

WEST AMWELL GREEN ACRES-1 ALTERNATIVE ROUTE COMPARISON TO PROPOSED ROUTE

Table Appendix B-24 Evaluation and Comparison of the Proposed Route to the West Amwell Green Acres-1 Alternative Route (MP 101R2 – MP 108.4R2)		
Proposed Route	Alternative Route	Evaluation/Comparison
General Information		
Length: 7.52 miles	Length: 8.34 miles	The Alternative Route has a greater construction cost than that of the Proposed Route by a factor of 1.4.
Collocated Length: 6.87 miles (u)	Collocated Length: 0.80 miles (u) and 6.18 miles (r)	
Construction Cost: \$80,513,930	Construction Cost: \$111,632,400	
Construction Duration: 4 months	Construction Duration: 5.5 months	
Regulated Resource Impact: Wetlands		
Wetland Areas Crossed: 29	Wetland Areas Crossed: 10	The Proposed Route has greater impacts to wetlands.
Crossing Method: 24 open-cut 3 trenchless (bore) 2 trenchless (HDD)	Crossing Method: 10 open-cut	
Impact: PFO Impact = 3.96 acres PSS Impact = 0.1 acres PEM Impact = 7.74 acres MODAG Impact = 0.19 acres	Impact: PFO Estimated Impact = 1.03 acres PSS Estimated Impact = 0.02 acres PEM Estimated Impact = 0.14 acres MODAG Estimated Impact = 0.23 acres	
Regulated Resource Impact: Waterbodies		
Waterbodies Crossed: 32	Waterbodies Crossed: 16	The Proposed Route has greater impacts to waterbodies.
Classification: 1 Alexauken Creek UNT (FW2-TMC1) 11 Swan Creek UNTs (FW2-NT) 1 Swan Creek (FW2-NT) 1 Delaware and Raritan Canal UNT (FW2-NT) 8 Moores Creek UNTs (FW2-TM) 1 Moores Creek (FW2-NT) 8 Fiddlers Creek UNTs (FW2-TM) 1 Fiddlers Creek (FW2-TM)	Classification: 13 Alexauken Creek UNTs (FW2-TMC1) 1 Peters Brook (FW2-NT) 1 Moores Creek UNT (FW2-TM) 1 Moores Creek (FW2-TM)	
Crossing Method: 1 (FW2-TMC1) dry crossing 10 (FW2-NT) dry crossings 6 (FW2-TM) dry crossings 2 (FW2-NT) trenchless (bore) 6 (FW2-TM) trenchless (bore) 2 (FW2-TM) trenchless (HDD) 2 (FW2-TM) Access Roads (culverted) 1 (FW2-NT) Access Road (culverted) 2 (FW2-TM) Access Roads	Crossing Method: 13 (FW2-TMC1) dry crossing 2 (FW2-TM) dry crossings 1 (FW2-NT) dry crossing	
Regulated Resource Impact: T&E Species		
Habitat Mapping: Fowler's Toad Golden-winged Warbler (non-breeding)	Habitat Mapping: American Kestrel (breeding) Bald Eagle (foraging) Grasshopper Sparrow (breeding)	The Proposed Route has the potential to impact greater T&E species habitat.

Table Appendix B-24
Evaluation and Comparison of the Proposed Route to the West Amwell Green Acres-1 Alternative Route
(MP 101R2 – MP 108.4R2)

