



Amphibian Crossing Waterloo Road

Byram Township, Sussex County, NJ

State of New Jersey, Department of Treasury • Division of Property Management and Construction (DPMC)

TA-2016 – Transportation Alternatives Program (TAP)

Virtual Public Information Center (PIC) • Final Design Phase

Thursday, May 18, 2023 • 6:00PM – 8:00PM



Meeting Format

- Panelist Introductions
- Brief Presentation at 6:05 PM and 7:05 PM
- Question and Answer periods (following presentations)
 - Please use the **Question Box** in the webinar
- Post Meeting Comments and Questions: received through **Thursday, June 1, 2023**

Submit to:

MacKenzie Hall, Biologist

Endangered and Nongame Species Program

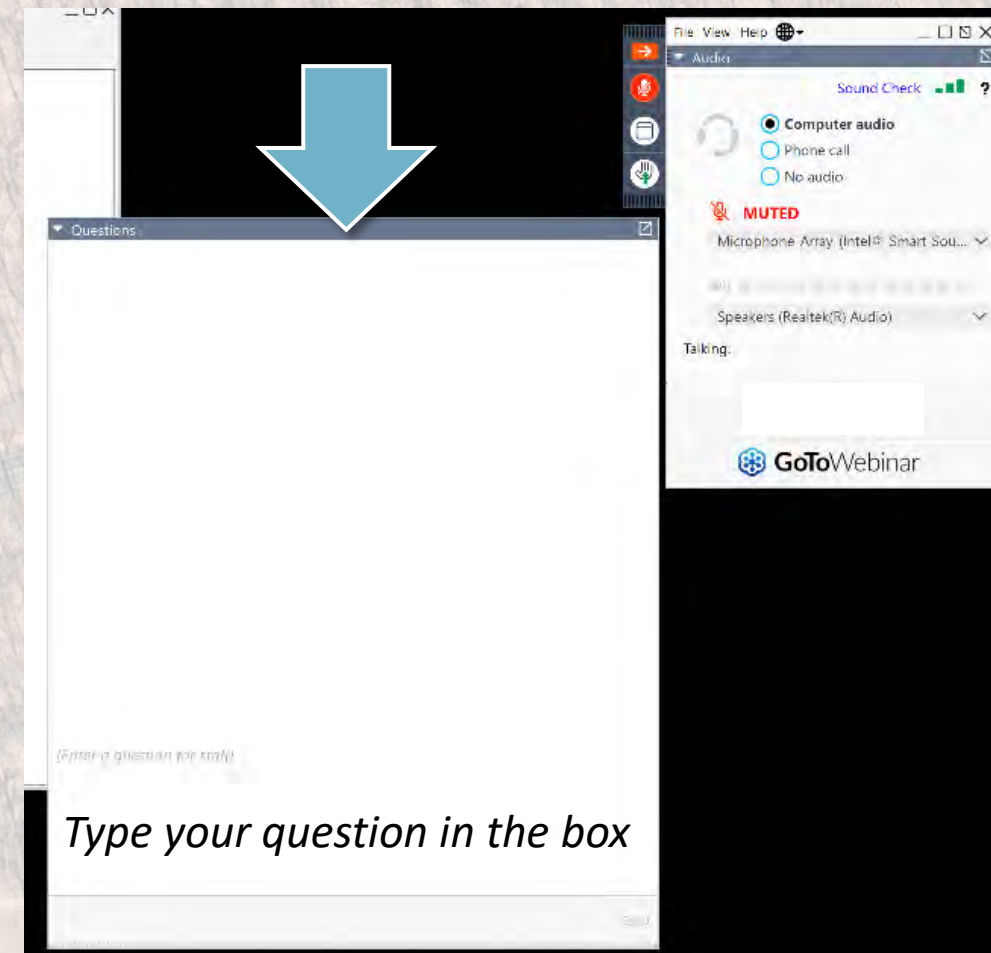
NJDEP Fish and Wildlife

PO Box 394, Lebanon NJ 08833

MacKenzie.Hall@dep.nj.gov



<https://dep.nj.gov/njfw/conservation/waterloo-road-amphibian-crossing-project/>



Questions and comments will be sent to the webinar's moderator then passed to the project team for responses

Project Status to Date

- May 4, 2021: Virtual Public Information Center (Design Development Phase)
 - Reviewed the proposed project and improvements
 - Material / Comment Resolution Summary were posted to NJDEP website for a two-week comment period
- Continued to advance the design
- Ongoing coordination with Sussex County, NJDEP, and NJDOT
- Right-of-Way Agreements (MOA between NJDEP and Sussex County)
- Environmental Permitting in progress
 - NJDOT Categorical Exclusion Document (CED) – Approved May 2022
 - NJ State Historic Preservation Office (SHPO) - Coordination / approvals, Application for Project Authorization – April 2022
 - Highlands Preservation Area General Permit 1 - Authorization received Feb 2023
 - Coordination with NJDEP – No Net Loss Reforestation Act (not applicable)
 - NJDEP Division of Land Resource Protection – HPPA General Permit # 1
 - In Progress; Under Review

