Transportation Project Report

Initial Project Proposal/Final Design Report

June 2020

Hungry Hollow Road over Tributary of Saddle River Culvert Replacement Project Identification Number (PIN): 8762.26 RCHD Culvert Identification Number (CIN): 4024071X05 Town of Ramapo, Village of Chestnut Ridge Rockland County



Project Approval Sheet

Mil	<u>estones</u>	Signatures	<u>Dates</u>
Α.	Recommendation for, Initiation, Scope and Design Approval:	The project cost and schedule are consistent with the Regional Capita IPP signed by Sandra Jobson Regional Program Manager	Il Program.
В.	Recommendation for Scope, Design, and Nonstandard Feature Approval:	All requirements requisite to these actions and approvals have been independent quality control reviews separate from the functional group accomplished, and the work is consistent with established standards, and procedures, except as otherwise noted and explained. The nonstandard features have been adequately justified and it is not them as part of this project.	en met, the required p reviews have been policies, regulations prudent to eliminate
C.	Public Hearing Certification	Name A public hearing was not required; however, a public informational m XX, YY, ZZZZ.	Date eeting was held on
		Name	Date
E.	Local Project Nonstandard Feature Approval	Nonstandard features on Non-NHS local roadways have been approp	riately justified.
		Name	Date
F.	Local Project Scope and Design Approval	The required environmental determinations have been made, and the alternative for this project is ready for final design.	preferred
		Name	Date

CONTACT: Dan Quinn, Rockland County Highway Department **PHONE**: (845) 638-5060 **PROJECT MANAGER**: Jared Anderson, P.E., HVEA Engineers

List of Preparers

Group Director Responsible for Production of this Initial Project Proposal/Final Design Report (IPP/FDR):

Jared Anderson, P.E., Project Manager, HVEA Engineers

Description of Work Performed:

Directed the preparation of the IPP/FDR 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.

1.1. PUBLIC FRIENDLY DESCRIPTION OF PROJECT

This report was prepared in accordance with the NYSDOT Project Development Manual and 6 NYCRR (New York Codes, Rules and Regulations) Part 617. Transportation needs have been identified (Section 1.3), objectives established (Section 1.4) to address the needs, and a cost-effective proposal to complete the objectives (Section 1.5).

This project will replace existing twin 36" corrugated metal arch pipes with a concrete box extension with a 10-foot wide by 3-foot tall precast concrete 4-sided box culvert. The culvert will be realigned to reduce entrance and exit skew, thereby improving hydraulic characteristics. An extended wingwall at the culvert entrance (east/upstream side) supports a sidewalk and is currently undermining. As such it will be replaced, taking into account added protection from scour. Bridge railing will be installed along the wingwall in lieu of fencing. At the other corners, appropriate bridge / guide railing will be installed.



1.2. PROJECT LOCATION

Location Details

- A. Route number: Rockland County Route 71
- B. Route name: Hungry Hollow Road
- C. CIN (Culvert Identification Number) and feature crossed: CIN 4024071X05 over Tributary of Saddle River
- D. City/Village/Township: Town of Ramapo, Village of Chestnut Ridge
- E. County: Rockland County
- F. Length: 160 feet
- G. Federal Aid System: BRIDGE NY (100% NY State), Non-NHS
- H. Functional Class: Urban Major Collector (17), Free access undivided 2 lane
- I. Existing AADT: 3,251
- J. Trucks (%): 6.1%

1.3. PROJECT NEED

Existing Characteristics of Concern				
Element	Measure/Indicator			
Culvert	Existing twin 36" CMP culvert with box extension under the sidewalk is in fair condition but cannot meet its hydraulic capacity requirement. Debris clogs the openings frequently during storms causing the stream to overflow into the roadway.			
Surface Rating	Roadway surface is patched with cracks in the wearing surface due to the poor conditions of the culvert and headwalls. Roadway exhibits some heaving in the area of the culvert.			
Sidewalk Rating	Sections of the sidewalk are heaved, settled, and cracked due to the poor conditions of the culvert and headwall. The curbs have settled and flush with the wearing surface.			
Highway Deficiencies/Safety	There is no guide rail protecting the west side of the road at the culvert. The chain link fence on top of the east wall is damaged with bent posts and rails. It also does not serve as adequate roadside protection.			
Substructure	Minor erosion is present at the upstream inlet end and mortar joints are cracked causing loose and missing stones from the wingwall. The east wingwall is collapsing and the headwall is cracked. Required repairs are beyond the capabilities of Department Maintenance forces.			

Project Element(S) To Be Addressed:

\square	Highway Element Bridge Element-S	-Specific	Operatio Where 8	nal Maintenan When	се
\boxtimes	Other:	Culvert Replacement			
Priori	ty Results:	Mobility & Reliab ☐ Economic Comp	ility etitiveness	⊠ Safety □ Environm	Security ental Stewardship

1.4. PURPOSE/OBJECTIVES

- (1) Replace the existing culvert, including the extended east wingwall, sidewalk and substructure with a more durable, corrosion resistant, hydraulically efficient structure while minimizing the life cycle cost of maintenance and repair.
- (2) Develop proper safety features along the roadside to reduce public and Rockland County risks using cost effective methods.
- (3) Correct/eliminate identified pavement deficiencies by replacing the pavement section over the new culvert and its approaches to prevent further degradation of pavement condition, providing low life cycle costs.

1.5. DESCRIPTION OF PROPOSED WORK

No Build/Maintenance Alternative

The existing culvert is hydraulically deficient and deteriorated. Erosion is evident and the excess flows are potentially accelerating deterioration of the roadway surface and sidewalk. Pavement, sidewalk and the east wingwall are undermining. Roadside protection is insufficient and does not meet NYSDOT standards. The "no build/ maintenance" alternative could potentially result in a compromised culvert structure in the future. This alternative would also continue to result in undermining of the pavement section and sidewalk and would not address the existing substandard roadside barrier condition.

Alternative 1 – Replacement with Precast Concrete Box Culvert

This alternative will replace the existing twin 36" corrugated aluminum arch pipes and box extension with a 10-foot by 2.5-foot tall precast concrete 4-sided box culvert to accommodate bank-full flows. This alternative will require the removal of the existing culvert, its substructure and approach roadway to install a new precast concrete culvert and precast wing walls.

As the culvert resides in a FEMA floodplain, it is beneficial to replace the culvert to improve hydraulics of the tributary. The culvert will be realigned to reduce the entrance and exit skew, further improving the hydraulic characteristics. New wingwalls, including the extended east wingwall adjacent to the tributary will be designed to resist the effects of scour to prevent future undermining.

In addition, the sidewalk will be reconstructed extending from Raymond Avenue to approximately 100 feet north of the existing culvert to comply with ADA/PROWAG. Four rail bridge railing will be installed along the extended east wingwall to safely protect pedestrians and proper bridge / guide railing will be replaced on the west side of the roadway.

Bank-full width was measured upstream (approximately 9.25 feet) and downstream (approximately 10.33 feet) of the proposed culvert. The resulting average of 9.79 will be able to be reasonably accommodated by the proposed culvert. A hydraulic analysis of the proposed culvert was performed using FHWA HY-8 and it was determined that the culvert will be able to pass the 5-year storm. While this does not meet HDM Chapter 8 (50 year), it exceeds the 2-year requirement in the ACOE NWP Regional Conditions. The bottom 20% of the culvert rise will be filled with natural stream bed material to accommodate ACOE NWP Regional Conditions.

For a more in-depth discussion of the design criteria and non-standard/non-conforming features see Section 2.3 of this report.

2.1. DESIGN STANDARDS

Design Standards				
Project Type	NYSDOT Design Guidance			
Culvert Replacement	NYSDOT Highway Design Manual Chapter 19 and NYSDOT Bridge Design Manual Chapter 3			
Design Criteria	NYSDOT Highway Design Manual Chapter 2			
Guide Rail	NYSDOT Highway Design Manual Chapter 10			
Pedestrian Facilities	NYSDOT Highway Design Manual Chapter 18			

С	ritical Design	Elements for Hungry	Hollow Road ov	ver Tribut	tary of Sa	addle River	
	PIN:	8762.26	NHS (Y/N):		No	
	Route No. & Name:	Rockland County Route 71	Functional Classification:		Urban Major Collector		
F	Project Type:	Culvert Replacement	Design Classifi	ication:	Rural Town Collector		
	% Trucks:	6.1%	Terrain:			Level	
Des	sign Year ADT:	3,251	Truck Access/Q Hwy.	ualifying	Access-N	No; Qualifying- No	
	Element	Standa	ird	Existing Condition		Proposed Condition	
1	Design Speed	35 - 50 r HDM Section	nph 2.7.3.3.A.	30 mph	posted	40 mph	
2	Lane Width	10 - 12 HDM Section 2.7.3.	? ft 3.B, Exhibit 2-6	10	ft	10 ft	
3	Shoulder Width	0 ft min 4 ft de 4 ft min. (un HDM Section 2.7.3.3.0	0 ft min 4 ft des. (curbed) 4 ft min. (uncurbed) HDM Section 2.7.3.3.C, Exhibits 2-5, 2-6		ft	1 ft1	
4	Horizontal Curv Radius	e 356 ft Min (at 6 HDM Section 2.7.3.	e _{max} = 4%) 3.D, Exhibit 2-6	1200 ft		1200 ft	
5	Superelevatior	4% Ma HDM Section 2.7.3.3	4% Max. HDM Section 2.7.3.3.E, Exhibit 2-1b		Max. ²	2.8%	
6	Stopping Sight Distance (Horizontal and Vertical)	271 ft M HDM Section 2.7.3.3	1in. 3.F., Exhibit 2-6	51	5 ft	515 ft	
7	Maximum Grad	e 9% HDM Section 2.7.3.3	3.G., Exhibit 2-6	3.3	3%	3.3%	
8	Cross Slope	1.5% Min. to HDM Section	3% Max. 2.7.3.3.H.	n/	a	n/a³	
9	Vertical Clearance	n/a	n/a		a	n/a	
10	Design Loading Structural Capacity	AASHTO HL-93 Live L Design Permi HDM Section	AASHTO HL-93 Live Load and NYSDOT Design Permit Vehicle HDM Section 19.5.3		20 ⁴	AASHTO HL- 93 Live Load and NYSDOT Design Permit Vehicle	
11	Americans with Disabilities Act Compliance ³	HDM Chapter 18, A	.DA, PROWAG	Existing p facil do not co HDM Cha ADA, PF	edestrian ities mply with apter 18, ROWAG	HDM Chapter 18, ADA, PROWAG	

- See Section 2.3 for additional explanation.
 Existing rate coincides with area of roadway settlement at the culvert.
 Entire project is on a curve and does not have a crowned cross slope.
 Per a 1995 Load Rating, See Appendix D.

2.2. OTHER DESIGN PARAMETERS

Other Design Parameters					
Element Parameter Existing Conditions Proposed Condition					
Drainage Design Storm	50 yr.	Unknown	5 yr.		
Compound Curve Ratio	2:1	3.33:1	3.33:1		
Design Vehicle	SU	SU	SU		

*Satisfies ACOE NWP General Regional Condition G-B-1 – 2-year design storm but does not satisfy DOT HDM Chapter 8.

2.3. NON-STANDARD/NON-CONFORMING FEATURES -

One nonstandard feature will remain upon completion of the project. The uncurbed, left shoulder will be 1 foot wide, consistent with the proposed right shoulder. Due to the short length of the project, the character of the adjacent roadway sections and no future plans to widen Hungry Hollow Road, this nonstandard feature will be retained. Refer to Appendix E for an NSFJ form.

Right shoulder width is also proposed as 1 foot to be consistent with adjacent roadway sections. Per Note 3 of Exhibit 2-6, justification for a shoulder less than 5 feet in width is only required if there is a high bicycling demand is anticipated or a bicycle route is present. As neither condition is present, the 1-foot shoulder width is standard for this type of facility.

Although the superelevation exceeds 4% maximum within the project limits, this is likely due to settlement of the roadway over time. This condition will be corrected in the proposed design.

There will be one non-conforming feature upon project completion:

Non-Conforming Features:

1.) Horizontal Curve radius is comprised of a compound curve with one curve having a radius of 1200 feet and another curve having a radius of 4000 feet. Compound curve ratio is 3.33:1 to meet existing highway geometry.

As noted in Section 2.1, the culvert will only be able to pass the 5-year storm based on available flow data from Stream Stats and an HY-8 analysis. Although NYSDOT HDM Chapter 8 requires a 50-year design storm, it should be noted that this culvert is part of a 100-year flood hazard area (Zone AE, FEMA FIRM 36087C0154G provided in Appendix D). As such, it is not feasible and out of the scope of this project to build the culvert to meet 50-year criteria due to limitations of the existing site and the tributary itself.

2.4. SPECIAL TECHNICAL ACTIVITIES REQUIRED

A detour is proposed during construction to allow for a time-efficient replacement of the culvert. The detour will direct traffic along Chestnut Ridge Road (NY 45), Pine Brook Road and Margetts Road for approximately 3.0 miles, taking approximately 6 minutes. Delays will be minimized by implementing adequate detour signage in accordance with a temporary traffic control plan.

A pedestrian detour will be required within the work zone while the existing east sidewalk is out of service. In order to accommodate pedestrians at all times, the culvert will need to be replaced in two phases. Using two mid-block crossings, pedestrians will be directed across Hungry Hollow Road

within a protected path on its west side on the existing asphalt pavement, then back to the east side. Once the eastern half of the culvert is completed, the new sidewalk will be opened for use.

2.5. WORKZONE SAFETY & MOBILITY

The County has determined that this project is not significant per 23 CFR 630.1010.

A Transportation Management Plan (TMP) will be prepared for the project consistent with 23 CFR 630.1012. The TMP will consist of a Temporary Traffic Control (TTC) plan. Transportation Operations (TO) and Public Information (PI) components of a TMP will be considered during final design.

2.6. POTENTIAL UTILITY INVOLVEMENT

🛛 Yes	No No
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Potential Utility Impacts				
Owner	Type (Denote OH/UG)	Impact		
Orange and Rockland Utilities	OH Electric & UG Gas	Gas main to be relocated		
Suez Water	Waterline (UG)	To be evaluated in final design		
Verizon	OH Comm/Fiber Optic	None anticipated		
Altice	OH Comm/Fiber Optic	None anticipated		
BestWeb	OH Comm/Fiber Optic	None anticipated		
Town of Ramapo	Sewer (UG)	Culvert will need to account for presence of 8" ACP sewer main		

2.7. RIGHT OF WAY

All proposed work can be accomplished within the existing right of way; therefore, it is anticipated that no right of way acquisitions will be required for the project. The ROW Clearance Certificate will be submitted with the PS&E package.

2.8 OWNERSHIP AND MAINTENANCE JURISDICTION

	Existing and Future Maintenance Jurisdiction						
Part No.	Highway	Limits	Feature(s) being Maintained	Centerline (mile)	Lane (mile)	Agency	Authority
1	Hungry Hollow Road	Entire Project Limits	Culvert, Pavement, Drainage, Guiderail, Striping	0.03	0.06	Rockland County	Highway Law Section 129
2	Hungry Hollow Road	Entire Project Limits	Sanitary Sewer	0.03	0.06	Town of Ramapo	Highway Law Section 10, Subdivsion 24

3.1. ENVIRONMENTAL CLASSIFICATION

NEPA (National Environmental Policy Act):

This project is 100% New York State funded and the FHWA's NEPA policies and procedures found in 23 CFR 771 do not apply.

SEQRA (State Environmental Quality Review Act):

In accordance with 6 NYCRR, Part 617, "State Environmental Quality Review", Rockland County has determined that this project is a SEQR Type II Action. Refer to Appendix B for the SEQR determination.

The following Checklist(s) are attached:

Federal Environmental Approvals Worksheet (FEAW)

Social, Economic and Environmental Resources Checklist

Capital Projects Complete Streets Checklist

3.2. ENVIRONMENTAL DOCUMENTATION

For topics checked yes on the Social, Economic, and Environmental Resources Checklist resolution is as follows:

Neighborhoods and Community Cohesion

Is there potential to impact transportation options (e.g. transit, walking, bicycling)?

Sidewalk within the project limits will be replaced to meet ADA/PROWAG. A temporary pedestrian walkway will be designated while work is being performed on the sidewalk in this location. There will be minimal impact to the community services from the construction.

Are there potential changes to travel patterns that could affect neighborhood quality of life?

A detour is proposed during construction. Refer to Section 2.4.

Community Services

Is there potential to affect emergency service response?

Emergency services will be provided with advanced notice of the project in order to properly plan methods to access all service response areas.

Environmental

Are there surface waters (other than wetlands) within or immediately adjacent to the project limits?

The project replaces a culvert carrying a Tributary to the Saddle River. Since this stream is Class C, this water way is not protected by NYSDEC, but is subject to Army Corps of Engineers jurisdiction. Temporary bypass will be required during construction. Precautionary measures will be taken to

minimize the impact of the waterway. Appropriate stormwater pollution and prevention measures will be taken.

Is the project in a mapped Flood Zone?

Hungry Hollow Road is located inside of a FEMA Zone AE floodplain. The proposed work will not change the alignment of the roadway and will serve to enhance the hydraulic characteristics of the waterway beneath Hungry Hollow Road.

Are federally/state listed endangered species or designated critical habitat indicated for the project county?

Bog Turtle (Glyptemys muhlenbergii)

The USFWS IPaC screening identified the Bog Turtle as being within the vicinity of the project; the NYSDEC screening did not identify any state listed endangered species being within the vicinity of the project. The bog turtle status in New York State is endangered and its Federal status is threatened. As per the New York Natural Heritage Program, bog turtles occur in open-canopy wet meadows, sedge meadows, and calcareous fens. The known habitat in the Lake Plain region of the state includes large fens that may include various species of sedges, such as slender sedge (Carex lasiocarpa), bog buckbean (Menyanthes trifoliata), mosses (Sphagnum spp.), pitcher plants (Sarracenia sp.), scattered trees, and scattered shrubs. Although historical records come from a larger area of the state, extant populations are known from small portions of six counties in the lower Hudson River Valley (Columbia, Dutchess, Putnam, Ulster, Orange, and Sullivan). The species has been identified within Rockland County; however, the project site has been identified as an unsuitable habitat for the Bog Turtle.

See Appendix B regarding documentation and NYSDOT's response memorandum of February 14, 2020. Since the project is not Federally funded but requires a Federal permit, coordination with the Army Corps of Engineers will occur during the Nationwide Permit Preconstruction Notification (PCN) process.

	Alternatives Evaluated		
Category	Null	Reasonable/Preferred Alternative (Alt. 1)	
Property impacts	None	None	
Operation at ETC + 20	Possible failure of culvert	No Impact	
20-year Crash Costs	n/a	n/a	
Construction Cost	n/a	\$0.511M	

Proposed Mitigation: No mitigation efforts are required as part of this project.

