston are designated as a regulated Municipal Separate Storm Sewer System (MS4) and therefore must review any stormwater protection elements of the plan.

4.4.2.2. Stream Bed and Bank Protection - A NYSDEC Article 15 permit will not be required for Option B-1 as both streams fall below the Class and Standard (C,C(T or TS)) for jurisdiction. Given that Option B-2 crosses the Esopus, an Article 15 would be required as this waterbody is Class B with B(T) standards.

4.4.2.3. Mitigation Summary - A NYSDEC State Pollutant Discharge Elimination System (SPDES) permit for construction will be required. The Project will also require a NYSDEC Section 401 Water Quality permit.

During construction, erosion from exposed surfaces may flow into the existing surface water conveyance system and/or into adjacent surface water streams and rivers. These flows will be controlled by the use of sediment and erosion control techniques. These techniques will be part of a sediment and erosion control plan to be implemented during construction and will conform to the requirements of the NYS Department of Transportation Standard Specification for Temporary Soil Erosion and Water Pollution Control, the NYS Standards and Specifications for Erosion Control and Sediment Control, and the SPDES Construction requirements. As part of the SPDES requirements, a Notice of Intent (NOI), Erosion and Sediment Control Plan, and a Stormwater Pollution Prevention and Control Plan (SWPPP) will be required for both Alternatives.

4.4.3. Wild, Scenic, and Recreational Rivers

4.4.3.1. State Wild, Scenic and Recreational Rivers - There are no waters located within the project corridor that are included in the New York State Wild, Scenic, and Recreational River System Act (Title 27 of Article 15 of the ECL).

4.4.3.2. National Wild and Scenic Rivers - There are no waters located within the project corridor that are listed in the National Program as wild, scenic, or recreational water (National Wild and Scenic Rivers Act – 16 U.S.C. 1271-1287). No further review is required for the proposed project.

4.4.3.3. Section 4(f) Involvement – The proposed project and the design alternatives do not require the acquisition of right-of-way from a park, recreational facility, or wildlife/waterfowl refuge. Therefore, further processing under Section 4(f) (23 CFR Part 774) is not required.

4.4.3.4. Mitigation Summary - No further studies are required.

4.4.4. Navigable Waters

4.4.4.1. State Regulated Waters – Esopus Creek is considered navigable under 6NYCRR Part 608 of the Conservation Law and will require an Article 15 Disturbance of Bed and Banks permit from the NYSDEC. However, the un-named tributaries to Esopus Creek are not considered navigable and will not require permits.

4.4.4.2. Office of General Services Lands and Navigable Waters –

4.4.4.3. Rivers and Harbors Act – Section 9 – The Esopus Creek and its tributaries above the Cantine Dam in Saugerties are not considered navigable by the United States Coast Guard (USCG) and therefore, will not require additional processing under USCG Section 9.

4.4.4.4. Rivers and Harbors Act – Section 10 – The Esopus Creek and its tributaries above the Cantine Dam in Saugerties are not considered navigable water bodies by the USACE. Therefore, the bridge work associated with this project will not be subject to permits issued by the USACE (Section 10 permit).

4.4.5. Floodplains

4.4.5.1. State Flood Insurance Compliance Program and Federal Floodplain Management- The Flood Hazard Boundary Maps for the Town of Hurley (36111C0460F and 36111C0470E) were reviewed. The Federal Emergency Management Agency (FEMA) mapping indicates that both alternatives of the project potentially pass through and adjacent to a Zone AE Flood Zone and a Zone X Flood Zone. The Zone AE Flood Zone is a FEMA area of special flood hazard that is inundated by the 100-year flood, where base flood elevations have been determined. The Zone X flood area is an area of 500-year flood with average depths of less than one (1) foot or with drainage areas less than one (1) square mile, and areas protected by levees from the 100-year flood.

NYSDEC compliance under 6NYCRR Part 502 would be required if the proposed construction activities alter the flood plain water elevations by more than 1.0 ft. The proposed project will not significantly impact the flood plain.

4.4.5.2. Executive Order 11988 - Proof of National Flood insurance Program (NFIP) insurance is required. As the Proposed Project would not constitute a substantial improvement, it would comply with 24 CFR §55 and would not have any impact to floodplain management.

4.4.6. Coastal Resources

4.4.6.1. State Coastal Zone Management Program - This project is not located within the Coastal Zone Boundary, but it is adjacent to the Esopus Creek, which is a designated inland waterway subject to the State's Coastal Management Program review of activities that impact the waterway. Based on the

scope of work and the anticipated disturbance, it is expected that the project will meet any needed consistency determination under the Coastal Zone Program.

4.4.6.2. State Coastal Erosion Hazard Area - This project is not located in a New York State Department of State Coastal Erosion Hazard Area. No further coastal zone studies are required.

4.4.6.3. Waterfront Revitalization and Coastal Resources Program – This project is not located within the boundaries of an approved Local Waterfront Revitalization area.

4.4.6.4. Federal Coastal Barrier Resources Act (CBRA) and Coastal Barrier Improvement Act (CBIA) - This project is not located within an area that contains coastal fish and wildlife habitat. Therefore, no further investigation is required.

4.4.7. Groundwater Resources, Aquifers, and Reservoirs

4.4.7.1. Aquifers – The project corridor is situated over a NYSDEC Primary or Principal aquifer as identified in Kantrowitz and Snavely (1982). Based on the scope of work, and the anticipated disturbance, surface water will not be impacted, and will not affect the aquifer recharge area within the project corridor. Therefore, supplemental groundwater investigations and Toler analysis will not be required.

4.4.7.2. Drinking Water Supply Wells (Public and Private Wells) and Reservoirs - The Rolling Meadows maintains a pump station and water lines that cross the O&W Corridor. The proposed project is minimally invasive and will not have an impact on established well heads or groundwater levels within the project corridor. Trail projects are not typically associated with permanent or significant changes to groundwater levels; therefore, no impacts to adjacent private water supply wells are anticipated. Best Management Practices (BMPs) including erosion and sediment control measures, stormwater management considerations, and construction chemical storage and handling procedures will be implemented as part of the project to provide further water quality assurances during construction.

4.4.8. Stormwater Management - This project is expected to disturb over one acre of land; therefore, a State Pollution Discharge Elimination System (SPDES) permit will be required. As a recreational facility, this project is not required to assess the requirements for stormwater management practices, all appropriate erosion and sediment control measures will be implemented as part of the proposed project. If reasonable and feasible, simple stormwater management practices will also be considered for implementation.

A SPDES General Permit for Construction Activities (GP-0-15-002) will be obtained from the NYSDEC prior to construction. A SWPPP with the appropriate sediment and erosion control measures and post construction water quality improvements, as necessary, will be developed.

4.4.9. General Ecology and Wildlife Resources

4.4.9.1. Fish, Wildlife, and Waterfowl -

4.4.9.1.(1) Habitat Areas, Wildlife Refuges, and Wildfowl Refuges –

4.4.9.1.(2) Endangered and Threatened Species - The NYSDEC Natural Heritage Program (NHP) was contacted on February 8, 2016 for information regarding the reported presence of any NYS endangered or threatened species or significant habitats located within or adjacent to the project corridor. A response from NHP, which was received on March 8, 2016, reported no records of rare or state-listed animals or plants, or significant natural communities, directly at the site. However, state-listed animals have been documented within the project vicinity. The bald eagle (*Haliaeetus leucocephalus*) has been documented within 0.5 miles of the project site and the northern long-eared bat (*Myotis septentrionalis*) has been documented within 3 miles of the project site. A copy of the coordination letter that was submitted to the NHP, as well as the response is provided in Appendix B.

The USFWS Information, Planning and Conservation (IPaC) online planning tool Trust Resource List generated for the proposed project lists the following Federally-listed species as having the potential to

occur within the vicinity of the Proposed Action: Indiana bat (*Myotis sodalis*) - endangered, the northern long-eared bat (*Myotis septentrionalis*) – threatened, and the bog turtle (*Clemmys muhlenbergii*) - threatened.

Forested areas were noted along much of the project corridor, however; tree removals will be primarily located at the western terminus of the project to facilitate the connection to the existing O&W Rail Trail. Should any removal of trees greater than 3" diameter at breast height be required, removal would only be conducted between October 31 and March 31 to avoid the roosting periods of the northern long-eared bat. In a letter dated May 9, 2017 FHWA has recommended that the project is *Likely to Adversely Affect* the federally listed Indiana Bat and the Northern Long-eared Bat based on tree clearing being located outside of the 100 ft. buffer of the existing roadway. Mitigation for this project will be completed through a mutually agreed upon in-lieu-fee (ILF) program to the effect of \$855.90 to conserve 0.15 acres of Indiana Bat habitat. A copy of the letter received from FHWA has been included in Appendix B.

A habitat assessment was completed in October 2016 and it was determined there was a lack of suitable bog turtle habitat due to inappropriate soils, hydrology, and wetland vegetation. A recommendation of No Effect is recommended for this species. A letter of concurrence has been received by FHWA stating the project will have *No Effect* on the.

4.4.9.1.(2) Invasive Species – Invasive species including common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) and garlic mustard (*Allaria petiolata*) were identified within the project limits. Precautions will be taken to prevent the introduction of additional invasive species during project design and construction.

4.4.9.1.(3) Roadside Vegetation Management – Existing roadside/trailside vegetation consists primarily of semi-maintained grassed area and deciduous forested areas. The management of roadside vegetation during and after construction will adhere to guidelines established by the NYSDOT. Seeding will be utilized to the extent necessary during construction to re-establish vegetation in disturbed areas; vegetating exposed soils minimizes the potential for soil erosion and water quality impacts.

4.4.10. Critical Environmental Areas

4.4.10.1. State Critical Environmental Areas – This project does not involve work in or near a Critical Environmental Area.

4.4.10.2. State Forest Preserve Lands - This project does not involve work in or near State Forest Preserve Lands.

4.4.11. Historic and Cultural Resources

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

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

Option B-1, O&W Corridor: Is located within an archeological sensitive area according to the New York State Historic Preservation Office (NYSHPO) Cultural Resource Information System (CRIS) website. The potential eastern terminus for Option B-1, at the intersection of Schwenk Drive and Fair Street, is approximately 375 feet away from the limits of the Kingston Stockade Historic District in the City of Kingston.

Option B-2, U&D Corridor / US Route 209 ROW: Is located adjacent to US Route 209 and along the county-owned U&D Railroad Corridor, is also within an archeological sensitive area according to the New York State Historic Preservation Office (NYSHPO) Cultural Resource Information System (CRIS) website. The potential eastern terminus for Option B-2, at the intersection of Schwenk Drive and Fair Street, is also approximately 375 feet away from the limits of the Kingston Stockade Historic District in the City of Kingston.

NYSDOT has reviewed both corridor options for the project in accordance with Section 106 of the National Historic Preservation Act and determined that the project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1).

4.4.11.3. Architectural Resources - The proposed project does not involve federally owned, jurisdictional or controlled property that is eligible for inclusion in the National Register of Historic Places. Therefore, Section 110 does not apply.

4.4.11.4. Archaeological Resources – As discussed above, although the project is located within a mapped archeological sensitive area, the project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1). Therefore, no further actions will be taken regarding archaeological resources and Section 106.

4.4.11.5. Historic Bridges - There are no bridges located in the project area that are listed on the NYSDOT's Historic Bridge Inventory. Additionally, no structures located within the project limits are included on the State or National Registers of Historic Places.

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

4.4.11.7. Native American Involvement - NYSDOT has reviewed both corridor options for the project in accordance with Section 106 of the National Historic Preservation Act and determined that the project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1).

4.4.12. Parks and Recreational Resources

4.4.12.1. State Heritage Area Program – Portions of both alternatives are located within the Kingston New York State Heritage Area.

4.4.12.2. National Heritage Areas Program – Both alternatives are located within the Hudson River Valley National Heritage Area.

4.4.12.3. National Registry of Natural Landmarks – The project area is located in an area that is mixed woods, brush, and field, with clustered, rural residential properties and few commercial properties. Vegetation in the project area is a mixture of wooded areas with low-lying brush and fields immediately adjacent to the project site. Physical impact to the project area will be minimal and there will be no change to the character of the natural surroundings. Additionally, there are no identified natural landmarks within the project corridor.

4.4.12.4. Section 4(f) Involvement - The proposed project and the design alternatives do not require the acquisition of right-of-way from or impacts to a park, recreational areas, or wildlife/waterfowl refuge. Therefore, further processing under Section 4(f) is not required.

4.4.12.5. Section 6(f) Involvement – The proposed project does not require the acquisition of additional right-of-way for the purpose of conversion to highway that has been federally funded through the Land and Water Conservation Fund Act (LWCFA). Therefore, further processing under Section 6(f) is not required.

4.4.12.6. Section 1010 Involvement – Properties improved or developed with assistance from the Urban Park and Recreation Recovery (UPARR) program cannot be converted to uses other than for public recreation without approval from the Secretary of the Interior. UPARR lands are not associated with the project. Therefore, a Section 1010 property review by the National Park Service will not be required.

4.4.13. Visual Resources – The project area does not contain any features that would be considered a natural landmark. The project area is located in an area that is mixed woods, brush, wetlands, and field, with clustered, rural residential properties and few commercial properties in the central portion of the corridor. Vegetation in the project area is a mixture of wooded areas with low-lying brush and fields

immediately adjacent to the project site. Physical impact to the project area will be minimal and there will be no change to the character of the natural surroundings. Additionally, there are no identified natural landmarks within the project corridor.

4.4.13.1 Effects Assessment - Physical impact to the project area will be minimal and there will be no change to the character of the natural surroundings. Additionally, there are no identified natural landmarks within the project area.

4.4.14 Farmlands

4.4.14.1. State Farmland and Agricultural Districts –

Option B-1, O&W Corridor: Is not located within an Ulster County Agricultural District or a New York State Agricultural District.

Option B-2, U&D Corridor / US Route 209 ROW: Is located within the ULST004 agricultural district certified pursuant to the Agricultural and Markets Law, Article 25-AA, Section 303 and 304.

4.4.14.2 Federal Prime and Unique Farmland - In accordance with the Federal Farmland Protection Policy Act, the project was evaluated with respect to the conversion of prime, unique, statewide, or local important farmland.

Option B-1, O&W Corridor: Since none of the soils within the project area for Option B-1, O&W are considered Prime or Unique, there will be no requirement to file a USDA Form AD 1006 for the project, and further investigations are not required.

Option B-2, U&D Corridor / US Route 209 ROW: The land on the northern side of Option B-2, U&D is located within the ULST004 Agricultural District. Pending preferred alternative selection and final design, a USDA Form AD 1006 might be required.

4.4.15 Air Quality

4.4.15.1. Transportation Conformity - The project scope is such that there are no added travel lanes or traffic features that would increase stopping times that would lead to an increase in air emissions within the project corridor. Therefore, further evaluations under the Clean Air Act are not required.

4.4.15.2. Carbon Monoxide (CO) Microscale Analysis – Ulster County is an attainment area for carbon monoxide and ozone. An air quality analysis for CO is not required since this project will not increase traffic volumes, reduce source-receptor distances by 10% or more, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS. The project does not require a project-level conformity determination.

4.4.16. Energy - It is not anticipated that the project will change travel patterns or alter vehicle-operating speeds in the project area. As such, energy consumption will not change as a result of the project. Therefore, an energy evaluation will not be required.

4.4.17. Noise - In accordance with the Federal Highway Administration's (FHWA) highway traffic noise regulation 23 CFR 772, a traffic noise analysis is not required for the following reasons:

- The project is not defined as a Type I or Type II Federal Highway Project.
- Class II projects (NEPA Categorical Exclusions) do not require a noise analysis.

4.4.18. Asbestos

4.4.18.1. Screening – A visual asbestos assessment was conducted for the project corridor. The primary objective of the assessment was to determine the potential, based on visual observations, for encountering Asbestos Containing Materials (ACMs) in areas that may be affected by the proposed construction.

4.4.18.2. Assessment and Quantification – The Asbestos Assessment was completed in general accordance with the February 2001 NYSDOT Environmental Analysis Bureau Environmental Procedures Manual, Volume II, Chapter 1.3 and the project scope.

4.4.18.3. Mitigation Summary - Based on visual observations during the site reconnaissance, there does not appear to be asbestos-containing materials visually present within the project limits. However, should suspect ACMs be encountered during construction, the materials should be sampled by a qualified sampling technician to determine asbestos content and disposal options.

4.4.19. Hazardous Waste and Contaminated Materials

4.4.19.1. Screening and Site Assessment - A Hazardous Waste/Contaminated Materials (HW/CM) Assessment was completed for the project area. The primary objective of this assessment was to render an opinion as to whether surficial or historical evidence indicates the presence of recognized environmental conditions that could result in the presence of hazardous materials in the environment. The assessment was completed in general accordance with the February 2001 EPM guidelines prepared by the NYSDOT - Environmental Analysis Bureau.

Public information was obtained from various federal, State, and local agencies that maintain environmental regulatory databases. These databases provide information about the regulatory status of a property and incidents involving use, storage, spilling or transportation of oil or hazardous materials. The search distances for the federal, state and local databases were in conformance with the search distances established in ASTM E-1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

A general site reconnaissance was conducted to make observations of surficial conditions and to observe possible evidence of recognized environmental conditions, which could result in the presence of hazardous materials in the environment.

In addition to the potential environmental concerns identified through visual observation, published Federal and State databases were reviewed to determine if sites within or adjacent to the project corridor have a history of use and/or disposal of contaminated/hazardous wastes.

The following list includes, but is not limited to, those databases researched.

Federal Agency Databases

- National Priorities List (NPL)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- RCRA Corrective Action Sites (CORRACTS)
- Resource Conservation and Recovery Information System (RCRIS)
- Emergency Response Notification System (ERNS) Database
- Facility Index System/Facility Identification Initiative Program (FINDS)
- RCRA Administration Action Tracking System (RAATS)
- Toxic Release Inventory System (TRIS)
- Toxic Substances Control Act (TSCA)

State Agency Databases

- Leaking Tanks (LTANKS) Database
- State Hazardous Waste Site (SHWS) Inactive Hazardous Wastes Disposal Sites
- Solid Waste Facilities/Landfills (SWF/LF)
- Underground Storage Tank (UST) Petroleum Bulk Storage (PBS) Database
- Brownfield Cleanup Agreements (BCP)
- Above Ground Storage Tank (AST) Petroleum Bulk Storage (PBS) Database

- Chemical Bulk Storage (CBS) AST Database
- New York State Spills (SPILLS) Database
- CBS UST Chemical Bulk Storage Database
- UST Major Oil Storage Facilities (MOSF) Database

Review of the above-listed databases indicates that thirty (30) Federal and State sites are identified within the project search radius limits. These sites include: one (1) NYSDEC Inactive Hazardous Waste site; one (1) Active Hazardous Spill site; seven (7) Closed Hazardous Spills sites; forty three (43) Leaking Tank sites; thirteen (13) Underground Storage Tank sites; five (5) Aboveground Storage Tank sites; one (1) New York Brownfields site; three (3) Historical Underground Storage Tank sites; (11) Spills sites; seven (7) PBS sites; eight (8) RCRIS-Generator/Transporter sites; and one (1) CBS site.

Table C
Agency Database Findings Adjacent to Corridor – Option B-1, O&W

Facility	Address/Location	Database	Status
Trailways Bus Station	499 Hurley Ave, Adjacent to the South	NY LTANKS NY Spills (2/6/07)	Tanks may still be present, Corrective Action Taken
Hurley Avenue Substation	Adjacent to the South, upgradient	NY Spills: 5/5/2002, 11/6/1993, 9/25/1995	No Further Action, Corrective Action for all three incidents
Trailways Property	297 Hurley Ave, Adjacent to the North	NY Spills, 7/2/06	Corrective Action Taken
Adirondack Transit Lines, Inc.	267-291 Hurley Ave, Adjacent to the North	RCRA-CESQG FINDS NY MANIFEST RI MANIFEST NY CBS NY Spills (2/26/07) NY UST NY AST	Violations Closed 12/2/09 Corrective Action Taken Three 10,000 gal diesel, one 6,000 gal Waste Oil, one 6,000 gal motor oil, one 1,000 gal #2 fuel oil, and one 6,000 gal heating oil USTs in service. Two used oil, one kerosene, one transmission fluid, ASTs in use. No reports of leaks or spills.
The Daily Freeman	79 Hurley Ave, Adjacent to the South	NY UST RCRA NonGen/NLR FINDS NY Manifest NY LTANKS	Four Closed USTs Corrective Action Taken
Apartment Building	500 Washington Ave, Adjacent to the North	NY LTANKS NY Spills NY UST NY HIST UST	Corrective Action Taken Five Closed and Removed USTs
Meth Lab Cleanup	503 Washington Ave, under the Washington Ave overpass	NY Spills, 9/2/14	Corrective Action Taken
Metropolitan Life Insurance Co	180 Schwenk Dr, Adjacent to the South	RCRA NonGen/NLR FINDS NY Manifest	No Violations

Ulster Savings Bank	180 Schwenk Dr, Adjacent to the South	NY Spills, 6/4/08	Corrective Action Taken
Laboratory Corporation of America	142 Schwenk Dr, Adjacent to the South	LTANKS RCRA NonGen/NLR FINDS NY Manifest	Corrective Action Taken No Violations
Utility Platers	412-420 Washington Ave, Adjacent to the South	RCRA SQG NY UST NY Spills NY Manifest	No Violations Tank Closed Corrective Action Taken
Romeo Kia	111 Schwenk Dr, Adjacent to the South	NY LTANKS NY Spills	Corrective Action Taken

Table 4
Agency Database Findings Adjacent to Corridor – Option B-2, U&D

Facility	Address/Location	Database	Status
Apartment Building	500 Washington Ave, Adjacent to the North	NY LTANKS NY Spills NY UST NY HIST UST	Corrective Action Taken Five Closed and Removed USTs
Meth Lab Cleanup	503 Washington Ave, under the Washington Ave overpass	NY Spills, 9/2/14	Corrective Action Taken
Metropolitan Life Insurance Co	180 Schwenk Dr, Adjacent to the South	RCRA NonGen/NLR FINDS NY Manifest	No Violations
Ulster Savings Bank	180 Schwenk Dr, Adjacent to the South	NY Spills, 6/4/08	Corrective Action Taken
Laboratory Corporation of America	142 Schwenk Dr, Adjacent to the South	LTANKS RCRA NonGen/NLR FINDS NY Manifest	Corrective Action Taken No Violations
Utility Platers	412-420 Washington Ave, Adjacent to the South	RCRA SQG NY UST NY Spills NY Manifest	No Violations Tank Closed Corrective Action Taken
Romeo Kia	111 Schwenk Dr, Adjacent to the South	NY LTANKS NY Spills	Corrective Action Taken

As open regulatory agency files exist, and previous site uses of potential environmental concern were identified within the search radius, supplemental environmental investigations may be warranted. The nature and extent of such supplemental investigations will be identified as the design alternatives are more fully developed. However, Chapter 5.1 of the EPM states that “any NYSDOT project that involves excavation adjacent to an open spill must be assessed for petroleum contamination in the right-of-way”. Therefore, a Freedom of Information Law (FOIL) request has been submitted to the NYSDEC to obtain additional information regarding the UST/AST sites situated immediately adjacent to the project corridor, as well as former spill sites along the corridor. A Freedom of Information Law (FOIL) request has also been submitted to the US EPA to obtain additional information regarding the RCRA Generators. To date, a response to our request has not been received.

4.4.19.2. Mitigation Summary –Based on the final findings of the records review, recommendations for subsurface investigations will be prepared.

4.5. Construction Effects - During construction of the project, some inconvenience will be experienced by the public due to temporary existing trail closures. This will be kept to a minimum. Residents located near the project area may experience an increase in noise and dust during construction. However, the increases will be kept to a minimum. This project will not have permanent or long-term impact once construction operations end.

4.6. Indirect (Secondary) Effects - This project will have no impact on growth or development in the area.

4.7. Cumulative Effects - This project will have no direct cumulative effects on the environment in the area.

CHAPTER 5 – EVALUATION AND COMPARISON OF ALTERNATIVES

Based on the investigations, discussion herein, official and public input, and taking into consideration the social, economic and environmental impacts, the alternative that best meets the project objectives is Alternative B – Reconstruction.

Two different reconstruction options (B-1 and B-2) were investigated and presented at the stakeholder meeting as well as the public informational meeting. The proposed reconstruction options include the construction of a dedicated multi-use trail along the O&W Railroad corridor, which is referred to as “Option B-1,” or along US Route 209 and the U&D Railroad Corridor, which is referred to as “Option B-2.” Both alternatives are discussed in greater detail in Chapter 3. The preferred Reconstruction Option (Option B-1) was selected based on social, economic, and environmental impacts as well as feasibility, schedule, project budgets and reasonableness.

5.1. Social Considerations

Prior to the public informational meeting, both reconstruction alternatives were investigated to determine the potential impacts on current land use, private properties, adjacent neighborhoods, general social groups, and social districts. Option B-1, O&W Corridor, is currently utilized by walkers, runners, and bicyclists but due to the uneven terrain and inconsistent surface material, it is not fully accessible for all potential trail users. Option B-2, U&D Corridor / US Route 209 ROW, is currently utilized and under permit by a tourism railroad operator. Additionally, without a western connection, it is preferred to create a more direct route between the O&W Rail Trail and the City of Kingston.

Option B-1, O&W Corridor, requires Right-of-Way acquisitions and easements while Option B-2, U&D Corridor, requires no ROW acquisitions. During the stakeholder meeting, the commercial property owners were receptive to the project and are willing to cooperate in the ROW process. No discussions of values or any details of the ROW process were discussed with any property owners.

5.2. Economic Considerations

A significant factor concerning the design and construction of the proposed Kingston Rail Trail is the available funding. As stated in Section 2.1 of this report, “The project was included on the State Transportation Improvement Plan (“STIP”) in 2010 at which time the County released an RFQ for engineering design. After selecting an engineering firm, the County was unable to negotiate a fee for the design and Right-of-Way services within the existing STIP budget. The project did not advance, and design was delayed pending additional funding. In 2014, Ulster County amended the STIP to add additional funding to the project in order to move forward, and selected an engineering consultant to work with the County on evaluation of two potential alternative routes.” Due to initial anticipated property impacts, Ulster County amended the TIP in 2016 to facilitate preliminary Right-of-Way acquisitions. Consequently, it is considered imperative for the design alternatives to fit within the available funding.

Both alternatives will accomplish the task of connecting the existing O&W Rail Trail to the City of Kingston. However, for Option B-2, U&D Corridor to accomplish the task, the alternative will need to cross the Esopus Creek twice. This will require the construction of a new pedestrian bridge adjacent to the existing structure carrying US Route 209 and the rehabilitation of the existing C9 Bridge on the U&D Railroad corridor. The costs to complete the two bridges exceed the available funding, and therefore, Option B-2 is not considered feasible.

Option B-1, O&W Corridor, satisfies the project objectives, is reasonable and feasible, within the scope of the project, and will not result in significant impacts. Therefore, the O&W Corridor option has been selected as the preferred option to progress to final design.

EXHIBIT 5.2.1 COMPARISON OF ALTERNATIVES CONSTRUCTION PROJECT COSTS		
ACTIVITIES	OPTION B-1, O&W	OPTION B-2, U&D
	O&W RAIL TRAIL TO WASH. AVE.	O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:		
CLEARING & GRUBBING:	\$ 50,000	\$ 25,000
EARTHWORK:	\$ 150,000	\$ 174,000
SUBBASE:	\$ 130,000	\$ 122,000
PAVEMENT:	\$ 230,000	\$ 210,000
GUIDERAIL & FENCE	\$ 110,000	\$ 358,000
DRAINAGE	\$ 150,000	\$ 20,000
LIGHTING	\$ 30,000	\$ 25,000
WORK ZONE TRAFFIC CONTROL:	\$ 20,000	\$ 50,000
EROSION CONTROL:	\$ 30,000	\$ 30,000
LANDSCAPE:	\$ 50,000	\$ 50,000
STRUCTURES	\$ 250,000	\$ 3,000,000
TRAILHEAD/PARKING LOT	\$ 80,000	\$ 80,000
SIDEWALK:	\$ 20,000	\$ 20,000
SUBTOTAL CONSTRUCTION ITEMS:	\$ 1,300,000	\$ 4,164,000
CONTINGENCY (15% @ DESIGN APPROVAL)	\$ 195,000	\$ 625,000
SUBTOTAL (2017 DOLLARS):	\$ 1,495,000	\$ 4,789,000
FIELD CHANGE ORDER (USE 5%)	\$ 75,000	\$ 240,000
SURVEY	\$ 30,000	\$ 90,000
MOBILIZATION (4%)	\$ 59,000	\$ 192,000
SUBTOTAL (2017 DOLLARS):	\$ 1,659,000	\$ 5,311,000
EXPECTED INFLATION AWARD AMOUNT (2018) +1.5%	\$ 30,000	\$ 80,000
TOTAL PROJECT CONSTRUCTION COSTS (2018 DOLLARS):	\$ 1,689,000	\$ 5,391,000
ENGINEERING	\$ 220,000	\$ 500,000
CONSTRUCTION INSPECTION & ADMINISTRATION	\$ 130,000	\$ 500,000
ROW INCIDENTALS AND ACQUISITIONS	\$ 85,000	\$ -
TOTAL COSTS:	\$ 2,124,000	\$ 6,391,000

5.3. Environmental Considerations

A preliminary environmental assessment was performed for both alternatives to determine if either option would have a significant impact on the environment. It was determined, based on the assessments and investigations that neither option will significantly impact the environment.

Option B-1, O&W Corridor, satisfies the project objectives, is reasonable and feasible, within the scope of the project, and will not result in significant environmental impacts. Therefore, the O&W Corridor option has been selected as the preferred option to progress to final design.

CHAPTER 6 – PROJECT COORDINATION

This design report has been prepared in accordance with the NYSDOT and the FHWA. The coordination with the federal, state, and local agencies is ongoing.

6.1. Early Coordination Process

Early coordination has been made with the environmental regulatory agencies (SHPO, NYSDEC, and the USFWS) concerned with the project site: floodplains, cultural resources, water quality, and endangered species. Correspondence with such agencies can be found in Appendix B.

6.2. Meeting with Community Groups and Individuals

An initial project walk-through was performed on May 1, 2015 with representatives from Ulster County and members of the Community Advisory Committee. The purpose of field meeting was to walk both corridors and openly discuss and collectively collaborate on potential opportunities, challenges and solutions that may arise during the design process.

One (1) Stakeholder Meeting occurred on October 13, 2015. The meeting was held to present the feasible alternatives to the local affected business owners and other interested parties to openly discuss suggestions and concerns about the project to Ulster County representatives and the design team. The majority of the meeting focused on Option B-1, O&W Corridor since that was the alignment that affected the stakeholders present at the meeting. The stakeholders were not opposed to the project so long as their rights as property owners were not infringed upon. CHG&E stated that they are in the early stages of plan development for rebuilding their transmission system along the O&W Corridor, north of the substation. Coordination with CHG&E is on-going to ensure both projects are technically feasible, compatible, and will not result in re-work as a result of construction operations. All information and sign-in sheets from the meeting are located in Appendix G.

A Community Advisory Committee (CAC) meeting was held on November 12, 2015 to present the findings of the preliminary design studies completed to date and ask for input and feedback on the preliminary alignment of the proposed multi-use trail. After presenting each alternative, the multiple termini locations and discussing potential impacts and costs associated with each alternative, the CAC members expressed a consensus of support to Option B-1, O&W Corridor.

One (1) Public Informational Meeting (PIM) was held on December 8, 2015. At the PIM, residents, stakeholders, and business owners were able to learn about the alignment options and express their opinions, suggestions, and concerns about the project to Ulster County representatives. Each alternative and corresponding options were discussed and the preferred, most feasible alternative was identified as the O&W Route. One aspect of the project that drove marked conversation was the eastern terminus location at Washington Avenue. The public was concerned about trail users crossing Washington Avenue without some type of traffic control device for assistance. As a result of the dialogue and discussions between county officials, crossing options are being investigated as part of the project. There were no written comments received from any participants as a result of the December PIM. All information and sign-in sheets from the meeting are located in Appendix G.

Appendix A

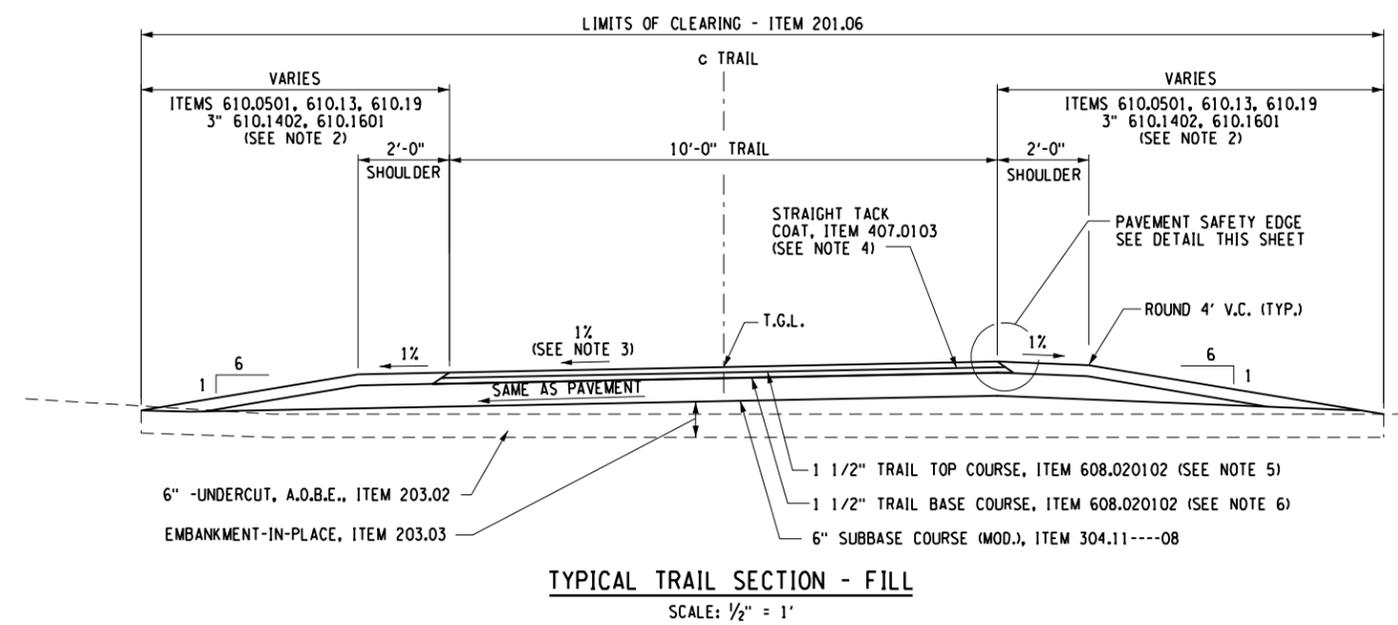
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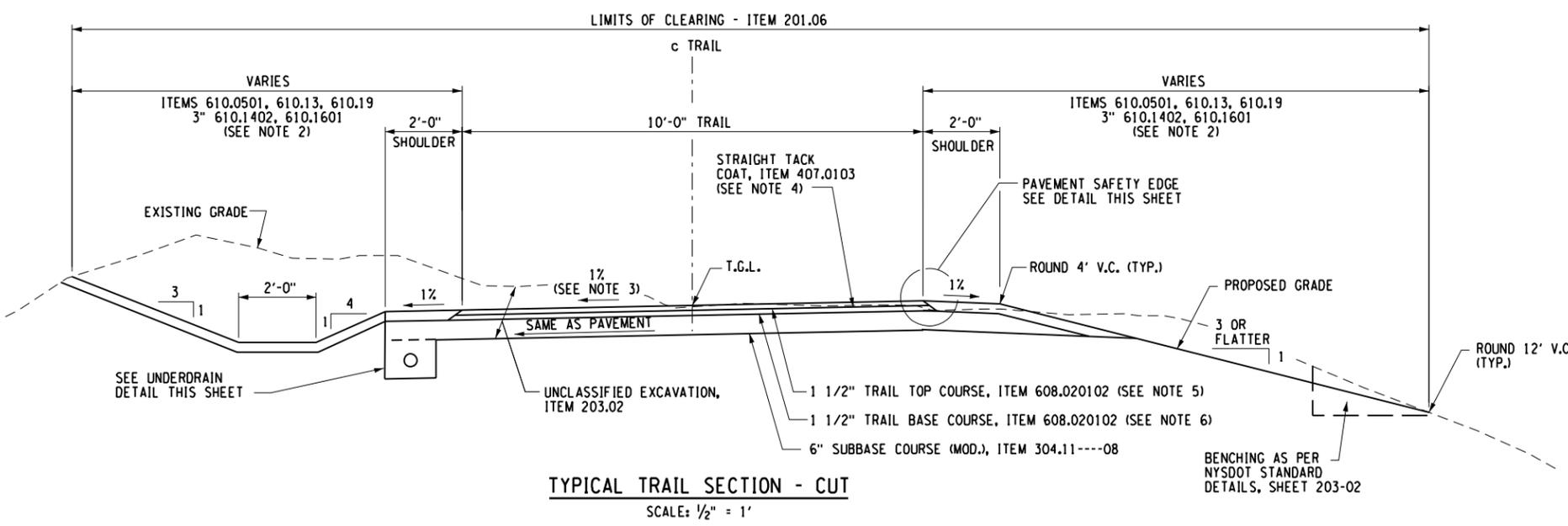
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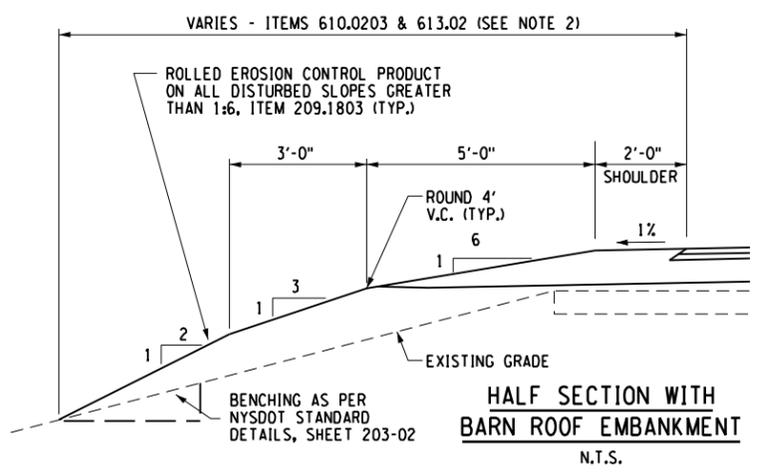
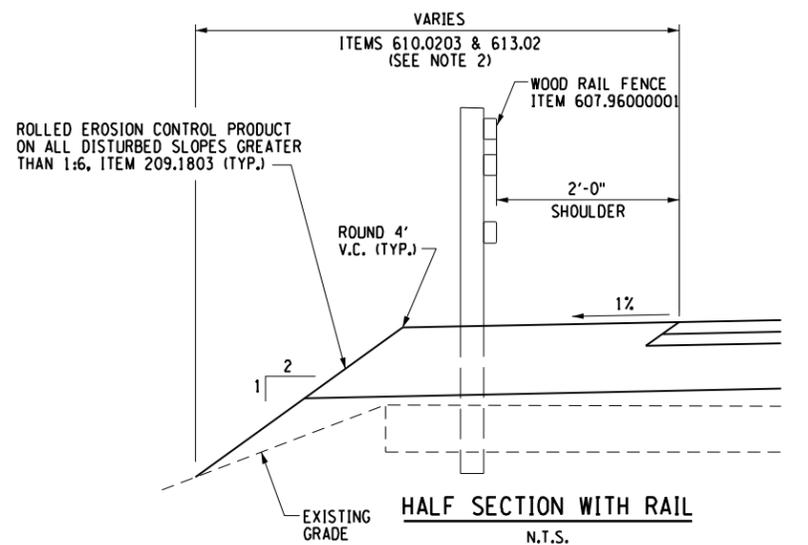
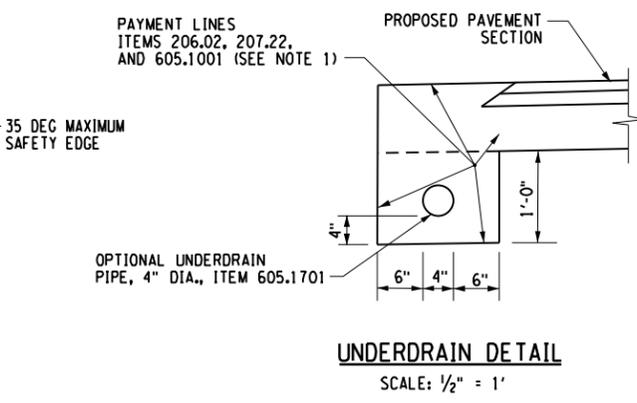
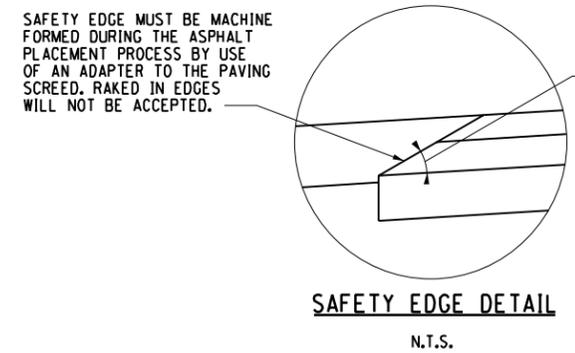
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TYPICAL TRAIL SECTION - CUT
 SCALE: 1/2" = 1'



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201.06	CLEARING AND GRUBBING	LS	610.0501	FERTILIZER	LB	1. EXCAVATION FOR UNDERDRAIN SHALL BE MADE AFTER SUBBASE COURSE HAS BEEN PLACED AND COMPACTED. 2. USE GENERAL ROAD SIDE SEED MIX FOR ITEM 610.1601. 3. TRAIL CROSS SLOPE MAY BE ADJUSTED BASED ON FIELD CONDITIONS. 4. TACK COAT SHALL BE PLACED BETWEEN ALL LIFTS OF ASPHALT. 5. 1 1/2" TRAIL TOP COURSE SHALL BE 9.5 MIX AS SPECIFIED IN TABLE 608-1 OR THE NYSDOT STANDARD SPECIFICATIONS. 6. 1 1/2" TRAIL BASE COURSE SHALL BE 19.0 MIX AS SPECIFIED IN TABLE 608-1 OR THE NYSDOT STANDARD SPECIFICATIONS. 7. ALL AREAS SHALL BE CLEAN, FREE OF DEBRIS, AND LOOSE MATERIAL PRIOR TO APPLICATION OF TACK COAT AND/OR ANY ASPHALT MATERIALS.
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	610.13	WEED REMOVAL	SY	
203.03	EMBANKMENT IN PLACE	CY	610.1402	TOPSOIL - ROADSIDE	CY	
206.02	TRENCH AND CULVERT EXCAVATION	CY	610.1601	TURF ESTABLISHMENT - ROADSIDE	SY	
207.22	GEOTEXTILE DRAINAGE	SY	610.19	WATERING VEGETATION	MGAL	
209.1803	ROLLED EROSION CONTROL PRODUCT	SY				
304.11-----08	SUBBASE COURSE (MOD.)	CY				
407.0103	STRAIGHT TACK COAT	GAL				
605.1001	UNDERDRAIN FILTER TYPE 2	CY				
605.1701	OPTIONAL UNDERDRAIN PIPE, 4" DIAMETER	FT				
607.96000001	WOOD RAIL FENCE	FT				
608.020102	HOT MIX ASPHALT (HMA) SIDEWALKS, DRIVEWAYS, BICYCLE PATHS, AND VEGETATION CONTROL STRIPS	TON				

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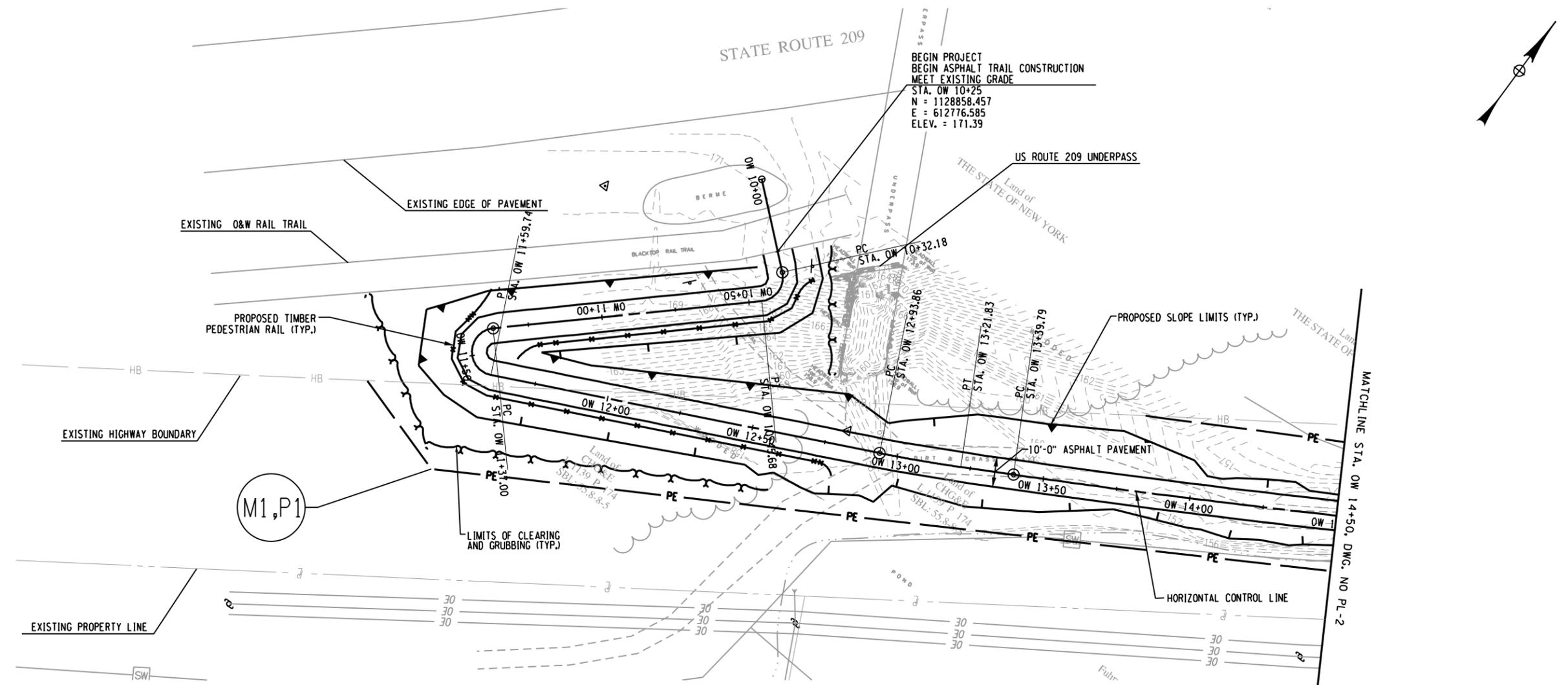
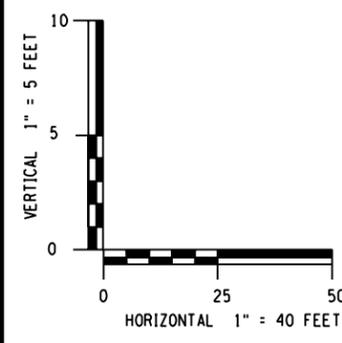
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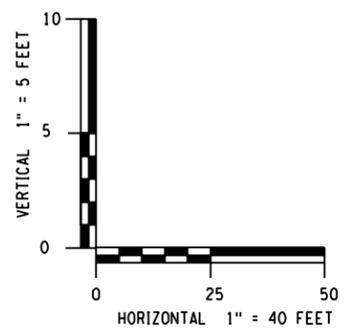
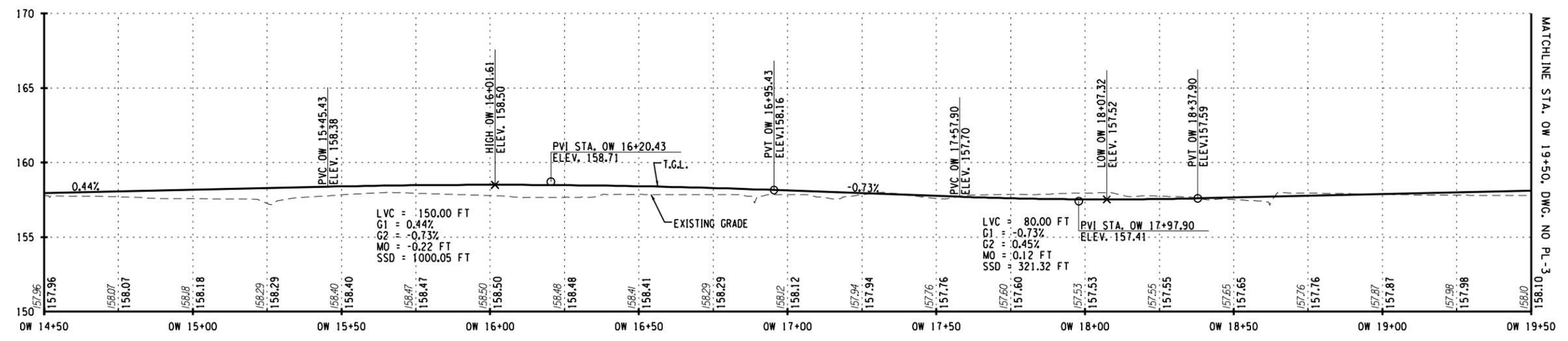
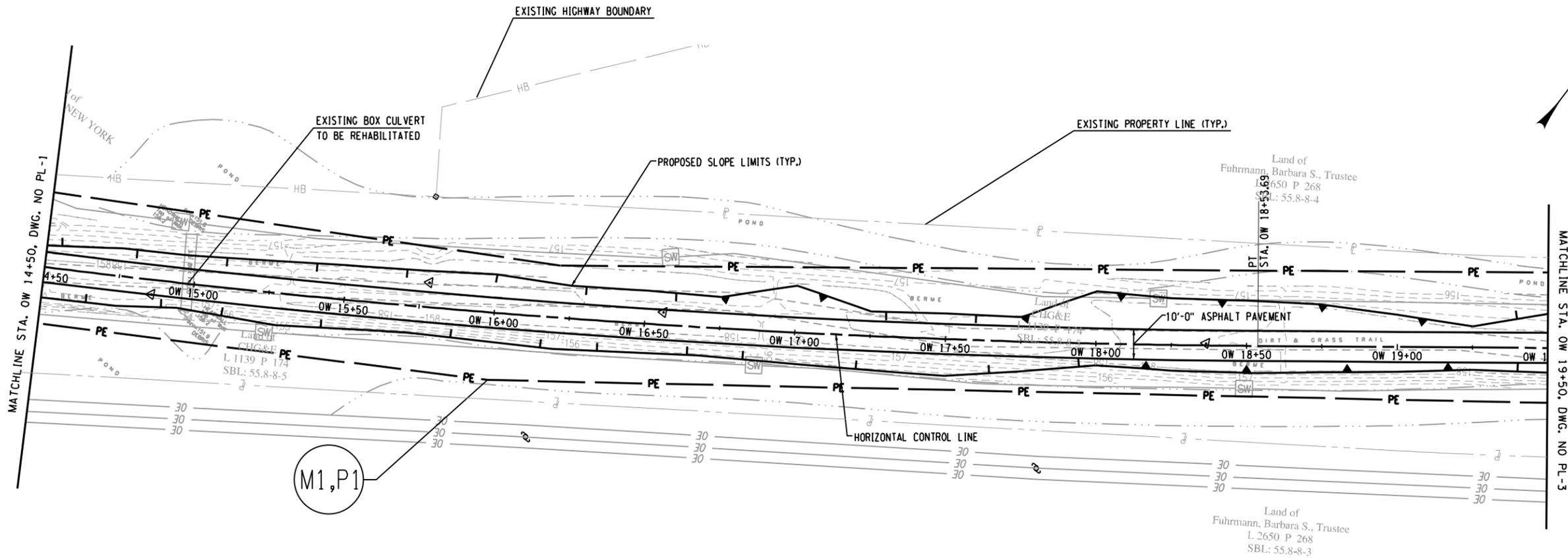
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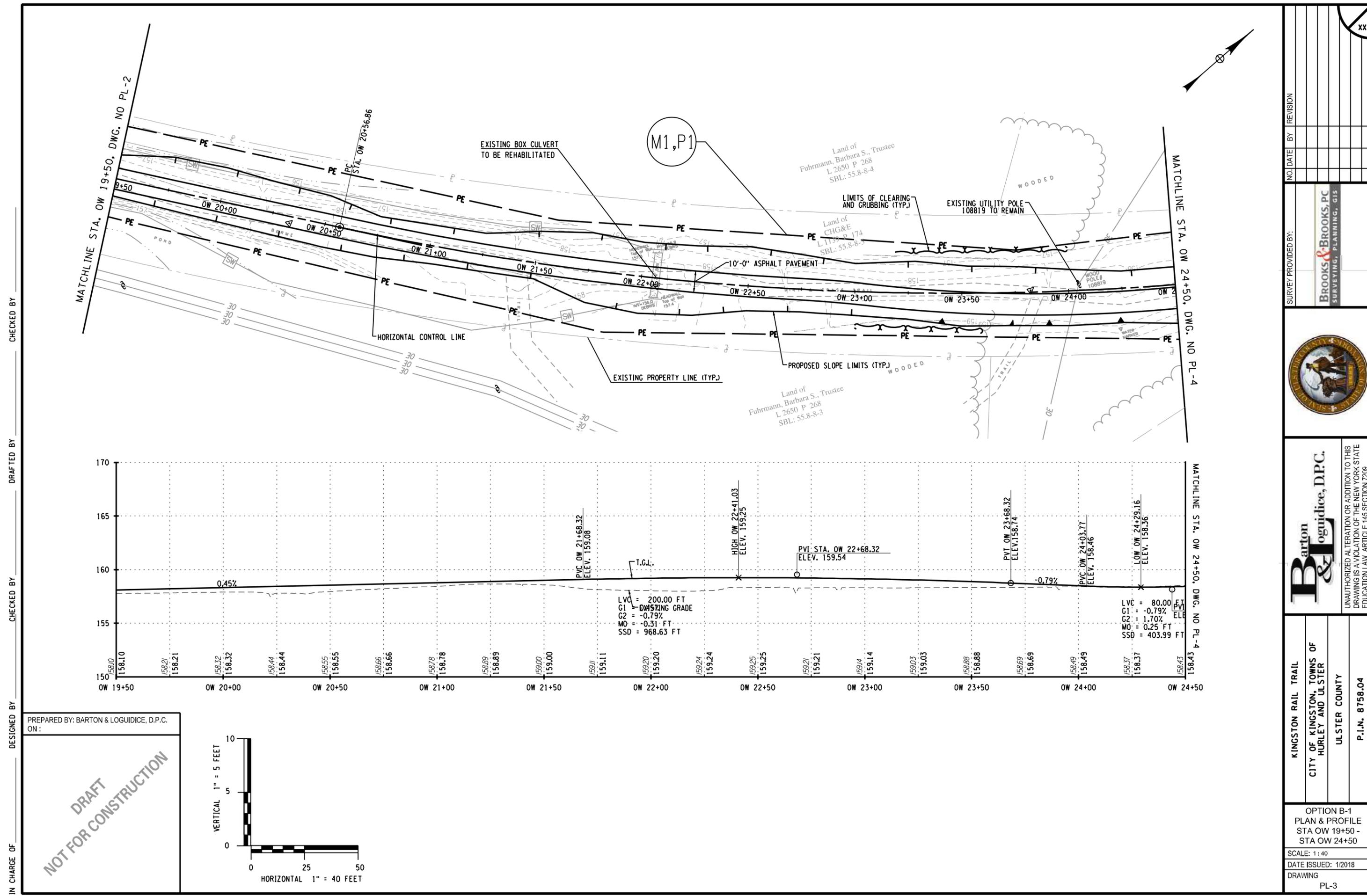
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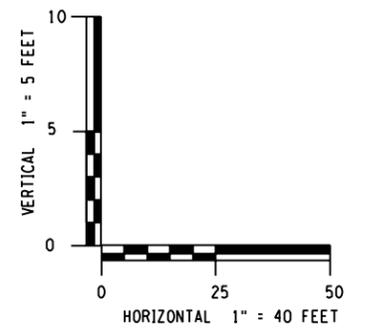
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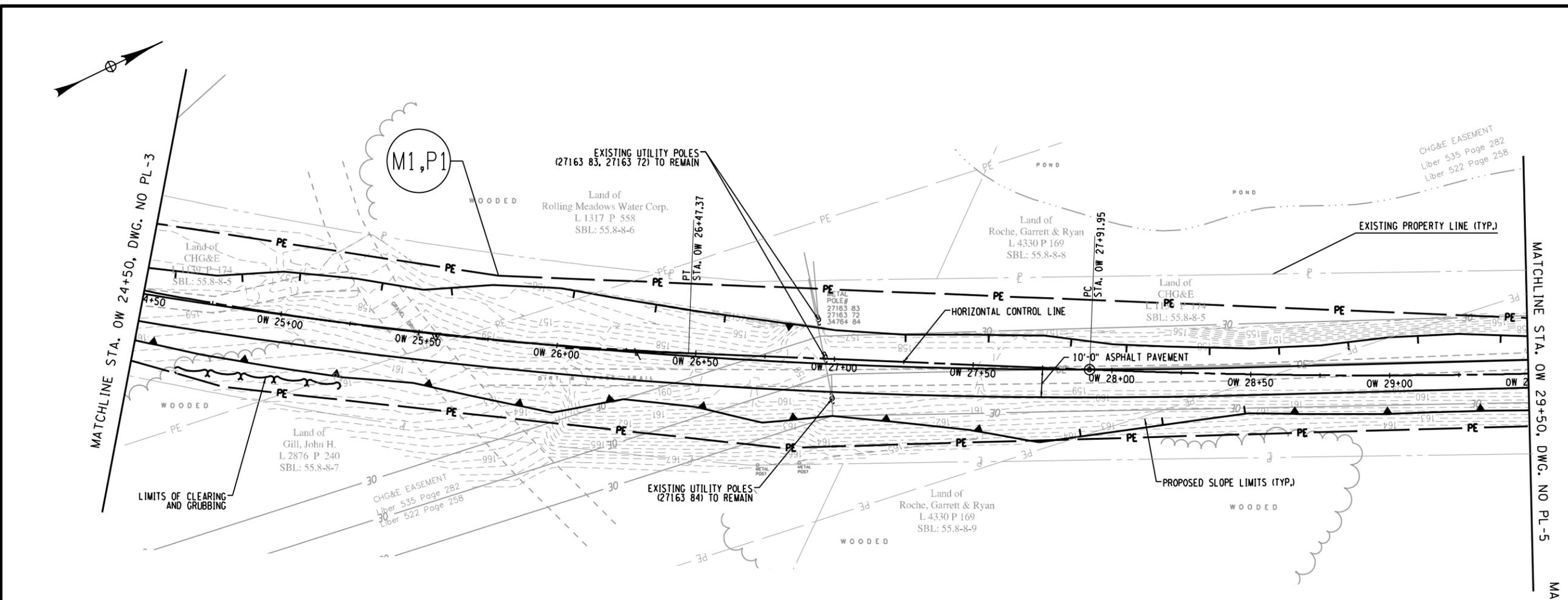
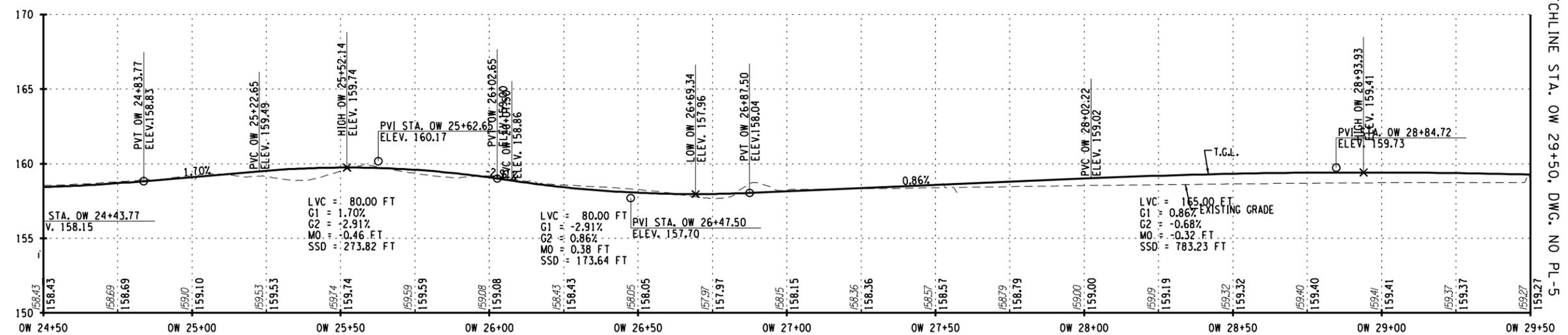
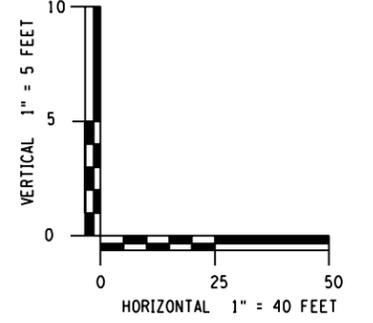
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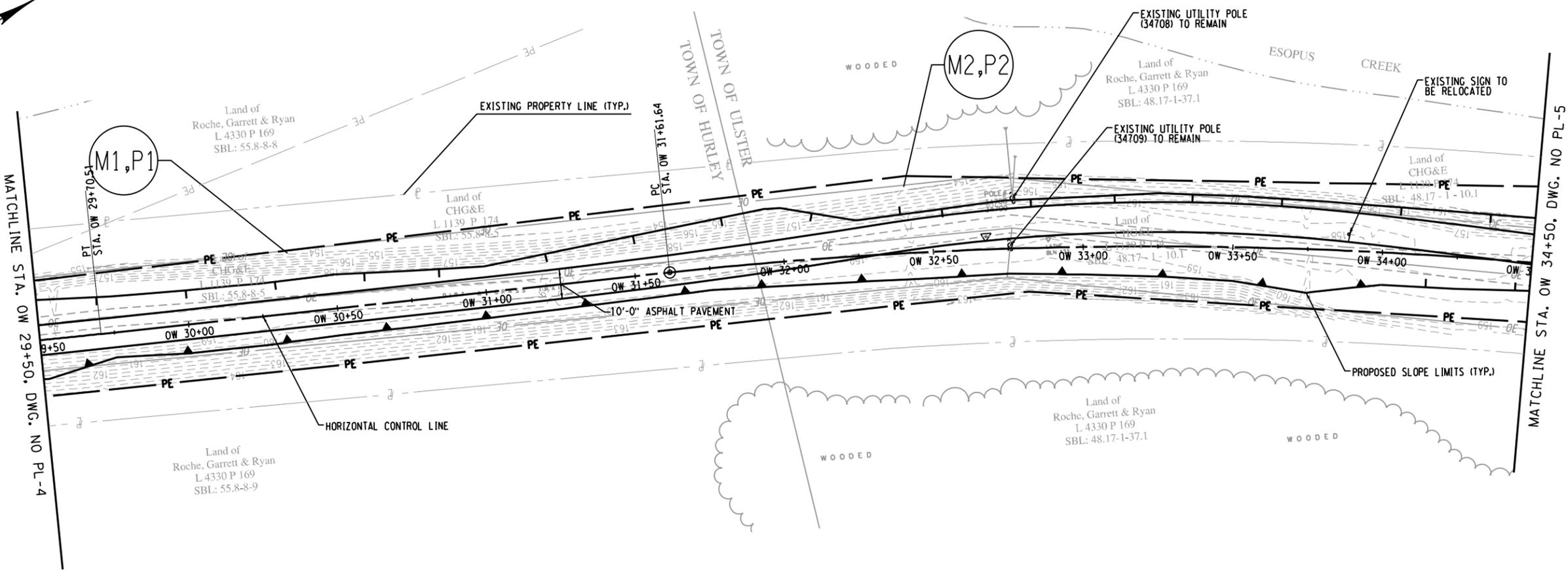
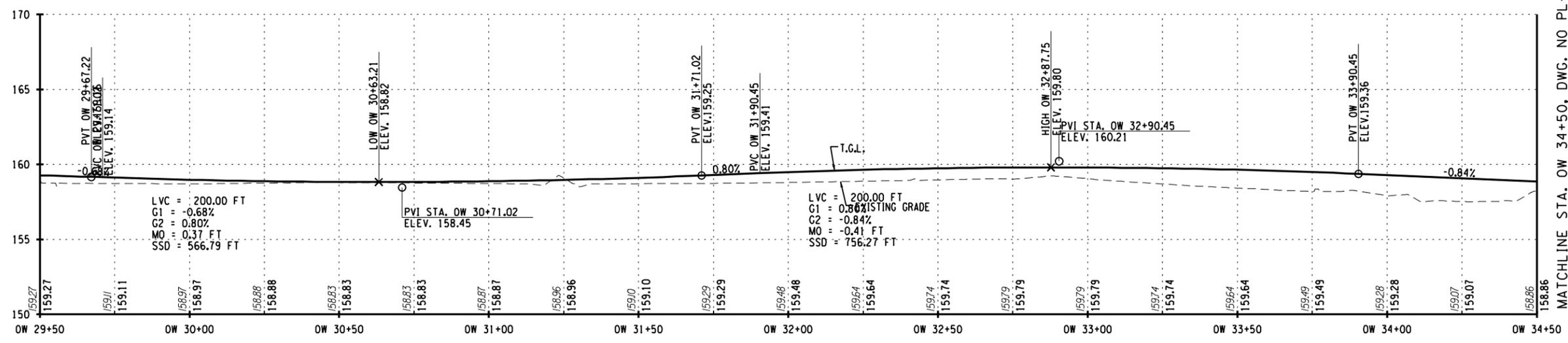
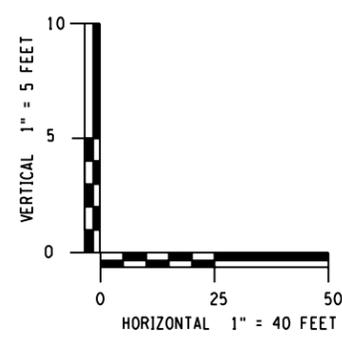
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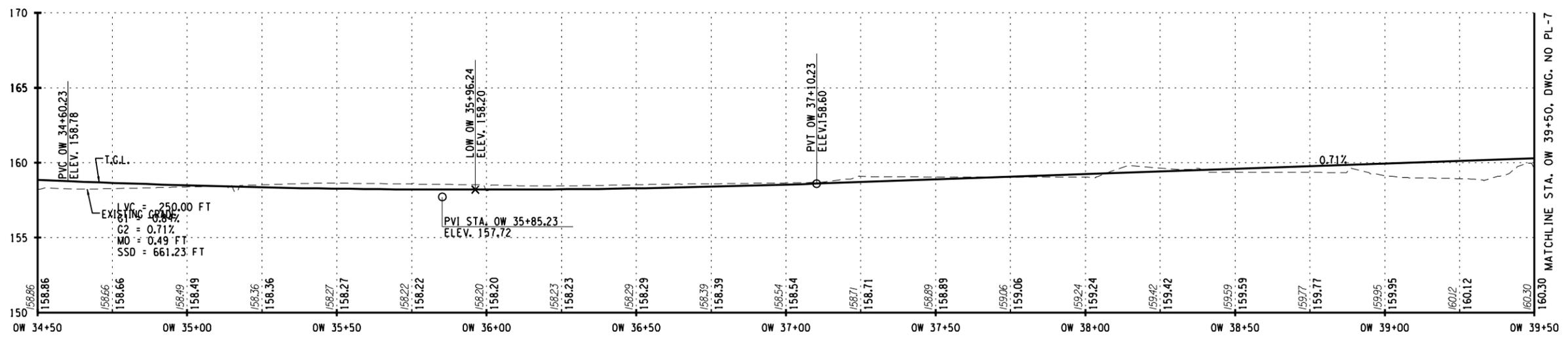
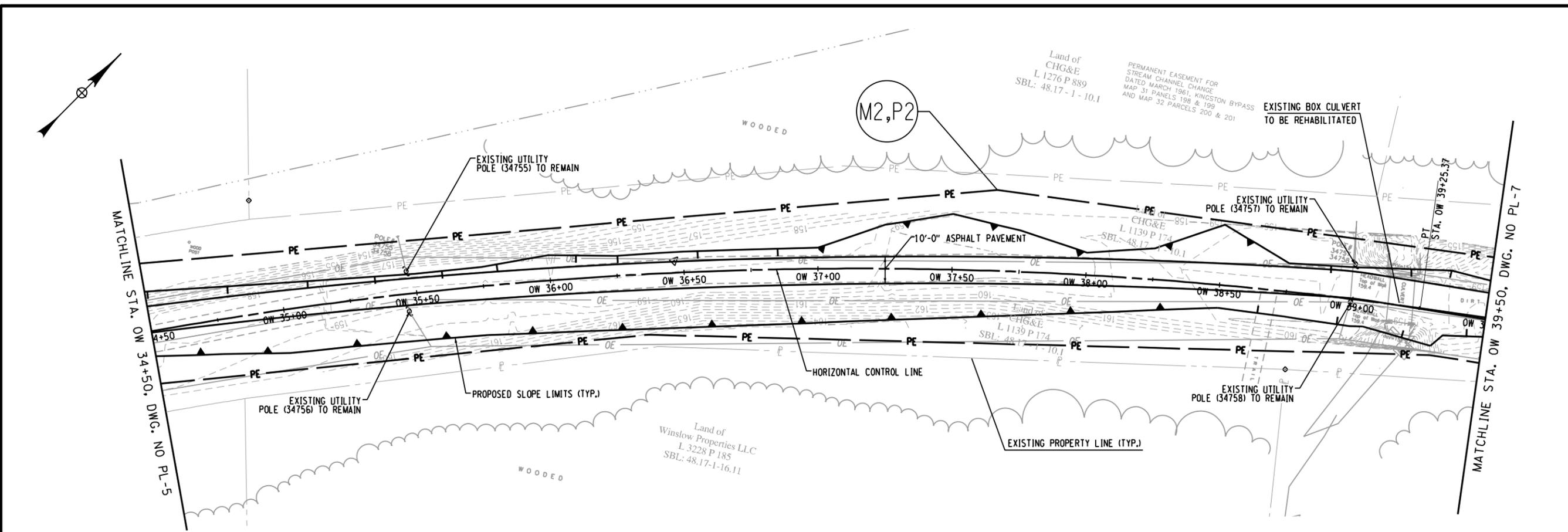
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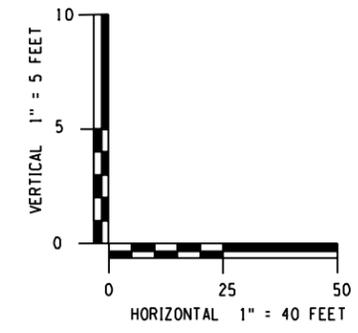
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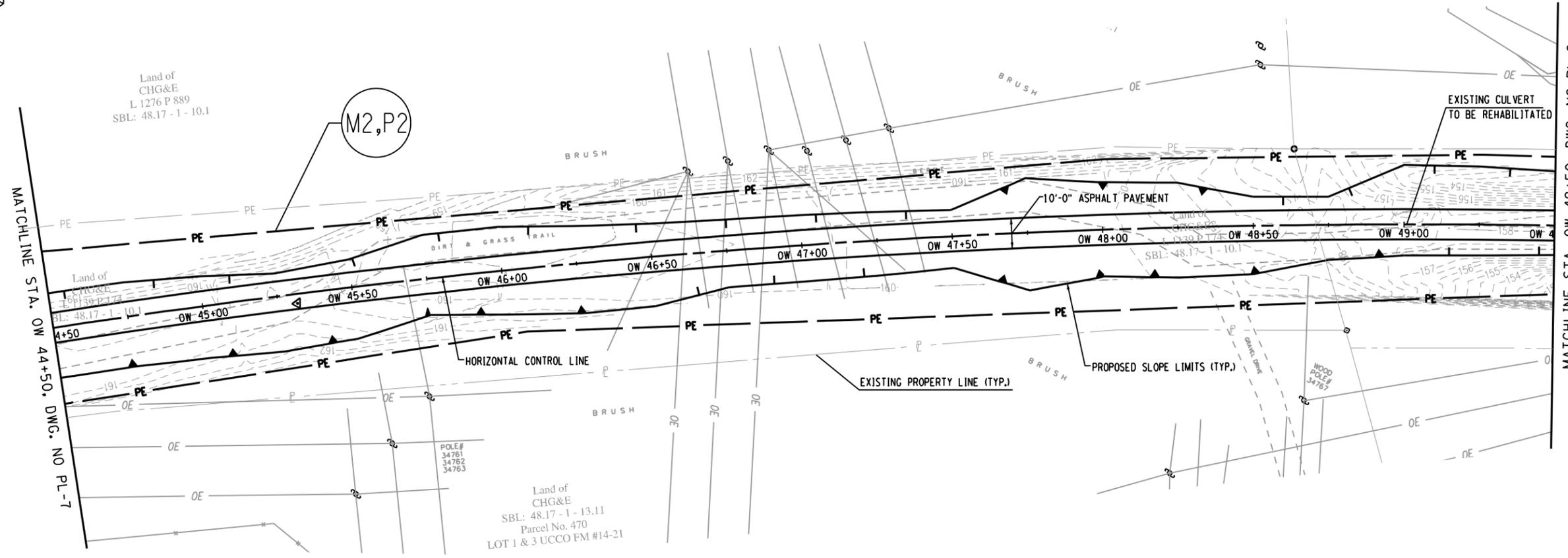
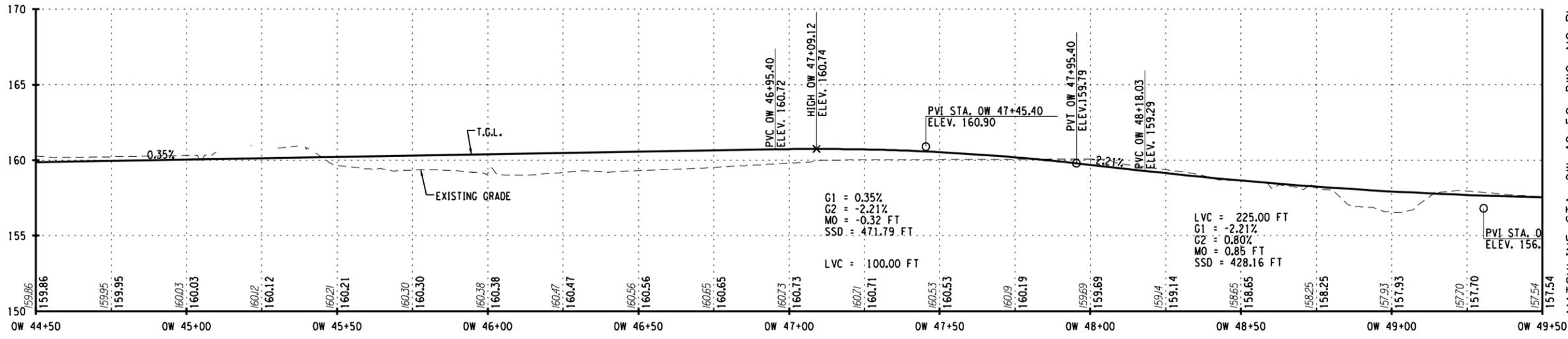
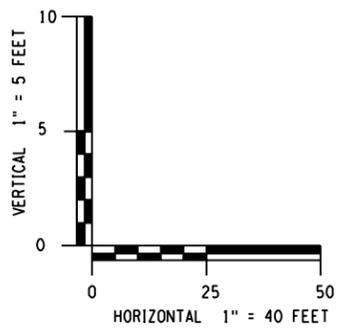
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON :
DRAFT
NOT FOR CONSTRUCTION



MATCHLINE STA. OW 44+50, DWG. NO PL-7

MATCHLINE STA. OW 49+50, DWG. NO PL-9

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 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

OPTION B-1
 PLAN & PROFILE
 STA OW 44+50 - STA OW 49+50
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 DATE ISSUED: 1/2018
 DRAWING PL-8