Amphibians in Our Forests



American Toad



Northern Gray Treefrog



Spotted Salamander



Northern Spring Peeper



Redback Salamander

Vernal Pools



SPRING

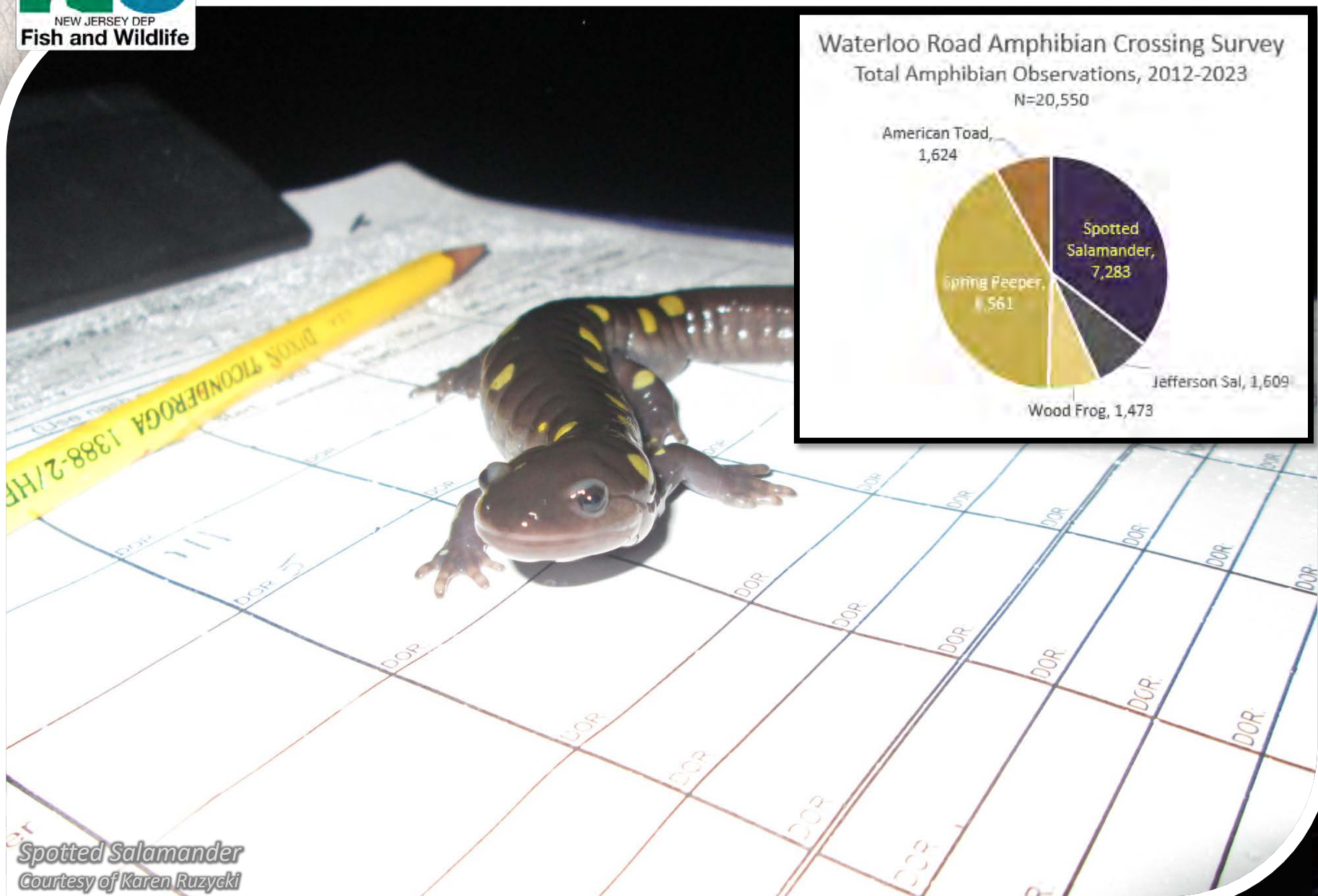
SUMMER



Waterloo Road



Waterloo Road Data





American Toad



Spring Peeper



Jefferson Salamander

Volunteer monitoring crossing



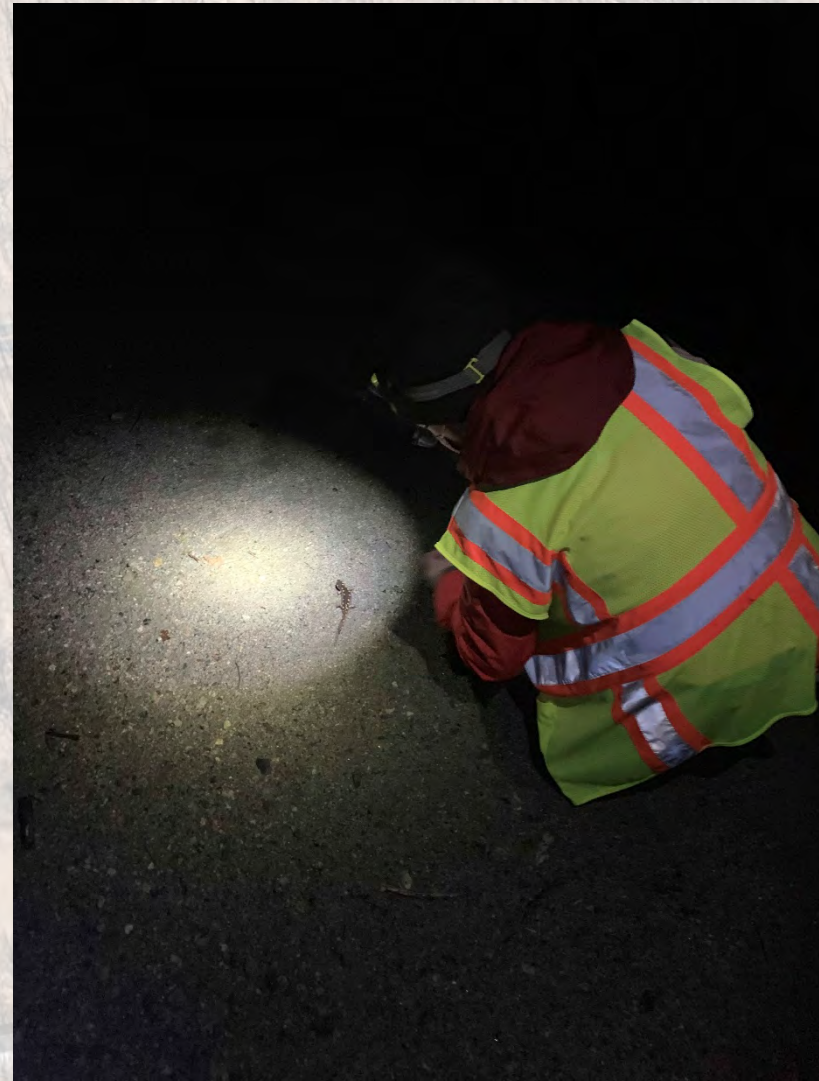
Spotted Salamander



Wood Frog (Casualty on Shoulder Stripe)