3.3. ANTICIPATED PERMITS/CERTIFICATIONS/COORDINATION

Permits

June 2020

New York State Department of Environmental Conservation (NYSDEC):

• Section 401 Water Quality Certification

New York State Department of Transportation (NYSDOT):

• Highway Work Permit (for detour on NY Route 45)

Army Corps of Engineers (USACE):

• Section 404/ Section 10 Nationwide Permit #3, #19 and #33

<u>Others</u>

• RCDOH Resource Evaluation Well Permit (for geotechnical borings)

Coordination

- NYSDOT Region 8
- Rockland County Highway Department
- NYSDEC
- New York State Historic Preservation Officer (SHPO)
- US Fish and Wildlife Service
- Town of Ramapo
- Village of Chestnut Ridge
- Utility services Orange and Rockland, Suez Water, Verizon, Altice, Town of Ramapo Sewer
- Emergency services police, fire, EMS

Certifications

None anticipated

3.4. NYS SMART GROWTH PUBLIC INFRASTRUCTURE POLICY ACT (SGPIPA)

To the extent practicable this project has met the relevant criteria as described in ECL § 6-0107. The Smart Growth Screening Tool was used to assess the project's consistency and alignment with relevant Smart Growth criteria; the tool was completed by the Rockland County Highway Department on January 8, 2019 and reflects the current project scope.

4.1. FUNDING

FUNDING SOURCE:	⊠ 100% State		E Federal
MPO INVOLVEMENT:	🗌 No	🛛 Yes N	YMTC (MHSTCC)
TIP AMENDMENT RE	QUIRED:	No	Yes; Needed by:
STIP STATUS:	🛛 On STIP		Not on STIP

4.2. COST AND SCHEDULE

\boxtimes	Public M
	Permits
	Other –

Public Meeting

4(f)/106 FHWA sign-off Consultant(s) for:

Other - Identify e.g., utilities, endangered species (ESA)

Schedule and Cost					
Project Phase Activity Duration Estimated Cost		Fund Source	Obligation Date		
Preliminary Design	Nov '19 - March '20	\$46,250	BRIDGE-NY	07/19	
Final Design	March '20 - Dec '20	\$46,250	BRIDGE-NY	07/19	
Construction	Feb '21 - Nov '21	\$511,000*	BRIDGE-NY	02/21	
Construction Inspection	Feb '21 - Nov '21	\$59,500	BRIDGE-NY	02/21	
TOTAL ESTIMATED COST \$663.000					

*Total from Engineer's Estimate with 15% contingency. Project is estimated to exceed programmed amount.

BASIS OF ESTIMATE: Engineer's Estimate/IPP

PROGRAM DISPOSITION/LETTING: Scheduled for letting in SFY 2021

STATEWIDE SIGNIFICANCE: \boxtimes No Remarks:

Design approval is anticipated in July 2020 with construction scheduled to begin in early 2021 and last 9 months. This duration anticipates that the project will be combined with 2 other concurrent projects. PIN 8762.15 and PIN 8762.25 to be let as one construction contract.

Rockland County acknowledges a funding shortfall between available BRIDGE NY funding and the expected award amount. The County is committed to funding any costs above and beyond programmed funding amounts.

Project Schedule			
Activity	Date Occurred/Tentative		
Scope Approval	July 2019		
Design Approval	July 2020		
ROW Acquisition	N/A		
Construction Start	February 2021		
Construction Complete	November 2021		

Project Cost (in millions)			
Act	ivities	Reasonable/Preferred Alternative (Alternative 1)	
	Bridge	0.205	
Construction	Highway	0.201	
00313	Field Change Item	0.021	
Incidentals		n/a	
Subtotal 1		0.427	
Contingency (15%* at Design Approval)		0.067	
Mobiliza	ation (4%)	0.017	
Sub	total 2	0.511	
Expected A	ward Amount	0.511	
Constructio	on Inspection	0.0595	
ROW Costs		N/A	
Total Altern	ative Costs**	0.5705	

*Estimate has been itemized at this stage. Contingency has been reduced to 15% as not to overstate construction costs.

**Rockland County acknowledges responsibility for all costs beyond programmed amounts.

5.1 PUBLIC INVOLVEMENT

Notifications to public officials, potential stakeholders and emergency responders and schools have been completed.

Public Involvement Plan Schedule of Milestone Dates			
Activity Date Occurred/Tentative			
Kickoff Meeting with RCHD	December 4, 2019		
Public Informational Meeting	July 2020		

6.1 LIST OF ATTACHMENTS / APPENDCIES

Appendix A – Maps, Plans, Profiles and Typical Sections

- Appendix B Environmental Information
- Appendix C Accident & Traffic Data
- Appendix D Structural & Hydraulic Information
- Appendix E Non-Standard Feature Justification
- Appendix F Stakeholders and Public Input Appendix G Photos
- Appendix H Preliminary Estimate
- Appendix I Miscellaneous

APPENDIX A

MAPS, PLANS, PROFILES, AND TYPICAL SECTIONS





1'-0"

1'-0"

7"

- ITEM 568.51 - STEEL Bridge Railing (four Rail)

PROPOSED EXTENDED WINGWALL/HEADWALL

		ROCKLAND COUNTY HIGHWAY DEPARTMENT			
		HUNGRY HOLLOW ROAD CULVERT OVER TRIBUTARY OF SADDLE RIVER T/RAMAPO, V/CHESTNUT RIDGE, COUNTY OF ROCKLAND			
7.5'	10'	Т	YPICAL SECTION	S	
1" = 5'		DESIGNED BY:	DRAWN BY:	CHECKED BY:	
	DATE	DATE: JUNE 2020	SCALE: AS SHOWN	PIN: 8762.26	
		DWG No.: TYP-02		SHEET OF XX	





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BEACON, NEW YORK 12508 (845) 838-3600 www.hveapc.com







WORK ZONE TRAFFIC CONTROL DETOUR PLAN

	DESIGNED BY:	DRAWN BY:	CHECKED BY:	
DATE	DATE: JUNE 2020	SCALE: N.T.S.	PIN: 8762.26	
	DWG No.: WZTC-01		SHEET OF XX	





GRID NORTH

	ROCKLAND COUNTY HIGHWAY DEPARTMENT			
	HUNGRY HOLLOW ROAD CULVERT OVER TRIBUTARY OF SADDLE RIVER T/RAMAPO, V/CHESTNUT RIDGE, COUNTY OF ROCKLAND			
	WORK ZONE TRAFFIC CONTROL DETOUR PLAN			
	DESIGNED BY: DRAWN BY: CHECKED BY:			
DATE	DATE: JUNE 2020	SCALE: N.T.S.	PIN: 8762.26	
	DWG No.: WZTC-02		SHEET OF XX	

APPENDIX B

ENVIRONMENTAL INFORMATION



DEPARTMENT OF PLANNING

Dr. Robert L. Yeager Health Center 50 Sanatorium Road, Building T Pomona, New York 10970 Phone: (845) 364-3434 Fax: (845) 364-3435

Douglas J. Schuetz Acting Commissioner Arlene R. Miller Deputy Commissioner

NOTE TO FILE

DATE:	3/13/2019
RE:	Determination of applicability to the State Environmental Quality Review Act (SEQRA)
PROJECT:	Hungry Hollow Road over Saddle River Tributary - Culvert Replacement
DESCRIPTION:	The existing dual 36" corrugated metal arch pipes are in fair condition but are hydraulically deficient. The upstream entrance is enclosed by a box culvert which was added to allow a sidewalk to be installed along Hungry Hollow Road. The sidewalk adjacent to the culvert is in poor condition with no railing. The stream flows parallel to Hungry Hollow Road and makes a sharp, near 90-degree turn, into the culvert entrance. The flow exits the outlet and makes a 45-degree turn before returning to running parallel with the roadway.
	The project will replace twin 36" corrugated metal arch pipes with a 10- foot wide 3-foot tall, precast concrete 4-sided box culvert. The culvert will be realigned to reduce entrance and exit skew, thereby improving hydraulic characteristics. Also, the wingwall at the culvert entrance will be extended to prevent roadway scour and undermining. Bridge railing will be installed along the extended wingwall; at the other corners, guide railing will be replaced. No property acquisition will be required; all work will be contained within the existing right-of-way. A stream disturbance permit will be required from the NYS Department of Environmental Conservation, as well as a general permit from the US Army Corps of Engineers.
DETERMINATION:	Review of this project indicates that it is a Type II Action as defined in Section 617.5(c)(2) of 6 NYCRR Part 617, the Statewide SEQRA regulations and is therefore not subject to the provisions of those regulations.
PREPARED BY:	The Rockland County Department of Planning - Helen Kenny Burrows

Cc; C.H. Vezzetti J. Pyzowski M. Drummond RC Legislature USACOE NYC DEC R. Presti, Jr., Mayor, Chestnut Ridge ERCSD Transportation Department

Social, Economic and Environmental Resources Checklist					
PIN:8762.26	FUNDING TYPE	:BRIDO	E NY		
DESCRIPTION: Hungry Hollow Road over Tributary of Saddle River DATE:3/18/2020))		
Culvert Replacement	REVISION DAT	E:			
MUNICIPALITY:Rockland County Highway Department	NEPA CLASS:N	I/A			
COUNTY:Rockland County	SEQRA TYPE:				
SCOPE: The project will replace the existing twin 36" CMP culv	ert with a prec	ast cor	ocrete		
structure. The culvert will be realigned to reduce entrance and entry hydraulic characteristics. The extended wingwall at the culvert entry prevent roadway scour and undermining. In addition, bridge railing extended wingwall; at the other corners, bridge / guide railing will be replaced and upgraded to ADA/PROWAG standards.	exit skew there entrance will be g will be install be installed. Sid	by impr replac ed alon ewalk v	ed to g the vill be		
SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS					
	NO	YES	NO		
Social					
A. Land Use	-				
1. Is there potential to affect current land use/zoning?					
2. Is there a lack of consistency with community's comprehensive plan and/or other local or regional planning goals?					
3. Will the project affect any planned or future development?	\boxtimes				
B. Neighborhoods and Community Cohesion					
 Are relocations of homes or businesses proposed or acquisition of community resources anticipated? 					
2. Is there potential for changes to neighborhood character?	\square				
 Is there a potential to impact transportation options (e.g., transit, walking, bicycling)? 					
4. Are there potential changes to travel patterns that could affect neighborhood quality of life?			\boxtimes		
5. Will the project divide or isolate portions of the community or generate new development that could affect the current community structure?					
C. General Social Groups	-				
 Are there potential effects to the ability of transit dependent, elderly, or disabled populations to access destinations (particularly local businesses and health care facilities)? 					
2. Does the project have the potential to disproportionately impact low income or minority populations (Environmental Justice)?					
 Are there alterations to pedestrian facilities that would affect the elderly or disabled such as lengthening pedestrian crossings or providing median refuge? 	\boxtimes				

SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	
	NO	YES	NO
D. Community Services			
 Is there potential to affect access to or use of Schools, Recreation Areas or Places of Worship (e.g., detours, sidewalk removal, addition of curb ramps, crosswalks, pedestrian signals, etc.)? 	\boxtimes		
Is there potential to affect emergency service response?			\boxtimes
Economic			
A. Regional and Local Economies			
 Is there potential to affect local economic viability (e.g., development potential, tax revenues, employment opportunities, retail sales or public expenditures)? 			
2. Is there a potential to divert traffic away from businesses?	\square		
B. Business Districts			
 Are there potential effects on the viability or character of Business Districts? 			
2. Will the project affect transportation options available for patrons getting into or out of the District?			
3. Will sidewalks, bicycling opportunities or transit opportunities to or within the district be affected?			
4. Will parking within the district be affected?	\boxtimes		
C. Specific Business Impacts			
 Are effects to specific businesses anticipated? (e.g., sidewalks, bicycling opportunities, or handicapped access to and from businesses)? 	\boxtimes		
2. Will the project affect available transportation options for patrons to businesses?			
3. Will the project affect the ability of businesses to receive deliveries?			
4. Will parking for businesses be affected?	\square		
Environmental	6		
1. Are there wetlands within or immediately adjacent to the project limits? See Environmental Procedures Manual (EPM) 4.A.R, Executive Order (EO) 11990 may apply.			
 Are there Surface Waters (other than wetlands) within or immediately adjacent to the project limits? lakes, ponds streams or wetlands of any jurisdiction 		\boxtimes	
3. Is there a designated Wild or Scenic River within or immediately adjacent to the project limits? (See <u>The Environmental Manual</u> (TEM) 4.4.3)			
 Will the project require a U.S. Coast Guard Bridge Permit? Project area includes a bridge over navigable waters of U.S. 			
 Does the project area contain waters regulated as Navigable by U. S. Army Corps of Engineers? Section 404/10 Individual Permit or NWP 23 may be required 			

SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	IMPAC ISSU	IMPACT ¹ OR ISSUE?	
	NO	YES	NO	
 Is the project in a mapped Flood Zone? TEM section 4.?, EO 11988 				
 Is the project in or could it affect a designated coastal area? FAN and/or Consistency determination may be required. See <u>TEM 4.6</u> 				
8. Is the project area above a Sole Source Aquifer? <u>See TEM 4.4</u> Coordination with FHWA and/or EPA may be required.				
9. Will the project involve one (1) acre of ground disturbance (or 5,000 sf in the East of Hudson watershed)?				
10. Are federally/state listed endangered species or designated critical habitat indicated for the project county? <i>Coordination with DEC and/or a FHWA determination may be required.</i> See <u>TEM 4.4.9.3</u>				
11. Is the project in a designated Critical Environmental Area? <i>TEM</i> 4.4.11(SEQR issue)				
 Are there any resources protected by Section 106 (or Section 1409) within the project limits or immediate area? See <u>TEM</u> <u>4.4.12 Appendix G</u> 				
13. Is Native American coordination required outside of Section 106 consultation? The project on or affecting Native American Lands or other areas of interest	\boxtimes			
 Is there a use, constructive use or temporary occupancy of a 4(f) resource? See <u>SECTION 4(f) POLICY PAPER</u> and contact Area Engineer. 				
15. Will the project involve conversion of a 6(f) resource? listed as having Land and Water Conservation funds spent on the resource				
16. Is there any potential to affect the character of important and possibly significant the visual resources of the project area and its environs? (See <u>PDM Chapter 3.2.2.2</u>)				
 Will the project convert land protected by the Federal Farmland Protection Act? See <u>TEM 4.4.15</u> 				
 Will the project acquire active farmland from an Agricultural District? (SEQR issue) 				
 Is the project in a non-attainment area and exceed the CO screening criteria? see <u>EPM Chapter 1 1.1-19 an Air Quality</u> <u>Analysis required</u> 				
20. Is the project in a non-attainment area and exceed the PM screening criteria? see <u>EPM Chapter 1 1.1-19? A hot spot analysis</u> is required				
21. Is the project a Type I Noise project as per 23 CFR 772? See <u>TEM 4.4.18</u>	\boxtimes			
22. Will the project require the removal of Asbestos Containing Materials? See <u>TEM 4.4.19</u>				
23. Does the project area contain Contaminated and Hazardous Materials? EPA National Priority List				
24. Will the project increase the height of towers, construct new towers or other obstructions in a known migratory bird flyway?				

NOTES:

¹ The term "impacts" means both positive and negative effects. Both types of effects should be discussed in the body of the report as appropriate.

PREPARED BY (Print Name and Title): Tim Mahoney, Staff Engineer

CERTIFICATION:

I certify that the information provided above is true and accurate.

Responsible Local Official _____ Date _____

Print Name and Title: _____


March 24, 2020

Mr. Steve MacAvery, NYSDOT Region 8, Local Projects Unit 4 Burnett Boulevard Poughkeepsie, NY 12603

Re: PIN 8762.26 – Hungry Hollow Road over Tributary of Saddle River Culvert Replacement Town of Ramapo, Village of Chestnut Ridge, Rockland County, New York Section 14.09 PSP

Dear Mr. MacAvery,

Rockland County Highway Department is planning to replace the Hungry Hollow Road Culvert over a Tributary of the Saddle River in the Town of Ramapo / Village of Chestnut Ridge. A description of the work is contained within the attached Section 14.09 PSP.

We request your review of this project and concurrence with our finding of No Adverse Effect. We have enclosed the Section 14.09 Cultural Resources Submittal Package, which includes a project description, location map, area of potential effect plan and photos.

Thank you for your assistance. If you have any questions or need additional information, please contact our office.

Sincerely,

HVEA Engineers by Lora Rinaldi, EIT, CPESC

cc: D. Quinn, RCHD J. Anderson, HVEA K. Wolfanger, NYSDOT O. Trocard, NYSDOT

NEW YORK STATE DEPARTMENT OF TRANSPORTATION PROJECT SUBMITTAL PACKAGE Section 14.09 of the State Historic Preservation Act For Locally Administered State-Aid Projects

A Project Submittal Package is prepared by the Local Project Sponsor (Sponsor) or their consultants for federal aid transportation projects to provide sufficient information for NYSDOT assessment of Section 14.09 obligations. The Sponsor sends the package to the Regional Local Project Liaison (RLPL) for RCRC review. The RCRC will make recommendations to identify what is needed for Section 14.09 compliance for the project.

DATE: March 2020 PIN: 8762.26

IDENTIFICATION

Project Name (if any): Hungry Hollow Road Culvert over Tributary of Saddle River Replacement

Project Area Boundaries Sec (Indicate State or County Ro	ee attached project description and location ute # and/or local street name, and clearly (<u>map</u> defined endpoints)	
County: Rockland	Town/City: Ramapo	Village/Hamlet: Chestnut Ridge	
Have you consulted the NYSHPO web site at * <u>http://nysparks.state.ny.us</u> to determine the preliminary			Yes 🗌 No
 Was the project site wholly or partially included within an identified archaeologically sensitive area? Does the project site involve or is it substantially contiguous to a previously evaluated 			🗌 Yes 🛛 No
National Register of	of Historic Places listed property?	. ,	🗌 Yes 🛛 No
* <u>http://nysparks.state.ny.us</u> t Tools	hen select HISTORIC PRESERVATION the	en Historic Preservation Field Services B	ureau then On Line

ALL PROJECTS SUBMITTED FOR REVIEW SHOULD INCLUDE THE FOLLOWING INFORMATION

Project Description – Attach a full description of the nature and extent of the work to be undertaken as part of this project. This should include, but not limited to, potential activities that might involve drainage, cutting, excavation, grading, filling, on-site detours, new sidewalks, right-of-way acquisition. Relevant portions of the project applications or environmental statements may be submitted. This could be from sections of the Draft Design Report/ Draft Scoping Document.

Location Maps - Provide USGS Quad or DOT Planimetric map showing project area location. The map must clearly show street and road names surrounding the project area as well as all portions of the project.