NO.	DATE	BY	REVISION

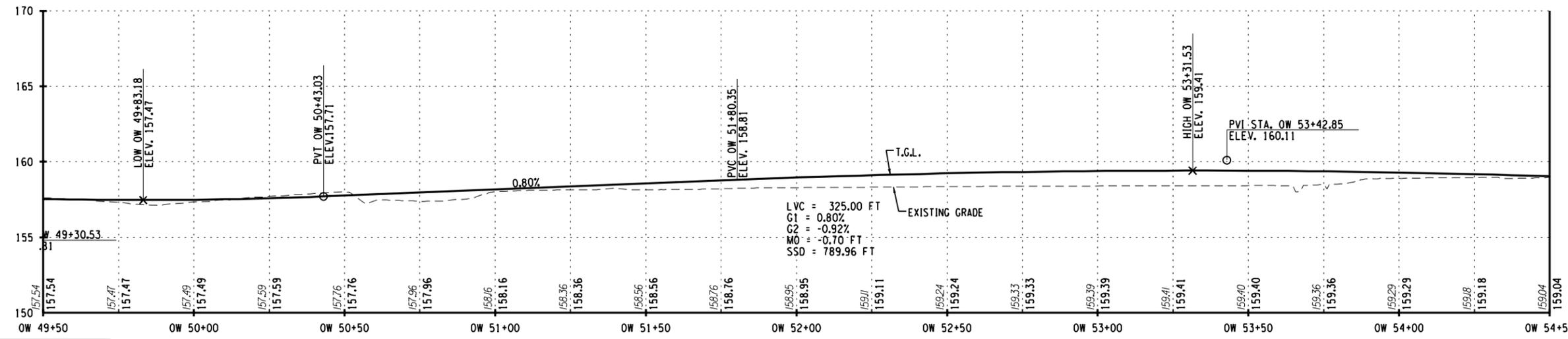
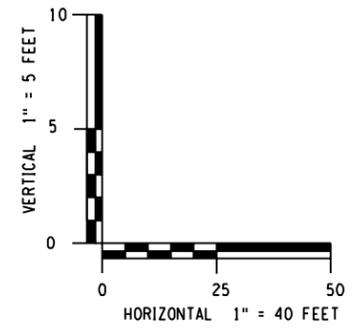
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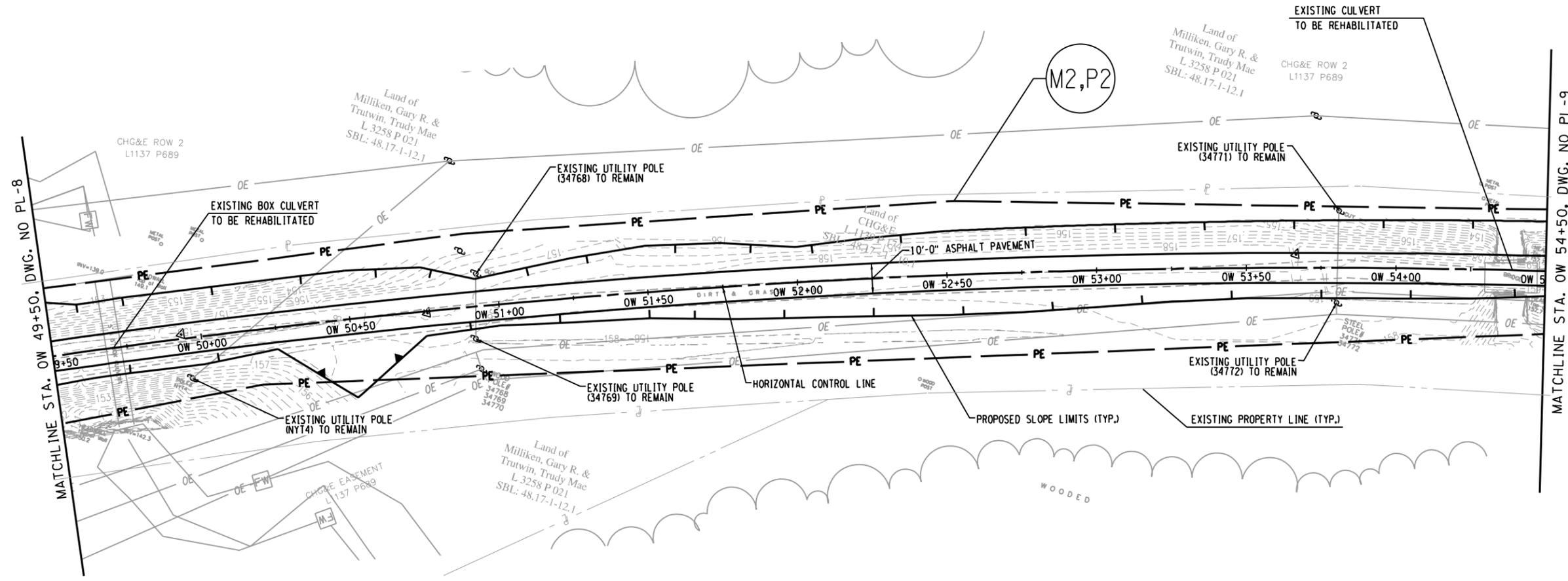
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MATCHLINE STA. OW 54+50, DWG. NO PL-9



MATCHLINE STA. OW 49+50, DWG. NO PL-8

MATCHLINE STA. OW 54+50, DWG. NO PL-9



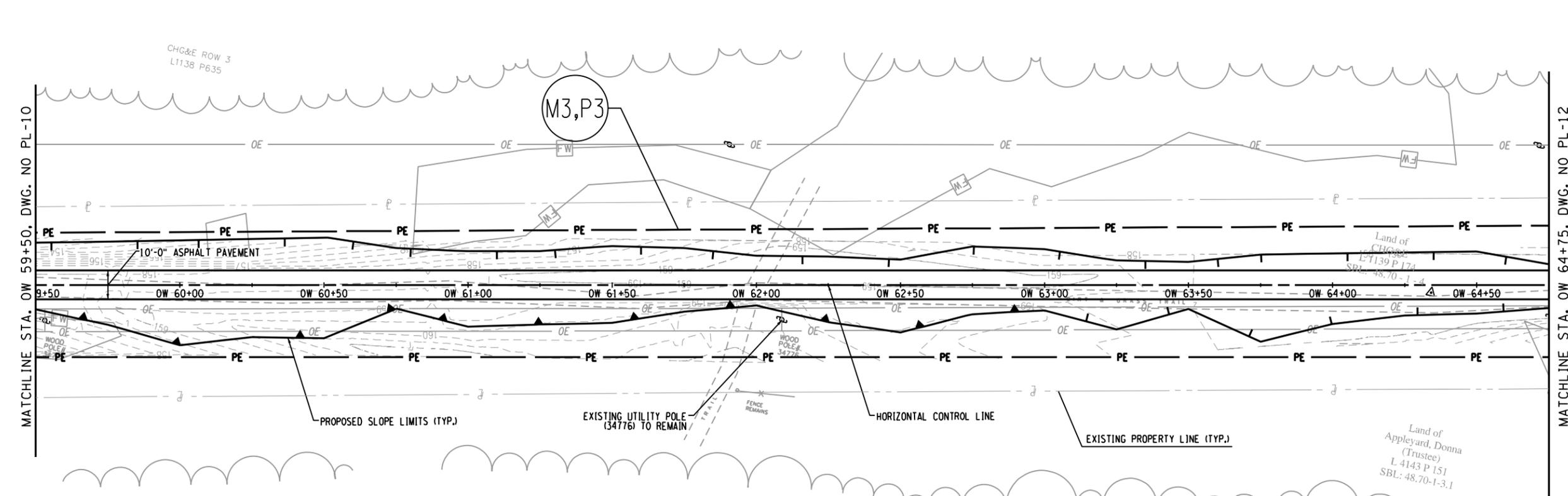
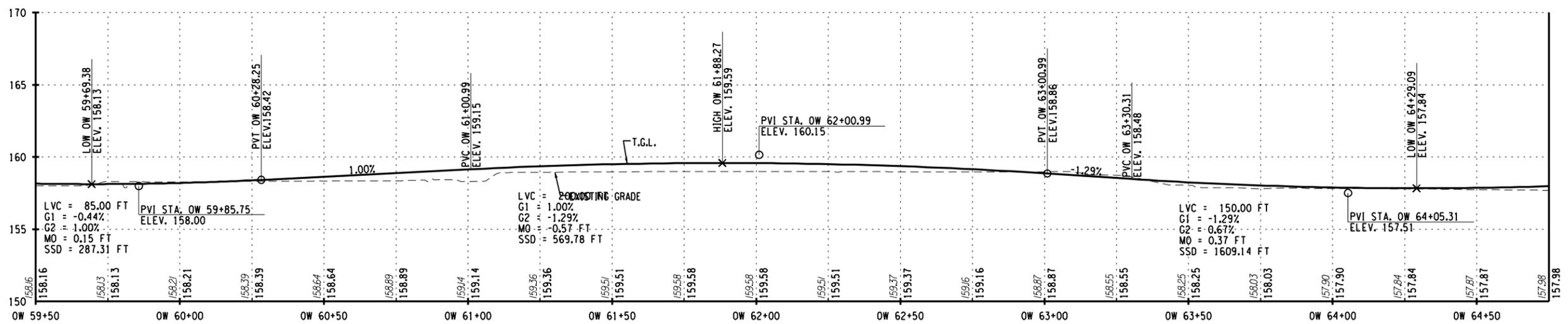
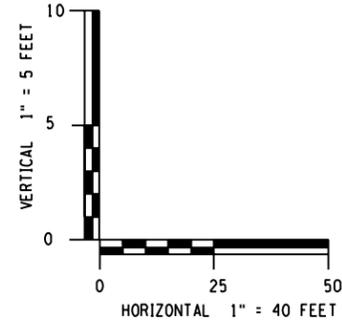
	Barton & Loguidice, D.P.C. <small>UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209</small>	KINGSTON RAIL TRAIL CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER ULSTER COUNTY P.I.N. 8758.04	OPTION B-1 PLAN AND PROFILE STA. OW 49+50 TO STA. OW 54+50 SCALE: 1:40 DATE ISSUED: 1/2018 DRAWING PL-9															
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON: _____

DRAFT
NOT FOR CONSTRUCTION

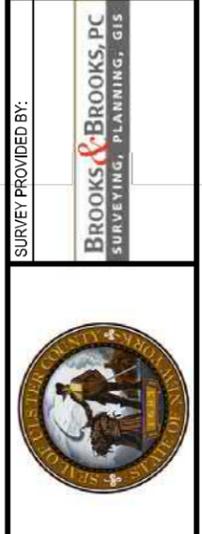


MATCHLINE STA. OW 64+75, DWG. NO PL-12

MATCHLINE STA. OW 59+50, DWG. NO PL-10

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
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NO.	DATE	BY	REVISION

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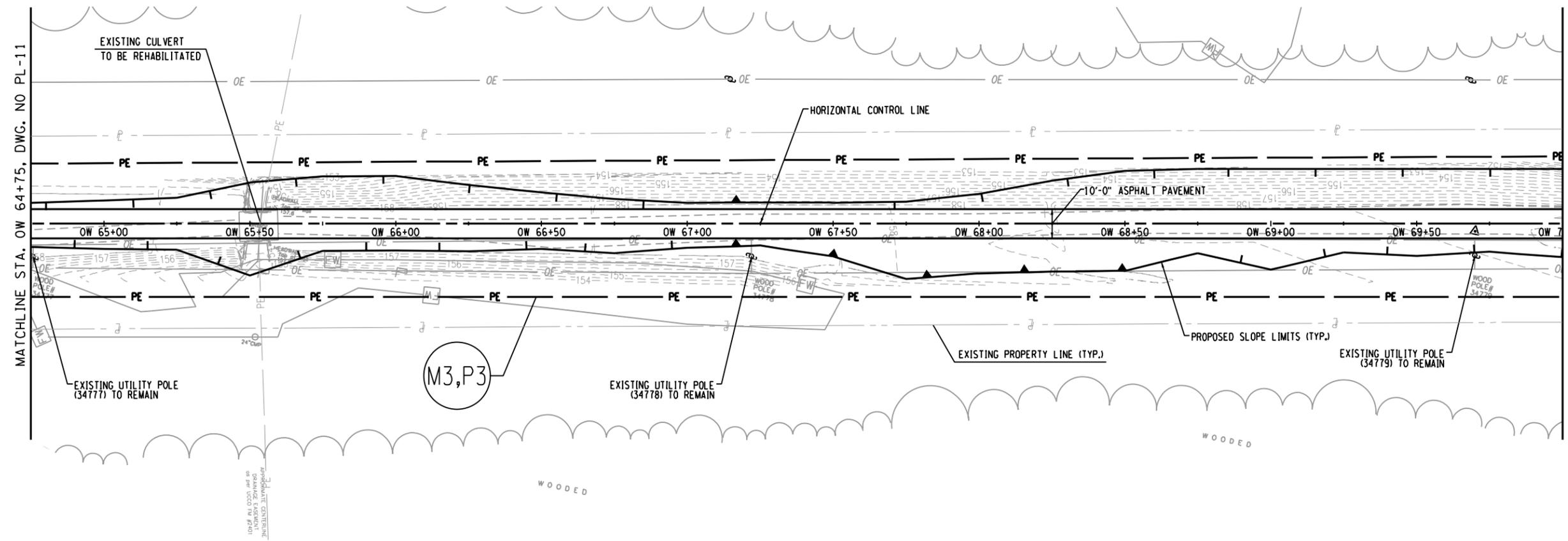
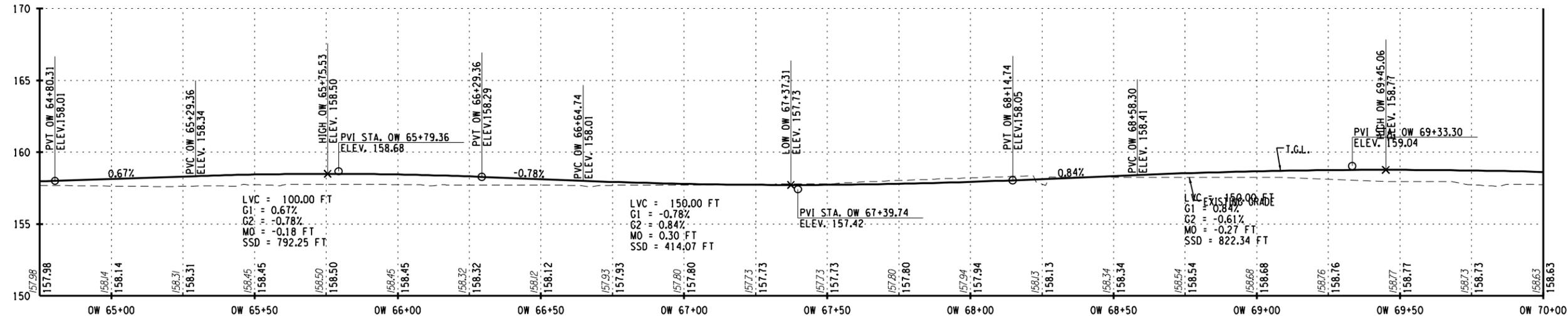
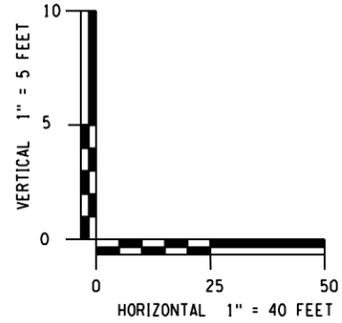
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 STA. OW 64+75
 SCALE: 1:40
 DATE ISSUED: 1/2018
 DRAWING
 PL-11

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MATCHLINE STA. OW 70+00, DWG. NO PL-13

MATCHLINE STA. OW 64+75, DWG. NO PL-11

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 KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
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OPTION B-1
 PLAN AND PROFILE
 STA. OW 64+75 TO
 STA. OW 70+00

SCALE: 1:40
 DATE ISSUED: 1/2018
 DRAWING
 PL-12



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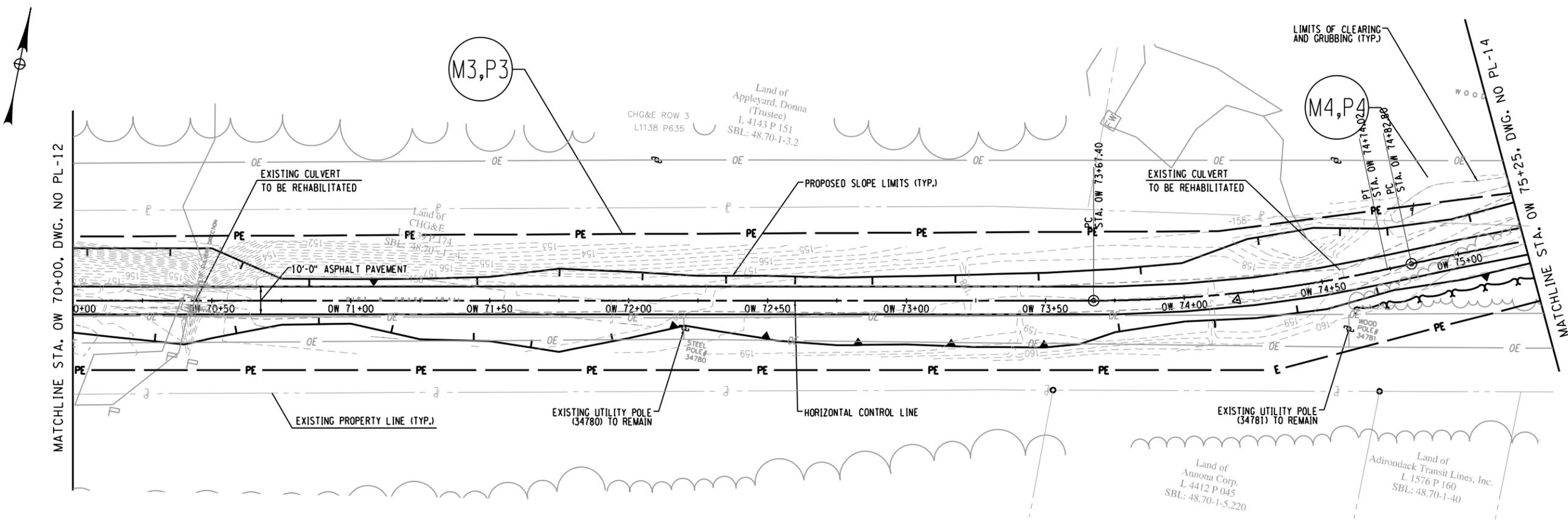
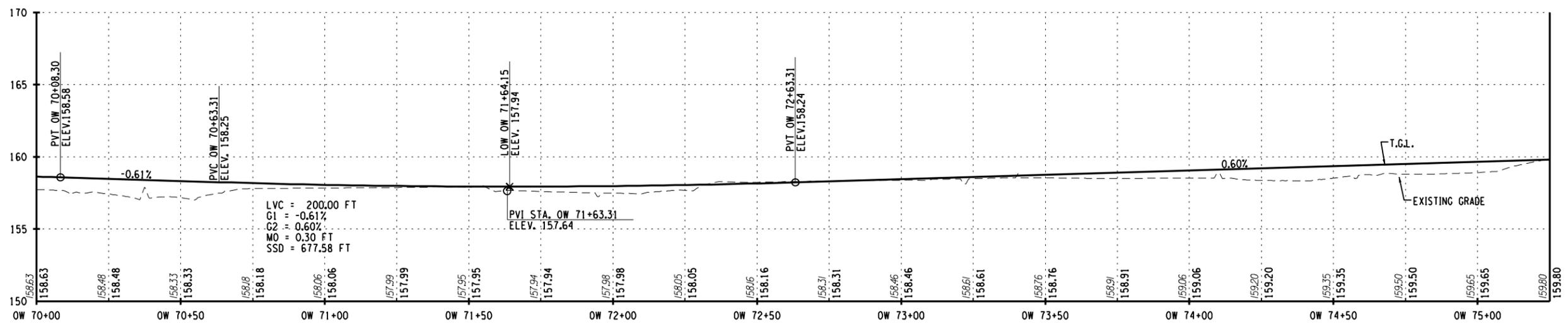
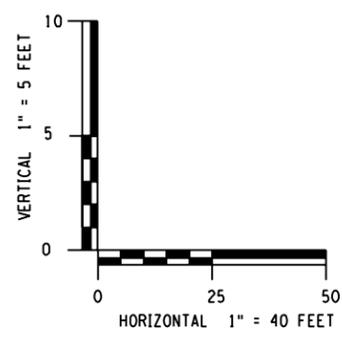
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 ON: _____

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MATCHLINE STA. OW 75+25, DWG. NO PL-14

KINGSTON RAIL TRAIL
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 ULSTER COUNTY
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OPTION B-1
 PLAN AND PROFILE
 STA. OW 70+00 TO STA. OW 75+25

SCALE: 1:40
 DATE ISSUED: 1/2018
 DRAWING PL-13

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NO.	DATE	BY	REVISION

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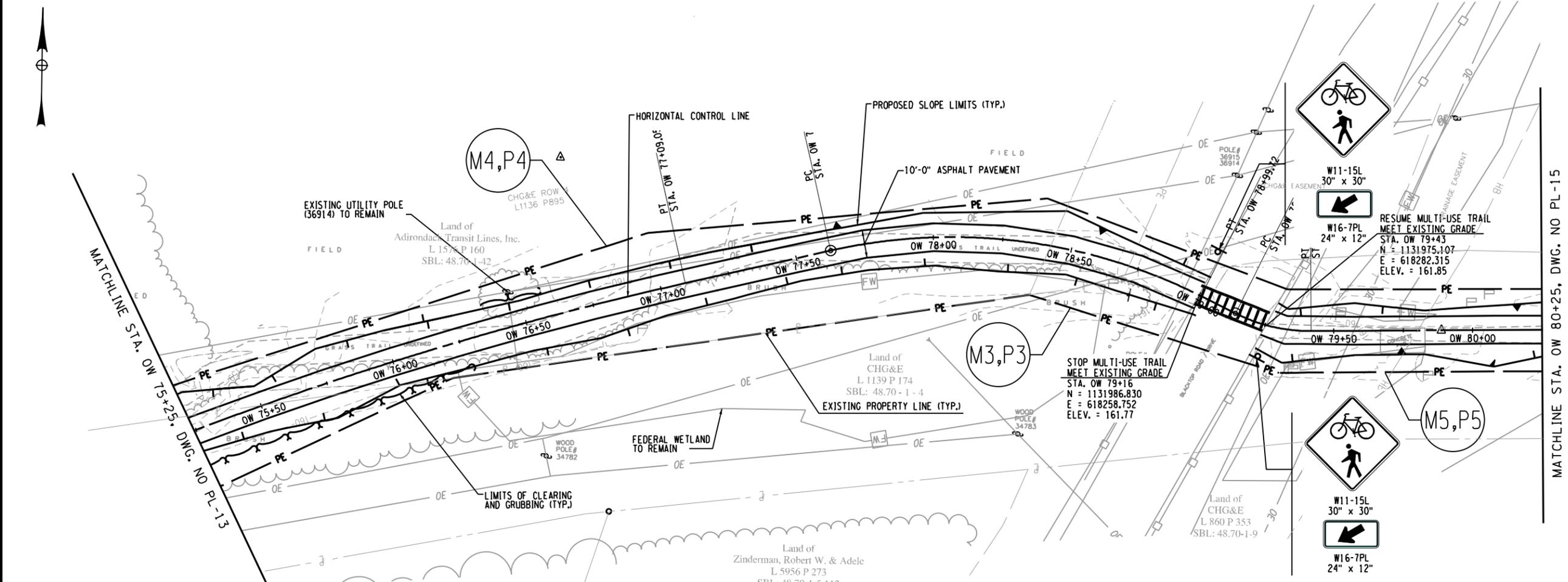
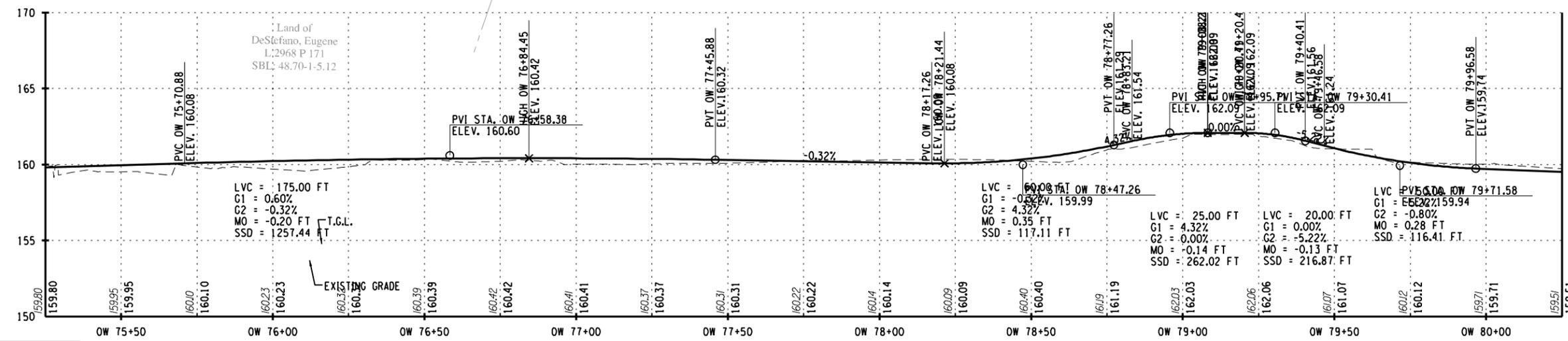
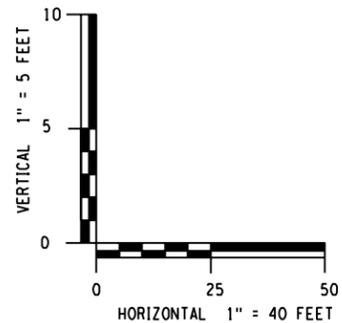
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MATCHLINE STA. OW 75+25, DWG. NO PL-13

MATCHLINE STA. OW 80+25, DWG. NO PL-15

	SURVEY PROVIDED BY: Brooks & Brooks, PC SURVEYING, PLANNING, GIS
	KINGSTON RAIL TRAIL CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER ULSTER COUNTY P.I.N. 8758.04
OPTION B-1 PLAN AND PROFILE STA. OW 74+25 TO STA. OW 80+25	
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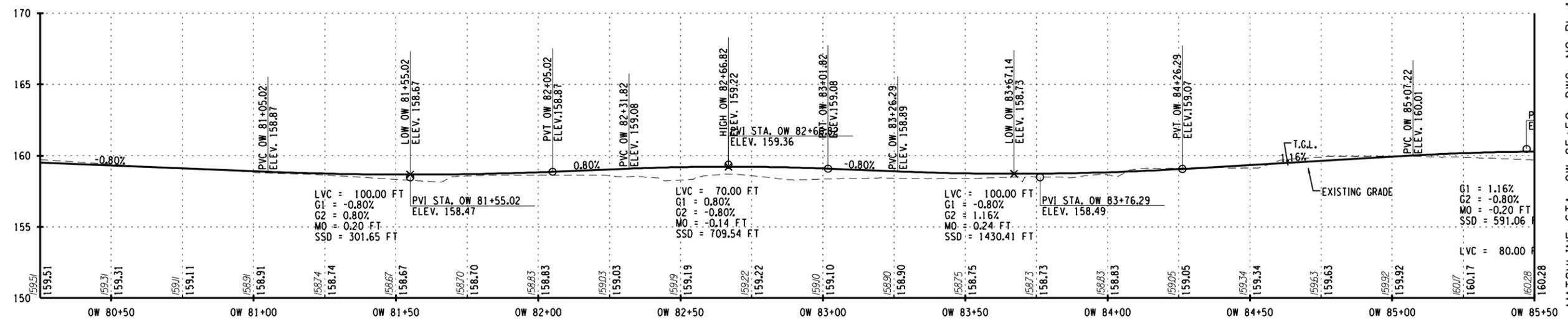
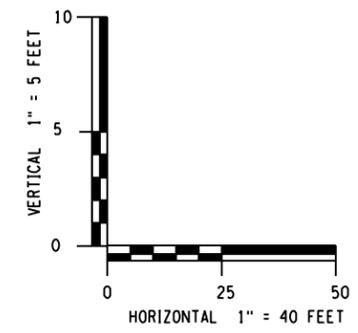
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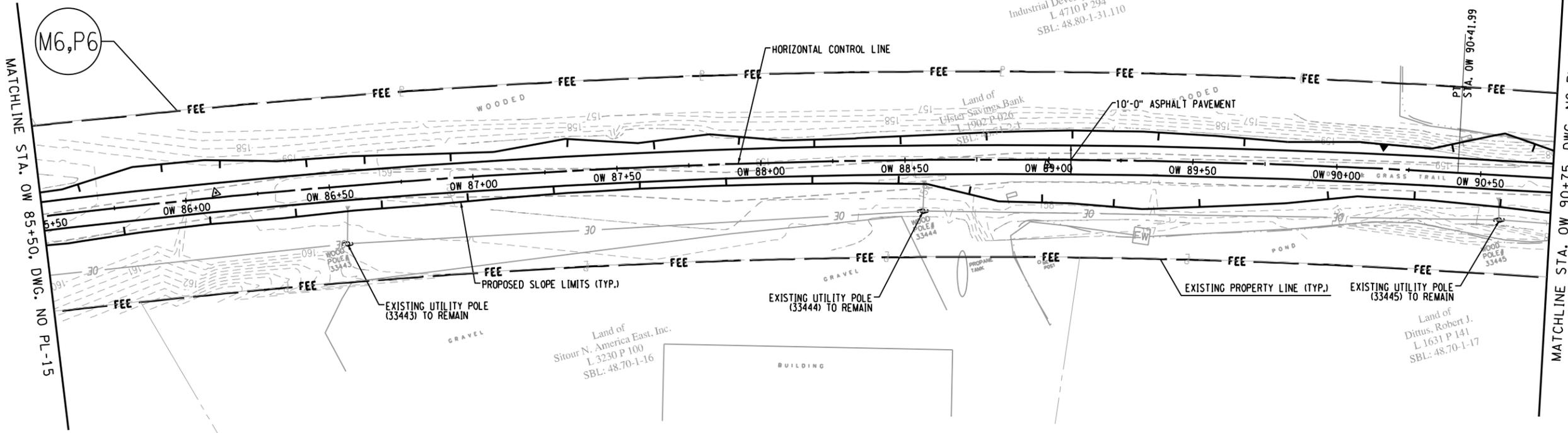
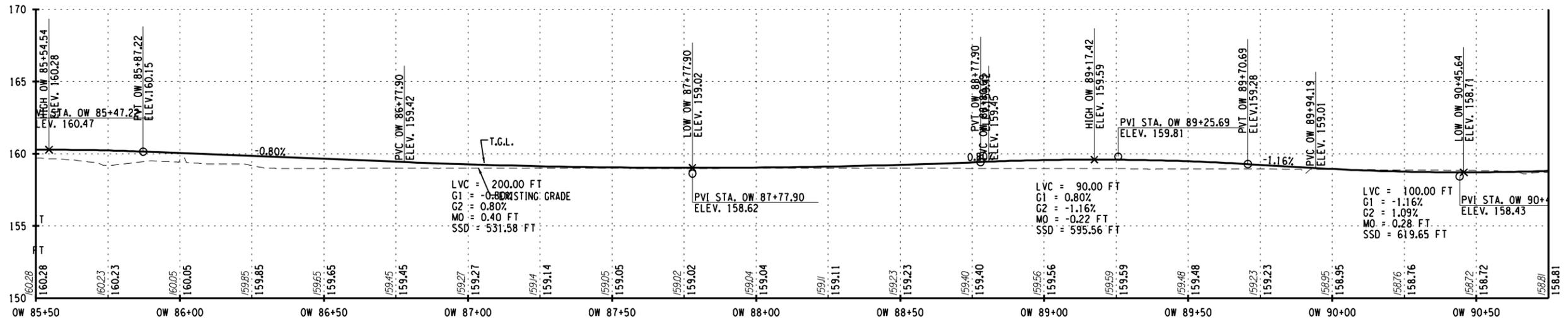
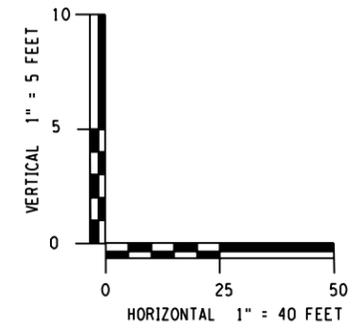


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 ON :
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MATCHLINE STA. OW 90+75, DWG. NO PL-17

MATCHLINE STA. OW 85+50, DWG. NO PL-15

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

OPTION B-1
 PLAN AND PROFILE
 STA. OW 85+50 TO
 STA. OW 90+75
 SCALE: 1:40
 DATE ISSUED: 1/2018
 DRAWING
 PL-16

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NO.	DATE	BY	REVISION

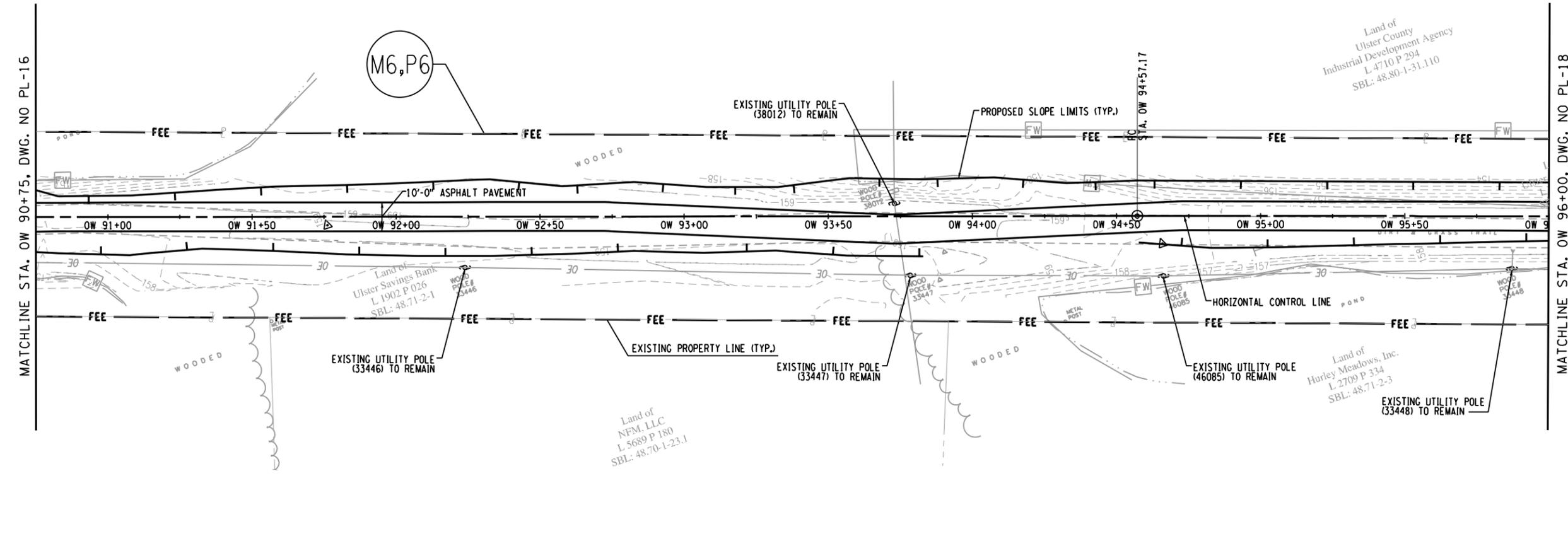
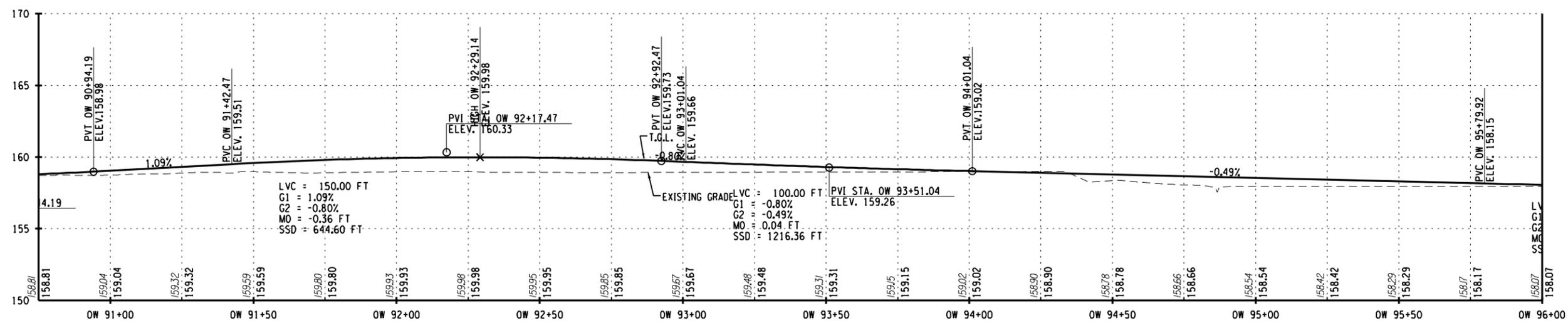
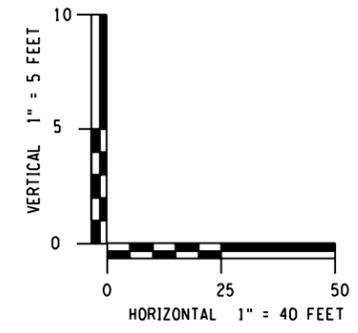
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
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MATCHLINE STA. OW 96+00, DWG. NO PL-18

MATCHLINE STA. OW 90+75, DWG. NO PL-16

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

OPTION B-1
 PLAN AND PROFILE
 STA. OW 90+75 TO
 STA. OW 96+00
 SCALE: 1:40
 DATE ISSUED: 1/2018
 DRAWING
 PL-17

Barton & Loguidice, D.P.C.
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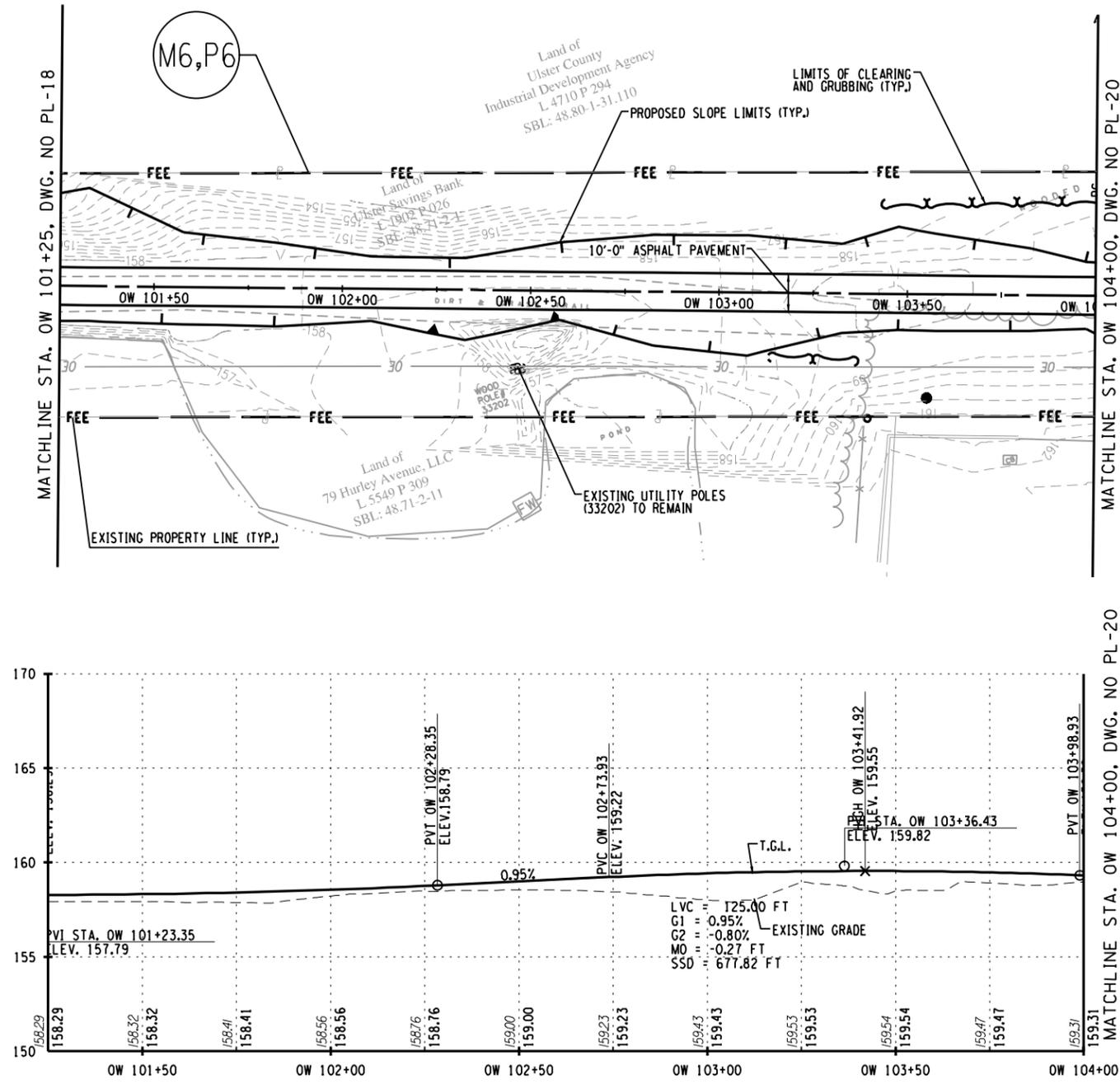
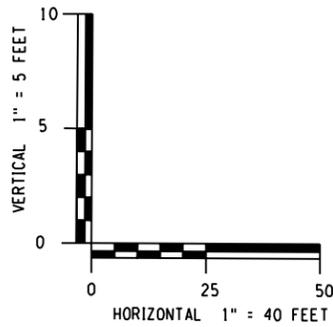
SURVEY PROVIDED BY:
Brooks & Brooks, PC
 SURVEYING, PLANNING, GIS

NO.	DATE	BY	REVISION

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IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____

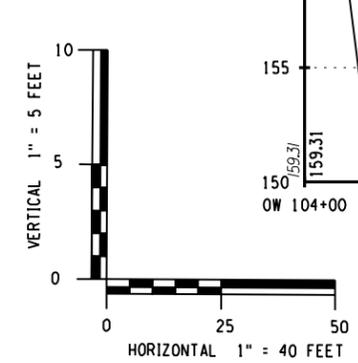
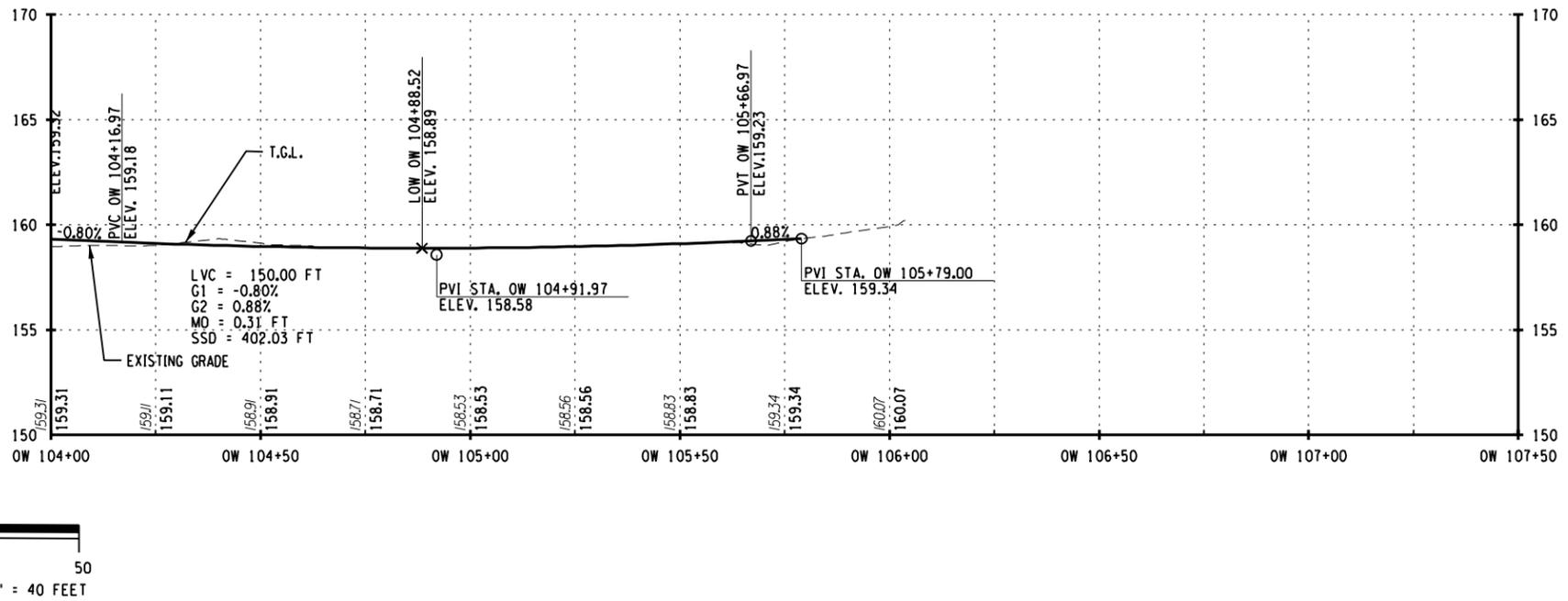
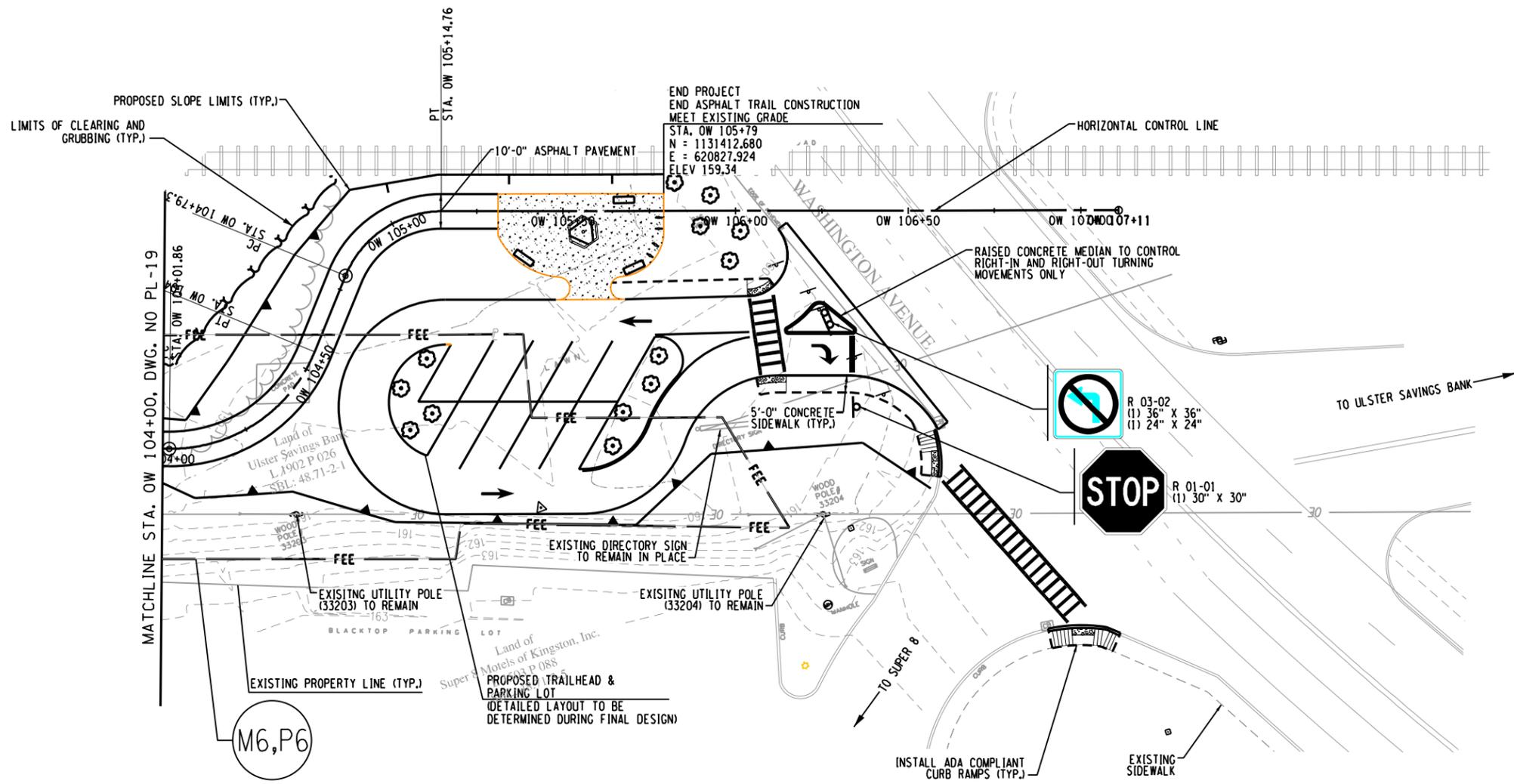
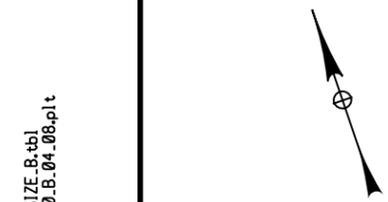
PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON :
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KINGSTON RAIL TRAIL		CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER		ULSTER COUNTY		P.I.N. 8758.04	
OPTION B-1 PLAN AND PROFILE STA. OW 101+25 TO STA. OW 104+00 SCALE: 1:40 DATE ISSUED: 1/2018 DRAWING PL-19							
BARTON & LOGUIDICE, D.P.C. UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209				SURVEY PROVIDED BY: BROOKS & BROOKS, P.C. SURVEYING, PLANNING, GIS			
NO. DATE		BY		REVISION		XX	

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 ON: _____
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KINGSTON RAIL TRAIL	P.I.N. 8758.04
CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER	
ULSTER COUNTY	
OPTION B-1 PLAN AND PROFILE STA. OW 104+00 TO STA. OW 107+13	
SCALE: 1:40	
DATE ISSUED: 1/2018	
DRAWING PL-20	

Appendix B

Environmental Information



U.S. Department
of Transportation
**Federal Highway
Administration**

New York Division

May 9, 2017

Leo W. O'Brien Federal Building
11A Clinton Avenue, Suite 719
Albany, NY 12207
518-431-4127
Fax: 518-431-4121
New York.FHWA@dot.gov

In Reply Refer To:
HED-NY

Ms. Sandra Jobson
Environmental Manager
New York State Department of Transportation, Region 8
4 Burnett Boulevard
Poughkeepsie, NY 12063

Subject: PIN 8758.04 – Threatened and Endangered Species Concurrence
Kingston Rail Trail
Towns of Hurley & Ulster, City of Kingston, Ulster County

Dear Ms. Jobson:

We have reviewed the documentation New York State Department of Transportation (NYSDOT) Region Eight submitted on March 21 regarding ESA consultation for the subject project. Based on the Federal Highway Administration's (FHWA) Headquarters Programmatic Biological Opinion, FHWA has determined that the project, as proposed by NYSDOT is "*Likely to Adversely Affect*" the federally listed Indiana Bat and the Northern Long-eared Bat. This determination was made based on the proposed tree clearing outside of 100 feet from the existing road.

Mitigation for this project will be completed through a mutually agreed upon in-lieu-fee (ILF) program to the effect of \$855.90 to conserve 0.15 acres of Indiana Bat habitat. NYSDOT may choose to conduct an acoustic survey in accordance with the United States Fish and Wildlife Service's (USFWS) 2016 Summer Guidance for Indiana Bats (<https://www.fws.gov/midwest/endangered/mammals/inba/survey/pdf/2016IndianaBatSummerSurveyGuidelines11April2016.pdf>). Specifically, Step 5 of this process explains acoustic survey methodology. Approval from the USFWS to conduct the survey would need to be sought before beginning, and surveys typically take place during the spring season. If acoustic surveys show that Indiana Bats are not present on the site, FHWA can revise the effect determination to "*No Effect*" and therefore, mitigation would no longer be required.

FHWA sought concurrence from USFWS for the removal of trees for the project. A response was provided in a letter dated May 3 approving mitigation through the use of the ILF program. All tree clearing must take place between October 31 and March 31. The extent of tree clearing must not exceed the agreed upon total of 0.3 acres and no more than 0.1 acres may be outside 100 feet of the existing road.

FHWA also concurs with NYSDOT Region Eight's recommendation that the subject project will have "*No Effect*" on the federally listed Bog Turtle.

Section 7 consultation is complete. If at any time during construction the presence of these federally listed species, or their habitat, is discovered or suspected, construction activities must be halted. Activities cannot resume until FHWA and USFWS are consulted.

If you have any questions, please feel free to contact me at (518) 431-8892.

Sincerely,

A handwritten signature in blue ink that reads "Sara J. Gross". The signature is written in a cursive style with a large initial "S" and "G".

Sara J. Gross, P.E.
Area Engineer

cc: D. Holsopple, Local Projects, NYSDOT, Region 8
L. Gorney, Local Projects, NYSDOT, Region 8
D. Hitt, Director, Office of Environment, NYSDOT MO
C. Ippoliti, Office of Environment, NYSDOT MO

Federal Environmental Approval Worksheet

PIN: 8758.04	Comp. by: Barton & Loguidice, D.P.C.	Date Comp.: 6/2/17	FUNDING TYPE: STP Flex Funds
DESCRIPTION: The project will establish approximately 2.0 miles of a multi-use trail along the abandoned Ontario & Western (O&W) Railroad corridor. The trail would provide a link between the City of Kingston and the Towns of Hurley and Ulster.			NEPA CLASS: Class II C list CE
			SEQR TYPE: Unlisted
LOCALITY (Village, Town, City): City of Kingston, Town of Hurley, Town of Ulster			COUNTY: Ulster

Purpose of this Worksheet:

- Communicate project National Environmental Policy Act (NEPA) classification to Federal Highway Administration (FHWA).
- Identify additional required FHWA environmental determinations, approvals and/or concurrences required before the Categorical Exclusion (CE) determination can be made.
- Reflect the documentation in the Design Approval Document (DAD) and enable the approving authority (per PDM Exhibit 4-2) to make the CE determination.

Categorical Exclusion (CE) - a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency (40 CFR 1508.4). Actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS) (23 CFR 771.115(b)).

Instructions (see also "FEAW_Instructions.doc"):

Complete the worksheet prior to the end of Design Phase I. If project parameters or site condition changes result in potential resource impacts, re-do worksheet prior to Design Approval to confirm NEPA determination and recertify (on page 4).

Step 1: Unusual Circumstances Threshold Determination – 23 CFR 771.117(b)

Any action which normally would be classified as a CE but could involve unusual circumstances (or even uncertainty) will require consultation with FHWA to determine if the CE classification is proper or whether an EA or EIS is required.

Do any, or the potential for any, unusual circumstances exist?

- | | | |
|----|---|---|
| 1. | Significant environmental impacts; | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |
| 2. | Substantial controversy on environmental grounds; | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |
| 3. | Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act; or | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |
| 4. | Inconsistencies with any Federal, State, or local law, requirement or administrative determination relating to the environmental aspects of the action. | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |

• **If yes to any** of the above, contact the Main Office Project Liaison (MOPL) (see PDM Exhibit 4-1). If after consultation with FHWA it is determined that the project cannot be progressed as a CE, **skip to step 4** and see PDM Chapter 4 for NEPA Class I (EIS) or Class III (EA) processing.

• **If no to all**, then this project qualifies as a Categorical Exclusion (CE); **proceed to step 2**.

Federal Environmental Approval Worksheet

Project ID Number: 8758.04

Step 2: Other FHWA environmental actions required prior to CE Determination

Classification as a CE does not exempt the project from further environmental review. Compliance with Federal Statutes, Regulations and Executive Orders (EO's) must be documented. Refer to the Department's Project Development Manual (PDM) and Environmental Manual (TEM) to determine the requirements.

2.1	Other required FHWA environmental independent determinations	FHWA Independent Determination and/or Concurrence Required & Received	Date determination/ concurrence issued	FHWA Independent Determination and/or Concurrence not required or resource not present
		A	B	C
	EO 11990 Protection of Wetlands Individual Finding	<input type="checkbox"/>	Date Issued	<input checked="" type="checkbox"/>
	ESA Section 7 Threatened and Endangered Species	<input checked="" type="checkbox"/>	5/9/2017	<input type="checkbox"/>
	Section 106 (National Historic Preservation Act)	<input type="checkbox"/>	Click here to enter a date.	<input checked="" type="checkbox"/>
	Section 4(f) (Park, Wildlife Refuge, Historic Sites, and National Wild and Scenic Rivers)	<input type="checkbox"/>	Date Issued	<input checked="" type="checkbox"/>
2.2	Other FHWA environmental compliance and/or approvals/concurrence required	Resource present and threshold exceeded		Resource not present, or present but threshold not exceeded
	EO 11988 Floodplains	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	EO 13112 Invasive Species	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	EO 12898 Environmental Justice	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	Safe Drinking Water Act Section 1424(e)	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	US Army Corps of Engineers, Section 404/10 NWP #23	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	Section 6(f) (Land and Water Conservation Funds)	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	Migratory Bird Treaty Act	<input type="checkbox"/>		<input checked="" type="checkbox"/>
	23CFR772 Type I Noise abatement	<input type="checkbox"/>		<input checked="" type="checkbox"/>
2.3	Other Environmental Issues requiring FHWA notification	Resource present and threshold exceeded		
	U.S. Army Corps of Engineers, Section 404/10 Individual Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	National Wild and Scenic Rivers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	U.S. Coast Guard Bridge Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Known hazardous waste site (only EPA National Priority list)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Project on or affecting Native American Lands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

For all categories above, refer to the **Table Thresholds** document.

Federal Environmental Approval Worksheet

After completion of Tables 2.1, 2.2, and 2.3, proceed to step 3.

Project ID Number: 8758.04

Step 3: Who makes the NEPA CE Determination?

FHWA Regulations describe two types of CEs; CEs listed in 23 CFR 771.117(c) [aka the C list], and CEs such as those listed in 23 CFR 771.117 (d) [aka the D list]. NYSDOT can make the CE determination for C list projects once all required approvals and concurrences have been secured. FHWA retains the NEPA determination for D list projects. FHWA makes the CE determination programmatically through NYSDOT for D list projects that meet the [July 15, 1996 FHWA NY Division NEPA Programmatic Categorical Exclusion memo criteria](#). To determine by whom, FHWA or NYSDOT, and how the CE determination is made, follow the instructions beginning in section 3.1 of the following table.

	CONDITION	ACTION
3	Determine whether FHWA or NYSDOT makes the CE determination.	
3.1	<p>If the project is an action that would normally be a CE in 23 CFR 771.117(c) (see the drop down list), check the "Yes" box. If not, check the "No" box.</p>	<p>If yes, NYSDOT can make the CE determination once all the approvals and coordinations required are complete.</p> <p>1. Is the project an action that would normally be a CE in 23 CFR 771.117(c)? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> "Construction of bicycle and pedestrian lanes, paths and facilities."</p> <p>If no, proceed to step 3.2.</p> <p>If yes, and the action falls under (c)(26), (c)(27), or (c)(28), proceed to step 3.1.1. Otherwise, proceed to step 3.1.2.</p>
3.1.1	<p>Determine if any additional constraints apply to the CE.</p>	<p>Do ANY of the conditions described in the Table Thresholds 3.1.1 (land acquisition, major traffic disruptions, changes in access control, floodplain encroachment, National Wild & Scenic Rivers) apply to the action? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>If yes, the (c)(26), (c)(27) and (c)(28) constraints have not been met – proceed to step 3.2.</p> <p>If no, do ANY of the following apply:</p> <ul style="list-style-type: none"> • A check in Column A in Table 2.1 for Section 106, and a finding of Adverse Effect? • A check in Column A in Table 2.1 for 4(f), and impacts are not de minimis? • A check in Column A in Table 2.3 for Section 404/10? • A check in Column A in Table 2.3 for USCG Bridge Permit? <p>Do ANY of the above apply to the action? YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>If yes, the (c)(26), (c)(27) and (c)(28) constraints have not been met – proceed to step 3.2.</p> <p>If no, the (c)(26), (c)(27) and (c)(28) constraints have been met – proceed to step 3.1.2.</p>

Federal Environmental Approval Worksheet

Project ID Number: 8758.04

3.1.2	Determine if any of the required environmental determinations, compliance and/or approvals/ concurrences are outstanding.	<p>If there are:</p> <ul style="list-style-type: none"> outstanding environmental determinations (Table 2.1:checks in column A without dates in column B) and/or circumstances requiring demonstration of applicable EO compliance or issues requiring FHWA environmental review (checks in column A in Table 2.2) <p>The project will use Memo Shell 2 (FHWA needs to review this project). Proceed to step 4.</p> <p><i>If the project does not meet the conditions above proceed to step 3.1.3.</i></p>
3.1.3	Determine if any issues are present that require FHWA notification.	<p>If there are:</p> <ul style="list-style-type: none"> any issues requiring FHWA environmental notification (checks in column A in Table 2.3); then <p>The project will use Memo Shell 3 (FHWA must be notified of this project). Proceed to step 4.</p> <p><i>If the project does not meet the conditions above proceed to step 3.1.4.</i></p>
3.1.4	No Determinations, Approvals, Concurrences or Notifications required.	<p>The project will use Memo Shell 1 (memo to file). Proceed to step 4.</p>
3.2	The project is a D list CE as per 23 CFR 771.117(d). Choose appropriate entry from drop down list. If "other" or (d)(13) provide an explanation.	<p>Certain actions eligible for categorical exclusion require NYSDOT to transmit documentation and a determination that a CE applies. Examples of activities that may proceed as a CE are listed in 23 CFR 771.117(d) (D list). Activities not directly listed on the D List also have the potential to proceed as a CE with submitted documentation (Other). Activities that may normally be classified as a C-list CE under 23 CFR 771.117(c)(26), (c)(27), or (c)(28) must meet the constraints at 23 CFR 771.117(e), or they revert to the D-list as (d)(13).</p> <p>The project is an action that would normally be a CE in 23 CFR 771.117(d). <input type="text" value="Choose an item"/>. Other or (d)(13): provide explanation here</p> <p>Proceed to step 3.2.1.</p>
3.2.1	Determine if any of the required environmental determinations, compliance and/or approvals/ concurrences are outstanding and/or notification is required.	<p>If there are:</p> <ul style="list-style-type: none"> any outstanding environmental determinations (any checks in column A without dates in column B in Table 2.1); and/or any circumstances requiring demonstration of applicable EO compliance (any checks in column A in Table 2.2); and/or issues requiring FHWA environmental notification (any checks in column A in Table 2.3); then <p>The project will use Memo Shell 4 (MOPL and FHWA need to review this project). Proceed to Step 4.</p>
3.2.2	Design Approval Document sent to FHWA	<p>If the project:</p> <ul style="list-style-type: none"> does not meet the conditions above (3.2.1), then the project has met the criteria established as per the programmatic agreement dated July 15, 1996. <p>The project will use Memo Shell 5 (memo to file). Proceed to Step 4.</p>

Federal Environmental Approval Worksheet

Project ID Number: 8758.04

Step 4: Summary and Recommendation

- This project **does** qualify to be progressed as a Categorical Exclusion.
 - The NEPA Determination is being made by FHWA
 - All outstanding FHWA environmental approvals will be obtained and are listed here: None
- List outstanding FHWA environmental approvals here:

All other environmental, social and economic factors that affect the project's NEPA classification, of Title 23 CFR 771.117 Environmental Impact and Related Procedures and the July 1996 FHWA NY Division NEPA Programmatic Categorical Exclusion memo must still be addressed, for example, the project:

- does not change the functional class;
- does not add mainline capacity;
- is not on new location;
- will not change travel patterns;
- acquires only minor amounts of ROW (temporary or permanent);
- does not cause displacements; does not change access control;
- is air quality exempt;
- is consistent with the NYS Coastal Management Program; **and**
- the analysis satisfies the requirements of the Farmland Protection Policy Act.

I certify that the information provided above is true and accurate and recommend the project be processed as described above.

Project Manager/Designer  _____ Date June 2, 2017
(or Responsible Local Official)

Print Name and Title: Daniel J. Rourke, P.E., Managing Engineer

Regional Environmental Unit Supervisor _____ Date _____

Print Name and Title: _____

Regional Local Project Liaison _____ Date _____
(Locally Administered Projects Only)

Print Name and Title: _____

Changes that may have occurred since the preparation of the worksheet which would **create the need to go through the Worksheet again** include but are not limited to: a change in the scope of the proposed project; a change in the social, economic or environmental circumstances or the setting of the project study area (i.e. the affected environment); a change in the federal statutory environmental standards; discovering new information not considered in the original process; and a significant amount of time has passed (equal or greater than three years).



NEPAssist

8758.04 - Option B-1, O&W

Map



Geographic coordinates:

POLYGON (41.929703,-74.059669,41.929740,-74.059667,41.930778,-74.057629,41.931065,-74.057114,41.931544,-74.056041,41.932050,-74.055206,41.932641,-74.054090,41.933215,-74.053168,41.933566,-74.053017,41.934939,-74.052266,41.935705,-74.051365,41.936232,-74.050936,41.936567,-74.050443,41.937381,-74.049048,41.938036,-74.047932,41.938595,-74.046204,41.938078,-74.043062,41.939292,-74.041087,41.939955,-74.038082,41.939910,-with buffer 0 miles



Note: The information in the following reports is based on publicly available databases and web services. The National Report uses nationally available datasets and the State Reports use datasets available through the [EPA Regions](#). Click on the hyperlinked question to view the data source and associated metadata.

National Report

Project Area	0.05 sq mi
Within an Ozone 8 - hr Non-Attainment Area?	no
Within a PM2.5 Non-Attainment Area?	no
Within a Lead Non-Attainment Area?	no
Within a Federal Land?	no
Within an impaired stream?	no
Within an impaired waterbody?	no
Within a waterbody?	no
Within a stream?	no
Within an NWI wetland?	click here
	<i>May take several minutes</i>
Within a Toxic Substances Control Act (TSCA) site?	no
Within a RADInfo site?	no
Within a Brownfields site?	no
Within a Superfund site?	no
Within a Toxic Release Inventory (TRI) site?	no
Within a water discharger (NPDES)?	no
Within an air emission facility?	no
Within a hazardous waste (RCRA) facility?	no
Within a school?	no
Within an airport?	no
Within a hospital?	no

Within a designated sole source aquifer? no

Within a historic property on the National Register of Historic Places? no

New York Report

Within a Great Lakes Area of Concern? no

Within the Great Lakes basin? no

Within Managed Natural Resources Area(s)? no

Within an American Heritage River? yes

Within a RCRA 2020 facility? no

Demographic Reports

USFWS IPaC Report

Last updated on Friday, January 22, 2016

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information			
Name of Action or Project: PIN 8758.04 - Kingston Rail Trail			
Project Location (describe, and attach a location map): City of Kingston, Towns of Hurley and Ulster, Ulster County, New York			
Brief Description of Proposed Action: The proposed project will establish approximately 2.0 miles of pedestrian and bicycle trail in the City of Kingston and the Towns of Hurley and Ulster. The trail is proposed to follow the abandoned Ontario & Western (O&W) Railroad corridor from the existing O&W Rail Trail along US Route 209, through the existing NYS Thruway underpass, to Washington Avenue (State Bike Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue and a traffic signal to assist trail users and others crossing Washington Avenue.			
Name of Applicant or Sponsor: Christopher White, Deputy Director		Telephone: 845-340-3340	
		E-Mail: cwhi@ulster.ny.us	
Address: 244 Fair Street, PO Box 1800			
City/PO: Kingston		State: NY	Zip Code: 12402
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO <input type="checkbox"/>
			YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: NYSDEC - permits NYSDOT - funding, design approval ACOE - permits			NO <input type="checkbox"/>
			YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		12.89 acres	
b. Total acreage to be physically disturbed?		6.23 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		0.064 acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
<input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input checked="" type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other (specify): Railroad			
<input type="checkbox"/> Parkland			

<p>18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____</p>	<p>NO</p> <p><input checked="" type="checkbox"/></p>	<p>YES</p> <p><input type="checkbox"/></p>
<p>20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ Based on the NYSDEC Environmental Navigator, a Brownfield Cleanup Program site is located in the vicinity of the western terminus of the project. The site name is Utility Platers, Inc./Kingston Diagnostics.</p>	<p>NO</p> <p><input type="checkbox"/></p>	<p>YES</p> <p><input checked="" type="checkbox"/></p>
<p>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</p> <p>Applicant/sponsor name: Christopher White Signature: <u>Christopher White</u> Date: <u>2/19/2016</u></p>		



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National Register of Historic Places]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	Yes

Project:

Date:

Short Environmental Assessment Form
Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

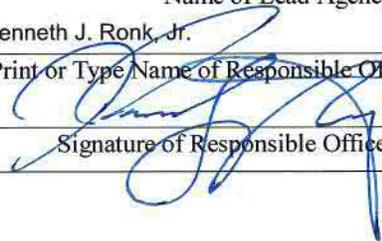
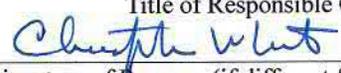
Project:

Date:

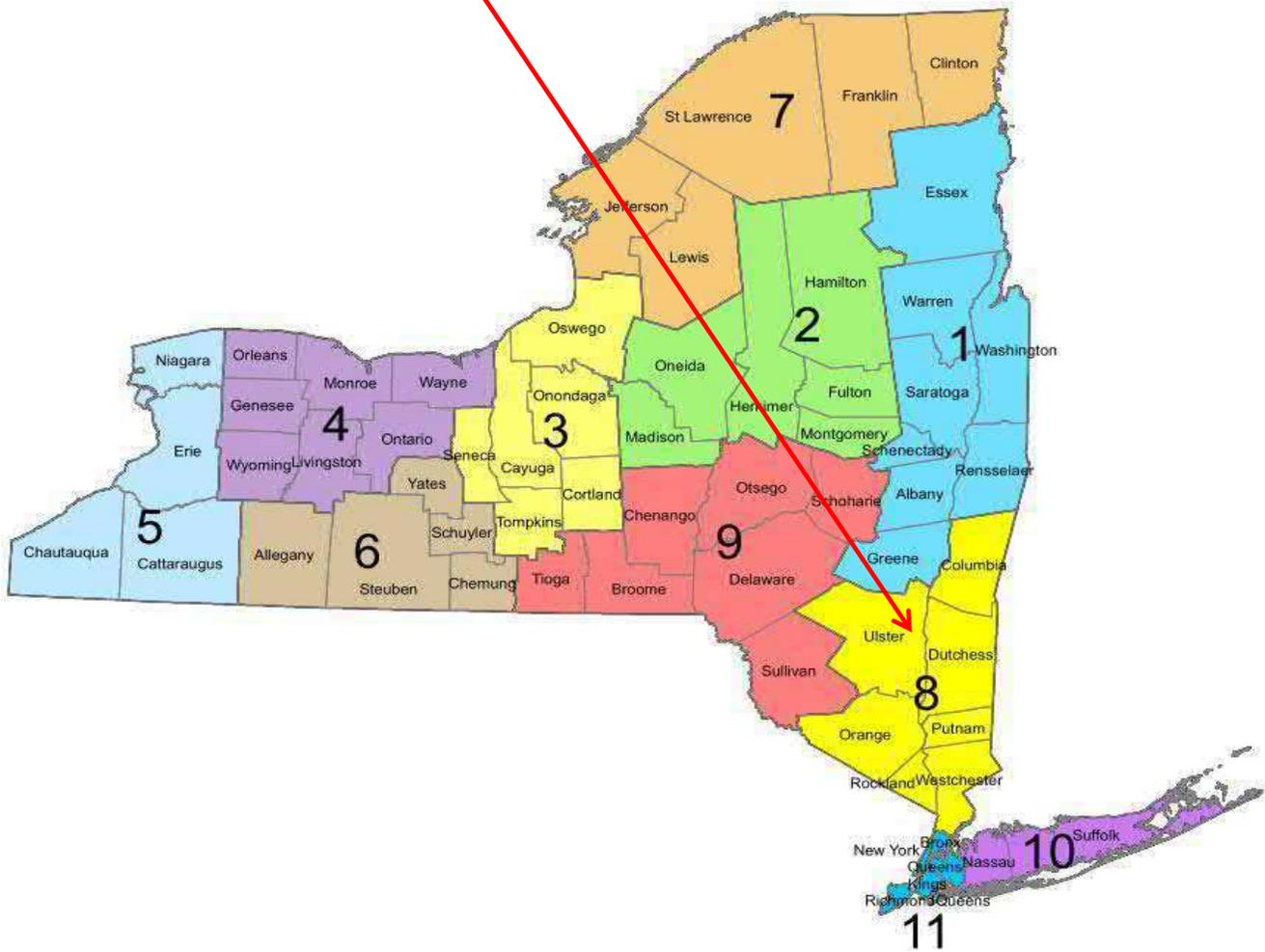
Short Environmental Assessment Form
Part 3 Determination of Significance

For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Ulster County Legislature	3/30/2016
Name of Lead Agency	Date
Kenneth J. Ronk, Jr.	Chairman
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
	
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

Project Location
Kingston Rail Trail
PIN 8758.04
City of Kingston, Town of Hurley, Town of
Ulster
Ulster County, New York



City of Kingston, Towns of Hurley & Ulster, Ulster County, New York

PIN 8758.04

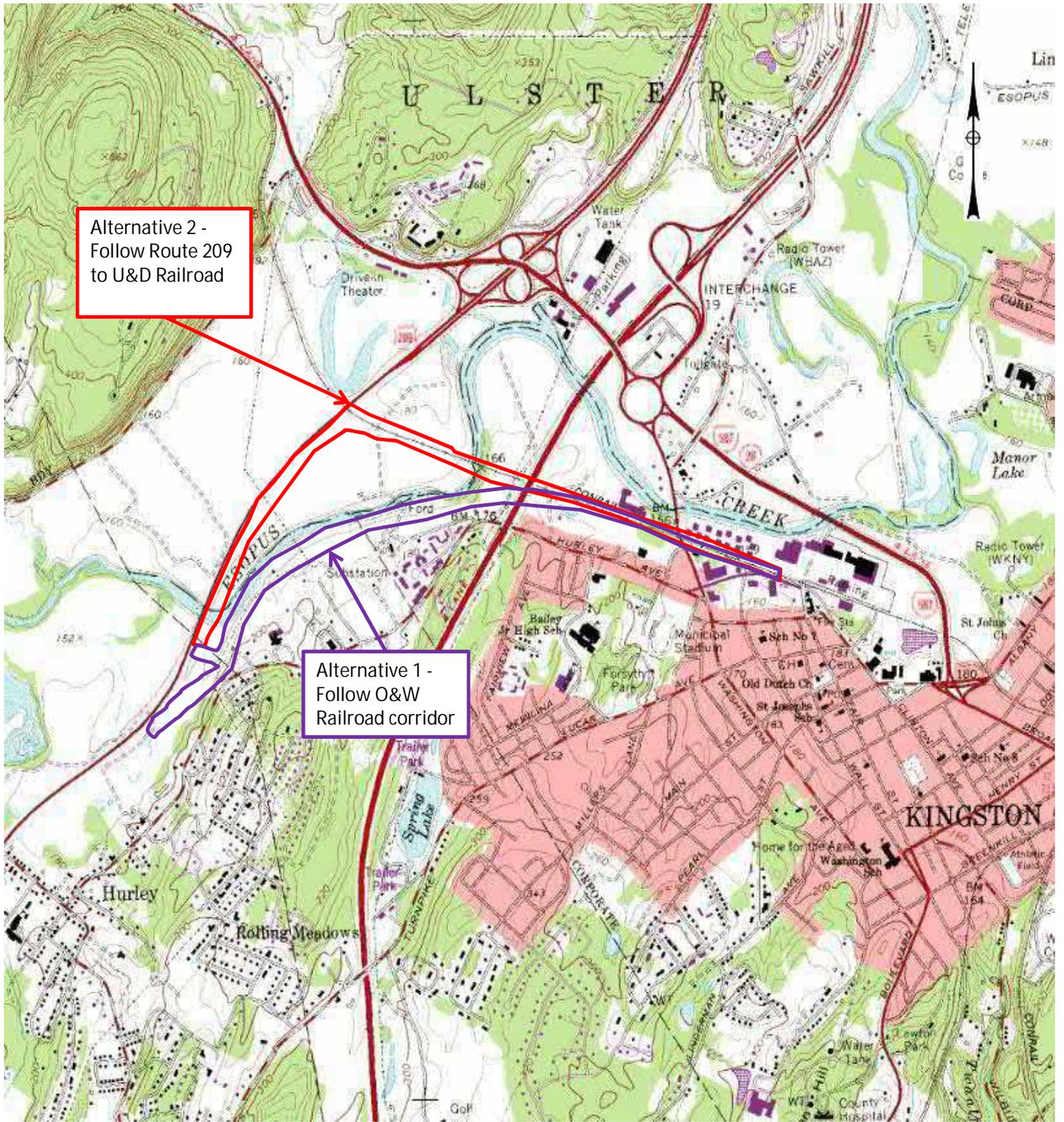
**Kingston Rail Trail
Site Location Map**



Engineers • Environmental Scientists • Planners • Landscape Architects

Source: NYSDOT

April 2015



Alternative 2 -
Follow Route 209
to U&D Railroad

Alternative 1 -
Follow O&W
Railroad corridor

City of Kingston, Towns of Hurley & Ulster, Ulster County, New York

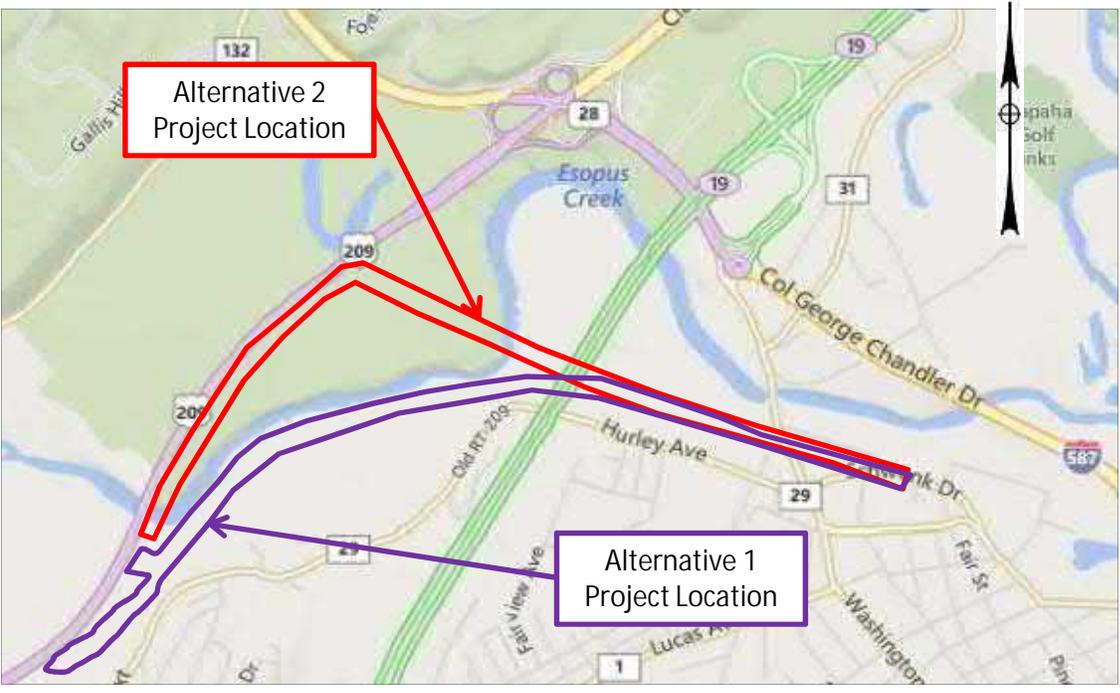
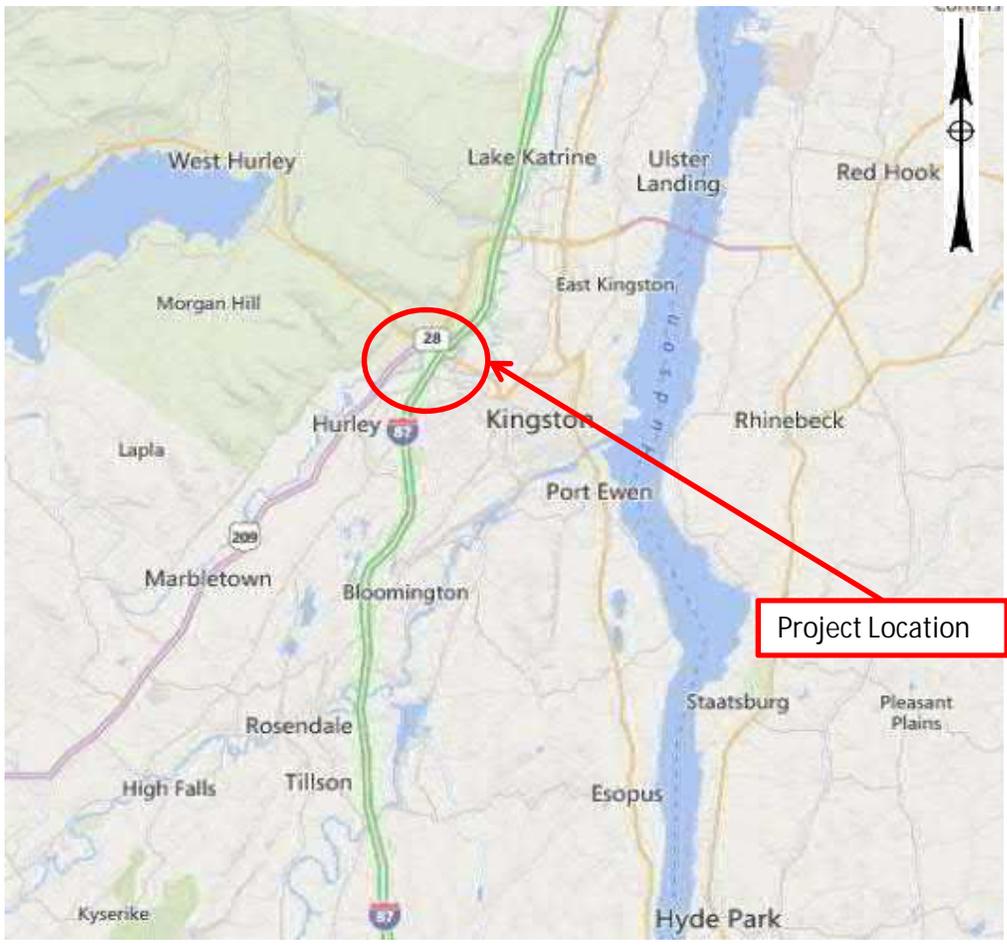
PIN 8758.04

**Kingston Rail Trail
Project Location Map**



Source: USGS Kingston West Quadrangle Map

April 2015



City of Kingston, Towns of Hurley & Ulster, Ulster County, New York

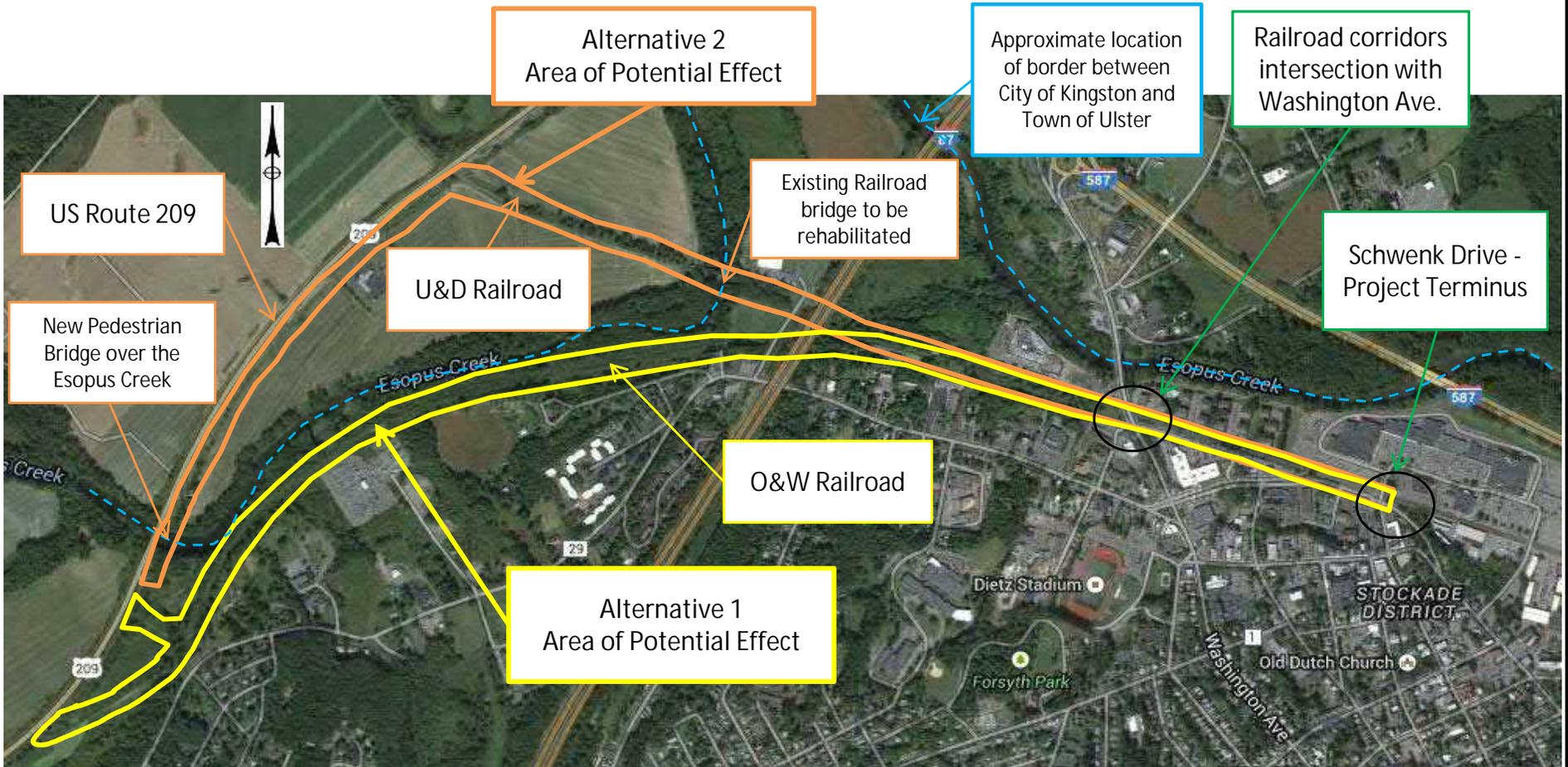
PIN 8758.04

**Kingston Rail Trail
Site Location Map**



Source: Bing Maps

April 2015



City of Kingston, Towns of Hurley & Ulster, Ulster County, New York

PIN 8758.04

**Kingston Rail Trail
Area of Potential Effect (APE) Map**



Engineers • Environmental Scientists • Planners • Landscape Architects

Source: Google Maps

April 2015



Looking South along US Route 209 at Hurley Rail Trail parking lot. Both Alternative 1 and 2 terminate at this location.