Waterloo Road Rescue Volunteers



Other Wildlife



Garter Snake





Habitat Loss and Roads

120+ native NJ wildlife species are threatened by fragmentation



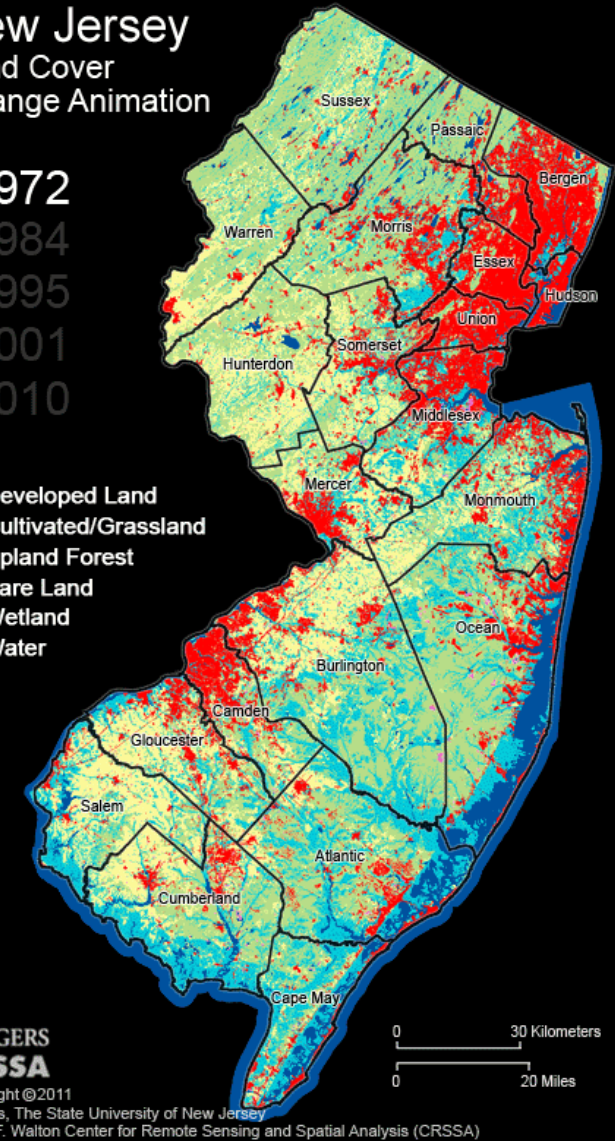
Eastern Box Turtle



New Jersey Land Cover Change Animation

>1972
>1984
>1995
>2001
>2010

Developed Land
Cultivated/Grassland
Upland Forest
Bare Land
Wetland
Water

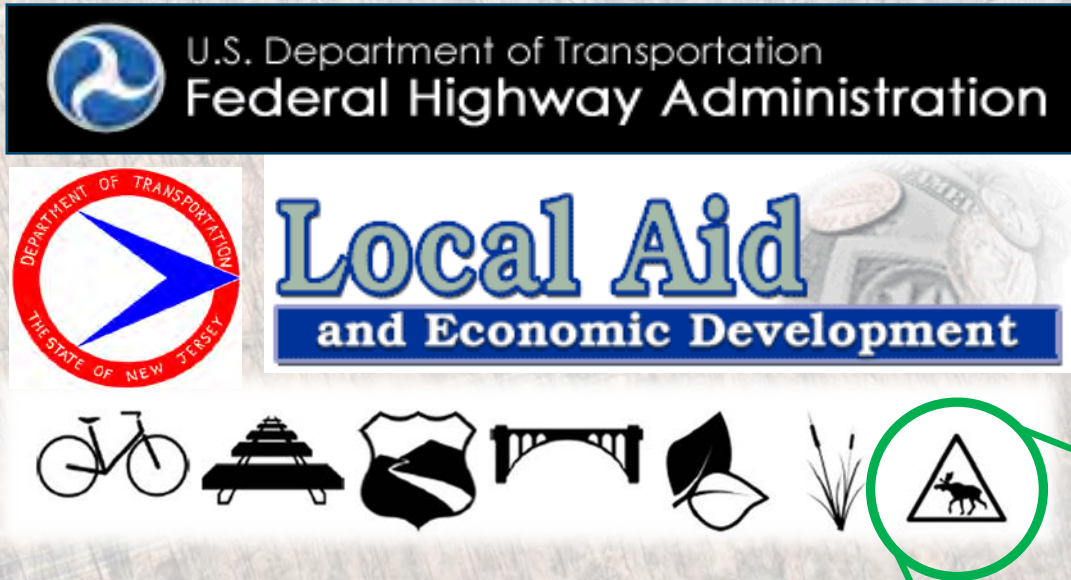


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Transportation Alternatives Program



With Support & Input From:

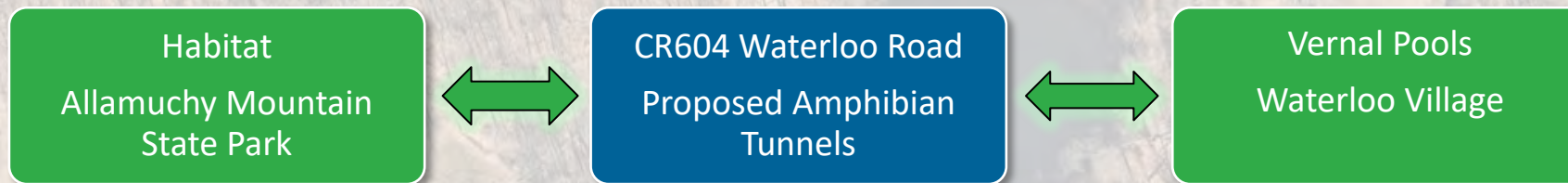
NJDEP Natural and Historic Resources Group
Sussex Co. Division of Engineering,
Sussex Co. Board of County Commissioners
Township of Byram
Conserve Wildlife Foundation of NJ
Tom Langton, Herpetofauna Consultants Int'l
Kensho Resources LLC
"The Neighborhood"

"Reduce
vehicle-caused wildlife
mortality or to restore and
maintain connectivity among
terrestrial or aquatic
habitats"