Photos - Provide clear, original color photographs of the entire project area keyed to a site plan. These photos should indicate:

- Buildings/structures more than 50 years old that are located along the property or on adjoining property
- Areas of prior ground disturbance (removal of original topsoil; filling and plowing are not considered disturbance)

LOCAL SPONSOR CONTACT

Name: Title: Firm/Agency:	Jared Anderson, P.E. Project Manager HVEA Engineers	City Person	
State:	NY	Zip: 12508	
Phone: 845-838-3600	E-Mail: janderson@hveapc.com		

Project Description:

Rockland County Highway Department is planning to replace the Hungry Hollow Road Culvert over the Tributary of the Saddle River in the Town of Ramapo / Village of Chestnut Ridge.

All work will be completed within the existing right of way. The project is being funded through the Bridge NY program.

Review of the SHPO CRIS:

A preliminary screening utilizing the NYSHPO CRIS was completed and found no eligible or listed historical or historic district within the project limits.

A screenshot of the CRIS map is included in the attachments.

Note that the dark blue outline is the outline for this consultation project – Hungry Hollow Road over Tributary of Saddle River Culvert Replacement (20PR00120).

Documentation of Previous Soil Disturbance:

Work for this project will be on areas of previously disturbed soil. Roadway construction will be minimal as it is limited to the culvert and minor approach roadway work. The area of previous disturbance is shown on the Area of Potential Effect Plan attached.

Structures Over 50 Years Old Within the Project Limits:

The existing culvert was built over 50 years ago. Photos of the culvert are attached. No other buildings, culverts, or other structures are located within the project limits. Per discussions with NYSDOT, this culvert has been determined not eligible for the National Register under 19PR03346.

Recommended Project Finding:

Based on preliminary screening, field review, amount of previous disturbance/fill from the original culvert construction, and lack of right-of-way acquisition, the County has determined that this project will have no effect on historic properties.

Attachments

- 1. Project Location Map
- 2. Area of Potential Effect Plan
- 3. Photo Key Map & Photos
- 4. CRIS Screenshot

PROJECT LOCATION MAP

The coordinates of the center of the project are N 41.088441, W 74.064827



PROJECT LOCATION MAP

BREWER RD NNEDY DR DRA'RD OLD NYACK TPRE ONQUIN CIR AVE 450 HUNGRY HOLLOW RD 87 287 402 BLUEJAY ST MARGETTS RD LEAGLE/ST-0 ANN BLVD R ANE R ANE LAWRENCE PL SUTIN PL Sunbridge Institute CHESTNU (h RIDGE (45) CAPRI **Project Location**

The coordinates of the center of the project are N 41.088441, W 74.064827





Zoom on next page





East side of Hungry Hollow Rd, looking south.



East side of Hungry Hollow Rd, looking east, upstream.



East side of Hungry Hollow Rd looking south.



East side of Hungry Hollow Road looking south.



East side of Hungry Hollow Road looking south.



Looking down at culvert on east side of Hungry Hollow Rd.



Looking down at culvert on east side of Hungry Hollow Rd.



East side of Hungry Hollow Rd looking west.





Culvert on west side of Hungry Hollow Rd.

West side of Hungry Hollow Rd, looking southwest.

CRIS Screenshot





Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO Governor ERIK KULLESEID Commissioner

January 13, 2020

Emma Chilton HVEA Engineers 560 Route 52 Beacon, NY 12508

Re: SEQRA Hungry Hollow Culvert - Rockland County Hungry Hollow Road, Chestnut Ridge, NY 20PR00120

Dear Emma Chilton:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Danel Mad

R. Daniel Mackay

Deputy Commissioner for Historic Preservation Division for Historic Preservation



ANDREW M. CUOMO Governor

MARIE THERESE DOMINGUEZ Commissioner

MEMORANDUM

- TO: O. Trocard/S. MacAvery, Local Projects Unit, Region 8 VIA EMAIL
- FROM: K. Wolfanger, Regional Cultural Resources Coordinator, Region 8

SUBJECT: SECTION 14.09 OF THE STATE HISTORIC PRESERVATION ACT PIN 8762.25 TOWNLINE ROAD CULVERT REPLACEMENT TOWN OF ORANGETOWN & CLARKSTOWN ROCKLAND COUNTY AND PIN 8762.26 HUNGRY HOLLOW ROAD CULVERT REPLACEMENT TOWN OF RAMAPO ROCKLAND COUNTY

DATE: February 27, 2020

The two above-referenced locally-administered projects are being fully funded through New York State's BridgeNY program. Even though these culverts are state-funded, as this is a priority project, the Regional Cultural Resource Coordinator is the point of contact for SHPO coordination for Section 14.09.

On February 12, 2020, the Department received a copy of the SHPO's impact finding letters for the two projects. These letters are both dated January 13, 2020 and both conclude that no properties listed or eligible for the New York State and National Registers of Historic Places will be impacted by the projects. SHPO's project numbers are 20PR00119 for PIN 8762.25 and 20PR00120 for PIN 8762.26. The information available on CRIS is not sufficient to ensure that the obligations of Section 14.09 have been met. Furthermore, this information is not likely to be sufficient for the Army Corps of Engineers to make an effect finding under Section 106 of the National Historic Preservation Act during permitting.

Please provide a complete Project Submittal Package for each project, including all previous correspondence with SHPO. Please note that the culverts have already been determined *not eligible* under 19PR03346.

If you or the project sponsor have any questions, please contact me.

KW:SL



February 12, 2020

Ms. Orietta V. Trocard Regional Local Projects Manager New York State Department of Transportation 4 Burnett Boulevard Poughkeepsie, NY 12603

Re: PIN 8762.26 – Hungry Hollow Road Culvert Replacement Town of Ramapo (Chestnut Ridge), Rockland County, NY Endangered Species Act Section 7 - Concurrence Request

Dear Ms. Trocard,

Rockland County Highway Department is replacing the Hungry Hollow Road culvert over a Tributary of the Saddle River in Chestnut Ridge, New York. The project is in receipt of Bridge NY funds. The scope of work includes replacement of the twin 36" corrugated metal arch pipes with a 10-foot wide by 3-foot tall precast concrete culvert. The culvert will be realigned to reduce entrance and exit skew. The wingwall at the culvert entrance will be extended to prevent scour and undermining, and bridge railing will be installed along the new wingwall. The guide railing at the other corners will be replaced. No property acquisition will be required. Land within the project limits is considered suburban.

We are writing to request ESA concurrence. The USFWI indicates the presence of the bog turtle in the vicinity. Included in this package you will find a map which shows no Federal or State wetlands within the action area of the project; therefore, there is no suitable habitat for bog turtles.

Coordinates of the project are: N 41.088441, W 74.064827

Thank you for your assistance. If you have any questions or concerns, please email or call me at (845) 838-3600.

Sincerely. **HVEA Engineers** by

Jared M. Anderson, P.E. Project Manager

cc: D. Quinn, RCHD S. MacAvery, NYSDOT

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Step 3: D	ocumentatio	n. Please complete	e the appropriate b	loxes below and con	plete the document	ation as described.	
	ESA/EFH Does Not Apply	No Effect, Activity- Based	No Effect, No Suitable Habitat or No Effect	BATS: MA, NLAA, 14-Day Form, or IPaC Submittal	NLEB: MA, LAA 30 Day Form, or IPaC Submittal	MA, NLAA, Traditional 7-step Process	MA, LAA, Formal Consultation
Northern Long-eared Bat	×						
Indiana Bat	Х						
Bog Turtle			No Suitable Habitat	AN	NA		
Mollusks (Dwarf Wedge Mussel, Rayed Bean, Clubshell, Chittenango Ovate Amber Snail)	×			AN	NA		
Karner Blue Butterfly	Х			NA	NA		
Sturgeon (Shortnose, Atlantic)	×			NA	NA		
Sea Turtles	Х			NA	NA		
Atlantic Large Whales	Х			٧N	AN		
EFH Resources (circle one)	EFH Does Not Apply	No Effect, Activity- Based		NA	EFH Programmatic Agreement Applies	EFH Programmatic Agreement MAY Apply	Individual EFH Consultation is Required
Documentation Required	The IPaC/NMFS ESA/EFH Mapper report is included in the Design Report.	Record the corresponding number of the activity in the box above. This sheet and the IPaC/NMFS ESA/EFH printout are included in the Design Report.	NYSDOT submits "No Effect, No Suitable Habitat Determination" to FHWA. Concurrence has been obtained if 15 days passes without correspondence from FHWA.	NYSDOT submits 14- day Form to USFWS- cc: Area Engineer, OR submits through IPaC w/Area Engineer included.	NYSDOT submits 30- day Form to FHWA- then to USFWS, OR NYSDOT submits hrough IPaC w/ Area Engineer included.	NYSDOT submits either BE or BA to FHWA, who submits to USFWS for concurrence.	NYSDOT submits BA to FHWA for Initiation of Formal Consultation with USFWS or NMFS.
Instructions for Use: This Sui	nmary Sheet	is sent to FHWA for	concurrence for all s	submissions, except "	ESA Does Not Apply" a	and "No Effect, Activ	vitv-Based". A

determination. SEE EACH SPECIES-SPECIFIC PACKAGE FOR SPECIFIC DOCUMENTATION REQUIREMENTS FOR SUBMITTALS. Also, FHWA requires documentation of submittal package includes all documentation for all species requiring concurrence, with a cover letter requesting concurrence, so that FHWA can make one ESA TEM 4.4.9.3.11 Appendix G (December 2018) compliance with ESA in the Design Report.

Species Conclusions Table

Project Name: PIN 8762.26 Replacement of Hungry Hollow Culvert over Tributary of Saddle River Date: June 2020

Species Name	Potential	Species	Piping	ESA / Eagle Act	Notes / Documentation Summary (include full rationale in your report)
	Habitat	Present?	Plover	Determination	
	Present?		Critical		
			Habitat		
			Present?		
Bog turtle (Clemmys	No	No	No	n/a	There are no known occurrences of the Federally threatened bog turtle within the
(Glyptemys)					project site. This is a semi-aquatic species, preferring habitat with cool, shallow,
muhlenbergii)					slow moving water, deep soft muck soils, and tussock-forming herbaceous
					vegetation. In New York, the bog turtle is generally found in open, early
					successional types of habitats such as wet meadows or open calcareous boggy
					areas generally dominated by sedges or sphagnum moss. Like other cold-
					blooded or ectothermic species, it requires habitats with a good deal of solar
					penetration for basking and nesting. The project location is above a riverine
					habitat (R3UBH), a class C stream. There are two freshwater ponds 0.27 miles
					(PUBHh) and 0.35 miles (PUBHx) from the site. There is no habitat for the bog
					turtles present at the site location.

Last modified: 6/23/2020



Wetlands

Project Location



National Wetlands Inventory (NWI) This page was produced by the NWI mapper

Riverine

Other

Freshwater Forested/Shrub Wetland

Freshwater Pond

Estuarine and Marine Wetland





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NYS Department of Environmental Conservation Not a legal document

Environmental Resource Mapper



November 19, 2019



United States Department of the Interior

FISH AND WILDLIFE SERVICE New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 Phone: (607) 753-9334 Fax: (607) 753-9699 http://www.fws.gov/northeast/nyfo/es/section7.htm



In Reply Refer To: Consultation Code: 05E1NY00-2020-SLI-1453 Event Code: 05E1NY00-2020-E-04452 Project Name: Hungry Hollow Culvert Replacement January 29, 2020

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 (<u>http://www.fws.gov/windenergy/</u>

<u>eagle_guidance.html</u>). Additionally, wind energy projects should follow the Services wind energy guidelines (<u>http://www.fws.gov/windenergy/</u>) 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: <u>http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/currentBirdIssues/Hazards/towers/currentBirdIssues/Hazards/towers/towers/hazards/towers/towers/hazards/towers/towers/hazards/towers/comtow.html.</u>

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(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office

3817 Luker Road Cortland, NY 13045-9385 (607) 753-9334

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Long Island Ecological Services Field Office

340 Smith Road Shirley, NY 11967-2258 (631) 286-0485

Project Summary

Consultation Code:	05E1NY00-2020-SLI-1453
Event Code:	05E1NY00-2020-E-04452
Project Name:	Hungry Hollow Culvert Replacement
Project Type:	** OTHER **

Project Description: suburban, replace culvert

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/41.088425595752724N74.06483738476166W</u>



Counties: Rockland, NY

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Reptiles

NAME	STATUS
Bog Turtle Clemmys muhlenbergii	Threatened
Population: Wherever found, except GA, NC, SC, TN, VA	
No critical habitat has been designated for this species.	
Species profile: <u>https://ecos.fws.gov/ecp/species/6962</u>	
Species survey guidelines:	
https://ecos.fws.gov/ipac/guideline/survey/population/182/office/52410.pdf	
Habitat assessment guidelines:	
https://ecos.fws.gov/ipac/guideline/assessment/population/182/office/52410.pdf	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior

FISH AND WILDLIFE SERVICE Long Island Ecological Services Field Office 340 Smith Road Shirley, NY 11967-2258 Phone: (631) 286-0485 Fax: (631) 286-4003



In Reply Refer To: Consultation Code: 05E1LI00-2020-SLI-0257 Event Code: 05E1LI00-2020-E-00593 Project Name: Hungry Hollow Culvert Replacement January 29, 2020

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 (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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 Act, 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 website 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.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

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 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/correntBirdIssues/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 Act. 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(s):

Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Long Island Ecological Services Field Office

340 Smith Road Shirley, NY 11967-2258 (631) 286-0485

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

New York Ecological Services Field Office

3817 Luker Road Cortland, NY 13045-9385 (607) 753-9334

Project Summary

Consultation Code:	05E1LI00-2020-SLI-0257
Event Code:	05E1LI00-2020-E-00593
Project Name:	Hungry Hollow Culvert Replacement
Project Type:	** OTHER **
Project Description:	suburban, replace culvert

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/41.088425595752724N74.06483738476166W</u>



Counties: Rockland, NY

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Reptiles

NAME	STATUS
Bog Turtle Clemmys muhlenbergii	Threatened
Population: Wherever found, except GA, NC, SC, TN, VA	
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/6962	

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.
11/19/2019

title

EFH Data Notice: Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional Fishery Management Councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41°5'26" N, Longitude = 75°55'54" W Decimal Degrees: Latitude = 41.09, Longitude = -74.07

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.

**For links to all EFH text descriptions see the complete data inventory: open data inventory -->

Mid-Atlantic Council HAPCs, No spatial data for summer flounder SAV HAPC.



Area of Interest (AOI) Information

Area : 519.8 acres

Nov 19 2019 9:17:05 Eastern Standard Time

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	0	0	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

DISCLAIMER: Use of this App does NOT replace the Endangered Species Act (ESA) Section 7 consultation process; it is a first step in determining if a proposed Federal action overlaps with listed species or critical habitat presence. Because the data provided through this App are updated regularly, reporting results must include the date they were generated. The report outputs (map/tables) depend on the options picked by the user, including the shape and size of the action area drawn, the layers marked as visible or selectable, and the buffer distance specified when using the "Draw your Action Area" function. Area calculations represent the size of overlap between the user-drawn Area of Interest (with buffer) and the specified S7 Consultation Area. Summary table areas represent the sum of these overlapping areas for each species group.



MARIE THERESE DOMINGUEZ Commissioner

MEMORANDUM

TO: O. Trocard/S. MacAvery, Local Projects Unit, Region 8 – VIA EMAIL

FROM: K. Wolfanger, Regional Environmental Contact, Region 8 KAW

SUBJECT: NATIONAL AND STATE ENDANGERED SPECIES ACT (ESA) PIN 8762.26 HUNGRY HOLLOW ROAD CULVERT REPLACEMENT TOWN OF RAMAPO ROCKLAND COUNTY

DATE: February 14, 2020

The above-referenced locally-administered project is being fully funded through New York State's BridgeNY program. There is no federal funding; however; a federal permit from Army Corps of Engineers (Corps) will be required for the project. This project proposes to replace the Hungry Hollow Road culvert.

On February 12, 2020, the Department received a copy of the following documents:

- 2/12/20 cover letter briefly describing the project
- ESA/EFH Transmittal Sheet indicating no suitable habitat for bog turtle and that ESA/EFH does not apply for all other species/habitat
- 8/19/19 Species Conclusions Table that indicates no suitable habitat is present for bog turtle
- 11/19/19 screenshot of the USFWS National Wetlands Inventory mapper showing a riverine wetland is mapped within the project area
- 11/19/19 screenshot from the NYSDEC Environmental Resource Mapper indicating the project area and that a stream is mapped within the project limits; no species were mapped in the vicinity of the project
- 1/29/20 USFWS's IPaC species lists from the New York Ecological Services Field Office and Long Island Ecological Services Field Office indicating bog turtle may occur within the boundary of the proposed project or be affected by the proposed project
- 11/19/19 NOAA Essential Fish Habitat query results indicating no EFH present
- 11/19/19 NOAA NMFS Section 7 Consultation Area mapper results indicating no species present

The Department screened the project area using NYNHP data dated December 2019 and confirmed that no species are in the vicinity. Since no species are present within the project vicinity, the sponsor's obligations under the State Endangered Species Act are complete. This shall be documented in the project's design approval document.

Please note that the Corps will complete ESA section 7 consultation in accordance with Nationwide Permit General Condition 18 – Endangered Species (see attached). The Sponsor is a non-federal permittee and shall provide the Corps with the results of the screening for federally-listed species including all the attachments referenced above, except the ESA/EFH Transmittal Sheet (which is for FHWA use only).

Our review of this project is complete. If you or the project sponsor have any questions, please contact me.

KW:SL Attachment

Buffalo & New York Districts Final Regional Conditions, Water Quality Certification and Coastal Zone Concurrence for the 2017 Nationwide Permits for New York State Expiration March 18, 2022

16. <u>Wild and Scenic Rivers</u>. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. <u>**Tribal Rights.**</u> No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat that might be affected applicant of the USACE' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

Buffalo & New York Districts Final Regional Conditions, Water Quality Certification and Coastal Zone Concurrence for the 2017 Nationwide Permits for New York State Expiration March 18, 2022

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. <u>Migratory Birds and Bald and Golden Eagles</u>. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. <u>Historic Properties</u>. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State



To:	DEC	C Region 3		From:	Emma Chilton	
Fax:				Pages:	3 w/ cover	
Phone:				Date:	11/14/2019	
Re:	State Clas Enda	e-Listed Species, Str sification/ Wetland L angered Species	eam ocations/	CC:		
🗆 Urge	ent	□ For Review	Please Com	ment	X Please Reply	Please Recycle

Please find attached a map showing the location of the Replacement of the Hungry Hollow Road culvert over a the tributary of the Saddle River Project. We are currently working on the preliminary design of this project.