Looking North adjacent to US Route 209 bridge over Esopus Creek. Proposed location of pedestrian bridge for Alternative 2.



I-87 overpass above the O&W Railroad corridor (Alternative 1).



Looking West along O&W Railroad corridor from I-87 overpass.
Proposed location of trail crossing for Alternative 1.



Looking West along O&W Railroad (Alternative 1)



Looking East along the O&W Railroad (Alternative 1) near the CHG&E Electrical Substation.



Looking West along O&W Railroad near possible western terminus for Alternative 1 at Hurley Rail Trail.



Looking East along O&W Railroad (Alternative 1) approaching I-87 overpass.



Looking East along county-owned U&D Railroad (Alternative 2) through the I-87 overpass



Looking West along U&D Railroad (Alternative 2) through the I-87 overpass with U&D Railroad trestle bridge over the Esopus Creek in the



Looking North along US Route 209 near NYS Police Station. Alternative 2 is proposed along the east side of roadway.



Looking South along US Route 209 near NYS Police Station. Alternative 2 will proceed along the east side of US Route 209.



Looking East along U&D Railroad. Alternative 2 is proposed to proceed along the county-owned railroad.



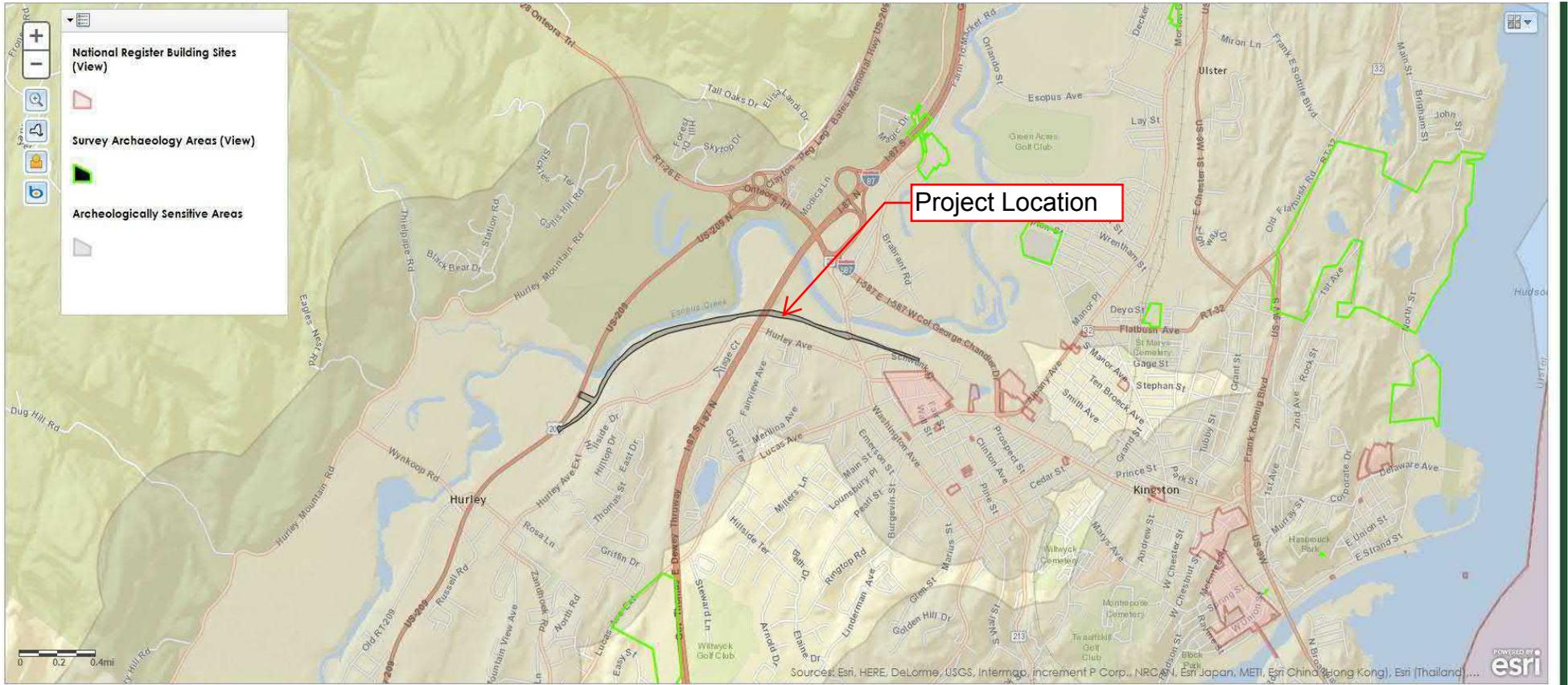
Looking East at the existing U&D Railroad bridge over the Esopus Creek. The existing structure will be rehabilitated for Alternative 2.



Looking West along the county-owned U&D Railroad corridor towards the intersection with US Route 209.



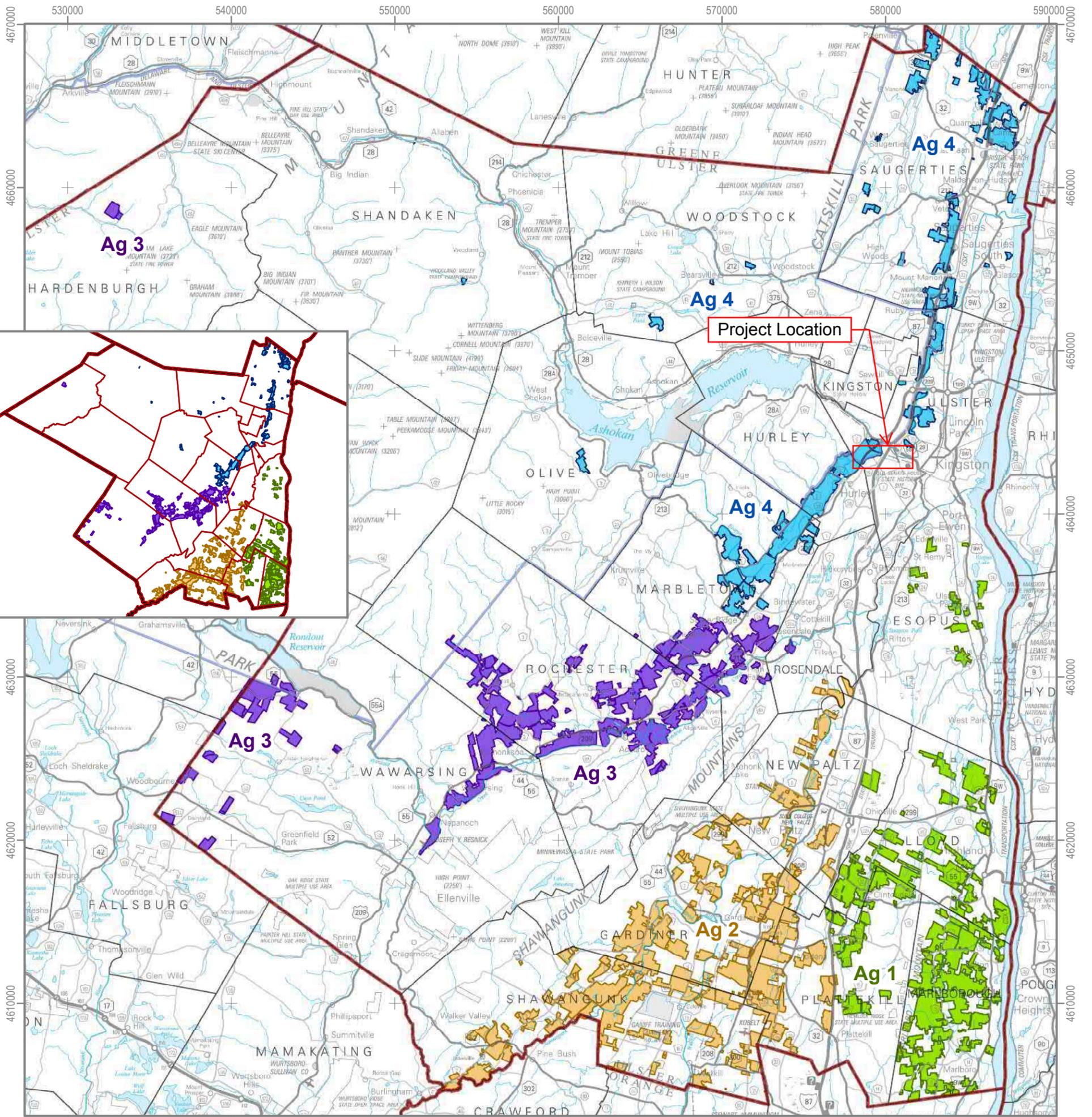
Looking North along US Route 209 at Hurley Rail Trail parking lot. Alternative 2 is proposed to begin at this location.



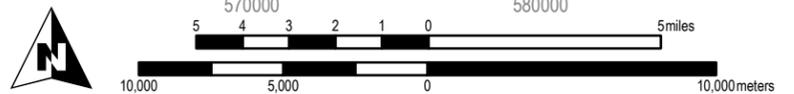
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Version 1.0.15, April 14, 2015

PIN 8758.04 – Kingston Rail Trail
Alternative #1 – O&W Railroad Corridor
NYSOPRHP Cultural Resource Information System



MAP PROJECTION
UTM Zone 18, NAD83 meters



KEY	DISTRICT CERTIFICATIONS and TOWNS			
Ag District 1	DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4
Ag District 2	CERTIFIED 9/19/2013	CERTIFIED 6/2/2006	CERTIFIED 11/13/2006	CERTIFIED 8/14/2007
Ag District 3	Esopus Lloyd Marlborough	New Paltz Plattekill Shawangunk	Esopus Gardiner Rochester	Plattekill Rosendale Wawarsing
Ag District 4			Hardenburgh Marbletown Ulster	Rosendale Shandaken Woodstock

MAP SOURCE INFORMATION

Map created at Cornell IRIS (Institute for Resource Information Sciences) <<http://iris.css.cornell.edu>> for the NYS Department of Agriculture and Markets
Agricultural Districts boundary data is available at CUGIR (Cornell University Geospatial Information Repository) website: <<http://cugir.mannlib.cornell.edu>>

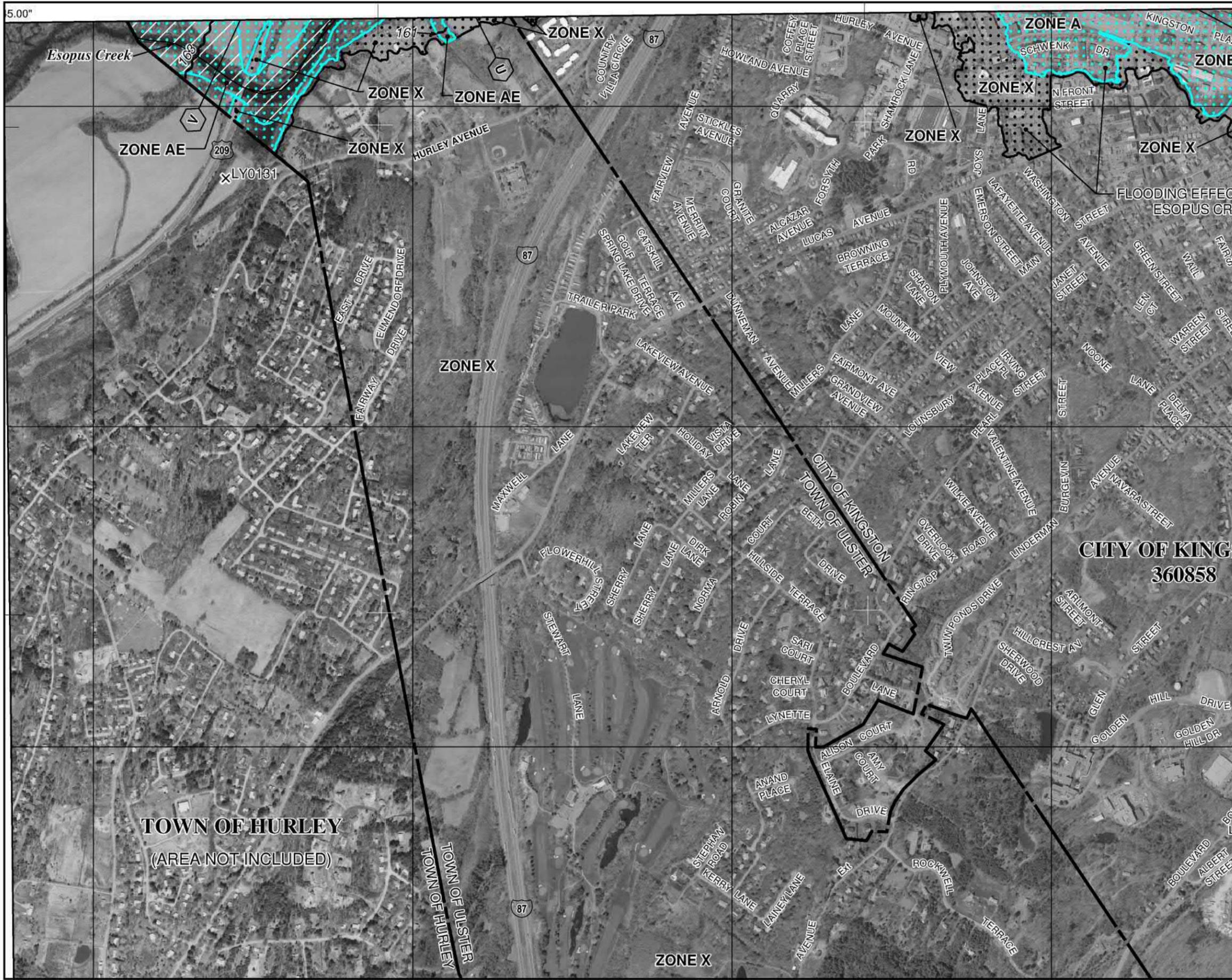
Base Map: state250_bw.tif 1998
Scale: 1:250,000; County boundaries imported from the file nyshore.e00 from the NYSGIS Clearinghouse website: <<http://gis.ny.gov>>

Contains data copyrighted by the NYS Office of Cyber Security

DISCLAIMER

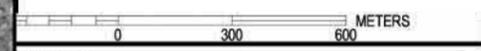
This is a general reference to Agricultural District boundaries; not a legal substitute for actual tax parcel information.
Boundaries as certified prior to January 2014
Open Enrollment Annual Additions are not included in this data. Check with county agencies to confirm the status of individual parcels.

5.00"



For more information on the Flood Insurance Study report for this jurisdiction.

If flood insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-638-6620.



PANEL 0470E

FIRM
FLOOD INSURANCE RATE MAP
ULSTER COUNTY,
NEW YORK
 (ALL JURISDICTIONS)

PANEL 470 OF 910
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ESOPUS, TOWN OF	360855	0470	E
KINGSTON, CITY OF	360858	0470	E
ROSENDALE, TOWN OF	360862	0470	E
ULSTER, TOWN OF	360866	0470	E

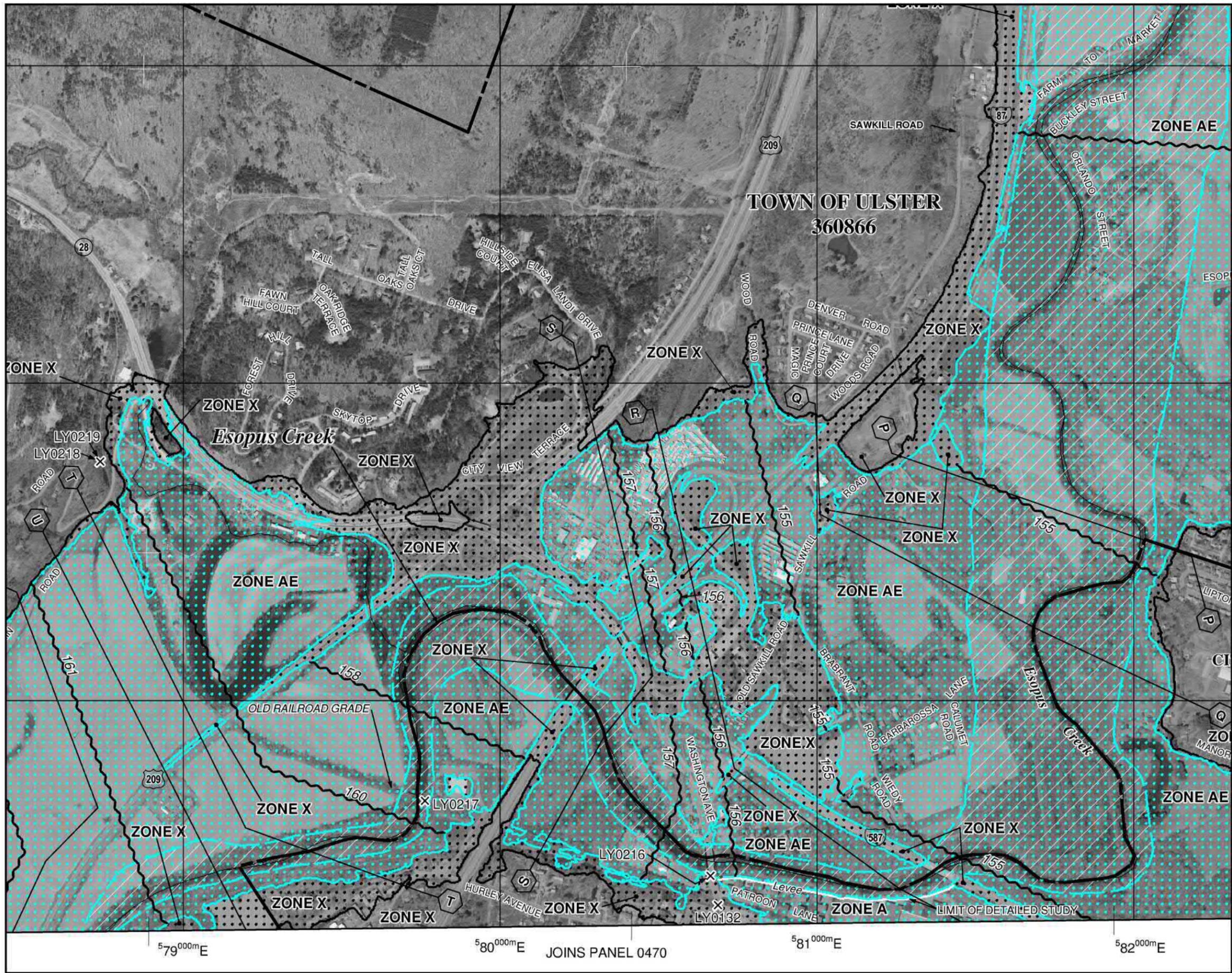
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
36111C0470E
EFFECTIVE DATE
SEPTEMBER 25, 2009

Federal Emergency Management Agency

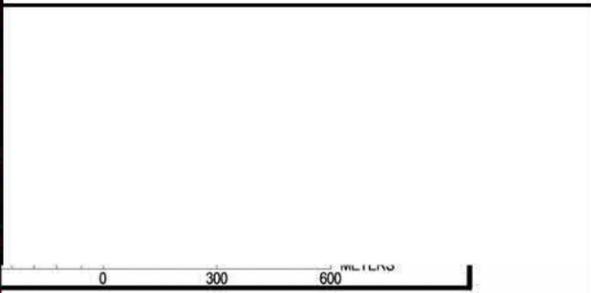
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



For more information on the Flood Insurance Study report for this jurisdiction, contact your insurance agent. If insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 1000'



PANEL 0460E

FIRM

FLOOD INSURANCE RATE MAP

ULSTER COUNTY, NEW YORK

(ALL JURISDICTIONS)

PANEL 460 OF 910
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
KINGSTON, CITY OF	360858	0460	E
KINGSTON, TOWN OF	361218	0460	E
ULSTER, TOWN OF	360866	0460	E

Notes to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
36111C0460E

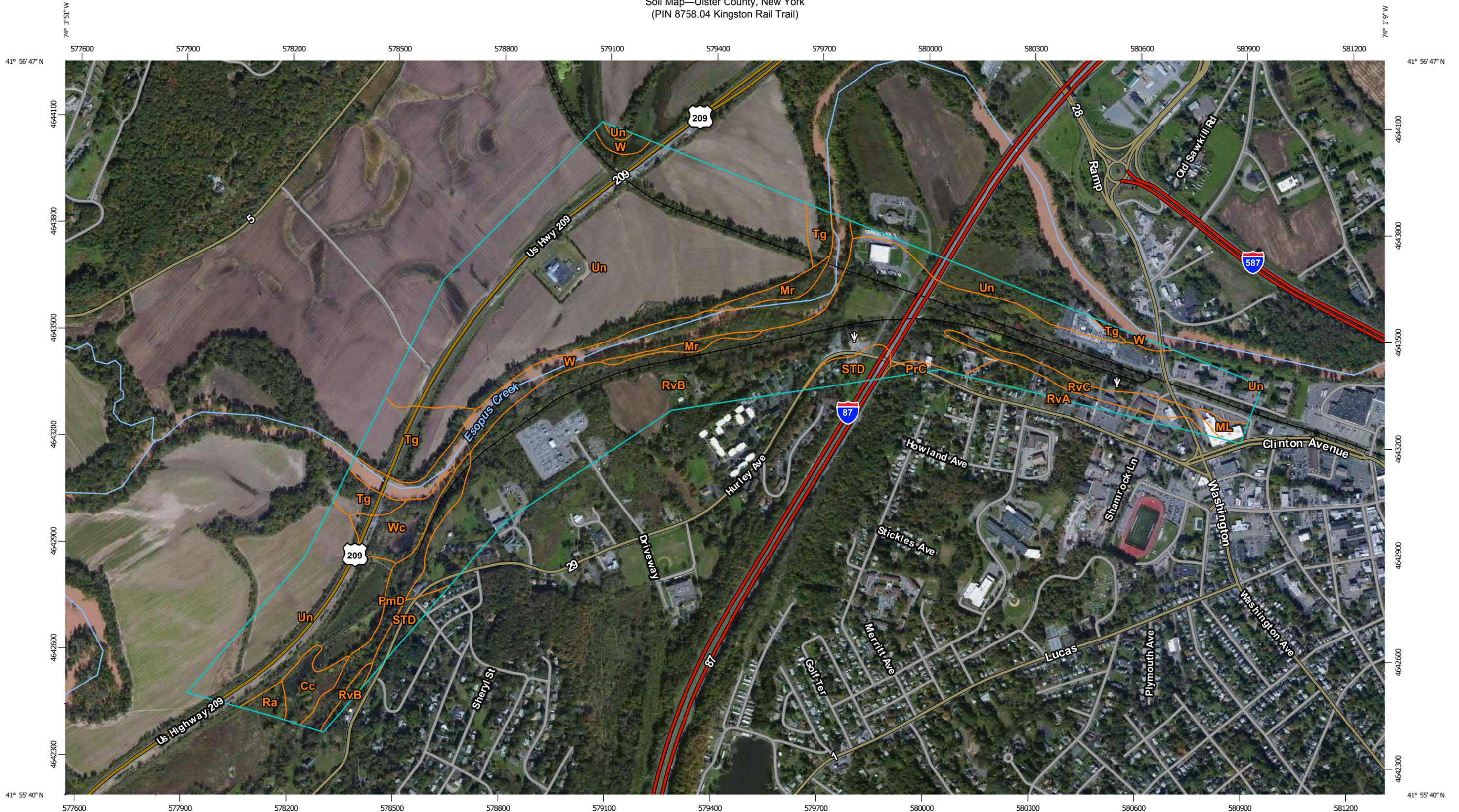
EFFECTIVE DATE
SEPTEMBER 25, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

579⁰⁰⁰m E 580⁰⁰⁰m E JOINS PANEL 0470 581⁰⁰⁰m E 582⁰⁰⁰m E

Soil Map—Ulster County, New York
(PIN 8758.04 Kingston Rail Trail)



Map Scale: 1:10,100 if printed on B landscape (17" x 11") sheet.
0 100 200 400 600 Meters
0 450 900 1800 2700 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ulster County, New York

Survey Area Data: Version 13, Sep 25, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 20, 2011—Oct 10, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Ulster County, New York (NY111)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cc	Canandaigua silt loam	5.0	1.3%
ML	Made land	1.5	0.4%
Mr	Middlebury silt loam	4.8	1.2%
PmD	Plainfield-Riverhead complex, moderately steep	9.7	2.5%
PrC	Plainfield-Rock outcrop complex, rolling	1.1	0.3%
Ra	Raynham silt loam	1.8	0.5%
RvA	Riverhead fine sandy loam, 0 to 3 percent slopes	5.9	1.6%
RvB	Riverhead fine sandy loam, 3 to 8 percent slopes	120.6	31.6%
RvC	Riverhead fine sandy loam, 8 to 15 percent slopes	6.5	1.7%
STD	Stockbridge-Farmington-Rock outcrop complex, hilly	7.6	2.0%
Tg	Tioga fine sandy loam	18.1	4.7%
Un	Unadilla silt loam	164.1	42.9%
W	Water	28.1	7.3%
Wc	Wayland mucky silt loam	7.2	1.9%
Totals for Area of Interest		382.0	100.0%



NYSDEC Wetland
KW-18

<p>O & W Rail Trail Project PIN #8758.04 City of Kingston, Town of Hurley Ulster County, NY</p>
<p>Water Features Map Alternative 1</p>

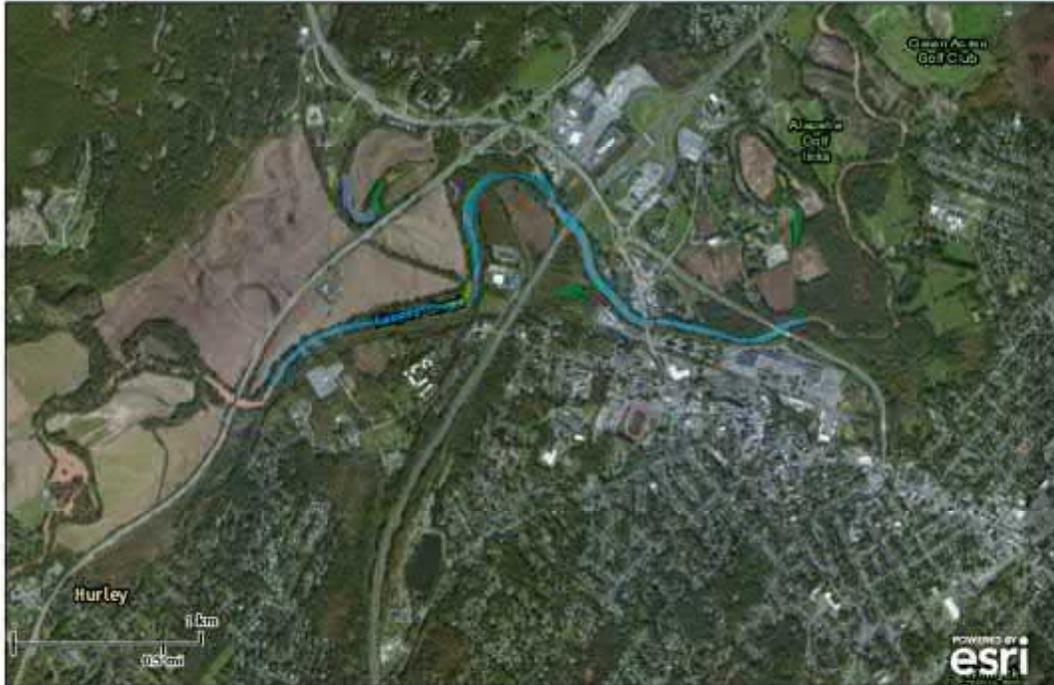


U.S. Fish and Wildlife Service

National Wetlands Inventory

O&W Rail Trail
Project - PIN
#8758.04

Apr 29, 2015



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

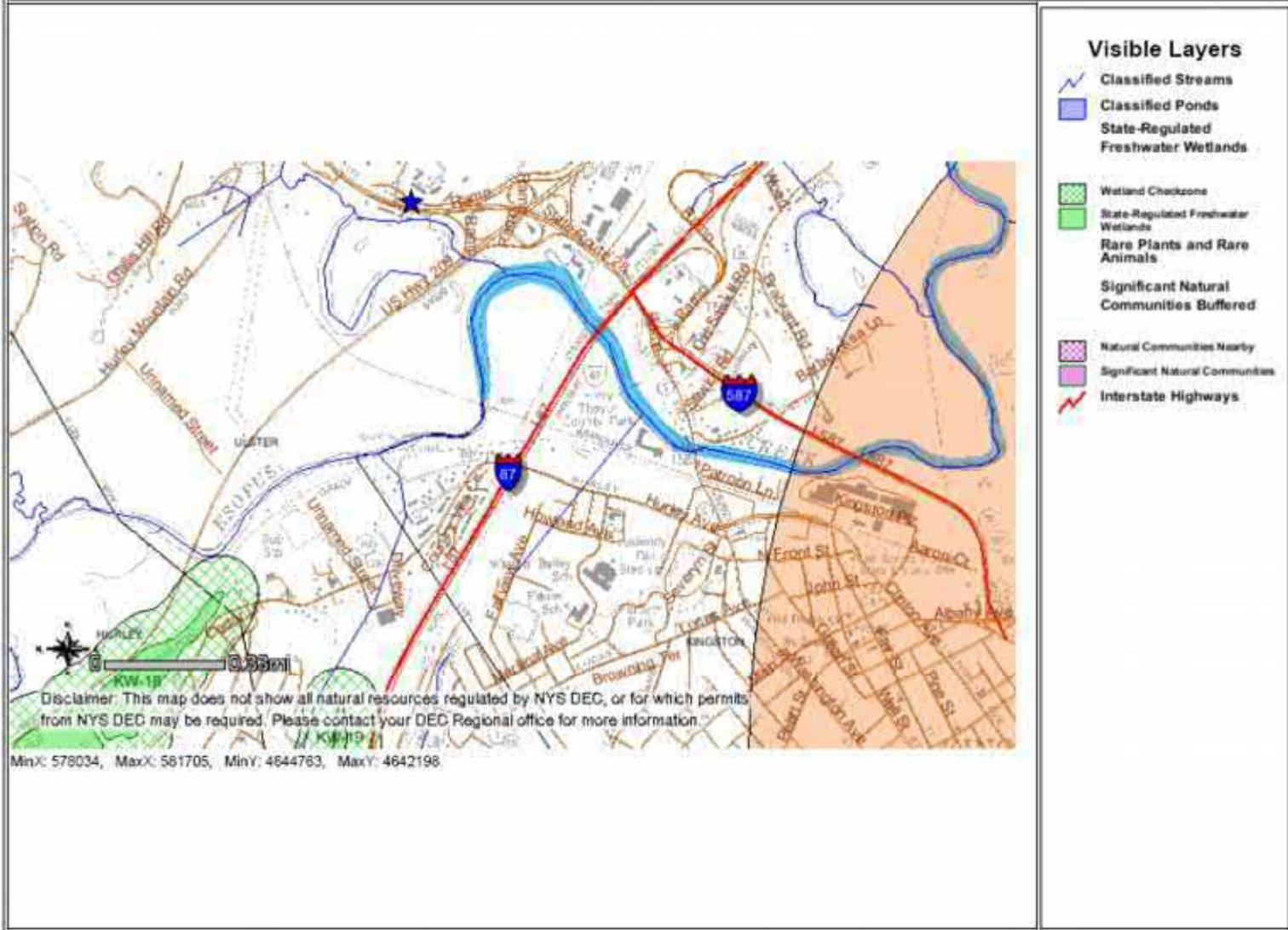
User Remarks:

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

O & W Rail Trail Project
PIN #8758.04
City of Kingston, Town of Hurley
Ulster County, NY

USFWS
Wetlands
Map

O&W Rail Trail Project - PIN #8758.04



Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data and does not necessarily endorse any interpretations or products derived from the data.

O & W Rail Trail Project
PIN #8758.04
City of Kingston, Town of Hurley
Ulster County, NY

NYSDEC
 Wetlands
 Map

September 14, 2015

Patricia Cole
Deputy Field Supervisor
New York Field Office
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, NY 13045

Re: Informal Section 7 Consultation for the Kingston Rail Trail Project (PIN 8758.04), City of Kingston, Town of Hurley, Ulster County, New York

Dear Ms. Cole:

Barton and Loguidice, D.P.C., has been contracted to provide engineering services for Ulster County for the establishment of approximately 1.7 miles of a bicycle and pedestrian trail which would provide a link between the City of Kingston and the Hurley Rail Trail. Foit-Albert Associates, P.C., has been contracted to provide environmental documentation and reviews for this project. The engineering services include the preparation of a Project Design Approval Document in accordance with New York Department of Transportation requirements, and preparation of the Full Environmental Assessment Form - Part 1 for SEQRA review.

Two alternatives will be developed for the location of the trail along two potential right-of-way (ROW) corridors. Alternative 1 will extend from the existing Hurley Rail Trail on U.S. Route 209, proceed along the abandoned Ontario & Western (O&W) Railroad right-of-way (ROW), and terminate at Washington Avenue. Alternative 2 will begin from the Hurley Rail Trail parking lot, extend north along U.S. Route 209 to the county-owned Ulster & Delaware (U&D) Railroad, proceed east along the U&D railroad corridor, and terminate at Kingston Plaza near the intersection of Schwenk Drive and Fair Street. Additional improvements include the development of trailhead parking, utility access points, and signage, including maps and safety rules at the trailheads. Signage and pedestrian crossing signals may be necessary, as may improvements to access along the existing corridor. Rehabilitation of the existing railroad trestle bridge along the U&D corridor over the Esopus Creek and the construction of a new pedestrian structure adjacent to the existing U.S. Route 209 bridge over the Esopus Creek will be evaluated as part of Alternative 2. Enclosed, please find location maps depicting the approximate project limits for both options.

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – New York Field Office (USFWS) notice of the project and to initiate informal consultation with USFWS under Section 7 of the Endangered Species Act (ESA) to determine whether any federally threatened, endangered, candidate, or proposed species, or their designated critical habitats could be affected.

The USFWS Information, Planning and Conservation (IPaC) online planning tool Trust Resource List generated for the proposed project (see **Attachment 1**) lists the following Federally-listed species as having the potential to occur within the vicinity of the Proposed Action: Indiana bat (*Myotis sodalis*) - endangered, the northern long-eared bat (*Myotis septentrionalis*) – threatened, and the bog turtle (*Clemmys mühlenbergii*) - threatened.



Ms. Patricia Cole
September 14, 2015
Page 2

The limited amount of tree clearing that would occur for the Proposed Action would only occur during the October 1 to March 31 tree clearing window to minimize adverse effects to northern long-eared bat and the Indiana bat, would result in minimal habitat loss, and would not result in fragmentation of a contiguous woodland area. For these reasons, the project may affect but is unlikely to adversely affect the northern long-eared bat and the Indiana bat or the habitats on which these species depend. We request your concurrence with this determination.

All work will be completed in existing ROW and previously disturbed and developed areas. Please advise if additional work will be required with respect to the bog turtle habitat and if the species is known to occur within the project limits and adjacent forested and scrub-shrub wetlands.

If you have questions or require additional information regarding this request, please contact me at (518) 605-4878 or gnugent@foit-albert.com. Thank you for your time and consideration.

Sincerely,

Georgeanna Nugent Lussier
Project Scientist



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New York Field Office

3817 Luker Road

Cortland, NY 13045

Phone: (607) 753-9334 Fax: (607) 753-9699

http://www.fws.gov/northeast/nyfo

To: Georgeanna Nugent Lussier

Date: Oct 29, 2015

USFWS File No: 151505

Regarding your: Letter Fax Email

Dated: Sep 14, 2015

For project: Kingston Rail Trail Project

Located: link between City of Kingston and the Hurley Rail Trail

In Town/County: City of Kingston, Ulster County

Pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the U.S. Fish and Wildlife Service:

Acknowledges receipt of your "no effect" and/or no impact determination. No further ESA coordination or consultation is required.

Acknowledges receipt of your determination. Please provide a copy of your determination and supporting materials to any involved Federal agency for their final ESA determination.

Is taking no action pursuant to ESA or any legislation at this time, but would like to be kept informed of project developments.

As a reminder, until the proposed project is complete, we recommend that you check our website (<http://www.fws.gov/northeast/nyfo/es/section7.htm>) every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current. Should project plans change or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.

USFWS Contact(s): Sandie Deon 10/29/15

Supervisor: Patricia Cole Date: 10/29/15



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
PHONE: (607)753-9334 FAX: (607)753-9699
URL: www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Code: 05E1NY00-2016-SLI-0782

January 22, 2016

Event Code: 05E1NY00-2016-E-01719

Project Name: 8758.04 - Option B-1, O&W

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <http://www.fws.gov/northeast/nyfo/es/section7.htm>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (

http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: 8758.04 - Option B-1, O&W

Official Species List

Provided by:

New York Ecological Services Field Office

3817 LUKER ROAD

CORTLAND, NY 13045

(607) 753-9334

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

Consultation Code: 05E1NY00-2016-SLI-0782

Event Code: 05E1NY00-2016-E-01719

Project Type: TRANSPORTATION

Project Name: 8758.04 - Option B-1, O&W

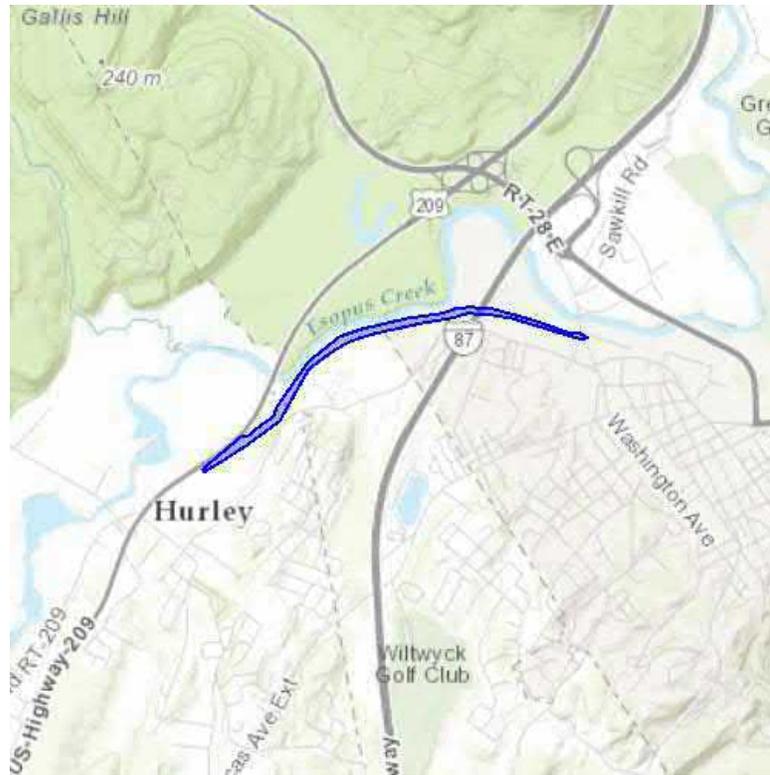
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: 8758.04 - Option B-1, O&W

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-74.059665 41.929672, -74.056264 41.931668, -74.055706 41.931748, -74.054762 41.932354, -74.053518 41.933009, -74.053153 41.933599, -74.052702 41.934222, -74.050342 41.936568, -74.047745 41.93818, -74.045728 41.938707, -74.043454 41.93909, -74.041737 41.939425, -74.038798 41.939713, -74.037703 41.94, -74.036459 41.940064, -74.034527 41.94, -74.031073 41.939266, -74.027597 41.938404, -74.026867 41.93834, -74.026202 41.938085, -74.026674 41.937973, -74.032854 41.939394, -74.03457 41.939617, -74.036673 41.939713, -74.038004 41.939409, -74.040364 41.93909, -74.044698 41.93842, -74.045943 41.938117, -74.04708 41.937829, -74.048453 41.937223, -74.050428 41.936105, -74.052069 41.933807, -74.052949 41.932689, -74.054419 41.931883, -74.055878 41.931165, -74.057702 41.930199, -74.05944 41.929393, -74.059665 41.929672)))

Project Counties: Ulster, NY



United States Department of Interior
Fish and Wildlife Service

Project name: 8758.04 - Option B-1, O&W

Endangered Species Act Species List

There are a total of 3 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Indiana bat (<i>Myotis sodalis</i>) Population: Entire	Endangered		
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		
Reptiles			
Bog Turtle (<i>Clemmys muhlenbergii</i>) Population: northern	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: 8758.04 - Option B-1, O&W

Critical habitats that lie within your project area

There are no critical habitats within your project area.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov



March 08, 2016

Daniel Carey
Barton & Loguidice, D.P.C.
10 Airline Drive, Suite 200
Albany, NY 12205

Re: Kingston Rail Trail
Town/City: City Of Kingston, Hurley, County: Ulster.
Ulster.

Dear Daniel Carey:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Our database has no records of rare or state-listed animals or plants, or significant natural communities directly at your site. Enclosed is a report of state-listed animals documented in the vicinity.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program



**The following state-listed animals have been documented
in the vicinity of your project site.**

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 3 Office at dep.r3@dec.ny.gov, (845) 256-3054. For information about potential impacts of your project on these species and how to avoid, minimize, or mitigate any impacts, contact the Region 3 Wildlife staff at Wildlife.R3@dec.ny.gov, (845) 256-3098.

The following species have been documented within 0.5 mi of the project site. Individual animals may travel 1 mi from documented locations.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
Birds			
Bald Eagle <i>Breeding</i>	<i>Haliaeetus leucocephalus</i>	Threatened	14124

The following species have been documented within 3 mi of the project site. Individual animals may travel 5 mi from documented locations. The main impact of concern for bats is the removal of potential roost trees.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
Mammals			
Northern Long-eared Bat <i>Seven (7) hibernacula have been documented within 5 mi of the project site.</i>	<i>Myotis septentrionalis</i>	Threatened	Threatened 14175

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

February 8, 2016

Information Services
Natural Heritage Program
New York State Department of Environmental Conservation
625 Broadway, 5th Floor
Albany, New York 12233-4757

Re: Kingston Rail Trail
City of Kingston, Towns of Hurley & Ulster, Ulster County, New York
Subj: Request for Information
File: 369.005.121

Dear Sir or Madam:

Barton & Loguidice, D.P.C. (B&L) has been retained by Ulster County for preliminary design services concerning the alternatives for Kingston Rail Trail. The preferred alignment consists of the construction of a dedicated 2.0 mile shared-use path along the O&W Railroad Corridor extending from the existing O&W Rail Trail to Washington Avenue or Kingston Plaza in the City of Kingston, Ulster County.

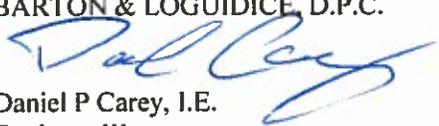
This alternative is proposed to follow the abandoned Ontario & Western (O&W) Railroad corridor for 2.0 miles from the existing O&W Rail Trail along US Route 209, through the existing NYS Thruway underpass, to Washington Avenue (State Bike Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue and a traffic signal to assist trail users and others crossing Washington Avenue. East of Washington Avenue, extending the trail approximate 0.37 miles to Kingston Plaza is also being investigated where additional property investigations and encroachment issues would need to be resolved.

B&L is currently conducting environmental screenings of the project site and this documentation is being provided to initiate the NYSDEC's review of endangered and threatened species for this project. We ask for your determination if there are records of state listed (or proposed for inclusion) endangered or threatened species in the vicinity of the project area.

Enclosed is a project location map. The western terminus for Alternative 1 is approximately located at the coordinates 41.929849° N latitude and 74.059325° W longitude (O&W Rail Trail tie-in) and eastern terminus at 41.938254° N latitude and 74.026815° W longitude (Washington Avenue) or 41.936601° N latitude and 74.020014° W longitude (Kingston Plaza).

Thank you for your assistance with this project.

Very truly yours,
BARTON & LOGUIDICE, D.P.C.


Daniel P Carey, I.E.
Engineer III

DPC/tms

Enclosures: Project Location Map (State)
Project Location Map (USGS)
Project Location Map (Site)
Project Location Map (APE)



Project Location
 Kingston Rail Trail
 PIN 8758.04
 City of Kingston, Town of Hurley, Town of
 Ulster
 Ulster County, New York



City of Kingston, Towns of Hurley & Ulster, New York

PIN 8758.04

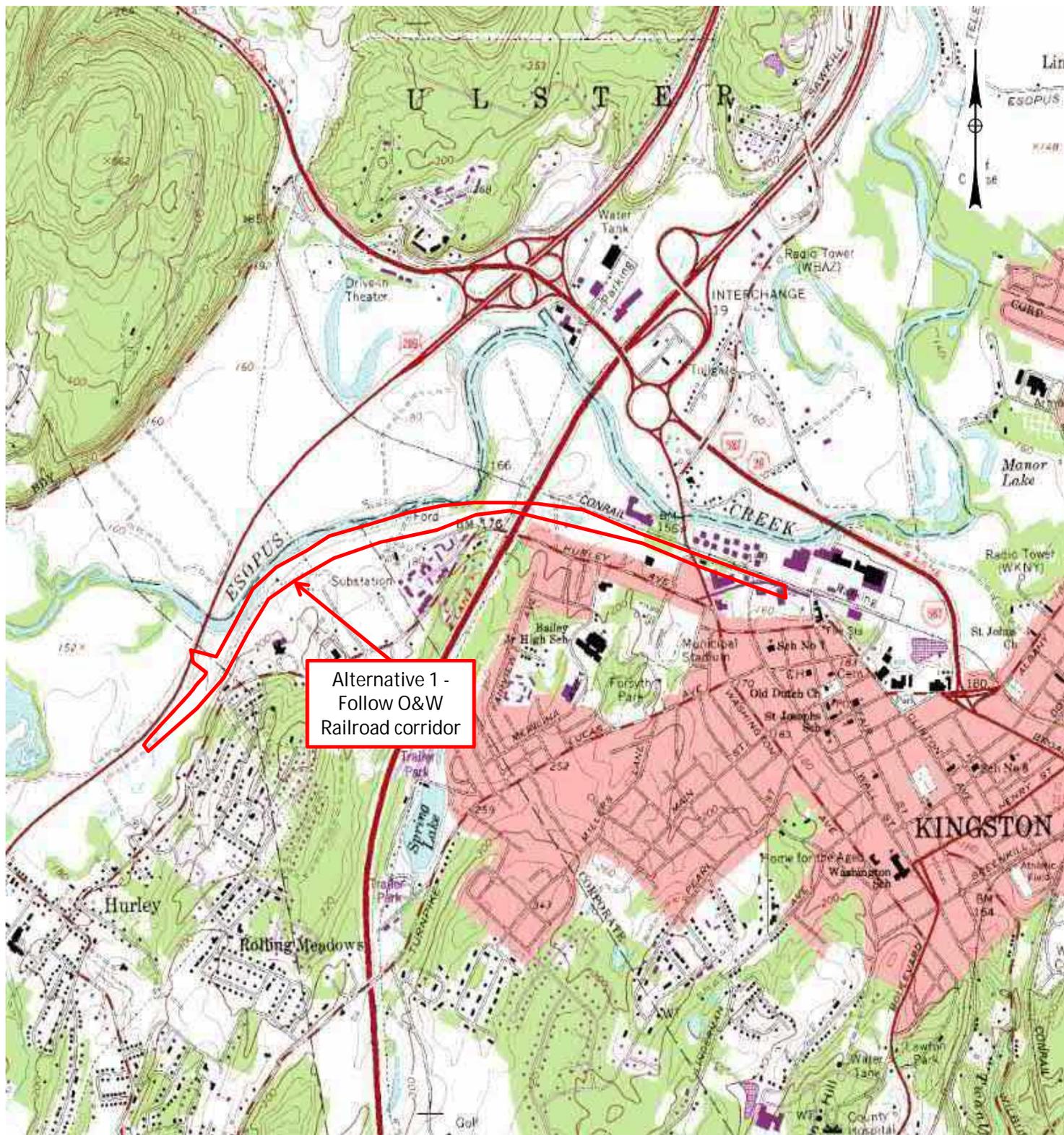
**Kingston Rail Trail
 Site Location Map**



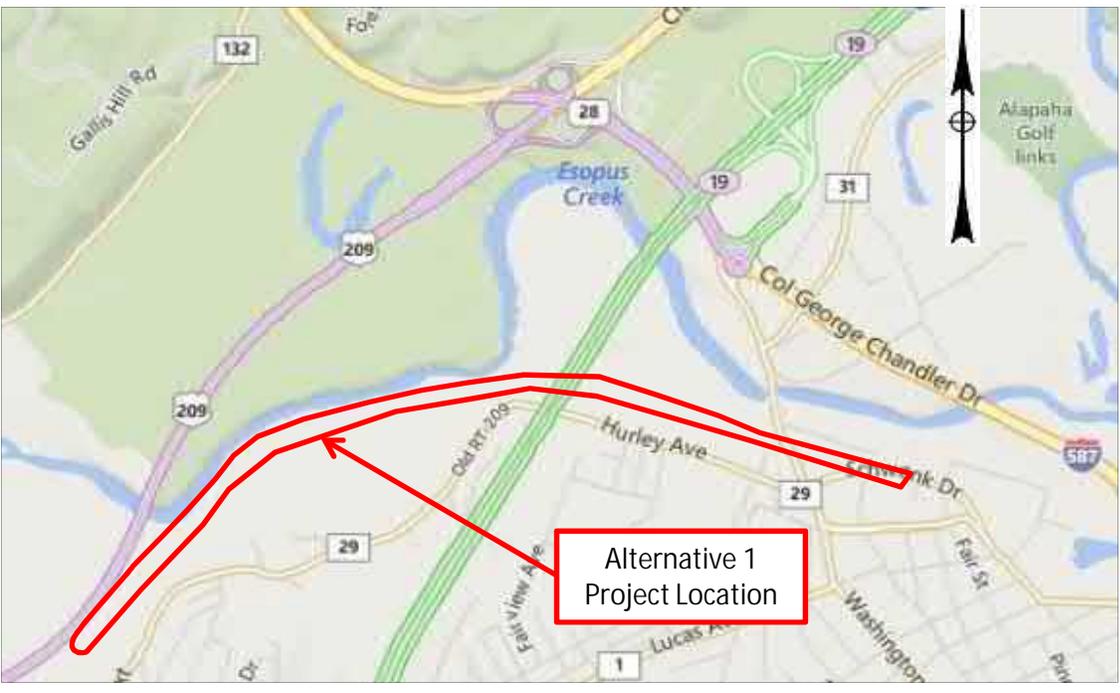
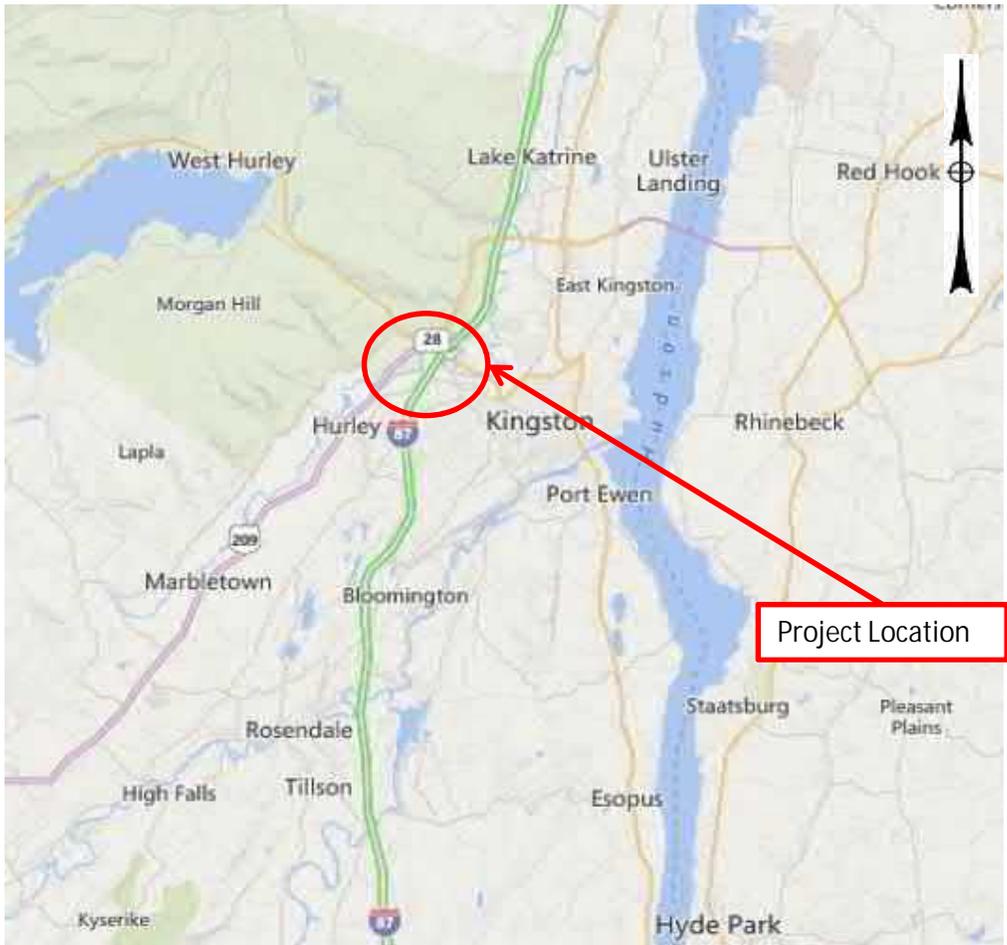
Engineers - Environmental Scientists - Planners - Landscape Architects

Source: Bing Maps

February 2016



Alternative 1 -
Follow O&W
Railroad corridor



City of Kingston, Towns of Hurley & Ulster, New York

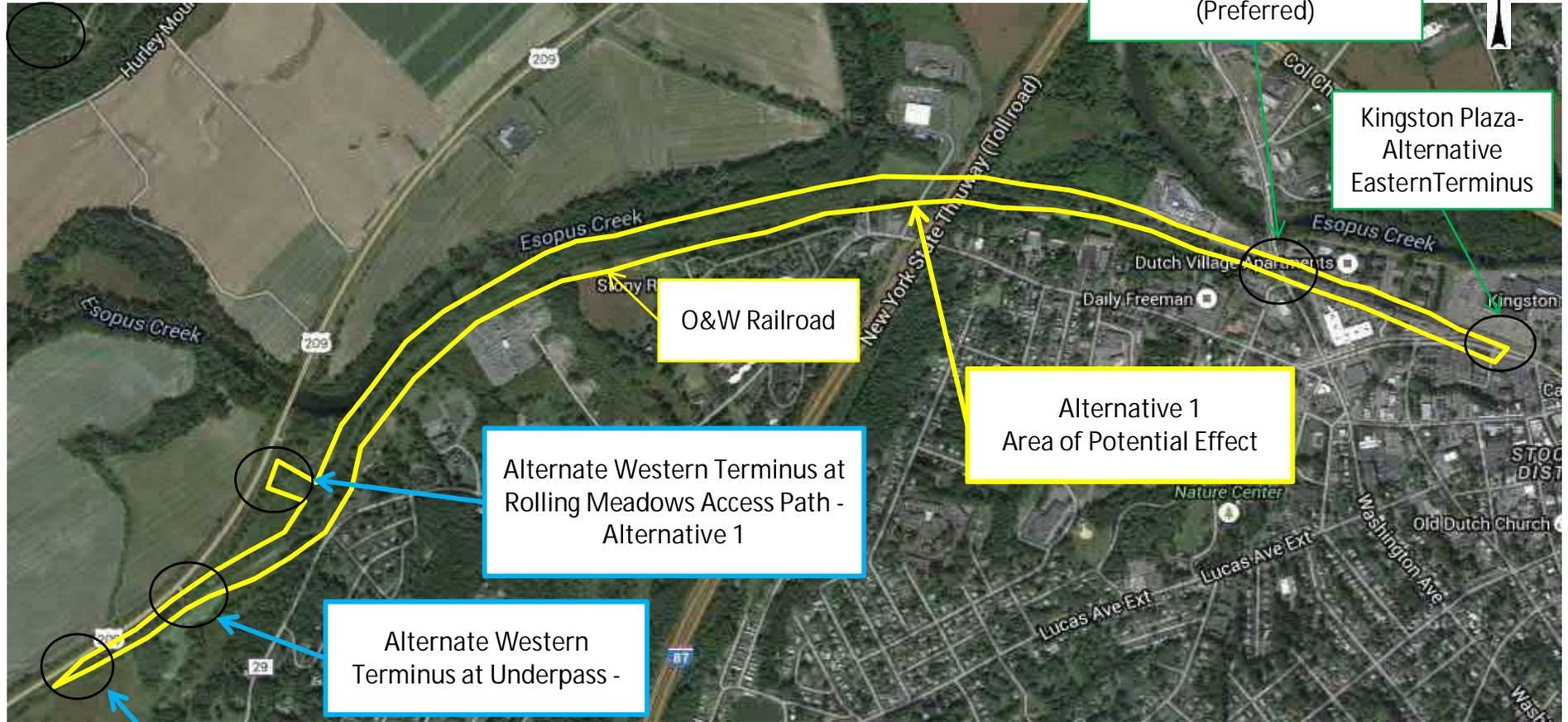
PIN 8758.04

**Kingston Rail Trail
Site Location Map**



Source: Bing Maps

February 2016



City of Kingston, Towns of Hurley & Ulster, New York

PIN 8758.04

**Kingston Rail Trail
Area of Potential Effect (APE) Map**



Engineers - Environmental Scientists - Planners - Landscape Architects

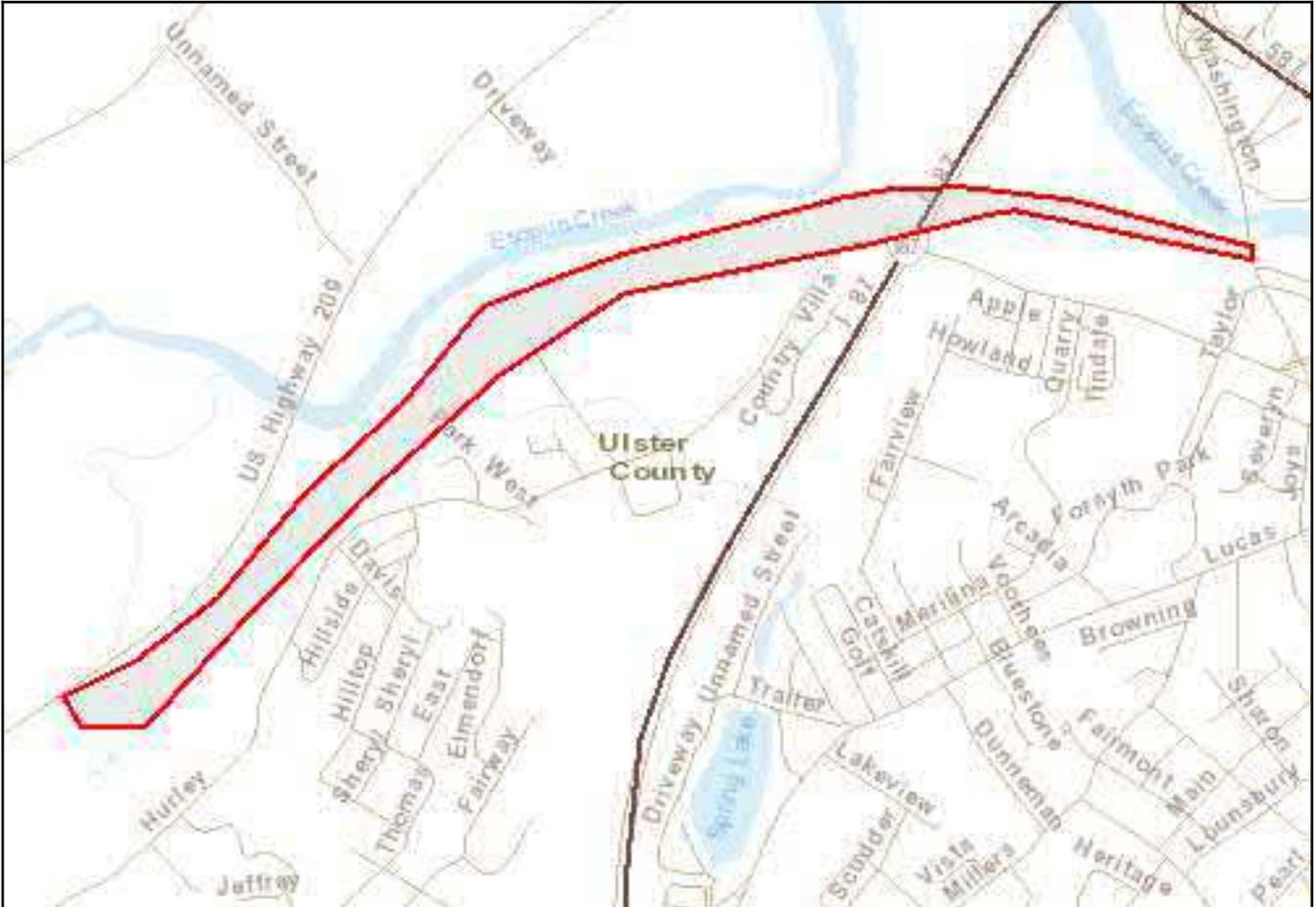
Source: Google Maps

February 2016

New York Nature Explorer

User Defined Results Report

Criteria: Selected Map Area



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Note: Restricted plants and animals may also have also been documented in one or more of the Towns or Cities in which your user-defined area is located, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented at the corresponding county level can be obtained via the County link(s) on the original User Defined Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

Wetland Delineation Report

FOR

Kingston Rail Trail
City of Kingston, Towns of Ulster and Hurley
Ulster County, NY
PIN #8758.04

Prepared For:

Mr. Christopher White
Deputy Director of Planning
Ulster County Planning Department
244 Fair Street, PO Box 1800
Kingston, New York 12402

September 2016

Prepared by:



Architecture.
Engineering.
Surveying.

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- Figure 2: Site Aerial Photograph
- Figure 3: Kingston West Topographic Quadrangle Map
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- B. USDA Custom Soil Resource for Ulster County, NY
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SECTION 1

WETLAND DELINEATION REPORT

1.0 Wetland Delineation Activities

1.1 Project Summary

Foit-Albert Associates Architecture, Engineering, and Surveying, P.C. (FA), has been contracted by Barton and Loguidice to assess wetlands and waters of the U.S. (WUS) subject to federal or state jurisdiction for the Kingston Rail Trail project in the Towns of Ulster and Hurley, Ulster County, New York (Figures 1 and 2). According to the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA) regulations described in Section 404 of the Clean Water Act (33 CFR Section 328.3 and 40 CFR Section 230.3) respectively, wetlands are "...areas that are inundated or saturated with surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Currently within the State of New York, the New York State Department of Environmental Conservation (NYSDEC) and USACE are typically the lead agencies responsible for verifying the accuracy of freshwater wetland delineations and authorizing encroachments into freshwater wetlands. The USACE regulates all jurisdictional wetlands within the state while the NYSDEC only regulates wetlands that are greater than 12.4 acres in size *and* identified on the New York State Freshwater Wetland Maps. The New York State Freshwater Wetland Map for this area depicts New York State Freshwater Wetland KW-18 on the western side of the project (Figure 4). Due to the presence of mapped State-regulated wetlands adjacent to the project limits, we expect the NYSDEC to be the lead agency responsible for verifying wetland boundaries and determining the jurisdictional status of wetlands at the project site. The USACE will also verify the jurisdictional status of the additional wetlands identified at the Site.

This report presents the results of Foit-Albert's associated wetland delineation of the project area.

Project Name: Kingston Rail Trail

Project Location: Towns of Ulster and Hurley, Ulster County

Project Scientist and Firm:

Georgeanna Nugent Lussier
Foit-Albert Associates
Hanover Square
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(518) 452-1037/cell (518) 605-4878
gnugent@foit-albert.com

Owner / Operator Name and Address:

Mr. Christopher White
Deputy Director of Planning
Ulster County Planning Department
244 Fair Street, PO Box 1800
Kingston, New York 12402

1.2 Project Description & Background

The project site appears on the Kingston West, NY Quadrangle of the U.S. Geological Survey Map (Figure 3). The project proposes to establish approximately 1.8 miles of a bicycle and pedestrian trail link between the City of Kingston and Towns of Hurley and Ulster, in Ulster County. Two alternatives were originally evaluated for the location of the trail along two potential right-of-way (ROW) corridors. Alternative 1 establishes the trail along the Ontario & Western (O&W) railroad ROW. Alternative 2 establishes the trail along the county-owned Ulster & Delaware (U&D) railroad ROW and along the east side of U.S. Route 209. Bridge rehabilitation and bridge construction involving two crossings over the Esopus Creek was also evaluated as part of Alternative 2. Additional improvements include the development of trailhead parking, utility access points, as well as, signage and potential pedestrian crossing signals. Alternative 1 was identified as the preferred alternative and would have less impacts to wetlands and WUS; this report summarizes the findings of the wetland and WUS within the project limits.

Alternative 1 extends approximately 1.8 miles from the existing Hurley Rail Trail parking lot on US Route 209 following the O&W railroad corridor to Washington Avenue. The total length of Alternative 1 is 1.8 miles. The vertical limits of disturbance will be approximately 1 ft. for the establishment of the trail foundation. In spot locations, the vertical limits will vary slightly for the establishment of drainage swales adjacent to the trail. The horizontal limit of disturbance will be 18 ft. wide, centered on the existing railroad ballast. Alternative 1 follows the existing O&W railroad corridor with the proposed trail to be constructed on the existing railroad ballast, therefore it is assumed that the entire project lies within previously disturbed areas.

There is one existing structure along the Alternative 1 route. The structure is an existing overpass which carries I-87 over the O&W Railroad. The overhead structure and abutments will not be impacted by this project. The trail will be located on the O&W Railroad corridor and will require right-of-way acquisitions and easements from Central Hudson Gas & Electric and Ulster Savings Bank.

Alternative 1, along the O&W Railroad corridor, is located within an archeological sensitive area according to the New York State Historic Preservation Office (NYSHPO) Cultural Resource Information System (CRIS) website. The proposed western terminus for Alternative 1, is approximately 400 feet away from the limits of the Kingston Stockade Historic District in the City of Kingston. Based on the findings, the proposed Alternative 1 would not have an impact to historic or archeological resources.

Photographs of the Site are located in Appendix A.

1.3 Methods

The wetland delineation was conducted by FA Staff Georgeanna Nugent Lussier in August 2015, in accordance with the 1987 *U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual* (USACE, 1987), the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, and the 1995 *New York State Freshwater Wetlands Delineation Manual* (NYSDEC, 1995). These documents are used as guidance to evaluate jurisdictional wetland limits under the USACE and the NYSDEC regulatory programs. These methodologies generally involve the review of three parameters (vegetation, soils, and hydrology) when making a wetland determination.

An initial assessment of the Site was made using the following resources:

- Ulster County online Map Viewer (Ulster County, 2015);
- USGS 7.5 Minute Topographic Map (Kingston West, New York Quadrangle) (Figure 3);
- New York State Department of Environmental Conservation (NYSDEC) Wetland Maps (NYSDEC, 2015) (Figure 4);
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory Maps (USFWS, 2015) (Figure 5);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Ulster County Soil Survey (Appendix B);
- Aerial Photography from 1952, 1961, 1974, 2003, and 2012; and
- Base survey mapping provided by Barton and Loguidice.

Based on the results of the initial assessment, the project area was visually inspected in the field to evaluate the jurisdictional limits of the wetlands and waters of the State of NY and the United States.

Dominant species in each vegetation layer were evaluated in terms of their wetland indicator status according to the “National List of Plant Species that Occur in Wetlands (Northeast)” (USFWS, 1988).

Wetland-upland boundaries were defined based on vegetation, hydrology, and soil characteristics, and marked using blue wetland flagging tape and also delineated using a handheld Trimble 8000 GPS unit.

1.4 Results

Foit-Albert Associates conducted a cursory review of existing literature and data to determine the extent of possible wetlands that may exist in the Project area. Based on the review of the existing mapping and literature of the Site it was determined that a Site investigation was necessary to delineate the boundaries and jurisdictionally of the wetlands and waters of the US and New York. The results of this investigation are found in the following sections.

1.4.1 On-Site Wetland Delineation and Characteristics

Several wetland areas and two tributaries were identified and delineated at the Site (Figures 6 and 7). Photographs of the wetland areas are found in Appendix A. While in the field, wetland boundaries were flagged and drawn onto a topographic map and the points were later surveyed and defined by a handheld GPS unit.

1.4.2 Literature and Mapping Results

This section summarizes the results of the literature and mapping review of the Site.

1.4.2.a NYSDEC Mapping (Figures 4 and 6)

A review of the NYSDEC Freshwater Wetlands map indicates one mapped NYSDEC wetland is located within the Site boundaries (Figure 4). The wetland is identified as KW-18 with a wetland class of 2, and is approximately 57 acres in size.

Esopus Creek is classified by the NYSDEC as Classification B(T) resource. The NYSDEC defines the function of this resource as waters for supporting swimming and other recreation, but not for drinking water. This resource may also support a trout population.

Tributaries 861-104 (Appendix C, PL-10) and 861-110 (Appendix C, PL-16) are classified by the NYSDEC as Classification D which is the lowest classification and standard which supports a best usage of fishing but not fish propagation (Figure 6).

1.4.2.b USFWS National Wetland Inventory (NWI) Mapping (Figure 5)

According to the National Wetland Inventory (NWI) map, several jurisdictional wetlands associated with Esopus Creek are located within the Site boundaries (Figure 5). The vegetative communities follow the Cowardin system identified in the National Wetland Inventory mapping process. The codes indicate palustrine, riverine and freshwater emergent wetlands within the project area (Cowardin, et. al., 1979).

1.4.2.d Ulster County Soil Survey (Appendix B)

The United States Department of Agriculture's Natural Resources Conservation Service (NRCS) has mapped the soils for the Site. Soils mapped within the Site boundaries include the following (Appendix B).

Table 1 – Select Soil Types Properties in Project area

Soil Name	Slope Range (%)	Hydric Criterion
ML, Made land	NA	2, 3
Mr, Middlebury silt loam	NA	2, 3, 4
PmD, Plainfield-Riverhead complex	NA	NA
RvB, Riverhead fine sandy loam	3-8%	2
RvC, Riverhead fine sandy loam, 8 to	8-15%	NA
STD, Stockbridge-Farmington-Rock outcrop complex, hilly	NA	NA
Tg, Tioga fine sandy loam	NA	2, 3, 4
Un, Unadilla silt loam	0-3%	2
Wc, Wayland mucky silt loam	NA	2, 3

Hydric Criterion:

1. All Histels except Folistels and Histosols except Folists; or
2. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:
 - a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - b. Show evidence that the soil meets the definition of a hydric soil;
3. Map unit components that are frequently ponded for long duration or very long duration during the growing season that:
 - a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - b. Show evidence that the soil meets the definition of a hydric soil; or
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - b. Show evidence that the soils meet the definition of a hydric soil.

1.4.3 Wetland Functions and Values

Function and values for project area wetlands were assessed using the USACE New England Divisions Highway Methodology Workbook Supplement (ACOE, 1999). The apparent primary function of all project area wetlands is Floodflow Alteration. During periods of heavy rain or spring snow melt, the wetlands serve as natural reservoirs or channels for conveying excess water and slowing the movement of water through the watershed.