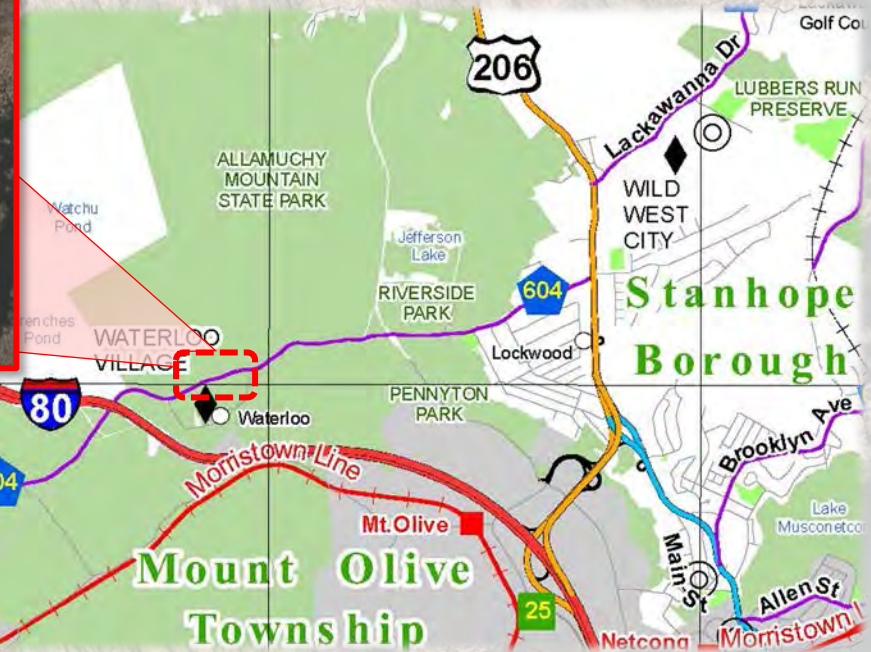
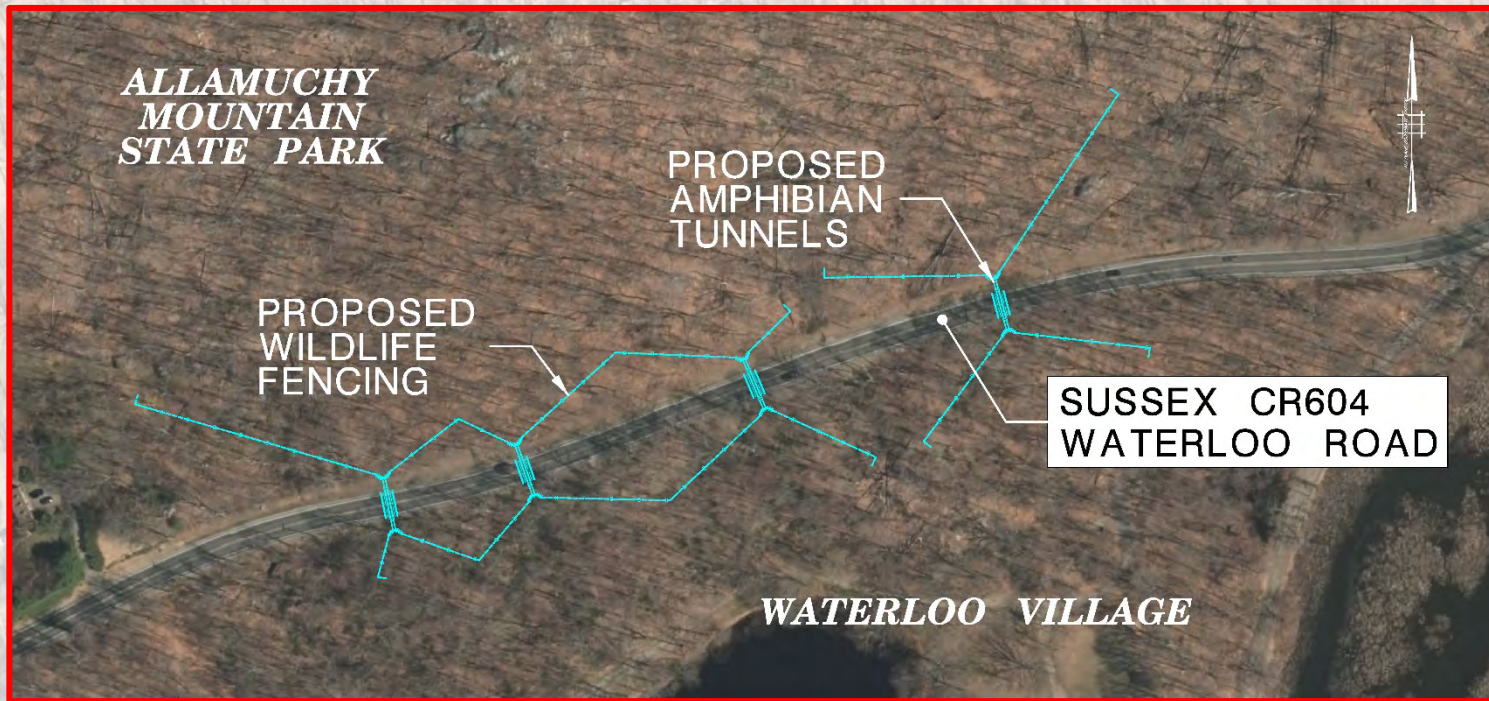
Project Purpose

Construct an amphibian passage system along a 1,200-foot section of Waterloo Road and adjacent to Allamuchy Mountain State Park and Waterloo Village in Byram Township, Sussex County.

Project offers a long-term solution to the vehicle-caused mortality threatening a significant local population of amphibians that use this area to migrate to a nearby vernal pool.



Project Locations / Limits



Sussex County Route (CR) 604

Waterloo Road • MP 6.20± to MP 6.42±

Byram Township, Sussex County

Waterloo Village

Allamuchy Mountain
State Park and existing
slope towards roadway

CR604 Waterloo Road
Westbound

CR604 Waterloo Road Existing Conditions



Waterloo Village Vernal Pool

Proposed Improvements

- Improvements include:
 - Construction of four (4) specialized amphibian tunnels beneath Sussex County Route 604 Waterloo Road
 - Tunnels widened since last PIC to accommodate more wildlife
 - Originally: 2' Wide x 3' High
 - Current Design: 5' Wide x 3' High
 - Installation of guide fencing on both sides of the road to intercept and funnel amphibians towards the tunnels