In determining the regulatory requirements of this project we need to ascertain the potential for State-Listed Species in the vicinity of the project. Please provide a review of the State's Master habitat Databank (MHDB) at your earliest convenience.

A NYSDEC Stream Classification for any waterways within the project limits, as well as any wetlands in the vicinity of the project is also necessary.

Thank you for your time on this matter.

Project Information:

The County of Rockland is planning to replace the Hungry Hollow Road culvert over a tributary of the Saddle River in the Town of Chestnut Ridge, New York. The project is funded by the Bridge NY Project. The scope of work includes replacement of the twin 36" corrugated metal arch pipes with a 10-foot wide by 3-foot tall precast concrete 4-sided box culvert. The culvert will be realigned to reduce entrance and exit skew. The wingwall at the culvert entrance will be extended to prevent roadway scour and undermining, and bridge railing will be installed along the new wingwall. The guide railing at the other corners will be replaced. No property acquisition will be required. The majority of the land within the project limits is considered suburban.

The coordinates of the center of the project are N 41.088441, W 74.064827

See figure 1 for a location map.

Project Map:



Figure 1: Location Map of Replacement of Hungry Hollow Road culvert over a tributary of the Saddle River, Rockland County

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 3 21 South Putt Corners Road, New Paltz, NY 12561-1620 P: (845) 256-3054 | F: (845) 255-4659 www.dec.ny.gov



Department of Environmental Conservation

December 3, 2019

Emma Chilton HVEA Engineers 560 Route 52 – Suite 201 Beacon, New York 12508

RE: Hungry Hollow Road Culvert over Tributary of Saddle River Village of Chestnut Ridge, Rockland County CH# 8562 Permit Jurisdiction Screening

Dear Ms. Chilton:

The New York State Department of Environmental Conservation (DEC or Department) received your request for a jurisdictional review of the above-referenced project on November 22, 2019. The project involves the replacement of the existing culvert comprised of twin 36-inch corrugated metal arch pipes with a 10-foot-wide by 3-foot-tall precast concrete 4-sided box culvert. The proposed culvert will be realigned to reduce entrance and exit skew. The wingwall at the proposed culvert entrance will be extended to prevent roadway scour and undermining, and bridge railing is proposed to be installed along the new wingwall. Additionally, the existing guide railing is to be replaced. Based upon our review of your inquiry and submitted materials, we offer the following comments:

PROTECTION OF WATERS

The following stream is located within or near the site you indicated:

Name	Class	DEC Water Index Number	Status
Tributary of Pine Brook	С	NJ-6-2-P987b	Non-Protected

A permit is not required to disturb the bed or banks of "non-protected" streams.

<u>If a permit is not required, please note</u>, however, you are still responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.



FRESHWATER WETLANDS

The project site is not within a New York State protected Freshwater Wetland. The project site does not appear to contain a federally regulated wetland area. If the United States Army Corps of Engineers (ACOE) requires a permit for work completed in or impacting a federal wetland, the Department may require a Section 401 Water Quality Certification. Please contact the ACOE at (917) 790-8411 for a determination.

STATE-LISTED SPECIES

The DEC has reviewed the State's Natural Heritage records. No records of sensitive resources were identified by this review.

The absence of data does not necessarily mean that rare or state-listed species, natural communities, or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on 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.

FEMA FLOODPLAIN

The project site is located within a Federal Emergency Management Agency (FEMA) Floodplain. The municipality will determine if any additional jurisdictions are applicable to the proposal.

OTHER

Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. More information about DEC permits may be found on our website, www.dec.ny.gov, under "Regulatory" then "Permits and Licenses." Application forms may be downloaded at http://www.dec.ny.gov/permits/6081.html.

Please contact this office if you have questions regarding the above information.

Sincerely,

hustin Pacille

Christina Pacella Division of Environmental Permits Region 3, Telephone No. (845) 256-2250

Village of Chestnut Ridge Village Clerk CC:

Hazardous Waste/Contaminated Materials (HW/CM) Site Screening for Local Projects

To be completed for all Local Project Design Approval Documents (Design Reports – IPP/FDR, PSR.FDR, DDR, BRR) and included in an appendix)

PIN:8762.26Project Description:Hungry Hollow Road Culvert Replacement over Tributary to Saddle River, Town of Ramapo,
Village of Chestnut Ridge, Rockland CountyProject limits:Between Raymond Avenue and Sparrow Drive
Jared Anderson, P.E.Completed by:Jared Anderson, P.E.

Project Scope

- [x] Soil disturbance/excavation required
- [] Right-of-way FEE takings required
- [x] Bridge or culvert work with a
 - [] bridge containing lead-based paint
 - [] bridge/culvert that contains asbestos-containing material
 - [] bridge/culvert that has not been inspected for asbestos-containing material
- [] Replacement of bridge rail with caulked plates over bridge (caulk may contain asbestos)
- [x] Sidewalk or curb ramp replacement (e.g. caulk or joint filler may contain asbestos)
- [x] Underground utility relocations (e.g. pipe wrap may contain asbestos)
- [] Building demolition

Visual Site Inspection Results

Site inspection from [x] site walk-over and/or [x] aerial photos/online street view

- [] Presence of noxious odors from [] soil and/or [] water
- [] Discoloration of [] soil, [] water, and/or [] foundation
- [] Site contains [] dead vegetation and/or [] little to no vegetation

[] Observed [] leaking pipes, [] transformers, [] tanks, [] barrels, [] monitoring wells¹, [] suspicious pavement patches²

[x] No potential hazardous waste/contaminated materials observed

Project Area and Vicinity

[] Auto body/repair shop

Results from screening³ of project limits and vicinity using [x] site walk-over and/or [x] aerial photos/online street view and/or [x] NYSDEC Environmental Site Database Search⁴:

[] Metal/Machine Fabricating

[] Furniture Refinisher

- [] Spill sites [] Manufacturer
- [] Gas station

- [] Electro-Plating
- [] Paint Shop

- [] Dry cleaner
- [] Printing Shop [] Foundry
- [] Junk/Scrap Recycling
- [] Municipal Landfill
- [] National Priority List (NPL)

- [] Chemical Plant/Refinery
- [] Electrical Substation
- [] Lumber Yard
- [] Rail Yard/Tracks
- [] Boat Yard
- [] Gas/Oil/Coal Storage Yard
- [] Other
- Specific site names & whether there will be ROW acquisition from the property: n/a

Other Notes:

No reported spills within project site. Gas line is a 6" steel main.

Conclusions:

[] An asbestos inspection is required
[] A hazardous waste assessment is required (excluding asbestos)
[x] No further hazardous waste investigation is warranted

APPENDIX C

ACCIDENT & TRAFFIC DATA

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-2)

PIN:		8762.26	Project Location:	Village of Chest	nut Ridge, Rockland	COunty
Conte	xt:	✓ Urban/Village	Suburban, or 🔲 R	ural		
Projec	t Title:	Hungry Hollow Road	l over Brook Culvert Re	placement		
STEP	1- APPL	ICABILITY OF CHECH	(LIST			
1.1	Is the by law structu	project located entirely and the project do re? If no , continue to q	on a facility where bio es not involve a sha uestion 1.2. If yes , <u>st</u> a	cyclists and pedestr ared use path or o <u>p here</u> .	rians are prohibited pedestrian/bicycle	Yes 🔽 No
1.2	a. Is ti pa b. Are pe • • • • Do	his project a 1R* Mainte <i>rt b of this question.</i> there opportunities destrians with the follow Sidewalk curb ramps Shoulder condition ar Pavement markings Signing cument opportunities of the to Highway Design Manual	enance project? <i>If no,</i> on the 1R project to wing Complete Street to and crosswalks and width r <i>deficiencies in the IP</i> ((HDM) Chapter 7 Exhibition	continue to question o improve safety features? P and <u>stop here.</u> 7-1 "Resurfacing ADA a	on 1.3. If yes , go to for bicyclists and	☐ Yes 🔽 No
1.3	Form Is this yes, ro pedest • • • • • • • • • • • • • • • • • • •	" under ADA, Pavement Ma project a Cyclical Pav eview <u>EI 13-021</u> * and trians with the following Travel lane width Shoulder width Markings for pedestria nent opportunities or de -021, "Requirements and Gu ravel Lane and Shoulder Wid	rkings and Shoulder Resurf rement Marking project identify opportunities Complete Streets feat ans and bicyclists officiencies in the IPP at idance for Pavement Markin th Adjustments".	acing for guidance. ct? If no , continue to improve safety tures: nd <u>stop here.</u> ng Operations - Require	to question 1.4. If for bicyclists and d Installation of CARDS	☐ Yes 🔽 No
1.4	 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? 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 stop here. 				☐ Yes 🔽 No	
STEP 1 prepared by: Joseph Pyzowski Date: 1/30/2019						
STEP	2 - IPP L	EVEL QUESTIONS (A	t Initiation)		Comment/Action	
2.1	Are the develo Streets Range that ca transit <i>Contac</i> <i>Plannii</i> <i>Coordi</i>	ere public policies or ap pment plans (e.g., com policy, Comprehensive and/or Bike/Ped plan, Il for consideration of p facilities in, or linking to the municipal planning of ang Group and Regional nator.	proved known munity Complete e Plan, MPO Long Corridor Study, etc.) edestrian, bicycle or o, the project area? fice, Regional Bicycle/Pedestrian	☐ Yes 🔽 No		

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-3)

2.2	Is there an existing or planned sidewalk, shared use path, bicycle facility, pedestrian-crossing facility or transit stop in the project area?	☐ Yes 🔽 No	
2.3	 a. Is the highway part of an existing or planned State, regional or local bicycle route? <i>If no</i>, <i>proceed to question 2.4. If yes</i>, go to part b of <i>this question</i>. b. Do the existing bicycle accommodations meet the minimum standard guidelines of <u>HDM</u> <u>Chapter 17</u> or the AASHTO "Guide for the Development of Bicycle Facilities"? * <i>Contact</i> <i>Regional Bicycle/Pedestrian Coordinator</i> * <i>Per HDM Chapter 17- Section 17.4.3, Minimum</i> <i>Standards and Guidelines.</i> 	☐ Yes 🔽 No	
2.4	Is the highway considered important to bicycle tourism by the municipality or region?	☐ Yes 🔽 No	
2.5	Is the highway affected by special events (e.g., fairs, triathlons, festivals) that might influence bicycle, pedestrian or transit users? <i>Contact</i> <i>Regional Traffic and Safety</i>	Ves V No	
2.6	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</i> <i>office, Regional Planning Group, and refer to the</i> <i>CAMCI Viewer, described in the "Definitions"</i> <i>section.</i>	☐ Yes 🔽 No	
2.7	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? If yes , consider a road diet evaluation for the scoping/design phase. Refer to the "Definitions" section for more information on road diets.	□ Yes 🗹 No	
2.8	Is there evidence of pedestrian activity (e.g., a worn path) and no or limited pedestrian infrastructure?	🗌 Yes 🔽 No	
STEP 2	prepared by: Joseph Pyzowski		Date: 1/30/2019
Bicycle/	Pedestrian Coordinator has been provided an opport	unity to comment: OR SCOPING/DE	☐ Yes ☐ No SIGN.

STEP (Scop	3 - PROJECT DEVELOPMENT LEVEL QUESTIONS ing/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?	🗌 Yes 🔽 No	
3.2	Is there history of bicycle or pedestrian crashes in the project area for which improvements have not yet been made?	🗖 Yes 🔽 No	
3.3	Are there existing curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks that don't meet ADA standards per <u>HDM Chapter 18</u> ?	Ves 🗌 No	See below for comments.
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)? <i>Refer to <u>El 13-</u>021</i> .	🗖 Yes 🔽 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)?	☐ Yes 🔽 No	
3.6	Are there conflicts among vehicles (moving or parked) and bike, pedestrian or transit users which could be addressed by the project?	🗆 Yes 🔽 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?	☐ Yes 🔽 No	
3.8	Does the community have an existing street furniture program or a desire for street appurtenances (e.g., bike racks, benches)?	🗌 Yes 🔽 No	
3.9	Are there gaps in the bike/pedestrian connections between existing/planned generators? <i>Consider</i> <i>locations within and in close proximity of the project</i> <i>area. (Within 0.5 mi (800 m) for pedestrian facilities</i> <i>and within 1.0 mi (1600 m) for bicycle facilities.)</i>	☐ Yes 🔽 No	
3.10	Are existing transit route facilities (bus stops, shelters, pullouts) inadequate or in inconvenient locations? (e.g., not near crosswalks) <i>Consult with</i> <i>Traffic and Safety and transit operator, as</i> <i>appropriate</i>	☐ Yes 🔽 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?	🗌 Yes 🔽 No	

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-5)

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?	🗌 Yes 🗹 No	
3.13	Are there opportunities to include green infrastructure which may help reduce stormwater runoff and/or create a more inviting pedestrian environment?	🗌 Yes 🗹 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?	🗌 Yes 🔽 No	
STEP Prepa Exis in p	3 prepared by: Jared Anderson, P.E. rer's Supporting Documentation, Comments and Clarif sting sidewalk within the project limits has heaved / settl arallel with the culvert replacement within the project limits	ications: ed and is no longer its.	Date: 3/18/2020 ADA compliant. This will be resolved

Introduction

Last Revised 06/22/2015

The intent of this checklist is to assist in the identification of needs for <u>Complete Streets</u> 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.

- Steps 1 & 2: Preparer is from Planning; review occurs as part of the normal IPP process.
- Step 3: Preparer is Project Designer; review occurs as part of Design Approval Document review/approval process.
- 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., Traffic and Safety, Landscape Architecture, Maintenance, etc.)
- d. This checklist should be reviewed during the development of the IPP, Scoping Document, and Design Approval

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-6)

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 <u>*Highway Design Manual Chapter 18*</u>, 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

- <u>CAMCI (Comprehensive Asset Management/Capital Investment) Viewer</u> A web-based GIS application used for planning purposes and located at <u>http://gisweb/camci/</u>.
- <u>Generator</u> 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.
- <u>Maintenance project</u> 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.
- <u>MPO (Metropolitan Planning Organization)</u> A federally mandated and federally funded transportation policymaking organization made up of representatives from local government and governmental transportation authorities.
- <u>Raised Pedestrian Refuge Medians and Corner Islands</u> 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 <u>http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf</u>.
- <u>Road diet</u> 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.
- <u>Transit facilities</u> Includes facilities such as transit shelters, bus turnouts and standing pads.
- <u>1R project</u> 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 degrading safety.
- <u>2R project</u> 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.

Station Class Point Length Road Name Beginning Description End Description AADT YEAR AADT 85<037 17 034 034 COUNT 087 Rocklar Region 08 POMONA RD YEAR A460 2.01 1460 2.01 165 2.01 5.68 2.01 5.68 2.01 5.68 2.01 5.68 2.01<
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Republic Republi
Road Number CR County 087 Rockland Region 08 85_8037 17 034 034 603 2.3 2018 460 2.3 2018 460 Rogion Rog
85_8037 17 0034 034 EAGLE VALLEY RD CR 72 STERLING MINE RD VL 460 2.3 2018 460 Roat Number CR County 087 Rockland Region 08 Rockland Region 08 Rockland Region 08 Rockland State
Normal Number CR4 County 087 Rocklaw Region 08 85_808 1
Roal Number CRG9 County 087 Rockland Region 08 85_8038 17 0183 0183 CEDAR FLATS RD BULSONTOWN RD NEW RT 210 554 1.5 2014 565 2011 568 Roal Number CRT County 087 Rockland Region 08 Region S54 1.5 2014 565 2011 568 S68 S69 S69 S68 S69
85_8038 17 0183 0183 CEDAR FLATS RD BULSONTOWN RD NEW RT 210 554 1.5 2014 565 2011 568 Road Number CR71 County 087 Rockland Region 08 74 554 1.5 2014 565 2011 568 85_6048 17 0152 0152 HUNGRY HOLLW RD RT 45 OLD NYACK TPKE 3235 6.1 2017 3251 2012 3791 2009 3229 Road Number CR71 County 087 Rockland Region 08 100
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Road Number CR72 County 087 Rockland Region 08
85_1103 16 0012 STERLING MINE R ROCKLAND CL/JUNIPER TER 12225 6 2018 12225 2014 10742 2011 11209 2008 10934
85_6013 16 0146 0146 STERLING MINE R RT17 RAMAPO TL 12448 5.6 2017 12523 2009 10708
85_1103 16 0183 0037 STERLING MINE R RAMAPO TL ORANGE CL 1225 6 2018 12225 2014 10742 2011 11209 2008 10934
Road Number CR73 County 087 Rockland Region 08
85_8039 16 0067 0067 SADDLE RIVER RD N J ST LN CR 81 S MONSEY RD 5044 4 2016 5105 2013 4955 2010 5078
85_8040 16 0198 0131 SADDLE RIVER RD CR 81 S MONSEY RD CR 52 OLD NYACK TNPK 5933 5.1 2018 5933 2011 4165
85_8041 16 0227 0029 SADDLE RIVER RD CR 52 OLD NYACK TNPK NY59 13022 3.7 2011 13588
Road Number CR74 County 087 Rockland Region 08
85_8042 16 0073 0073 VIOLA RD SPOOK ROCK RD FORSHAY RD 7412 4 2018 7412 2014 3968 2011 6510
85_6049 16 0123 0123 VIOLA RD US 202 SPOOK ROCK RD 3921 5.7 2015 3992 2013 4441 2012 4495 2009 3497
85_8043 16 0153 0080 VIOLA RD FORSHAY RD 10407 3.7 2014 10661 2011 11322
85_8044 16 0312 0153 ECKERSON RD NY306 NY45 12815 5.8 2016 12969 2013 8942 2010 11474
85 8045 16 0407 0095 ECKERSON RD NY45 W CLARKSTOWN 12909 3.7 2016 13065 2013 11173 2010 11946
Road Number CR75 County 087 Rockland Region 08
85_2013 16 0283 0266 CALLS HOLLOW RD RAMAPO TL WILLOW GROVE RD 1971 7.4 2014 2019 2011 1829
Road Number CR76 County 087 Rockland Region 08

TE 213	(6/19)				DE	ETAIL5	3 OF ,	ACCII	DENT	HISTORY FOR	LOCATION (A	S SHOWN C	N CRASH DIAGRAM)	DIAGRAM SHEET
STL	IDY NO.				ROUTI	E NO. 0	STRE	ET NAI	ME Hun	igry Hollow Road (CF	۲۱)			COUNTY - ROCKLAND MUNICIPALITY - TOWN OF RAMAPO
	ENTORY N	, <u>o</u>			AT INT	ERSEC	TION V	WITH R	aymond	Ave				BY - DQ DATE - 2/25/2020
	NO. OF MC	NTHS	LIGHT CC		NS (LC)			ROA	DWAY C	CHARACTER (RC)		ROADW	AY SURFACE CONDITION (I	SC) WEATHER (WEA)
			1. Dayligh	rt				1. Sti	raight & I	Level		1. Dry		1. Clear
			2. Dawn 3. Dusk					2. St 3. Stl	raight &	Grade Hillcrest		2. Wet 3. Mudd	~	2. Cloudy 3. Rain
Begin	Date //1/20	9	4. Dark R	oad Lighi	ted			4. CL	Irve & Le	svel		4. Snow	/lce	4. Snow
End D	ate 6/30/20 ⁻	19	5. Dark R	oad Unliç	ghted			0 0.0 0.0	urve & G urve at H	rade iillcrest		5. Slush 10. Othe	-	 Sleet/Hail/Freezing Rain Fog/Smog/Smoke Other
NO	CASE	DATE	TIME	# OF VEH	SEV	LC	RC	RSC	WEA	CONTRIB FACTORS	REF MKR	ACC TYPE		DESCRIPTION
-	36690827	4/18/2017	11:20	-	NR	-	5	-	-	26, YY		SIGN POST	Driver of vehicle #1 states she of the opposite direction. She then struck a sign post and a fence.	sserved an uninvolved vehicle coming at her from reports that she swerved her vehicle to the right but
7	37057930	12/29/2017	02:55	1	NR	4	5	7	1	61, YY		ANIMAL	Operator reports that he struck a damage to his vehicle.	crossing deer on Hungry Hollow Rd. causing
e	37766423	2/25/2019	20:42	4	PDO	ي ک	2	7	+	64, YY		TREE	Driver of Vehicle 1 stated he was did not see the downed tree acro	traveling straight on Hungry Hollow Rd when he iss the roadway and crashed into it.