2.0 Wetland Delineation Results and Opinion

Wetlands were delineated along the entire 1.8 mile corridor on both sides of the trail; the results of the delineation are presented in Appendix C and the characteristics are summarized in the table below.

Table 2 – Wetland Characteristics

Wetland	Appendix C Plan Sheets	Hydrology	Soils	Vegetation Type
NYSDEC KW-18	PL-1 to PL-3	Standing water	Unadilla silt loam	Emergent and forested
Tributary 861-104	PL-10	Stream channel	Riverhead fine sandy loam and Middlebury silt loam	Forested
Freshwater Pond	PL-12 to PL-14	Standing water	Riverhead fine sandy loam	Emergent
Tributary 861-110	PL-15	Stream channel	Riverhead fine sandy loam	Forested
Freshwater Pond	PL-16	Standing water	Riverhead fine sandy loam	Emergent
Freshwater Pond	PL-17 to PL-20	Standing water	Riverhead fine sandy loam	

In Foit-Albert Associates professional opinion, the wetlands may be under the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act as they are directly connected to Esopus Creek. NYSDEC Wetland KW-18 is approximately 57 acres in size and located within the project boundaries; the NYSDEC confirmed the boundary and jurisdictionality of this wetland in June 2016. Based on the proposed construction activities (Appendix C), there will be approximately 70 square feet of temporary impact and 320 square feet of permanent impact to NYSDEC Wetland KW-18. The total proposed temporary and permanent impacts for the project include the following (Appendix C):

Table 3 – Total Proposed Wetlands and Waters of the US Impacts

Impact Type	Wetland Impact
Temporary	1,115 sq ft 0.025 ac
Permanent	890 sq ft 0.02 ac

3.0 Summary and Conclusions

Total proposed wetland impacts are less than 0.10 acre; it is recommended that the necessary notifications be made to the USACE regarding any proposed alterations to wetlands and watercourses pursuant to the requirements of the Nationwide Permit. All wetlands on the Project area may be subject to the jurisdiction of the USACE regulatory program. Foit-Albert Associates recommends that the jurisdiction limits of the delineated wetlands be confirmed by the USACE through a preliminary Jurisdictional Determination (JD) within three (3) years of this study. At the end of three (3) years from the date of this report, wetland flag locations will no longer be valid.

A preliminary JD will help to establish potential USACE wetland boundaries and limits. No site development or other activities with the potential to impact the wetlands on the Project area are conducted prior to obtaining a preliminary JD within, or nearby these flagged wetland areas.

There is a NYSDEC jurisdictional wetland (KW-18) in the project area; therefore, a NYSDEC freshwater wetland permit will be required. The boundaries of this wetland were confirmed with the NYSDEC in June 2016. Based on the proposed construction activities, there will be approximately 70 square feet of temporary impact and 320 square feet of permanent impact to this wetland.

Esopus Creek is classified by the NYSDEC as a Classification B(T) resource and the two tributaries within the project limits are classified as D resources. A NYSDEC 401 Water Quality Certification is anticipated prior to construction of proposed improvements.

4.0 References

- ACOE, 1999. "The Highway Methodology Workbook Supplement," US Army Corps of Engineers, New England District, NAEPP-360-1-30a, September 1999.
- Cowardin, L. M., V. Carter, F.C. Golet, E.T. LaRoe, 1979. "Classification of Wetlands and Deepwater Habitats of the United States", U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C., Jamestown, ND, <http://npwrc.usgs.gov/resource/1998/classwet/classwet.htm>, website accessed August 2015.
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- USFWS, 1988. "National List of Plant Species that Occur in Wetlands (Northeast)", United States Fish and Wildlife Service, 1988.
- USFWS, 2015. Wetlands Online Mapper. Online: <http://www.fws.gov/wetlands/Data/Mapper.html>. United States Fish and Wildlife Service, Viewed August 2015.
- USGS, 1980. Kingston West, New York Quadrangle, 7.5 Minute Series (Topographic), 1959, Photorevised 1980.
- Wetland Training Institute, Inc, 1995. *Field Guide for Wetland Delineation; 1987 Corps of Engineers Wetlands Delineation Manual*. Glenwood, NM. WTI 02-1 143pp. 1995.

5.0 Limitations

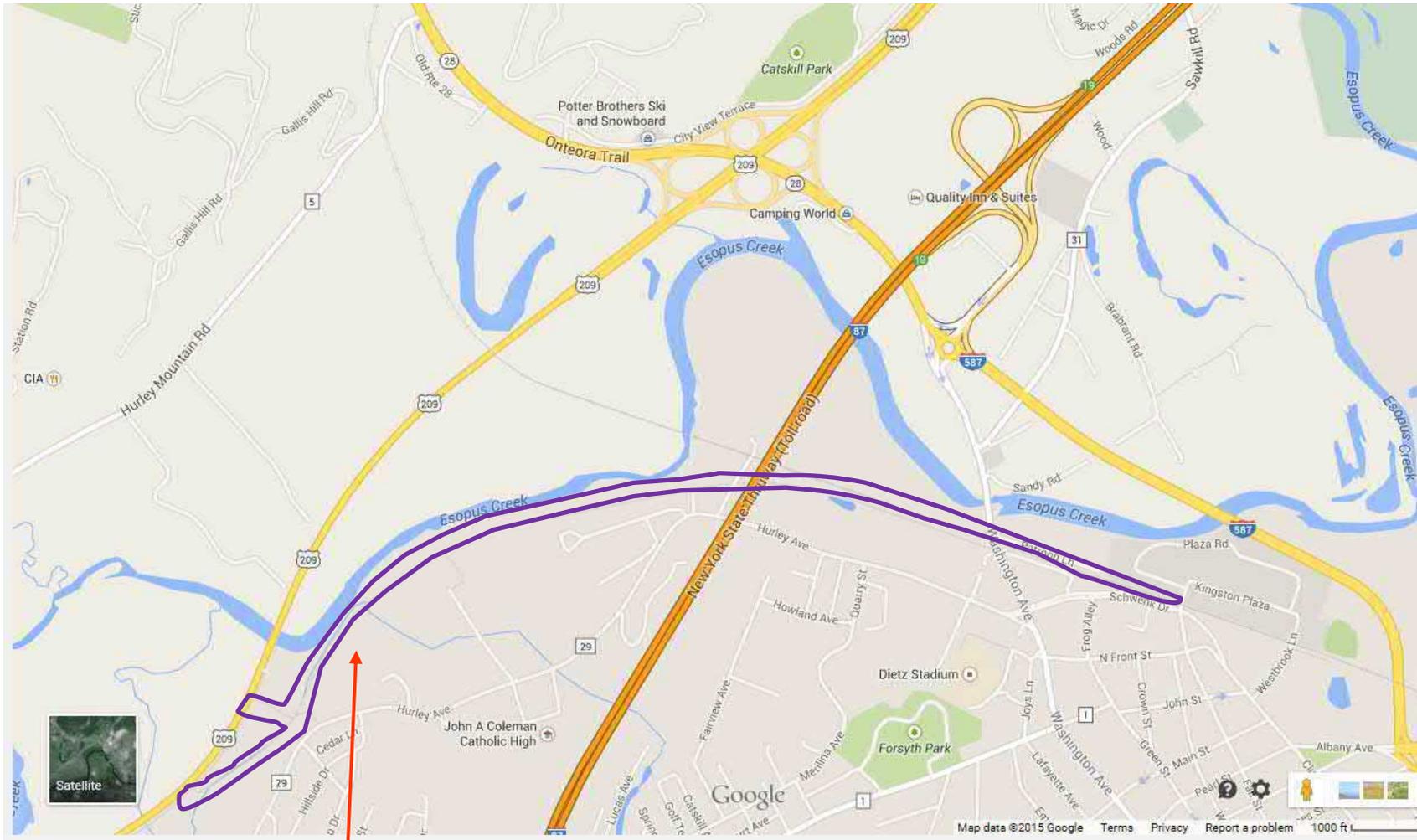
This report was prepared by Foit-Albert Associates Architecture, Engineering, and Surveying, P.C., at the request of and for the sole benefit of Ulster County, or any entity controlling, controlled by, or under common control with Ulster County. The conclusions and recommendations offered in this report are based on the data obtained from a limited number of sample points. Soil conditions typically vary even over short distances. Thus, the nature and extent of variations outside the surficial and subsurface investigation may not become evident except through further investigation.

This report is the exclusive and present use of Ulster County, or any entity controlling, controlled by, or under common control with Ulster County. Conclusions stated herein refer only to the specific Site at the time of the investigation.

FIGURES:

- Figure 1: Site Location Map
- Figure 2: Site Aerial Photograph
- Figure 3: Kingston West Topographic Quadrangle Map
- Figure 4: NYSDEC Wetlands Map
- Figure 5: USFWS NWI Map
- Figure 6: Surface Water Features
- Figure 7: Wetland Delineation Map

FIGURE 1
SITE LOCATION MAP



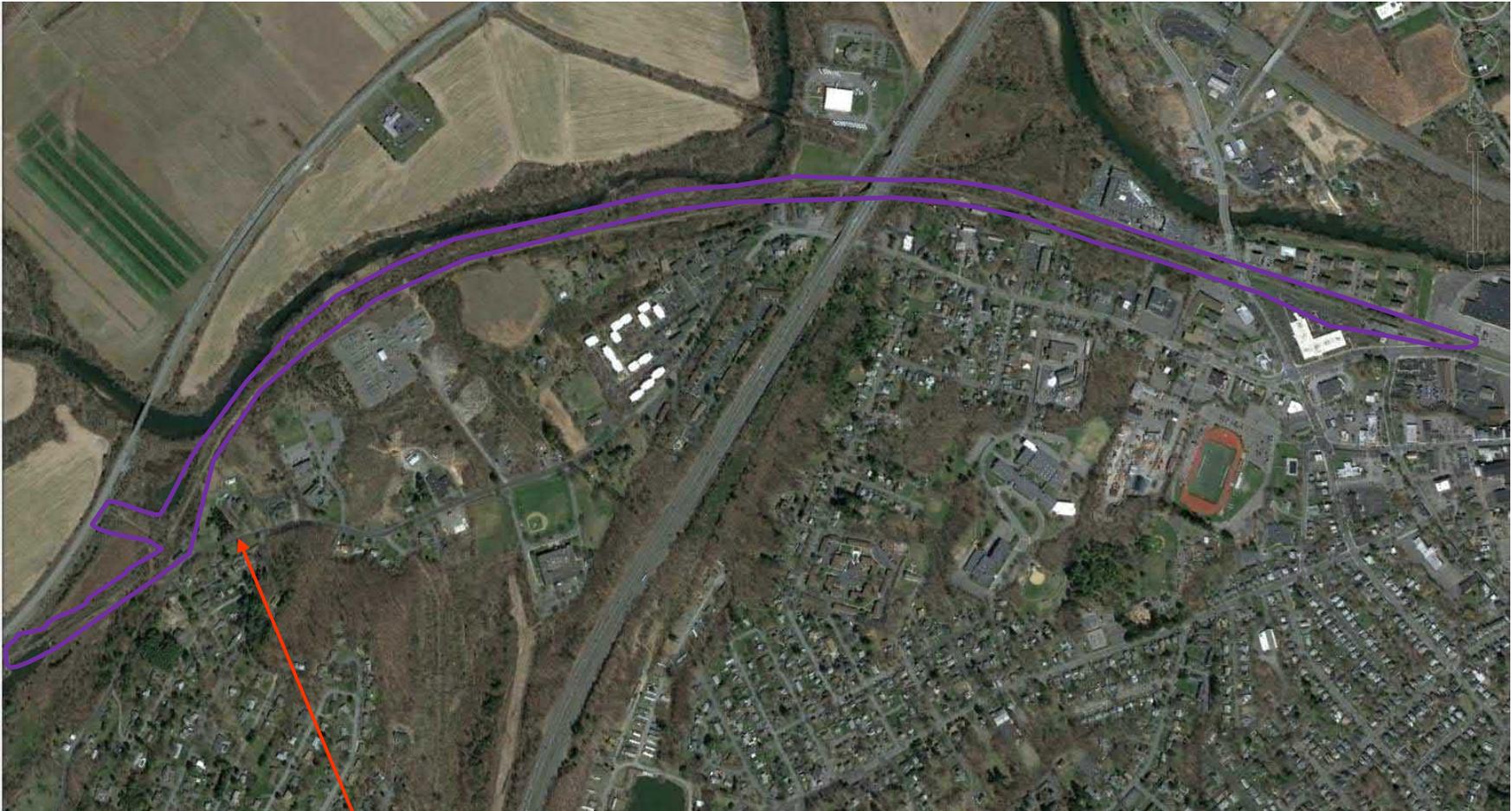
**SITE
AREA**



Kingston Rail Trail
PIN 8758.04
Ulster County, New York



FIGURE 2
SITE AERIAL PHOTOGRAPH



Google Earth July 2016

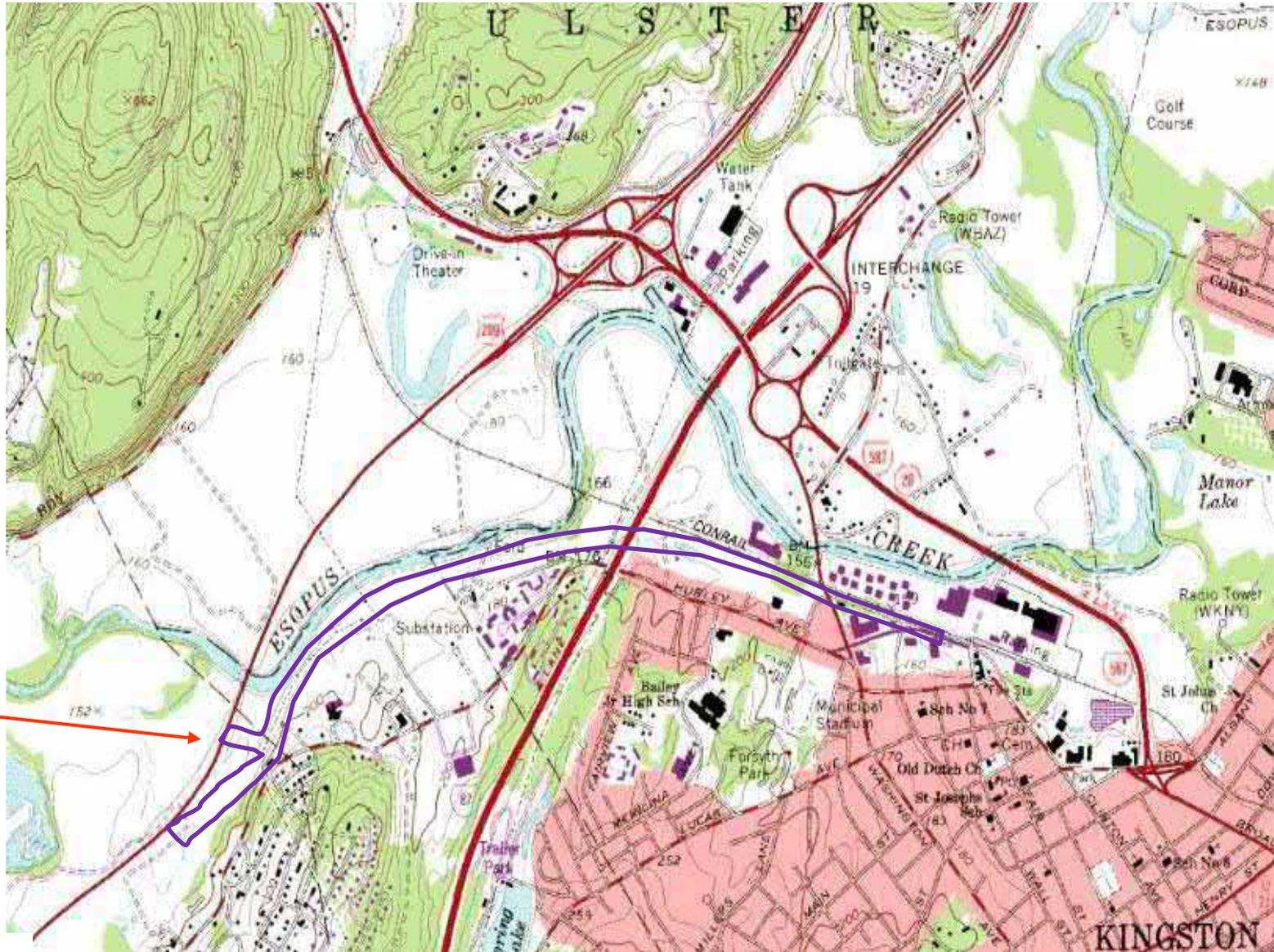
**SITE
AREA**



Kingston Rail Trail
PIN 8758.04
Ulster County, New York

FoitAlbert
ASSOCIATES
Architecture.
Engineering.
Surveying.

**FIGURE 3
KINGSTON WEST
TOPOGRAPHIC QUADRANGLE MAP**



**SITE
AREA**

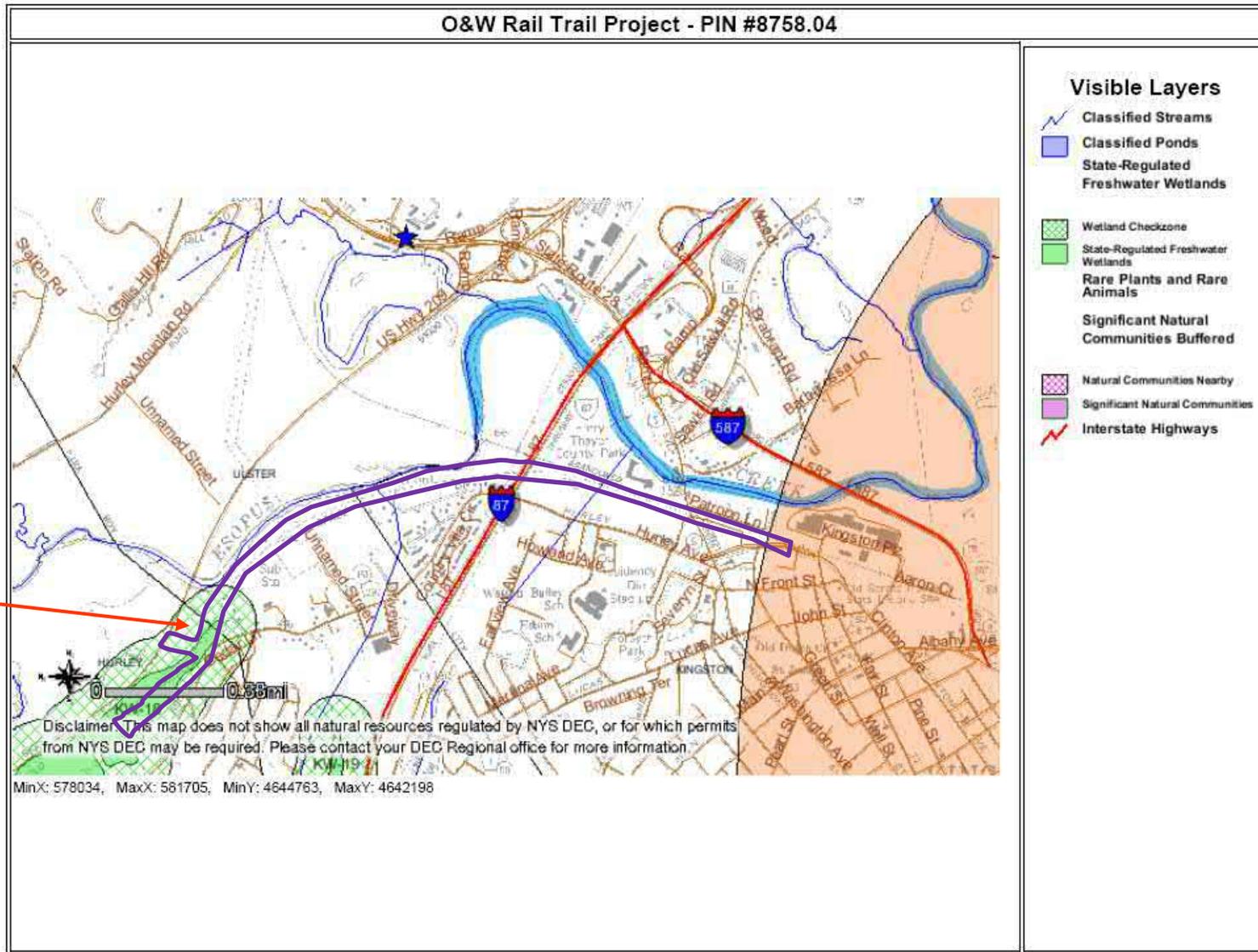


**Kingston Rail Trail
PIN 8758.04
Ulster County, New York**

**FIGURE 3
NYSDEC WETLANDS MAP**

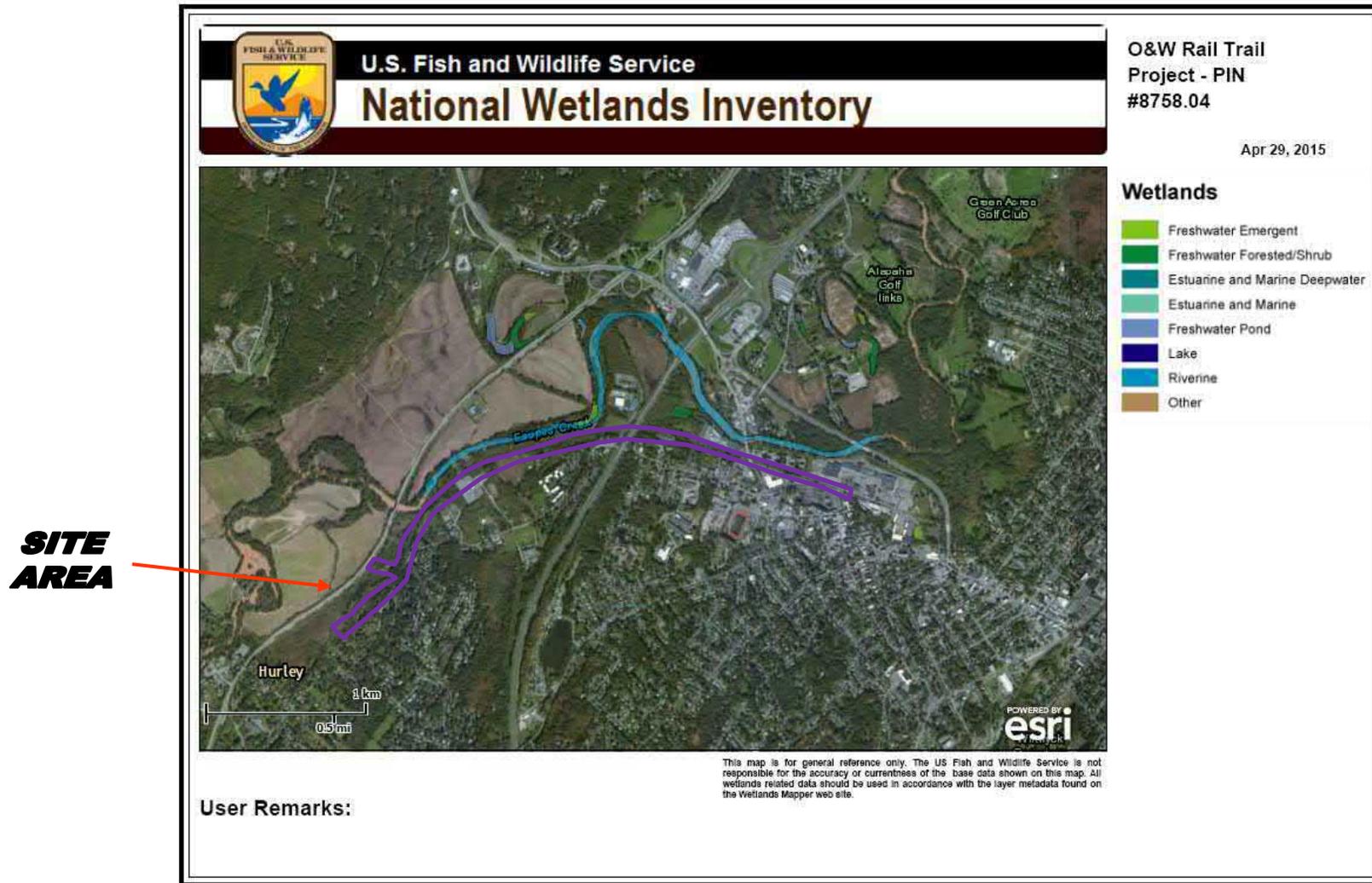
O&W Rail Trail Project - PIN #8758.04

**SITE
AREA**



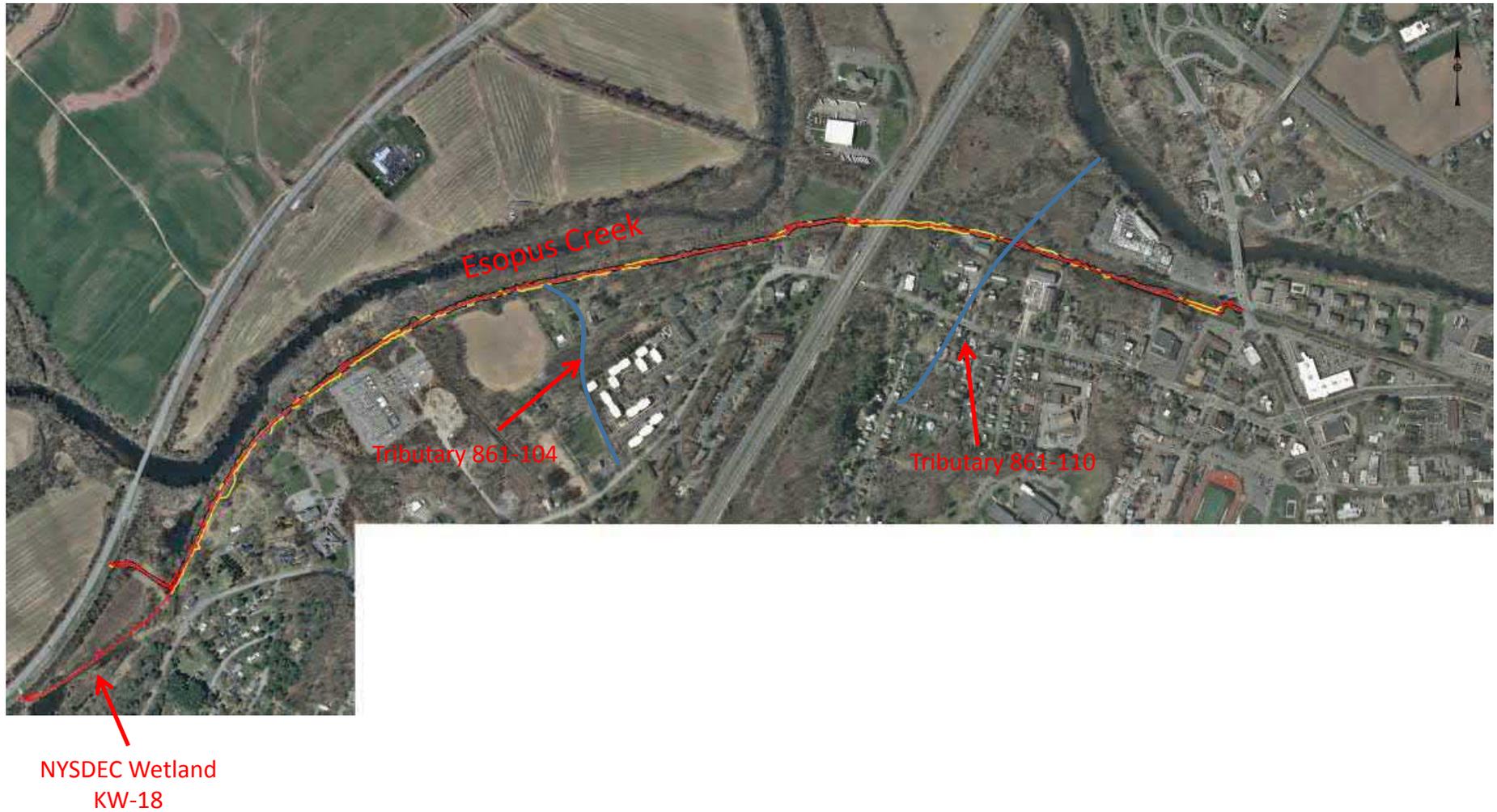
**Kingston Rail Trail
PIN 8758.04
Ulster County, New York**

FIGURE 5
USFWS NWI MAP



Kingston Rail Trail
PIN 8758.04
Ulster County, New York

FIGURE 6
SURFACE WATER FEATURES



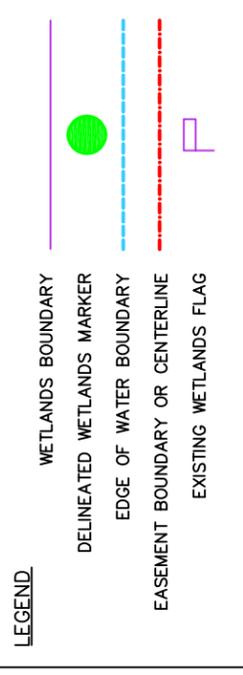
Kingston Rail Trail
PIN 8758.04
Ulster County, New York



**FIGURE 7
WETLAND DELINEATION MAP**



**KINGSTON RAIL TRAIL
PIN 8758.04
ULSTER COUNTY, NY**



APPENDIX A
Photographic Log

Kingston Rail Trail Photo Log

01	
Photo showing NYSDEC Wetland KW-18	
02	
Photo showing NYSDEC Wetland KW-18	

Kingston Rail Trail Photo Log

03	
Tributary 861-104 and wooden foot bridge.	
04	
Tributary 861-104 and concrete abutments	

Kingston Rail Trail Photo Log

05

Plan Sheet
14 facing
east,
*Phragmites
australis*
vegetation



06

Plan Sheet
14 facing
west,
*Phragmites
australis*
vegetation



Kingston Rail Trail Photo Log

07

Trail with
upland and
emergent
vegetation,
Plan Sheet
12



08

Trail with
upland and
emergent
vegetation,
Plan Sheet
13



Kingston Rail Trail Photo Log

09

Freshwater
pond, Plan
Sheet 16



10

Freshwater
pond, Plan
Sheets 17
and 18



Kingston Rail Trail Photo Log

11

Tributary
861-110,
Plan Sheet
15



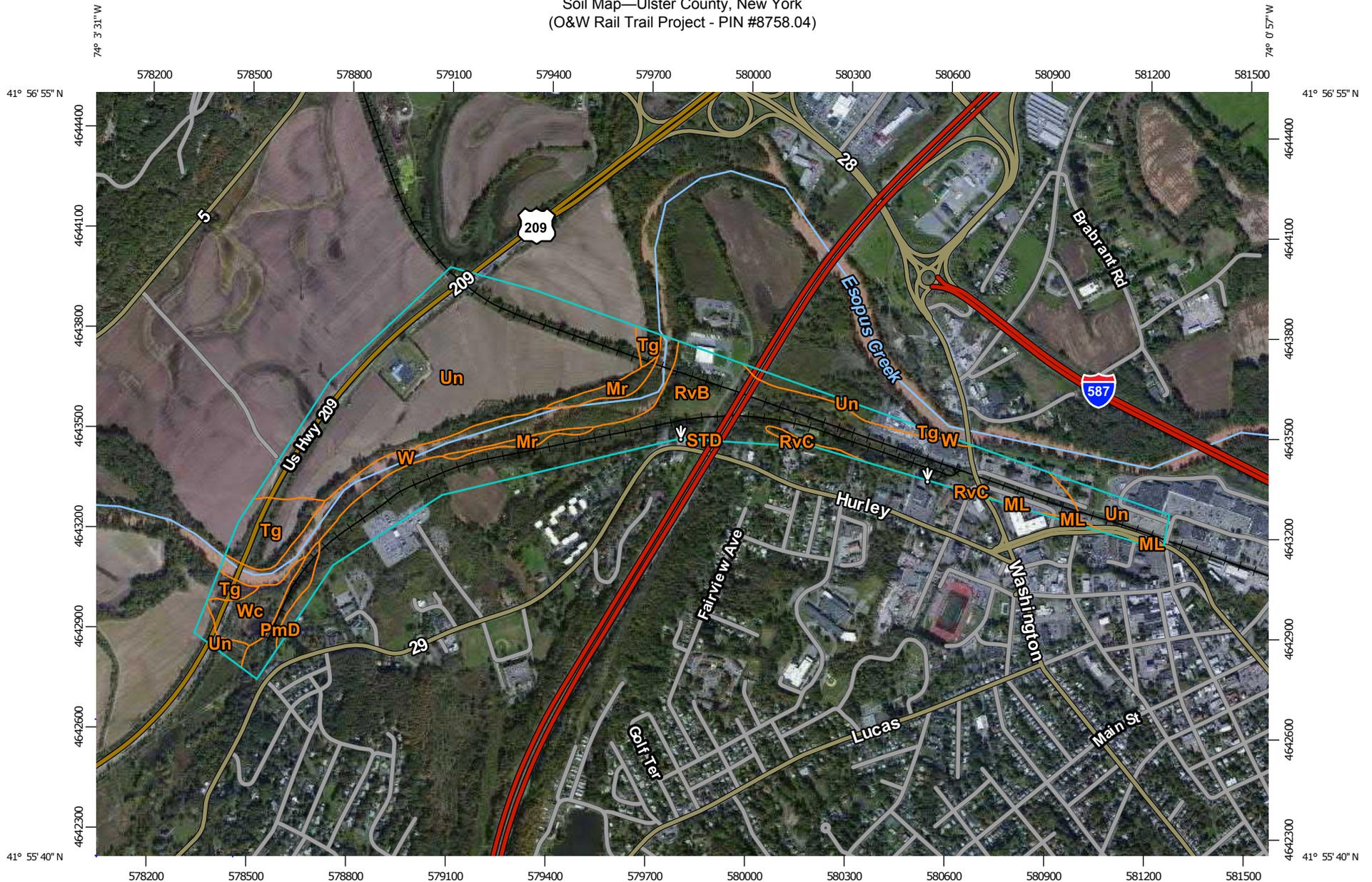
12

A view of
Esopus
Creek



APPENDIX B
USDA Custom Soil Resource for Ulster County, NY

Soil Map—Ulster County, New York
(O&W Rail Trail Project - PIN #8758.04)



Map Scale: 1:16,100 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Ulster County, New York

Survey Area Data: Version 12, Sep 16, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 20, 2011—Oct 10, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Ulster County, New York (NY111)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ML	Made land	0.8	0.3%
Mr	Middlebury silt loam	4.8	2.0%
PmD	Plainfield-Riverhead complex, moderately steep	4.7	1.9%
RvB	Riverhead fine sandy loam, 3 to 8 percent slopes	80.0	32.8%
RvC	Riverhead fine sandy loam, 8 to 15 percent slopes	1.3	0.5%
STD	Stockbridge-Farmington-Rock outcrop complex, hilly	0.0	0.0%
Tg	Tioga fine sandy loam	13.4	5.5%
Un	Unadilla silt loam	107.2	43.9%
W	Water	24.6	10.1%
Wc	Wayland mucky silt loam	7.2	3.0%
Totals for Area of Interest		244.0	100.0%

APPENDIX C

Site Plans, Wetland Boundaries, and Impact Maps

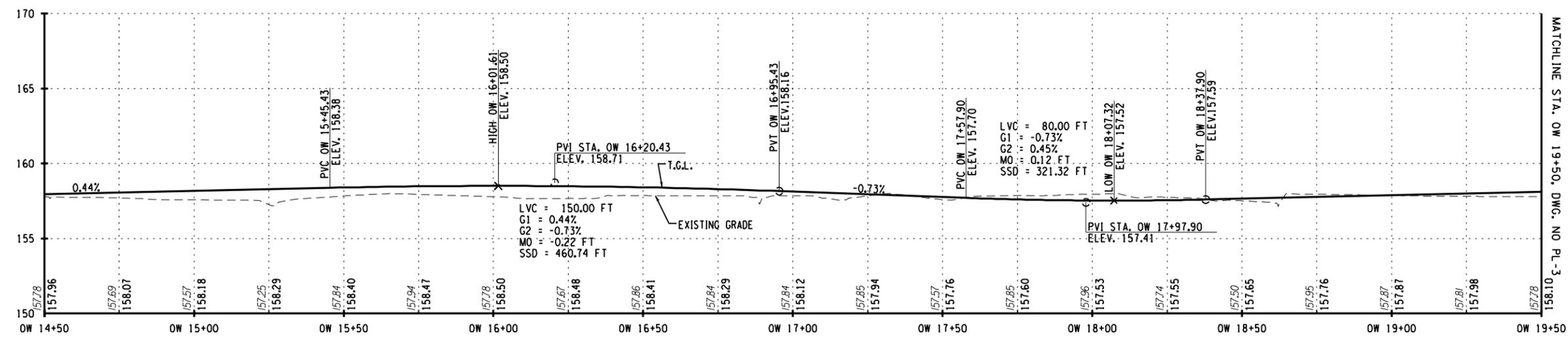
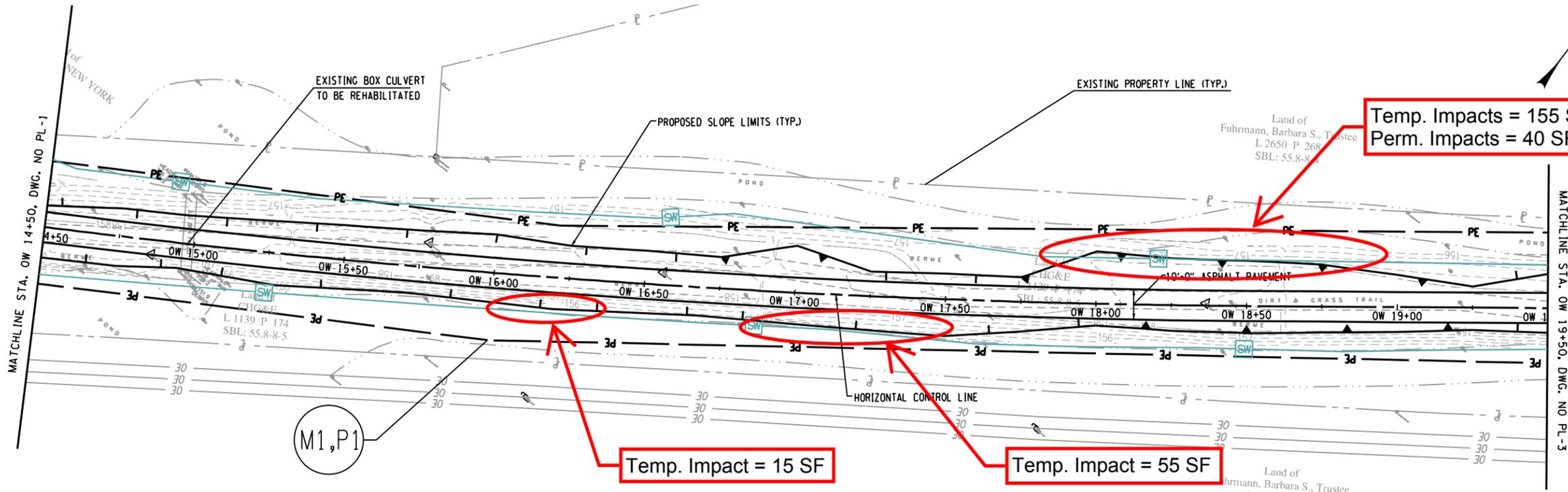
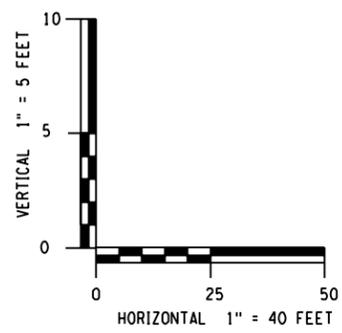
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IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ DRAFTED BY _____

PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON : _____

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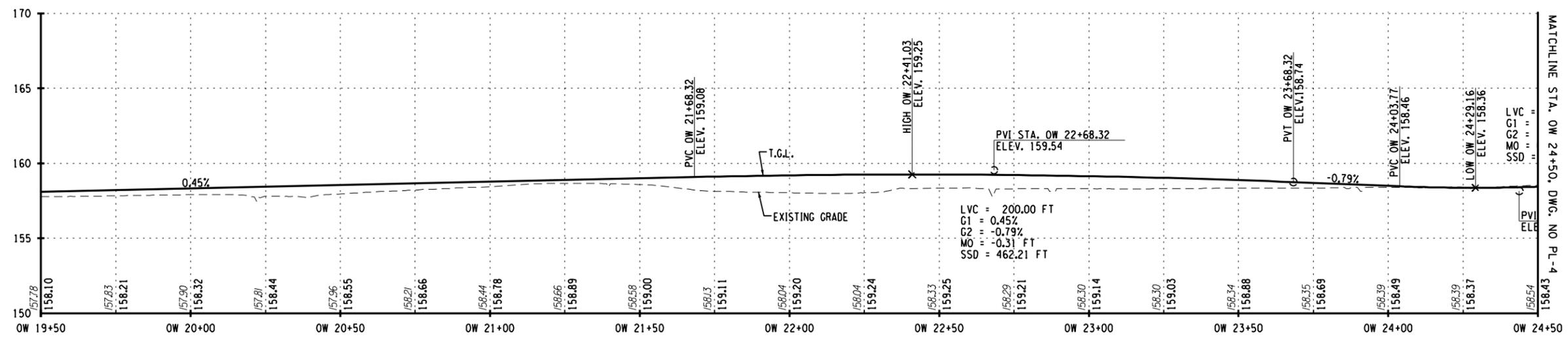
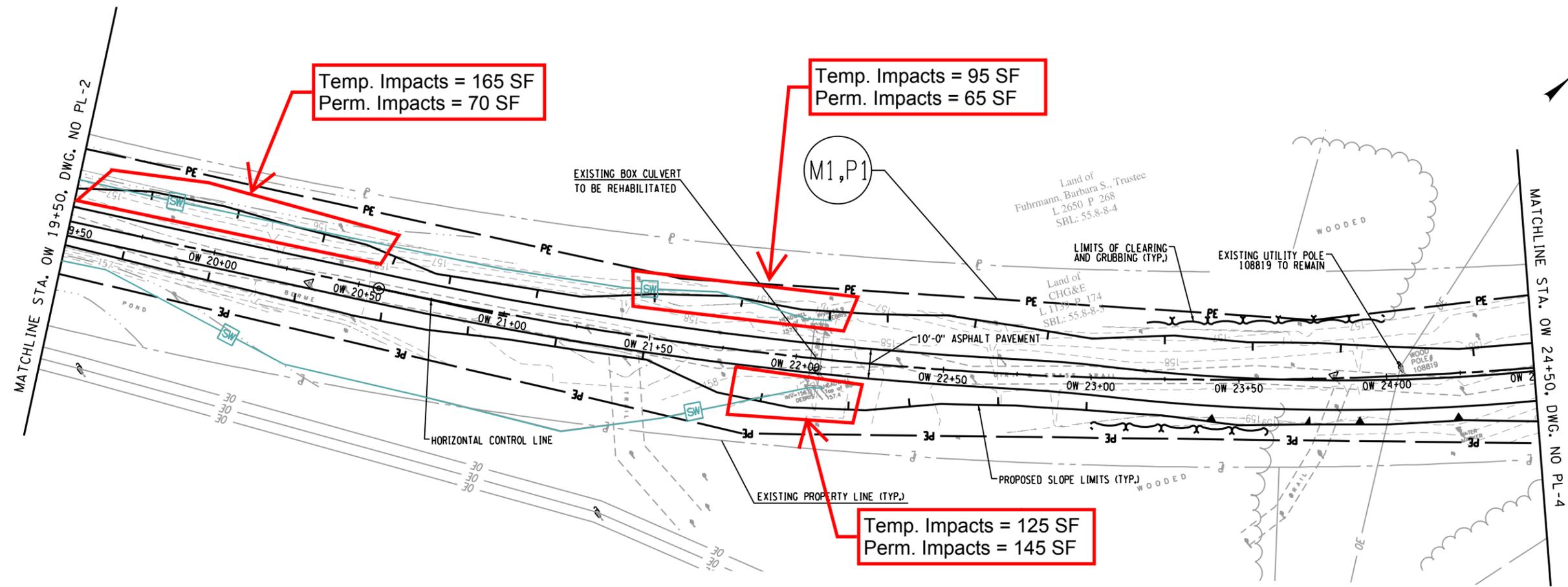
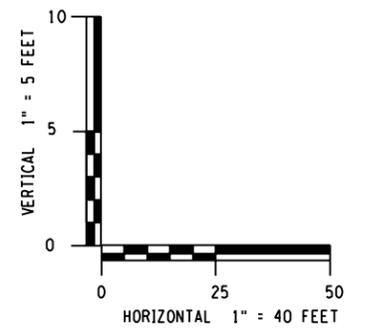
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ULSTER COUNTY		P.I.N. 8758.04		
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
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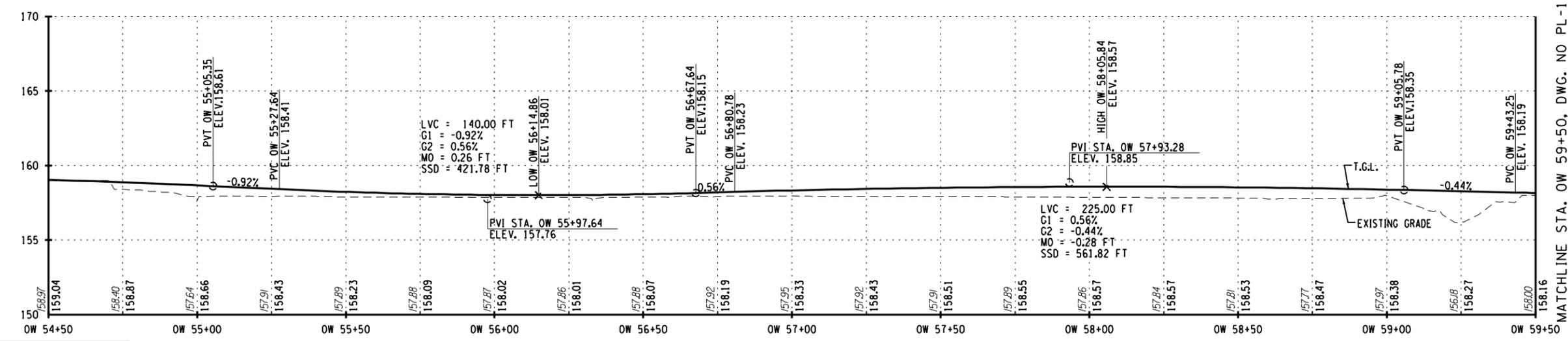
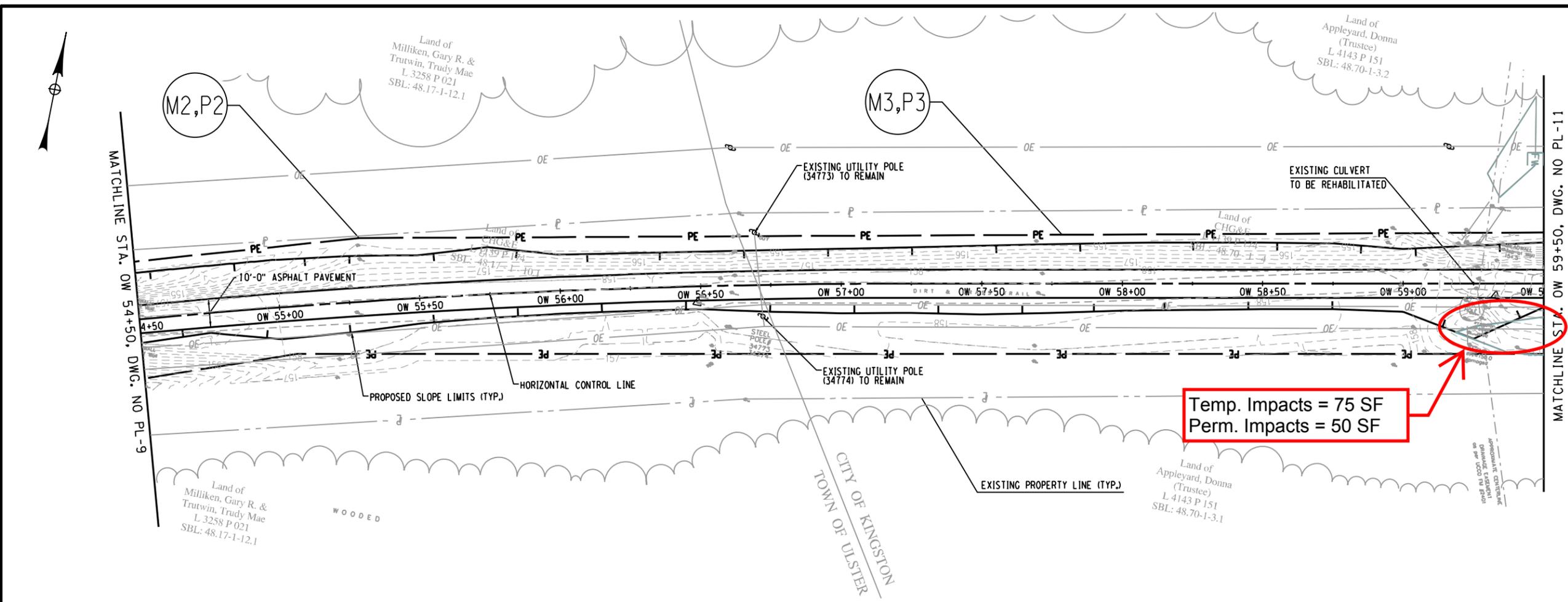


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ULSTER COUNTY				
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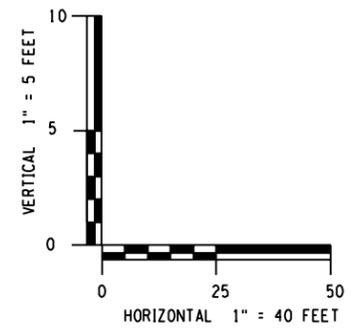
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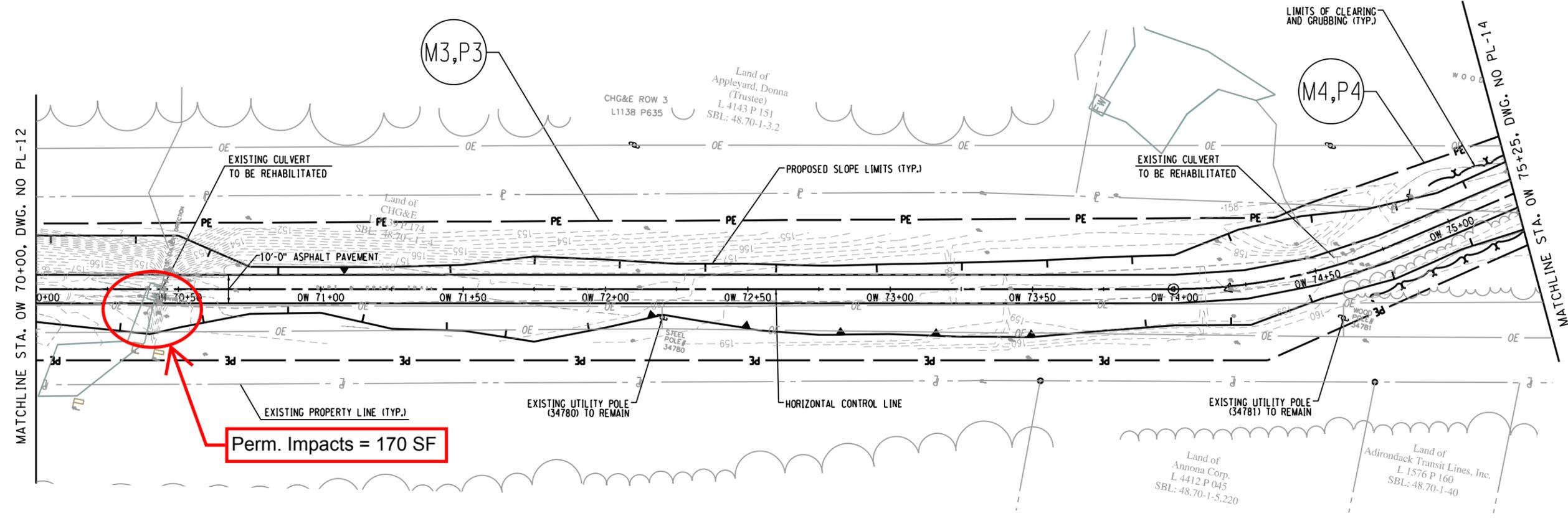
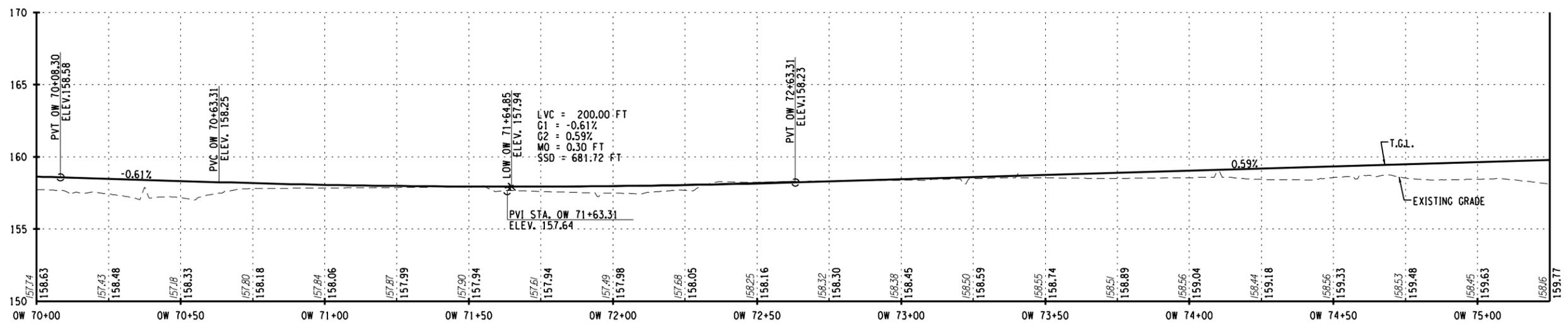
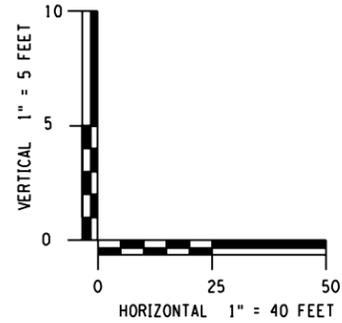
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON:



Perm. Impacts = 170 SF

MATCHLINE STA. OW 75+25, DWG. NO PL-14

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

OPTION B-1
 PLAN AND PROFILE
 STA. OW 70+00 TO STA. OW 75+25

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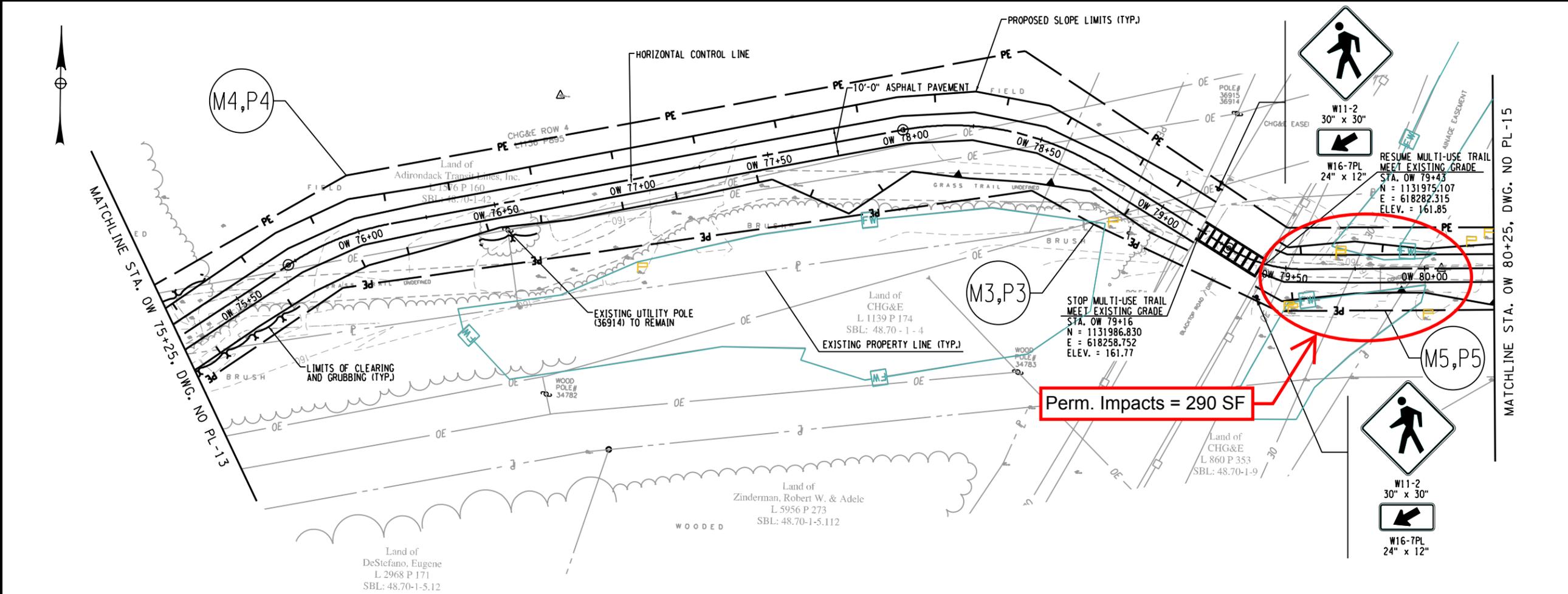
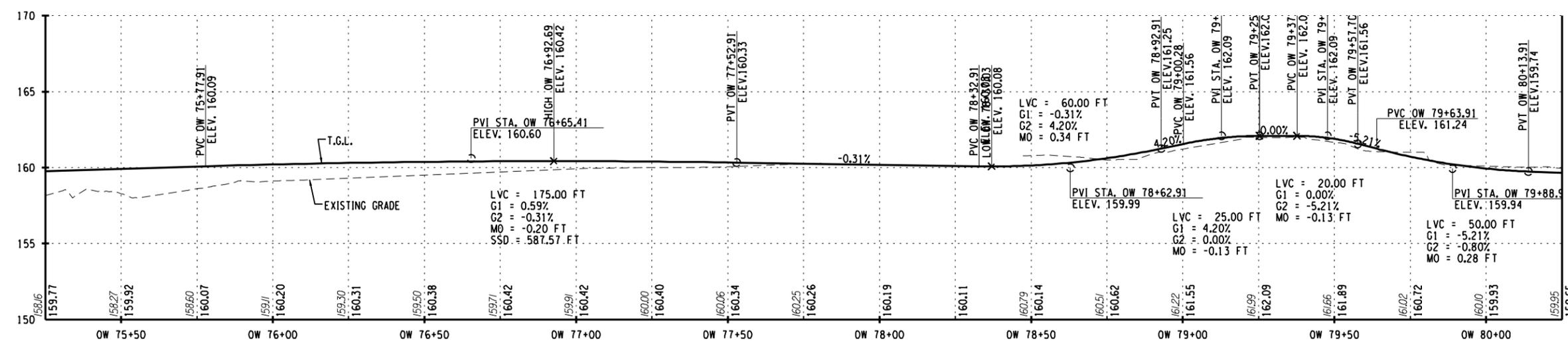
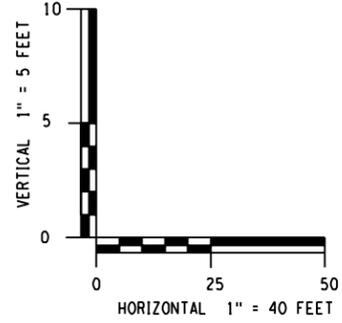
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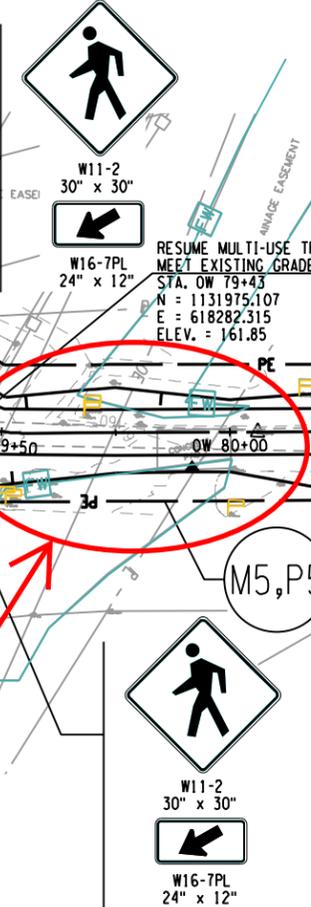
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 ON: _____

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Perm. Impacts = 290 SF



MATCHLINE STA. OW 80+25, DWG. NO PL-15

	SURVEY PROVIDED BY: Brooks & Brooks, P.C. SURVEYING, PLANNING, GIS
	NO. DATE BY REVISION
Barton & Loguidice, D.P.C.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209
KINGSTON RAIL TRAIL CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER ULSTER COUNTY P.I.N. 8758.04	OPTION B-1 PLAN AND PROFILE STA. OW 74+25 TO STA. OW 80+25
SCALE: 1:40 DATE ISSUED: /2016 DRAWING PL-14	XX

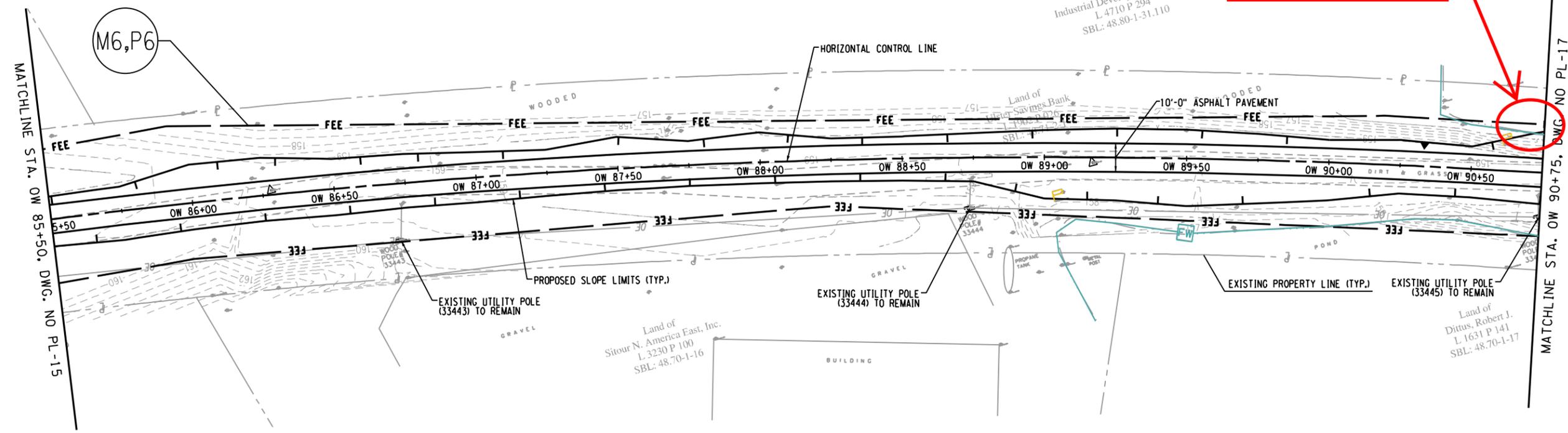
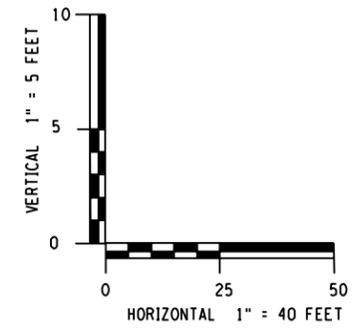
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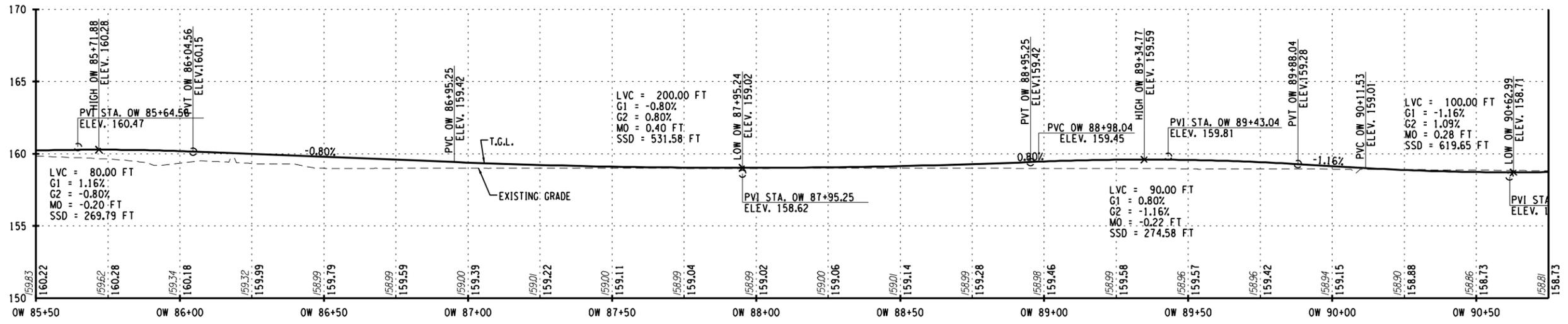
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PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON: _____

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Temp. Impacts = 40 SF



MATCHLINE STA. OW 90+75, DWG. NO PL-17

	SURVEY PROVIDED BY: Brooks & Brooks, P.C. SURVEYING, PLANNING, GIS
	NO. DATE BY REVISION
	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209
KINGSTON RAIL TRAIL CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER ULSTER COUNTY P.I.N. 8758.04	OPTION B-1 PLAN AND PROFILE STA. OW 85+50 TO STA. OW 90+75 SCALE: 1:40 DATE ISSUED: /2016 DRAWING PL-16

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Barton & Loguidice, D.P.C.

Memo To: Project File **Date:** October 18, 2016
From: Corinne I. Steinmuller **Project No.:** 369.005.121
Environmental Scientist II
Subject: Addendum to Kingston Rail Trail Wetland Delineation Report

Project Area and Description

Barton & Loguidice, D.P.C. (B&L) has been retained by Ulster County for engineering and design of the proposed Kingston Rail Trail (PIN 8758.04) in the Towns of Ulster and Hurley and in the City of Kingston, Ulster County, New York. The project is on the approved Statewide Transportation Improvement Program (STIP). The objectives of this project are to establish an off-road pedestrian/bicycle facility to provide alternative means of transportation and link the City of Kingston and the Towns of Hurley and Ulster. This alternative is proposed to follow the abandoned Ontario & Western (O&W) Railroad corridor for 2.0 miles from the existing O&W Rail Trail along U.S. Route 209 through the existing NYS Thruway underpass to Washington Avenue (State Bike Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue and a traffic signal to assist trail users and others crossing Washington Avenue.

Primary land usage surrounding the project corridor is residential and municipal. Much of the surrounding area is young successional forest adjacent to a maintained power line corridor and wetlands.

Initial Delineation

Initial wetland delineation was completed by Foit-Albert Associates in August of 2015. A total of 16 wetlands were identified within the project assessment area. A site visit was completed with the New York State Department of Environmental Conservation (NYSDEC) to confirm the boundaries of two of the wetlands that were determined to be subject to State jurisdiction as part of Wetland KW-18. The remaining wetlands were identified as having a significant nexus to Esopus Creek, thereby qualifying for Federal jurisdiction.

Supplemental Effort

On October 7, 2016, an Environmental Scientist from B&L's Ecology Group performed a site visit to confirm the initially delineated wetland boundaries and to collect field data to support the delineated wetland boundaries and characterize the wetlands. Since field data sheets were not completed under the initial wetland delineation effort, field data sheets were completed for each



Memo to: Project File
October 18, 2016
Page 2

wetland identified under the supplemental effort to document the field observations that supported the wetland determination for each area.

Wetland Delineation Methodology

The background data described in the initial delineation report was reviewed prior to undertaking the wetland field investigations. The Routine Wetlands Determination Method with Onsite Inspection from the *Wetlands Delineation Manual* (Environmental Laboratory, 1987) was used to identify wetlands located within the assessment area that are subject to jurisdiction by the U.S. Army Corps of Engineers (USACE) and/or NYSDEC. Assessments of vegetative communities, soils, and hydrology were made within the corridor to determine the wetland boundaries in the field.

The first step in the wetland delineation was to determine whether normal conditions were present at the study area. The study area was then examined for evidence of natural or human induced alteration of vegetation, soils, or hydrology. These investigations were followed by collecting vegetation, hydrology, and soils data from selected data collection points to determine the location of the wetland boundary.

The presence of wetland vegetation was determined by evaluating the indicator status of dominant plant species in each vegetative stratum (i.e., herbaceous layer, shrub/sapling layer, tree layer, and woody vine layer). The quadrat sizes selected for each vegetative stratum were a 5-foot radius for herbaceous vegetation, 15-foot radius for shrub/saplings, and a 30-foot radius for trees and woody vines. Dominant plant species were determined using visual percent aerial coverage estimates. The most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceeded 50 percent of the total dominance measure for a given stratum, plus any additional species comprising 20 percent or more of the total dominance measure for that stratum, were considered to be dominant species for the stratum.

The wetland indicator status (obligate - OBL, facultative wetland - FACW, facultative - FAC, facultative upland - FACU, or upland - UPL) for all dominant plant species identified in the sample plots was determined from the National Wetland Plant List: 2016 Update (Lichvar, 2016). The wetland vegetation criterion was deemed to be met if greater than 50 percent of the dominant plants in a sample plot had an indicator status of OBL, FACW, and/or FAC. Plant community data recorded from the sample plot are included on the field data sheet provided in Appendix A.

The presence of primary hydrologic indicators (such as inundation, watermarks, drift lines, or drainage patterns) or secondary hydrologic indicators (such as oxidized root channels, water stained leaves, or the FAC neutral test) was determined by making visual observations within the



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sample plots and surrounding areas. Soil saturation was determined by hand digging a 12 to 16-inch deep soil test hole with a soil spade and observing the depth of saturation. Free water in the test pit was also recorded at the point to which water rose or entered in the hole. Hydrologic data gathered in the field at the sample plot were recorded on the field data sheet provided in Appendix A.

The presence of hydric soil indicators was determined by obtaining soil samples from the hand dug soil test holes. Munsell Soil Color Charts (2009 Edition) were used to determine soil matrix and concentration colors. Soil color information and other observations made at the sample plot were recorded on the field data sheet provided in Appendix A.

A wetland determination was made at each sample plot after characterizing vegetation, hydrologic, and soil indicators. If the vegetation, hydrology, and hydric soil criteria were met, the area was determined to be a wetland. If one or more of the criteria were not met, the area was determined to be non-wetland. The boundaries of additional identified wetlands or extensions of the previously identified wetlands were surveyed in the field using a hand-held Trimble GeoXH 6000 series Global Positioning System (GPS) with decimeter accuracy. The wetland boundaries were later added to the Geographic Information System (GIS) base mapping and the initially collected wetland data for the site to prepare the Wetland Delineation Results maps (Figures 1-8). Representative photographs taken of the identified wetlands are provided in Appendix B.

Results

The initial wetland delineation completed by Foit-Albert Associates in June of 2016 identified a total of 16 wetlands within the project assessment area. Wetlands identified by VHB, Inc. in September 2014, provided by Central Hudson Gas & Electric, were utilized in this effort. B&L performed a supplemental site visit on October 7, 2016 to confirm the initially delineated wetland boundaries and to collect field data to support the delineated wetland boundaries and characterize the wetlands.

Two of the wetlands identified under the initial delineation effort (Streams 1 and 2) were determined during the supplemental effort to not have hydric soils to support their identification as wetlands within the project corridor. Therefore, these two areas were eliminated as wetlands and more appropriately determined to be stream channels (bedrock streams with rocky banks) that qualify as Waters of the U.S. under USACE jurisdiction. The boundaries of two initially identified wetlands (Wetland A and Wetland E) were expanded under the supplemental effort as a result of wetland field indicators observed outside of the initially delineated wetland boundary. In addition, two wetlands (Wetland D and Wetland L) were identified under the supplemental effort that were not identified during the initial delineation effort. The boundaries of these two



new wetlands were flagged and surveyed, and field data were recorded on field data sheets to document the qualifying observations.

Each wetland identified under the initial and supplemental efforts was sequentially labelled alphabetically from A to N. Table 1 (below) presents the coordinates of each identified wetland. Table 2 (below) summarizes the observed field indicators of each wetland that resulted in its identification as a wetland, and summarizes the regulatory jurisdiction of each wetland. Figures 1-8 show the final wetland resource mapping. The results of these efforts have been included in the updated plan sheets for the project.

Stream resources identified under the initial and supplemental efforts were sequentially labelled numerically from 1 to 5. Table 1 (below) presents the coordinates of each identified stream. All streams were unmapped except Stream 3, which was identified as NYSDEC Waters Index No. H-171-22, a tributary of the Esopus Creek. This stream is classified as a Class D stream with D Standards. Therefore, none of the stream resources are subject to NYSDEC jurisdiction. However, all meet Federal jurisdiction as they were determined to be tributaries of the Esopus Creek due to their northerly flow.

Table 1. Wetland Locations	
Resource ID	Lat/Long Coordinates (NAD83)
A	41°55'51.52"N, 74° 3'22.60"W
B	41°55'55.77"N, 74° 3'17.81"W
C	41°56'17.18"N, 74° 2'48.04"W
D	41°56'20.34"N, 74° 2'35.39"W
E	41°56'21.06"N, 74° 2'32.80"W
F	41°56'20.80"N, 74° 2'28.19"W
G	41°56'21.38"N, 74° 2'22.75"W
H	41°56'23.46"N, 74° 2'13.33"W
I	41°56'23.39"N, 74° 2'10.03"W
J	41°56'21.77"N, 74° 1'57.26"W
K	41°56'22.20"N, 74° 1'55.30"W
L	41°56'20.59"N, 74° 1'49.17"W
M	41°56'19.58"N, 74° 1'47.30"W
N	41°56'18.50"N, 74° 1'43.28"W
Stream 1	41°56'11.63"N, 74° 3'0.19"W
Stream 2	41°56'18.96"N, 74° 2'42.67"W
Stream 3	41°56'20.08"N, 74° 2'36.41"W
Stream 4	41°56'20.92"N, 74° 2'28.28"W



Table 1. Wetland Locations	
Resource ID	Lat/Long Coordinates (NAD83)
Stream 5	41°56'21.95"N, 74° 2'22.59"W

Table 2. Wetland Data Plot Information and Wetland Jurisdictional Criteria					
Wetland ID	Cover Type	Hydrophytic Vegetation Indicator(s) ¹	Wetland Hydrology Indicators ²	Hydric Soil Indicator(s) ³	Regulatory Jurisdiction
A	Emergent/scrub-shrub	Rapid Test	A2, A3, B6, C2, C9, D2, D5	F6	NYSDEC & USACE
B	Emergent/scrub-shrub	Rapid Test	A2, A3, B6, C2, C9, D2, D5	F6	NYSDEC & USACE
C	Emergent	Dominance Test, Prevalence Index	A1, A2, A3, D5	S5	USACE
D	Scrub-shrub	Rapid Test	A2, A3, D5	F6	USACE
E	Emergent	Rapid Test	A2, A3, C9, D2, D5	S5, S7	USACE
F	Emergent/scrub-shrub	Rapid Test	A1, A2, A3, D2, D3, D5	S5	USACE
G	Emergent	Dominance Test, Prevalence Index	A2, A3, D5	F6	USACE
H	Emergent	Rapid Test	A2, A3, C2, C9, D5	A11, F6	USACE
I	Emergent	Rapid Test	A3, B10, D2, D5	F6	USACE
J	Emergent	Dominance Test, Prevalence Index	A2, A3, B6, C2, D2, D5	A11, F3	USACE
K	Emergent	Rapid Test	A2, A3, B6, C2, D2, D5	F6	USACE
L	Emergent	Rapid Test	A1, A2, A3, D2, D5	F6	USACE
M	Emergent	Rapid Test	A2, A3, B6, C2, D2, D5	F6	USACE
N	Emergent	Dominance Test, Prevalence Index	A2, A3, B6, C2, D2, D5	F6	USACE

¹ Refer to Hydrophytic Vegetation Indicators in the *Regional Supplement 2012*
² Refer to Wetland Hydrology Indicators in the *Regional Supplement 2012*
³ Refer to Hydric Soil Indicators in the *Regional Supplement 2012*

Literature Cited

Foit-Albert Associates. 2016. Wetland Delineation Report. Kingston Rail Trail.

Environmental Laboratory. 1987. *Wetlands Delineation Manual*. Technical Report Y-87. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mass.

Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2016. The National Wetland Plant List: 2014 Update of Wetland Ratings. *Phytoneuron* 2016-41: 1-42.

Munsell Color. 2009. *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Instruments Corporation, Baltimore, Maryland.