Proposed Improvements

ALLAMUCHY
MOUNTAIN
STATE PARK

AMPHIBIAN TUNNEL #4
PROJECT @ STA. 20+03±

AMPHIBIAN TUNNEL #3
PROJECT @ STA. 17+20±

PROPOSED WILDLIFE FENCE

LIMIT OF GRADING

INLETS FOR AMPHIBIAN TUNNEL
MAINTENANCE AND ACCESS
PAVEMENT REPLACEMENT

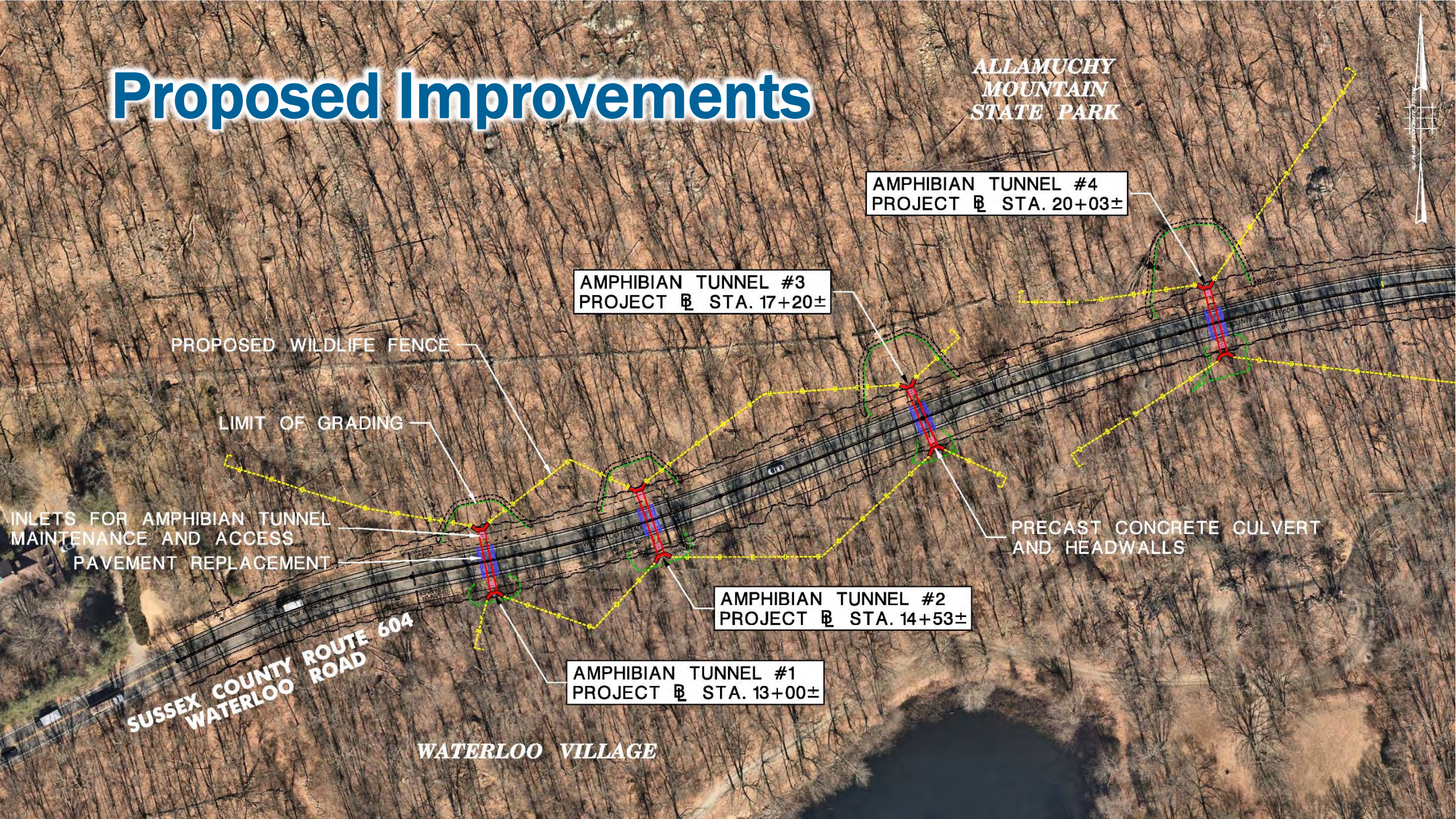
PRECAST CONCRETE CULVERT
AND HEADWALLS

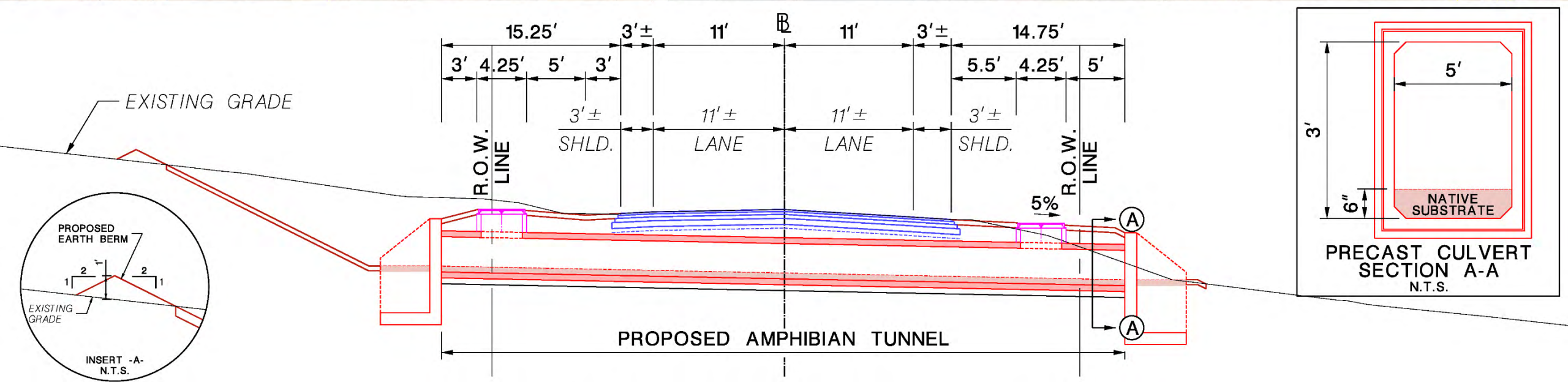
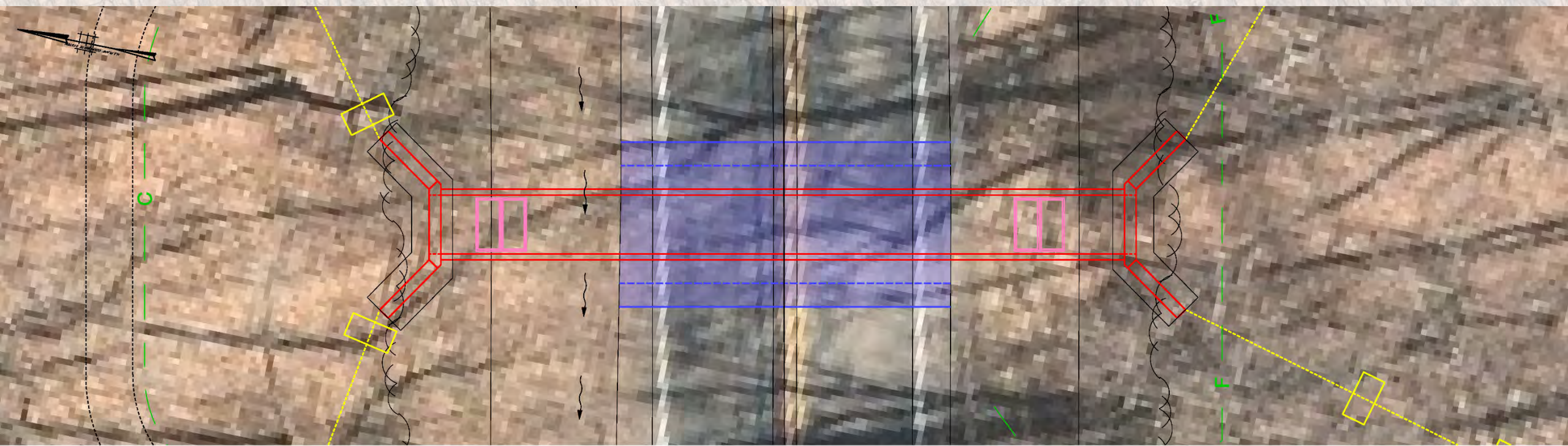
AMPHIBIAN TUNNEL #2
PROJECT @ STA. 14+53±