1" = 30'









KEY: □ - FIXED OBJECT A - ANIMAL ■ - LOOSE OBJECT

φ

15

30'

APPENDIX D

STRUCTURAL INFORMATION

GEOTECHNICAL FIELD INVESTIGATION

PIN 8762.26

Hungry Hollow Road over Tributary of Saddle River Culvert Replacement

Rockland County Highway Department

Town of Ramapo

March 2020



Prepared by HVEA Engineers

TABLE OF CONTENTS

Ι.	Hungry Hollow Road Culvert Geotechnical investigation	
	 Actual soil boring locations 	
	 Description of site conditions 	
	 Soil Boring Logs 	4
	Pictures of site	





Hungry Hollow Road Site Conditions

The project along Hungry Hollow Rd. (CR 71) over a tributary of Saddle River will replace twin 36" corrugated metal arch pipes with a 10-foot wide by 5-foot tall precast concrete 4-sided box culvert. The culvert will be realigned to reduce entrance and exit skew thereby improving hydraulic characteristics. The wingwall at the culvert entrance will be extended to prevent roadway scour and undermining. In addition, the bridge railing will be installed along the extended wingwall; at the other corners, guide railing will be replaced.

A geotechnical field investigation was performed on March 9th to analyze the subsurface soil conditions of Hungry Hollow Road in the Village of Chestnut Ridge of Rockland County, NY. Craig Geotechnical Drilling Inc. was on site to perform the drilling by the "mud rotary" method using a CME-750X drilling rig. All drilling performed was done with a 3-7/8" drill bit and a 4" casing. An NX-2 core bit was used for rock coring. Standard Penetration Testing (SPT) and sampling was done in accordance with ASTM D1586. Rock coring and sampling was done in accordance with ASTM D2113. A 2" split spoon sampler was dropped from a height of 30 inches using a 140-pound hammer to obtain the Standard Penetration N-values for each sample collected. Collection of information for boring logs and termination depths were done in accordance with NYSDOT Geotechnical Design Manual Chapter 4.

Along Hungry Hollow Road, two separate borings were drilled in the SB lane, one on each side of the existing culvert. While drilling for holes B-6 and B-7 the sampling was very similar. The drilling for hole B-6 was done on the south side of the culvert and hole B-7 was drilled on the north side. From 0-7' beneath the surface, there was a dark brown medium sand with fine gravel layer. This layer was very dense at 7' beneath the surface, then a boulder was reached and drilled through until 9'. From 9-12' beneath the surface, a brown well graded gravel with sand layer was found. This layer continued until approximately 15' feet beneath the roadway where a very wet reddish-brown fine to medium sand layer was found. From 15-30' below, there was a dense reddish-brown silty sand layer. This layer was noticed to be difficult to break apart out of the split barrel sampler and SPT values guickly rose in this layer. During drilling for hole B-7 an interface was found between the silty sand layer and a red medium dense sand layer at 32'. Top of bedrock was reached at 34' beneath the roadway surface (EL. 367.02 for B-7) and Red sandstone was discovered. A 5' core sample was taken as beyond this the holes began to collapse. During drilling there were numerous boulders and dense gravel making drilling difficult throughout.


HVEA Engineers 560 Rt. 52 - Suite 201 Beacon, NY 12508 (845) 838-3600 FAX (845) 838-5311

SOIL BORING LOG

Project		Hungr	y Holl	ow Rd.	over Tri	butary of	Saddle River	Boring No.:	B-7
Project	ID:	19-03	53					Date:	3/9/2020
Locatio	n:	Hungr	y Holl	ow Rd.				Driller:	Paul Mullins
Client:		Rockla	nd Co	ounty				Inspector:	Tim Mahoney
Contra	ctor:	Craig (Geote	chnical	Drilling I	nc.			
Drilling	Metho	od:		Mud	Rotary		Start time:	8:05	Surface El.: 405.02
Drill Ri	g:			CME	750 X		Finish time:	10:40	Datum El.:
Bit size	/type:			3-7/8			Total depth:	40'	Water El.:
Casing	size:			4"			Spoon size:	2" OD	
Hamm	er weig	ght/dro	p heig	ht:	140 lb	s/30"			
Depth/	'time o	f water	disco	very:			1		
ition	ו (ft.)	e No.	ple	pe ple	ple very	Blows	D <i>da</i> to <i>r</i> ia	Description	Demonto
Eleva	Dept	Sampl	Sam	Sam	Sam	per 6"	wateria	a Description	Remarks
						27	1		
404.02	1					33	6" asphalt, fine	to medium sand with	
						25	well grade	d gravel (Brown)	
403.02	2	S-1	SS	24"	18"	14			
							-		
402.02	3						-		
							-		
401.02	4								
400.02	5								
						17			
399.02	6					12	Medium sand v	vith fine gravel (Dark	Vorydonco
						8	k	prown)	very dense
398.02	7	S-2	SS	24"	6"	46			
397.02	8								Drilled through a boulder
									from 7-9'
396.02	9						-		
395.02	10								
						6			
394.02	394.02 11 30 Well graded grav				l gravel with sand				
						10	(6	Brown)	
393.02	12	S-3	SS	24"	12"	10			
392.02	13								

5	ENGIN	E		HVEA 560 Rt Beacou (845) 8 FAX (8	Engine . 52 - S n, NY 1 338-36 45) 83	ers Guite 201 .2508 00 8-5311	B	SOIL BORING	LOG		
Project Project Locatic Client:	t: t ID: on:	Hungr 19-030 Hungr Rockla	ry Hollo 63 ry Hollov and Cou	w Rd. c w Rd. nty	over Tr	ibutary of	Saddle River	Boring No.: Date: Driller: Inspector:	B-7 3/9/2020 Paul Mullins Tim Mahoney		
Elevation	Depth (ft.)	Sample No.	Type	Sample Length	Sample Recoverv	Blows on SS per 6"	Material D	Description	Remarks		
391.02	14						-				
390.02	15						_				
389.02	16					2	Very wet sand wit	th gravel (Reddish	Matarial was list if a		
388.02	17	S-4	SS	24"	12"	1	brov	wn)			
387.02	18						-				
386.02	19						-		Hitting boulders while drilling		
385.02	20						-				
384.02	21					10 12	Silty sand with fin	e gravel (Reddish	Very dense at the end of		
383.02	22	S-5	SS	24"	8"	39		wii)	samping		
382.02	23						-				
381.02	24						-				
380.02	25						-				
379.02	26					40	Very dense silty	/ sand (Reddish	Hard to break apart out		
378.02	27	S-6	SS	24"	18"	50 48	broי	wn)	of split spoon sampler		
377.02	28						-				
376.02	29						-				

Ŀ	ENGIN	IEERS		HVEA 1 560 Rt Beacon (845) 8 FAX (8	Engine . 52 - n, NY 338-36 45) 83	eers Suite 201 12508 500 38-5311	B	SOIL BORING	LOG
Project Project	:: חוי	Hungr	y Hollo	w Rd. o	ver T	ributary of	Saddle River	Boring No.:	B-7 3/5/2020
Locatio	on:	Hungr	y Hollov	w Rd.				Driller:	Paul Mullins
Client:		Rockla	ind Cou	nty				Inspector:	Tim Mahoney
Contra	ctor:		Jeotech	inical D	rilling	Inc.			
Elevation	Depth (ft.	Sample No	Sample Type	Sample Length	Sample	Blows on SS per 6"	Material D	escription	Remarks
375.02	30						-		
374.02	31					90 50/1"	Interface of very of sand laver and re	dense brown silty d medium dense	
373.02	32	S-7	SS	24"	8"		- sai	nd	
372.02	33						-		
371.02	34						-		34' Top of bedrock
370.02	35						-		
369.02	36						-		Used NX-2 core bit for 5'
368.02	37						-		bottom was not straight
367.02	38						Bedrock - Re	d sandstone	coring and once core bit
366.02	39						-		sampling the hole
365.02	40	C-1	Core	60"	54"		-		could not continue.
							-		
							-		
							-		
							-		



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SOIL BORING LOG

Project	:	Hungr	y Holl	ow Rd. c	over Trik	outary of S	Saddle River	Boring No.:	B-6
Project	ID:	19-03	63					Date:	3/9/2020
Locatio	n:	Hungr	y Holl	ow Rd.				Driller:	Paul Mullins
Client:		Rockla	and Co	ounty				Inspector:	Tim Mahoney
Contra	ctor:	Craig (Geote	chnical D	rilling Ir	nc.			
Drilling	Metho	od:		Mud R	Rotary		Start time:	11:15	Surface El.: 406.02
Drill Rig	g:			CME-7	′50 X		Finish time:	1:30	Datum El.:
Bit size	/type:			3-7/8"			Total depth:	40'	Water El.:
Casing	size:			4"			2" OD		
Hamm	er weig	ht/dro	p heig	ht:	140 lbs	s/30"			
Depth/	time of	f water	disco	very:					
Ple Ple Ple No. (ft.)						Blows			
svat	pth	alqr		dy i amg eng	amp cov	on SS	Material	Description	Remarks
Ele	Del	San	ŝ.	L S	S: Re	per 6"			
						13			
405.02	1					21	6" asphalt, fine to	medium sand with	
						42	well graded	gravel (Brown)	
404.02	2	S-1	SS	24"	15"	19			
							-		
403.02	3						-		
							-		
402.02	4								
							-		
401.02	5								
						12			
400.02	6					5	Medium sand wi	th fine gravel (Dark	
						12	bro	own)	
399.02	7	S-2	SS	24"	8"	6			
398.02	8								
397.02	9								
396.02	10								
						8			
395.02	11					31	Fine gravel with	medium to coarse	
						45	sand	(Brown)	
394.02	12	S-3	SS	24"	12"	16	4		
393.02	13								

Ŀ	ENGIN	IEERS		HVEA 560 Rt Beaco (845) 8 FAX (8	Engin . 52 - n, NY 338-3 45) 8	eers Suite 201 12508 600 38-5311	SOIL BORING LOG					
Project	:: • ID•	Hungr	y Hollo	w Rd. o	ver T	ributary of	Saddle River	Boring No.:	B-6			
Locatio	טו. n:	Hungr	ss v Hollov	w Rd.				Driller:	Paul Mullins			
Client:		Rockla	nd Cou	nty				Inspector:	Tim Mahoney			
Contra	ctor:	Craig (Geotech	nical D	rilling	lnc.						
Elevation	Depth (ft.)	Sample No.	Sample Type	Sample Length	Sample	And Blows on SS per 6"	Material D	Description	Remarks			
392.02	14						_					
391.02	15						_					
390.02	16						Very wet fine to	o medium sand	Large gravel found			
389.02	17	S-4	SS	24"	12"		3 (Bro 3	own)	coming out of hole			
388.02	18						_					
387.02	19						_					
386.02	20						_					
385.02	21					19	9 7 — Silty fine to medi	um sand (Brown)				
384.02	22	S-5	SS	24"	15"	10	5	,				
383.02	23						_					
382.02	24						_					
381.02	25						_					
380.02	26					20	5 Very dense silty fir	ne to medium sand				
379.02	27	S-6	SS	24"	6"	2	/ (Bro 7	own)				
378.02	28						_					
377.02	29						_					

<u>}</u>	ENGIN	IEERS		HVEA I 560 Rt Beacor (845) 8 FAX (8-	Engi . 52 n, N 338-3 45) 8	nee - Su 7 12 360 838	ers uite 201 2508 0 -5311	B	SOIL SORING	LOG
Project Project Locatic	:: ID: on:	Hungr 19-036 Hungr Bockla	y Hollov 53 y Hollov	w Rd. o v Rd.	ver	Trik	outary of S	Saddle River	Boring No.: Date: Driller: Inspector:	B-6 3/5/2020 Paul Mullins Tim Maboney
Contra	ctor:	Craig C	Geotech	inical Di	rillin	g Ir	IC.		inspector.	minimum
Elevation	Depth (ft.)	Sample No.	Sample Type	Sample Length	Sample	Recovery	Blows on SS per 6"	Material Description		Remarks
376.02	30									
375.02	31						28 45	Very dense silty sar		
374.02	32	S-7	SS	24"	18"		50/1"	(Bro		
373.02	33									
372.02	34									34' Top of bedrock
371.02	35									
370.02	36									
369.02	37									
368.02	38							Bedrock - Re	d sandstone	Used NX-2 core bit for 5'
367.02	39									collapsed and sampling
366.02	40	C-1	Core	60"	60"					5' core was retrieved.



LEVEL I INSPECTION AND ANALYSIS OF HUNGRY HOLLOW ROAD OVER UNIDENTIFIED BROOK CIN 4024071X05 RAMAPO, NEW YORK

Introduction

١.

A Level I Inspection of CIN 4024071X05 was conducted by Lochner on December 22, 2011. The objective of the inspection was to determine the overall condition of the culvert, check roadway safety in the vicinity (100 feet up and down station), assess the stream channel for scour, erosion and obstructions, and establish culvert features (i.e. span width, length, roadway width, etc.) Following the inspection, the existing Level I load rating and hydrologic and hydraulic analyses were reviewed to determine if conditions at the structure require updating the live load capacity of the structure and the adequacy of the culvert opening, respectively.

The following is a general description of the culvert and a summary of the load rating and hydraulic findings.

II. Description of Culvert

CIN 4024 spans south to north and carries Hungry Hollow Road over an unidentified brook in the Town of Ramapo, Rockland County. The year of construction is unknown. The culvert consists of two, 3 foot diameter, corrugated metal pipes. The corrugations were field measured and found to be 1/2 inches deep and spaced 2-5/8 inches apart. These culverts were installed under an old slab-type culvert. Rock fill was pushed inside the old culvert to fill the void between the pipe and slab. The structure has a 2011 General Recommendation Rating of 3.

A continuation of a safety flag was reported by Lochner's Team Leader on December 22, 2011 for broken pipe rail along the west pavement edge.

The following information was taken from the 1995 Level I Load Rating Analysis and is assumed to be correct.

A. Corrugated Metal Pipe

The condition of the metal, which was determined to be steel, is fair. The thickness was field measured and found to be 0.135 inches. This is slightly less than the full design thickness of 0.138 inches. The overall shape of the culvert is excellent. There are no deformations or open seams. The horizontal dimension of the pipe is true throughout the length of the culvert. It is not known how well the material between the old culvert and pipes is compacted. Poor compaction could be causing the pavement problems that exist.

B. Sidewalks and Parapets

The sidewalk on the east side of the road is in poor condition. Sections of sidewalk are heaved, settled, and cracked. There is no sidewalk on the west side of the road. There are no parapets on either side of the road.

C. Load Ratings

Structural conditions at CIN 4024 have not significantly changed since the last inspection. As such, the Level I Load Rating Analysis previously performed in 1995 does not need to be updated.

The following information was taken from the 1995 report.

Load rating analyses were performed for the corrugated metal pipe. The analyses showed the load carrying capacity of the culvert is 36 tons (HS20).

D.

Hydrologic/Hydraulic Analysis

Hydraulic conditions at the site are generally unchanged since the last inspection report. Hydrologic information from the previous report was utilized in a new hydraulic analysis.

Hydrologic and hydraulic analysis indicates the culvert services a 69-acre watershed area with the following peak flows:

25 year storm	=	193 cfs
50 year storm	=	217 cfs
100 year storm	=	250 cfs

This includes flow from culvert CIN 4035, which is upstream. The culvert capacity was found to be inadequate for the 50-year storm with anticipated flooding of the roadway.