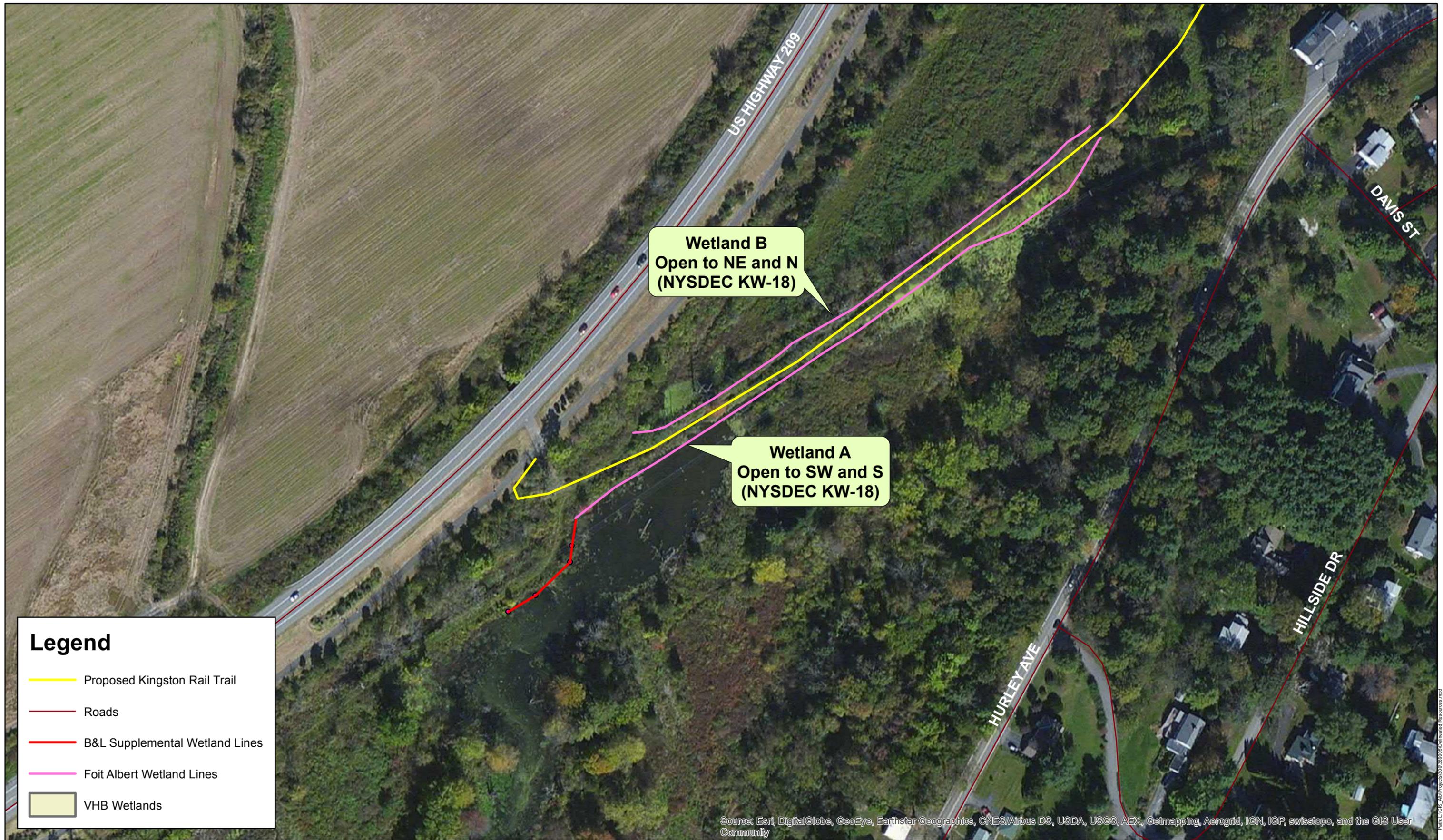


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U.S Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeastern Region (Version 2.0), ed. J.S. Wakeley, R. W. Lichvar, C.V. Noble, and J.F. Berkowitz. ERDC/EL TR 12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

CIS/akg
Attachments

Figures





Legend

- B&L Supplemental Stream Lines
- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Wetland Lines
- VHB Wetlands
- VHB Streams

**Stream 1
Initially FA Wetland**

**Wetland Outside Project Corridor -
Not Included for this Project**

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



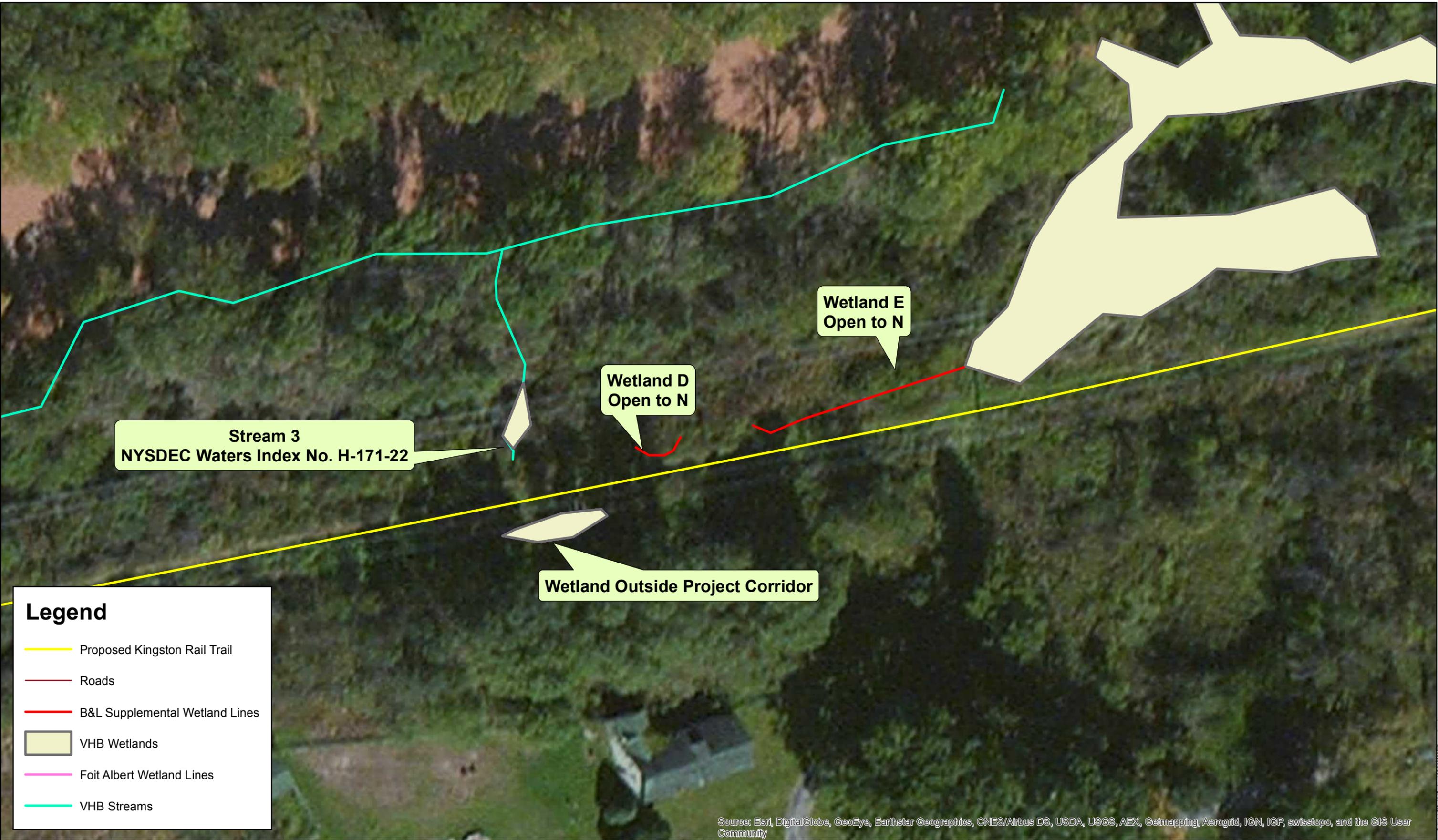
Legend

- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Stream Lines
- B&L Supplemental Wetland Lines
- VHB Wetlands
- VHB Streams

**Stream 2
Initially FA Wetland**

Wetland C

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Stream 3
 NYSDEC Waters Index No. H-171-22

Wetland D
 Open to N

Wetland E
 Open to N

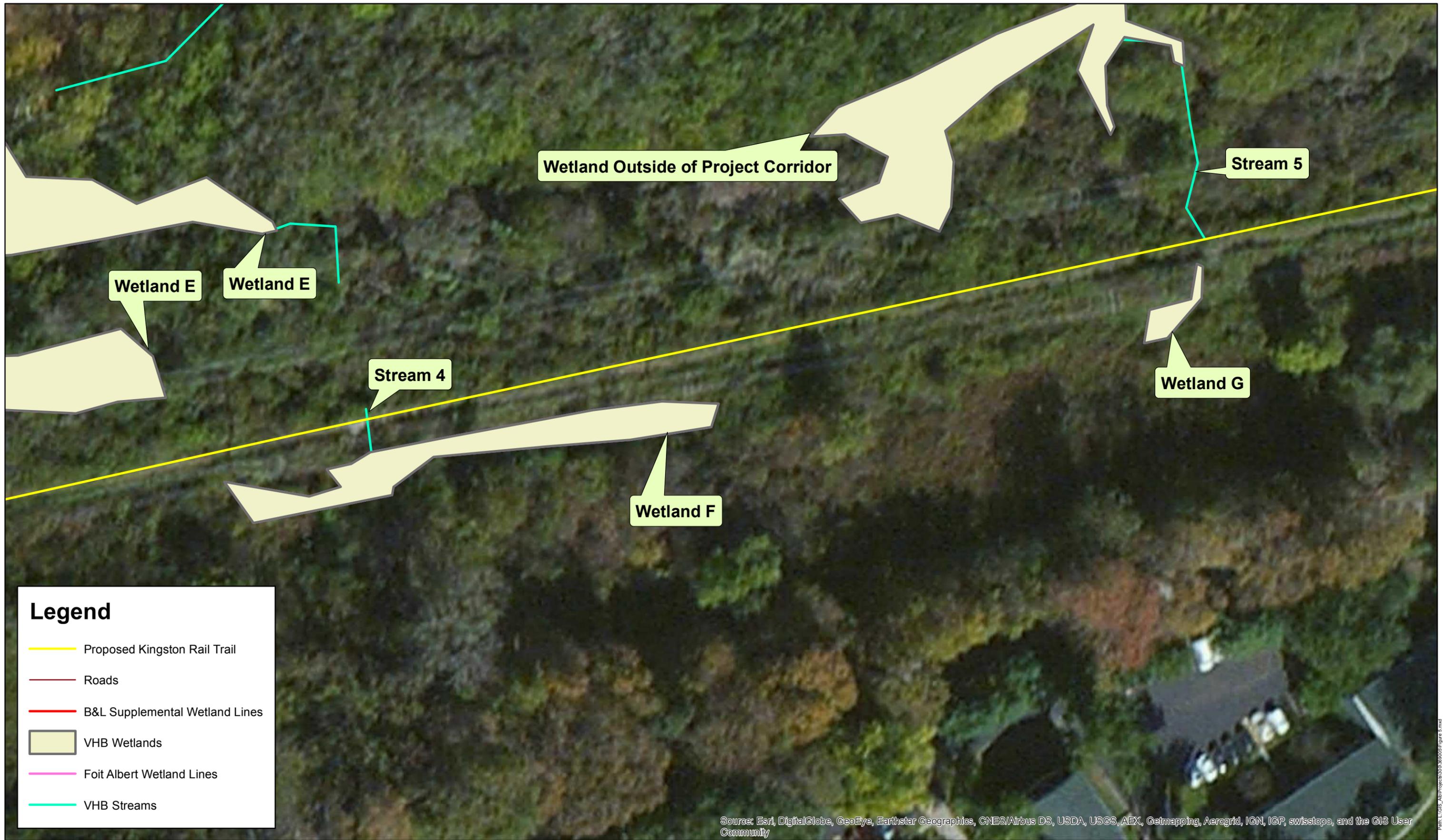
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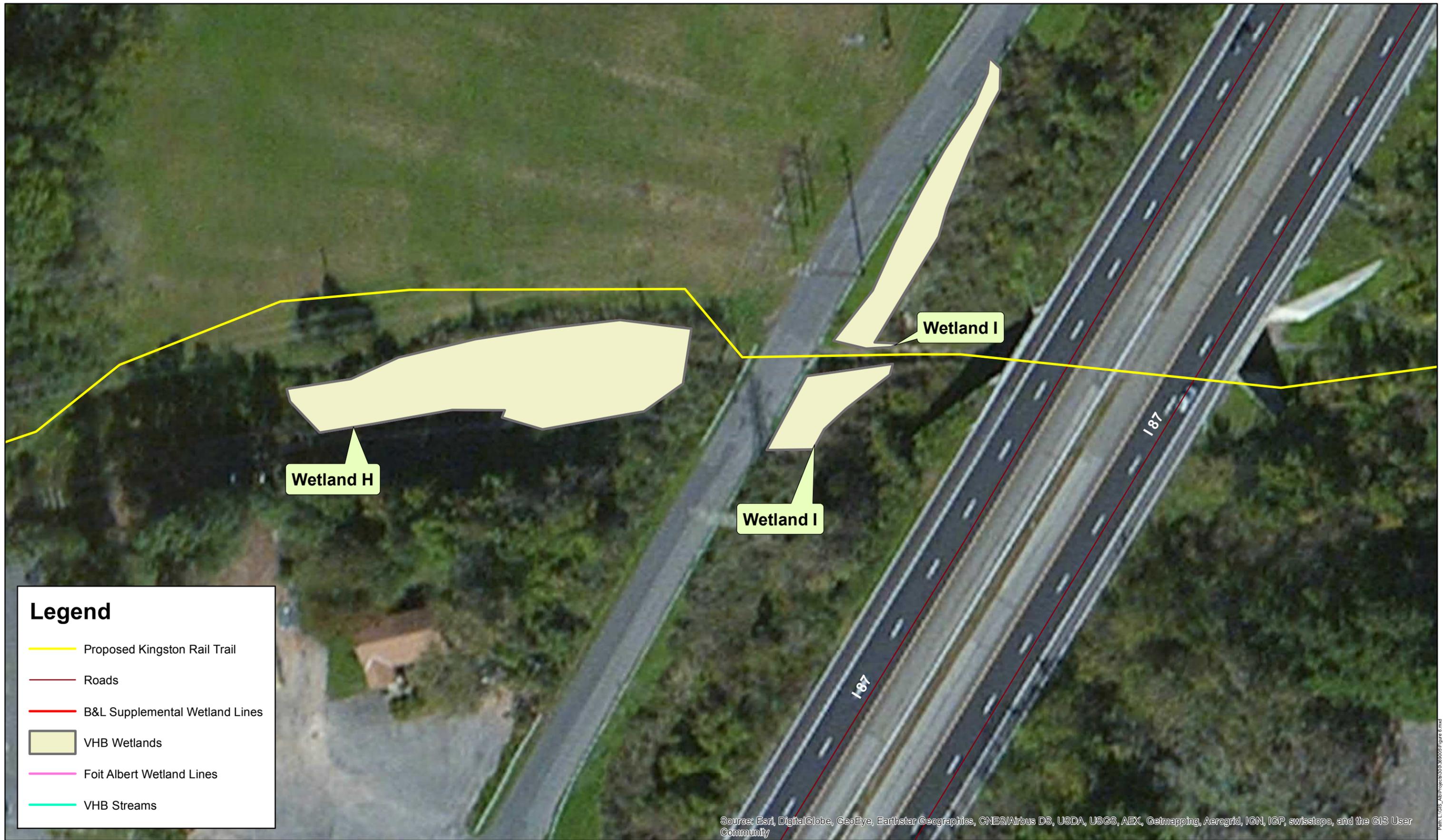
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- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Wetland Lines
- VHB Wetlands
- Foit Albert Wetland Lines
- VHB Streams

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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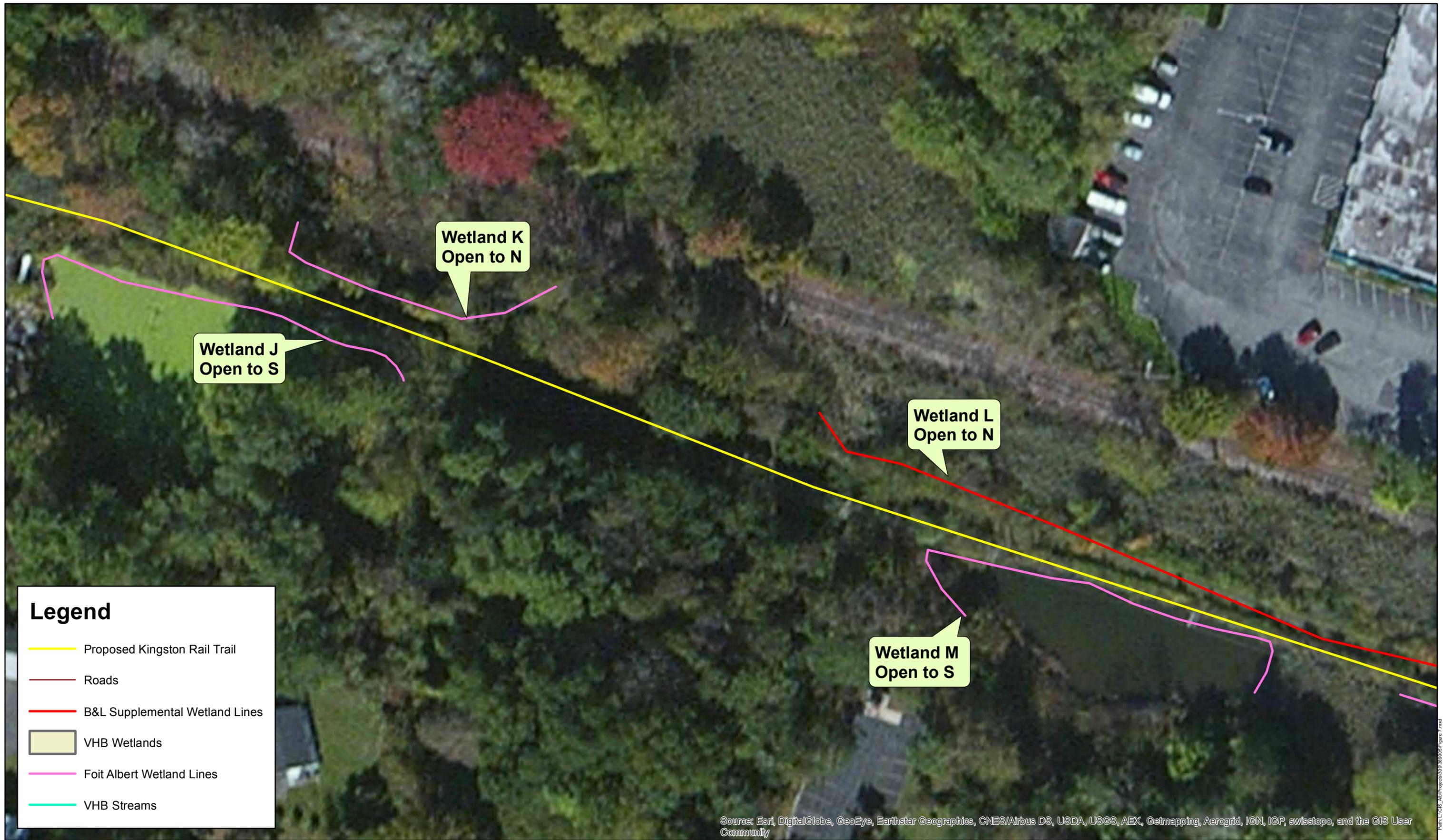




Legend

- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Wetland Lines
- VHB Wetlands
- Foit Albert Wetland Lines
- VHB Streams

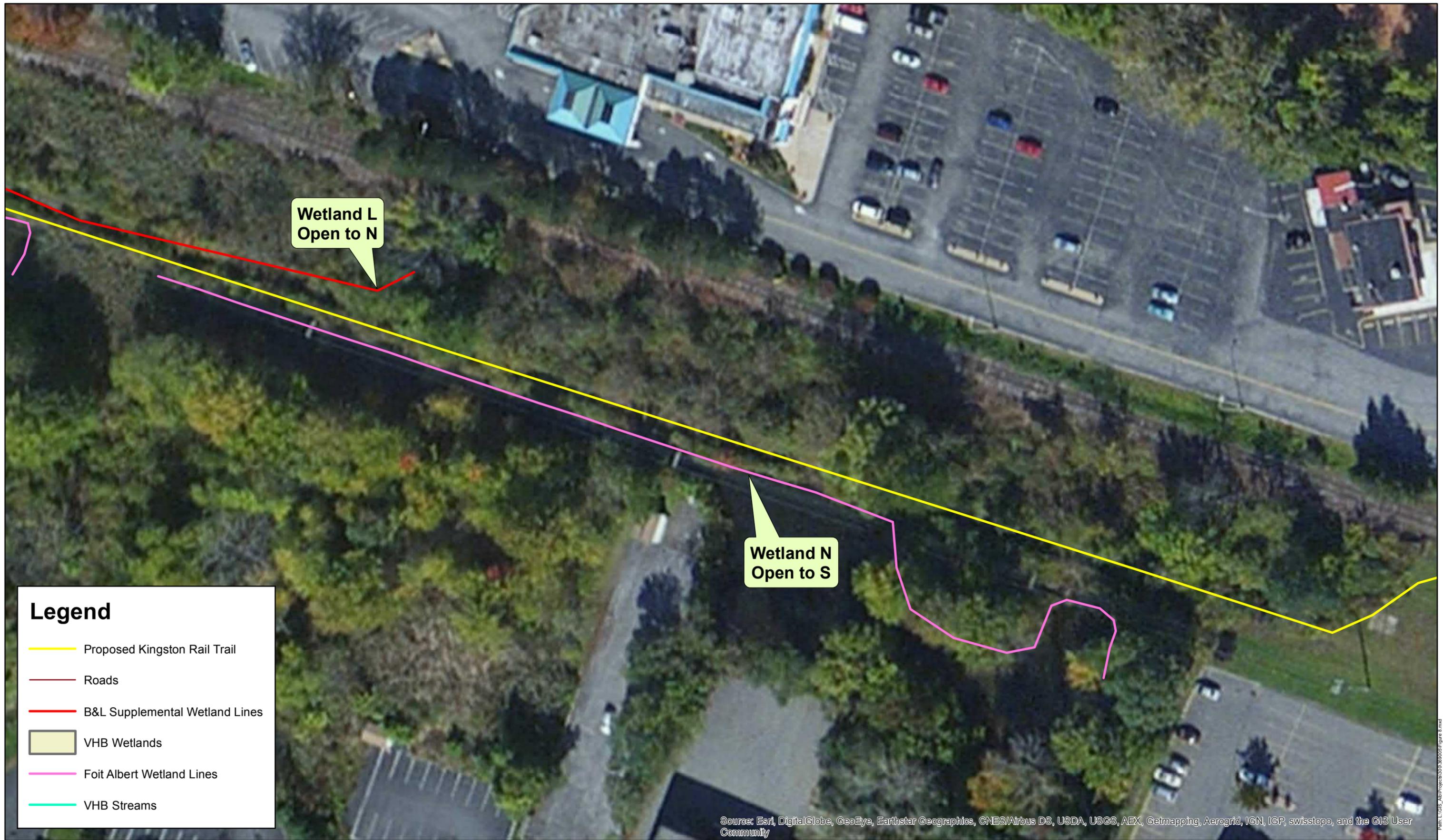
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Legend

- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Wetland Lines
- VHB Wetlands
- Foit Albert Wetland Lines
- VHB Streams

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Wetland L
Open to N

Wetland N
Open to S

Legend

- Proposed Kingston Rail Trail
- Roads
- B&L Supplemental Wetland Lines
- VHB Wetlands
- Foit Albert Wetland Lines
- VHB Streams

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Appendix A

Field Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston, Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: A
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°55'51.52"N Long: 74° 3'22.60"W Datum: NAD 83
 Soil Map Unit Name: Cc NWI classification: PEM/SS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Typically, this is a ponded wetland. The unusually dry summer led to a lack of surface water and lowered water table during the second site visit.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: B
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°55'55.77"N Long: 74° 3'17.81"W Datum: NAD 83
 Soil Map Unit Name: Un NWI classification: PEM/SS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland B</u>
Remarks: (Explain alternative procedures here or in a separate report.) Normal hydrology not present due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>5</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: B

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u><i>Acer saccharinum</i></u>	15	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A) Total Number of Dominant Species Across All Strata: <u> </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u> 15 </u> =Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)				
1. <u><i>Cornus alba</i></u>	10	Yes	FACW	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u><i>Salix spp.</i></u>	5	Yes		
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u> 15 </u> =Total Cover			
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)				
1. <u><i>Lythrum salicaria</i></u>	35	Yes	OBL	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u> 35 </u> =Total Cover			
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)				
1. _____				
2. _____				
3. _____				
4. _____				
	<u> </u> =Total Cover			

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point **B**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100					Loamy/Clayey	Orangic content 10%
4-10	10YR 2/2	95	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
10-18	10YR 2/2	90	10YR 6/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
18-22	10YR 4/2	90	10YR 6/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/8	5	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: C
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'17.18"N Long: 74° 2'48.04"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland C</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Riparian wetland. Stream running through still had good flow of water despite dry year. Stream eventually outlets 200 ft. northwest into the Esopus Creek.

VEGETATION – Use scientific names of plants.

Sampling Point: C

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 2 </u> (A) Total Number of Dominant Species Across All Strata: <u> 2 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 100.0% </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u> 60 </u></td><td>x 1 = <u> 60 </u></td></tr> <tr><td>FACW species <u> 25 </u></td><td>x 2 = <u> 50 </u></td></tr> <tr><td>FAC species <u> 5 </u></td><td>x 3 = <u> 15 </u></td></tr> <tr><td>FACU species <u> 0 </u></td><td>x 4 = <u> 0 </u></td></tr> <tr><td>UPL species <u> 0 </u></td><td>x 5 = <u> 0 </u></td></tr> <tr><td>Column Totals: <u> 90 </u></td><td>(A) <u> 125 </u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u> 1.39 </u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u> 60 </u>	x 1 = <u> 60 </u>	FACW species <u> 25 </u>	x 2 = <u> 50 </u>	FAC species <u> 5 </u>	x 3 = <u> 15 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Totals: <u> 90 </u>	(A) <u> 125 </u> (B)	Prevalence Index = B/A = <u> 1.39 </u>	
Total % Cover of:	Multiply by:																			
OBL species <u> 60 </u>	x 1 = <u> 60 </u>																			
FACW species <u> 25 </u>	x 2 = <u> 50 </u>																			
FAC species <u> 5 </u>	x 3 = <u> 15 </u>																			
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																			
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																			
Column Totals: <u> 90 </u>	(A) <u> 125 </u> (B)																			
Prevalence Index = B/A = <u> 1.39 </u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)																				
1. <u>Lythrum salicaria</u>	60	Yes	OBL																	
2. <u>Impatiens capensis</u>	20	Yes	FACW																	
3. <u>Solanum dulcamara</u>	5	No	FAC																	
4. <u>Solidago gigantea</u>	5	No	FACW																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: D
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'20.34"N Long: 74° 2'35.39"W Datum: NAD83
 Soil Map Unit Name: RvB NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland D</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: D

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Cornus alba</u>	60	Yes	FACW		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Impatiens capensis</u>	30	Yes	FACW		
2. <u>Lythrum salicaria</u>	10	Yes	OBL		
3. <u>Onoclea sensibilis</u>	5	No	FACW		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point **D**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100					Loamy/Clayey	
3-8	10YR 2/1	90	10YR 7/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
8-14	10YR 2/2	90	10YR 7/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
14-24	10YR 4/2	80	10YR 7/6	20	C	M	Loamy/Clayey	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/2016
 Applicant/Owner: Ulster County State: NY Sampling Point: E
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'21.06"N Long: 74° 2'32.80"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland E</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See above remarks.

VEGETATION – Use scientific names of plants.

Sampling Point: E

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lythrum salicaria</u>	60	Yes	OBL		
2. <u>Phragmites australis</u>	30	Yes	FACW		
3. <u>Onoclea sensibilis</u>	5	No	FACW		
4. <u>Scirpus atrovirens</u>	2	No	OBL		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Loamy/Clayey	
4-12	10YR 2/1	80	7.5YR 5/8	20	C	M	Sandy	Prominent redox concentrations
12-18	10YR 2/2	80	7.5YR 5/8	20	C	M	Sandy	Prominent redox concentrations
18-22	10YR 4/2	85	7.5YR 5/8	15	C	M	Sandy	Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Marl (F10) (LRR K, L)		
<input checked="" type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Stripped Matrix (S6)			
<input checked="" type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: F
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'20.80"N Long: 74° 2'28.19"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM/SS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland F</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Associated with stream corridor that drains 230 feet north toward the Esopus Creek.

VEGETATION – Use scientific names of plants.

Sampling Point: F

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Alnus incana</u>	15	Yes	FACW		Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> X </u> No _____	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lythrum salicaria</u>	40	Yes	OBL		
2. <u>Onoclea sensibilis</u>	15	Yes	FACW		
3. <u>Polygonum sagittatum</u>	15	Yes	OBL		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover					
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: G
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'21.38"N Long: 74° 2'22.75"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland G</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year. Appears that this wetland normally drains to the north toward the Esopus through a failed culvert that crosses the proposed trail alignment.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: G

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 2 </u> (A) Total Number of Dominant Species Across All Strata: <u> 2 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 100.0% </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 50 </u></td> <td>x 1 = <u> 50 </u></td> </tr> <tr> <td>FACW species <u> 40 </u></td> <td>x 2 = <u> 80 </u></td> </tr> <tr> <td>FAC species <u> 10 </u></td> <td>x 3 = <u> 30 </u></td> </tr> <tr> <td>FACU species <u> 0 </u></td> <td>x 4 = <u> 0 </u></td> </tr> <tr> <td>UPL species <u> 0 </u></td> <td>x 5 = <u> 0 </u></td> </tr> <tr> <td>Column Totals: <u> 100 </u></td> <td>(A) <u> 160 </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u> 1.60 </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> 50 </u>	x 1 = <u> 50 </u>	FACW species <u> 40 </u>	x 2 = <u> 80 </u>	FAC species <u> 10 </u>	x 3 = <u> 30 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Totals: <u> 100 </u>	(A) <u> 160 </u> (B)	Prevalence Index = B/A = <u> 1.60 </u>	
Total % Cover of:	Multiply by:																			
OBL species <u> 50 </u>	x 1 = <u> 50 </u>																			
FACW species <u> 40 </u>	x 2 = <u> 80 </u>																			
FAC species <u> 10 </u>	x 3 = <u> 30 </u>																			
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																			
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																			
Column Totals: <u> 100 </u>	(A) <u> 160 </u> (B)																			
Prevalence Index = B/A = <u> 1.60 </u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)																				
1. <u>Lythrum salicaria</u>	50	Yes	OBL																	
2. <u>Impatiens capensis</u>	30	Yes	FACW																	
3. <u>Urtica dioica</u>	10	No	FAC																	
4. <u>Onoclea sensibilis</u>	10	No	FACW																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point **G**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/2						Loamy/Clayey	
3-8	10YR 2/2	95	7.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
8-14	10YR 2/2	85	7.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/6	10	C	M		Prominent redox concentrations
14-24	10YR 4/2	90	7.5YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/6	5	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: H
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Plain Local relief (concave, convex, none): Neither Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'23.46"N Long: 74° 2'13.33"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland H</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: H

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Phragmites australis</u>	80	Yes	FACW		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Lythrum salicaria</u>	5	No	OBL		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover					
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <u> X </u> No _____	

Remarks: (Include photo numbers here or on a separate sheet.)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: I
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slop Local relief (concave, convex, none): Minor concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'23.39"N Long: 74° 2'10.03"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland I</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: I

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Phragmites australis</u>	80	Yes	FACW		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover					

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point I

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/1						Loamy/Clayey	
3-8	10YR 3/2	90	7.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
8-16	10YR 3/2	90	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/6	5	C	M		Prominent redox concentrations
16-22	10YR 4/2	90	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/6	5	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: J
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'21.77"N Long: 74° 1'57.26"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland J</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year. Wetland normally ponded.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: J

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u> 4 </u> (A) Total Number of Dominant Species Across All Strata: <u> 4 </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 100.0% </u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 60 </u></td> <td>x 1 = <u> 60 </u></td> </tr> <tr> <td>FACW species <u> 20 </u></td> <td>x 2 = <u> 40 </u></td> </tr> <tr> <td>FAC species <u> 10 </u></td> <td>x 3 = <u> 30 </u></td> </tr> <tr> <td>FACU species <u> 0 </u></td> <td>x 4 = <u> 0 </u></td> </tr> <tr> <td>UPL species <u> 0 </u></td> <td>x 5 = <u> 0 </u></td> </tr> <tr> <td>Column Totals: <u> 90 </u></td> <td>(A) <u> 130 </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u> 1.44 </u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u> 60 </u>	x 1 = <u> 60 </u>	FACW species <u> 20 </u>	x 2 = <u> 40 </u>	FAC species <u> 10 </u>	x 3 = <u> 30 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Totals: <u> 90 </u>	(A) <u> 130 </u> (B)	Prevalence Index = B/A = <u> 1.44 </u>	
Total % Cover of:	Multiply by:																			
OBL species <u> 60 </u>	x 1 = <u> 60 </u>																			
FACW species <u> 20 </u>	x 2 = <u> 40 </u>																			
FAC species <u> 10 </u>	x 3 = <u> 30 </u>																			
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																			
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																			
Column Totals: <u> 90 </u>	(A) <u> 130 </u> (B)																			
Prevalence Index = B/A = <u> 1.44 </u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)																				
1. <u>Lythrum salicaria</u>	30	Yes	OBL																	
2. <u>Onoclea sensibilis</u>	10	Yes	FACW																	
3. <u>Urtica dioica</u>	5	No	FAC																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)																				
1. <u>Lythrum salicaria</u>	30	Yes	OBL	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Onoclea sensibilis</u>	10	Yes	FACW																	
3. <u>Urtica dioica</u>	5	No	FAC																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)																				
1. _____	_____	_____	_____	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point J

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 2/2						Loamy/Clayey	
2-6	10YR 2/2	90	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
6-10	10YR 3/2	90	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
10-18	10YR 4/2	85	10YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 5/6	10	C	M		Prominent redox concentrations
18-24	10YR 5/2	85	10YR 5/8	8	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 5/6	7	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: K
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'22.20"N Long: 74° 1'55.30"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland K</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year. Wetland normally ponded.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: K

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lythrum salicaria</u>	20	Yes	OBL		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.
2. <u>Polygonum sagittatum</u>	10	Yes	OBL		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover					
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point **K**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/2						Loamy/Clayey	
3-10	10YR 2/2	90	10YR 5/8	10	C	M	Loamy/Clayey	Prominent redox concentrations
10-18	10YR 3/2	90	10YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 5/6	5	C	M		Prominent redox concentrations
18-22	10YR 3/2	80	10YR 5/8	15	C	M	Loamy/Clayey	Prominent redox concentrations
			7.5YR 5/6	5	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (F22)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: L
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'20.59"N Long: 74° 1'49.17"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland L</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: L

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u> 30 </u>)				
1.	25	Yes	FACW	<i>Acer saccharinum</i>
2.				
3.				
4.				
5.				
6.				
7.				
	25	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u> 15 </u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Herb Stratum (Plot size: <u> 5 </u>)				
1.	70	Yes	FACW	<i>Phragmites australis</i>
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	70	=Total Cover		
Woody Vine Stratum (Plot size: <u> 30 </u>)				
1.				
2.				
3.				
4.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point L

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2						Loamy/Clayey	
4-12	10YR 2/2	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
12-18	10YR 3/2	90	7.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
18-24	10YR 3/2	85	7.5YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 7/6	5	C	M		Prominent redox concentrations

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Marl (F10) (LRR K, L)		
<input type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Stripped Matrix (S6)			
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
---	--

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: M
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'19.58"N Long: 74° 1'47.30"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland M</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year. Wetland normally ponded.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: M

<u>Tree Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: <u> 15 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤3.0 ¹ _____ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<u>Herb Stratum</u> (Plot size: <u> 5 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lythrum salicaria</u>	20	Yes	OBL		
2. <u>Scirpus atrovirens</u>	15	Yes	OBL		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.	
<u>Woody Vine Stratum</u> (Plot size: <u> 30 </u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover				Hydrophytic Vegetation Present? Yes <u> X </u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Kingston Rail Trail City/County: Kingston/Ulster Sampling Date: 10/7/16
 Applicant/Owner: Ulster County State: NY Sampling Point: N
 Investigator(s): Corinne Steinmuller Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope %: _____
 Subregion (LRR or MLRA): LRR R Lat: 41°56'18.50"N Long: 74° 1'43.28"W Datum: NAD 83
 Soil Map Unit Name: RvB NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland N</u>
Remarks: (Explain alternative procedures here or in a separate report.) Hydrology not indicative of normal conditions due to dry year. Wetland normally ponded.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) <u>X</u> High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) <u>X</u> Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
---	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 See remarks above.

VEGETATION – Use scientific names of plants.

Sampling Point: N

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u> 30 </u>)				
1.	30	Yes	FACW	<i>Acer saccharinum</i>
2.				
3.				
4.				
5.				
6.				
7.				
	30	=Total Cover		
Sapling/Shrub Stratum (Plot size: <u> 15 </u>)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		=Total Cover		
Herb Stratum (Plot size: <u> 5 </u>)				
1.	40	Yes	OBL	<i>Lythrum salicaria</i>
2.	20	Yes	OBL	<i>scirpus atrovirens</i>
3.	10	No	FACW	<i>Onoclea sensibilis</i>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	70	=Total Cover		
Woody Vine Stratum (Plot size: <u> 30 </u>)				
1.				
2.				
3.				
4.				
		=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u> </u>	x 2 = <u> </u>
FAC species <u> </u>	x 3 = <u> </u>
FACU species <u> </u>	x 4 = <u> </u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u> </u> (A)	<u> </u> (B)
Prevalence Index = B/A = <u> </u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

Appendix B

Site Photographs

Representative Corridor Photographs



Photo 1. Trail beginning, looking north.



Photo 2. Wetland A, looking east.



Photo 3. Wetland B, looking west.



Photo 4. Wetland outside of disturbance limits, adjacent to the Esopus Creek north of project.



Photo 5. Wetland H, looking east.



Photo 6. Wetland J, looking south.



Photo 7. Wetland M, looking east.

Barton & Loguidice, D.P.C.

Memo To: Project File **Date:** March 21, 2017

From: Corinne I. Steinmuller **Project No.:** 369.005.121
Environmental Scientist II

Subject: Threatened and Endangered Species Habitat Assessment
Kingston Rail Trail

Project Area and Description

Barton & Loguidice (B&L) has been retained by Ulster County for engineering and design of the proposed Kingston Rail Trail (PIN 8758.04) in the Towns of Ulster and Hurley and the City of Kingston, Ulster County, New York. The project is on the approved Statewide Transportation Improvement Program (STIP). The objectives of this project are to establish an off-road pedestrian/bicycle facility to provide alternative means of transportation and link the City of Kingston and the Towns of Hurley and Ulster. This alternative is proposed to follow the abandoned Ontario & Western (O&W) Railroad corridor for 2.0 miles from the existing O&W Rail Trail along U.S. Route 209 through the existing NYS Thruway underpass to Washington Avenue (State Bike Route 28) in Kingston. Included in this option is a potential trailhead on the west side of Washington Avenue and a traffic signal to assist trail users and others crossing Washington Avenue.

Primary land usage surrounding the project corridor is residential and municipal. Much of the surrounding area is young successional forest adjacent to a maintained power line corridor and wetlands.

Federally Protected Species

The U.S. Fish and Wildlife Service (USFWS) New York Field Office's website was reviewed to determine whether any federally listed endangered, threatened, or candidate species are reported to inhabit the proposed project corridor. The USFWS' Information, Planning and Conservation (IPaC) System reported three federally protected species that could potentially inhabit the project area: Indiana bat (*Myotis sodalis* – Endangered), northern long-eared bat (*Myotis septentrionalis* – Threatened), and the bog turtle (*Clemmys muhlenbergii* – Threatened). A printout of the IPaC results is included as Attachment A.

Critical Habitat

A review of designated critical habitat areas within New York State was completed and no such areas exist within or adjacent to the project area.



Memo to: Project File
March 21, 2017
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New York State Protected Species

The Natural Heritage Program (NHP) was contacted for information regarding the reported presence of any endangered species, threatened species, species of special concern, or significant natural communities within or adjacent to the project corridor. A response was received from the NHP on March 8, 2016 that indicated records of breeding bald eagles within 0.5 miles of the project corridor and seven known hibernacula of northern long-eared bat within 5 miles of the project corridor. The NHP's response letter is included for review as Attachment B.

Availability of Suitable Habitat

A habitat assessment of the project area was completed by B&L's ecology staff on October 7, 2016. The main objective of the habitat assessment was to identify the presence of any state or federally protected species within or adjacent to the project corridor, or the presence of suitable habitat for any of the reported species.

Northern long-eared (NLEB) and Indiana (IBAT) bats

These bat species select roosting trees based on the tree's location, position within the landscape, bark characteristics, and ability to provide cavities or crevices. Suitable roosting and foraging habitat for the bats includes mixed age stands of trees greater than 3" diameter at breast height (DBH), with foraging habitat containing areas of open water. Trees and shrubs within the corridor included: northern catalpa (*Catalpa speciosa*), silver maple (*Acer saccharinum*), white ash (*Fraxinus americana*), red oak (*Quercus rubra*), and staghorn sumac (*Rhus typhina*). A small section of wooded vegetation will require removal where the trail will connect by switchback to the existing Kingston O&W trail along Route 209. The DBH range was between 1-25 inches with the majority below 3 inches. Twenty to 30 dead trees may be removed as well just north of this area. These trees lacked bark, had less than 9 inch DBHs, and were devoid of crevices. Based on the presence of trees greater than 3 inches in DBH, potential roosting habitat exists for the NLEB and IBAT in the project corridor. Project photographs showing the characteristics of the assessed areas are included in Attachment C.

Bog turtle

The bog turtle, the smallest of the emydid turtles, spends much of the time buried in the mud and, therefore, has a reputation for being secretive. While they prefer fens, highly acidic wetlands and areas of soft, deep mud are considered suitable habitat. Several wetland complexes are adjacent to, but not within, the proposed areas of disturbance for the project. While the wetlands were open canopy, they lacked the microtopographic relief characteristic of bog turtle habitat and necessary for basking and hibernation. No wetlands were identified as having the preferred mucky soils and many of them were sandy. Additionally, the invasive species common



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Page 3

reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) were common and there was a lack of diverse vegetation, including a lack of sedges (*Carex* spp.) often associated with bog turtle habitat.

Bald Eagle Review

The bald eagle (*Haliaeetus leucocephalus*) was removed from the federal endangered species list in 2007, but is still afforded federal protection under the Bald and Golden Eagle Protection Act (BGEPA) and state protection under the Environmental Conservation Law. Accordingly, the project corridor was assessed to determine whether potential impacts to this species may occur. During coordination with the NHP, bald eagles were noted within 0.5 miles of the project corridor. A review of the 2000-2005 New York State Breeding Bird Atlas Survey (BBA) indicated no historical sightings of bald eagles in the project area. The proposed project will have no adverse effects on large bodies of water or shoreline areas that bald eagles typically use for foraging. Results of this record review are included as Attachment D.

Breeding Bird Atlas

During the review of Survey Blocks 5764C and 5764D of the 2000-2005 BBA, one threatened and two NYS species of special concern were observed near the project corridor. Table 1, below, lists bird species observed in the BBA Survey Blocks mentioned above, which include the project area. Results of the Breeding Bird Atlas query are included in Attachment D.

NYSDEC Nature Explorer

The New York Nature Explorer contains information regarding natural resources, including threatened and endangered species and significant and natural communities. Review of the NYSDEC Nature Explorer query resulted in no findings of rare, threatened, or endangered species in the project corridor. Results of this query are provided in Attachment E.



Table 1: 2000-2005 New York State Breeding Bird Atlas Results

Species Name	Survey Block	Behavior Code*	NYS Legal Status	Suitable Habitat	Suitable Habitat Within proposed areas of disturbance?
Cooper's hawk (<i>Accipiter cooperii</i>)	5764C	X1	Special Concern	Forest and woodland birds, often found in woodlots adjacent to forest openings, or along edge habitats, and near streams, lakes, and other bodies of water.	Yes
Red-shouldered hawk (<i>Buteo lineatus</i>)	5764C	X1	Special Concern	Forest birds that prefer an open sub-canopy for hunting. Can be found in suburban areas with mixed forest and housing.	Yes
Least Bittern (<i>Ixobrychus exilis</i>)	5764D	X1	Threatened	Marsh birds that suspend their nest structures between sturdy emergent vegetation.	Yes

* X1 = Species observed in possible nesting habitat, but no other indication of breeding noted; singing males present in breeding season.

Discussion and Effect Determinations

Based on the site observations documented during the habitat assessment for the proposed Kingston Rail Trail project, the following presents effects determinations for the species identified as potentially inhabiting/utilizing the project corridor:

Indiana and northern long-eared bats

According to the USFWS' 2016 Indiana bat summer survey guidelines (this document also applies to the northern long-eared bat), suitable habitat was identified within the project corridor due to tree presence and numerous wetlands and streams identified throughout the project corridor. Seven NLEB hibernacula were identified within 5 miles of the project corridor, outside the USFWS implemented 0.25 mile cutting restriction. A small (about 0.3 acre) area of live trees and shrubby vegetation, as well as 30 dead trees, are proposed for removal for the project. Tree removal is proposed to occur within the USFWS Conservation Cutting Timeline window of between October 1 and March 31 during any given year in accordance. Additionally, Best Management Practices are recommended to be utilized to protect water quality during the project. Implementation of the BMPs and performing tree removals during USFWS' recommended clearing window for the protection of bats, the proposed project is recommended to have a determination of May Affect, Likely to Adversely Affect the NLEB and IBAT. See Attachment F for USFWS' Federal Highway Administration concurrence forms.



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Bald Eagle

Bald eagles prefer habitat along large bodies of water and shoreline area. Esopus Creek is north of the project corridor, in places only 60 feet away. Review of the BBA did not indicate eagle observations, but the NHP response indicated the presence of bald eagles within 0.5 miles of the project corridor. While this project does not require a BGEPA permit as it is not within 660 ft. of a known nest, bald eagles will travel within 1 mile of known nest locations. Some noise disturbance may result during the project construction period in the corridor that would disturb bald eagle foraging, but this project is unlikely to disturb nesting bald eagles. Therefore, this project is concluded not to impact bald eagles.

Bog Turtle

Since the characteristics of wetlands in areas adjacent to the project corridor lack the characteristics that support bog turtles, a determination of No Effect is recommended for this threatened species.

BBA Species

Suitable habitat was found for the Cooper's hawk, red-shouldered hawk, and the least bittern, which were observed in the project area during the Breeding Bird Survey in 2009. However, due to the temporary nature of construction as well as limited ground disturbance, a determination of no effect is recommended for these species.

In addition, no observations of other protected species, unique plant assemblages, or significant natural communities were noted within or adjacent to the project limits. A Species Conclusion Table is included as Attachment G to summarize the results and determinations of this assessment.

CIS/akg
Attachments

Figure 1

Aerial Project Corridor Map



Legend

- Proposed Kingston Rail Trail
- Roads

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Path: L:\GIS_A\Projects\00369005\Unreleased_Resources.mxd



I-87 UNDERPASS

END LIMIT - WASHINGTON AVE.

NYS POLICE BUILDING

ESOPUS CREEK

US ROUTE 209

I-87

WASHINGTON AVENUE

O&W TRAIL PARKING LOT

ROLLING MEADOWS PUMP HOUSE

BEGIN LIMIT - US ROUTE 209 UNDERPASS
(CLEAR TREES AND TRAVERSE SLOPE TO TIE INTO O&W TRAIL)

KINGSTON RAIL TRAIL - PREFERRED ALTERNATIVE
CITY OF KINGSTON AND TOWNS OF ULSTER AND HURLEY
ULSTER COUNTY

PIN 8758.04



Figure 2

Topographic Project Corridor Map

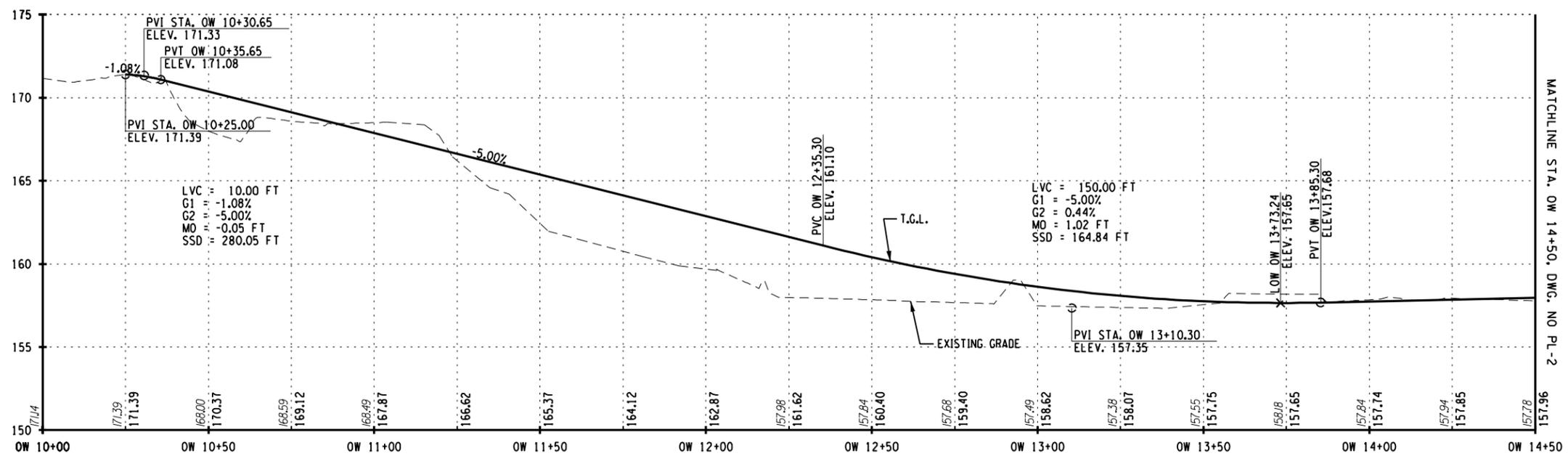
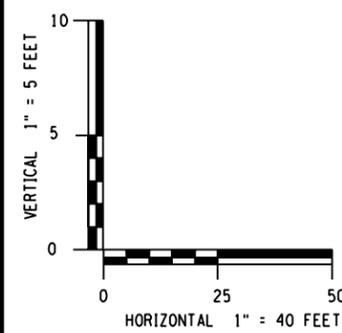
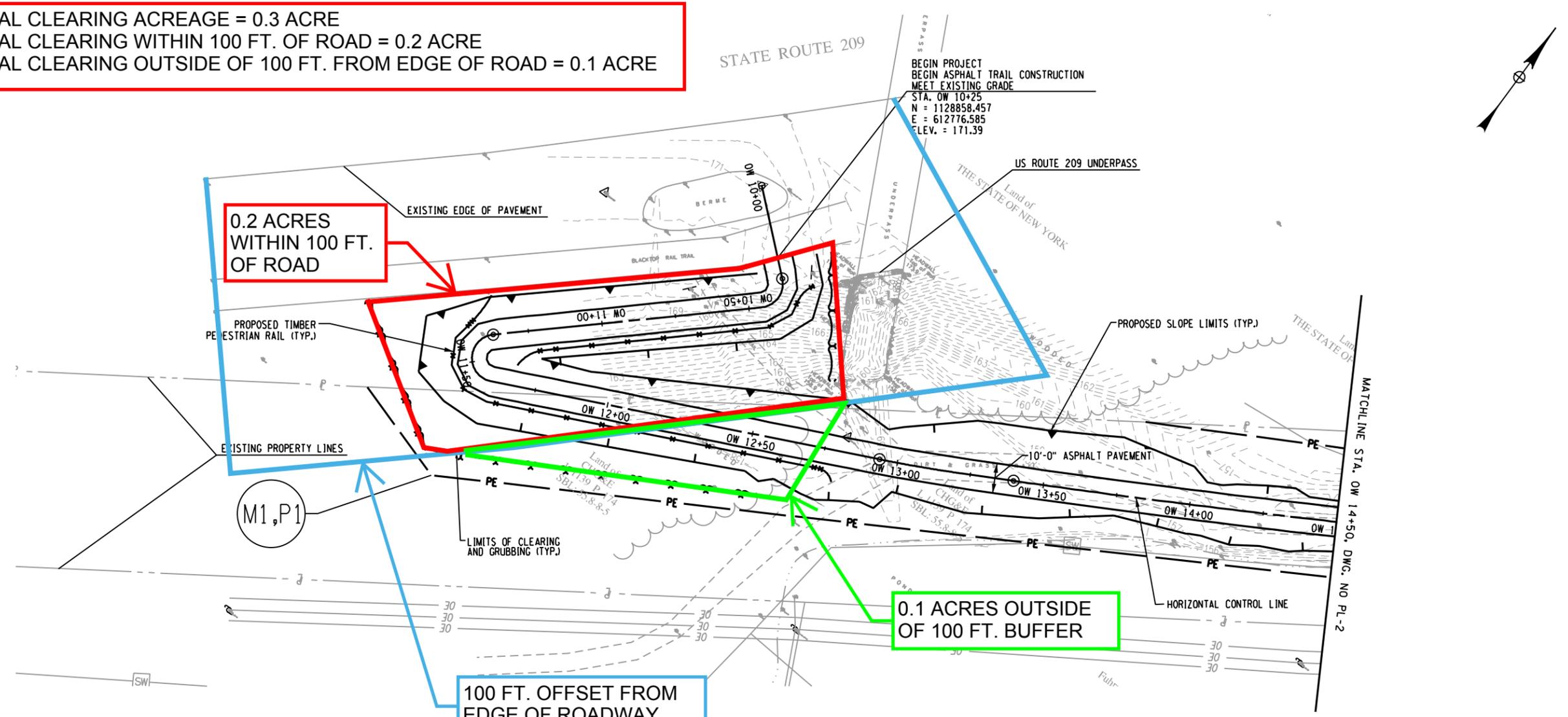


Legend

— Proposed Kingston Rail Trail

FILE NAME = L:\MNSTN\Projects\0300\369\005 Kingston Rail Trail\MNSTN\2016-04 FOR\ALI 1 - 0&W\875804 Plan 01.dgn
 DATE = 3/13/2017
 TIME = 11:45:06 AM

TOTAL CLEARING ACREAGE = 0.3 ACRE
 TOTAL CLEARING WITHIN 100 FT. OF ROAD = 0.2 ACRE
 TOTAL CLEARING OUTSIDE OF 100 FT. FROM EDGE OF ROAD = 0.1 ACRE



DESIGNED BY
 CHECKED BY
 DRAFTED BY
 CHECKED BY

PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON:

NO.	DATE	BY	REVISION	XX
SURVEY PROVIDED BY: BROOKS & BROOKS, P.C. SURVEYING, PLANNING, & GIS				
<small>UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209</small>				
KINGSTON RAIL TRAIL		CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER		
ULSTER COUNTY		P.I.N. 8758.04		
OPTION B-1 PLAN & PROFILE STA OW 10+00 - STA OW 14+50				
SCALE: 1:40				
DATE ISSUED: /2016				
DRAWING PL-1				

Attachment A

U.S. Fish and Wildlife Service Information, Planning and Consultation (IPaC) System Results



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
PHONE: (607)753-9334 FAX: (607)753-9699
URL: www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Code: 05E1NY00-2016-SLI-1236

March 21, 2016

Event Code: 05E1NY00-2016-E-02767

Project Name: PIN 8758.04 Kingston Rail Trail

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <http://www.fws.gov/northeast/nyfo/es/section7.htm>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (

http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the Services wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: PIN 8758.04 Kingston Rail Trail

Official Species List

Provided by:

New York Ecological Services Field Office

3817 LUKER ROAD

CORTLAND, NY 13045

(607) 753-9334

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

Consultation Code: 05E1NY00-2016-SLI-1236

Event Code: 05E1NY00-2016-E-02767

Project Type: TRANSPORTATION

Project Name: PIN 8758.04 Kingston Rail Trail

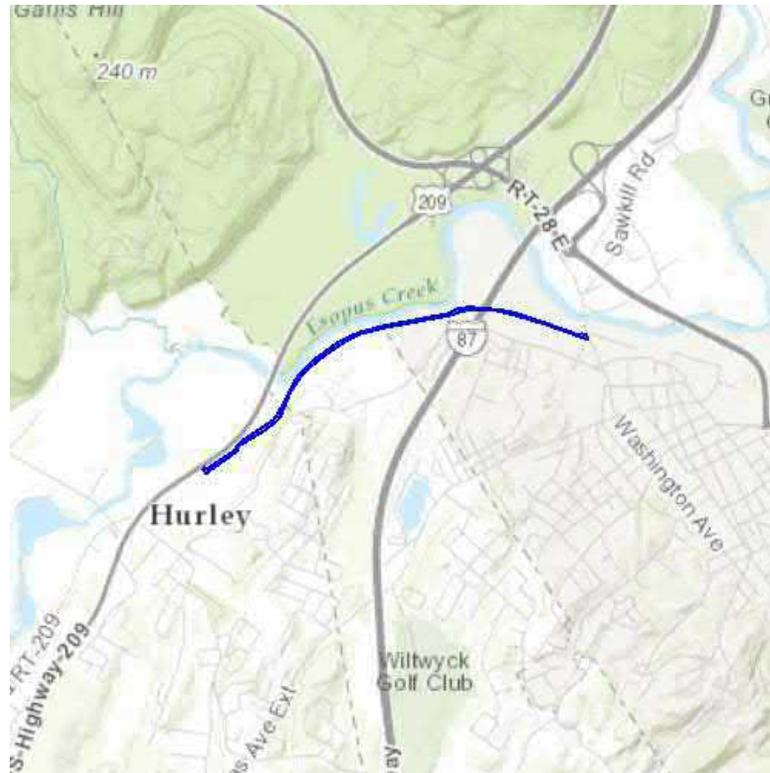
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: PIN 8758.04 Kingston Rail Trail

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Ulster, NY



United States Department of Interior
Fish and Wildlife Service

Project name: PIN 8758.04 Kingston Rail Trail

Endangered Species Act Species List

There are a total of 3 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Indiana bat (<i>Myotis sodalis</i>) Population: Entire	Endangered		
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		
Reptiles			
Bog Turtle (<i>Clemmys muhlenbergii</i>) Population: northern	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: PIN 8758.04 Kingston Rail Trail

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Attachment B

Natural Heritage Program (NHP) Response

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov



March 08, 2016

Daniel Carey
Barton & Loguidice, D.P.C.
10 Airline Drive, Suite 200
Albany, NY 12205

Re: Kingston Rail Trail
Town/City: City Of Kingston, Hurley, County: Ulster.
Ulster.

Dear Daniel Carey:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Our database has no records of rare or state-listed animals or plants, or significant natural communities directly at your site. Enclosed is a report of state-listed animals documented in the vicinity.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

A handwritten signature in cursive script that reads "Andrea Chaloux".

Andrea Chaloux
Environmental Review Specialist
New York Natural Heritage Program



**The following state-listed animals have been documented
in the vicinity of your project site.**

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for your project, please contact the Permits staff at the NYSDEC Region 3 Office at dep.r3@dec.ny.gov, (845) 256-3054. For information about potential impacts of your project on these species and how to avoid, minimize, or mitigate any impacts, contact the Region 3 Wildlife staff at Wildlife.R3@dec.ny.gov, (845) 256-3098.

The following species have been documented within 0.5 mi of the project site. Individual animals may travel 1 mi from documented locations.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
Birds			
Bald Eagle <i>Breeding</i>	<i>Haliaeetus leucocephalus</i>	Threatened	14124

The following species have been documented within 3 mi of the project site. Individual animals may travel 5 mi from documented locations. The main impact of concern for bats is the removal of potential roost trees.

<i>COMMON NAME</i>	<i>SCIENTIFIC NAME</i>	<i>NY STATE LISTING</i>	<i>FEDERAL LISTING</i>
Mammals			
Northern Long-eared Bat <i>Seven (7) hibernacula have been documented within 5 mi of the project site.</i>	<i>Myotis septentrionalis</i>	Threatened	Threatened 14175

This report only includes records from the NY Natural Heritage database. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

Attachment C

Project Corridor Photographs



Photo 1. Existing trail to be paved, looking north.



Photo 2. Area of potential clearing, looking west. Existing trail on top of berm.



Photo 3. NYSDEC mapped wetland KW-18, looking east.



Photo 4. KW-18 looking northeast.



Photo 5. Existing path looking west, connecting the rail trail on Route 209 to the proposed trail.



Photo 6. Dead trees that may be removed to achieve proper trail width.



Photo 7. Majority of corridor, looking north.



Photo 8. Continuation.



Photo 9. Trail looking northeast at the Ulster Town Line.



Photo 10. Phragmites dominated wetland adjacent to corridor.



Photo 11. Phragmites dominated wetland near I-87 overpass, looking east.



Photo 12. Wetland located south of corridor near terminus of trail at Washington Avenue.



Photo 13. Wetland south of corridor, looking east.

Attachment D

2000-2005 New York State Breeding Bird Atlas Survey Results

List of Species Breeding in Atlas Block 5764C

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	<i>Branta canadensis</i>	FL	5/26/2002	Game Species
Wood Duck	<i>Aix sponsa</i>	X1	7/3/2002	Game Species
Mallard	<i>Anas platyrhynchos</i>	D2	6/14/2002	Game Species
Wild Turkey	<i>Meleagris gallopavo</i>	X1	5/26/2002	Game Species
Great Blue Heron	<i>Ardea herodias</i>	X1	7/13/2001	Protected
Green Heron	<i>Butorides virescens</i>	FL	7/8/2002	Protected
Turkey Vulture	<i>Cathartes aura</i>	X1	7/13/2001	Protected
Cooper's Hawk	<i>Accipiter cooperii</i>	X1	7/3/2002	Protected-Special Concern
Red-shouldered Hawk	<i>Buteo lineatus</i>	X1	5/26/2002	Protected-Special Concern
Broad-winged Hawk	<i>Buteo platypterus</i>	X1	7/7/2003	Protected
Red-tailed Hawk	<i>Buteo jamaicensis</i>	P2	5/26/2002	Protected
Killdeer	<i>Charadrius vociferus</i>	P2	7/13/2001	Protected
Spotted Sandpiper	<i>Actitis macularius</i>	D2	5/26/2002	Protected
American Woodcock	<i>Scolopax minor</i>	D2	4/5/2002	Game Species
Rock Pigeon	<i>Columba livia</i>	X1	6/11/2002	Unprotected
Mourning Dove	<i>Zenaida macroura</i>	FL	7/3/2002	Protected
Chimney Swift	<i>Chaetura pelagica</i>	X1	7/13/2001	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	X1	6/8/2001	Protected
Belted Kingfisher	<i>Megaceryle alcyon</i>	X1	7/3/2002	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	D2	7/3/2002	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	FL	7/13/2001	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	FY	5/26/2002	Protected
Northern Flicker	<i>Colaptes auratus</i>	X1	7/13/2001	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	T2	7/7/2003	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	FY	7/7/2003	Protected
Acadian Flycatcher	<i>Empidonax virescens</i>	T2	7/3/2002	Protected
Willow Flycatcher	<i>Empidonax traillii</i>	S2	6/12/2002	Protected
Least Flycatcher	<i>Empidonax minimus</i>	X1	7/23/2001	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	FL	7/23/2001	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	B2	6/11/2002	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	DD	7/8/2002	Protected
Blue-headed Vireo	<i>Vireo solitarius</i>	D2	7/7/2003	Protected
Warbling Vireo	<i>Vireo gilvus</i>	S2	6/11/2002	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	S2	7/23/2001	Protected
Blue Jay	<i>Cyanocitta cristata</i>	FL	7/8/2002	Protected
American Crow	<i>Corvus brachyrhynchos</i>	FY	7/8/2002	Game Species
Tree Swallow	<i>Tachycineta bicolor</i>	FL	7/7/2003	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	X1	6/14/2002	Protected
Barn Swallow	<i>Hirundo rustica</i>	ON	5/26/2002	Protected

List of Species Breeding in Atlas Block 5764C

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Black-capped Chickadee	<i>Poecile atricapillus</i>	FY	5/26/2002	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	FL	7/8/2002	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	FL	6/29/2003	Protected
Brown Creeper	<i>Certhia americana</i>	X1	6/12/2002	Protected
Carolina Wren	<i>Thryothorus ludovicianus</i>	FL	7/13/2001	Protected
House Wren	<i>Troglodytes aedon</i>	FL	7/7/2003	Protected
Eastern Bluebird	<i>Sialia sialis</i>	FL	7/8/2002	Protected
Veery	<i>Catharus fuscescens</i>	X1	5/26/2002	Protected
Hermit Thrush	<i>Catharus guttatus</i>	X1	6/11/2002	Protected
Wood Thrush	<i>Hylocichla mustelina</i>	FY	7/7/2003	Protected
American Robin	<i>Turdus migratorius</i>	FL	7/13/2001	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	FL	7/13/2001	Protected
Northern Mockingbird	<i>Mimus polyglottos</i>	FY	6/29/2003	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	X1	5/26/2002	Protected
European Starling	<i>Sturnus vulgaris</i>	FL	7/13/2001	Unprotected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	FY	6/29/2003	Protected
Blue-winged Warbler	<i>Vermivora pinus</i>	X1	7/13/2001	Protected
Yellow Warbler	<i>Dendroica petechia</i>	FL	7/3/2002	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	X1	7/23/2001	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	D2	6/29/2003	Protected
American Redstart	<i>Setophaga ruticilla</i>	FY	7/7/2003	Protected
Worm-eating Warbler	<i>Helminthos vermivorum</i>	FY	6/11/2002	Protected
Ovenbird	<i>Seiurus aurocapilla</i>	DD	7/7/2003	Protected
Northern Waterthrush	<i>Seiurus noveboracensis</i>	FL	7/7/2003	Protected
Louisiana Waterthrush	<i>Seiurus motacilla</i>	D2	5/26/2002	Protected
Common Yellowthroat	<i>Geothlypis trichas</i>	FY	6/29/2003	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	D2	6/11/2002	Protected
Chipping Sparrow	<i>Spizella passerina</i>	FL	7/13/2001	Protected
Field Sparrow	<i>Spizella pusilla</i>	X1	7/3/2002	Protected
Savannah Sparrow	<i>Passerculus sandwichensis</i>	X1	5/26/2002	Protected
Song Sparrow	<i>Melospiza melodia</i>	FY	7/3/2002	Protected
Swamp Sparrow	<i>Melospiza georgiana</i>	X1	6/11/2002	Protected
Dark-eyed Junco	<i>Junco hyemalis</i>	X1	7/23/2001	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	T2	7/3/2002	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	FY	7/23/2001	Protected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	FL	7/13/2001	Protected
Indigo Bunting	<i>Passerina cyanea</i>	DD	6/29/2003	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	NY	7/8/2002	Protected
Common Grackle	<i>Quiscalus quiscula</i>	FY	7/13/2001	Protected

List of Species Breeding in Atlas Block 5764C				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Brown-headed Cowbird	<i>Molothrus ater</i>	FL	7/13/2001	Protected
Orchard Oriole	<i>Icterus spurius</i>	X1	6/11/2002	Protected
Baltimore Oriole	<i>Icterus galbula</i>	FL	7/3/2002	Protected
House Finch	<i>Carpodacus mexicanus</i>	FL	6/29/2003	Protected
American Goldfinch	<i>Spinus tristis</i>	T2	7/13/2001	Protected
House Sparrow	<i>Passer domesticus</i>	NE	7/13/2001	Unprotected

Current Date: 10/11/2016

List of Species Breeding in Atlas Block 5764D				
Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Canada Goose	<i>Branta canadensis</i>	FL	5/8/2001	Game Species
Wood Duck	<i>Aix sponsa</i>	FL	6/10/2001	Game Species
Mallard	<i>Anas platyrhynchos</i>	FL	6/6/2001	Game Species
Mallard x Am. Black Duck Hybrid	<i>Anas platyrhynchos x A. rubripes</i>	X1	6/23/2000	Game Species
Wild Turkey	<i>Meleagris gallopavo</i>	FL	6/20/2005	Game Species
Least Bittern	<i>Ixobrychus exilis</i>	X1	7/7/2004	Threatened
Great Blue Heron	<i>Ardea herodias</i>	X1	6/23/2000	Protected
Green Heron	<i>Butorides virescens</i>	NE	6/30/2000	Protected
Turkey Vulture	<i>Cathartes aura</i>	X1	6/23/2000	Protected
Broad-winged Hawk	<i>Buteo platypterus</i>	T2	7/21/2001	Protected
Red-tailed Hawk	<i>Buteo jamaicensis</i>	FL	7/7/2004	Protected
Killdeer	<i>Charadrius vociferus</i>	DD	6/24/2000	Protected
American Woodcock	<i>Scolopax minor</i>	D2	3/23/2002	Game Species
Rock Pigeon	<i>Columba livia</i>	NE	5/6/2000	Unprotected
Mourning Dove	<i>Zenaida macroura</i>	NE	5/29/2000	Protected
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	S2	5/20/2004	Protected
Eastern Screech-Owl	<i>Megascops asio</i>	ON	5/15/2001	Protected
Great Horned Owl	<i>Bubo virginianus</i>	P2	2/15/2001	Protected
Barred Owl	<i>Strix varia</i>	S2	6/20/2005	Protected
Chimney Swift	<i>Chaetura pelagica</i>	P2	6/10/2002	Protected
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	P2	6/4/2001	Protected
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	ON	6/13/2002	Protected
Downy Woodpecker	<i>Picoides pubescens</i>	FL	6/24/2000	Protected
Hairy Woodpecker	<i>Picoides villosus</i>	X1	6/24/2000	Protected
Northern Flicker	<i>Colaptes auratus</i>	FL	6/30/2000	Protected
Pileated Woodpecker	<i>Dryocopus pileatus</i>	B2	5/10/2002	Protected
Eastern Wood-Pewee	<i>Contopus virens</i>	T2	6/8/2001	Protected
Willow Flycatcher	<i>Empidonax traillii</i>	T2	6/4/2001	Protected

List of Species Breeding in Atlas Block 5764D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Least Flycatcher	<i>Empidonax minimus</i>	X1	6/6/2001	Protected
Eastern Phoebe	<i>Sayornis phoebe</i>	FL	6/24/2000	Protected
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	S2	6/6/2001	Protected
Eastern Kingbird	<i>Tyrannus tyrannus</i>	FL	8/4/2004	Protected
Yellow-throated Vireo	<i>Vireo flavifrons</i>	X1	7/8/2002	Protected
Warbling Vireo	<i>Vireo gilvus</i>	T2	6/30/2000	Protected
Red-eyed Vireo	<i>Vireo olivaceus</i>	NY	7/2/2002	Protected
Blue Jay	<i>Cyanocitta cristata</i>	FY	6/29/2000	Protected
American Crow	<i>Corvus brachyrhynchos</i>	FL	6/23/2000	Game Species
Tree Swallow	<i>Tachycineta bicolor</i>	FY	6/10/2001	Protected
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	N2	5/8/2001	Protected
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	ON	6/4/2001	Protected
Barn Swallow	<i>Hirundo rustica</i>	NE	6/30/2000	Protected
Black-capped Chickadee	<i>Poecile atricapillus</i>	FL	6/5/2002	Protected
Tufted Titmouse	<i>Baeolophus bicolor</i>	FL	6/18/2002	Protected
White-breasted Nuthatch	<i>Sitta carolinensis</i>	FL	6/24/2000	Protected
Carolina Wren	<i>Thryothorus ludovicianus</i>	DD	8/13/2002	Protected
House Wren	<i>Troglodytes aedon</i>	ON	6/5/2000	Protected
Marsh Wren	<i>Cistothorus palustris</i>	FL	8/4/2004	Protected
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	B2	5/6/2000	Protected
Eastern Bluebird	<i>Sialia sialis</i>	FL	6/24/2000	Protected
Veery	<i>Catharus fuscescens</i>	S2	6/24/2000	Protected
Wood Thrush	<i>Hylocichla mustelina</i>	FY	6/30/2000	Protected
American Robin	<i>Turdus migratorius</i>	FY	6/3/2000	Protected
Gray Catbird	<i>Dumetella carolinensis</i>	FY	7/17/2000	Protected
Northern Mockingbird	<i>Mimus polyglottos</i>	FY	6/4/2000	Protected
Brown Thrasher	<i>Toxostoma rufum</i>	D2	7/2/2002	Protected
European Starling	<i>Sturnus vulgaris</i>	ON	5/6/2000	Unprotected
Cedar Waxwing	<i>Bombycilla cedrorum</i>	FL	6/23/2000	Protected
Blue-winged Warbler	<i>Vermivora pinus</i>	S2	6/1/2000	Protected
Yellow Warbler	<i>Dendroica petechia</i>	FY	6/23/2000	Protected
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	FY	6/6/2001	Protected
Black-throated Green Warbler	<i>Dendroica virens</i>	X1	6/8/2001	Protected
Pine Warbler	<i>Dendroica pinus</i>	T2	6/13/2002	Protected
Prairie Warbler	<i>Dendroica discolor</i>	S2	6/24/2000	Protected
Black-and-white Warbler	<i>Mniotilta varia</i>	S2	6/23/2000	Protected
American Redstart	<i>Setophaga ruticilla</i>	P2	6/23/2000	Protected
Ovenbird	<i>Seiurus aurocapilla</i>	S2	6/3/2000	Protected
Louisiana Waterthrush	<i>Seiurus motacilla</i>	X1	4/27/2002	Protected

List of Species Breeding in Atlas Block 5764D

Common Name	Scientific Name	Behavior Code	Date	NY Legal Status
Common Yellowthroat	<i>Geothlypis trichas</i>	D2	6/3/2000	Protected
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	S2	6/24/2000	Protected
Chipping Sparrow	<i>Spizella passerina</i>	FY	6/1/2000	Protected
Song Sparrow	<i>Melospiza melodia</i>	FY	6/3/2000	Protected
Scarlet Tanager	<i>Piranga olivacea</i>	S2	6/24/2000	Protected
Northern Cardinal	<i>Cardinalis cardinalis</i>	FL	5/25/2000	Protected
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	FL	7/2/2002	Protected
Indigo Bunting	<i>Passerina cyanea</i>	P2	6/1/2000	Protected
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	FY	6/30/2000	Protected
Common Grackle	<i>Quiscalus quiscula</i>	FS	6/3/2000	Protected
Brown-headed Cowbird	<i>Molothrus ater</i>	FL	6/30/2000	Protected
Baltimore Oriole	<i>Icterus galbula</i>	FY	6/30/2000	Protected
Purple Finch	<i>Carpodacus purpureus</i>	X1	6/11/2002	Protected
House Finch	<i>Carpodacus mexicanus</i>	FL	6/4/2001	Protected
American Goldfinch	<i>Spinus tristis</i>	D2	6/4/2001	Protected
House Sparrow	<i>Passer domesticus</i>	FY	6/1/2000	Unprotected

Current Date: 10/11/2016

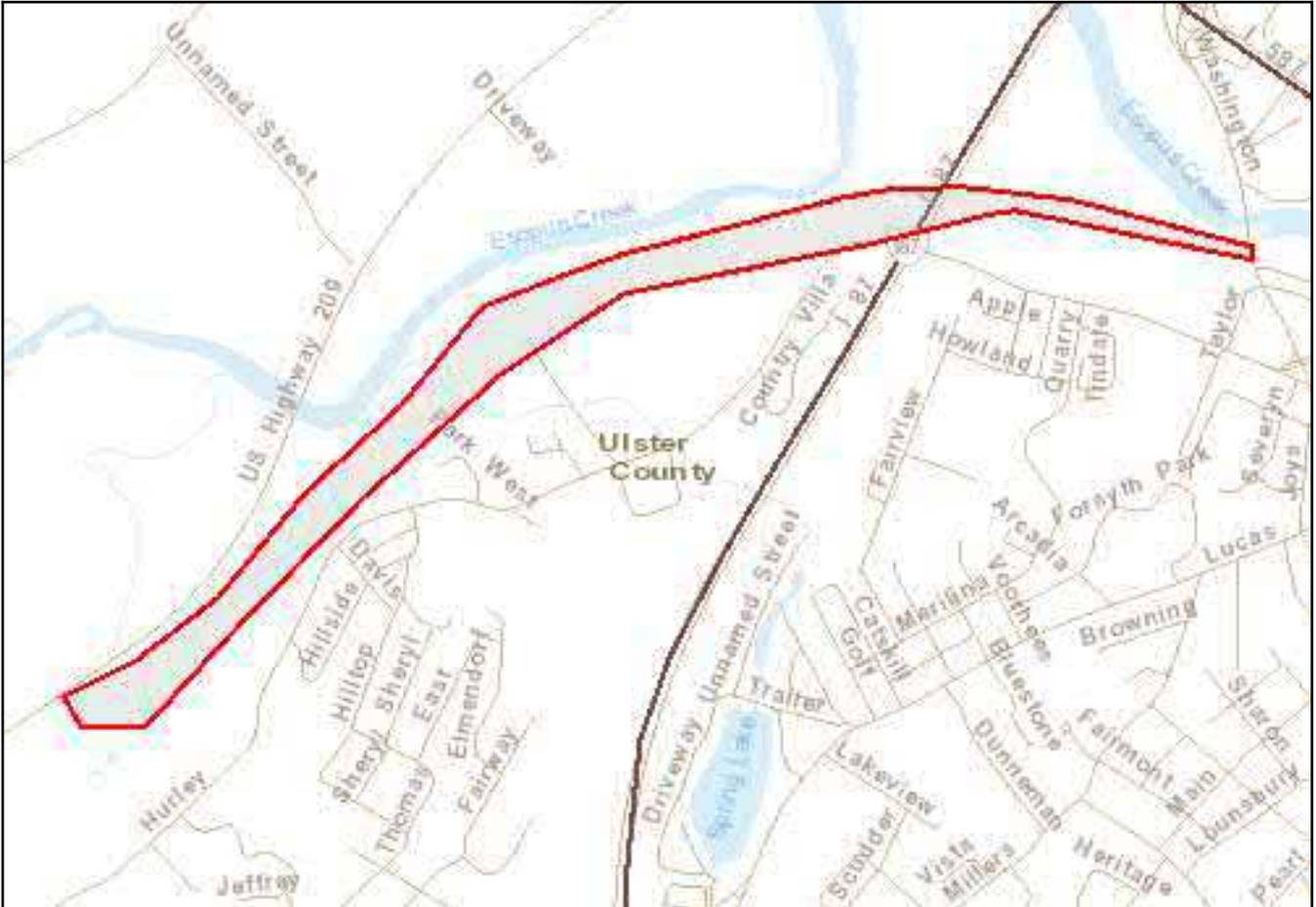
Attachment E

NYS Department of Environmental Conservation (NYSDEC) Nature Explorer Results

New York Nature Explorer

User Defined Results Report

Criteria: Selected Map Area



Common Name	Subgroup	Distribution Status	Year Last Documente	Protection Status		Conservation Rank	
				State	Federal	State	Global

Note: Restricted plants and animals may also have also been documented in one or more of the Towns or Cities in which your user-defined area is located, but are not listed in these results. This application does not provide information at the level of Town or City on state-listed animals and on other sensitive animals and plants. A list of the restricted animals and plants documented at the corresponding county level can be obtained via the County link(s) on the original User Defined Search Results page. Any individual plant or animal on this county's restricted list may or may not occur in this particular user-defined area.