AMPHIBIAN TUNNEL #1
PROJECT @ STA. 13+00±

SUSSEX COUNTY ROUTE 604
WATERLOO ROAD

WATERLOO VILLAGE



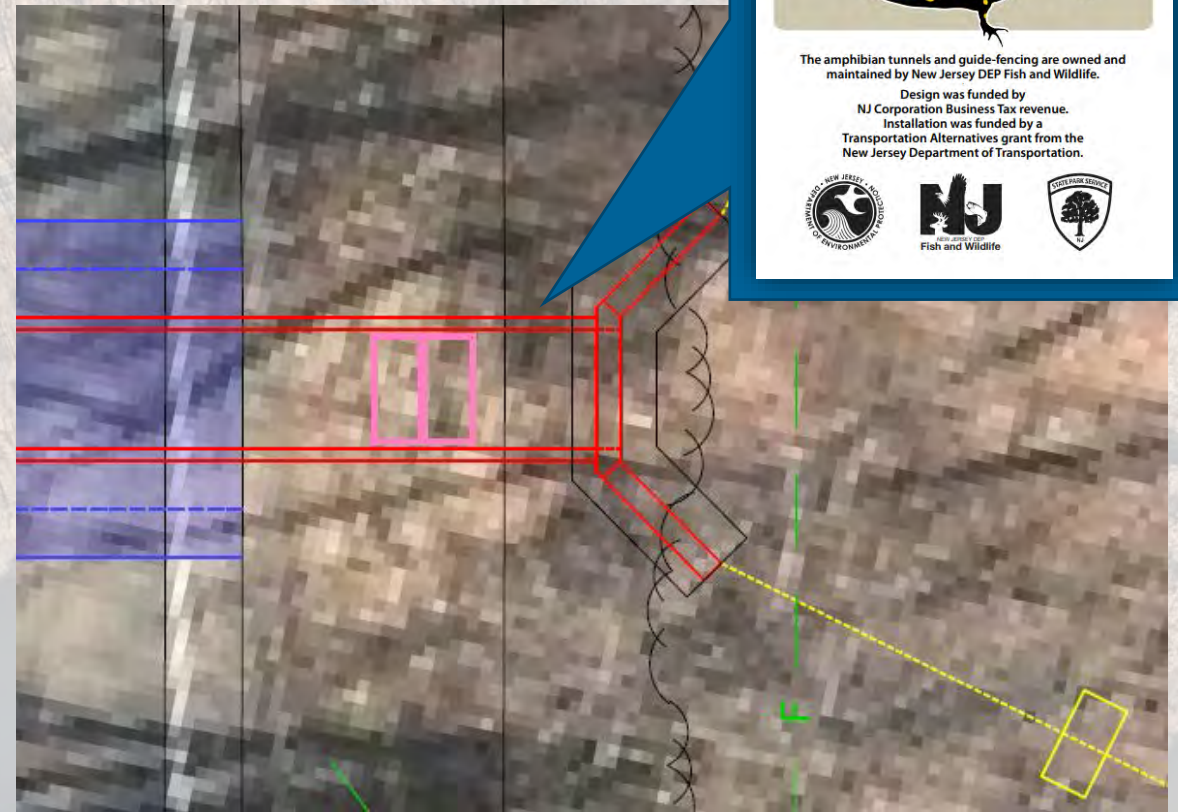
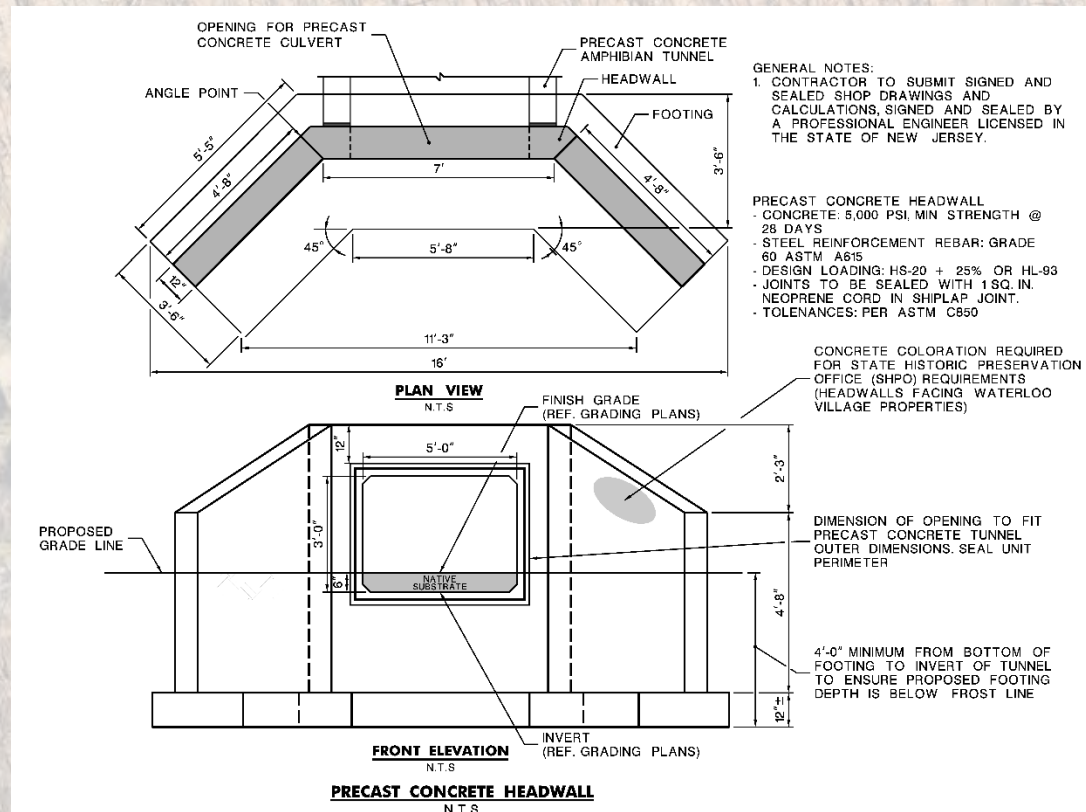