CIN 4024

APPENDIX A

LEVEL I LOAD RATING

I:\NBR\PRJ\000006674\Non-CADD\Reports\Load Rating-Hydraulic Reports\CIN 4024_Load Rating Hydraulic Rpt.doc

			· .
WOM UCO 84000 UNI 11/04-11 E4054 (1/20)		SHEFT 1 OF 1	
ROCKLAND COUNTY HIGHWAY DEPAR	TMENT		
METAL PIPE CILLVERTIO	ΔΠ ΒΔΤΙΝ		
MILIALI II L OOLVLIII LO			
	*. . · ·	13 14 15 16 17 18	
CULVERT IDENTIFICATION NUMBER			
4 0 2 4 0 7 1 X	0 5	TYPE (A–C): <u>A</u> – Round	
1 2 3 4 5 6 7 8	9 10	(CULVERT TYPES ARE LISTED AT BOTTOM OF PAGE)	
FIELD DATA:			
	3.00	COPNER RADIUS - Arches (ET):	0.00
COBBUGATED STEEL PITCH (IN):	2.67	FIELD MEASURED THICKNESS (IN.):	0.135
CORRUGATED STEEL DEPTH (IN.):	0.50	DESIGN THICKNESS (IN.):	0.138
TOP RADIUS - Arches (FT.):	0.00	COVER - H (FT.):	1.10
PBOPERTIES: (Table 2-2)		anna hann air ar an air an an an air ann an air an ann an	·····
As-Built Properties:			
MOMENT OF INERTIA - I (IN ^ 4/FT.):	0.0544	RADIUS OF GYRATION (IN.=((I/A) ^0.5):	0.177
WALL AREA (IN ² /FT):	1.744	SLENDERNESS (D/r):	203.83
AS-INSPECTED Properties: MOMENT OF INFRITIA - 1 (IN ^ 4/FT.);	0.0532	RADIUS OF GYRATION (IN = $(1/A)^{0.5}$):	0,177
WALLAREA (IN ² /FT):	1.7060	SLENDERNESS (D/n):	203.83
FORCES & STRESSES:		at have a second and a second	
ALLOWABLE WALL STRESS - Eb (PSI)	33.000	DESIGN PRESSURE - Bound Pine - PV (PSP)	18 767
DESIGN WALL STRESS - Fc (PSI):	16,500	DESIGN CORNER PRESSURE-Arch Pc (PSF):	0
DESIGN COMPRESSION IN PIPE WALL (K/FT	.): 28.15		
DEAD LOAD:		······································	
	107		-
POT COMPACTION OF RIPE BACKELL (%)	130	DEAD I OAD (PSE) =	149
LOAD FACTOR K:	0.67		
LIVE LUAU:	н н стр		
IMPACT FACTOR I (%):	20.00%	APPLIED LIVE LOAD (PSF) =	1939
CRITICAL LOADING (LBS) :	16,000		18619
DISTRIBUTED LIVE LOAD AREA (SF):	10	ALLOW LIVE LOAD (PSP) =	10,010
AS INSPECTED LOAD RATIN	<u>G (HS20 TR</u>	UCK):	n
Allowable Live Load X 36 Tons =	36 TON	IS (Legal Limit)	
Applied Live Load	, mildiousen		
Equivalent HS20 Truck -	HS20	· · · · · · · · · · · · · · · · · · ·	and the second se
Lyuvalent 1020 Huck =	1020		
Culvert Types: A – Round	B – Arch	C – Semi Circle or Less	· .
	- · · · · · ·		

CIN 4024

APPENDIX B

HYDRAULIC ANALYSIS

I:\NBR\PRJ\000006674\Non-CADD\Reports\Load Rating-Hydraulic Reports\CIN 4024_Load Rating Hydraulic Rpt.doc

Headwater Elevation (ft)	Total Discharge (cfs)	4024071X05 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
100.16	193.00	97.42	95.34	8
100.17	198.70	97.36	101.12	3
100.17	204.40	96.89	107.28	3
100.18	210.10	96.58	113.31	3
, 100.19	215.80	96.35	119.28	. 3
100.19	217.00	95.72	120.31	2
100.20	227.20	94.29	132.49	3
100.21	232.90	93.50	139.20	· * 3
100.21	238.60 ,	. 92.75	, 145.70	, 3
100.22	244.30	92.02	152.15	3
100.23	250.00	91.32	158.57	3
100.00	92.86	92.86	0.00	Overtopping

Table 7 - Summary of Culvert Flows at Crossing: 4024071X05

Inlet INV = 96.15 H= 100.13 - 96.15 = 3.98' D = 3.00'

H/D = 1.33

Rating Curve Plot for Crossing: 4024071X05



ŝ

Total Discharge (cfs)	Culvert Discharge (cfs)	Headwater Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
193.00	97.42	100.16	3.862	4.010	3-M2t	3.000	2.263	2.594	2.504	7,497	5.134
198.70	97.36	100.17	3.860	4.018	3-M2t	3.000	2.263	2.634	2.544	7.403	5.177
204.40	96.89	100.17	3.842	4.024	3-M2t	3.000	2.257	2.672	2.582	7.285	5.220
210.10	96.58	100.18	3.830	4.030	3-M2t	3.000	2.254	2.711	2.621	7.186	5.260
215.80	96.35	100.19	3.822	4.038	3-M2t	3.000	2.251	2.748	2.658	7.102	5.301
217.00	95.72	100.19	3.799	4.040	3-M2t	3.000	2.244	2.756	2.666	7.042	5.309
227.20	94.29	100.20	3.747	4.049	7-M2t	3.000	2.228	2.822	2.732	6.835	5.379
232.90	93.50	100.21	3.718	4.056	7-M2t	3.000	2.218	2.858	2.768	6.730	5.417
238.60	92.75	100.21	3.691	4.063	7-M2t	3.000	2.210	2.893	2.803	6,636	5.454
244.30	92.02	100.22	3.665	4.069	7-M2t	3.000	2.201	2.928	2.838	6.550	5.491
250.00	91.32 /	100.23	3.640	4.075	7-M2t	3.000	2.193	2.963	2.873	<i>6</i> .474	5.526

Table 8 - Culvert Summary Table: 4024071X05

Inlet Elevation (invert): 96.15 ft, Outlet Elevation (invert): 95.78 ft

Culvert Length: 31.60 ft, Culvert Slope: 0.0117

Culvert Performance Curve Plot: 4024071X05



Water Surface Profile Plot for Culvert: 4024071X05



Site Data - 4024071X05

Site Data Option: Culvert Invert Data Inlet Station: 0.00 ft Inlet Elevation: 96.15 ft Outlet Station: 31.60 ft Outlet Elevation: 95.78 ft Number of Barrels: 2

Culvert Data Summary - 4024071X05

Barrel Shape: Circular Barrel Diameter: 3.00 ft Barrel Material: Corrugated Steel Embedment: 0.00 in Barrel Manning's n: 0.0240 Inlet Type: Conventional Inlet Edge Condition: Square Edge with Headwall Inlet Depression: NONE

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s)	Shear (psf)	Froude Number
193.00	98.37	2.50	5.13	1.39	0.66
198.70	98.41	2.54	5.18	1.41	0.66
204.40	98.45	2.58	5.22	1.43	0.66
210.10	98.49	2.62	5.26	1.46	0.66
215.80	98.53	2.66	5.30	1.48	0.67
217.00	98.54	2.67	5.31	1.48	0.67
227.20	98.60	2.73	5.38	1,52	0.67
232.90	98.64	2.77	5.42	1.54	0.67
238.60	98.67	2.80 ′	5.45	1.56	0.67
244.30	98.71	2.84	5.49	1.58	0.67
250.00	98.74	2.87	5.53	1.60	0.67

Table 9 - Downstream Channel Rating Curve (Crossing: 4024071X05)

Tailwater Channel Data - 4024071X05

Tailwater Channel Option: Trapezoidal Channel Bottom Width: 10.00 ft Side Slope (H:V): 2.00 (_:1) Channel Slope: 0.0089 Channel Manning's n: 0.0400 Channel Invert Elevation: 95.87 ft

Roadway Data for Crossing: 4024071X05

Roadway Profile Shape: Constant Roadway Elevation Crest Length: 500.00 ft Crest Elevation: 100.00 ft Roadway Surface: Paved Roadway Top Width: 31.60 ft

Tel: (845) 638-5060 ROCKLAND COUNTY HIGHWAY DEPARTMENT CHARLES H. VEZZETTI Fax: (845) 638-5037 cmail: highway@co.rockland.ny.us 23 New Hempstead Road CHARLES H. VEZZETTI													
chian. ingn way e	con ocklandiny.as		***	23 N New	ew I City	hen, No	npstead Ro ew York 10)956		,			
Group	2			ERT]	ww. INV	co.r VE	CNTOR	y.us/h Y RI	ighwa E PC	ay/)RT	P	repar En	ed By: Kok Meng Png, PE, gineering/GIS Division
Town	Ramapo)	Inspect By	:	Ri	cha	ard luele		Firm	1:	Lochr	ner	Engineering
tion	Feature Carri Hungr	ed y Hollow	Road	Featu	Feature Crossed Brook				Culvert ID Number (CIN) 4024071X06				
Loca	Location	0.	45 Mi North of Route 45					Ori	entati	ion South t	o N	lorth	
APPR ROAD	Left Shoulder 2.0	Width	Roadway V 19	Vidth .0		Me	dian Width None		Righ	nt Sho	ulder Width 1.5		Total Width 22.5
VER XT	Left Sidewak	Width	Left Shoulde	er Width		Roa	adway Widt	h	Med	ian Ty	уре		
ND O'	Non	e	2.	0		D:-	19.0	1.	T -4-1	N G.	No	ne	Laura en Galacet
R0/ CUI	None		Right Shoulder Width			4.0			26.5			NO	Lanes on Culvert
F	Shape		Material			Coating Type					Skew	Le	angth Along Road
VER	Circu	lar	Alu	ıminum	iminum		None			10°			6.1
cuL	Barrel Size		B	arrel Ler	ngth		#Barrels	Туре	of End	d Treatment			in Cover Depth
	2 @ 3.0' E	Diameter Each		31.6			2 Hea		dwalls & Wingwalls				1.1
ö	Functional Cla	ssification	Y			ear Built			Scour Protection				
MISC	Round			eri Inlet Inv F	1			Slope	(04)	Sion	Water Mark	/ III	Culvert Status
	1.8'	Centerlin	e of Road	95.8'	4.	Uu	95.7'	.32	(%) %	Ingn	100.1		Open
tion g	Inspec. Date 12/22/2011	Condition 4.17	Rating 1	Urgency Iı 6	ndex		Inspection R	eport	<u>L:\</u> 02	Highwa 4071X	ay Data\Culver 06.pdf	rts\lr	spection Reports\CIN4
Inspec Findin	Work Required				S	iee l	Inspection Re	eport					



COMPOSITE	COMPOSITE CONDITION RATING: 4.17										
ITEM	WEIGHT	CONDITION	WEIGHTED CONDITION VALUE								
Abutments	N/A	N/A	N/A								
End Treatments	5	3	15								
Stream Channel	6	3	18								
Wearing Surface	4	4	16								
Curbs	1	1	1								
Sidewalks	2	3	6								
Structural Deck	N/A	N/A	N/A								
Primary Member	N/A	N/A	N/A								
Joints	N/A	N/A	N/A								
Concrete	N/A	N/A	N/A								
Masonry	N/A	N/A	N/A								
Footings	N/A	N/A	N/A								
Shape	9	5	45								
Seams & Joints	4	5	20								
Metal	10	5	50								
Summation: 41 171											

C.I.N. 4024071X06

Brook

Feature Carried:

Hungry Hollow Road

Feature Crossed:

General Recommendation:

3

Safety Flag

CULVERT DAMAGE ASSESSMENT/INSPECTION IMPACT FROM HURRICANE IRENE 2011

LOCHNER

 REVIEWED BY:
 Dale Griffin

 TITLE:
 Structural Engineer / PE No. 068608



COUNTY OF ROCKLAND DEPARTMENT OF HIGHWAYS

CED CITI VEDT DEDODT

	FLAGGED CULVER	LI REFORT	
INITIAL:		INSPECTOR_R	lichard Icele PE
			17/22/11
RED FLAG* YELLOW FLAG* SAFETY FLAG*	D	ATE OF INSPEC	110N_(2[00],1
PROMPT INTERIM A	CTION RECOMMENDED	X YES	NO
CIN 4024071 X06	TOWN RAMAPO	VILLAGE_	
FEATURES: CARRIEI	HUNGRY HOLLOW RD	CROSSED F	SROOK
TYPE Corrogated F	Pipe Arch NUMBER OF B	ARRELS 2	
DESCRIPTION OF FL	AGGED CONDITION (Be s	necific as to exact	nature and location of
This is a cont for broken pip rail has not I of 4.5' within safety hazand drop off on the Chain link fence be considered.	tinuation of the perail along the u per replaced and 3.5' feet of the to to both pedestrice e east side is me e. Guide rail profec	lem): Safety Flog vest paren there is a ancel lane. ans and Mol inginally pro fion of the	issued 2/24/00 ent edge. The sharp drop off This can be a forists. A similar fected with drop off should
PHOTOS ATTACHED	X YES NO IF Y	ES, NUMBER AT	TACHED 1
Flagged Culvert Report C	ompleted by <u>Richard</u>	Inele PE	Date 12/22/11
VERBAL NOTIFICATI	ON: (For Red flags and safety	flags only)	
To: Kok Meng Png	Rockland County Highway De	partment on $\frac{12/z}{z}$	2/11 at \$100 PMO'clock
By: Richard Tuel	e PE Quichard Jen	lete _	12/22/11
	Signature of Team Leader	or	Date

Signature of Team Leader or Consultant's Representative

12/1/99

*The appropriate caption in the upper left of this form shall be initialed by the signatory

MGM-006-BD 187 (9/94)

ROCKLAND COUNTY HIGHWAY DEPARTMENT Flagged Culvert Report

										FEATURE		FEATURE		SHEET	OF	1
4	0	2	4	0	7	1	Х	0	6	CARRIED	Hungry Hollow Road	CROSSED	Brook	DATE	12/22/2011	
										-						
	1 11 2	A CR		AL BY	and F	N/SI	0412	110	Servery							
	TV-	X	X	A.	28	100	AL TO		1- U							
	N 1-X		1- 1	- 163	ada		E. C.	STOR	The second	1 Martin						
1	N/2	W.S.S.	A SHALL			ALL CAL	N.K	影响	unen gji	Stat Trans						



		Photo No.	1
Location	Left embankment		
Description	Missing railing creatin	g a safety hazaro	l at the left
	embankment		
References	Safety flag report		



RCHD TP 349(12/2011)		ROCKLAND COUNTY HIGHWAY DEPARTMENT																SHEET	2			OF	22	
		<u>CULVI</u>	ERT	DAMA	<u>GE A</u>	<u>اSS</u>	ESS	MEN ⁻	<u>T/INS</u>	PE	CTIC	<u>ON RE</u>	PO	RT				М	ONTH		D	ΑY		YEAR
																C	ATE	: 1	2	וו	2	2	Γ	1 1
CULVERT IDENTIFICATION NU	MBER			POSTING	S:													13	14	. 1	15	16	L	17 18
4 0 2 4 0 7 1	X 0 6	6		LOA	DING:	х	х	TONS	"XX	"				INSP	ECTED	BY: Ri	chard	l luele P.E.						
1 2 3 4 5 6 7	8 9 10	0				11	12	I	f Not Pos	sted								Inspe	ecting E	ngineer				
TOWN CULVERT # ROUTE	# TYPE													TITLE	E / PE No	o. S€	enior I	Bridge Engine	eer / PE	No. 05871	8			
INSPECTION AGENCY: 1 3 19 20	TYPE OF II	NSPECTION:		1 1-GE 21 2-IN	ENERA DEPTH	L 3-9 H 4-N	SPECIA NONE (I	L UNDER	CONTRA	ACT)	YE	AR BUILT	: U	nknown		TOTAL L	ENG	STH: 6.1	FT.	-	тоти	AL WIE	DTH: 3	31.6 FT.
FEATURE CARRIED: Hungry Hollow Roa	d			FEA	TURE	CROS	SED: E	Brook						LOCA	TION:	0.45 Mi N	orth c	of Route 45						
CULVERT TYPE: Aluminum Pipe							_		TOTAL S	SPAN	S/BAR	RELS: 2			ORIE	NTATIO	N:	South to Nor	th					
FOR BARREL AND BOX CULVERT T	<u>/PES:</u>	BARREL SI	HAPE:	Arch						-	BA	RREL CRO	oss	SECTIO	NAL DI	MENSIO	NS:	24" High x 36	5" Wide					
ABUTMENTS:	Begin	End	ACC	ESS CA	rego	<u>RY:</u>	١	Walking										APPRO/	ACHE	<u>S:</u>				
JOINT WITH DECK	8	8	END	TREAT	/ENTS	<u>S:</u>	_	<u>.</u> .			STR	REAM CH	IAN	INEL:				DRA	INAGE	1				5
BEARINGS, ANCHOR BOLTS, PAD	$\begin{array}{c} 22\\ 8\\ 24 \end{array}$	²³ 8 25	WIN	NGWALLS			Ľ	5	End 1]	AD	EQUATE (OPEI	NING		3		EME	BANKM	ENT			C	56 3
BRIDGE SEAT & PEDESTALS	8	8	HEA	ADWALLS			[3	3]	ALI	GNMENT				3		SET	TLEME	ENT				3
BACKWALL	BACKWALL 8 8 29							40 9	9 43]	EROSION & SCOUR					<u>4</u>		ERC	SION				Ľ	3
STEM (BREASTWALL)	STEM (BREASTWALL)							5	45 45]	СН	ANNEL SI	LTA	TION		4		PAV	EMEN	Т				4
EROSION OR SCOUR	8	8	SETTLEMENT 5						40 5 47]	BA	NK PROTE	ECTI	ON		3		GUII	DE RA	ILING				8
FOOTINGS & PILES	8	8	RECOMMENDATION 5						3]	RE	COMME	END	ATION		3		RE	СОМІ	MEND	τιο	N		3
RECOMMENDATION	8 36	8	GENERAL RECOMMENDATION:							WOR														
			IF YE	S, EXPLAI	N BELO	W:																		
RECOMMEND FURTHER	1=NO	1																						
INVESTIGATION	2=YES	65	66																					92
REPAIRS POUR	DE	СК		JOINT			RE	PLACE		CU	IRB & F	ASCIA		FI)	X			REPAIR			PAINT			
NECESSARY CONCRETE	REP	AIR (SE)		REPAIR		v	VEARIN	G SURF	ACE		REP/	AIRS (LE)		SIDEV	VALK (SE)			RAILING		ня	STEEL	- Δι)	SAN	
	0 0 0		0	0 0	0	0	2	5 0) 0	0	1	0 0)	0 3	0	0	0	1 2	0	0	0	0	0	0 0
93 94	93 94 97									111		1 1	11	15		11	9			123			126	
REMARKS: It appears the 2 alu	minum corrugat	ted pipe arch	nes hav	ve been pl	aced i	nto a	concre	te slab	or conc	rete l	box				_									
culvert as evidence	by the concrete	e slab and ab	outmer	nt walls at	both th	ne up	stream	and do	wnstrea	ım er	nds of	the			_	REVIEV	VED	BY: Dale	e Griff	n				
culvert. The culvert	number was ch	nanged to 40	24071	X06 for ar	ch pipe	e, hov	vever tl	he pipe	is alum	inum	not st	teel			_									
RATING SYSTEM: 6-U	sed to shade betwe	en "5" and "7".	". 3 - Serious deterioration or not functioning								2 - Use	d to shade bet	ween											
9 - Condition Unknown 5 - M	nor deterioration and is fi	unctioning as		as ori	ginally des	igned. 1	The structu	ire can no		a rating of "1" and "3".				TITI F / P	FΝο	· Ctm	atural	Fasias	or / F		00000	00		
7 - New Condition No evidence	any designed. Isolated a erioration which doesn't	affect structure's		althou	achieve l Iah still ah	is iuli off	iyii idi uesig rt elasticall	jii capacity, lv. thus re-			I - POle ctri	ucture has lost	ous. I nractiv	cally			D	ATE: Jan	uary 2	Engine 2 2012	er / P		00000	00
of decay or deterioration and is ability	to perform at full original	I design capacity.		taining	g some de	gree of i	ts original I	load carrying	q		all	capacity to sus	stain th	ne				Jan	uury Z	<u>_, _0 1</u> 2				
performing at full design capacity. 4 - U	ed to shade between "3"	" and "5".		capac	ity. Extens	sive, seri	ious mat'l d	leterioration			oriç	ginal design loa	adings											

ROCKLAND COUNTY HIGHWAY DEPARTMENT CULVERT DAMAGE ASSESSMENT/INSPECTION REPORT

 SHEET
 3
 OF
 22

 MONTH
 DAY
 YEAR

 DATE
 1
 2
 2
 1
 1
 1

 13
 14
 15
 16
 17
 18



			ELEMENTS													(MULTI-GIRDER / SLABS)						CONCRETE							MET	AL		
S NI	SPAN JMBE	I ER	WEARING SURFACE	MONOLITHIC DECK SURFACE	ALIGNMENT & GEOMETRY	CURBS	SIDEWALKS & FASCIAS	RAILINGS & PARAPETS	RAILING PAINT	SCUPPERS	GRATINGS	SIGNAGE	SHOULDERS	EMBANKMENT	RECOMMENDATION	DECK STRUCTURAL	ркімаку мемвек	SECONDARY MEMBER	PAINT	JOINTS	RECOMMENDATION	ALIGNMENT	JOINTS	CONCRETE	MASONRY	MORTAR	FOOTINGS	SHAPE	HORIZONTAL DIMENSION	SEAMS AND JOINTS	METAL	RECOMMENDATION
-	11	12	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
0	0	1	4	8	5	1	3	1	8	8	8	8	5	8	3	8	8	8	8	8	8	8	8	8	8	8	8	5	5	5	5	5
0	0	2	4	8	5	1	3	1	8	8	8	8	5	8	3	8	8	8	8	8	8	8	8	8	8	8	8	5	5	5	5	5

REMARKS: See Remarks Page

RECOMMENDATIONS: Replacement rather than repair is recommended

RATING SYSTEM:

9 - Condition Unknown 8 - Item Not Applicable

7 - New Condition. No evidence

of decay or deterioration and is performing at full design capacity.