This list only includes records of rare species and significant natural communities from the databases of the NY Natural Heritage Program. This list is not a definitive statement about the presence or absence of all plants and animals, including rare or state-listed species, or of all significant natural communities. For most areas, comprehensive field surveys have not been conducted, and this list should not be considered a substitute for on-site surveys.

Attachment F

FHWA Bat Forms

PIN: 8758.04

PROJECT NAME: Kingston Rail Trail

DATE: 3/21/17

Section 7 ESA Process: ESA Transmittal Sheet

Step 3: Documentation. Please complete the appropriate boxes below and complete the documentation as described.

	ESA Does Not Apply	No Effect, Activity-Based	No Effect, No Suitable Habitat	MA, NLAA, 14-Day Form	MA, 30 Day Form	MA, NLAA, Traditional 7-step Process	Bridge/Bat Survey Form	MA, LAA
Northern Long-eared Bat	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Indiana Bat	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	NA	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Bog Turtle	<input type="checkbox"/>		<input checked="" type="checkbox"/>	NA	NA	<input type="checkbox"/>	NA	<input type="checkbox"/>
Mollusks (Dwarf Wedge Mussel, Rayed Bean, Clubshell, Chittenango Ovale Amber Snail)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	NA	<input type="checkbox"/>
Karner Blue Butterfly	<input checked="" type="checkbox"/>		<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	NA	<input type="checkbox"/>
Sturgeon (Shortnose, Atlantic)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	NA	<input type="checkbox"/>
Other listed species (Please List)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	NA	NA	<input type="checkbox"/>	NA	<input type="checkbox"/>
Documentation Required	The IPaC report is included in the Design Report.	Record the corresponding number(s) of the activity in the box above. This sheet and the IPaC printout are included in the Design Report.	NYSDOT submits "No Suitable Habitat Determination" to FHWA for "No Effect" Concurrence.	NYSDOT submits 14-day Form to the USFWS w/ cc: to Area Engineer.	NYSDOT submits 30-day Form to FHWA, who submits it to USFWS for concurrence.	NYSDOT submits either BE or BA to FHWA, who submits to USFWS for concurrence.	NYSDOT submits Bridge/Bat Survey Form to FHWA.	NYSDOT submits BA to FHWA for Initiation of Formal Consultation with USFWS.

Instructions for Use: This Summary Sheet is sent to FHWA for concurrence for all submissions, except "ESA Does Not Apply" and "No Effect, Activity-Based". A submittal package should include all documentation for all species requiring concurrence so that FHWA can make one ESA determination. **SEE EACH SPECIESSPECIFIC PACKAGE FOR SPECIFIC DOCUMENTATION REQUIREMENTS FOR SUBMITTALS.** Also, FHWA requires documentation of compliance with ESA in the Design Report.



IBat Suitable Habitat Assessment Form for Trees (IBat SHAFT)

Project Name: Kingston Rail Trail PIN: 8758.04

Acres Proposed to be Cut: 0.30 acre Lat/ Long: 41.562468N, -74.2687W

Project Description: New trail along the abandoned O&W Railroad corridor for 1.8 mi from existing Hurley

Rail Trail parking lot to Washington Ave in Kingston

All work within former rail bed and existing dirt trail area.

Summary of NYNHP Database Results (proximity to known hibernacula, roost trees, maternity colonies and forage locations): Seven hibernacula documented within 5 miles of the project site.

Results of Field-based IBat Suitable Bat Habitat Assessment:

- Does the Tree Removal Area contain forested/wooded habitat that is made up of trees greater than 5" dbh, that also exhibit signs of exfoliating bark, cracks, crevices, and/or cavities, OR that also is mixed with larger trees? **Yes Comment:** _____
- Does the Tree Removal Area have individual trees that have exfoliating bark, cracks, crevices, and/or cavities, and are closer than 1000' from other forested/wooded habitat? **Yes**
- Does the Tree Removal Area contain any of the following: adjacent and interspersed emergent wetlands and adjacent areas of agricultural fields, old fields, and pastures, and forests and woodlots (range from dense to loose aggregates of trees) that contain live trees and/or snags greater or equal to 5" dbh that have exfoliating bark, cracks, crevices, and/or cavities? **Yes**

Is any portion of the Tree Removal Area below 900' elevation? **Yes**

If the answer is yes to any of the Field-based Suitable Habitat above questions, and yes to the elevation question, then the determination is that "Suitable IBat Habitat" exists within the Tree Removal Area.

Determination: Suitable IBat Habitat No Suitable IBat Habitat
 *Must complete Rangewide 14-Day Form, traditional informal or formal consultation. *You can conclude "No Effect, No Suitable Habitat."

Characterization/Description of the Habitat: Early successional habitat of individual trees located within 1000 feet of forested and wooded habitat. Wetlands are located adjacent and within the project boundaries.

The project area is sparsely populated by human made structures.

Comments (include specific bat species, if applicable, such as areas are below 900' in elevation, no roost trees for IBat were specifically noted by NYNHP): _____

Name (individual completing the field assessment): Corinne Steinmuller

Signature: Date: 10/11/2016

Phone Number: 518-218-1801 x 2033 Email Address: csteinmuller@bartonandloguidice.com





IBat LAA Consultation Form (30-Day Form)

This form is for the following:

- 1. Projects in the following locations:
 - a. Inside the range of the Indiana bat (using IPaC and NYNHP Data); AND
 - b. Projects with either suitable IBat habitat (using the IBat SHAFT), with positive acoustical records of bats (from a Summer Bat Survey), or with assumed IBat habitat.

AND

- 2. Projects that meet all of the following requirements:
 - a. Tree removal within suitable IBat habitat between April 1 and April 30 or August 1 and September 30 AND/OR tree removal that is between 100 and 300 feet from the pavement edge proposed for any time of year; AND
 - b. Projects that provide required compensatory mitigation for IBat (if you are not providing mitigation, you must go through formal consultation with the USFWS).

NOTE: Projects within 100-feet of the edge of pavement with tree removal proposed for October 1 to March 31 can use the 14-Day Form for May Affect, Not Likely to Adversely Affect determination.

All Projects: 30-Day Form Requirements:

	YES	NO
1. Could the project disturb hibernating IBats in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Does the project remove any trees or involve construction within 0.5 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Would the project cut or destroy (during any time of year) known occupied maternity roost trees, or any other trees, or involve any construction activities within a 0.25-mile radius from the maternity roost tree, or known forage location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered no to questions 1-4. The remainder of the form will be used by the USFWS to determine if additional consultation is required.

All Projects: Project/ Habitat Details

Project Name: Kingston Rail Trail PIN: 8758.04
 Lat/Long: 41.56N, -71.27W Region: 8
 Project Description: New Trail along the abandoned O&W Railroad corridor for 1.8 mi. from existing O&W Rail Trail to Washington Avenue
 FWS Consultation Code (from IPaC Trust Resources Report "link"): 05ENY00-2016-SLI-2406
 Distance to known hibernacula: None reported
 Distance to known roost sites, maternity colonies, or forage sites: None Reported

Did NYSDOT determine that suitable habitat exists by using the IBat SHAFT? YES **NO**
 If YES, please attach a copy of the SHAFT Form to this document.
 Did a Summer Bat Survey indicate acoustical IBat records? YES **NO**
 If YES, please attach a copy of the Summer Bat Survey results to this document.
 If NO to either question, is NYSDOT assuming IBat habitat? **YES** NO

Bridge Projects

Description of project components that are outside the FHWA Rangewide Programmatic BO, such as the creation of daylight-like conditions through lighting changes: _____



Indiana Bat



Note: The completion of the Bridge/Bat Survey Form within 1 year of the project is required for bridge projects- please see the form for instructions.

Tree Removal Projects- Complete the following table:

Tree removal acreage based on time of year and location	The following counties: Monroe, Seneca, Montgomery, Nassau, Suffolk, Rockland		All Other Counties in New York State	
	April 1 to September 30	October 1 to March 31	April 1 to September 30	October 1 to March 31
Acreage of tree removal between 0 and 100 feet from edge of road/rail ballast	_____ Acres (x1.5)	NLAA: Use 14-Day Form	_____ Acres (x1.25)	0.2 Acres
Acreage of tree removal between 100-300 ft from edge of road/rail ballast	_____ Acres (x2.25)	_____ Acres (x1.75)	_____ Acres (x2.0)	0.1 _____ Acres (x1.5)

To estimate acreage: If > 0.5 acres: identify the perimeter and area of the project impact with GPS/GIS. If < 0.5 acres: Can count number of suitable and multiply by 0.09 acres/tree or use GPS/GIS.

All Projects: Compensatory Mitigation

Using the multiplier (X.XX) in each box above, enter the Compensatory Mitigation Acres for all types of tree removal, all times of year, in total: _____ acres.

The cost of using the USFWS In-Lieu-Fee program is ~~\$2,980~~ \$5,706 per acre. Multiply Compensatory Mitigation Acres (total) from above times ~~\$2,980~~ \$5,706 per acre for the amount to be contributed to the ILF: \$ 855.90

Note: ILF payments must be made prior to project construction except for projects that do not require letting prior to construction (payments must be made within three months of project's completion).

All Projects: Effects Determination

Is the determination that NYSDOT is concluding "Likely to Adversely Affect" the IBat? YES NO

If the USFWS does not respond within 30 days from submittal of this form, FHWA may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the IBat are fulfilled. FHWA understands that the USFWS presumes that all activities are implemented as described herein.

FHWA will report any departures from the described activities to the appropriate USFWS Field Office. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick IBat.

Name (individual completing the form)/ Agency (NYSDOT or Local): Corinne Steinmuller / Barton & Loguidice D.P.C.

Phone Number: 518-218-1801 x2033 Email Address: csteinmuller@bartonandloguidice.com

NYSDOT Signature: _____ Date: _____

FHWA Contact (name/email): _____

Procedure: NYSDOT submits this form to the FHWA Area Engineer, requesting their concurrence with the LAA determination. The NYSDOT signature is required to be the Regional Unit Supervisors for all projects, including local projects. The submission is to be one email with a project location map, with the project's Action Area clearly delineated on the map. If FHWA concurs with the determination, NYSDOT's email will be forwarded to the USFWS (cc: to the NYSDOT contact).

The USFWS has 30 calendar days to comment or request additional information, and will "reply to all". If FHWA/NYSDOT is not notified within 30 days, Section 7 consultation for the IBat is complete. The Area Engineer will then issue an ESA Concurrence Letter to NYSDOT.





NLEB Suitable Habitat Assessment Form for Trees (NLEB SHAFT)

Project Name: Kingston Rail Trail PIN: 8758.04

Acres Proposed to be Cut: 0.30 Lat/ Long: 41.562468N, -74.2687W

Project Description: New trail along the abandoned O&W Railroad corridor for 1.8 mi from existing Hurley

Rail Trail parking lot to Washington Ave in Kingston

All work within former rail bed and existing dirt trail area.

Summary of NYNHP Database Results (Proximity to known hibernacula, roost trees, maternity colonies and forage locations): Seven hibernacula documented within 5 miles of the project site.

Results of Field-based NLEB Suitable Bat Habitat Assessment:

- Does the Tree Removal Area contain forested/wooded habitat that is made up of trees greater than 3" dbh, that also exhibit signs of exfoliating bark, cracks crevices, and/or cavities, OR that also is mixed with larger trees? **Yes Comment:** _____
- Does the Tree Removal Area have individual trees that have exfoliating bark, cracks, crevices, and/or cavities, and are closer than 1000' from other forested/wooded habitat? **Yes**
- Does the Tree Removal Area contain any of the following: adjacent and interspersed emergent wetlands and adjacent areas of agricultural fields, old fields, and pastures, and forests and woodlots (range from dense to loose aggregates of trees) that contain live trees and/or snags greater or equal to 3" dbh that have exfoliating bark, cracks, crevices, and/or cavities? **Yes**

If the answer is yes to any of the above questions, the determination is that "Suitable NLEB Habitat" exists within the Tree Removal Area.

Determination: Suitable NLEB Habitat No Suitable NLEB Habitat
 *Must complete Rangewide 14-Day Form, *You can conclude "No Effect", No Suitable
 30- Day Form, or Formal Consultation. Habitat.

Characterization/Description of the Habitat: Early successional habitat of individual trees located within 1000' feet of forested and wooded habitat. Wetlands are located adjacent and within the project boundaries.

The project area is sparsely populated by human made structures.

Comments (include specific bat species, if applicable, such as no roost trees for northern long-eared bat specifically were noted by NYNHP): _____

Name (individual completing the field assessment): Corinne Steinmuller/Barton and Loguidice, D.P.C

Signature:  Date: 10/11/16

Phone Number: 518-218-1801 x 2033 Email Address: csteinmuller@bartonandloguidice.com



Rangewide Bat Consultation Form

In submitting this form, FHWA ensures that the proposed project(s) adhere to the criteria of the range-wide programmatic informal BA. NYSDOT submits this form to the USFWS requesting their concurrence with NYSDOT’s determination, with a cc: to the FHWA Area Engineer. The USFWS has 14 calendar days to comment or request additional information, and will “reply to all”. If FHWA/NYSDOT is not notified within 14 days, Section 7 consultation for bat species is complete under the rangewide programmatic informal consultation. The Area Engineer will then issue an ESA Concurrence Letter to NYSDOT.

Project Name: Kingston Rail Trail

PIN: 8758.04

Lat/Long: 41.562468N, -74.2687W

Region: NYSDOT Region 8

Project Description: New trail along the abandoned O&W Railroad corridor for 1.8 mi from Existing Hurley Rail Tral parking lot to Washington Ave in Kingston.

FWS Consultation Code (Taken from IPaC project search): 05E1NY00-2016-SLI-2406

Does the project contain documented forage or roost sites? If it does, NYSDOT must instead use the 7step traditional process found at: at <http://www.fws.gov/northeast/nyfo/es/step1.htm>. YES NO

Acres of trees to be cut, or number of trees to be cut: 0.30 acre

- 1 If the project is a bridge project, will current permanent lighting and roosting potential remain the same? Also-The Bridge/Bat Survey Form is required to be completed and submit it to FHWA. See Attachment 3. YES NO N/A
- 2 Are trees to be cut between October 1 and March 31, and will they be marked to distinguish them from trees that are not to be cut? YES NO N/A
- 3 Are trees to be cut located within 100-feet of the existing road surface? YES NO N/A
- 4 Are all other appropriate AMMs included in the project? YES NO N/A

If the answers to the above four questions are YES (or N/A for some bridge projects), then the determination is “May Affect, Not Likely to Adversely Affect” either Indiana bat or the northern long-eared bat. Is this the determination that NYSDOT is concluding? YES NO

If there are other species (from IPaC) that have a “May Affect” determination, please attach the determination/ paperwork. Are there other species? YES NO

Name (individual completing the form)/ Agency: Corinne Steinmuller/Barton and Loguidice, D.P.C

Phone Number: 518-218-1801 x 2033 Email Address: csteinmuller@bartonandloguidice.com

Signature: 

Date: 10/11/16

FHWA Area Engineer: _____

Attachment G

Species Conclusion Table

Species Conclusions Table
Project Name: PIN 8758.04 Kingston Rail Trail
Date: 03/21/17

Species Name/ Critical Habitat	Potential Habitat Present?	Species Present?	Critical Habitat Present?	ESA/Eagle Act Determination (REQUIRED)	Notes/Documentation Summary (include full rationale in your report)
Indiana Bat (<i>Myotis sodalis</i>)	Yes	No Current Survey Conducted	No	May Affect, Likely to Adversely Affect	Suitable roosting habitat was identified within the project corridor. The 4(d) rule indicates that tree removals of 1 acre or less that is not within 0.25 miles of a known bat hibernaculum or 150 feet of known occupied maternity roost trees are considered minimal impacts. Minimal impacts will have little or no impact on the ecological value and function. To reduce impacts to this species, tree removals will be completed during the USFWS' recommended cutting window: October 1 to March 31. By adhering to these cutting restrictions, a MA, LAA determination is recommended for the Indiana bat.
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Yes	Yes	No	May Affect, Likely to Adversely Affect	The 4(d) rule indicates that tree removals of 1 acre or less which are not within 0.25 miles of a known bat hibernaculum or 150 feet of known occupied maternity roost trees are considered minimal impacts. Minimal impacts will have little or no impact on the ecological value and function. Seven hibernacula have been documented within 5 miles of the project site. Any removal of trees greater than 3" in diameter at breast height will be conducted during the USFWS' recommended cutting window: between October 1 and March 31 to avoid roosting periods. By adhering to these cutting restrictions, a MA, LAA is recommended for the northern long-eared bat. Suitable roosting habitat was identified within the project corridor.
Bog Turtle (<i>Clemmys muhlenbergii</i>)	Yes	No Current Survey Conducted	No	No effect	There were no wetlands observed within the project corridor that exhibited the substrate, hydrology, and vegetation characteristics necessary to be considered suitable bog turtle habitat. Because of the absence of suitable habitat for this species, a No Effect determination is recommended.
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	Yes	Yes	No	Unlikely to disturb nesting bald eagles	The bald eagle was delisted from the federal ESA on August 8, 2007. While there are no ESA requirements for this species after this date, bald eagles continue to receive federal protection under the Bald and Golden Eagle Protection Act (BGEPA). Documented within 0.5 miles of the project site. Any disturbance will be limited to temporary construction noise. No permanent habitat degradation will occur as a result of this project.

Appendix C

Pedestrian & Traffic Information

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-2)

PIN:	<input type="text" value="8758.04"/>	Project Location:	<input type="text" value="Ulster County"/>
Context:	<input checked="" type="checkbox"/> Urban/Village <input type="checkbox"/> Suburban, or <input type="checkbox"/> Rural		
Project Title:	<input type="text" value="Kingston Rail Trail"/>		
STEP 1- APPLICABILITY OF CHECKLIST			
1.1	Is the project located entirely on a facility where bicyclists and pedestrians are prohibited by law and the project does not involve a shared use path or pedestrian/bicycle structure? <i>If no, continue to question 1.2. If yes, <u>stop here</u>.</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1.2	a. Is this project a 1R* Maintenance project? <i>If no, continue to question 1.3. If yes, go to part b of this question.</i> b. Are there opportunities on the 1R project to improve safety for bicyclists and pedestrians with the following Complete Street features? <ul style="list-style-type: none"> • Sidewalk curb ramps and crosswalks • Shoulder condition and width • Pavement markings • Signing <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i> <small>* Refer to Highway Design Manual (HDM) Chapter 7, Exhibit 7-1 "Resurfacing ADA and Safety Assessment Form" under ADA, Pavement Markings and Shoulder Resurfacing for guidance.</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
1.3	Is this project a Cyclical Pavement Marking project? <i>If no, continue to question 1.4. If yes, review EI 13-021* and identify opportunities to improve safety for bicyclists and pedestrians with the following Complete Streets features:</i> <ul style="list-style-type: none"> • Travel lane width • Shoulder width • Markings for pedestrians and bicyclists <i>Document opportunities or deficiencies in the IPP and <u>stop here</u>.</i> <small>* EI 13-021, "Requirements and Guidance for Pavement Marking Operations - Required Installation of CARDS and Travel Lane and Shoulder Width Adjustments".</small>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1.4	Is this a Maintenance project (as described in the "Definitions" section of this checklist) and different from 1.2 and 1.3 projects? <i>If no, continue to Step 2. If yes, the Project Development Team should continue to look for opportunities during the Design Approval process to improve existing bicycle and pedestrian facilities within the scope of project. Identify the project type in the space below and <u>stop here</u>.</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
STEP 1 prepared by:		<input type="text"/>	Date: <input type="text"/>
STEP 2 - IPP LEVEL QUESTIONS (At Initiation)			Comment/Action

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-3)

<p>2.1</p>	<p>Are there public policies or approved known development plans (e.g., community Complete Streets policy, Comprehensive Plan, MPO Long Range and/or Bike/Ped plan, Corridor Study, etc.) that call for consideration of pedestrian, bicycle or transit facilities in, or linking to, the project area? <i>Contact municipal planning office, Regional Planning Group and Regional Bicycle/Pedestrian Coordinator.</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>The proposed project is included in the Ulster County Transportation Council's (UCTC) 2008 Non-Motorized Transportation Plan</p>
<p>2.2</p>	<p>Is there an existing or planned sidewalk, shared use path, bicycle facility, pedestrian-crossing facility or transit stop in the project area?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>The project to extend from the existing O&W Rail Trail to the sidewalk system on Washington Avenue</p>
<p>2.3</p>	<p>a. Is the highway part of an existing or planned State, regional or local bicycle route? <i>If no, proceed to question 2.4. If yes, go to part b of this question.</i> b. Do the existing bicycle accommodations meet the minimum standard guidelines of HDM Chapter 17 or the AASHTO "Guide for the Development of Bicycle Facilities"? * <i>Contact Regional Bicycle/Pedestrian Coordinator</i> <small>* Per HDM Chapter 17- Section 17.4.3, Minimum Standards and Guidelines.</small></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>2.4</p>	<p>Is the highway considered important to bicycle tourism by the municipality or region?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>The project will link Kingston neighborhoods and businesses to the existing O&W Rail Trail.</p>
<p>2.5</p>	<p>Is the highway affected by special events (e.g., fairs, triathlons, festivals) that might influence bicycle, pedestrian or transit users? <i>Contact Regional Traffic and Safety</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>2.6</p>	<p>Are there existing or proposed generators within the project area (<i>refer to the "Guidance" section</i>) that have the potential to generate pedestrian or bicycle traffic or improved transit accommodations? <i>Contact the municipal planning office, Regional Planning Group, and refer to the CAMCI Viewer, described in the "Definitions" section.</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Forsyth Park, Dietz Stadium</p>
<p>2.7</p>	<p>Is the highway an undivided 4 lane section in an urban or suburban setting, with narrow shoulders, no center turn lanes, and existing Annual Average Daily Traffic (AADT) < 15,000 vehicles per day? <i>If yes, consider a road diet evaluation for the scoping/design phase. Refer to the "Definitions" section for more information on road diets.</i></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-4)

2.8	Is there evidence of pedestrian activity (e.g., a worn path) and no or limited pedestrian infrastructure?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Corridor currently utilized by walkers, runners, and mountain bikers.
<p>STEP 2 prepared by: <input type="text"/> Date: <input type="text"/></p> <p>Bicycle/Pedestrian Coordinator has been provided an opportunity to comment: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>ATTACH TO IPP AND INCLUDE RECOMMENDATIONS FOR SCOPING/DESIGN.</p>			

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-5)

STEP 3 - PROJECT DEVELOPMENT LEVEL QUESTIONS (Scoping/Design Stage)			Comment/Action
3.1	Is there an identified need for bicycle/pedestrian/transit or "way finding" signs that could be incorporated into the project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.2	Is there history of bicycle or pedestrian crashes in the project area for which improvements have not yet been made?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.3	Are there existing curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks that don't meet ADA standards per HDM Chapter 18 ?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.4	Is the posted speed limit is 40 mph or more and the paved shoulder width less than 4' (1.2 m) (6' in the Adirondack or other State Park)? Refer to EI 13-021 .	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.5	Is there a perceived pedestrian safety or access concern that could be addressed by the use of traffic calming tools (e.g., bulb outs, raised pedestrian refuge medians, corner islands, raised crosswalks, mid-block crossings)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pedestrian-activated signal would improve pedestrian safety while crossing the high-volume Washington Ave.
3.6	Are there conflicts among vehicles (moving or parked) and bike, pedestrian or transit users which could be addressed by the project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.7	Are there opportunities (or has the community expressed a desire) for new/improved pedestrian-level lighting, to create a more inviting or safer environment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.8	Does the community have an existing street furniture program or a desire for street appurtenances (e.g., bike racks, benches)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.9	Are there gaps in the bike/pedestrian connections between existing/planned generators? Consider locations within and in close proximity of the project area. (Within 0.5 mi (800 m) for pedestrian facilities and within 1.0 mi (1600 m) for bicycle facilities.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	There is no non-motorized transportation link between the existing O&W Trail and the City of Kingston
3.10	Are existing transit route facilities (bus stops, shelters, pullouts) inadequate or in inconvenient locations? (e.g., not near crosswalks) Consult with Traffic and Safety and transit operator, as appropriate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.11	Are there opportunities to improve vehicle parking patterns or to consolidate driveways, (which would benefit transit, pedestrians and bicyclists) as part of this project?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Additional parking facilities will be provided for potential trail users

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-6)

3.12	Is the project on a "local delivery" route and/or do area businesses rely upon truck deliveries that need to be considered in design?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.13	Are there opportunities to include green infrastructure which may help reduce stormwater runoff and/or create a more inviting pedestrian environment?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3.14	Are there opportunities to improve bicyclist operation through intersections and interchanges such as with the use of bicycle lane width and/or signing?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<p>STEP 3 prepared by: <input type="text"/> Date: <input type="text"/></p> <p>Preparer's Supporting Documentation, Comments and Clarifications:</p> <p>灩 CONTROL Forms.TextBox.1</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>			

Last Revised 06/22/2015

Introduction

The intent of this checklist is to assist in the identification of needs for [Complete Streets](#) design features on Capital projects, including locally-administered projects.

This checklist is one tool that NYSDOT employs in its integrated approach to Complete Streets considerations. It provides a focused project-level evaluation which aids in identifying access and mobility issues and opportunities within a defined project area. For broader geographic considerations (e.g., bicycle route planning, corridor continuity), NYSDOT and other state and local agencies use a system-wide approach to identifying complete streets opportunities.

Use of this checklist is initiated during the earliest phase of a project, when information about existing conditions and needs may be limited; it is therefore likely that the Preparer will only be able to complete Steps 1 and 2 at this time. As the project progresses, and more detailed information becomes available, the Preparer will be able to complete Step 3 and continue to refine earlier answers, to give an increasingly accurate indication of needs and opportunities for Complete Streets features.

Guidance for Steps 1, 2 and 3

Based on the guidance below, the Regions will assign the appropriate staff to complete each step in the Checklist. The Preparer should have expertise in the subject matter and be able to effectively work with and coordinate comments/responses with involved Regional Groups.

- o Steps 1 & 2: Preparer is from Planning; review occurs as part of the normal IPP process.
 - o Step 3: Preparer is Project Designer; review occurs as part of Design Approval Document review/approval process.
 - o For Local Projects - Local Project Sponsors will be responsible for completing all steps.
- a. A check of "yes" indicates a need to further evaluate the project for Complete Streets features. Please identify in the comment box, or append at the end of the checklist, any supporting information or documentation.
 - b. Answers to the questions should be checked with the local municipality, transit provider, MPO, etc., as appropriate, to ensure accuracy and evaluate needed items versus desirable items (i.e., prioritize needs).
 - c. Answers to the questions should be coordinated with NYSDOT Regional program areas as appropriate (e.g.,

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-7)

Traffic and Safety, Landscape Architecture, Maintenance, etc.)

- d. This checklist should be reviewed during the development of the IPP, Scoping Document, and Design Approval Document; and revisited due to a project delay or if site conditions or local planning changes during the project development process. Continued coordination with the Regional Bicycle and Pedestrian Coordinator is necessary throughout project scoping and design.
- e. It will be assumed that the Project Description and Limits will be as described in the IPP for Step I, the Scoping Document for Step 2 and the Design Approval Document for Step 3. Preparers should describe any deviations from this assumption under "Preparer's Supporting Documentation".
- f. For the purposes of this checklist, the "project area" is within 0.5 mi (800 m) for pedestrian facilities and 1.0 mi (1600 m) for bicycle facilities. In some circumstances, bicyclists may travel up to 7 miles for a unique generator, attraction or event. These special circumstances may be considered and described as appropriate.
- g. For background on Complete Streets features and terminology, please visit the following websites:
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/design_guidance/design_nonmotor/highway/index.cfm
<http://www.fhwa.dot.gov/publications/publicroads/10julaug/03.cfm>
<http://www.smartgrowthamerica.org/complete-streets/>
- h. Refer to [Highway Design Manual Chapter 18](#), Section 18.5.1 for further information and guidance on the use of this checklist.
- i. For projects with multiple sites, Preparers may choose to prepare multiple checklists for each site.

Definitions

- CAMCI (Comprehensive Asset Management/Capital Investment) Viewer - A web-based GIS application used for planning purposes and located at <http://gisweb/camci/>.
- Generator - A generator, in this document, refers to both origins and destinations for bicycle and/or pedestrian trips (e.g., schools, libraries, shopping areas, bus stops, transit stations, depots/terminals).
- HDM - New York State Department of Transportation's [Highway Design Manual](#).
- Maintenance project - For the purposes of this checklist, maintenance projects are listed as the following project types: Rigid pavement repairs, pavement grooving, drainage system restoration, recharge basin reconditioning, SPDES facilities maintenance, underdrain installation, guide rail and/or median barrier upgrading, impact attenuator repair, and/or replacement, reference marker replacement, traffic management systems maintenance, repair and replace loop detectors, highway lighting upgrades, noise wall rehab/replacement, retaining wall rehab/replacement, graffiti removal/prevention, vegetation management, permanent traffic count detectors, weigh-in-motion detectors, slope stabilization, ditch cleaning, bridge washing/cleaning, bridge joint repair, bridge painting and crack sealing.
- MPO (Metropolitan Planning Organization) - A federally mandated and federally funded transportation policy-making organization made up of representatives from local government and governmental transportation authorities.
- Raised Pedestrian Refuge Medians and Corner Islands - Raised elements within the street at an intersection or midblock crossing that provide a clear or safety zone to separate pedestrians, bicyclists, and other non-motorized modes, from motor vehicles. See FHWA's *Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations* at <http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf>.
- Road diet - A transportation planning technique used to achieve systemic improvements to safety or provide space for alternate modes of travel. For example, a two-way, four lane road might be reduced to one travel lane in each direction, with more space allocated to pedestrian and cyclist facilities. Also known as a lane reduction or road re-channelization.
- Transit facilities - Includes facilities such as transit shelters, bus turnouts and standing pads.
- 1R project - A road resurfacing project that includes the placement or replacement of the top and/or binder pavement course(s) to extend or renew the existing pavement design life and to improve serviceability while not

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-8)

degrading safety.

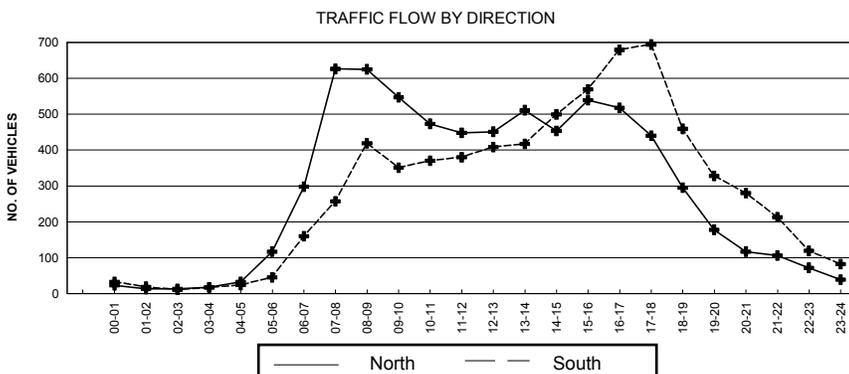
- 2R project - A multicourse structural pavement and resurfacing project that may include: milling, super elevation, traffic signals, turn lanes, driveway modifications, roadside work, minor safety work, lane and shoulder widening, shoulder reconstruction, drainage work, sidewalk curb ramps, etc.

New York State Department of Transportation

Classification Count Average Weekday Hourly Data Report

Route/Road	US209	Begin Date	12/06/2012	STATION	860540
Region-County	8 - ULSTER	End Date	12/13/2012	Taken By	TST----
From	CR 8 WYNCOOP AVE	No. Days Counted	7	Processed By	DOT-MAB
To	RT 28	No. of Lanes	2	Batch ID	DOT-2012_Ulst
Ref Marker	209 86031309	DOT ID	100157		
End Milepost	31.34	Func. Class	14-U Principal Arterial - Other		

VEHICLE CLASS AVG NUM AXLES	MC F1	CAR F2	2A-4T F3	BUS F4	SINGLE UNIT			SINGLE TRAILER			MULTI TRAILER			% HV F4-F13	% TRK F3-F13	AXLE ACTOR		
					2A-6T F5	3 A F6	4+ A F7	4- A F8	5 A F9	6+ A F10	5- A F11	6 A F12	7+ A F13				TOTAL	
HOUR	00-01	0	16	6	0	0	0	0	0	1	0	0	0	23	4.3	30.4	.94	
	01-02	0	10	3	0	0	0	0	0	0	0	0	0	13	0.0	23.1	1	
	02-03	0	8	4	0	0	0	0	0	1	0	0	0	13	7.7	38.5	.90	
	03-04	0	10	7	0	0	0	0	0	1	0	0	0	18	5.6	44.4	.92	
	04-05	0	21	7	0	2	0	0	0	3	0	0	0	33	15.2	36.4	.88	
	05-06	0	89	19	1	6	0	0	0	2	0	0	0	117	7.7	23.9	.97	
	06-07	0	225	62	0	8	0	0	0	3	0	0	0	298	3.7	24.5	.99	
	07-08	0	503	102	0	16	1	0	1	3	0	0	0	626	3.4	19.6	.99	
	08-09	0	511	87	2	16	0	2	1	3	1	0	0	625	4.3	18.2	.97	
	09-10	1	421	95	3	19	1	1	1	4	1	0	0	547	5.5	22.9	.98	
	10-11	0	363	81	3	17	2	0	3	3	1	0	0	473	6.1	23.3	.98	
DIRECTION	11-12	0	351	73	2	14	2	0	2	4	0	0	0	448	5.4	21.7	.98	
North	12-13	0	349	77	5	11	1	1	2	4	1	0	0	451	5.5	22.6	.97	
	13-14	0	403	80	5	14	2	1	2	3	0	0	1	511	5.5	21.1	.98	
	14-15	1	357	67	3	14	2	0	4	3	1	0	0	453	6.2	21.0	.97	
	15-16	1	417	85	4	22	2	1	2	3	1	0	0	539	6.7	22.4	.97	
	16-17	1	412	77	2	19	1	0	2	3	1	0	0	518	5.4	20.3	.98	
	17-18	0	356	66	1	12	1	1	1	1	1	0	0	440	4.1	19.1	.99	
	18-19	0	245	40	0	9	0	0	0	1	0	0	0	295	3.4	16.9	.99	
	19-20	0	148	24	1	3	0	0	1	1	0	0	0	178	3.4	16.9	.99	
	20-21	0	96	16	0	4	0	0	0	1	0	0	0	117	4.3	17.9	.99	
	21-22	0	90	14	0	1	0	0	0	1	0	0	0	106	1.9	15.1	.99	
	22-23	0	60	10	0	2	0	0	0	0	0	0	0	72	2.8	16.7	1	
	23-24	0	31	6	0	1	0	0	0	1	0	0	0	39	5.1	20.5	.96	
TOTAL VEHICLES		4	5492	1108	32	210	15	7	22	50	8	0	0	5	6953	5.0	21.0	.98
TOTAL AXLES		8	10984	2216	80	420	45	28	77	250	48	0	0	44	14200			
HOUR	00-01	0	29	3	0	0	1	0	0	0	0	0	0	33	3.0	12.1	.99	
	01-02	0	18	1	0	0	0	0	0	0	0	0	0	19	0.0	5.3	1	
	02-03	0	8	1	0	0	0	0	0	2	0	0	0	11	18.2	27.3	.79	
	03-04	0	11	2	0	0	1	1	0	1	0	0	0	17	23.5	35.3	.73	
	04-05	0	14	3	0	1	2	1	1	2	0	0	0	24	29.2	41.7	.81	
	05-06	0	30	7	0	2	2	0	2	1	1	0	0	45	17.8	33.3	.88	
	06-07	0	110	26	1	11	6	1	1	2	1	0	0	160	15.0	31.3	.92	
	07-08	0	196	38	1	9	7	0	1	4	0	0	0	257	8.9	23.7	.95	
	08-09	1	336	54	3	11	9	1	1	2	1	0	0	419	6.7	19.6	.97	
	09-10	0	272	51	1	14	6	1	1	4	0	0	0	351	8.0	22.5	.96	
	10-11	0	291	52	2	11	6	1	2	4	1	0	0	370	7.3	21.4	.96	
DIRECTION	11-12	1	311	43	4	9	5	0	2	3	1	0	0	380	6.6	17.9	.96	
South	12-13	0	339	47	3	10	3	1	1	3	1	0	0	408	5.4	16.9	.97	
	13-14	0	330	56	3	11	8	2	1	4	1	0	0	417	7.4	20.9	.96	
	14-15	1	409	61	2	11	8	1	1	4	0	0	0	499	5.6	17.8	.97	
	15-16	0	471	77	1	11	4	1	1	2	1	0	0	569	3.7	17.2	.98	
	16-17	1	564	93	1	10	8	1	1	0	0	0	0	679	3.1	16.8	.99	
	17-18	0	601	80	0	5	4	0	1	1	1	0	0	694	1.9	13.4	.99	
	18-19	1	400	44	1	6	5	0	1	1	0	0	0	459	3.1	12.6	.99	
	19-20	0	281	38	0	3	4	0	1	1	0	0	0	328	2.7	14.3	.99	
	20-21	0	249	26	0	2	3	0	0	0	0	0	0	280	1.8	11.1	.99	
	21-22	0	188	20	0	2	2	0	0	0	1	0	0	213	2.3	11.7	.99	
	22-23	0	103	12	0	1	2	0	0	1	0	0	0	119	3.4	13.4	.98	
	23-24	0	70	9	0	1	1	0	0	1	0	0	0	82	3.7	14.6	.98	
TOTAL VEHICLES		5	5631	844	23	141	97	12	19	43	10	0	0	8	6833	5.2	17.5	.97
TOTAL AXLES		10	11262	1688	58	282	291	48	67	215	60	0	0	70	14051			
GRAND TOTAL VEHICLES		9	11123	1952	55	351	112	19	41	93	18	0	0	13	13786	5.1	19.3	.98
GRAND TOTAL AXLES		18	22246	3904	138	702	336	76	144	465	108	0	0	114	28251			



DIRECTION	North	South	TOTAL
NUMBER OF VEHICLES	6953	6833	13786
NUMBER OF AXLES	14200	14051	28251
% HEAVY VEHICLES (F4-F13)	5.00%	5.20%	5.10%
% TRUCKS & BUSES (F3-F13)	21.00%	17.50%	19.30%
AXLE CORRECTION FACTOR	0.98	0.97	0.98

PEAK HOUR DATA				
DIRECTION	HOUR	COUNT	2-WAY	HOUR COUNT
North	07-08	626	A.M.	08-09 1044
South	17-18	694	P.M.	16-17 1197

New York State Department of Transportation Traffic Count Hourly Report

ROUTE #: 981K	ROAD NAME: Washington Ave	FROM: JCT WASH AVE&HURLEYAVE	TO: TOWN OF ULSTER	COUNTY: Ulster
DIRECTION: Southbound	FACTOR GROUP: 30	REC. SERIAL #: 0021	FUNC. CLASS: 16	CITY: KINGSTON
STATE DIR CODE: 7	WK OF YR: 31	PLACEMENT: 500 Ft N of Schwenk Dr	NHS: yes	LION#:
DATE OF COUNT: 07/28/2010		@ REF MARKER: 981K86012001	JURIS: NYSDOT	BIN: 1050030
NOTES LANE 0: Week 31 South Bound		ADDL DATA:	CC Stn:	RR CROSSING:
		COUNT TYPE: AXLE PAIRS	BATCH ID: DOT-R8WW31a	HPMS SAMPLE:
COUNT TAKEN BY:	ORG CODE: TST	INITIALS: ---	PROCESSED BY: ORG CODE: DOT	INITIALS: jh

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH COUNT	DAILY HIGH HOUR			
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12						
28	W												956	842	789	819	815	828	775	913	867	804	667	482	393	292	198	157			
29	T	58	47	33	33	49	87	261	651	897	841	827	816	880	856	901	907	950	954	642	520	411	323	193	146	12283	954	17			
30	F	102	60	40	35	37	96	262	549	898	794	806	852	1036	975	941	921	964	936	643	505	405	343	263	234	12697	1036	12			
31	S	141	74	38	24	23	50	114	287	450	551	682	809	697	622	638	608	581	589	522	461	426	383	304	212	9286	809	11			
1	S	167	102	29	31	37	51	95	154	265	365	435	524	597	641	612	581	658	571	477	416	393	259	181	141	7782	658	16			
2	M	60	42	22	33	37	98	240	621	895	814	846	877	901	851	851	920	944	811	581	422	345	240	187	130	11768	944	16			
3	T	71	42	32	33	37	106	247	683	984	865	802	773	824	874	918	927	990	797	556	463	356	266	208	140	11994	990	16			
4	W	67	35	30	31	45	96	249	648																						

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)															ADT									
73	45	33	32	41	94	248	619	910	817	800	813	840	838	846	901	922	828	602	464	370	275	193	141	11745
<u>DAYS Counted</u>	<u>HOURS Counted</u>	<u>WEEKDAYS Counted</u>	<u>WEEKDAY Hours</u>	<u>AVERAGE WEEKDAY</u>		<u>Axle Adj. Factor</u>	<u>Seasonal/Weekday Adjustment Factor</u>	ESTIMATED																
8	168	5	102	922	8%	0.983	1.093	AADT 10746																

County of Ulster Traffic Count Hourly Report

ROAD #:	2510	ROAD NAME:	SCHWENK DR	FROM:	WASHINGTON AVE	TO:	CLINTON AVE	COUNTY:	Ulster
DIRECTION:	Eastbound	FACTOR GROUP:	30	REC. SERIAL #:	2623	FUNC. CLASS:	19	CITY:	KINGSTON
STATE DIR CODE:	1	WK OF YR:	16	PLACEMENT:	225 FT E OF FROG ALLEY	NHS:	yes	LION#:	
DATE OF COUNT:	04/16/2013			@ REF MARKER:		JURIS:	City	BIN:	
NOTES	LANE 0: EB TRAVEL AND PASSING LANES			ADDL DATA:		CC Str:		RR CROSSING:	
COUNT TAKEN BY:	ORG CODE: TST INITIALS: ---			COUNT TYPE:	AXLE PAIRS	BATCH ID:	ULS-Processed	HPMS SAMPLE:	
				PROCESSED BY:	ORG CODE: ULS INITIALS: DS				

DATE	DAY	AM												PM												DAILY TOTAL	DAILY HIGH	DAILY HIGH HOUR
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12			
1	M																											
2	T																											
3	W																											
4	T																											
5	F																											
6	S																											
7	S																											
8	M																											
9	T																											
10	W																											
11	T																											
12	F																											
13	S																											
14	S																											
15	M																											
16	T																											
17	W	12	8	8	6	22	74	141	346	491	535	498	497	528	530	541	522	521	475	295	183	149	65	62	24			
18	T	17	13	10	11	33	53	127	394	497	477	448	486	518	554	468	535	544	482	333	216	141	96	59	16	6555	563	15
19	F	10	16	5	12	29	73	116	345	513	536	507	522	587					463	307	206	142	88	63	37	6491	554	13
20	S																											
21	S																											
22	M																											
23	T																											
24	W																											
25	T																											
26	F																											
27	S																											
28	S																											
29	M																											
30	T																											

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)															ADT									
13	12	8	10	28	66	126	357	493	509	478	495	516	522	487	533	518	467	308	199	142	82	60	26	6455
<u>DAYS Counted</u>	<u>HOURS Counted</u>	<u>WEEKDAYS Counted</u>	<u>WEEKDAY Hours</u>	<u>AVERAGE WEEKDAY</u>		<u>Axle Adj. Factor</u>	<u>Seasonal/Weekday Adjustment Factor</u>	ESTIMATED (one way)																
4	72	4	71	533	8%	0.987	1.061	AADT 6084																

County of Ulster Traffic Count Hourly Report

ROAD #:	2510	ROAD NAME:	SCHWENK DR	FROM:	WASHINGTON AVE	TO:	CLINTON AVE	COUNTY:	Ulster
DIRECTION:	Westbound	FACTOR GROUP:	30	REC. SERIAL #:	2623	FUNC. CLASS:	19	CITY:	KINGSTON
STATE DIR CODE:	2	WK OF YR:	16	PLACEMENT:	225 FT E OF FROG ALLEY	NHS:	yes	LION#:	
DATE OF COUNT:	04/16/2013			@ REF MARKER:		JURIS:	City	BIN:	
NOTES	LANE 0: WB TRAVEL AND PASSING LANES			ADDL DATA:		CC Strn:		RR CROSSING:	
COUNT TAKEN BY:	ORG CODE: TST INITIALS: ---			COUNT TYPE:	AXLE PAIRS	BATCH ID:	ULS-Processed	HPMS SAMPLE:	
				PROCESSED BY:	ORG CODE: ULS INITIALS: DS				

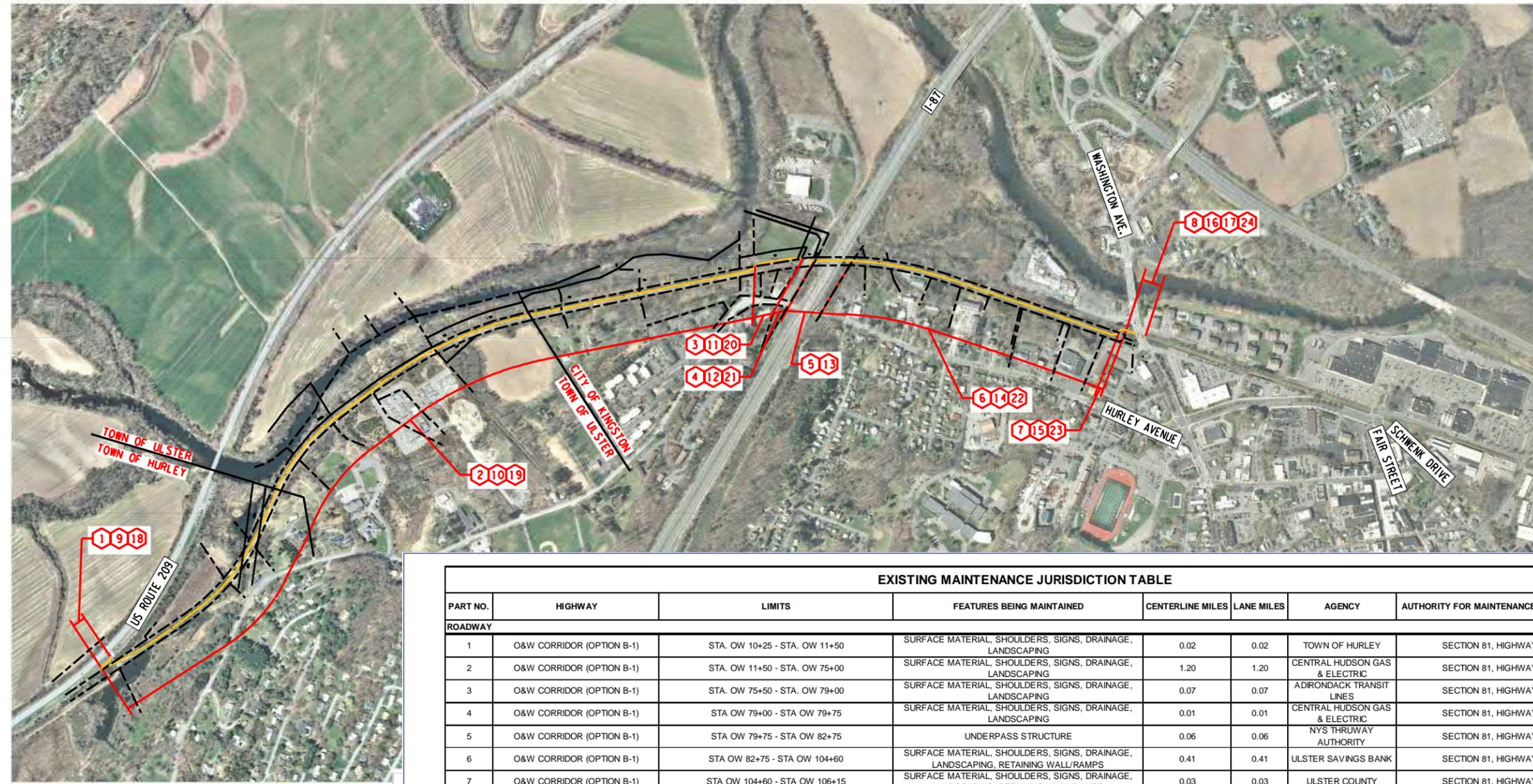
DATE	DAY	AM											PM											DAILY TOTAL	DAILY HIGH	DAILY HIGH HOUR			
		12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10	10 TO 11	11 TO 12	12 TO 1	1 TO 2	2 TO 3	3 TO 4	4 TO 5	5 TO 6	6 TO 7	7 TO 8	8 TO 9	9 TO 10				10 TO 11	11 TO 12	
1	M																												
2	T																												
3	W																												
4	T																												
5	F																												
6	S																												
7	S																												
8	M																												
9	T																												
10	W																												
11	T																												
12	F																												
13	S																												
14	S																												
15	M																												
16	T																												
17	W	26	8	10	5	12	30	83	244	299	334	411	438	505	468	510	499	580	575	432	264	171	124	87	44				
18	T	25	18	6	8	11	37	83	228	318	324	387	426	464	497	488	468	592	574	405	324	227	154	85	41	6264	574	17	
19	F	24	19	8	10	12	34	81	222	297	320	425	420	528												6214	638		
20	S																												
21	S																												
22	M																												
23	T																												
24	W																												
25	T																												
26	F																												
27	S																												
28	S																												
29	M																												
30	T																												

AVERAGE WEEKDAY HOURS (Axle Factored, Mon 6AM to Fri Noon)														ADT	
DAYS Counted	HOURS Counted	WEEKDAYS Counted	WEEKDAY Hours	AVERAGE WEEKDAY High Hour	AVERAGE WEEKDAY % of day	Axle Adj. Factor	Seasonal/Weekday Adjustment Factor	ESTIMATED (one way)							
4	72	4	71	588	10%	0.987	1.061	<div style="font-size: 24pt; font-weight: bold; text-align: center;">AADT</div> <div style="font-size: 24pt; font-weight: bold; text-align: center;">5766</div>							

Appendix D

Ownership and Maintenance Jurisdiction

DESIGNED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____



- NOTES:
- PART NO. REFERS TO CORRESPONDING NUMBERS ON THE PLAN
 - ALL EXISTING MUNICIPALITY OR PRIVATELY OWNED UTILITIES WITHIN THE LIMITS OF THE HIGHWAY R.O.W. WHICH REMAIN IN SERVICE UNCHANGED, AND ALL SUCH FACILITIES RELOCATED OR PROTECTED AS A PART OF THE WORK PERFORMED UNDER THIS PROJECT, WHETHER CROSSING, LOCATED WITHIN OR ADJACENT TO THE R.O.W., SHALL BE MAINTAINED AS THE CASE MAY BE, BY THE MUNICIPALITY OR BY THE AGENCY OR UNIT OWNING OR HAVING CONTROL AND JURISDICTION THEREOF.
 - THE PORTION OF A DRIVEWAY OR SIDE STREET, CONSTRUCTED OR ADJUSTED UNDER THE PROJECT BETWEEN THE EDGE OF PAVEMENT AND THE OUTSIDE EDGE OF SHOULDER OR PARKING LANE SHALL BE MAINTAINED BY THE APPROPRIATE AGENCY. THE REMAINING PORTION OF THE ADJUSTED DRIVEWAY BEYOND THE OUTSIDE EDGE OF SHOULDER SHALL BE MAINTAINED BY THE OWNER.

PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON :

DRAFT

EXISTING MAINTENANCE JURISDICTION TABLE							
PART NO.	HIGHWAY	LIMITS	FEATURES BEING MAINTAINED	CENTERLINE MILES	LANE MILES	AGENCY	AUTHORITY FOR MAINTENANCE JURISDICTION
ROADWAY							
1	O&W CORRIDOR (OPTION B-1)	STA. OW 10+25 - STA. OW 11+50	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.02	0.02	TOWN OF HURLEY	SECTION 81, HIGHWAY LAW
2	O&W CORRIDOR (OPTION B-1)	STA. OW 11+50 - STA. OW 75+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	1.20	1.20	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
3	O&W CORRIDOR (OPTION B-1)	STA. OW 75+50 - STA. OW 79+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.07	0.07	ADIRONDACK TRANSIT LINES	SECTION 81, HIGHWAY LAW
4	O&W CORRIDOR (OPTION B-1)	STA OW 79+00 - STA OW 79+75	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.01	0.01	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
5	O&W CORRIDOR (OPTION B-1)	STA OW 79+75 - STA OW 82+75	UNDERPASS STRUCTURE	0.06	0.06	NYS THRUWAY AUTHORITY	SECTION 81, HIGHWAY LAW
6	O&W CORRIDOR (OPTION B-1)	STA OW 82+75 - STA OW 104+60	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.41	0.41	ULSTER SAVINGS BANK	SECTION 81, HIGHWAY LAW
7	O&W CORRIDOR (OPTION B-1)	STA OW 104+60 - STA OW 106+15	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.03	0.03	ULSTER COUNTY	SECTION 81, HIGHWAY LAW
8	WASHINGTON AVENUE	ENTIRE LIMITS	PAVEMENT, SHOULDERS, SIGNS, STRIPING, DRAINAGE, LANDSCAPING	N.A.	N.A.	CITY OF KINGSTON	ARTICLE 3, SECTION 46, HIGHWAY LAW
SNOW & ICE REMOVAL							
9	O&W CORRIDOR (OPTION B-1)	STA. OW 10+25 - STA. OW 11+50	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.02	0.02	TOWN OF HURLEY	SECTION 81, HIGHWAY LAW
10	O&W CORRIDOR (OPTION B-1)	STA. OW 11+50 - STA. OW 75+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	1.20	1.20	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
11	O&W CORRIDOR (OPTION B-1)	STA. OW 75+50 - STA. OW 79+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.07	0.07	ADIRONDACK TRANSIT LINES	SECTION 81, HIGHWAY LAW
12	O&W CORRIDOR (OPTION B-1)	STA OW 79+00 - STA OW 79+75	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.01	0.01	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
13	O&W CORRIDOR (OPTION B-1)	STA OW 79+75 - STA OW 82+75	UNDERPASS STRUCTURE	0.06	0.06	NYS THRUWAY AUTHORITY	SECTION 81, HIGHWAY LAW
14	O&W CORRIDOR (OPTION B-1)	STA OW 82+75 - STA OW 104+60	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.41	0.41	ULSTER SAVINGS BANK	SECTION 81, HIGHWAY LAW
15	O&W CORRIDOR (OPTION B-1)	STA OW 104+60 - STA OW 106+15	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.03	0.03	ULSTER COUNTY	SECTION 81, HIGHWAY LAW
16	WASHINGTON AVENUE	ENTIRE LIMITS	PAVEMENT, SHOULDERS, SIGNS, STRIPING, DRAINAGE, LANDSCAPING	N.A.	N.A.	CITY OF KINGSTON	ARTICLE 3, SECTION 46, HIGHWAY LAW
SIDEWALKS & APPURTENANCES							
17	WASHINGTON AVENUE	ENTIRE LIMITS	SIDEWALKS	N.A.	N.A.	CITY OF KINGSTON	ARTICLE 3, SECTION 46, HIGHWAY LAW
MOWING							
18	O&W CORRIDOR (OPTION B-1)	STA. OW 10+25 - STA. OW 11+50	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.02	0.02	TOWN OF HURLEY	SECTION 81, HIGHWAY LAW
19	O&W CORRIDOR (OPTION B-1)	STA. OW 11+50 - STA. OW 75+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	1.20	1.20	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
20	O&W CORRIDOR (OPTION B-1)	STA. OW 75+50 - STA. OW 79+00	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.07	0.07	ADIRONDACK TRANSIT LINES	SECTION 81, HIGHWAY LAW
21	O&W CORRIDOR (OPTION B-1)	STA OW 79+75 - STA OW 82+75	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING	0.01	0.01	CENTRAL HUDSON GAS & ELECTRIC	SECTION 81, HIGHWAY LAW
22	O&W CORRIDOR (OPTION B-1)	STA OW 82+75 - STA OW 104+60	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.41	0.41	ULSTER SAVINGS BANK	SECTION 81, HIGHWAY LAW
23	O&W CORRIDOR (OPTION B-1)	STA OW 104+60 - STA OW 106+15	SURFACE MATERIAL, SHOULDERS, SIGNS, DRAINAGE, LANDSCAPING, RETAINING WALL/RAMPS	0.03	0.03	ULSTER COUNTY	SECTION 81, HIGHWAY LAW
24	WASHINGTON AVENUE	ENTIRE LIMITS	SHOULDER AND SIDE SLOPES WITHIN PROPERTY BOUNDARY	N.A.	N.A.	CITY OF KINGSTON	ARTICLE 3, SECTION 46, HIGHWAY LAW

NO.	DATE	BY	REVISION



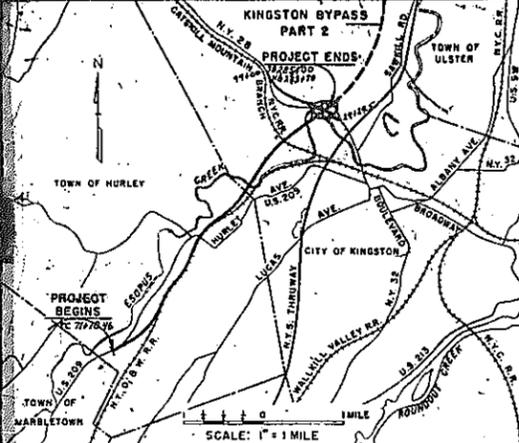
Barton & Loguidice, D.P.C.

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

MAINTENANCE JURISDICTION - OPTION B-1, O&W

SCALE: 1 : 1000
 DATE ISSUED: / /2016
 DRAWING
 MJ - 1

Appendix E
Structures Information



Site of Work.

**STATE OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
DIVISION OF CONSTRUCTION**

**PLANS FOR CONSTRUCTING WITH FEDERAL AID, THE
KINGSTON BY-PASS, PART 1
(Route U.S. 209 to Route N.Y. 28)**

From Station T.C. 69+70 to Station 285+00, a length of 4.86 miles, Plus 1.73 miles of Access of which 2.66 miles is in the Town of Hurley and 1.42 miles Plus 1.73 miles of Access is in the Town of Ulster
F.A. PROJECT No. F-FG-U-395(7)

CONTRACT No. F.A.S.H. 61-9

**AND FOR RECONSTRUCTING WITH FEDERAL AID, A PORTION OF THE
KINGSTON-WEST HURLEY, STATE HIGHWAY No. 5173**

Between Station W 29+88.99 and Station W 98+99.92 a length of 1.32 miles in the Town of Ulster
SEQUENCE No. 28-1-2

F. A. PROJECT No. F-1009(5)

CONTRACT No. F.A.R.C. 61-32

A TOTAL COMBINED LENGTH OF 5.80 MILES PLUS 1.73 MILES OF ACCESS

FED. ROAD PROJ. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	N.Y.	F-FG-U-395(7) F-1009(5)		80

**KINGSTON BY-PASS PART I
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES**

TYPE OF CONSTRUCTION

Cement Concrete Pavement (Main Line)	4.57 Miles
Cement Concrete Pavement (Ramps)	1.47 Miles
Asphalt Concrete	0.76 Miles
Bituminous Double Surface Treatment	0.26 Miles
Miscellaneous Work	0.87 Miles

INCLUDING

H.G.S.S. (Route U.S. 209), Composite 1 Beam, Single Span 78' 5" c. to c. bearings

Esopus Creek Bridge, Welded Plate Girder, 2 Spans 137' 6" c. to c. bearing

H.G.S.S. (Route N.Y. 28), Composite 1 Beam, 4 Spans: 1 @ 45.12', 1 @ 72.64', 1 @ 70.54' and 1 @ 38.51' c. to c. bearings

STANDARD STRUCTURE SHEETS

46-4, 50-34, 51-21, 52-2C, 52-2W, 54-9, 54-TBR, 56-4, 56-6, 56-52, 58-1, 58-3R2, 58-17R1, 58-40, 58-103, 58-103R, 59-7, 59-11CR1, 59-11R1, 59-11WR1, 59-19, 59-48A, 59-48B, 59-48D1, 59-48D2, 59-61, 60-3A, 60-19A, 60-41, 60-43A, 60-43B, 60-45, 60-45A, 60-45B, 60-48E, 60-48FR1, 60-48XR1, 60-49, 60-53, 60-54, 60-54(4), 60-106

All work contemplated under this contract to be completed by and in conformity with the specifications adopted January 2, 1927, except as modified on these plans and in the itemized Proposal.

Approximate Location of Contract on Route U.S. 209 between Town of Marletown North Line and Route N.Y. 28.

DATE OF CONTRACT	TYPE	MEASURED LENGTH	LENGTH IN MILES	THICKNESS OF TOP	WIDTH		SQ. FT. OF PAVEMENT	TONS OF TOP	MATERIALS			CONTRACTOR
					PAV'T	ROADWAY			SAND	STONE	CEMENT	
April 10, 1961	Reinf. Cem. Conc.	Mainline 18,721.25	3.546	9"	12.24' 44.72' 44.72'	46.74' 117.4' 117.4'	780,721		Hurley Sand and Gravel Co.	Callanagh Road	Lehigh Hudson	Eng'rs in Charge C. R. Frazer
May 3, 1961	Pavement	Ramps 6,327	1.579	9"	4' Variable	5' Variable	156,966		Improv. American	Improv. American	North American	Dist. Eng'g. M. H. Anderson
July 31, 1963	Asphalt Concrete	9,562'	1.811	2 1/2"	22' 54"	47' 54"	276,528	5,108.75	61-R-199	61-R-199	Atlantic Century	
TOTALS							1,216,715	5,108.75				

Metal Reinf. for Pavt. Mash. American Steel & Wire Co. Type of Joint Filler Flint Kate, H-100.

ULSTER COUNTY

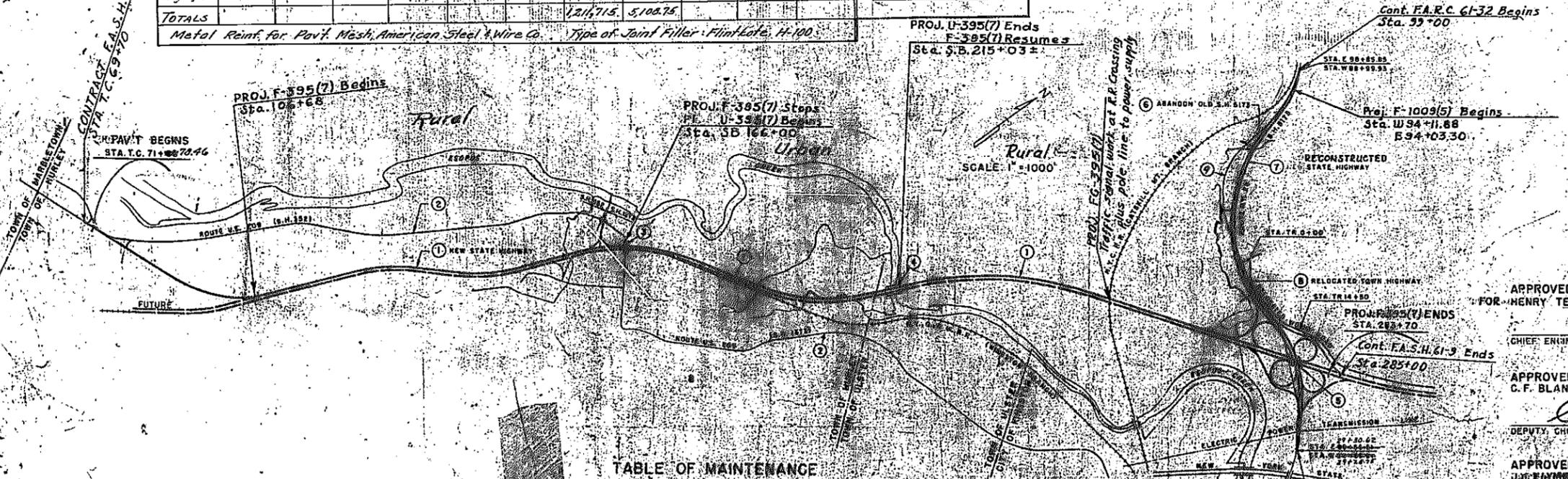


TABLE OF MAINTENANCE

PART	HIGHWAY	LIMITS	MILES	AGENCY	JURISDICTION	PART	HIGHWAY	LIMITS	MILES	AGENCY	JURISDICTION
1	New State Highway	Sta. T.C. 71+89.2 to Sta. T.C. 105+52.82	0.4	State	Highway Law Section 341 Subdiv. 53	2	Structure over Kingston Bypass	Entire Structure		State	Highway Law Section 341 Subdiv. 53
2	S.H. 1373 S.H. 352	Creekside Road - Town of Hurley to Kingston City Line		County	Highway Law Section 341 Subdiv. 54	3	Old S.H. 5173	Sta. 29+88.99 to Sta. 100+25.64	1.34	Abandon & Remove	Destroyed by Construction
3	Structure over Kingston Bypass	Entire Structure		State	Reconstr. S.H. 1373	4	Reconstr. S.H. 5173	Sta. 29+88.99 to Sta. 100+25.64	1.32	State	Reconstr. S.H. 5173
4	Structure over Esopus Creek	Entire Structure		State	Highway Law Section 341 Subdiv. 53	5	Relocated Town Highway Wood Road	Sta. T.C. 0+00 to Sta. T.C. 14+99	0.27	Town	Relocation Highway Law Section 10 Subdiv. 23
						6	Old S.H. 5173	Sta. 100+25.64 to Sta. 83+70.2	0.14	Town	Highway Law Section 10 Subdiv. 23

DESIGN TRAFFIC DATA

Design Class 5 Modified
Estimated 1978 Traffic D.H. 684
A.A.D.T. 6000

APPROVED FOR HENRY TEN HAGEN
CHIEF ENGINEER
Paul Walden

APPROVED C.F. BLANCHARD
DEPUTY CHIEF ENGINEER
C.F. Blanchard

APPROVED J.G. RAYMOND
ASST. DEPUTY CHIEF ENGINEER
J.G. Raymond

RECOMMENDED BY K.G. RAUER
DISTRICT ENGINEER
K.G. Rauer

PREPARED BY SHUMAMON & BUCKLEY CONSULTING ENGINEERS NEW YORK



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	FG-F-U-335(7) F-1029(S)	10	90

KINGSTON BYPASS PART I
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES

NOTES

STRUCTURAL DESIGN SPECIFICATIONS

Structures have been designed and shall be detailed in accordance with A.A.S.H.O. Specifications 1957 Edition, modified by N.Y. State D.P.M. as follows:
 Design Load: H 20-516-44, or Interstate Loading of 2-24,000 lb. axles
 4'-0" c.c., except that slabs designed for not less than 32,000 lb. axle.
 Weight of Earth: 130 lbs./cu. ft. for Bridges, 120 lbs./cu. ft. for Walls and Culverts
 Design Stresses: Structural Steel - bending 18,000 p.s.i.
 Concrete compression in bending 1000 p.s.i.
 Reinforcing Steel - Tension 18,000 p.s.i.
 Modular ratio, n = 10
 Shear Connectors: designed for a factor of safety of 2
 Earth Pressure: Equivalent fluid pressure of 38 lbs./sq. ft.

FOUNDATION CONDITIONS

The Contractor's attention is directed to the Special Notes for each structure which appear in the proposal. Particular attention should be given to the foundation notes which briefly outline the anticipated subsurface conditions at each site and which specify certain requirements relative to construction.
 Boring information and samples may be inspected at the office of the District Engineer, Poughkeepsie, N.Y.
 Borings taken in 1958

CONCRETE

Construction Joints, other than those shown, will not be permitted without written permission of the Deputy Chief Engineer (Bridges).
 Adequate keys shall be provided at all construction joints.
 Concrete in tops of pedestals under bearing plates shall be placed 1/4" high integrally with the concrete of the pedestal and bush hammered to a true horizontal plane at the required elevation.
 Sidewalks shall not be scored on bridge.

The cost of furnishing and installing all joint materials, compressed asbestos sheet packing, asphalt roofing felt, caulking compound, preformed expansion joint filler and lead wool shall be deemed included in the unit prices bid for the concrete items except that Joint Sealing Compound and Rubber Joint Material will be paid for under Items 351 X and 352 X respectively.
 Unless otherwise shown all exposed edges of concrete shall be chamfered 1". Bituminous material, Item 61 shall be applied to the back of all Retaining Walls and Bridge Abutments in contact with earth above the footings and pedestals.
 The minimum waiting period before loads are permitted on the structural slab or the wearing surface after the concrete is placed, shall be 10 days for loads of 2 tons to 10 tons and 28 days for loads of 10 tons to the legal load limit.
 Tops of Abutment Backwalls shall be steel trowel finished.
 Fiber Glass Resin Laminated Waterproofing Item 450 shall be applied to tops of bridge deck slabs and other surfaces wherever Asphalt Concrete Wearing Surface is to be in contact with concrete and shall extend up face of curb 1' above pavement.
 Approved corrugated metal forms may be used for the Structural Slab, provided the cover for the reinforcing steel is maintained above the crest of the corrugations.
 Stud shear connectors shall be placed on the beams after the Structural Steel has been erected and the forms have been placed for the structural slab.

SELECTED FILL

At Structures all Embankments and Fills of Selected Fill, Item 2EF-B shall be deposited in horizontal layers not to exceed 8 inches in thickness and thoroughly compacted to a minimum dry density of 100 percent of Maximum Density, as defined in the General Specifications for Excavation under "h. Embankments". Water shall be added in such amounts as the Engineer may consider necessary to obtain satisfactory compaction.
 The portion of Selected Fill shown on the plans which is below abutment footings shall be placed prior to pile driving and consolidated for a period of time satisfactory to the Deputy Chief Engineer (Bridges), unless otherwise specified.
 The Selected Fill shown behind abutments and/or wingwalls shall be placed immediately following the completion and curing of the abutment walls and/or wingwalls.

BAR REINFORCEMENT

Dimensions relative to Bar Reinforcement are to center lines of bars unless otherwise noted.
 Concrete cover measured to the face of the bar shall be:
 1" for bridge deck slabs.
 4" in bottom of footing for abutments, walls and piers.
 2" in all other locations, except where otherwise shown on the plans.
 Bar spacing may be varied 1 inch where necessary but the number of bars in each 5 feet shall equal the number called for on the plans
 Reinforcement bar laps are to be 20 diameters, for bars with deformations conforming to ASTM - A 305, latest issue, unless otherwise noted on the plans.

STRUCTURAL STEEL

All Steel to be welded to conform to ASTM Designation A 373, except as noted on plans.
 All welding not covered on the plans and specifications shall conform to AWS Specifications for Welded Highway and Railway Bridges, 1956 Edition.
 Beams and girders of composite construction shall have no temporary intermediate supports while concrete is being placed.
 Surfaces against which concrete is to be deposited shall not be painted.
 All longitudinal beams and girders shall be cambered to dead load deflection and vertical curvature of the roadway.
 All rivets 3/4" dia, open holes 1 1/8" dia unless otherwise noted.
 All Web Stiffeners to be truly vertical in fascia girders.
 Unless otherwise shown all fillet welds to be 3/16".
 Camber of beams shall be measured with beams lying on their sides.
 Stringers and girders shall be field welded to sole plates after bearings have been set and aligned to their proper positions on bridge seats. No paint to be applied on flange where welds are to be made.
 Special precautions must be exercised where welding crosses edge of flange to avoid any possibility of "under cut" or nicks in edge of flange.
 In addition to the electrodes permitted under Item 29A, low hydrogen electrodes meeting the requirements of A.M.S.-A.S.T.M. Classification E 6018 may also be used for manual welding. The same precautions regarding the care and use of E 6018 electrodes shall be observed as are required for E 6015 and E 6016 electrodes.
 When the Contractor elects to set anchor bolts by template, the template shall be of sufficient strength to support and hold the bolts in their proper position and not displace when concrete is poured.
 When the Contractor elects to drill the finished concrete to set anchor bolts, it will be his responsibility to place the reinforcing steel in the bridge seat or pedestals to prevent interference with his drilling operations.
 Anchor bolts shall be set and grouted immediately after the holes are drilled.
 Radiographic inspection may be used to establish the soundness of groove welds in built joints. Any such inspection will be made without cost to the Contractor, and procedure, technique and standards of acceptance will be in accordance with the A.S.M.E. Boiler Code, Section VIII Paragraph UW51.

PAINTING OF STRUCTURAL STEEL

The drier catalyst shall be Zirconium Manganese and Cobalt metals of the following tabulated percentages of the non-volatile vehicle by weight introduced therein as soluble organic metal salts.

	ZIRCONIUM %	MANGANESE %	COBALT %
Maroon Primer	0.14	0.04	
Orange Primer	0.14	0.04	
Black Paint	0.15	0.01	0.02
Stain resistant White Paint	0.10	0.02	
Gray Paint	0.10	0.02	
Gray-Green Paint	0.15	0.04	

Normal spreading rates for paints M 19 A thru M 24 A shall be in the range of the 400 to 500 sq. ft. per gal., so as to provide wet film thickness of 2.5 to 3.5 mils.
 Paint shall be applied only when the air temperature is at or above 40° Fahr. and relative humidity is less than 85%.

SPECIFICATIONS

New York State Department of Public Works Division of Construction Specifications as adopted January 2, 1957, as augmented and amended by the supplementary specifications, shall govern the construction of this Contract.

CIVIL NOTES

Elevations refer to the datum of the U.S. Coast and Geodetic Survey, which is Mean Sea Level at Sandy Hook.
 The North indicated on and referred to in this set of plans is the Grid North of the East Zone of the New York State Traverse Mercator Coordinate System. Azimuths measured from the North.
 The principal Meridian of East Zone is West Longitude 74°-20'-00";
 XD = 500,000

UTILITY NOTE

Telephone and electrical poles and cables will be removed or relocated by others.

CEMENT AND AGGREGATES

Cement: Type 2A - For Items 18X, 85CA, 85CB, 85CC & 85CT.
 Type 2A - For Items 47BR and 47BR
 Type 2A and N - For Items 47, 47C, 97BB, 97BC, 102 D1-A, 102 D1-B, 102 D1-C, 102 M-E, 102X, 105 and 20X.

Aggregates: Type A or B shall be used as coarse aggregate and Type a, b or c, fine aggregate shall be used in all concrete items.

GRADING NOTE

All grading shall be defined by the Typical Sections except as directed by the Engineer and/or as indicated on the plans.
 The cost of furnishing and placing water used for sodding will be paid for under Items IW and IWA of the Highway Portion of the Contract.

EXCAVATION NOTE

The cost of any pumping, bailing and draining necessary during construction to keep the excavation free from water shall be included in the unit prices bid for the excavation items, except where Item 82 is shown on the plans, it shall be included in the price bid for Item 82.

MAINTAINING TRAFFIC

The contractor shall perform his work in such a manner so as to maintain two way vehicular and pedestrian traffic at all times while maintaining full access to adjacent private property.
 See Specifications for Item 76.