← ALLAMUCHY STATE PARK

TYPICAL AMPHIBIAN TUNNEL

WATERLOO VILLAGE AND POND →

Concrete Headwalls



AMPHIBIAN TUNNELS

These wildlife tunnels are part of a road-crossing system specially designed for the salamanders, frogs and toads inhabiting the area. Amphibians migrate seasonally between the upland forest and their vernal breeding pool below, but the road is a dangerous barrier to their journey. These tunnels give safe passage across the road, conserving amphibians and their important role in the ecosystem.

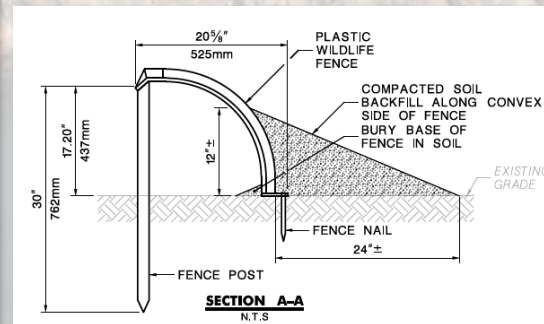
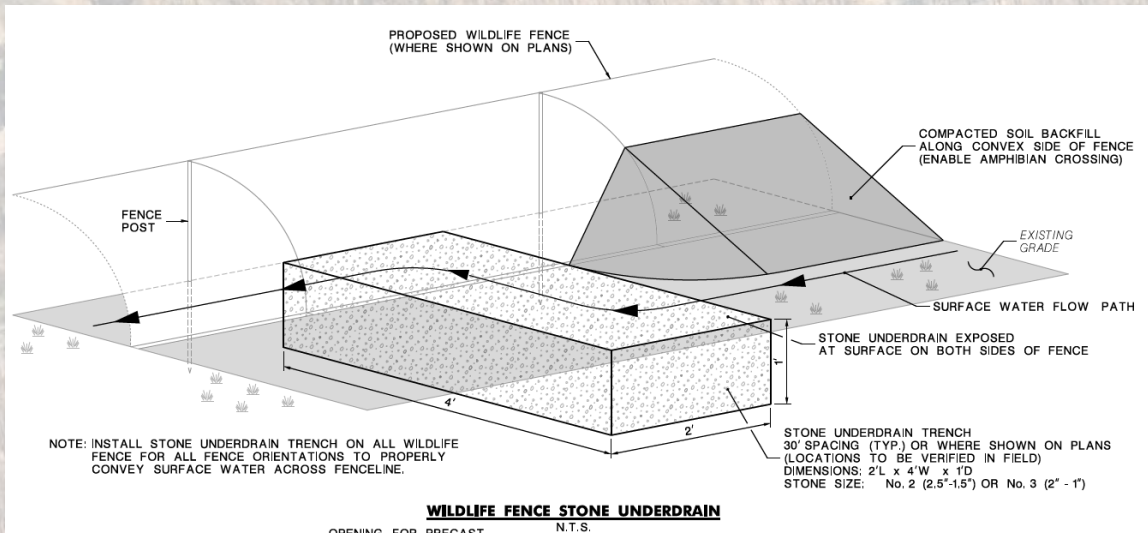


The amphibian tunnels and guide-fencing are owned and maintained by New Jersey DEP Fish and Wildlife.

Design was funded by
NJ Corporation Business Tax revenue.
Installation was funded by a
Transportation Alternatives grant from the
New Jersey Department of Transportation.