6 - Used to shade between "5" and "7".
5 - Minor deterioration and is functioning as originally designed. Isolated areas of decay or deterioration which doesn't affect structure's ability to perform at full original design capacity.
4 - Used to shade between "3" and "5". 3 - Serious deterioration or not functioning as originally designed. The structure can no longer achieve its full original design capacity, although still able to react elastically, thus retaining some degree of its original load carrying capacity. Extensive, serious mat'l deterioration.

- 2 Used to shade between a rating of "1" and "3".
- Potentially Hazardous. The structure has lost practically all capacity to sustain the original design loadings.

Remarks

ROCKLAND COUNTY HIGHWAY DEPARTMENT
CULVERT DAMAGE ASSESSMENT/INSPECTION REPORT

SHEET 4 OF 22 MONTH DAY YEAR DATE 1 2 2 2 1 1

	C	ULVER	IDEN1	TIFIC	ATION I	NUMB	ER				$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
ŀ	0	2 4	0	7	1	Х	0 6	FEATURE CARRIED:	Hungry Hollow Road	FEATURE CROSS	ED: Brook
1 VN	2 CUI	3 4 _VERT #	5	6 ROL	/ JTE #	8	9 10 TYPE	INSPECTED BY:	Richard luele P.E.	TITLE / PE N	o. Senior Bridge Engineer / PE No. 058718
I	REMA	ARKS:									
-	TP 34	9 box 3	8 & 39	, the	re are s	stone	masonry wi	ngwalls at this culver. The	e end right wingwall has colla	apsed. See photo 13 & 14, rated 1.	
-	TP 34	9 box 4	0 and 4	41 ar	nd TP 3	350 bo	ox 23, 8 line	ar feet of the top 8 inch p	ortion of the left headwall/par	rapet/fascia is broken and missing. The right	headwall is cracked.
-	See p	hoto 15	and 10	6 rate	ed 3.						
-	TP 34	9 box 5	0 & 53	, the	openir	ng clo	gs with deb	ris frequently during storm	ns causing the stream to over	rtop its banks and flow across the roadway.	See photo 16, rated 3 and 4.
-	TP 34	9 box 5	1, the s	strea	m chai	nnel c	hanges dire	ection abruptly at the inlet	and outlet inhibiting stream f	low. See photo 17 & 18, rated 3.	
-	TP 34	9 box 5	2, mino	or er	osion is	s pres	ent at the u	pstream inlet end. See pr	noto 19, rated 4.		
-											
-	TP 34	9 box 5	4 and 9	57 &	59, the	e strea	am channel	runs parallel to the end ri	ght roadway embankment ar	nd is lined with a stone masonry wall. The mo	rtar joints are cracked and
-	nissii	ng and t	he stor	nes a	ire loos	se and	d missing af	fecting approximately 100) linear feet of the wall. The b	eginning left embankment is similar. See pho	tos 20, 21, & 22, rated 3.
	TP 34	9 box 5	6, the a	appro	bach di	rainag	ge is re eval	uated and up rated rated	5.		
-	TP 34	9 box 5	8, both	n app	roache	es sho	w settlemer	nt in the sidewalk area as	evidence by uneven sidewal	ks slabs. This condition causes a tripping haz	zard. See photo 23, rated 3.
-	TP 34	9 box 6	0, the j	pave	ment is	s patc	hed and rou	ugh riding affecting an are	a 8ft. by 15ft. See photo 24,	rated 4.	
-	TP 35	60 box 1	9, ther	e are	two sr	mall p	otholes and	cracks in the wearing su	rface over the culvert. See pl	hoto 28, rated 4.	
-	TP 35	0 box 2	2, curb	os are	e settle	d and	I flush with t	he wearing surface and a	re ineffective. See photo 25,	rated 1.	
_											
-	TP 35	0 box 2	4 the r	ight r	ail is m	nissing	g and has b	een missing since 2000 w	when this condition was safely	y flagged by the previous inspection team. Th	e right chain link fence is
_	ama	ged for	approx	umat	ely 100	linea	ar feet with b	pent posts, bent rail, and l	oose chain link. See photos 2	26 & 27, rated 1.	
-											
-											









	CULVER	T INDENT	FICATI	ION N	IUMBEF	र		FEATURE			FEAT	IIRE				SHEET	9	OF	22
4	0 2	4) 7	1	X	0	6	CARRIED	Hungry Hol	low Road	CROS	SED	Brook			DATE	12/22	2/2011	
4								CARRIED	Hungry Hoi	IOW ROad		SED	Brook			DATE			
						Pho	to No.		1						Photo	No		2	
	Location	Beginn	ng Ap	proa	ch					Loca	tion I	End A	proach						
										_									
I	Description	Genera	view	from	South	of th	ne culv	ert		Descrip	tion (Genera	al view fr	om North	of the cu	lvert			
F	References	Standa	d pho	to						Referen	ces 🗧	Standa	ard photo)					

_	CL	JLVER	T INDE	NTIFI	CATIC	DN NL	JMBE	R		- FFATURF		FFATURE		SHEET	10	OF	22
4	0	2	4	0	7	1	Х	0	6	CARRIED	Hungry Hollow Road	CROSSED	Brook	DATE	12/22/2	2011	
										-		_					
1 de	the aver	1 - A		916	7/11	Vil.	1999	998	44	0299209						and and all	A REAL MARCH 19

	<image/>	
	Photo No. 3	Photo No. 4
Location	Upstream	Location Left side of culvert facing upstream
Description	Right elevation	Description Inside of barrel typical
References	Standard photo	References Standard photo

CULVERT INDENTIFICATION NUMBER	FFATURE SHEET 11 OF 22
4 0 2 4 0 7 1 X 0 6 CARRIED Hungry Holle	ow Road CROSSED Brook DATE 12/22/2011
	FEATURE DW Road Brook SHEET 11 OF 22 DATE 12/22/2011
Photo No. 5 Location Upstream channel	Photo No. 6 Location Downstream channel
Description Upstream of culvert	Description Downstream of culvert
References Standard photo	References Standard photo

CULVERT INDENTIFICATION NUMBER

ROCKLAND COUNTY HIGHWAY DEPARTMENT CULVERT INSPECTION AND CONDITION REPORT

OF 22

SHEET 12

	Photo No 7		Photo No. 8
Location	Beginning left wingwall and bank protection	Location	End left wingwall and bank protection
Description	Downstream beginning embankment and wingwall	Description	Downstream end embankment and wingwall
References	Standard photo, TP 349 box 50 & 53, rated 3	References	Standard photo

CULVERT INDENTIFICATION NUMBER	FEATURE SHEET	13 OF 22
4 0 2 4 0 7 1 X 0 6 CARRIED Hungry Holle	ow Road CROSSED Brook DATE	12/22/2011
Image:		
Photo No. <u>9</u>	Photo No.	10
LocationBeginning right wingwall and bank protection	Location End right wingwall and bank protection	
approach embankment up rated		
Description Upstream beginning embankment and wingwall	Description Upstream end embankment and wingwall	
References Standard photo	References Standard photo	

CULVER	INDENTIFICATION NUMBER	FEA	TURE	SHEET	14	OF 22	
4 0 2	4 0 7 1 X 0 6 CARRIED Hungry Hollo	w Road CRO	DSSED Brook	DATE	12/22/20)11	
Location	Photo No11	Location	Phote Beginning approach South of cu	No	1	2	
Description	End approach	Description	Beginning approach				
References	Standard photo	References	Standard photo				
CULVERT INDENTIFICATION NUMBER

ROCKLAND COUNTY HIGHWAY DEPARTMENT CULVERT INSPECTION AND CONDITION REPORT

SHEET

15 OF 22

CULVERT INDENTIFICATION NUMBER FEATURE	FEATURE SHEET 15 OF 22
4 0 2 4 0 7 1 X 0 6 CARRIED Hungry Hollo	ow Road CROSSED Brook DATE 12/22/2011
Photo No. 13	Photo No. 14
Location End Right Wingwall	Location End Right Wingwall
Description Collapsed wall	Description Collapsed wall
References TP349 box 39 Rated 1	References TP349 box 39 Rated 1

CULVERT INDENTIFICATION NUMBER

ROCKLAND COUNTY HIGHWAY DEPARTMENT CULVERT INSPECTION AND CONDITION REPORT

OF 22

SHEET 16

	E	FEATURE	SHEET 10	
4 0 2 4 0 7 1 X 0 6 CARRIED	D Hungry Hollow Road	CROSSED Brook	DATE12/22/2	2011
Photo No	15		Photo No.	16
Location Left Headwall	Lo	cation Inlet		
Description Ton 9" missing for 91 E		intion Blocked by debuic beed	valle enalled and erector	4
			wans spaneu anu crackeo	<u>а</u>
References TP349 box 40 and 41 TP350 box 23 Rated 3	Refer	ences TP349 box 40, 41, 50, 53	Rated 3, 3, 3 and 4	

CULVERT INDENTIFICATION NUMBER	SHEET 17 OF 22
4 0 2 4 0 7 1 X 0 6 CARRIED Hungry Holl	ow Road CROSSED Brook DATE 12/22/2011
Photo No. 17 Location Alignment - inlet	Photo No. 18 Location Alignment - outlet
Description Channel changes direction abruptly at the inlet and outlet	Description Channel changes direction abruptly at the inlet and outlet
References TP349 box 51 Rated 3	References TP349 box 51 Rated 3

CULVERT INDENTIFICATION NUMBER

ROCKLAND COUNTY HIGHWAY DEPARTMENT CULVERT INSPECTION AND CONDITION REPORT

SHEET

18 OF 22

CULVE		FEATURE		FEATURE		SHEET	10 UF 22
4 0 2	4 0 7 1 X 0	6 CARRIED	Hungry Hollow Ro	oad CROSSED	Brook	DATE	12/22/2011
					- Burriso		A LOUGH AND A LOUGH AND A
Ster Vel	The second second second						
the state		et yezhoù ar	1200		-		
			Alter States			- AND	
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		AP.	3857				- Charles
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		ACT	~~~	No. S	H BAR		The second
Star 1					1 States	1	
N/A AV	A REAL PORT			-			
NAME AND A COMPANY OF THE SAL							
Logatio	Photo	No	19	Location Bagi	Photo	No	20
Location				Location Begi	ining left emparkment and	uownstre	eann channtei
Descriptio	Minor erosion		[Description Morta	ar joints cracked and missin	g loose s	tones
Reference	5 TP349 box 52, rated 4		F	References TP34	9 box 54,57 and 59, rated 3		

CULVERT INDENTIFICATION NUMBER	FFATURE	SHEET 19 OF 22
4 0 2 4 0 7 1 X 0 6 CARRIED	Hungry Hollow Road CROSSED Brook	DATE 12/22/2011
		<image/>
Photo No.	21	Photo No. 22
Location End right embankment and upstream channe	Location End right embankment and u	upstream channel
Description Mortar joints cracked and missing loose ston	es Description Mortar joints cracked and m	issing loose stones
References TP349 box 54, 57 and 59, rated 3	References TP349 box 54, 57 and 59, rate	ed 3

CL	JLVERT	INDEN	ITIFIC	CATION	I NUMBE	R		FEATURE			FFATURE		SHEET	20	OF	22
4 0	2	4	0	7	1 X	0	6	CARRIED	Hungry Hollo	w Road	CROSSED	Brook	DATE	12/22/2	2011	
		4				R	6	FEATURE CARRIED	Hungry Hollov	w Road	FEATURE CROSSED	Brook	DATE			
		in i	1 9			Phc	oto No.		23		A.L.		Photo No	-	24	
Lo	cation	Right	appi	roach :	and sid	<u>ewal</u> k				Locati	on <u>End</u> a	pproach pavement				
	-															
Desci	ription	Both	appr	oache	s show	settle	ment	in the sidev	valk area	Descripti	on Patch	ed and rough riding				
Refer	ences	TP349	9 bo>	c 58 ra	ted 3					Referenc	es TP349	box 60 Rated 4				

	FEATURE SHEET 21 OF 22
A 0 2 4 0 7 1 X 0 6 FEATURE CARRIED Hung	gry Hollow Road FEATURE CROSSED Brook SHEET 21 OF 22 DATE 12/22/2011
Photo No 25	Photo No. 26
Location Right curb and sidewalk	Location Left rail
Description Curb settled and flush with wearing surface	Description Rail is missing and has been safety flagged
References TP350 box 22 and 23 Rated 1 and 3	References TP350 box 24 Rated 1

CUL 4 0	VERT INDENTIFICATION NUMBER FEATURE 2 4 0 7 1 X 0 6 CARRIED	Hungry Hollow Road	FEATURE CROSSED	Brook	SHEET DATE	22 OF 12/22/2011	
	<image/>						
	Photo No.	27		Phot	o No	28	
Loca	tion Right chain link fence	Loc	ation Wear	ing surface over the culver	t		
Descrij	Bent posts and rail loose fence fabric	Descri	ption Two s	small potholes in the weari	ng surface	e over the cu	llvert
Refere	TP350 box 24 rate this rail 1	Refere	ences TP35	0 box 19 rated 4			

StreamStats Report

 Region ID:
 NY

 Workspace ID:
 NY20200616172041454000

 Clicked Point (Latitude, Longitude):
 41.08842, -74.06485

 Time:
 2020-06-16 13:20:56 -0400



Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit

StreamStats

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.41	square miles
LAGFACTOR	Lag Factor as defined in SIR 2006-5112	0.0157	dimensionless
STORAGE	Percentage of area of storage (lakes ponds reservoirs wetlands)	0	percent
MAR	Mean annual runoff for the period of record in inches	27.8	inches

Peak-Flow Statistics Parameters[2006 Full Region 2]								
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit			
DRNAREA	Drainage Area	0.41	square miles	1.93	996			
LAGFACTOR	Lag Factor	0.0157	dimensionless	0.014	6.997			
STORAGE	Percent Storage	0	percent	0	11.88			
MAR	Mean Annual Runoff in inches	27.8	inches	16.03	33.95			

Peak-Flow Statistics Disclaimers[2006 Full Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Peak-Flow Statistics Flow Report [2006 Full Region 2]

Statistic	Value	Unit
1.25 Year Peak Flood	21.4	ft^3/s
1.5 Year Peak Flood	27.9	ft^3/s
2 Year Peak Flood	37.6	ft^3/s
5 Year Peak Flood	68.7	ft^3/s

Statistic	Value	Unit
10 Year Peak Flood	95.4	ft^3/s
25 Year Peak Flood	135	ft^3/s
50 Year Peak Flood	170	ft^3/s
100 Year Peak Flood	209	ft^3/s
200 Year Peak Flood	253	ft^3/s
500 Year Peak Flood	320	ft^3/s

StreamStats

Peak-Flow Statistics Citations

6/16/2020

Lumia, Richard, Freehafer, D.A., and Smith, M.J.,2006, Magnitude and Frequency of Floods in New York: U.S. Geological Survey Scientific Investigations Report 2006–5112, 152 p. (http://pubs.usgs.gov/sir/2006/5112/)

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Application Version: 4.3.11

HY-8 Culvert Analysis Report

PIN 8762.26 Hungry Hollow Road over Tributary of Saddle River

June 2020

Prepared by:



Crossing Discharge Data

Discharge Selection Method: Specify Minimum, Design, and Maximum Flow Minimum Flow: 21.4 cfs (1.25 yr storm) Design Flow: 68.7 cfs (5 yr storm) Maximum Flow: 95.4 cfs (10 yr storm)

Headwater Elevation (ft)	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
403.65	21.40	21.40	0.00	1
403.85	28.80	28.80	0.00	1
404.03	36.20	36.20	0.00	1
404.19	43.60	43.60	0.00	1
404.35	51.00	51.00	0.00	1
404.50	58.40	58.40	0.00	1
404.70	68.70	68.70	0.00	1
404.78	73.20	73.20	0.00	1
404.92	80.60	80.60	0.00	1
405.05	88.00	88.00	0.00	1
405.18	95.40	95.40	0.00	1
406.00	132.37	132.37	0.00	Overtopping

Table 1 - Summary of Culvert Flows at Crossing: Hungry Hollow Culvert



Crossing Front View (Roadway Profile): Hungry Hollow Culvert (5 yr Design Storm)