SYMBOLS

	EXISTING	PROPOSED
Property Line	---	---
City or Town Line	---	---
Right of Way Taking Line	---	---
Water Main	---	---
Water Valve	---	---
Hydrant	∇	∇
Storm Drain	---	Future
Drop Inlet	---	---
Manhole	○	○
Headwall	T	T
Utility Company Pole	○	○
Utility Company Pole with Light	○	○
Tree	○	○
Edge of Woods	---	---
Swamp	---	---
Stream	---	---
Fence	---	---
Guide Railing and Mail Barrier	---	---
Power Transmission Tower and Wires	---	---
Building to be Demolished	---	---
Taking Map and Parcel Number	---	---
Temporary Pavement	---	---
Boring and Number	---	---

ABBREVIATIONS

R.C.C.P.	Reinforced Concrete Culvert Pipe
C.M.P.	Corrugated Metal Pipe
C.M.P.A.	Corrugated Metal Pipe Arch
DI-A	Drop Inlet - "A" denotes Type
M.H.	Manhole
Inv.	Invert Elevation
N.Y.T.	New York Telephone Company
C.H.G. & E.	Central Hudson Gas and Electric Corporation
R.O.W.	Right of Way
N.I.C.	Not in Contract
N.F.	Near Face
F.F.	Far Face
E.F.	Each Face
A.O.B.E.	As ordered by the Engineer
I.O.B.E.	If ordered by the Engineer

NOTES AND SYMBOLS

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK
10	9-1-60	No Scale	

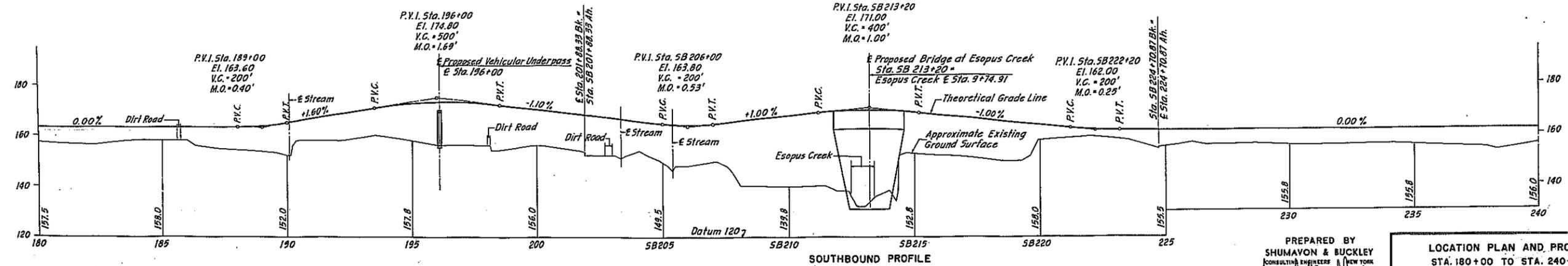
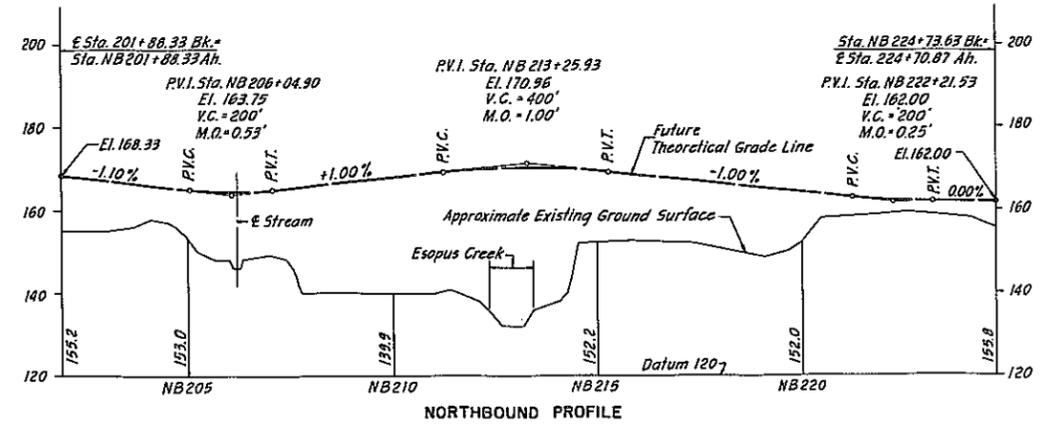
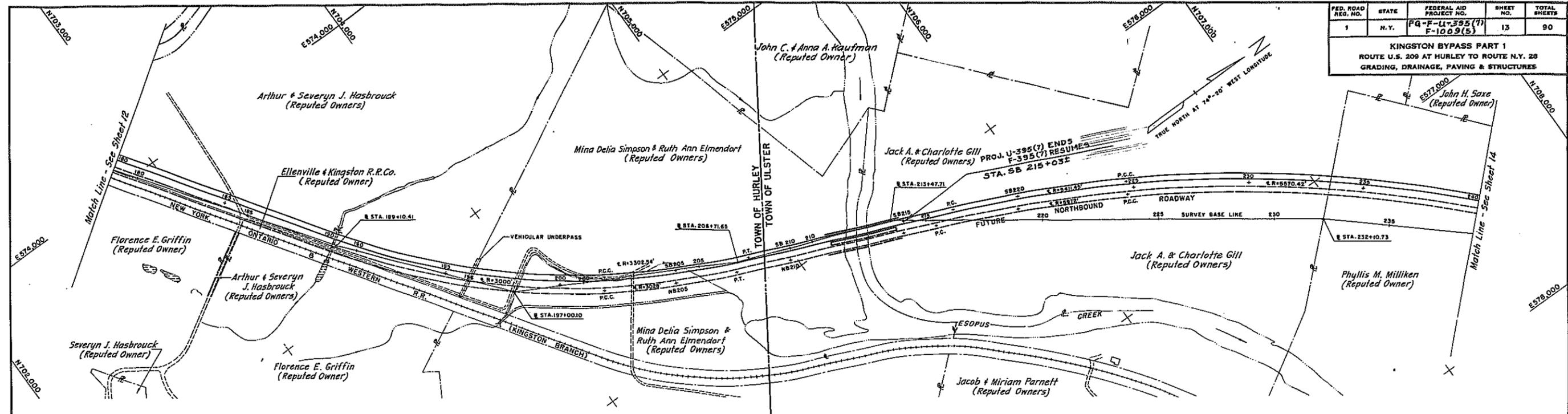
PREPARED BY
 SHUMAYON & BUCKLEY
 CONSULTING ENGINEERS
 NEW YORK
 N.Y.S.P.E. LIC. NO. 1408 DATE

Drawn by: Charles H. Shaw
 Checked by: Charles H. Shaw



FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	F-1-395(7) F-1009(5)	13	90

KINGSTON BYPASS PART 1
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES

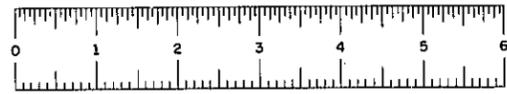


Checked by: [Signature]
 Prepared by: [Signature]
 Date: 9-1-60

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NEW YORK

LOCATION PLAN AND PROFILE
STA. 180+00 TO STA. 240+00

DRAWING NO.	DATE	SCALE	SHUMAVON & BUCKLEY
13	9-1-60	Hor. 1"=200' Vert. 1"=20'	CONSULTING ENGINEERS NEW YORK

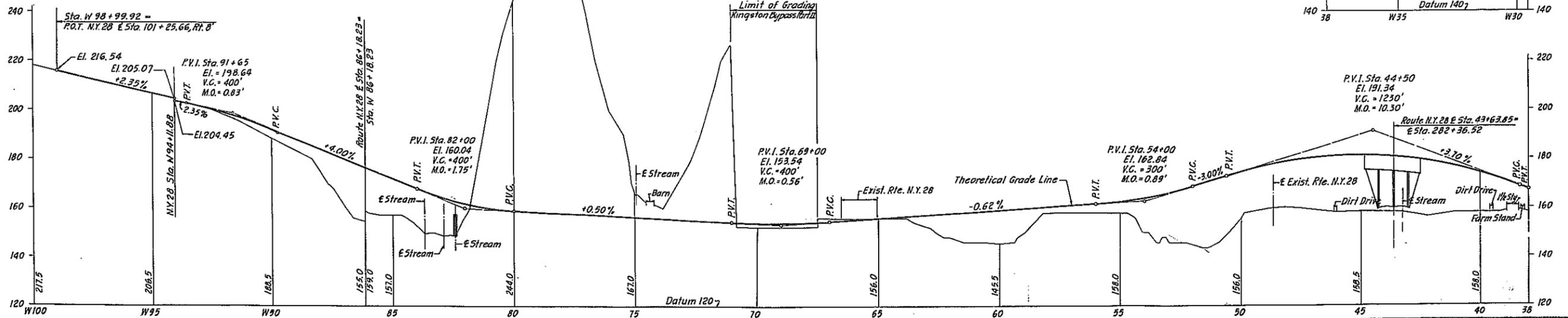
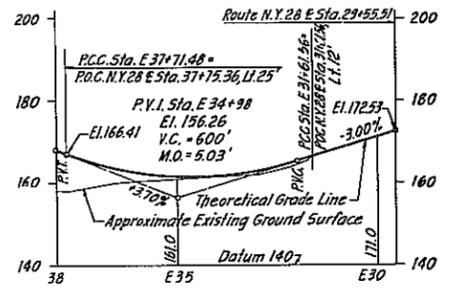
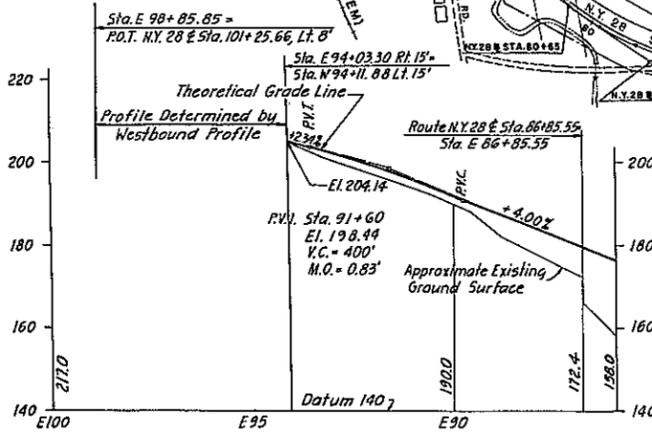
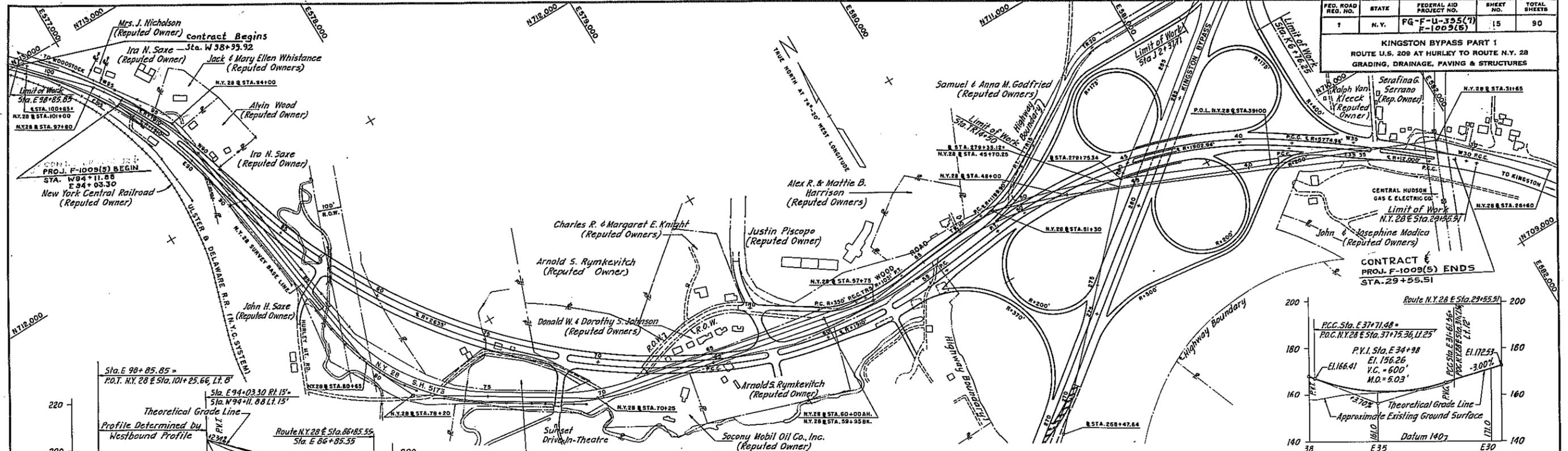


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	FG-F-U-35(7) F-1009(5)	15	90

KINGSTON BYPASS PART I

ROUTE U.S. 208 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES

CONTRACT & PROJ. F-1009(5) ENDS
STA. 29+55.51



In Charge of Office: [Signature]
 Made By: [Signature]
 Checked By: [Signature]

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NEW YORK

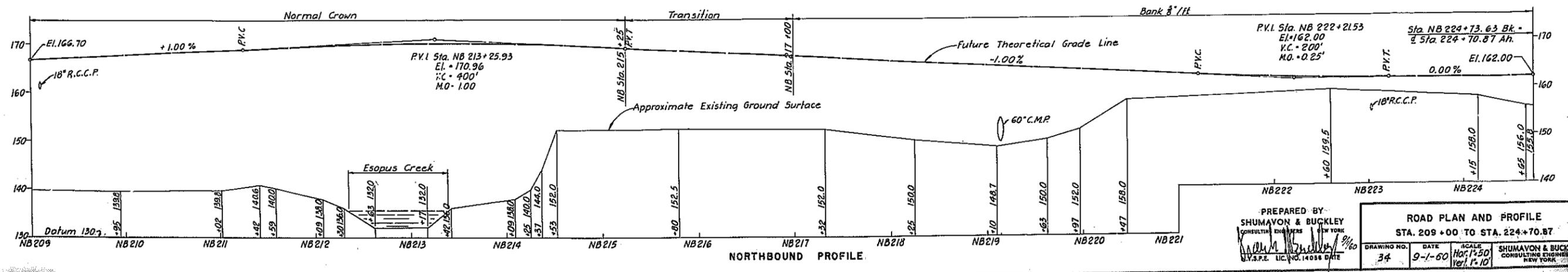
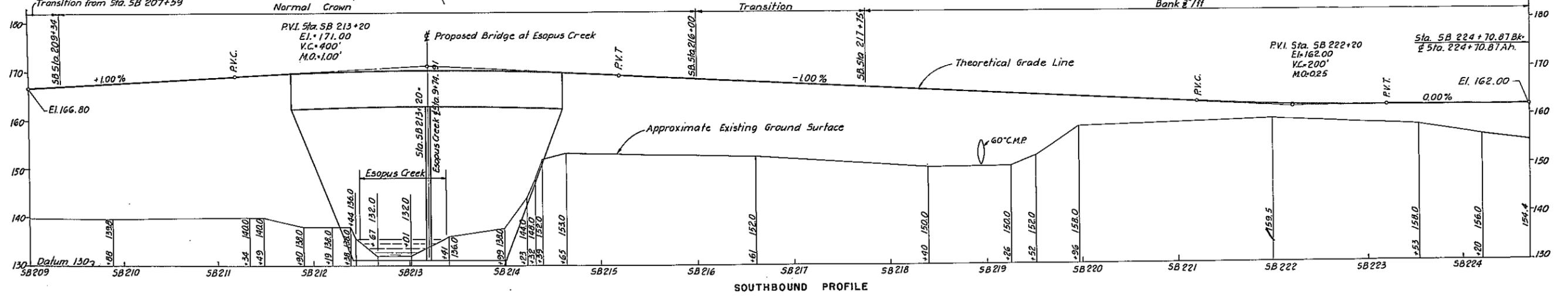
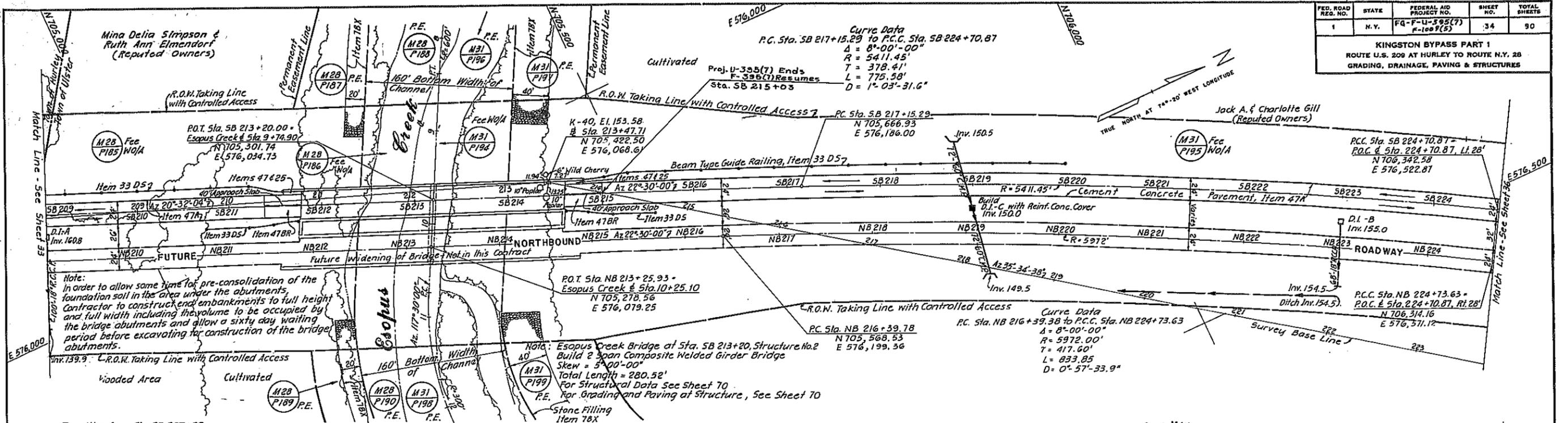
LOCATION PLAN AND PROFILE
ROUTE N.Y. 28 S.H. 5173
STA. W 29+55.51 TO STA. W 98+99.92

DRAWING NO.	DATE	SCALE	ENGINEER
15	9-1-30	Hor. 1"=200' Vert. 1"=20'	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	FQ-F-11-595(7) F-1007(5)	34	90

KINGSTON BYPASS PART I
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES



Drawn by: [Signature]
 Checked by: [Signature]

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 NEW YORK

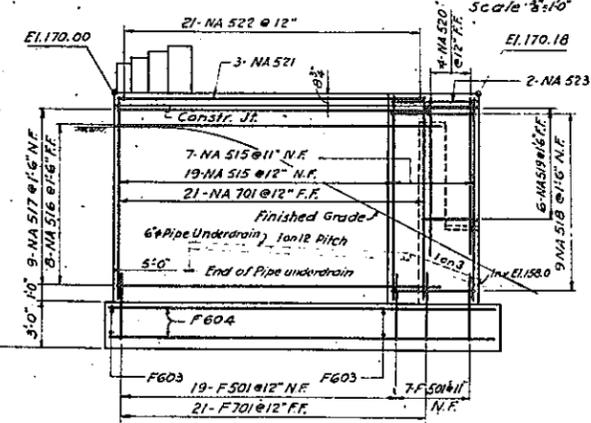
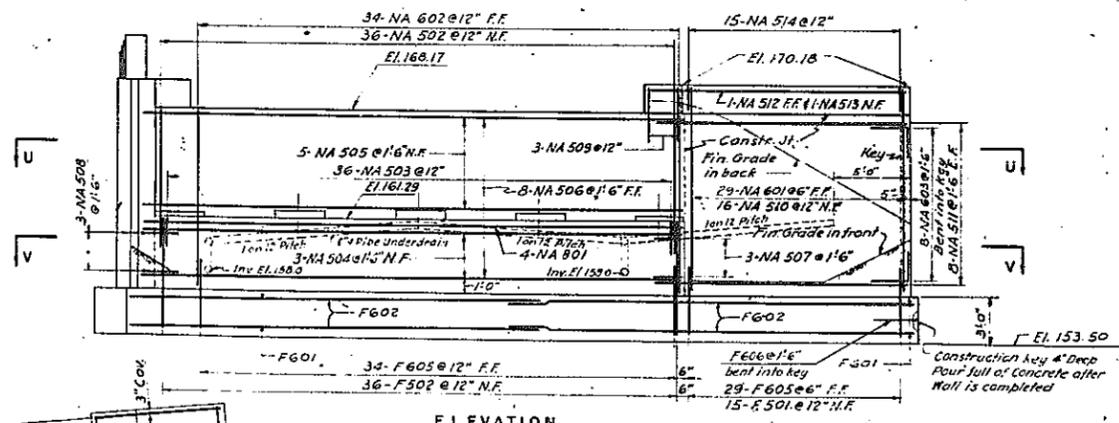
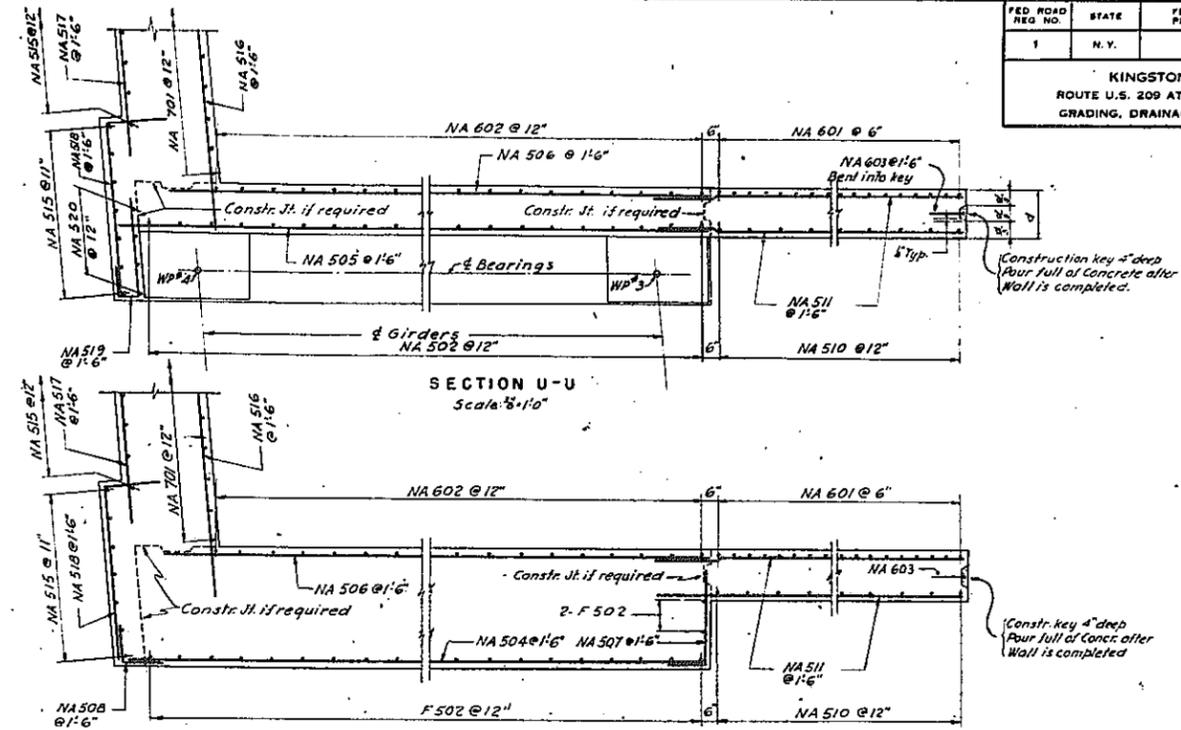
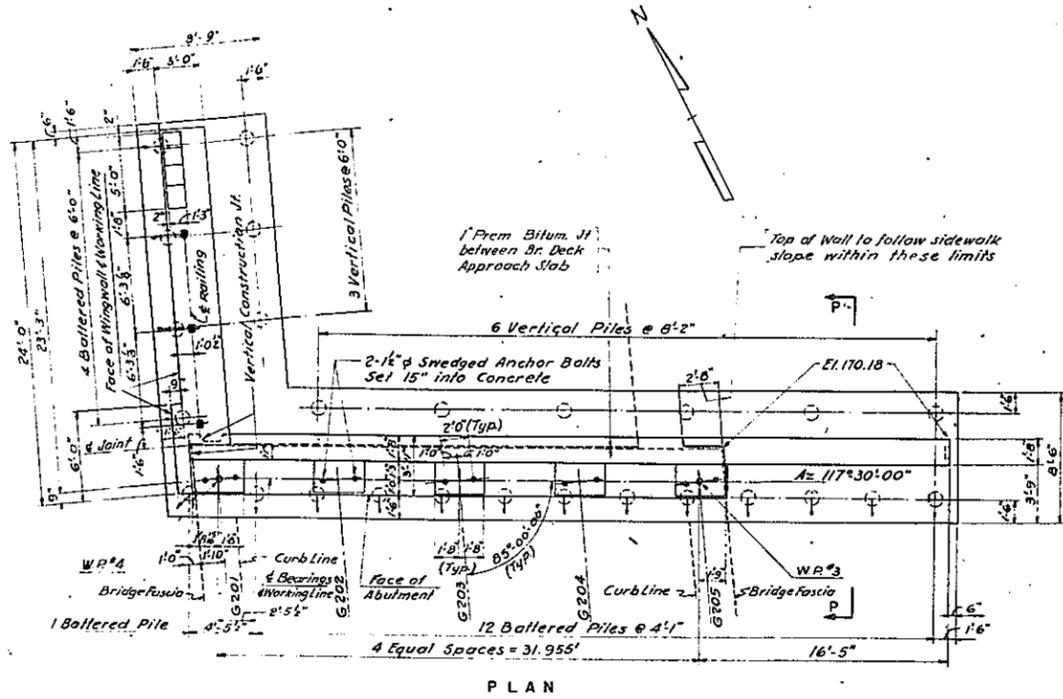
ROAD PLAN AND PROFILE
 STA. 209+00 TO STA. 224+70.87

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY
34	9-1-60	Hor. 1"=50' Ver. 1"=10'	CONSULTING ENGINEERS NEW YORK



FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.		72	90

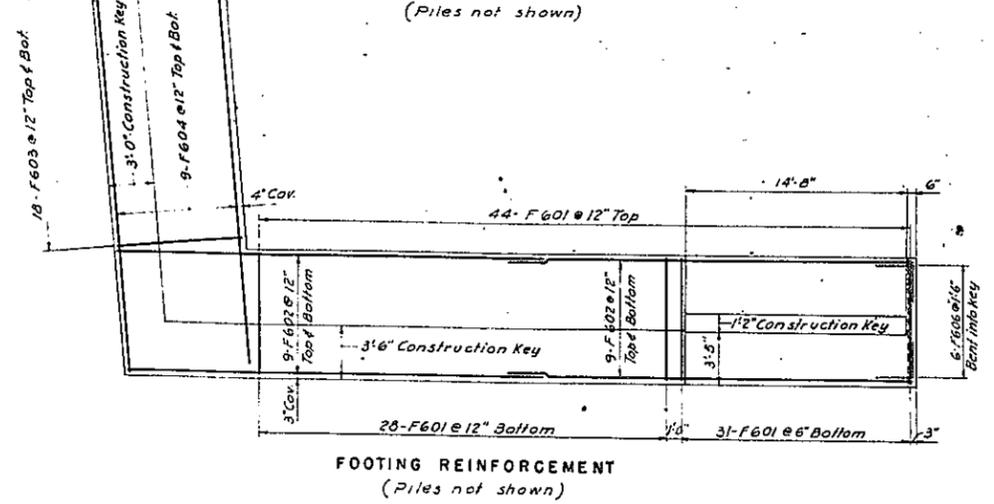
KINGSTON BYPASS PART I
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES



BUSH HAMMERED PEDESTAL ELEVATIONS

GIRDERS	PIER		NORTH ABUTMENT	
	SOUTH ABUTMENT	SPAN 1	SPAN 2	
G101 - G201	161.65	161.97	161.62	
G102 - G202	161.79	162.11	161.77	
G103 - G203	161.91	162.24	161.89	
G104 - G204	161.78	162.11	161.78	
G105 - G205	161.63	161.97	161.64	

- NOTES:
- For Notes see Dwg. 70
 - For Coordinates of Working Points see Dwg. 70
 - For Excavation and Fill Payment Lines see Dwg. 70
 - For Bar Schedule see Dwg. 77
 - For additional Abutment and Wall Details and Pylon Reinforcing see Dwg. 89
 - For Pipe Underdrain Layout behind Abutments and Walls see Dwg. 70
 - For Typical Abutment Pedestal Reinforcement see Dwg. 88
 - For Curb Protection R. Detail see Dwg. 88
 - For Pile Details see Dwg. 89
 - Work this Drawing together with Dwg. 71
 - For Table of Concrete & Cement in Substructure see Dwg. 71.



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BRIDGE NO. 2 ESOPUS CREEK BRIDGE
STA. SB 213 + 20.00
NORTH ABUTMENT

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY
72	9-1-1960	3/4" = 1'-0"	CONSULTING ENGINEERS NEW YORK

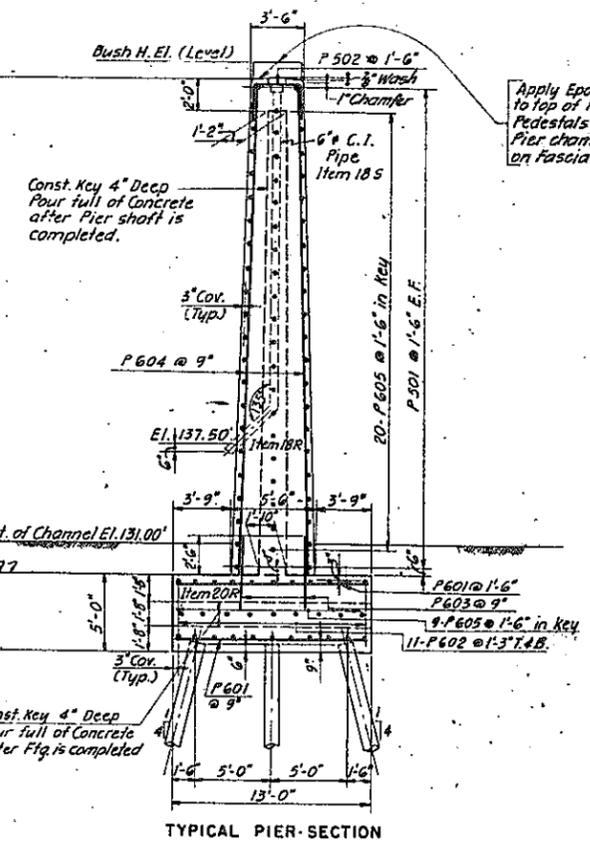
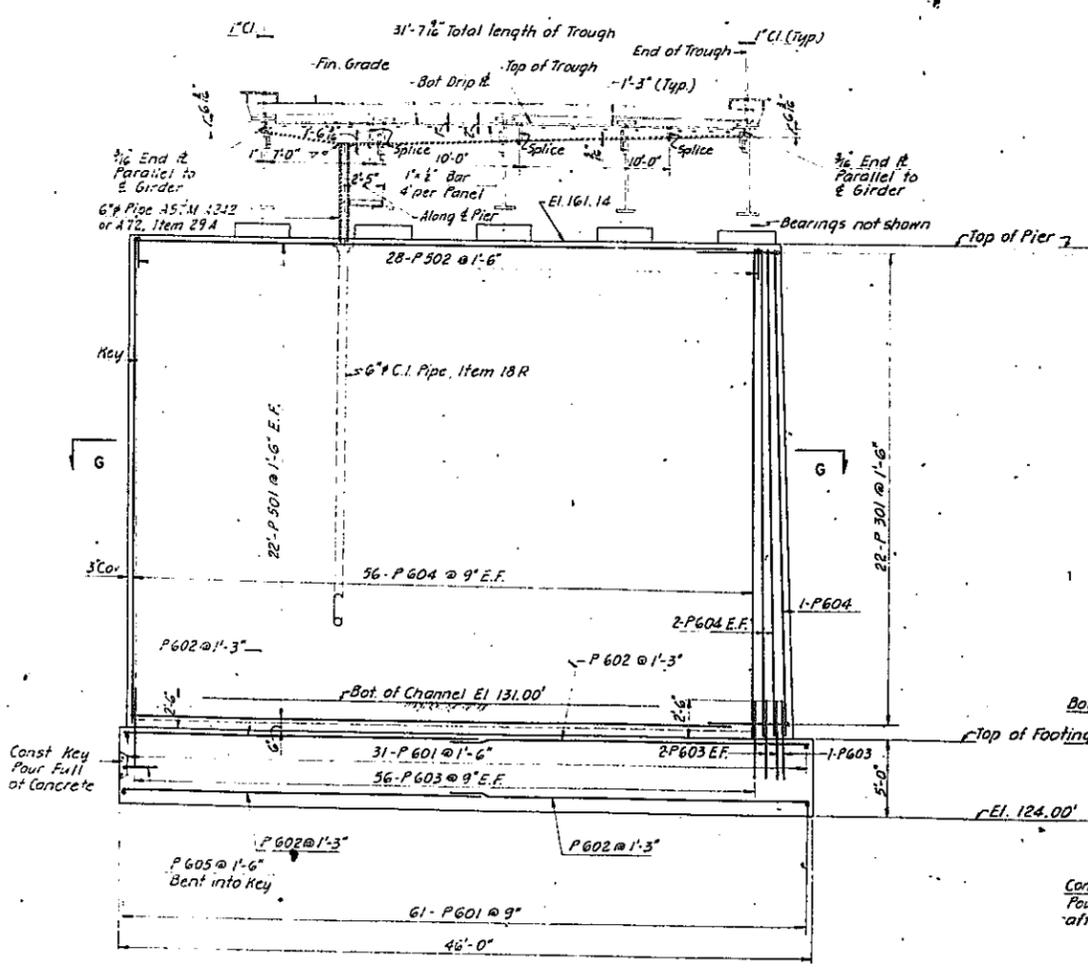
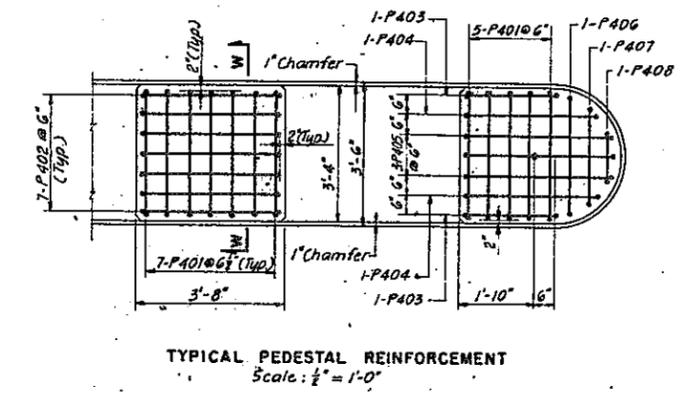
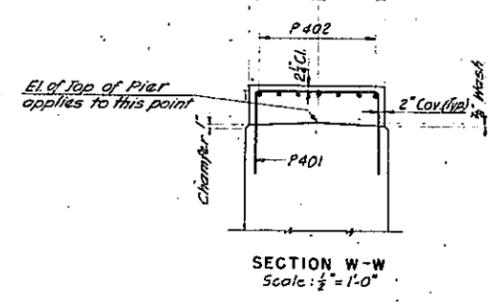
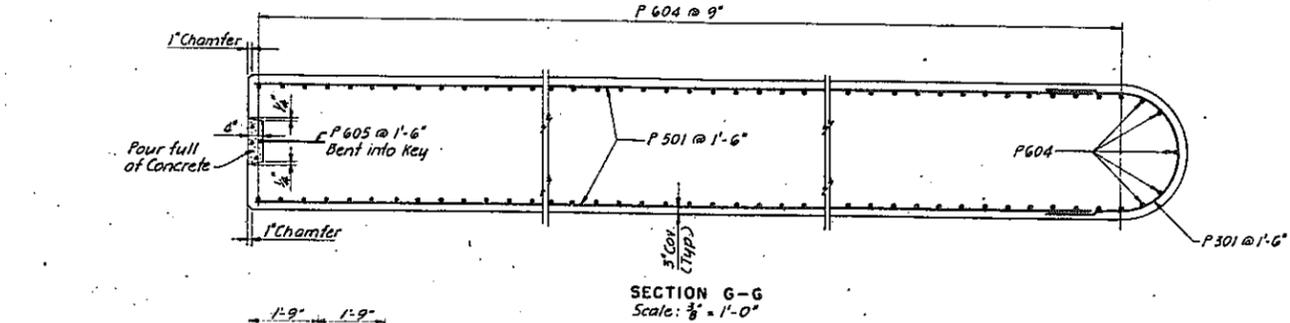
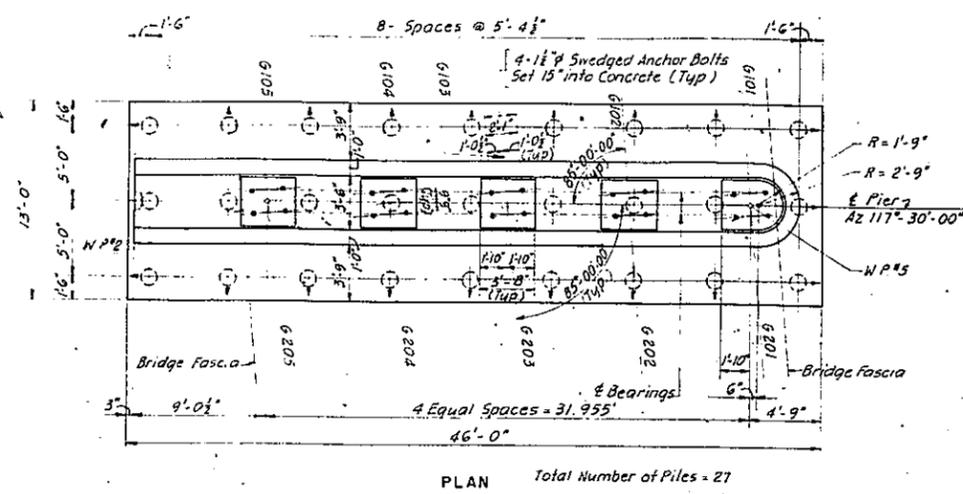
No As-Built Revisions

Date _____
In Charge of _____
Made By _____
Checked By _____



FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.		73	90

KINGSTON BYPASS PART I
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES



Apply Epoxy Protective Coating for Concrete, Item 363 to top of Pier and the top and side surfaces of the Pedestals down to the level of the bottom edge of the Pier chamfer. Provide 1/2" wash starting 2" beyond & on Fascia Pedestals only.

- Notes:
1. For Notes See Dwg. No. 70.
 2. For Coordinates of Working Points See Dwg. No. 70.
 3. For Excavation Payment Lines See Dwg. No. 70.
 4. For Pile Detail See Dwg. No. 89.
 5. For Bar Schedule See Dwg. No. 77.
 6. For Bush Hammered Elevations See Dwg. No. 72.
 7. For Location of Section N-N See Dwg. No. 76.
 8. For Table of Concrete and Cement in Substructure see Dwg. 71.

Date: _____
In Charge of: _____
Made By: _____
Checked By: _____

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NEW YORK

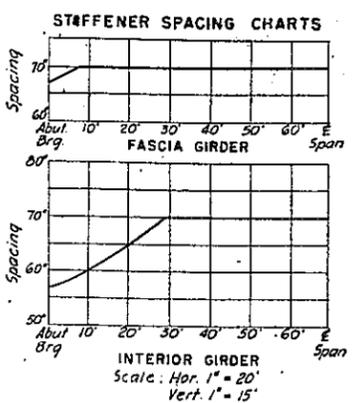
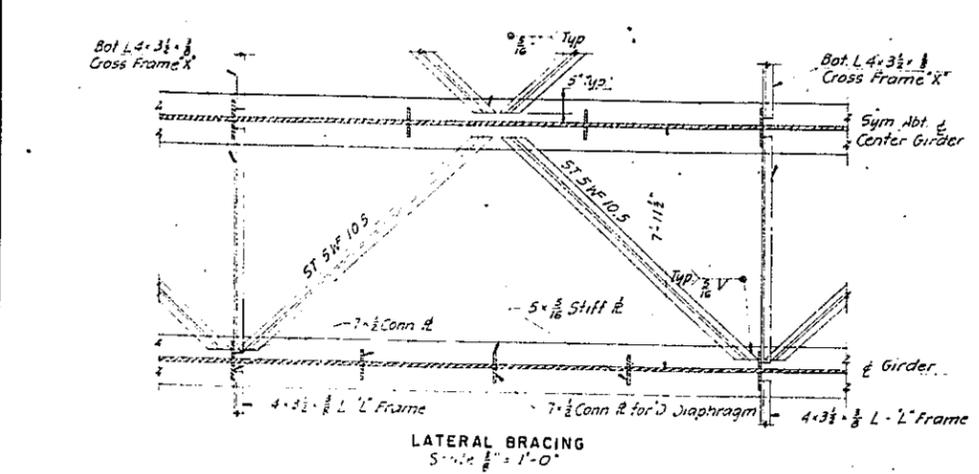
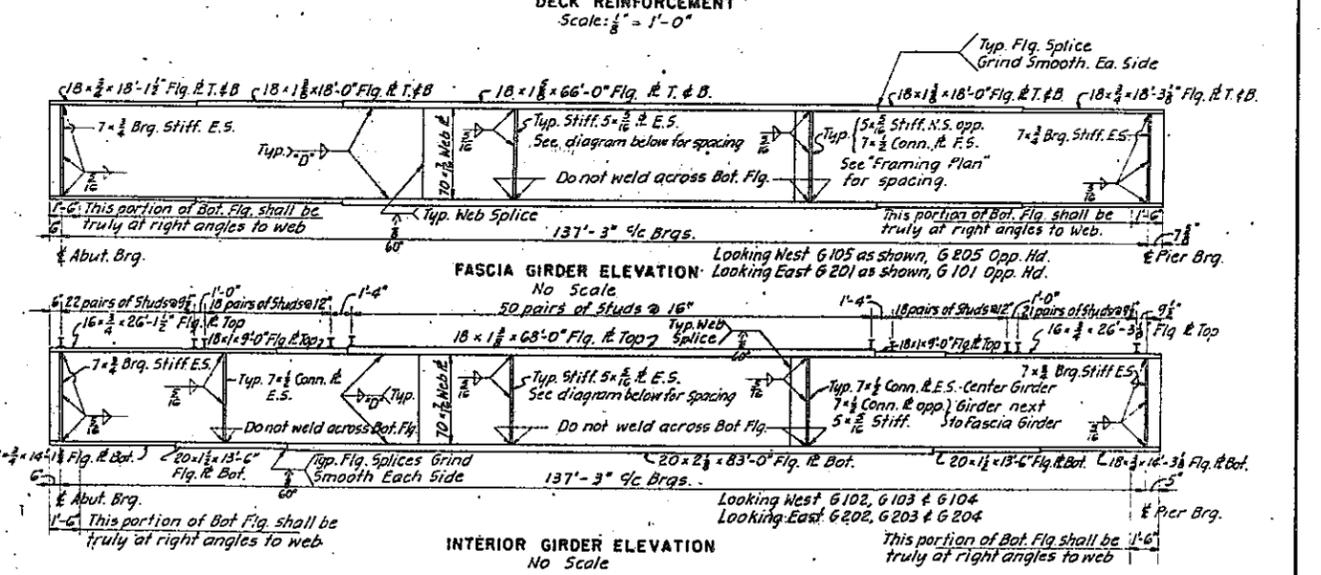
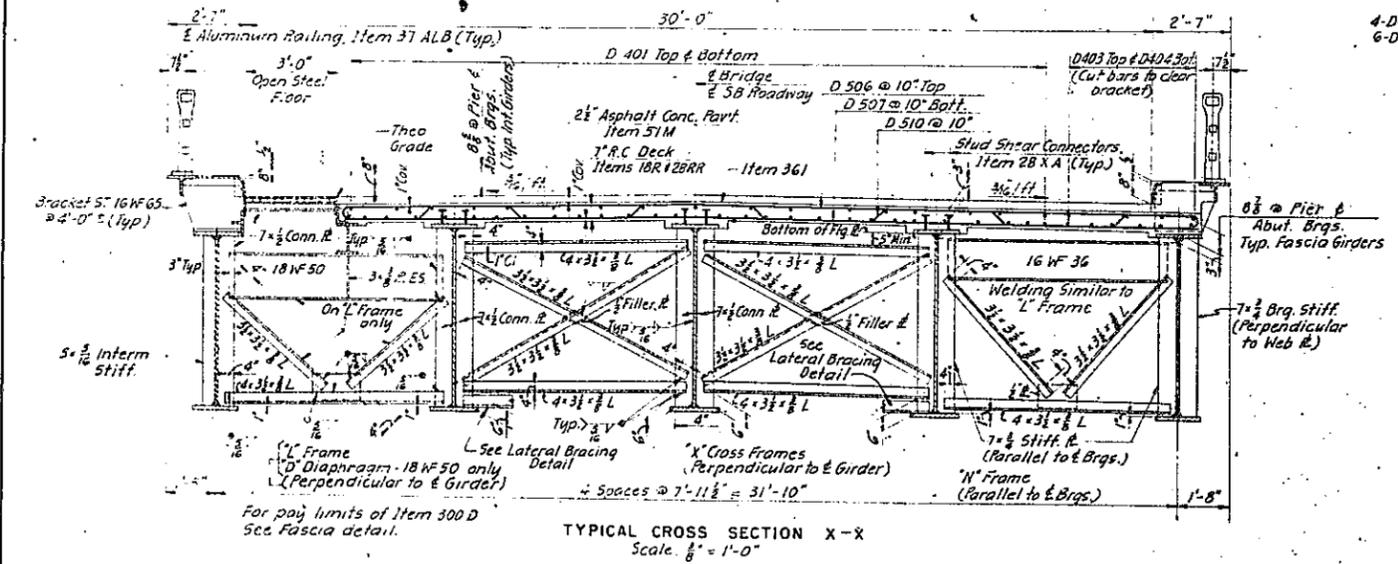
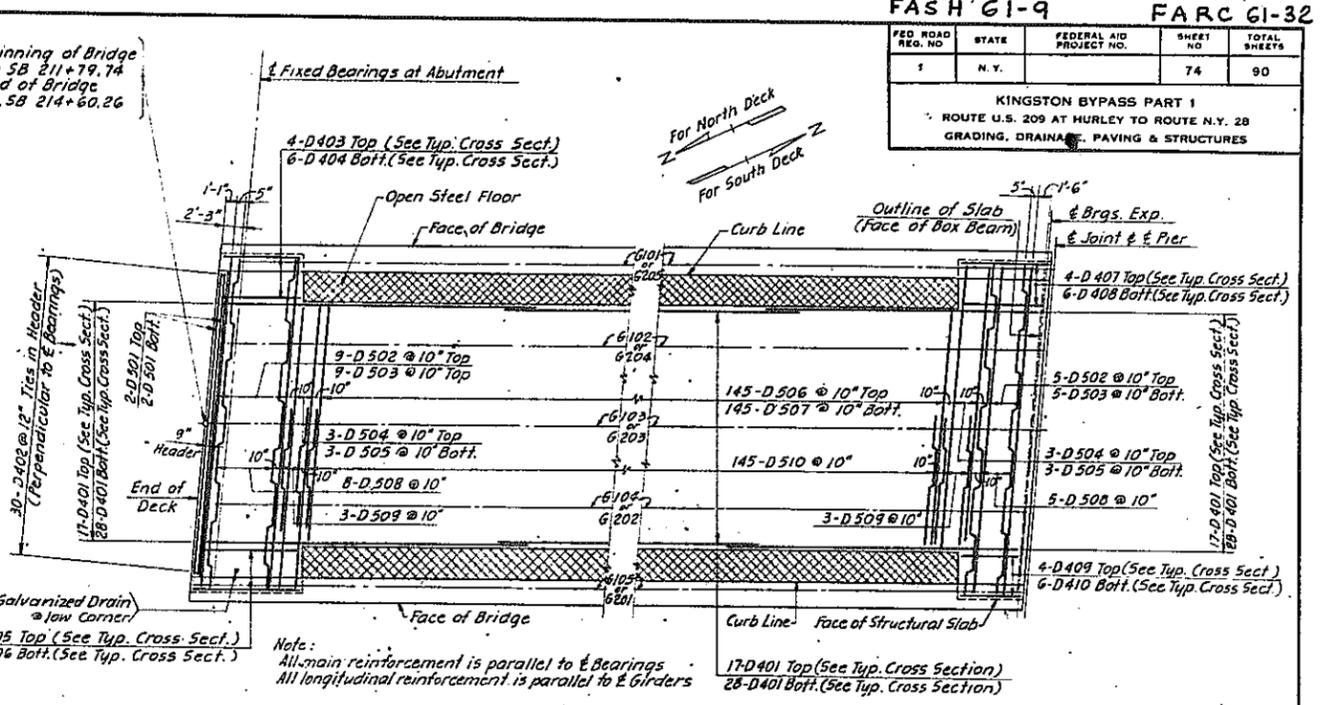
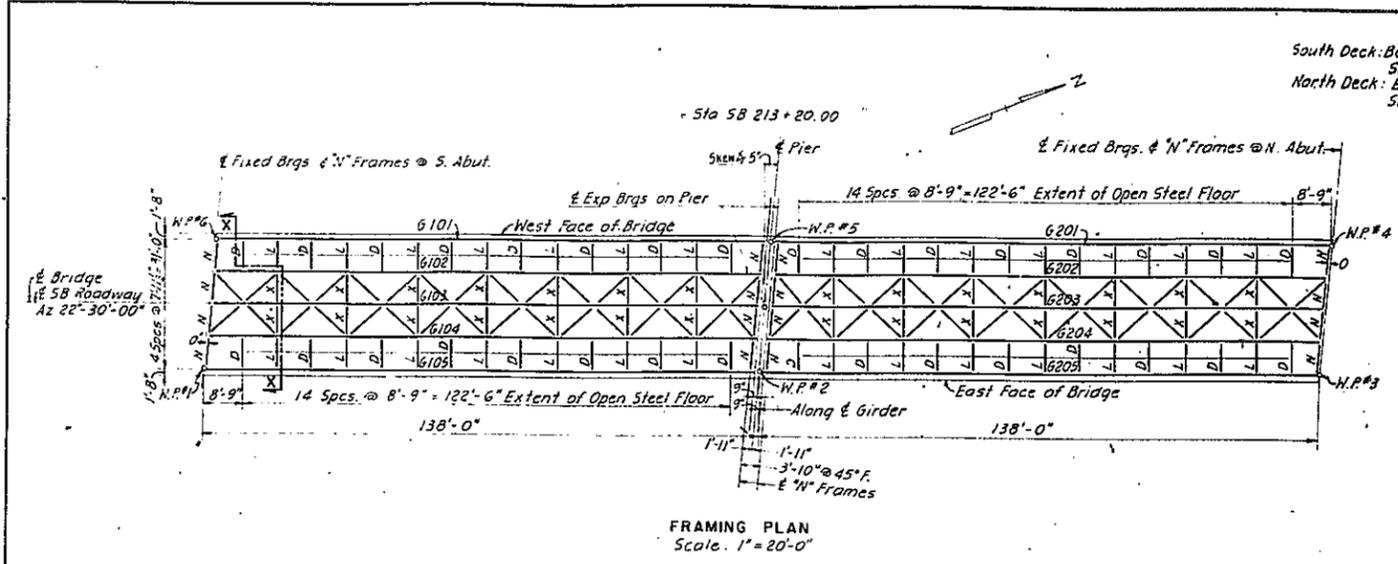
No As-Built Revisions

BRIDGE NO. 2 ESOPUS CREEK BRIDGE
STA. SB 213 + 20.00
PIER

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK
73	9-1-1960	1/8" = 1'-0"	



FASH 61-9		FARC 61-32	
FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
1	N. Y.		74
		TOTAL SHEETS	90
KINGSTON BYPASS PART I ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28 GRADING, DRAINAGE, PAVING & STRUCTURES			



CAMBER		
Girder	Steel D.L.	Conc. D.L.
6101, 6105, 6201, 6203	1 1/8"	1/4"
	Superimposed	1 1/8"
	Vert. Curve	1 1/8"
	Total	3 1/4"
6102, 6103, 6104, 6202, 6203, 6204	Steel D.L.	1 1/8"
	Conc. D.L.	1/4"
	Superimposed	1 1/8"
	Vert. Curve	1 1/8"
	Total	4 1/4"

WELDING SEQUENCE FOR GIRDERS

1. Completely weld web fls into one unit.
2. Weld stiffener to web fl.
3. Completely weld flange fls into one unit.
4. Assemble flange & web fls by starting at the center & proceeding outward to the ends, welding on each side of the web simultaneously & allowing the ends free to move as the welds contract.

- NOTES:**
1. For Notes See Dwg. No. 70
 2. See Specifications for Field Splicing
 3. Size or Filler Weld "D" is shown on Dwg. No. 75
 4. Webs shall be spliced at approximately the 1/2 pt. All splice details shall conform to A.M.S. Specifications.
 5. Deck Reinforcement Schedule is on Dwg. No. 77
 6. Work this Dwg. with Dwg. No. 75 & 76
 7. Additional Deck Details are shown on Dwg. No. 75
 8. Railing Post Location is shown on Dwg. No. 75 & 76
 9. All Stiffeners & Connection fls shall be truly vertical.
 10. For Fascia Detail see Dwg. No. 75

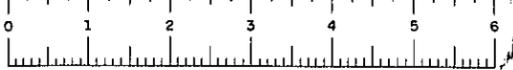
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NEW YORK

BRIDGE NO. 2 ESOPUS CREEK BRIDGE
Sta. SB 213 + 20.00
SUPERSTRUCTURE

DRAWING NO. 74
DATE 9-1-1960
SCALE As Shown

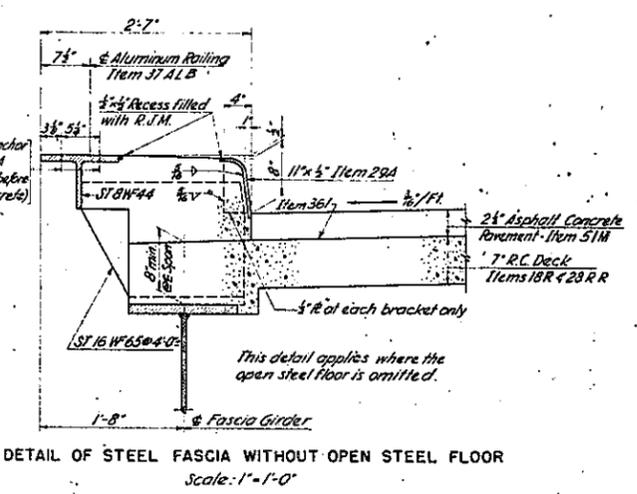
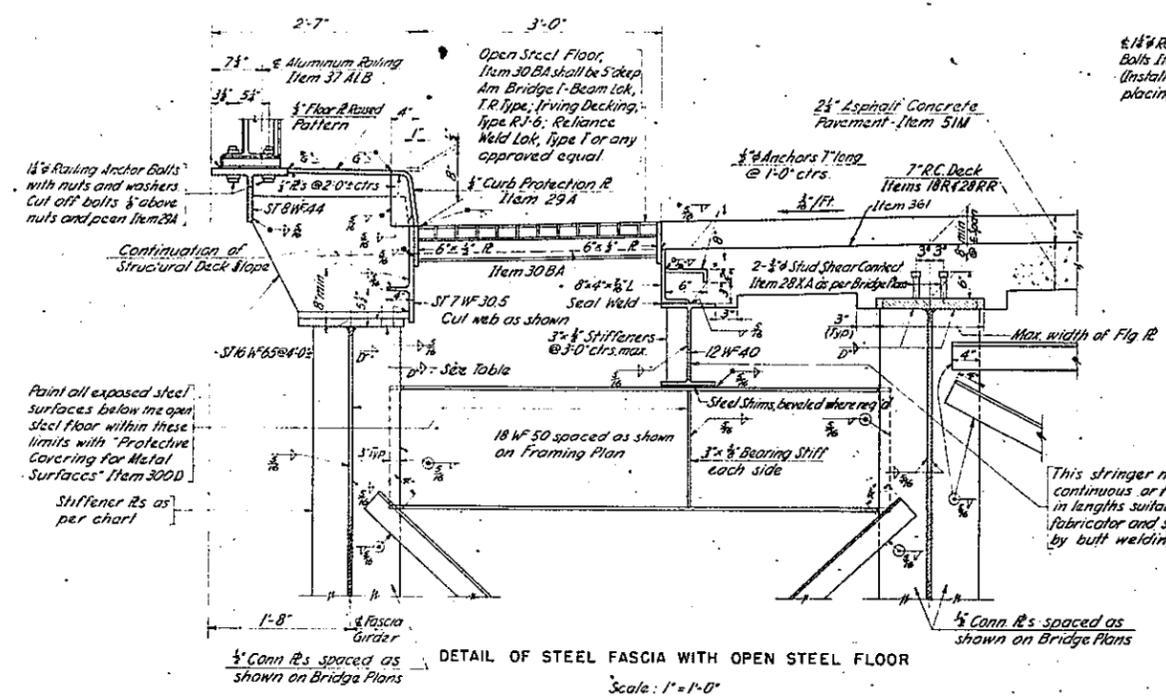
SHUMAVON & BUCKLEY
CONSULTING ENGINEERS
NEW YORK

Date _____
In Charge of _____
Made By _____
Checked By _____

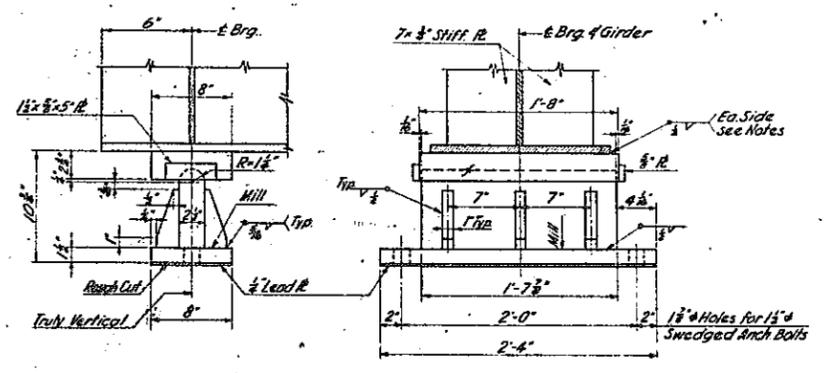
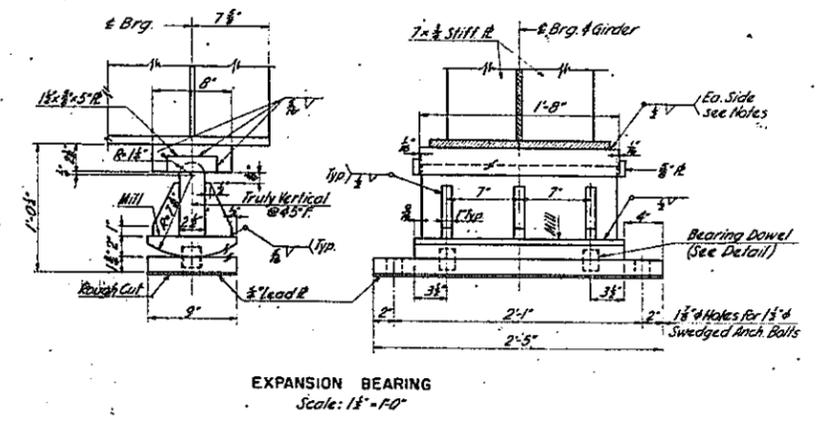


Insert a 1/8" thick Prefabricated Pad between steel and aluminum. Pads shall be fabric as manufactured by Fabreka Products Co. Compressed Asbestos Packing, Reasby-Morrison Co. or approved equal. Put under Item 37 ALB.

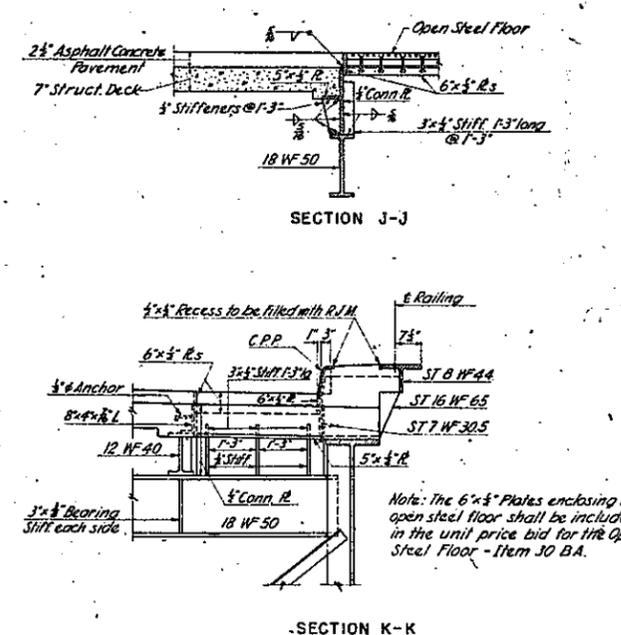
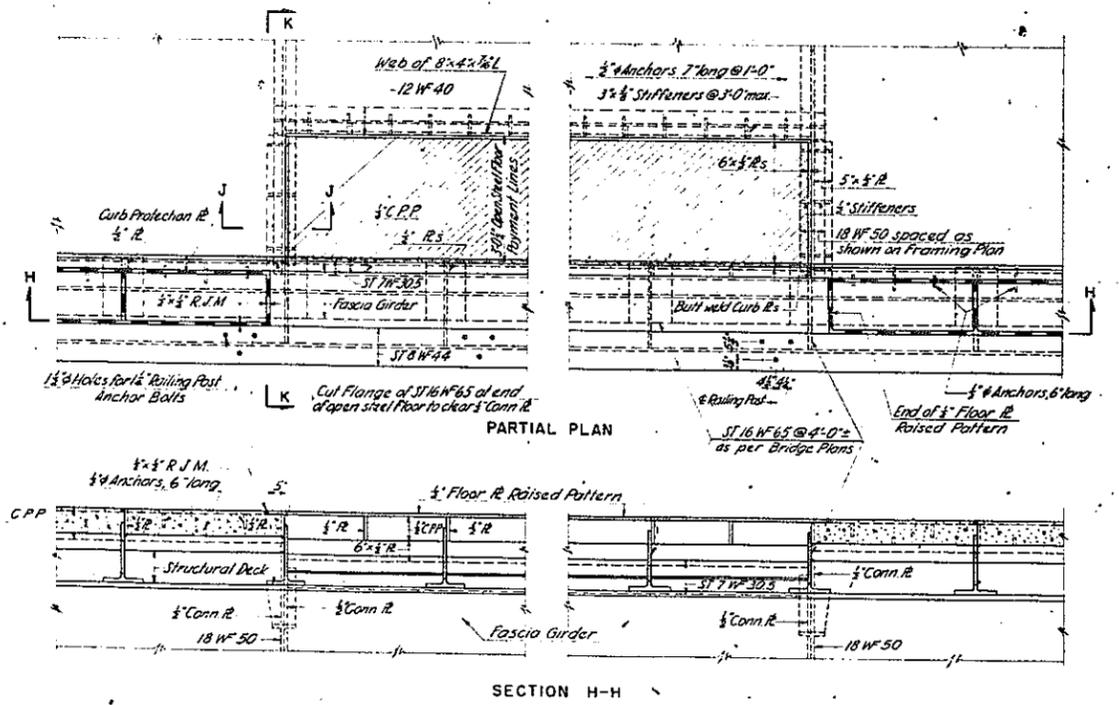
Notes:
Curb Protection Plates less than 3'-6" in length must be butt welded to adjacent section before they are installed. The joints between adjacent sections of floor and curb plates shall be seal welded in the field, before the concrete is placed.
Except as otherwise noted all steel shown to be paid for under Item 29 A



SIZE "D" OF CONTINUOUS FILLET WELD	
Material Thickness (In.)	Weld Size "D" (In.)
Under 1/2	3/16
Over 1/2 to 2 1/2	1/4
Over 2 1/2	5/16



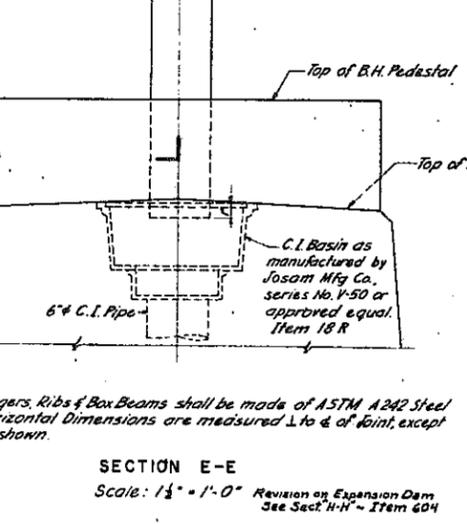
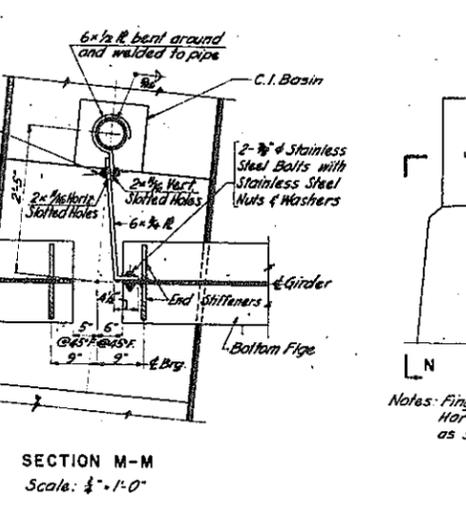
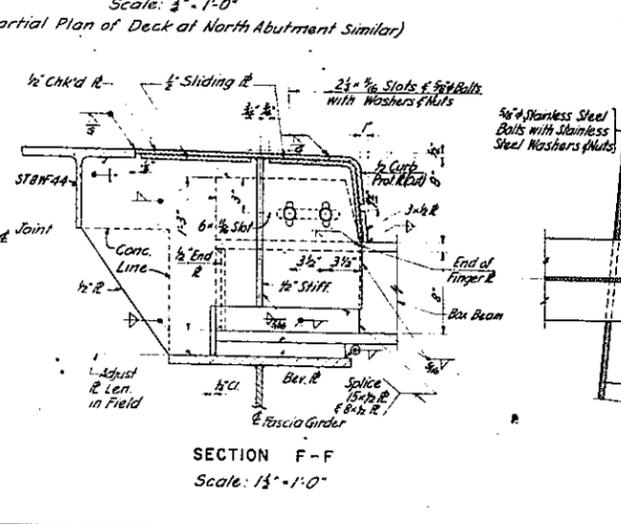
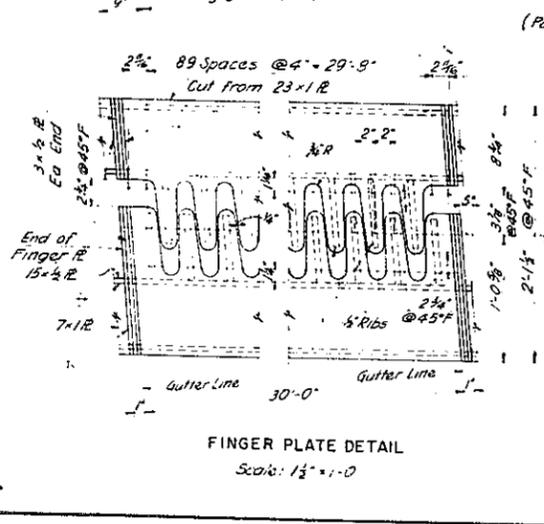
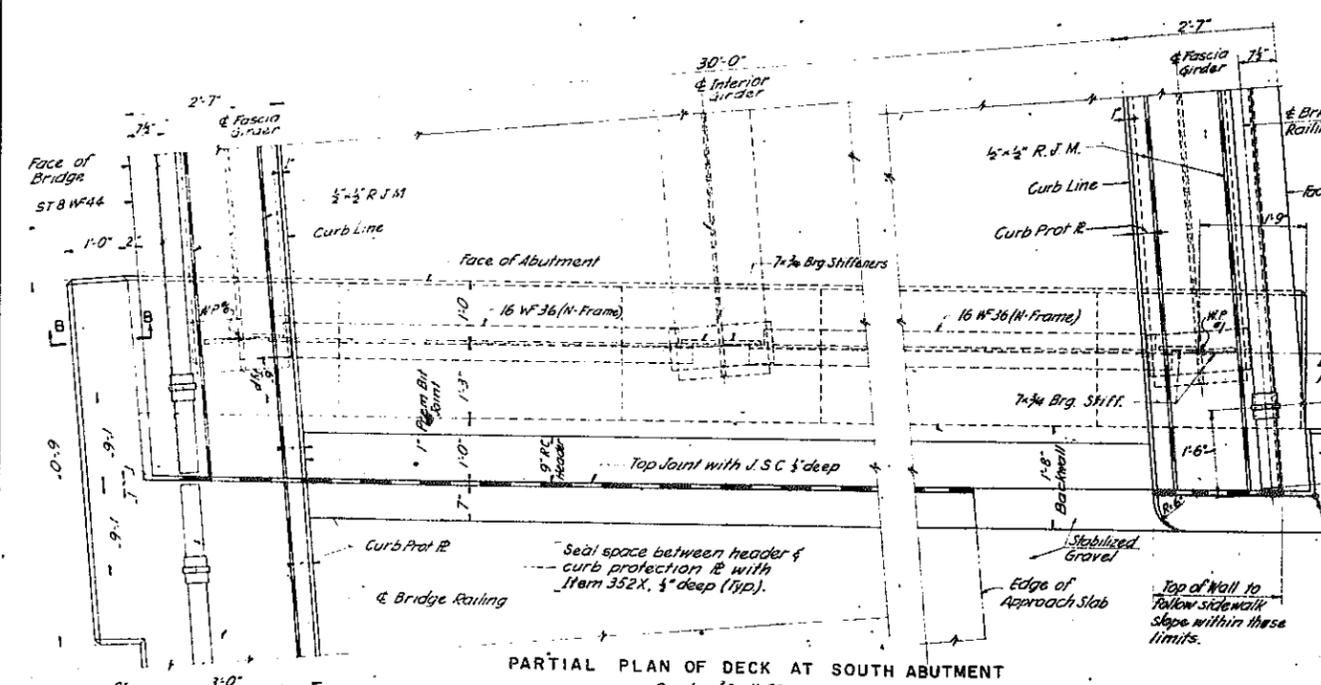
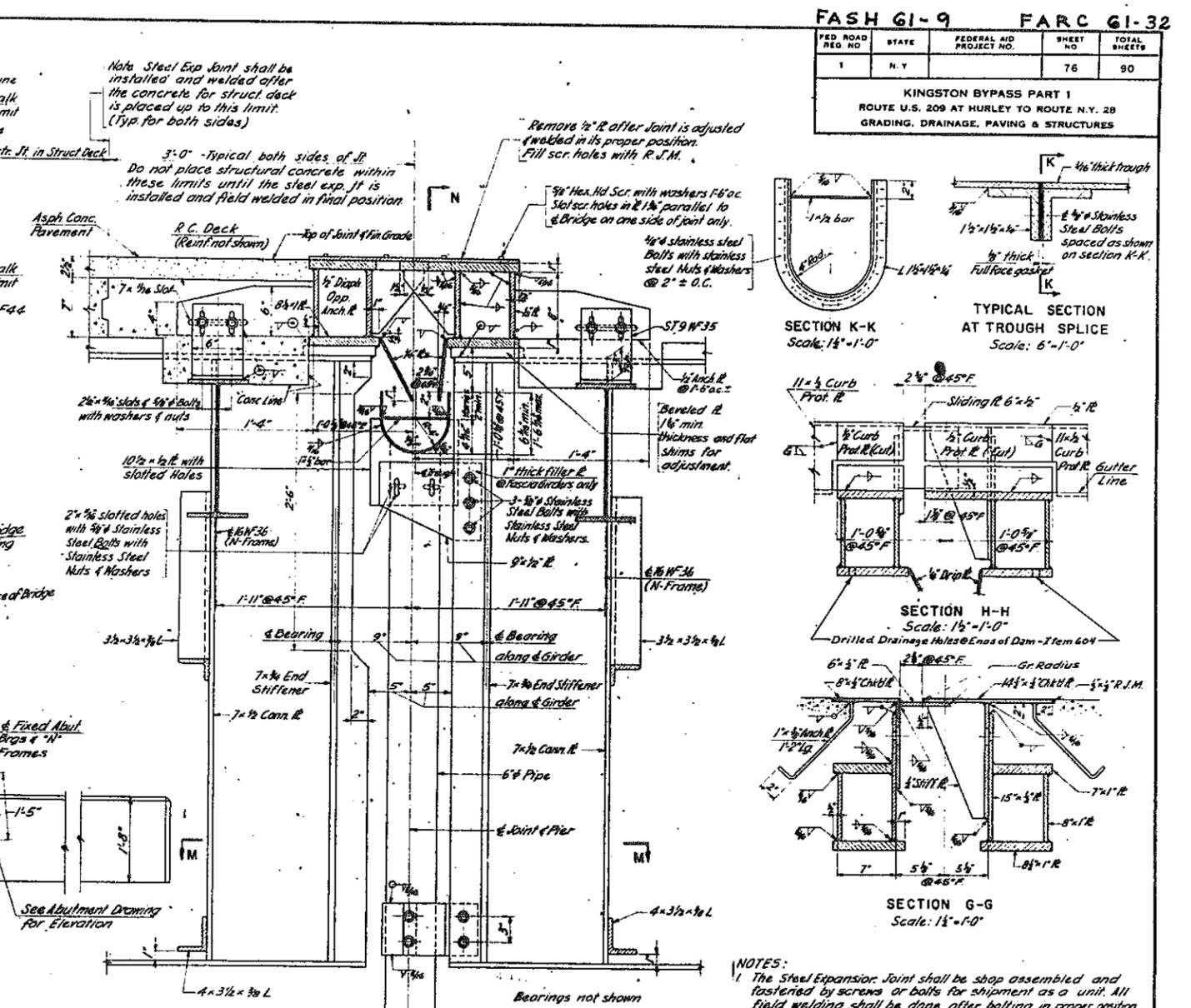
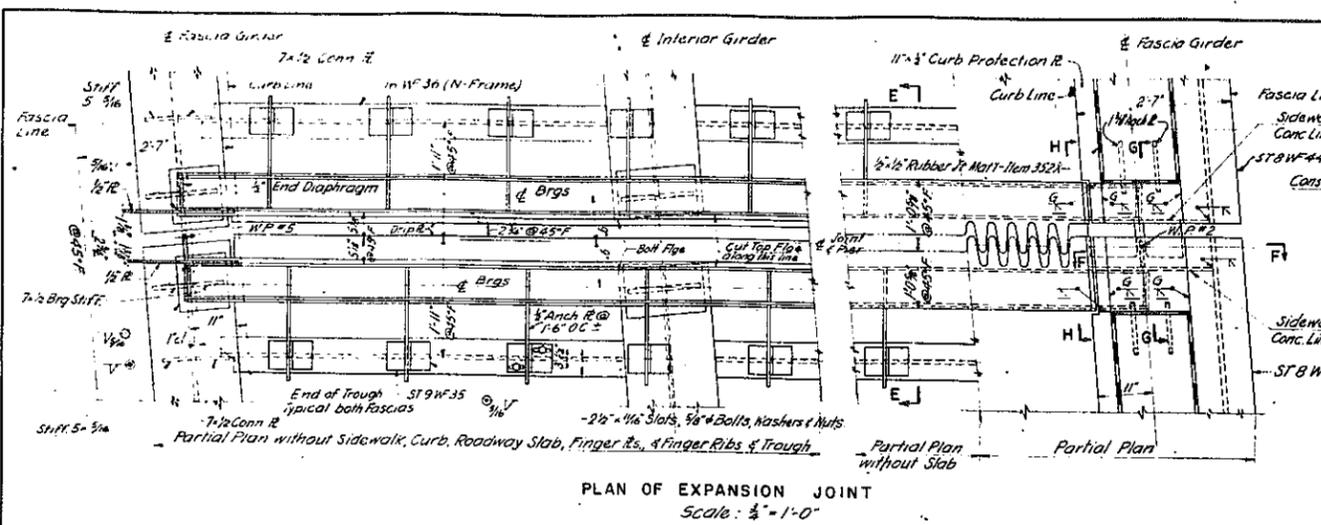
- NOTES:
- Charts showing the required lean of Rockers for the condition of completely erected steel to produce theoretically vertical Rockers under full dead load shall be submitted with the Shop Drawings for the Engineer's Approval.
 - The weight of lead plates shall not be included in the quantity to be paid for under Item 29A but the cost thereof shall be included in the Unit Price bid for this Item.
 - Girders shall be welded to sole plates after the Bearings have been set & aligned in their proper positions on the Bridge seats.
 - Bearing Dowel Detail is shown on Dwg No. 88.
 - For additional Railing Details see Dwg. No. 88 & 89.



Date: 9/1/60
 In Charge: [Signature]
 Made By: [Signature]
 Traced By: [Signature]
 Checked By: [Signature]



FASH 61-9		FARC 61-32	
FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
1	N.Y.		76
KINGSTON BYPASS PART I		TOTAL SHEETS	
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28		90	
GRADING, DRAINAGE, PAVING & STRUCTURES			



NOTES:

- The Steel Expansion Joint shall be shop assembled and fastened by screws or bolts for shipment as a unit. All field welding shall be done after bolting in proper position. Screws and bolts shall be removed after all field welding has been completed. Screw holes shall be filled with R.J.M.
- Removable Drainage Trough shall be installed prior to installation of Steel Expansion Joint. All bolts shall be equipped with approved locking devices. All trough sections (except bolts) to be given three coats of paint before installation. Upon completion of installation the trough shall be tested for water tightness.
- The Expansion Joint and removable Drainage Trough shall be fabricated of ASTM A 242 steel. All bolts, nuts & washers for Trough assembly shall be of stainless steel. Payment will be made under Item 29 A.
- Work this Drawing with Dwg. No. 74 & 75
- For Section N-N see Dwg. No. 73

Notes: Fingers, Ribs & Box Beams shall be made of ASTM A 242 Steel. Horizontal Dimensions are measured L to & of joint, except as shown.

REVISION ON EXPANSION DETAIL
See Sect. N-N - Item 604

PREPARED BY
SHUMAYON & BUCKLEY
CONSULTING ENGINEERS & ARCHITECTS
NEW YORK

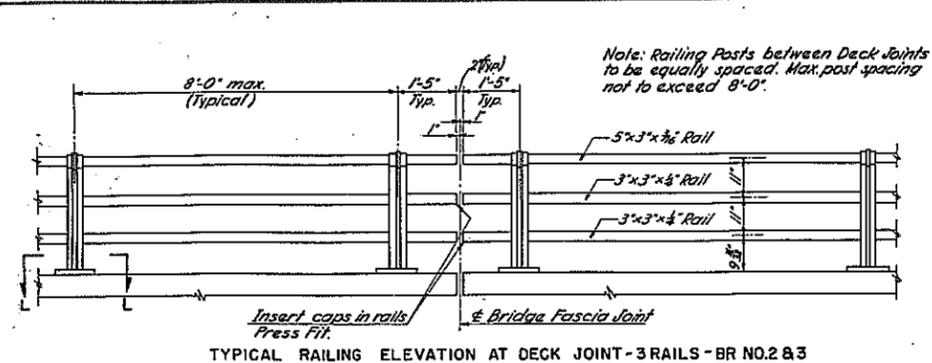
BRIDGE NO. 2, ESOPUS CREEK BRIDGE
STA. 58 213 + 20.00
DECK JOINTS

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK
76	9-1-1960	As shown	



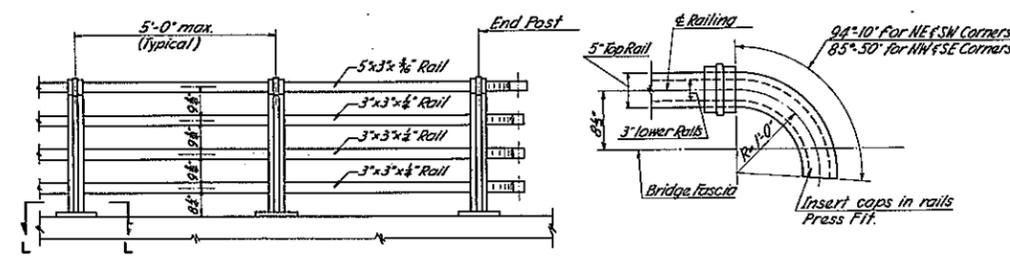
FED. ROAD PROJ. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	FG-F-U-393(7) F-1009(S)	88	90

KINGSTON BYPASS PART 1
ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28
GRADING, DRAINAGE, PAVING & STRUCTURES



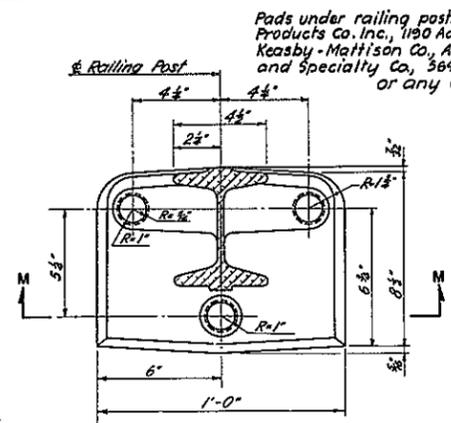
TYPICAL RAILING ELEVATION AT DECK JOINT - 3 RAILS - BR NO.2 & 3
Scale: 1/2" = 1'-0"

In any railing panel at least 2 rails shall be continuous thru each post except posts at end of the structure and posts adjacent to open joints in railing.