Proposed Route	Alternative Route	Evaluation/Comparison
Kentucky Warbler (breeding) Northern Copperhead (occupied) Veery (breeding) Wood Turtle (occupied) Worm-eating Warbler (breeding)	Great Blue Heron (foraging) Northern Myotis (inactive sighting)	
Regulated Resource Impact: Cultural Resources ^{1,2}		
Architectural Properties: 2 One historic district, one historic property. One potentially historic property (recommended eligible, under NJHPO review).	Architectural Properties: 2 Two historic districts.	The Proposed Route impacts one more architectural property and one more archaeological site than the Alternative Route.
Archaeological Sites: 1 One site (eligible).	Archaeological Sites: None	
Logistics: Traffic Impact		
During construction of this portion of the Proposed Route, Old 518 and Hewitt Road will be open-cut, causing a brief closure for one to two days. Local traffic has convenient detour options.	Construction of the pipeline within Harbourton Mount Airy Road, Harbourton Rocktown Road, Highway 179, Trenton Harbourton Road and Bear Tavern Road, will require the closure of each roadway during pipeline construction activities. During the road closures, detours would be required as described in the Traffic Analysis provided in Appendix C.	Implementation of the Alternative Route roadway closures and detours would significantly increase project related traffic impacts during construction. The closure and detours would have adverse impacts as detailed in the Traffic Analysis provided in Appendix C.
Logistics: Proximity to Structures and Residences ³		
There are four residences in close proximity to the Proposed Route workspace.	There are 21 residences and one church in close proximity to the Alternative Route workspace.	The Alternative Route has a greater impact on residences and structures.
Logistics: Emergency Services Impact		
Emergency services will need to take detours during brief road closures at Old 518 and Hewitt Road.	Emergency services would be able to use the Alternative Route roadways during pipeline construction, however, there would be some partial road closures during pipeline construction. This Alternative Route also passes near the West Amwell Township Police Department and the West Amwell Township Fire Station.	Full or partial road closures associated with construction of the Alternative Route would adversely impact response times for emergency services on a localized basis.
Logistics: Impact to Places of Public Assembly		
This portion of the Proposed Route is located near Hewitt Park and Howell Living Farm; however, the project will not directly impact these sites.	The South Hunterdon Regional High School complex is located along Mt. Airy Harbourton Road (CR-601). This Alternative Route also passes near two churches and could impact access during road closures.	The Alternative Route would impact access to a large school complex.
Logistics: Constructability		
None	The construction of the pipeline would require the removal and relocation of some utility poles and associated utility lines along the	The Alternative Route has greater constructability issues.

Table Appendix B-24
Evaluation and Comparison of the Proposed Route to the West Amwell Green Acres-1 Alternative Route
(MP 101R2 – MP 108.4R2)

Proposed Route	Alternative Route	Evaluation/Comparison
	roadway portions of the Alternative Route. Because of the width of the roadways, areas beyond the ROW would have to be used for additional workspace in some locations. Plating of open trench in the roadways would be required at some locations to allow access to private residences. Existing roadside stone walls, abutments and guiderails would have to be removed and reinstalled along roadway portions of the Alternative Route.	
Conclusion		
<p>After taking into consideration its greater cost and logistical limitations including its far greater impact to structures and residences, its proximity to the South Hunterdon Regional High School, other anticipated community impacts and constructability, the West Amwell Green Acres-1 Alternative Route is dismissed as impracticable.</p> <p>PennEast strives to minimize locating the pipeline in areas prone to any amount of an increased operational risk as much as practicable. Implementing the alternative routes within the roadway would substantially increase the linear footage of the project within areas at an elevated operational risk for third-party damage. The probability of third-party excavator accidents, a major cause of natural gas transmission pipeline incidents over the past 20 years, is higher with pipelines located within roadways due to the higher frequency of excavation activities that increase the probability of accidental striking of the pipeline, such as the installation and maintenance of other subsurface infrastructure (e.g. water lines, fiber optic cables, sewers, etc.), building construction activities, and roadway resurfacing.</p>		
Legend: N/A – Not Applicable r – road		rr – railroad u – utility UNT – Unnamed Tributary
Notes: 1 Unless otherwise noted, includes only those resources listed on or determined eligible for listing on the National Register of Historic Places (NRHP). Sources: "Historic Districts of New Jersey" and "Historic Properties of New Jersey" datasets, 28 January 2019, available at http://njogis-newjersey.opendata.arcgis.com/datasets?q=historic ; and/or recorded by AECOM on behalf of PennEast Pipeline Company, LLC, as of June 2019. 2 Includes NRHP-eligible and/or listed archaeological sites as well as those that have not been evaluated for NRHP eligibility. Source: archaeological site locations on file at the New Jersey State Museum as of 12 March 2019; and/or recorded by AECOM on behalf of PennEast Pipeline Company, LLC, as of June 2019. 3. Close Proximity - In terms of structures and residences is defined at within 50 feet of the workspace		