Total Discharg e (cfs)	Culvert Discharg e (cfs)	Headwat er Elevation (ft)	Inlet Control Depth (ft)	Outlet Control Depth (ft)	Flow Type	Normal Depth (ft)	Critical Depth (ft)	Outlet Depth (ft)	Tailwater Depth (ft)	Outlet Velocity (ft/s)	Tailwater Velocity (ft/s)
21.40	21.40	403.65	0.798	0.952	3-M2t	0.826	0.522	0.680	0.680	3.148	5.724
28.80	28.80	403.85	0.973	1.147	3-M2t	0.989	0.636	0.826	0.826	3.487	6.339
36.20	36.20	404.03	1.134	1.325	3-M2t	1.137	0.741	0.962	0.962	3.764	6.844
43.60	43.60	404.19	1.287	1.492	3-M2t	1.274	0.839	1.090	1.090	4.000	7.273
51.00	51.00	404.35	1.432	1.649	3-M2t	1.403	0.931	1.213	1.213	4.206	7.647
58.40	58.40	404.50	1.569	1.799	3-M2t	1.525	1.019	1.331	1.331	4.388	7.979
68.70	68.70	404.70	1.750	1.999	3-M2t	1.685	1.136	1.490	1.490	4.612	8.385
73.20	73.20	404.78	1.826	2.083	3-M2t	1.752	1.185	1.557	1.557	4.700	8.546
80.60	80.60	404.92	1.949	2.218	3-M2t	1.859	1.264	1.666	1.666	4.836	8.794
88.00	88.00	405.05	2.069	2.349	3-M2t	1.963	1.340	1.774	1.774	4.962	9.021
95.40	95.40	405.18	2.188	2.477	3-M2t	2.063	1.414	1.879	1.879	5.078	9.232

Table 2 - Culvert Summary Table: Culvert 1

******* Straight Culvert Inlet Elevation (invert): 402.70 ft, Outlet Elevation (invert): 402.50 ft Culvert Length: 40.00 ft, Culvert Slope: 0.0050

Slope: 0.0050

Culvert Performance Curve Plot: Culvert 1



Water Surface Profile Plot for Culvert: Culvert 1



Site Data - Culvert 1

Site Data Option: Culvert Invert Data Inlet Station: 15.00 ft Inlet Elevation: 402.10 ft Outlet Station: 55.00 ft Outlet Elevation: 401.90 ft Number of Barrels: 1

Culvert Data Summary - Culvert 1

Barrel Shape: Concrete Box Barrel Span: 10.00 ft Barrel Rise: 3.00 ft Barrel Material: Concrete Embedment: 7.20 in Barrel Manning's n: 0.0120 (top and sides) Manning's n: 0.0350 (bottom) Culvert Type: Straight Inlet Configuration: Square Edge (30-75° flare) Wingwall Inlet Depression: None

Flow (cfs)	Water Surface Elev (ft)	Depth (ft)	Velocity (ft/s) Shear (psf)		Froude Number
21.40	403.18	0.68	5.72	1.27	1.22
28.80	403.33	0.83	6.34	1.55	1.23
36.20	403.46	0.96	6.84	1.80	1.23
43.60	403.59	1.09	7.27	2.04	1.23
51.00	403.71	1.21	7.65	2.27	1.22
58.40	403.83	1.33	7.98	2.49	1.22
68.70	403.99	1.49	8.38	2.79	1.21
73.20	404.06	1.56	8.55	2.92	1.21
80.60	404.17	1.67	8.79	3.12	1.20
88.00	404.27	1.77	9.02	3.32	1.19
95.40	404.38	1.88	9.23	3.52	1.19

Table 3 - Downstream Channel Rating Curve (Crossing: Hungry Hollow Culvert)

Tailwater Channel Data - Hungry Hollow Culvert

Tailwater Channel Option: Rectangular Channel Bottom Width: 5.50 ft Channel Slope: 0.0300 Channel Manning's n: 0.0300 Channel Invert Elevation: 402.50 ft

Roadway Data for Crossing: Hungry Hollow Culvert

Roadway Profile Shape: Constant Roadway Elevation Crest Length: 50.00 ft Crest Elevation: 406.00 ft Roadway Surface: Paved Roadway Top Width: 37.90 ft

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was New York State Plane East Zone (FIPS 3101). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <u>http://www.ngs.noaa.gov</u> or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA, N/NGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, Maryland 20910-3282 (301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <u>http://www.ngs.noaa.gov.</u>

Base map information shown on the FIRMs was provided in digital format by NYSDEC. The information was derived from New York State Office of Cyber Security & Critical Infrastructure Coordination from 30-centimeter photography dated 2007.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to confirm to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Information eXchange** at 1-877-336-2627 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Information eXchange may also be reached by Fax at 1-800-358-9620 and its website at <u>http://msc.fema.gov</u>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at <u>http://www.fema.gov</u>.



This digital FIRM was produced through a unique cooperative partnership between the New York State Department of Environmental Conservation (NYSDEC) and FEMA. As part of the effort, NYSDEC has joined in a Cooperative Technical Partnership agreement to produce and maintain FEMA's digital FIRM.



APPENDIX E

NON-STANDARD FEATURE JUSTIFICATIONS

Justification Number



Exhibit 2-15 Nonstandard Feature Justification

				Rev. 03/16/20 EB 20-018		
PIN: 8762.26	Route No. and Name: Hungry Hollow Road					
Project Type: Culvert Replacement	National Network/Qualifying Highway					
Functional Class: Urban Collector/Major Coll	Design Collector Context Rural Town					
AADT: 3,251	% Trucks: 6.1	NHS Non-NHS Terrain: Level				
1. Description of Nonstandard Feature			<u>.</u>			
Type of Feature: Shoulder Width						
Location: Hungry Hollow Road over Tributary	y to Saddle River - Left Shoulder					
Latitude and Longitude (Linear Feature) FR	ROM Lat: Long:	то	Lat:	Long:		
Latitude and Longitude (Point Feature) Lat	: 41^5'18.16N Long: 74^3'53.	42W				
Standard Value: 4 feet		Design Speed: 40 mph				
Existing Value: 1 foot		Recommended Speed - Exi	sting: 30 mph			
Proposed Value: 1 foot		Recommended Speed - Pro	oposed: 30 mph			
2. Accident Analysis						
Current Accident Rate ¹ : 8.43)acc/mvm ()acc/mev	Statewide Accident Rate: 3.54 Oacc/mvm Oacc/mev				
From 7/1/2016 to	6/30/2019	Is the Nonstandard Featur	e a contributing factor?	Ves No		
3. Cost Estimates		I				
Cost to fully meet standards: Millions of do	llars	Cost(s) for incremental im	provements: n/a			
4. Mitigation						
e.g., increased superelevation and speed change lane length for a non-standard ramp radius A 1 foot shoulder is consistent with the project area and will be proposed. The project will have safety upgrades such as new bridge / guide rail and pavement replacement to eliminate a heave over the culvert.						
5. Compatibility with Adjacent Segments	and Future Plans					
Providing a 4 foot shoulder this short length (160 feet) project would be incompatible with the rest of Hungry Hollow Road. There are no future plans to widen Hungry Hollow Road.						
b. Other Factors						
Bicyclists must use the travel lane in present day conditions and will continue to do so following this project.						
7. Proposed Treatment (i.e., recommendation)						
Provide a 10 foot travel lane and 1 foot shoulder on both sides of the roadway.						

¹ Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.

APPENDIX F

STAKEHOLDERS AND PUBLIC INPUT (TO BE COMPLETED FOLLOWING PIM)

APPENDIX G

PHOTOS



Hungry Hollow Road – East Side, Looking South



Hungry Hollow Road – East Side, Looking East (Upstream)



Hungry Hollow Road – East Side, Looking Down at Inlet



Hungry Hollow Road – West Side, Looking Downstream, Gas Main Exposed


Hungry Hollow Road – South Project Limit, Looking North (at Raymond Avenue)

APPENDIX H

PRELIMINARY ESTIMATE



Project: PIN 8762.26 - Hungry Hollow Road Culvert Replacement Client: Rockland County Proj. No. 19-0363

	ESTIMATE OF QUANTITIES SUMMARY				
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL COST
201.06	CLEARING AND GRUBBING	-	LS	\$10,000.00	\$10,000.00
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	287	сY	\$65.00	\$18,655.00
203.07	SELECT GRANULAR FILL	5	СҮ	00.06\$	\$450.00
203.21	SELECT STRUCTURE FILL	67	сҮ	\$75.00	\$5,025.00
206.01	STRUCTURE EXCAVATION	57	СΥ	00'96\$	\$5,415.00
209.11000011	INLET FILTER SEDIMENT CONTROL FOR NEW CATCH BASINS	1	EACH	00'002\$	\$300.00
209.12000011	INLET FILTER SEDIMENT CONTROL FOR EXISTING CATCH BASINS	2	EACH	\$275.00	\$550.00
304.11000008	SUBBASE COURSE (MODIFIED)	06	с	\$100.00	\$9,000.00
402.128303	12.5 F3 TOP COURSE HMA, 80 SERIES COMPACTION	37	TON	\$250.00	\$9,250.00
402.258903	25 F9 BINDER COURSE HMA, 80 SERIES COMPACTION	37	TON	\$200.00	\$7,400.00
402.378903	37.5 F9 BASE COURSE HMA, 80 SERIES COMPACTION	32	TON	\$150.00	\$4,800.00
407.0103	STRAIGHT TACK COAT	30	GAL	\$25.00	\$750.00
490.30	MISCELLANEOUS COLD MILLING OF BITUMINOUS CONCRETE	214	SΥ	\$10.00	\$2,140.00
552.17	SHIELDS AND SHORING	2,436	SF	\$5.00	\$12,180.00
555.0105	CONCRETE FOR STRUCTURES, CLASS A	53	с	\$1,200.00	\$63,600.00
568.51	STEEL BRIDGE RAILING (FOUR RAIL)	108	Ч	\$200.00	\$21,600.00
568.54	STEEL BRIDGE RAILING (THREE RAIL)	19	ΓĿ	00'008\$	\$5,700.00
568.70	TRANSITION BRIDGE RAILING	128	Ч	\$225.00	\$28,800.00
595.50000018	SHEET-APPLIED WATERPROOFING MEMBRANE	500	SF	\$5.00	\$2,500.00
603.6003	REINFORCED CONCRETE PIPE CLASS III, 18 INCH DIAMETER	7	ΓĿ	\$120.00	\$840.00
603.63100315	PRECAST CONCRETE BOX CULVERT (FILL HEIGHT LESS THAN 24 IN) 10 FOOT SPAN, 3 FOOT RISE	40	Ч	\$2,500.00	\$100,000.00
603.6700001	PRECAST CONCRETE WINGWALL UNITS FOR BOX CULVERTS	6.1	SΥ	\$1,500.00	\$9,150.00
604.301873	RECTANGULAR DRAINAGE STRUCTURE TYPE R FOR CAST IRON F3 FRAME	5	LF	\$725.00	\$3,625.00
606.10	BOX BEAM GUIDE RAILING	17	ΓĿ	\$50.00	\$850.00
606.120101	BOX BEAM END PIECE	1	EACH	\$700.00	\$700.00
606.120201	BOX BEAM GUIDE RAILING END ASSEMBLY, TYPE IIA	с	EACH	\$2,500.00	\$7,500.00
607.9600008	REMOVE AND DISPOSE OF EXISTING FENCE	79	LF	\$20.00	\$1,580.00
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS	8	Ç	\$800.00	\$6,400.00
609.0401	CAST-IN-PLACE CONCRETE CURB TYPE VF150	156	LF	\$60.00	\$9,360.00
610.1402	TOPSOIL - ROADSIDE	5	сҮ	\$60.00	\$300.00
610.1601	TURF ESTABLISHMENT - ROADSIDE	40	SΥ	\$3.00	\$120.00
619.01	BASIC WORK ZONE TRAFFIC CONTROL	1	RS	\$20,000.00	\$20,000.00
619.04	TYPE III CONSTRUCTION BARRICADE	15	EACH	\$150.00	\$2,250.00
625.01	SURVEY OPERATIONS	1	LS	\$10,000.00	\$10,000.00
627.50140008	CUTTING PAVEMENT	305	LF	\$20.00	\$6,100.00
637.11	ENGINEER'S FIELD OFFICE - TYPE 1	ę	MNTH	\$2,000.00	\$6,000.00
637.34	OFFICE TECHNOLOGY AND SUPPLIES	5,000	DC	\$1.00	\$5,000.00
637.36	CONSTRUCTION TESTING SUPPLIES - CONSUMABLES	100	DC	\$1.00	\$100.00
655.0706	CAST FRAME F3, UNMOUNTABLE CURB BOX CU3 & RETICULINE GRATE G3	1	EACH	\$2,500.00	\$2,500.00
685.11	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	276	LF	\$10.00	\$2,760.00
685.12	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES - 20 MILS	276	LF	\$10.00	\$2,760.00
				SUBTOTAL	\$406,010.00
697.03	FIELD CHANGE PAYMENT	21,000	DC	\$1.00	\$21,000.00
				SUBTOTAL	\$427,010.00
699.040001	MOBILIZATION	-	LS	\$17,080.40	\$17,080.40
				SUBTOTAL	\$444,090.40
			CONT	INGENCY (15%)	\$66,613.56
			ES	TIMATED COST	\$511,000.00

APPENDIX I

MISCELLANEOUS



Department of Transportation

ANDREW M. CUOMO Governor

> PAUL A. KARAS Acting Commissioner

MEMORANDUM

TO: S. Jobson, Regional Planning & Program Manager, Region 8

FROM: D. Anziani, Local Projects Unit Region 8

SUBJECT: SMART GROWTH 8762.26 BRIDGE NY 2018-HUNGRY HOLLOW ROAD OVER BROOK CULVERT REPLACEMENT VILLAGE OF CHESTNUT RIDGE, ROCKLAND COUNTY DATE: January 30, 2019

The 2010 Smart Growth (SG) Public Infrastructure Policy Act requires the Department to conduct a SG review, prepare a SG Impact Statement and sign an attestation for all public infrastructure projects the state approves, undertakes, supports or finances.

Rockland County, the sponsor for this local project has completed the Smart Growth Screening Tool and Local Attestation form as requested. The Local Projects Unit has reviewed and concur with the information contained within the Smart Growth provided by the Sponsor. Please complete the NYSDOT attestation section and return the original signed document to the Local Projects Unit.

If you have any questions or need further information contact me at (845) 431-5774.

PIN 8762.26

Prepared By:(Joseph M. Pyzowski)

Smart Growth Screening Tool (STEP 1)

NYSDOT & 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 <u>Smart Growth Guidance</u> document.

Title of Proposed Project: Hungry Hollow Road over Brook Culvert Replacement

Location of Project: Village of Chestnut Ridge, Rockland County.

Brief Description: The project will replace twin 36" corrugated metal arch pipes with a 10-foot wide 3-foot tall precast concrete 4-sided box culvert. The culvert will be realigned to reduce entrance and exit skew thereby improving hydraulic characteristics. Also, the wingwall at the culvert entrance will be extended to prevent roadway scour and undermining. Bridge railing will be installed along the extended wingwall; at the other corners guide railing will be replaced.

A. Infrastructure:

Addresses SG Law criterion a. -

(To advance projects for the use, maintenance or improvement of existing infrastructure)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 project will replace a structurally deteriorated and hydraulically obsolete culvert and improve Hungry Hollow Road by constructing an extended wingwall which will elliminate scour and undermining of the roadway and sidewalk.

Maintenance Projects Only

- a. Continue with screening tool for the four (4) types of maintenance projects listed below, as defined in NYSDOT PDM Exhibit 7-1 and described in 7-4: https://www.dot.ny.gov/divisions/engineering/design/dqab/pdm
 - Shoulder rehabilitation and/or repair;
 - 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 <u>Smart</u> <u>Growth Impact Statement and signed Attestation</u> 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?

N/A

Yes 🗌	No 🗌	N/A 🖂
-------	------	-------

2. Will the project reduce greenhouse gas emissions?

Yes 🗌 No 🖂

Explain: (use this space to expand on your answers above)

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)

This project is located in a suburban area of private homes.

D. Mixed Use Compact Development:

SG-13 (revised May, 2013)

Smart Growth Screening Tool

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?

	1 /		
	Yes	No 🗌	N/A 🖂
2.	Will the project f	oster brownfiel	d redevelopment?
	Yes	No 🗌	N/A 🖂
3.	Will this project f	oster enhancer	nent of beauty in public spaces?
	Yes	No 🗌	N/A 🖂
4.	Will the project f recreation?	oster a diversity	y of housing in proximity to places of employment and/or
	Yes	No 🗌	N/A 🖂
5.	Will the project f and/or compact o	oster a diversity development?	of housing in proximity to places of commercial development
	Yes 🗌	No 🗌	N/A 🖂
6.	Will this project f	oster integratio	on of all income groups and/or age groups?
	Yes 🗌	Νο	N/A 🖂
7.	Will the project e	ensure predictal	pility in land use codes?
	Yes	No 🗌	N/A 🖂
8.	Will the project e	ensure predictal	pility in building codes?
	Yes	No 🗌	N/A 🖂
	Explain: (use this	s space to expai	nd on your answers above)
	1		

E. Transportation and Access:

NYSDOT 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 🗌
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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)

The project will preserve and reconstruct a section of undermined sidwalk which could eventually be closed if the project work was not undertaken.

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 intermunicipal 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?

					Smart Growth Screening Tool
	Yes	\boxtimes	No 🗌	N/A	
2.	Is the	e project cons	sistent with loca	al plan	s?
	Yes	\boxtimes	No 🗌	N/A	
3.	Is the	e project cons	sistent with cou	inty, re	egional, and state plans?
	Yes	\boxtimes	No 🗌	N/A	
4.	Has t proje	here been co	ordination betw	ween i	nter-municipal/regional planning and state planning on the
	P) -				
	Yes		No 🗌	N/A	
	Yes Expla	⊠ ain: (use this s	No space to expand	N/A d on ye	our answers above)

.1

G. Stewardship of Natural and Cultural Resources:

Clean water, clean air and natural open land are essential elements of public health and guality 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.

enhance surface water and/or groundwater?

(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?

N/A 🖂

N/A

	Yes		No	
2.	Will	the project pr	otec	t, p
	Yes	\bowtie	No	

reserve, and/or

3. Will the project protect, preserve, and/or enhance air quality?

Yes	No	N/A	\square

4. Will the project protect, preserve, and/or enhance recreation and/or open space?

 \square

Yes	No 🗌	N/A

5. Will the project protect, preserve, and/or enhance scenic areas?

SG-13 (revised May, 2013)

			Smart Growth Screening Tool
	Yes 🗌	No 🗌	N/A 🖂
6.	Will the proje	ect protect, preserv	e, and/or enhance historic and/or archeological resources?
	Yes 🗌	No 🗌	N/A 🖂
	Explain: (use	this space to expan	nd on your answers above)
	Throug and cultur	h the SEQRA proces al resources.	s the project will be evaluated for impacts to environmental

Smart Growth Impact Statement (STEP 2)

NYSDOT: 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:

-	
~	

- -
- •
- •
- •
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- •

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.

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

County Project Manager Title <u>January 8, 2019</u> Date

Joseph Pyzowski Printed Name

Responsible Local Official (for local projects):

Signature

Superintendent of Highways Title <u>Charles H. Vezzetti</u> Printed Name

January 8, 2019

Date

B. ATTESTATION (NYSDOT)

- 1. I HEREBY:
- \mathfrak{q} \square 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):

Signatu

1/31/19 Date Date Date D. COBSON

Title

Printed Name