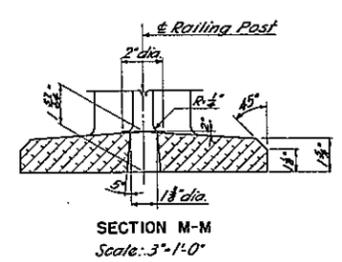


TYPICAL RAILING ELEVATION - 4 RAILS - BR NO.1
Scale: 1/2" = 1'-0"

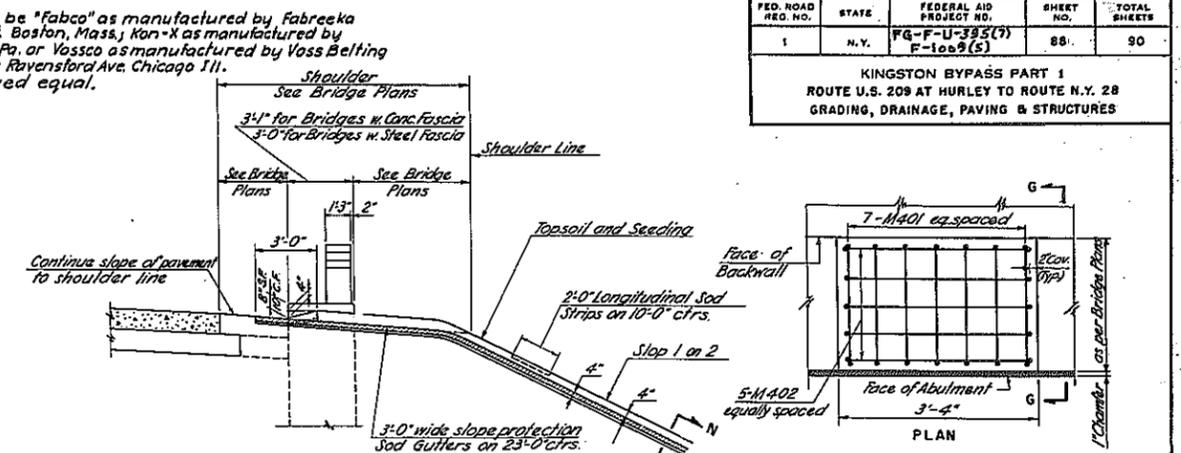
END PLAN DETAIL OF 4-RAIL RAILING - BR NO.1
Scale: 1/2" = 1'-0"
For location see Bridge Plans



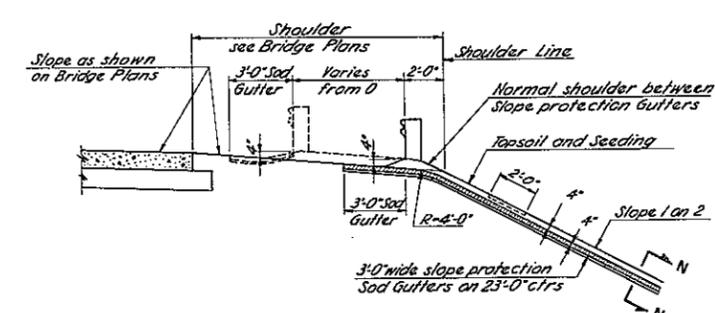
SECTION L-L
Scale: 3" = 1'-0"



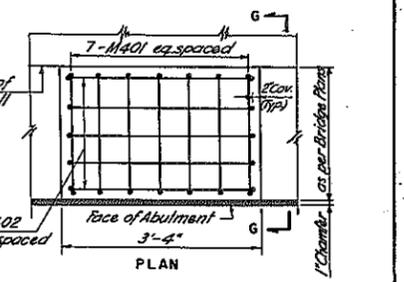
SECTION M-M
Scale: 3" = 1'-0"



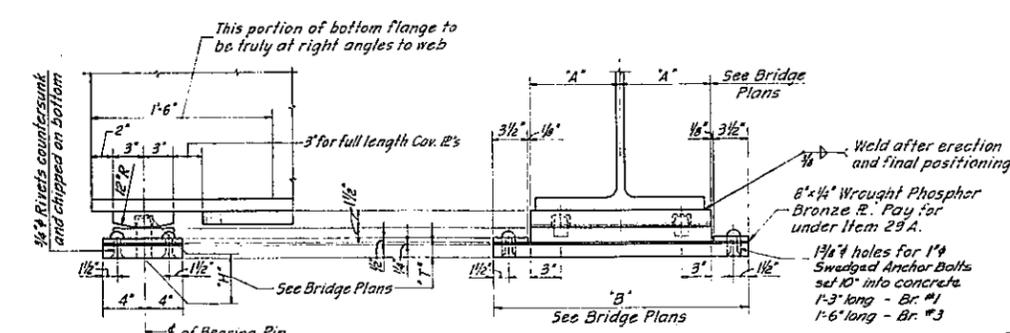
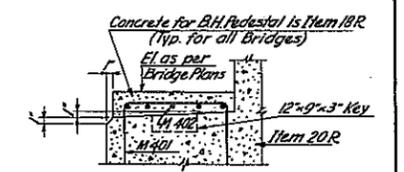
TYPICAL SECTION THRU GUTTER AT END OF WALL - BR NO.2 & 3
No Scale



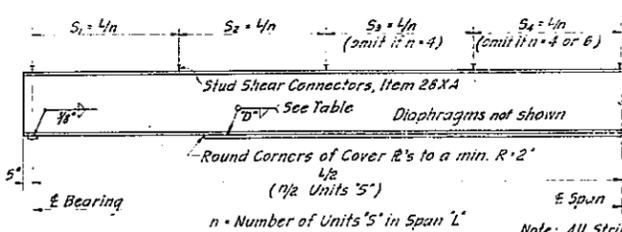
TYPICAL SECTION THRU END GUTTER - BR NO.2 & 3
No Scale



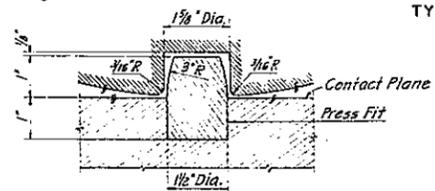
SECTION G-G
TYPICAL ABUTMENT PEDESTAL REINFORCEMENT
BR NO.2 & 3
Scale: 3/4" = 1'-0"



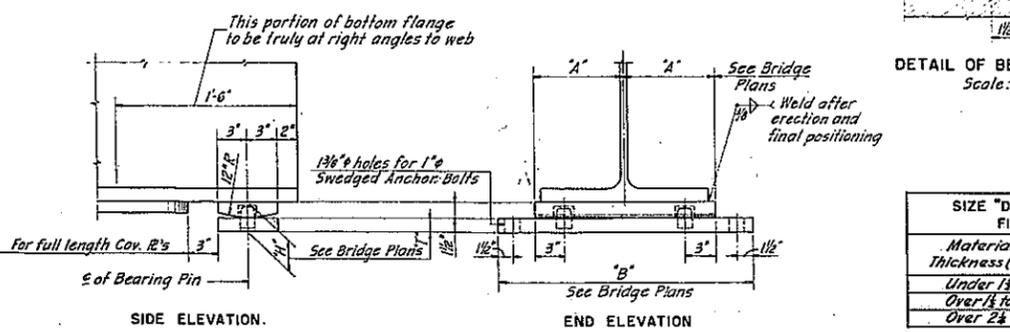
EXPANSION BEARINGS - BR. NO. 1 & 3
Scale: 1 1/2" = 1'-0"



TYPICAL STRINGER ELEVATION
BR NO.1 & 3
No scale



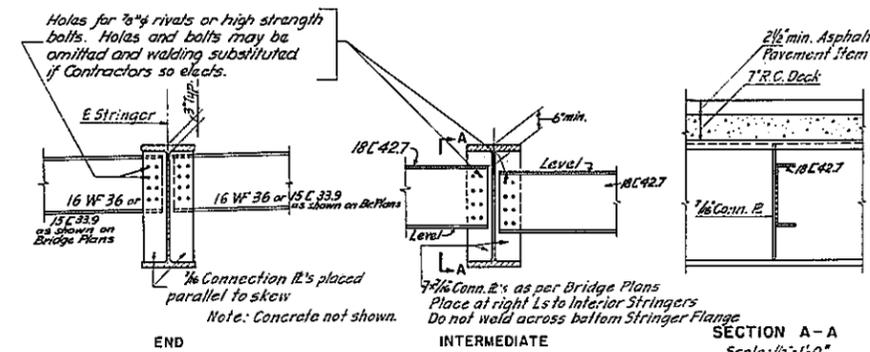
DETAIL OF BEARING DOWEL
Scale: 6" = 1'-0"



FIXED BEARINGS - BR. NO. 1 & 3
Scale: 1 1/2" = 1'-0"

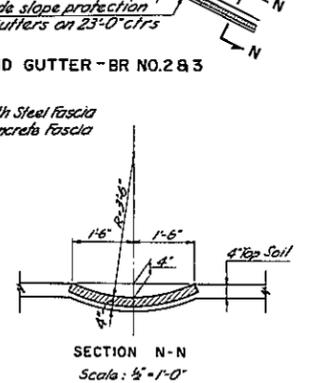
Note: Bearing Details shown apply to W Stringers only. Bearing Details for R Girders are shown on Bridge Plans.

SIZE "D" OF CONTINUOUS FILLET WELD	
Material Thickness (in)	Weld Size "D" (in)
Under 1/2	3/8
Over 1/2 to 2 1/2	1/2
Over 2 1/2	5/8

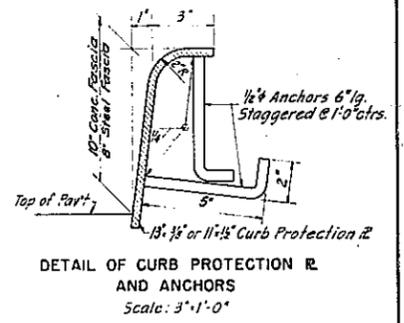


TYPICAL DIAPHRAGM CONNECTIONS - BR NO. 1 & 3
Scale: 1/2" = 1'-0"

Diaphragms and Connections shown apply to W Stringers only. Diaphragms and Connections for R Girders are shown on Bridge Plans.



SECTION N-N
Scale: 1/2" = 1'-0"



DETAIL OF CURB PROTECTION R AND ANCHORS
Scale: 3" = 1'-0"

NOTES

- All Curb Protection R's shall conform to specifications for Item 30AZ. The cost of furnishing and placing the Curb Protection R and Anchor Bars or Studs shall be paid under Item 29A or Item 30AZ as shown on Bridge Plans.
- For additional Railing Details see Drawing No. 89, Bridge Drawings & State Standard Structures: Sheets 59-54(3) & 59-54(4).
- Except at steel expansion dams, the Curb Protection R shall have open joints to line up with all deck joints. Between deck joints, the Curb Protection R shall have all joints welded. Curb Protection R shall be welded to steel expansion dams where both meet.
- Work this drawing with Bridge Drawings

PREPARED BY
SHUMAYON & BUCKLEY
CONSULTING ENGINEERS
NEW YORK
DATE: 9-1-1960
SCALE: As Shown

MISCELLANEOUS STRUCTURE DETAILS			
DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK
88	9-1-1960	As Shown	



FED. ROAD REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	FQ-F-U-333(7) F-1009(s)	90	90
KINGSTON BYPASS PART I ROUTE U.S. 209 AT HURLEY TO ROUTE N.Y. 28 GRADING, DRAINAGE, PAVING & STRUCTURES				

NO.	ITEM	UNIT	BRIDGE NO. 1		BRIDGE NO. 2		BRIDGE NO. 3		TOTAL	
			H.G.S. AT S.H. 1373 (RTE. U.S. 209) STA. SB 166+38.66		ESOPUS CREEK BRIDGE STA. SB 213 +20		H.G.S. AT S.H. 5173 (RTE. N.Y. 28) C. STA. 282+36.52			
			NEAT	ROUND	NEAT	ROUND	NEAT	ROUND	NEAT	ROUND
2EF-B	Selected Fill	C.Y.	4200	4,600	13,900	15,200	14,700	16,200	32,800	36,000
5	Trench, Culvert & Bridge Excavation	C.Y.	1,560	1,700	4,060	4,500	2,350	2,600	7,970	8,800
11 H	Perforated Corrugated Metal Pipe Underdrain 6" Diam.	L.F.	645	700	136	150	312	350	1,093	1,200
13	Cast Iron Pipe - 6" Dia.	L.F.	135	140	-	-	-	-	135	140
15-2A	Portland Cement - Type 2A	Bbls.	3393	3500	1,785	1,850	4,122	4,260	9,300	9,610
15-N	Natural Cement - Type N	Bbls.	172	180	79	80	213	220	464	480
18X	Class 1A Concrete for Structures	C.Y.	1,019	1,050	422	435	893	925	2,334	2,410
20X	Class 1A Concrete	C.Y.	911	945	412	425	1,127	1,160	2,450	2,530
24A	Bagged Screened Gravel	C.Y.	330	360	60	70	63	70	453	500
28RR	Bar Reinforcement for Structures	Lb.	228,400	238,000	86,800	90,000	387,000	399,000	702,200	727,000
28XA	Stud Shear Connectors	Ea.	1,320	1,350	1,560	1,600	10,800	11,000	13,680	13,950
29A	Structural Steel	Lb.	125,100	128,000	609,700	622,000	686,700	701,000	1,421,500	1,451,000
30AZ	Metal Protection Plate for Curbs	L.F.	167	170	-	-	1,021	1,040	1,188	1,210
30BC	Open Steel Floor	S.F.	-	-	1,470	1,500	-	-	1,470	1,500
37ALB	Aluminum Railing (3 Rail)	L.F.	-	-	592	600	1,047	1,060	1,639	1,660
37ALB4	Aluminum Railing (4 Rail)	L.F.	166	170	-	-	-	-	166	170
47BR	Cement Concrete Pavement	C.Y.	-	-	55	60	110	120	165	180
47BRC	Cement Concrete Pavement with Carbon Black	C.Y.	-	-	-	-	56	60	56	60
51-M	Asphalt Concrete	Tons	31	32	108	110	290	298	429	440
61	Bituminous Material	Gals.	550	570	84	90	157	170	791	830
78X	Stone Filling	C.Y.	-	-	2,107	2,300	-	-	2,107	2,300
79BA	Dry Concrete Block Paving	S.Y.	-	-	-	-	1,280	1,400	1,280	1,400
80	Dry Rip-Rap	C.Y.	-	-	1,620	1,800	-	-	1,620	1,800
82	Coffer Dams	S.F.	-	-	3,900	4,000	-	-	3,900	4,000
83ST	Temporary Steel Sheet Piling	S.F.	4,810	5,000	-	-	-	-	4,810	5,000
83TT	Temporary Timber Sheet Piling	S.F.	11,090	11,500	-	-	-	-	11,090	11,500
85CA	Cast-in Place Concrete Piles (20 Ton Capacity)	L.F.	-	-	-	-	17,145	19,000	17,145	19,000
85CB	Cast-in Place Concrete Piles (35 Ton Capacity)	L.F.	10,425	11,000	-	-	-	-	10,425	11,000
85CC	Cast-in Place Concrete Piles (50 Ton Capacity)	L.F.	-	-	9,140	10,000	-	-	9,140	10,000
85CT	Cast-in Place Concrete Test Piles	L.F.	-	-	-	-	280	300	280	300
87	Furnishing Equipment for Driving Piles	L.S.	28%	28%	25%	25%	47%	47%	100%	100%
106AS	Aluminum Chain Link Fencing 6'-0" high	L.F.	592	600	-	-	-	-	592	600
112	Emulsified Carbon Black	Lb.	-	-	-	-	80	85	80	85
121	Topsoil Placed from Stockpiles	C.Y.	113	120	76	80	185	200	374	400
123	Seeding	Acres	0.26	0.3	0.14	0.2	0.34	0.4	0.74	0.9
124	Sodding	S.Y.	210	230	190	200	552	570	952	1,000
300E	Protective Covering for Metal Surfaces	S.F.	-	-	8,650	10,000	-	-	8,650	10,000
351-X	Joint Sealing Compound	Gals.	20	20	5	5	25	25	50	50
352-X	Rubber Joint Material	Gals.	3	5	3	5	14	15	20	25
45D	Fiber Glass Resin Laminate Waterproofing	S.F.	2,025	2,100	6,886	7,200	18,644	19,000	27,555	28,300
363	Epoxy Protective Coating for Concrete	Gals.	10	10	21	22	67	68	98	100
14-A	Reinf. Conc. Culvert Pipe 18" Dia.	L.F.	-	-	-	-	75	80	75	80
30 S	Miscellaneous Metals	Lb.	-	-	-	-	600	700	600	700

The items listed "Old" have been superseded and where appearing on the Bridge Drawings Sh 59 to Sh 90, new items shall apply as follows:

Old Item	New Item
18 R	18 X
20 R	20 X
30 BA	30 BC
30	30 S
10 RY	11 H
300 D	300 E
361	450

Item M 36 B "Preformed Expansion Joint Filler" shall be used where ever the Bridge Plans call for Premoulded Bituminous Joint Material.

PREPARED BY: SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK

ESTIMATED BRIDGE QUANTITIES

DRAWING NO.	DATE	SCALE	SHUMAYON & BUCKLEY CONSULTING ENGINEERS NEW YORK
90	9-1-1960	None	

Appendix F

Non-Standard Feature Justification


**Exhibit 2-15
Nonstandard Feature Justification**

Rev. 04/24/17

PIN: 8758.04	Route No. and Name: Kingston Rail Trail
Project Type: New construction of Multi-Use Trail	<input type="checkbox"/> National Network/Qualifying Highway <input type="checkbox"/> Access Highway
Functional Class: N/A	Design Classification (AASHTO Class): Trail
ADT: N/A	% Trucks: N/A
<input checked="" type="checkbox"/> NHS <input type="checkbox"/> Non-NHS	Terrain: Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius
Location: 2 curves near eastern terminus of project
Latitude and Longitude (Linear Feature) FROM Lat: N=1131439.87 g: E=620747.86 N=1131383.74 E=620698.93
Latitude and Longitude (Point Feature) Lat: _____ g: _____
Standard Value: 60 ft. Design Speed: 18 mph
Existing Value: N/A Recommended Speed - Existing: _____
Proposed Value: 30,45 ft. Recommended Speed - Proposed: _____

2. Accident Analysis

Current Accident Rate ¹ : N/A <input checked="" type="checkbox"/> acc/mvm <input type="checkbox"/> acc/mev	Statewide Accident Rate: N/A <input checked="" type="checkbox"/> acc/mvm <input type="checkbox"/> acc/mev
From _____ to _____	Is the Nonstandard Feature a contributing factor? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Anticipated accident rates, severity, and costs:

N/A

3. Cost Estimates

Cost to fully meet standards: \$5,000 total	Cost(s) for incremental improvements: N/A
---	---

4. Mitigation
e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve Warning signs will be installed for Bicyclists

5. Compatibility with Adjacent Segments and Future Plans

To provide adequate space to build the trailhead in this location and to provide for future expansion of this segment of the trail, the proposed Non-Standard curves must be constructed as proposed.

6. Other Factors
e.g., social, economic, and environmental

The non-standard curves will actually provide for a speed reduction among bicyclists as they approach the trailhead and Washington Ave. As proposed for this project, the non-standard curves are located just before the terminus of the trail. A trailhead is needed in this location to promote use of this trail facility and to provide a location for users to park their vehicles.

7. Proposed Treatment (i.e., recommendation)

The proposed non-standard curve is recommended to be installed.

¹ Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.



Exhibit 2-15 Nonstandard Feature Justification

Rev. 04/24/17

PIN: 8758.04	Route No. and Name: Kingston Rail Trail		
Project Type: New construction of Multi-Use Trail	<input type="checkbox"/> National Network/Qualifying Highway <input type="checkbox"/> Access Highway		
Functional Class: N/A	Design Classification (AASHTO Class): Trail		
ADT: N/A	% Trucks: N/A	<input checked="" type="checkbox"/> NHS <input type="checkbox"/> Non-NHS	Terrain: Rolling

1. Description of Nonstandard Feature

Type of Feature: Horizontal Curve Radius
Location: 2 curves near Western terminus of project
Latitude and Longitude (Linear Feature) FROM Lat: N=1128744.67 g: E=612675.33 N=1128847.86 E=612788.80
Latitude and Longitude (Point Feature) Lat: g:
Standard Value: 60 ft. Design Speed: 18 mph
Existing Value: N/A Recommended Speed - Existing:
Proposed Value: 8 ft. Recommended Speed - Proposed:

2. Accident Analysis

Current Accident Rate ¹ : N/A <input checked="" type="checkbox"/> acc/mvm <input type="checkbox"/> acc/mev	Statewide Accident Rate: N/A <input checked="" type="checkbox"/> acc/mvm <input type="checkbox"/> acc/mev
From to	Is the Nonstandard Feature a contributing factor? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Anticipated accident rates, severity, and costs:

N/A

3. Cost Estimates

Cost to fully meet standards: \$25,000	Cost(s) for incremental improvements: N/A
--	---

4. Mitigation

e.g., increased superelevation and speed change lane length for a non-standard ramp radius

Curve Warning signs and wood guiderail will be installed for Bicyclists

5. Compatibility with Adjacent Segments and Future Plans

The non-standard horizontal curve radius at the western terminus is necessary to create a switchback in the trail to connect the Proposed Kingston Rail Trail with the existing O&W rail trail. The switchback will be constructed to ADA compliant grades.

6. Other Factors

e.g., social, economic, and environmental

The decision to install a non-standard curve was a result of an effort to minimize the impacts to existing Wetland (KW-18) and limit the amount of tree clearing (ESA Impacts) in the area.

7. Proposed Treatment (i.e., recommendation)

The non-standard curve is recommended to be installed.

¹ Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

Appendix G

Stakeholders and Public Input

Kingston Rail Trail (PIN 8758.04)
Stakeholder Interview: New York State Police
October 6, 2015

Interview Participants: *Dennis Doyle and Chris White, UC Planning Department*
 Sergeant Richard Brunner, NYSP Kingston, Station Commander

Meeting Notes:

Sergeant Brunner had received from his command the wrong date for the stakeholder meeting, but Dennis and Chris were available to meet with him to discuss the project.

After providing an overview of the project objectives, alternative routes and background, Dennis and Chris asked for any concerns or ideas Sergeant Brunner might offer on the trail alignment nearest the Trooper barracks.

Sergeant Brunner offered the following insights:

- The NYSP's biggest concern would be security. The building is secure, but their parking lot is not. This would have to be considered if we increase the amount of pedestrian traffic going by the facility.
- The other major concern would be the safety of the trail crossing at the entrance/ exit to the barracks. We would need to deal with emergency vehicles exiting the facility to respond to emergency calls.

Other topics discussed:

- Routing the trail behind the barracks is probably not a good alternative. The barracks property is leased from John Gill, and the trail could interfere with agricultural uses near the barracks.
- Route 209 is a federal highway so access to the roadway is controlled by federal regulations.
- The sight distances at the barracks entry/exit are good and not an issue.
- The original rail trail project was supposed to be named after a deceased Trooper, Mike Kelly, who was an avid runner and cyclist.
- Due to cost and other constraints, it is most likely that Ulster County will not utilize the alternative closest to the barracks.
- The project schedule for design and construction was reviewed.

Follow-up to Meeting:

- Chris sent a copy of the Project Map with Alternatives to Sergeant Brunner

369.005
2015-10-13
DPC

MEETING SUMMARY

STAKEHOLDER MEETING

For

**PIN 8758.04
KINGSTON RAIL TRAIL PROJECT
ULSTER COUNTY, NY**

At

**COUNTY OFFICE BUILDING
244 FAIR STREET, 6TH FLOOR LIBRARY
KINGSTON, NY 12401
OCTOBER 13, 2015 @ 10 AM**



I. Introduction and Attendance

A meeting was held at the County Office Building on October 13, 2015 at 10:00 A.M. The purpose of the meeting was to present the possible alternatives proposed for the Kingston Rail Trail to the stakeholders and address any and all concerns regarding the proposed project.

Please see the attached sign in sheet for a list of the meeting attendees and their respective contact information.

II. Matters Discussed – Overall Project

1. The County began the meeting by providing the project background.
 - a. The project began in 2010 but was put on hold due to funding issues. The project started back up when additional funding was obtained in 2014.
 - b. The objective is to connect the Hurley Rail Trail to the City of Kingston.
 - c. Barton & Loguidice (B&L) presented both alignment alternatives, the group focused primarily on the O&W alternative since it includes the majority of the impacts.
2. Central Hudson asked about specific trail features such as corridor width, emergency vehicle access, and surface material.
 - a. B&L stated the proposed width at this time is a 10 ft. wide trail with 2 ft. shoulders on each side. It was discussed that the width may need to vary in specific locations to minimize disturbance or to ensure adequate width for maintenance or emergency vehicle access.
 - b. Emergency vehicle access will need to be provided in accordance with Federal requirements.

III. Rolling Meadows Water Corporation (R.M.W.C.)

1. B&L presented a potential western terminus for the O&W alternative that could utilize the access path from the existing O&W to a pump house and tie into the existing Hurley Rail Trail.
2. R.M.W.C. confirmed the pump house is accessed on a daily basis by truck traffic. There are concerns over pedestrian traffic hindering maintenance vehicle access to the pump house.
3. R.M.W.C. confirmed that the access path floods frequently and that there are multiple test wells and springs located in the area of the proposed access at the western terminus. B&L acknowledged that the access path is in the floodplain and, if selected, mitigation will be determined during final design.
4. R.M.W.C. confirmed there is an aging water transmission line that runs parallel to the access path from the east side of the O&W to the pump house. This line has had leaks in the past and is approaching the end of its useful life, requiring replacement construction in the future.
 - a. B&L confirmed that the selected final alignment will be surveyed and all utilities will be located so impacts are minimized.
5. R.M.W.C. will look to see what record plans are available for their facilities in the project area and will provide them to the County and B&L.

6. R.M.W.C. feels that the "Alternative B-1 Alignment" (or Blue Route on the maps) would be the best for all parties involved as well as best for the overall form and function of the trail. The trail would stay out of the flood plain and come to meet the grade of the Hurley Rail Trail.
 - a. B&L Noted that the Blue Route would be better suited; however, B&L noted its belief that the area was wetlands and the trail might not be wide enough.
 - b. R.M.W.C. stated that the wetland areas has only back up recently due to old failing box tunnels that allowed water to flow under the original O&W right-of-way.

IV. Central Hudson Gas & Electric Corporation (CHG&E)

1. B&L presented the limits of the O&W alternative within Central Hudson's Right-of-Way.
2. Central Hudson stated that they are in the early stages of plan development for rebuilding its transmission facilities north of the substation.
 - a. Central Hudson emphasized that the scope of the project is to replace the poles and not relocate the poles. Also, the project will attempt to decrease the number of poles by replacing the existing 3 pole installations with 2 pole installations and increasing the spans from pole to pole.
 - b. CHG&E indicated that its project falls under Article VII of the NY Public Service Law.
 - c. The CHG&E project's schedule calls for preliminary design to be completed in February 2016 and construction to start in 2017.
 - d. B&L will coordinate with Central Hudson's engineers to ensure that both projects are technically feasible and compatible.
3. Central Hudson expressed that they do not oppose the project but would like to ensure that its rights as property owners are not infringed upon, and they are able to maintain access to its utilities.
4. Central Hudson expressed that they are more comfortable with providing a license agreement rather than an easement. The County and B&L indicated that the right-of-way process, as required through the federal funds involved, would dictate the type of easement that would be needed for this project. However, all parties will work together to develop a mutual agreement. The County will check with its Attorney if an irrevocable license could be used.
5. Central Hudson stated that they can provide general parameters of where they would like the trail to be located with respect to their new project, but exact locations will need to be confirmed upon final design.
 - a. B&L will contact the engineers for Central Hudson to coordinate designs.
 - b. The County asked Central Hudson to provide required design criteria in writing so B&L can progress the design and minimize any necessary re-design.
6. Central Hudson confirmed the 28 mile rebuild project will begin at the substation along the O&W and proceed north.

V. Ulster Savings

1. B&L presented the limits of the O&W within Ulster Savings' Right-of-Way.
2. Ulster Savings described a proposal that it previously submitted to the County for an easement. The proposal provides for an access path that would run perpendicular from Parcel 48.70-1-15.2, owned by the Hudson Valley Housing Development, to Parcel 48.70-1-7.2, owned by Ulster Savings Bank. The access path will cross the U&D Railroad Corridor with an at-grade crossing.

- a. Ulster Savings will confirm and or verify the width required for emergency vehicles according to the City of Kingston.
3. Ulster Savings has no objections to the proposed Kingston Rail Trail project but wants to make sure the project is mutually beneficial and does not inhibit or impact the housing development easement.

VI. Super 8 and Best Western

1. B&L presented the proposed project trailhead and parking lot along Washington Avenue.
2. Their major concern about the proposed project is that trail users will utilize the hotels' parking lots as overflow parking.
 - a. The County expressed that they would like to work with the adjacent hotels and make the proposed rail trail mutually beneficial. The hotels can treat the trail as an amenity.
3. Best Western indicated it was getting some business from the train operations on the U&D Corridor.
4. The County mentioned that if the trail was to extend to Kingston Plaza, the crossing at Washington Avenue would be signalized but there are currently no funds allotted for a signal.
 - a. All Stakeholders have concerns with safety at Washington Avenue and all support exploration of the installation of a signal.
 - b. Also discussed was the potential for a future project to install a traffic signal on Washington Avenue and consolidate the driveways to one location to help improve safety and navigation in the area.
5. The County confirmed the trail will not be open at night so lighting is not currently planned.
6. The project will investigate ways to link the hotels to the trail for use by their patrons, but prohibit use of their parking lots by non-patron trail users.

VII. Action Items

1. County
 - a. Schedule Public Informational Meeting
2. B&L
 - a. Contact design engineers for Central Hudson's rebuilding project.
3. Rolling Meadows
 - a. Provide record plans for pipe location along access path.
 - b. Provide any comments and concerns prior to Public Informational Meeting, tentatively scheduled for early December.
4. Central Hudson
 - a. Provide general design parameters, such as minimum offset from pole to trail edge and width between poles, to B&L. Exact locations will need to be confirmed.
 - b. Provide any comments and concerns prior to Public Informational Meeting, tentatively scheduled for early December.
5. Ulster Savings
 - a. Provide necessary geometry, width, etc., and type of access needed for emergency vehicles as required for their project.

PIN 8758.04
10/13/2015
Page 5 of 5

- b. Provide any comments and concerns prior to Public Informational Meeting, tentatively scheduled for early December 2015.

If there are any comments or corrections to these minutes, please provide them by October 27, 2015.



Engineers • Environmental Scientists • Planners • Landscape Architects

SIGN-IN SHEET

ULSTER COUNTY
P.I.N. 8758.04 - KINGSTON RAIL TRAIL
STAKEHOLDER MEETING OCTOBER 13, 2015 @ 10:00 AM

NAME	REPRESENTING	E-MAIL	PHONE #
Dan Rowke	B&L	drowke@bartonandlogiquice.com	518-218-1801
Dan Carey	B&L	dcarey@bartonandlogiquice.com	518-218-1801
John Eck	Ulster Savings Bank	jeck@ulstersavings.com	845-338-6322 x 3251
Chris White	U.C. Planning	cwhi@co.ulster.ny.us	(845) 340-3338
Dennis Doyle	LC Plannis	ddoy@co.ulster.ny.us	(845) 340-3339
Tom Baird	B&L	tbaird@bartonandlogiquice.com	518-218-1801
Andrew Emrich	UCDFW	aemr@co.ulster.ny.us	340-3125
Rebecca Maxwell	Supers	rebecca.maxwell.supers@gmail.com	(845) 338-3078
Wayne J. Mancioni	Central Hudson	WJmancioni@cehud.com	(845) 486-5534
Jessica Caserto	Central Hudson	jcaserto@cehud.com	(845) 486-5485
Chris Rottkamp	Central Hudson	crottkamp@cehud.com	(845) 486-5367
JEFF VOGT	ROLLING MEADOWS WATER CORP.	JEFF@ROLLINGMEADOWSWATER.COM	(845) 331-2201



MICHAEL P. HEIN
COUNTY EXECUTIVE

County Executive Mike Hein And The
Ulster County Planning Department Invite You
To A Public Information Meeting Regarding The

Kingston Rail Trail Project: ***Linking the City of Kingston to the Hurley Rail Trail***

December 8, 2015- 7:00 PM
County Office Building
244 Fair Street, Kingston
Legislative Chambers- 6th Floor



The Kingston Rail Trail project (PIN 8758.04) is a federally-funded initiative to connect the City of Kingston to the Hurley (O&W) Rail Trail.

The County's engineering consultant, Barton & Loguidice, will present alternative trail routes that were evaluated and discuss the preliminary trail plans for the preferred trail alternative.

Public input will be welcomed following the presentation.

***For more information, please contact
Chris White at Ulster County Planning- (845) 340-3338***



Kingston Rail Trail
Linking the City of Kingston to the O&W Rail Trail

Agenda

- Project Team and Introductions
- Project Overview
 - Funding and Schedule
 - Objectives
 - Alternatives
 - Preferred Alternative
- Existing Conditions
- Environmental Studies

Kingston Rail Trail
Linking the City of Kingston to the O&W Rail Trail

Locally Administered Federal Aid Project

- \$ 1,375,000 Total Project Funding Currently Allocated
- 80% Federal/State Funds Through the Surface Transportation Program (STP-FLEX)
- 20% State Dedicated Funds
- Draft Ulster County Transportation Committee (UCTC) Transportation Improvement Program (TIP) includes Additional Funds to bring the Project Budget to \$2.03M

Kingston Rail Trail

Linking the City of Kingston to the O&W Rail Trail

Schedule

- Begin ROW Process January 2016
- Design Approval March 2016
- Design and ROW Complete August 2016
- Begin Bid Process October 2016
- Award Construction Contract January 2017
- Construction Start April 2017
- Construction Complete July 2017

Kingston Rail Trail

Linking the City of Kingston to the O&W Rail Trail

Project Objectives

- Establish an Off-Road Pedestrian & Bicycle Trail Linking the City of Kingston to the Towns of Hurley & Ulster (a 13 mile segment)
- Expand the County's Rail Trail Network into a World-Class Tourism Destination and First-Class Quality of Life Amenity
- Link to the Kingston Green Line, Connections to Businesses, & Services in Kingston and the Towns of Ulster and Hurley
- Enhance Recreational Opportunities and Improve Quality of Life
- Create a Multi-Use Trail Hub in the City of Kingston

Kingston Rail Trail Project

Linking the City of Kingston to the O&W Rail Trail

Alternative 2 U&D/Route 209

US Route 209

Alternative 1 O&W

Route 209 Bridge over the Esopus Creek

C9 Bridge over the Esopus Creek

Washington Avenue Project Terminus & Trailhead

Kingston Plaza

Alternative 1 – O&W = 1.8 mi

Alternative 2 – U&D/Route 209 = 1.8 mi

Kingston Rail Trail Alternative Comparison

Preliminary Design

- Mapping & Data Gathering – Field Reconnaissance
 - Development of Digital Mapping
 - Property Boundaries, Ulster County Property Data
- Identify Challenges – Crossing the Esopus & Thruway
 - Cost and Feasibility
- Identify Property & Potential Environmental Impacts
 - Adjacent Landowners, Wetlands, Stormwater Management, Access
- Estimate Costs – Final Design, Right of Way, Construction
 - Limited Funding Available, Federal-Aid Project Requirements

Kingston Rail Trail

Linking the City of Kingston to the O&W Rail Trail

Alternative Comparison

<u>Alternative 1 – O&W</u>	<u>Alternative 2 – U&D/RT 209</u>
<ul style="list-style-type: none">• No Esopus Creek Crossing• Acquisitions/Easements Required• Minor Wetland Impacts• No Effect on Historic Properties• Coordination with CHG&E for its Project in the Corridor	<ul style="list-style-type: none">• Requires 2 Esopus Creek Crossings• No Property Acquisitions• Minor Wetland Impacts• No Effect on Historic Properties• Requires Permits from NYSDOT
Estimated Total Project Cost = \$1.9 M	Estimated Total Project Cost = \$6.3 M

Kingston Rail Trail

Washington Avenue to Kingston Plaza



- Right of Way Involvement, Encroachments
- Requires Signalization at Washington Avenue for Pedestrian Crossing
- Estimated Total Cost = \$ 375,000

Kingston Rail Trail
Linking the City of Kingston to the O&W Rail Trail

Washington Avenue to Kingston Plaza



- Requires Signalization at Washington Avenue for Pedestrian Crossing
- Right of Way Involvement, Encroachments
- Estimated Total Cost = \$ 375,000

Kingston Rail Trail
Linking the City of Kingston to the O&W Rail Trail

Right of Way

Chris, Developing Slide to show ROW from Ulster SB, CHG&E, etc.

Preferred Alternative

The O&W Route (Alternative 1) is the Preferred Alternative

- Meets Objectives, Proposed Budget, & Schedule
- Unimproved Corridor Currently Informally Utilized by Walkers, Runners, & Mountain Bikers
- Logical Access Points and Links to Existing Trail
- Engineering and Construction Not Overly Complicated
- Most Direct Route From City of Kingston to Hurley Rail Trail













Kingston Rail Trail

Linking the City of Kingston to the O&W Rail Trail

Existing Conditions – Alt. 1 - O&W



Cut slope along eastern side of corridor

Utility poles owned by CHG&E
New Transmission System
Planned by CHG&E

Rail Trail Section



2' Shoulder 10' Multi-use Trail 2' Shoulder

Typical Trail Section Throughout O&W Corridor

Kingston Rail Trail

Linking the City of Kingston to the O&W Rail Trail

Existing Conditions – Alt. 1 – O&W



Existing Steel and Timber Structure

Potential Replacement Example







Opportunities



Proposed Trailhead at Washington Avenue

The Proposed Kingston Rail Trail Connection to the O&W Rail Trail



Opportunities

The O&W Rail Trail Extends Approximately 13 miles from the Town of Hurley Southwest through the Town of Marbletown and into the Town of Rochester



Open Up Scenic Vistas,
Improve Creek Access





Trail Surfaces

- Stone Dust
- Various Gradations of Stone or Stone and Sand and Clay Additives
- Conventional Asphalt Pavement
- Asphalt Millings / Sand Mixture
- Porous Materials
- Mechanically Constrained Stone
- Modified Stabilized Soils



Considerations:
Long term Sustainability, Durability, Maintenance, Wetlands, Federal-aid Project, Consistency with Adjacent Trail, CHG&E Access, ADA Compliance, Cost

Recommended Surface is - Asphalt Pavement

Social, Economic and Environmental Considerations

- Include Quality of Life and Public Health
- Benefits for All Social Groups
- Positive for Regional and Local Economies
- Positive Impacts on Local Businesses
- Initial Screenings Completed
- Wetland Delineations
- Endangered Species
- No Historic Impacts

Approvals

- National Environmental Policy Act (NEPA)
- State Environmental Quality Review Act (SEORA)

Wetland Adjacent to Trail Near Washington Avenue

Preferred Alternative

The O&W Route (Alternative 1) is the Preferred Alternative

- Meets Objectives, Proposed Budget, & Schedule
- Unimproved Corridor Currently Informally Utilized by Walkers, Runners, & Mountain Bikers
- Logical Access Points and Links to Existing Trail
- Engineering and Construction Not Overly Complicated
- Most Direct Route From City of Kingston to Hurley Rail Trail

Thank you!

Project materials including this presentation can be found at:
<http://ulstercountyny.gov/planning/krtip>

To provide your thoughts regarding the project, please contact:
Mr. Christopher White, Deputy Director of Planning
 Please reference the "Kingston Rail Trail"

Telephone: (845) 340-3338
 Email: cwhi@co.ulster.ny.us
 Mailing Address:
 Ulster County Planning Department
 244 Fair Street, PO Box 1800
 Kingston, NY 12402




PUBLIC INFORMATIONAL MEETING
PIN 8758.04 – Kingston Rail Trail
Tuesday, December 8, 2015 at 7:00 PM

Public Input:

1. Why is asphalt the best option?
 - a. B&L explained that the trail surface requires durability. If federal money is used, the surface needs to be durable enough to last a minimum of 10 years. Also, asphalt allows for Central Hudson Gas & Electric (CHG&E) maintenance vehicles and allows for easy trail maintenance (i.e. snow removal).
2. How will wetlands be protected within the 100' buffer?
 - a. B&L explained that by simply pitching the trail away from the wetland or installing an infiltration swale between the trail and the wetland will prevent runoff from flowing directly from the asphalt trail into the wetland.
3. To avoid any confusion with the trail network, the trail should be called the "Kingston O&W Rail Trail" since it is on the O&W alignment and will connect to the O&W Trail (Hurley Rail Trail).
 - a. Comment noted and the County will be evaluating naming conventions.
4. Will Right-of-Way go through Ulster County or through the City?
 - a. The County
5. Can the parking lot be combined with the hotel's parking lot?
 - a. It is not the intent of the project to take parking away from hotel patrons. Super 8 expressed concerns of security for hotel patrons.
6. A positive impact of the trail was mentioned. Studies have shown that when a trail reaches 12/13+ miles, it attracts a larger regional draw.
7. There are concerns of crossing Washington Ave. Are there long-term plans to make Washington Avenue multi-modal?
 - a. The County needs to determine the future of the U&D corridor before moving forward with future plans of Washington Ave.
8. Has a pedestrian bridge over Washington Ave. been considered in order to get trail users across Washington Ave?
 - a. The County needs to determine the future of the U&D corridor. If the trail continues on the east side of Washington Ave., multiple crossing alternatives will be considered.

9. Another positive impact of the proposed trail was mentioned. By providing an off-road pedestrian facility, the municipalities will save money for special events (i.e. half-marathons) in that the municipalities will not need to coordinate with the local police in order to block off streets.
 - a. The extension of the trail will open up more opportunities to relieve local roads of the need to run special events (i.e. half-marathons).
10. What will CHG&E maintenance vehicles be doing along the trail corridor?
 - a. CHG&E will need access to their utility poles along the O&W corridor. Coordination is on-going with CHG&E engineers to ensure both projects are technically feasible and compatible.
11. What will be done to accommodate CHG&E maintenance vehicles?
 - a. A thicker (deeper) stone layer can be used to accommodate heavier loads of their maintenance vehicles.
12. Where does the maintenance money come from? The trail will be built with federal and state funds but with what funds will the trail be maintained?
 - a. The County will fund the maintenance which is estimated to be \$1000/mile for maintenance (i.e. snow removal, leave removal, minor asphalt patch work).
13. Is there an issue with installing a parking lot on Washington Ave.? There are issues with access management currently on Washington Ave. and adding another access point may create more issues.
 - a. These concerns are being investigated as part of the design process.
14. Will there be water access from the trail to the Esopus Creek? Perhaps a picnic area along the shoreline or fishing access point? There are not many access points to the Esopus for trail users and vice versa. There are several positive impacts by providing a location for creek users to pull off and rest.
 - a. Yes, these potential opportunities are being investigated. One obstacle could be property impacts.
15. How many spaces will be provided in the parking lot along Washington Ave.? The lot shown does not appear to contain enough spots.
 - a. The drawing is a concept at this point and additional parking opportunities are being investigated.
16. Has a possible re-route to tie into Forsyth Park and Dietz Stadium rather than Washington Ave. been considered? It will allow for ample parking and providing a trailhead away from Washington Ave. may prevent more traffic congestion.
 - a. This option will be investigated.

17. Has a route been considered to go under Washington Ave. rather than across it or over it?
 - a. Environmental, Floodplain, and Property impacts will significantly slow progress which may lead to the loss of federal funding. Floodplain and floodway are major considerations since federal dollars cannot typically be used for project in a floodplain.

18. Is there a deadline to build the trail with the federal funding?
 - a. B&L explained that there is a deadline of 10 years. If the trail is not constructed within 10 years, the funding can be pulled and the County will have to pay back the money that has been spent.

19. Will there be a location for restrooms?
 - a. It will be looked into during final design.

20. Has a connection to Coleman High School been considered?
 - a. It will be looked into during final design.

21. There is a large bird population that migrates from the Ashokan Reservoir towards the Hudson River. Will facilities for bird watchers be provided?
 - a. It will be looked into during final design.

(Do not use staples)

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Affix
Postage
Here

ULSTER COUNTY PLANNING DEPARTMENT
244 FAIR STREET, PO BOX 1800
KINGSTON, NY 12402

ATTN: MR. CHRISTOPHER WHITE, DEPUTY DIRECTOR OF PLANNING

(fold)



PUBLIC INFORMATIONAL MEETING SIGN-IN SHEET

PIN 8758.04 - Kingston Rail Trail

Tuesday, December 8, 2015 at 7:00 PM

County Office Building, 244 Fair Street, Kingston: 6th Floor/ Legislative Chambers



NAME	ADDRESS	E-MAIL	PHONE #
Patrick Goodwin	Woodstock Land Conservancy		
Carol Durkin	West Hurley, NY		
Kenneth Smith	FRIENDS OF CAISKILL MOUNTAIN RAIL TRAIL SUBODHACK LAND CONSERVANCY		
Wally & Linda Cook	Hurley Rail Trail Committee		
GEORGE J. DAGIS	SAUGERTIES NY	GJDAGIS@HVC.RR.COM	
Kristen Wilson	Cornell Coop. Ext.	kew67@cornell.edu	(845) 340 3990x344
Hector Pedriquez			
CARL PEZZINO	PEZZINO@HVC.RR.COM		
Rebecca Maxwell	4877 West Kingston Ave	Rebecca.maxwell.super@v. @gmail	845 388.3088
Emily Flynn	KINGSTON	RIICE-FRIENDLYKINGSTON@GMAIL.COM	
JOHN YOU'NB	112 JEFFREY LN	HURLEY -	339-8302
JOHN & BERNICE MORROW	PO 117	LK KAT	12449 594-1651
KARL BEARD	- NPS / HYDE PARK, NY		
STEVE RICE	- CHAIR UGTAC		
NICK MERCURIO	into on file	FRONICK@HVC.COM	687-2312



PUBLIC INFORMATIONAL MEETING SIGN-IN SHEET

PIN 8758.04 - Kingston Rail Trail

Tuesday, December 8, 2015 at 7:00 PM

County Office Building, 244 Fair Street, Kingston: 6th Floor/ Legislative Chambers



Engineers • Environmental Scientists • Planners • Landscape Architects

NAME	ADDRESS	E-MAIL	PHONE #
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Tim Wudemann			
Jesse Grossbachin			
Kelcy Tirapell			



PUBLIC INFORMATIONAL MEETING SIGN-IN SHEET

PIN 8758.04 – Kingston Rail Trail

Tuesday, December 8, 2015 at 7:00 PM

County Office Building, 244 Fair Street, Kingston: 6th Floor/ Legislative Chambers



NAME

ADDRESS

E-MAIL

PHONE #

*Cara Gentry 38 ways Ave Kingston
Kathy Nola on file*



PUBLIC INFORMATIONAL MEETING SIGN-IN SHEET

PIN 8758.04 – Kingston Rail Trail

Tuesday, December 8, 2015 at 7:00 PM

County Office Building, 244 Fair Street, Kingston: 6th Floor/ Legislative Chambers



NAME

ADDRESS

E-MAIL

PHONE #

Harris Sofie PO Box 577 King harris@westwoodrealty.com
 Wilray Stelden willard@hrc.ny.us

Appendix H
Right-of-Way Information

PRELIMINARY RIGHT-OF-WAY ACQUISITIONS TABLE

PIN 8758.04 KINGSTON RAIL TRAIL

CITY OF KINGSTON & TOWNS OF HURLEY & HURLEY, ULSTER COUNTY

JUNE 8, 2017

Map#	Parcel#	Reputed Owners	Tax Map Information	Deed		Size of Total Parcel (SF)	Size of Total Parcel (Acres)	Size of Portion to be Acquired (SF)	Size of Portion to be Acquired (Acres)	% of Parcel Area Taken	Type of Acquisition (FEE/PE/TE)	Comments
				Liber	Page							
1	1	CENTRAL HUDSON GAS & ELECTRIC	55.8-8-5	1139	174	157,468	3.6	90469	2.1	57.5%	PE	Multi-use path construction
2	2	CENTRAL HUDSON GAS & ELECTRIC	48.17-1-10.1	1139	174	457,621	10.5	112675	2.6	24.6%	PE	Multi-use path construction
3	3	CENTRAL HUDSON GAS & ELECTRIC	48.70-1-4	1139	174	147,710	3.4	89164	2.0	60.4%	PE	Multi-use path construction
4	4	ADIRONDACK TRANSIT LINES	48.70-1.42	1576	160	191,664	4.4	11568	0.3	6.0%	PE	Multi-use path construction
					1136	895	46,438	1.1	11284	0.3	24.3%	PE
5	5	NYS THRUWAY AUTHORITY				19,046	0.4	9642	0.2	50.6%	PE	Multi-use path construction
									-	-	-	
6	6	ULSTER SAVINGS BANK	48.71-2-1	1902	26	145,410	3.3	145410	3.3	100.0%	FEE	Multi-use path construction

ROW PROJECT ESTIMATE

PROJECT: PIN 8758.04 – Kingston Rail Trail
 COUNTY: Ulster

.. Preliminary
 X Programming
 .. Updated
 LEADTIME REQUIRED
 STAFF CONSULTANT

1) Property Costs, # of Props.	5	\$40,000.00		
2) Interest		\$0.00		
* 3) Appraisals		\$15,000.00		
4) Condemnation Factor		\$0.00		
* 5) Title Search	a) # Certs.	\$12,000.00		
	b) # Abs.	\$0.00		
6) Certs. & Closing Papers		\$6,000.00		
7) Negotiations		\$6,500.00		
8) Supreme Court		\$0.00		
9) Proration of Taxes		\$6,105.00		
10) Mortgage Prepayment Fees		N/A		
11) Demolition Costs, # of Buildings		\$0.00		
(Line 2a) SUB-TOTAL		\$85,605.00		
12) Relocation Asst., # Relocs.				
13) Moving Expenses	a) Families b) Business c) In Lieu of d) Re-Estab.			
14) Repl. Housing	a) Housing Supp. b) Rental Supp.			
15) Last Resort Housing	a) Owner b) Tenant			
16) Mortgage Int. Diff.				
17) Closing Costs				
(Line 2b) SUB-TOTAL		\$0.00		
TOTALS		\$85,605.00		
PREPARED BY	DATE	CHECKED BY	DATE	
ACQ. EST (#1-11)				
PREPARED BY	DATE	CHECKED BY	DATE	
ACQ. EST (#1-11)				

*Costs for Incidental Phase Authorization; remaining costs for Acquisition Phase Authorization

ROW 353C

Appendix I

Smart Growth Screening Tool

Smart Growth Screening Tool

PIN 8758.04

Prepared By: Barton and Loguidice D.P.C.

Smart Growth Screening Tool (STEP 1)

NYS DOT & Local Sponsors – Fill out the Smart Growth Screening Tool until the directions indicate to **STOP** for the project type under consideration. For all other projects, complete answering the questions. For any questions, refer to [Smart Growth Guidance](#) document.

Title of Proposed Project: PIN 8758.04 Kingston Rail Trail

Location of Project: City of Kingston and Towns of Ulster and Hurley, Ulster County, New York

Brief Description: The project will establish a multi-use trail along the abandoned O&W Railroad corridor to provide a link between the City of Kingston and the Town of Hurley.

A. Infrastructure:

Addresses SG Law criterion a. –

(To advance projects for the use, maintenance or improvement of existing infrastructure)

1. Does this project use, maintain, or improve existing infrastructure?

Yes

No

N/A

Explain: (use this space to expand on your answers above – the form has no limitations on the length of your narrative)

The proposed shared-use path will utilize the abandoned O&W Railroad corridor to connect the Hurley Rail Trail to the City of Kingston which will provide non-motorized transportation a safe off-road facility to travel between the City of Kingston and High Falls, approximately 11 miles. The existing railroad ballast will be utilized for a foundation for the proposed shared-use path. The corridor is currently used by walkers, runners, and mountain bikers but the narrow width, uneven terrain, and limited access prevents potential users from utilizing the trail. The corridor will be widened to 10 ft. with 2 ft. shoulders and will be constructed with a surface material to accommodate all potential users. In areas of steep embankments along the Esopus Creek, pedestrian/bicyclist railing will be installed.

Maintenance Projects Only

a. Continue with screening tool for the four (4) types of maintenance projects listed below, as defined in NYS DOT PDM Exhibit 7-1 and described in 7-4:

<https://www.dot.ny.gov/divisions/engineering/design/dqab/pdm>

➔ Shoulder rehabilitation and/or repair;

Smart Growth Screening Tool

- ➔ Upgrade sign(s) and/or traffic signals;
- ➔ Park & ride lot rehabilitation;
- ➔ 1R projects that include single course surfacing (inlay or overlay), per Chapter 7 of the NYSDOT Highway Design Manual.

b. For all other maintenance projects, **STOP here**. Attach this document to the programmatic [Smart Growth Impact Statement and signed Attestation](#) for Maintenance projects.

For all other projects (**other than maintenance**), continue with screening tool.

B. Sustainability:

NYSDOT defines Sustainability as follows: A sustainable society manages resources in a way that fulfills the community/social, economic and environmental needs of the present without compromising the needs and opportunities of future generations. A transportation system that supports a sustainable society is one that:

- ➔ Allows individual and societal transportation needs to be met in a manner consistent with human and ecosystem health and with equity within and between generations.
- ➔ Is safe, affordable, and accessible, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
- ➔ Protects and preserves the environment by limiting transportation emissions and wastes, minimizes the consumption of resources and enhances the existing environment as practicable.

For more information on the Department's Sustainability strategy, refer to Appendix 1 of the Smart Growth Guidance and the NYSDOT web site, www.dot.ny.gov/programs/greenlites/sustainability

(Addresses SG Law criterion j : to promote sustainability by strengthening existing and creating new communities which reduce greenhouse gas emissions and do not compromise the needs of future generations, by among other means encouraging broad based public involvement in developing and implementing a community plan and ensuring the governance structure is adequate to sustain and implement.)

1. Will this project promote sustainability by strengthening existing communities?

Yes No N/A

2. Will the project reduce greenhouse gas emissions?

Yes No N/A

Explain: (use this space to expand on your answers above)

Smart Growth Screening Tool

1. The construction of the proposed Kingston Rail Trail will foster a sense of community by instituting alternative means of transportation for the general public in multiple municipalities. The proposed project will provide an off-road connection between the City of Kingston and the Towns of Ulster and Hurley. If residents have access to non-motorized infrastructure and have a choice in their method of transportation, they will be more inclined to use the trail rather than an automobile.

2. By providing a safe, efficient, and accessible off-road multi-modal connection to schools, employers, businesses, and services, dependency on automobiles is reduced and, therefore, harmful emissions from car exhausts will be reduced. If residents have access to non-motorized infrastructure and have a choice in their method of transportation, they will be more inclined to use the trail rather than an automobile.

C. Smart Growth Location:

Plans and investments should preserve our communities by promoting its distinct identity through a local vision created by its citizens.

(Addresses SG Law criteria b and c: to advance projects located in municipal centers; to advance projects in developed areas or areas designated for concentrated infill development in a municipally approved comprehensive land use plan, local waterfront revitalization plan and/or brownfield opportunity area plan.)

1. Is this project located in a developed area?

Yes No N/A

2. Is the project located in a municipal center?

Yes No N/A

3. Will this project foster downtown revitalization?

Yes No N/A

4. Is this project located in an area designated for concentrated infill development in a municipally approved comprehensive land use plan, waterfront revitalization plan, or Brownfield Opportunity Area plan?

Yes No N/A

Explain: (use this space to expand on your answers above)

1.& 2. The project is located adjacent to the municipal center for the City of Kingston. It will allow for pedestrians and bicyclists to travel from the Town of Hurley to the developed area of the City of Kingston.

3. The proposed project will foster downtown revitalization in that it will: promote local spending by recreation users, reduce infrastructure costs, and increase revenues for local government by sales taxes associated with local spending.

4. The project is located in an area designated for concentrated infill development in

Smart Growth Screening Tool

that it is located on underutilized land where the infrastructure of the abandoned O&W Railroad is already in place. It is consistent with the comprehensive land use plan in that the Ulster County Transportation Council (UCTC) developed the Non-Motorized Transportation Plan in an effort to establish a county-wide, sustainable non-motorized transportation system that will “reduce fossil fuel consumption, enable freedom of mobility, encourage more physical activity, allow children to walk or bike to school, reduce traffic congestion, and create economic growth” through recreational tourism. The project is consistent with the Non-Motorized Transportation Plan, which identifies the need to link regional trail segments to achieve a seamless non-motorized transportation network throughout the County.

D. Mixed Use Compact Development:

Future planning and development should assure the availability of a range of choices in housing and affordability, employment, education transportation and other essential services to encourage a jobs/housing balance and vibrant community-based workforce.

(Addresses SG Law criteria e and i: to foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development and the integration of all income groups; to ensure predictability in building and land use codes.)

1. Will this project foster mixed land uses?
Yes No N/A
2. Will the project foster brownfield redevelopment?
Yes No N/A
3. Will this project foster enhancement of beauty in public spaces?
Yes No N/A
4. Will the project foster a diversity of housing in proximity to places of employment and/or recreation?
Yes No N/A
5. Will the project foster a diversity of housing in proximity to places of commercial development and/or compact development?
Yes No N/A
6. Will this project foster integration of all income groups and/or age groups?
Yes No N/A
7. Will the project ensure predictability in land use codes?

Smart Growth Screening Tool

Yes No N/A

8. Will the project ensure predictability in building codes?

Yes No N/A

Explain: (use this space to expand on your answers above)

3. The construction of the multi-use trail will enhance the beauty of public spaces by transforming an overgrown abandoned railroad corridor into a beautiful recreational facility. The development will promote tourism and local spending which will serve as an economic benefit for the neighboring businesses.

6. The completion of the project will provide opportunities for senior citizens to be more physically active, for children to walk or bike to school, for adults to commute to work without vehicles, and connect the local communities.

E. Transportation and Access:

NYS DOT recognizes that Smart Growth encourages communities to offer a wide range of transportation options, from walking and biking to transit and automobiles, which increase people's access to jobs, goods, services, and recreation.

(Addresses SG Law criterion f: to provide mobility through transportation choices including improved public transportation and reduced automobile dependency.)

1. Will this project provide public transit?

Yes No N/A

2. Will this project enable reduced automobile dependency?

Yes No N/A

3. Will this project improve bicycle and pedestrian facilities (such as shoulder widening to provide for on-road bike lanes, lane striping, crosswalks, new or expanded sidewalks or new/improved pedestrian signals)?

Yes No N/A

(Note: Question 3 is an expansion on question 2. The recently passed Complete Streets legislation requires that consideration be given to complete street design features in the planning, design, construction, reconstruction and rehabilitation, but not including resurfacing, maintenance, or pavement recycling of such projects.)

Explain: (use this space to expand on your answers above)

Smart Growth Screening Tool

2.&3. The proposed project will not provide public transit but rather, it will promote the use of alternative modes of transportation whether that be walking, running, biking, skating, or any other non-vehicular method of transportation. By providing an off-road facility for pedestrians and bicyclists, the dependency on automobiles is reduced because people will have more options to travel from the Town of Hurley to the City of Kingston. Currently, there is no convenient route for non-motorized traffic to travel from Hurley to Kingston other than the high speed and heavy traffic roadways. The completion of the Kingston Rail Trail will provide safe accommodations to travel between the municipalities.

F. Coordinated, Community-Based Planning:

Past experience has shown that early and continuing input in the transportation planning process leads to better decisions and more effective use of limited resources. For information on community based planning efforts, the MPO may be a good resource if the project is located within the MPO planning area.

(Addresses SG Law criteria g and h: to coordinate between state and local government and inter-municipal and regional planning; to participate in community based planning and collaboration.)

1. Has there been participation in community-based planning and collaboration on the project?

Yes No N/A

2. Is the project consistent with local plans?

Yes No N/A

3. Is the project consistent with county, regional, and state plans?

Yes No N/A

4. Has there been coordination between inter-municipal/regional planning and state planning on the project?

Yes No N/A

Explain: (use this space to expand on your answers above)

1. Public Informational Meeting's will be held to receive the community's feedback about the proposed project and address any concerns moving forward.

2. & 3. The project is consistent with the Ulster County's "Long Range Transportation Plan" as well as the "Non-Motorized Transportation Plan" which states that pedestrian accommodations are a top priority. The main objective for both plans is to establish a county-wide, sustainable non-motorized transportation system that will "reduce fossil fuel consumption, enable freedom of mobility, encourage more physical activity, allow children to walk or bike to school, reduce traffic congestion, and create economic growth" through recreational tourism.

4. The project is consistent with state plans and coordination between the county and the

Smart Growth Screening Tool

state has been ongoing.

G. Stewardship of Natural and Cultural Resources:

Clean water, clean air and natural open land are essential elements of public health and quality of life for New York State residents, visitors, and future generations. Restoring and protecting natural assets, and open space, promoting energy efficiency, and green building, should be incorporated into all land use and infrastructure planning decisions.

(Addresses SG Law criterion d :To protect, preserve and enhance the State's resources, including agricultural land, forests surface and ground water, air quality, recreation and open space, scenic areas and significant historic and archeological resources.)

1. Will the project protect, preserve, and/or enhance agricultural land and/or forests?

Yes No N/A

2. Will the project protect, preserve, and/or enhance surface water and/or groundwater?

Yes No N/A

3. Will the project protect, preserve, and/or enhance air quality?

Yes No N/A

4. Will the project protect, preserve, and/or enhance recreation and/or open space?

Yes No N/A

5. Will the project protect, preserve, and/or enhance scenic areas?

Yes No N/A

6. Will the project protect, preserve, and/or enhance historic and/or archeological resources?

Yes No N/A

Explain: (use this space to expand on your answers above)

Smart Growth Screening Tool

2. The project will protect groundwater and adjacent waterbodies by promoting sheet flow and allowing water to infiltrate the ground naturally. The proposed trail will maintain the existing drainage patterns as much as possible.

3. Air quality will be enhanced by reducing the dependency on automobiles which will reduce the amount of pollutants expelled into the atmosphere.

4. The project will enhance recreation by allowing people to commute from the Town of Hurley and the City of Kingston by walking or biking.

6. The project is located within a mapped archeological sensitive area but SHPO has determined the project will have No Effect upon cultural resources.

Smart Growth Screening Tool

Smart Growth Impact Statement (STEP 2)

NYS DOT: Complete a Smart Growth Impact Statement (SGIS) below using the information from the Screening Tool.

Local Sponsors: The local sponsors are not responsible for completing a Smart Growth Impact Statement. Proceed to [Step 3](#).

Smart Growth Impact Statement

PIN:

Project Name:

Pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act. This project has been determined to meet the relevant criteria, to the extent practicable, described in ECL Sec. 6-0107. Specifically, the project:

-
-
-
-
-
-

This publically supported infrastructure project complies with the state policy of maximizing the social, economic and environmental benefits from public infrastructure development. The project will not contribute to the unnecessary costs of sprawl development, including environmental degradation, disinvestment in urban and suburban communities, or loss of open space induced by sprawl.

Smart Growth Screening Tool

Review & Attestation Instructions (STEP 3)

Local Sponsors: Once the Smart Growth Screening Tool is completed, the next step is to submit the project certification statement (**Section A**) to Responsible Local Official for signature. After signing the document, the completed Screening Tool and Certification statement should be sent to NYSDOT for review as noted below.

NYSDOT: For state-let projects, the Screening Tool and SGIS is forwarded to Regional Director/ RPPM/Main Office Program Director or designee for review, and upon approval, the attestation is signed (**Section B.2**). For locally administered projects, the sponsor's submission and certification statement is reviewed by NYSDOT staff, the appropriate box (**Section B.1**) is checked, and the attestation is signed (Section B.2).

A. CERTIFICATION (LOCAL PROJECT)

I HEREBY CERTIFY, to the best of my knowledge, all of the above to be true and correct.

Preparer of this document:



Signature

8/3/16

Date

Engineer III

Title

Daniel P. Carey

Printed Name

Responsible Local Official (for local projects):

Signature

Date

Title

Printed Name

Smart Growth Screening Tool

B. ATTESTATION (NYSDOT)

1. I HEREBY:

Concur with the above certification, thereby attesting that this project is in compliance with the State Smart Growth Public Infrastructure Policy Act

Concur with the above certification, with the following conditions (information requests, confirming studies, project modifications, etc.):

(Attach additional sheets as needed)

do not concur with the above certification, thereby deeming this project ineligible to be a recipient of State funding or a subrecipient of Federal funding in accordance with the State Smart Growth Public Infrastructure Policy Act.

2. NOW THEREFORE, pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act, to the extent practicable, as described in the attached Smart Growth Impact Statement.

NYSDOT Commissioner, Regional Director, MO Program Director,
Regional Planning & Programming Manager (or official designee):

Signature

Date

Title

Printed Name

Appendix J

Estimate

**PROJECT COST ESTIMATE
KINGSTON RAIL TRAIL
FINAL DESIGN REPORT**

CITY OF KINGSTON AND TOWNS OF HURLEY AND ULSTER, ULSTER COUNTY

January 23, 2018

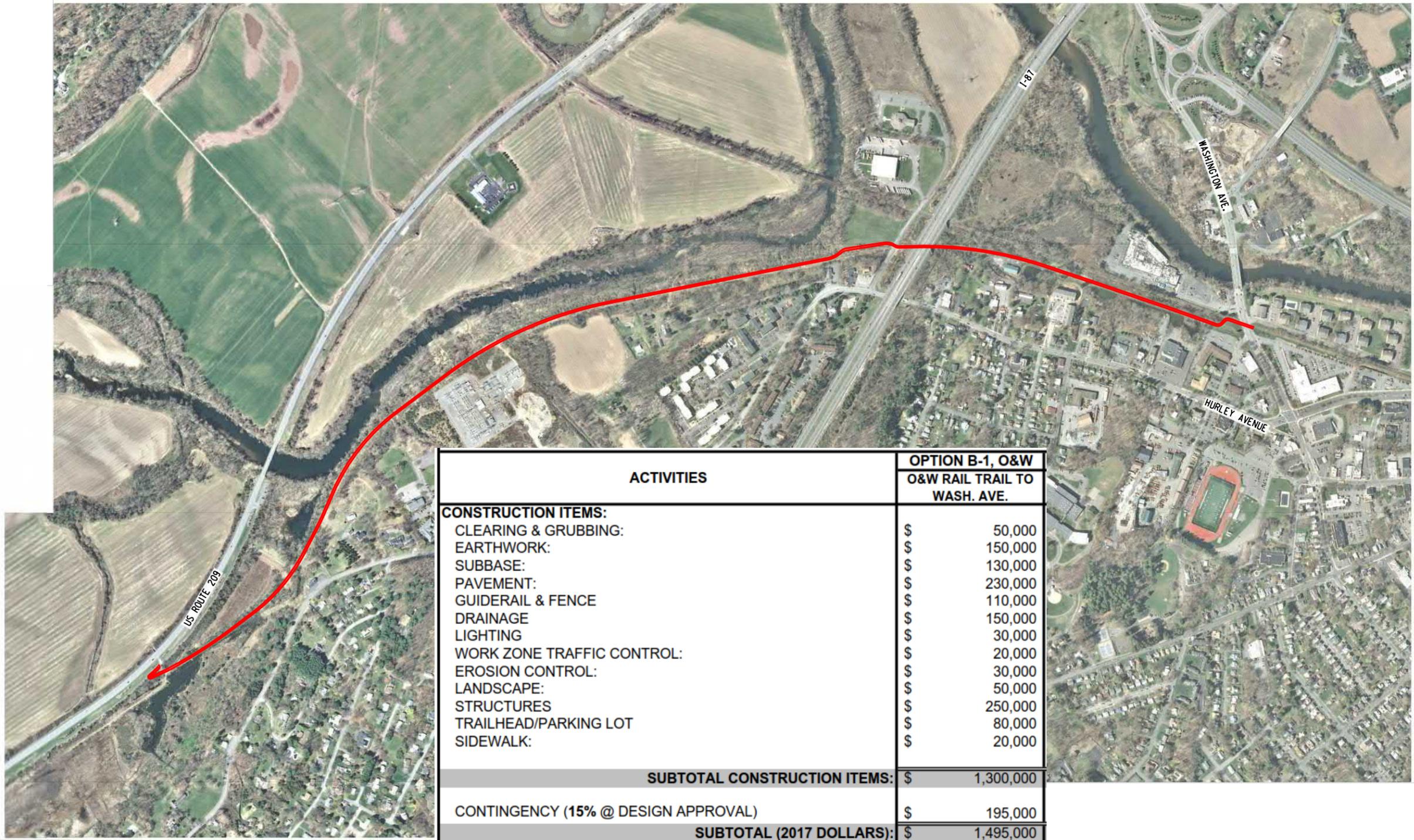
B&L JN 369.005.121

EXHIBIT 1.5-B COMPARISON OF ALTERNATIVES CONSTRUCTION PROJECT COSTS		
ACTIVITIES	OPTION B-1, O&W	OPTION B-2, U&D
	O&W RAIL TRAIL TO WASH. AVE.	O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:		
CLEARING & GRUBBING:	\$ 50,000	\$ 25,000
EARTHWORK:	\$ 150,000	\$ 174,000
SUBBASE:	\$ 130,000	\$ 122,000
PAVEMENT:	\$ 230,000	\$ 210,000
GUIDERAIL & FENCE	\$ 110,000	\$ 358,000
DRAINAGE	\$ 150,000	\$ 20,000
LIGHTING	\$ 30,000	\$ 25,000
WORK ZONE TRAFFIC CONTROL:	\$ 20,000	\$ 50,000
EROSION CONTROL:	\$ 30,000	\$ 30,000
LANDSCAPE:	\$ 50,000	\$ 50,000
STRUCTURES	\$ 250,000	\$ 3,000,000
TRAILHEAD/PARKING LOT	\$ 80,000	\$ 80,000
SIDEWALK:	\$ 20,000	\$ 20,000
SUBTOTAL CONSTRUCTION ITEMS:	\$ 1,300,000	\$ 4,164,000
CONTINGENCY (15% @ DESIGN APPROVAL)	\$ 195,000	\$ 625,000
SUBTOTAL (2017 DOLLARS):	\$ 1,495,000	\$ 4,789,000
FIELD CHANGE ORDER (USE 5%)	\$ 75,000	\$ 240,000
SURVEY	\$ 30,000	\$ 90,000
MOBILIZATION (4%)	\$ 59,000	\$ 192,000
SUBTOTAL (2017 DOLLARS):	\$ 1,659,000	\$ 5,311,000
EXPECTED INFLATION AWARD AMOUNT (2018) +1.5%	\$ 30,000	\$ 80,000
TOTAL PROJECT CONSTRUCTION COSTS (2018 DOLLARS):	\$ 1,689,000	\$ 5,391,000
ENGINEERING	\$ 220,000	\$ 500,000
CONSTRUCTION INSPECTION & ADMINISTRATION	\$ 130,000	\$ 500,000
ROW INCIDENTALS AND ACQUISITIONS	\$ 85,000	\$ -
TOTAL COSTS:	\$ 2,124,000	\$ 6,391,000

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 DATE = 8/5/2016
 TIME = 4:02:36 PM

IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____

PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON :



ACTIVITIES	OPTION B-1, O&W O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:	
CLEARING & GRUBBING:	\$ 50,000
EARTHWORK:	\$ 150,000
SUBBASE:	\$ 130,000
PAVEMENT:	\$ 230,000
GUIDERAIL & FENCE	\$ 110,000
DRAINAGE	\$ 150,000
LIGHTING	\$ 30,000
WORK ZONE TRAFFIC CONTROL:	\$ 20,000
EROSION CONTROL:	\$ 30,000
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TOTAL COSTS:	\$ 2,124,000

NOTE:
 1. PEDESTRIAN CROSSING SIGNAL SYSTEM TYPE TO BE DETERMINED (I.E. HAWK, TRADITIONAL, PUSH BUTTON, ETC)

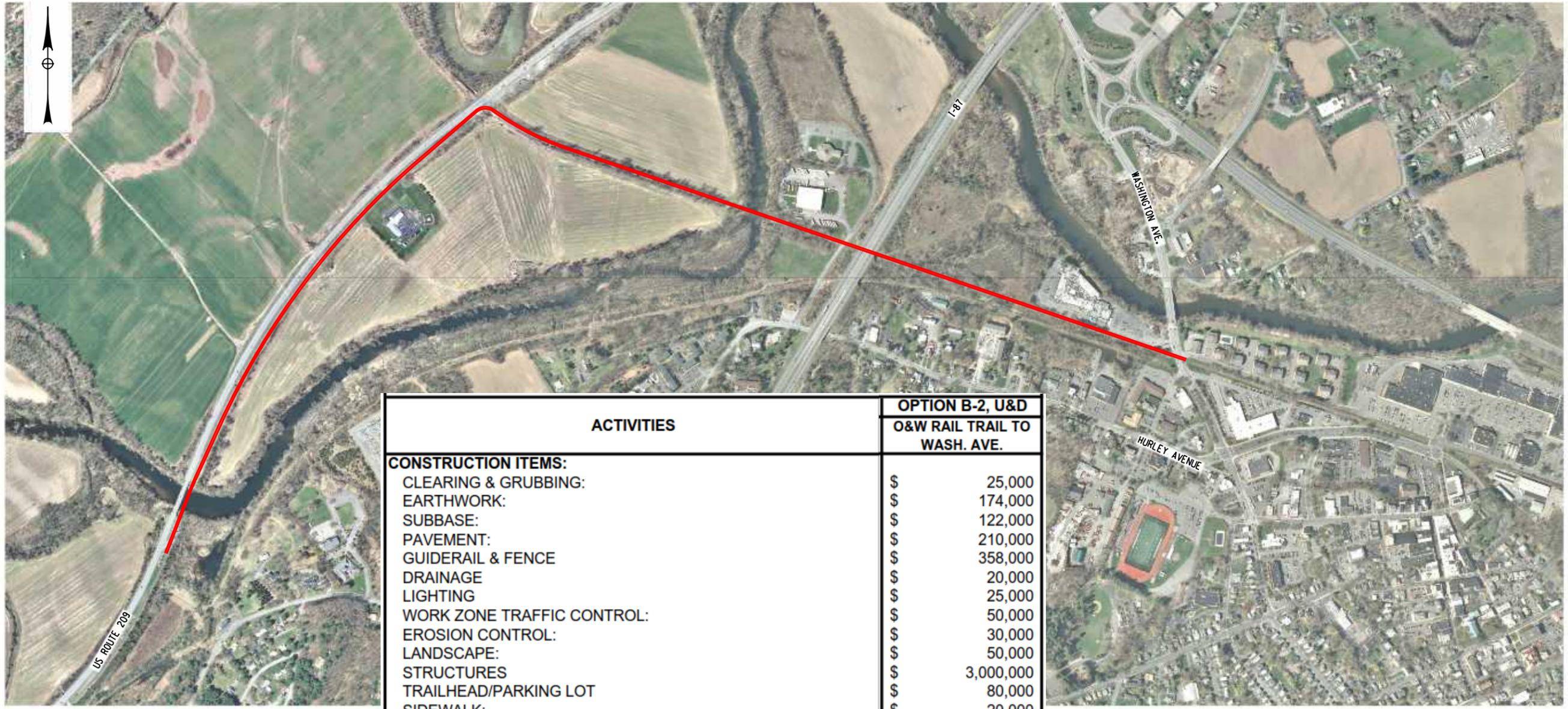
		KINGSTON RAIL TRAIL	
		CITY OF KINGSTON, TOWNS OF HURLEY AND ULSTER	ULSTER COUNTY
UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW, ARTICLE 145 SECTION 7209		P.I.N. 8758.04	
OPTION B-1, O&W - ESTIMATE		SCALE: 1 : 800	
		DATE ISSUED: /2016	
		DRAWING XXX	
NO.	DATE	BY	REVISION

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 DATE = 8/5/2016
 TIME = 4:00:12 PM

IN CHARGE OF _____ DESIGNED BY _____ CHECKED BY _____ DRAFTED BY _____ CHECKED BY _____

PREPARED BY: BARTON & LOGUIDICE, D.P.C.
 ON:



ACTIVITIES	OPTION B-2, U&D O&W RAIL TRAIL TO WASH. AVE.
CONSTRUCTION ITEMS:	
CLEARING & GRUBBING:	\$ 25,000
EARTHWORK:	\$ 174,000
SUBBASE:	\$ 122,000
PAVEMENT:	\$ 210,000
GUIDERAIL & FENCE	\$ 358,000
DRAINAGE	\$ 20,000
LIGHTING	\$ 25,000
WORK ZONE TRAFFIC CONTROL:	\$ 50,000
EROSION CONTROL:	\$ 30,000
LANDSCAPE:	\$ 50,000
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TOTAL PROJECT CONSTRUCTION COSTS (2018 DOLLARS):	\$ 5,391,000
ENGINEERING	\$ 500,000
CONSTRUCTION INSPECTION & ADMINISTRATION	\$ 500,000
ROW INCIDENTALS AND ACQUISITIONS	\$ -
TOTAL COSTS:	\$ 6,391,000

NO.	DATE	BY	REVISION



Barton & Loguidice, D.P.C.
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 DRAWING IS A VIOLATION OF THE NEW YORK STATE
 EDUCATION LAW, ARTICLE 145 SECTION 7209

KINGSTON RAIL TRAIL
 CITY OF KINGSTON, TOWNS OF
 HURLEY AND ULSTER
 ULSTER COUNTY
 P.I.N. 8758.04

OPTION B-2, U&D -
 ESTIMATE
 SCALE: 1:800
 DATE ISSUED: /2016
 DRAWING
 XXX

NOTE:
 1. PEDESTRIAN CROSSING SIGNAL SYSTEM TYPE TO BE DETERMINED
 (I.E. HAWK, TRADITIONAL, PUSH BUTTON, ETC)

XX