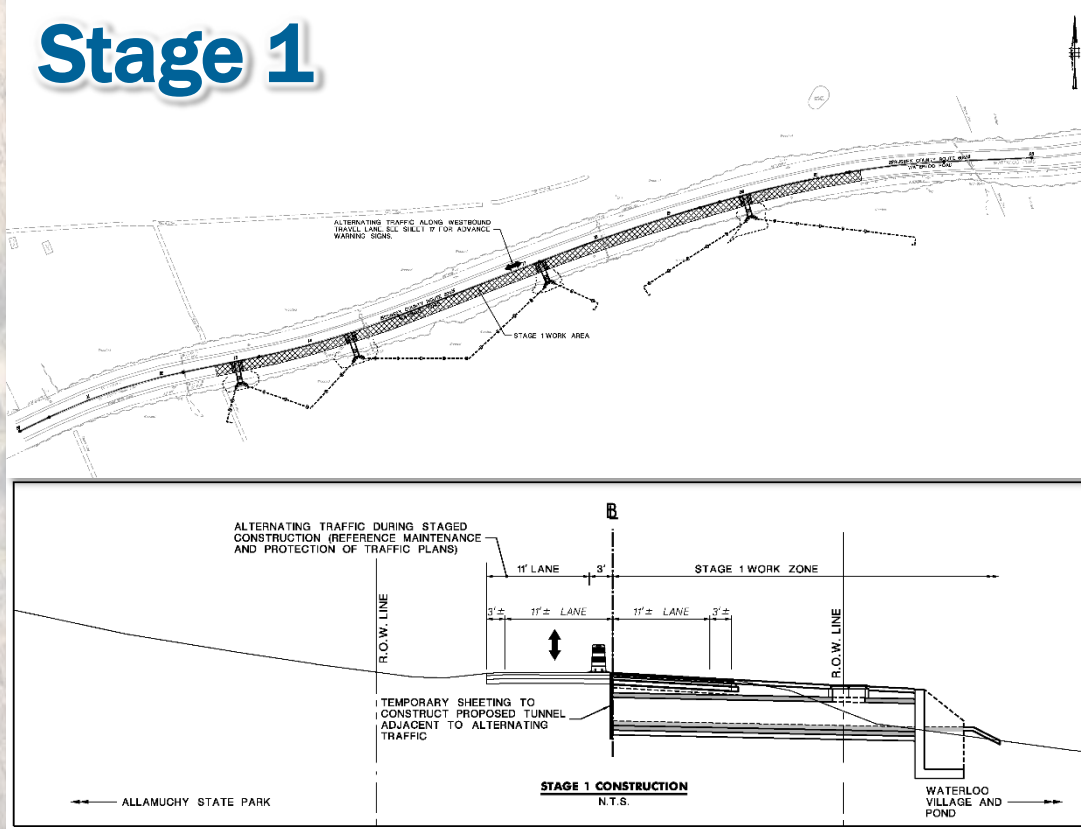


Wildlife Fencing

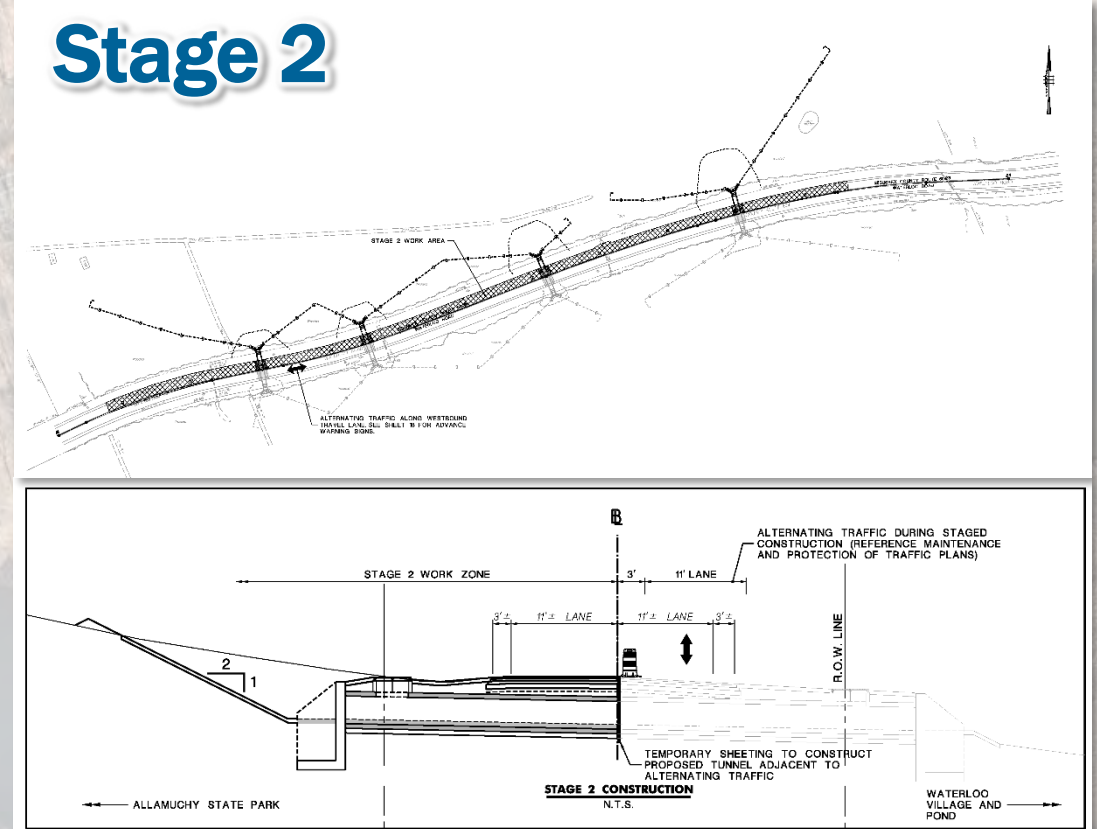


Construction Staging

Stage 1



Stage 2



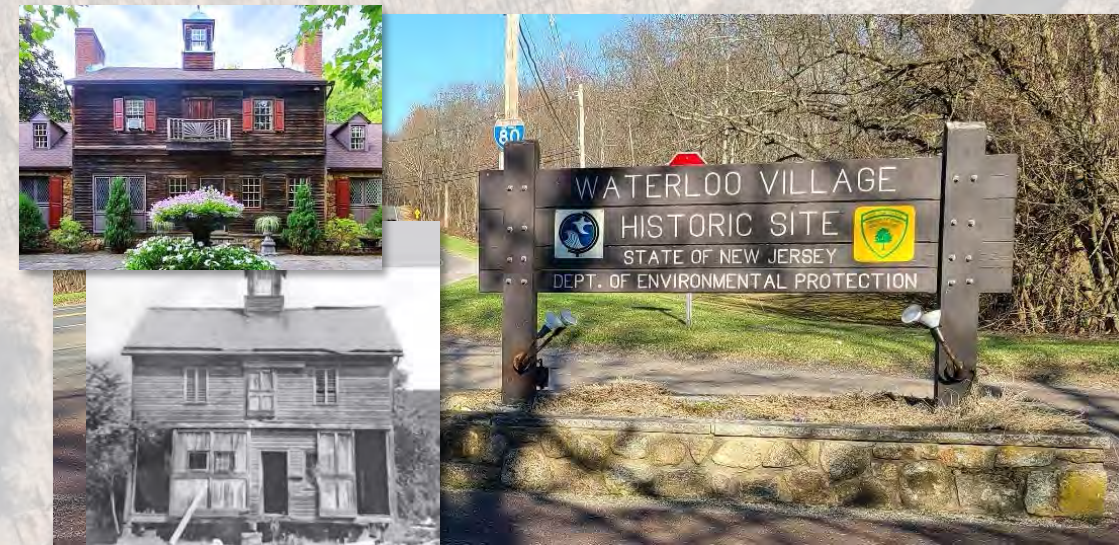
Environmental Services & Other Approvals

- Categorical Exclusion Document (CED)
 - Addresses any potential environmental issues: Deforestation; Cultural Resources; ecology, threatened and endangered species; Wetlands; Air & Noise; Hazardous; Public Reaction; Socioeconomics; and Environmental Permits
 - Received approval (NJDOT BEPR) – May 2022
- Highlands Preservation Area General Permit 1
 - Authorization received Feb 2023
- NJDEP Division of Land Resource Protection – HPPA General Permit # 1
 - In Progress
- NJ State Historic Preservation Office (SHPO)
 - Coordination / approvals, Application for Project Authorization – April 2022
- Upper Delaware Soil Conservation District
- Sussex County Road Opening Permit



Cultural Resources

- Project area falls partially within the Waterloo Village Historic District (NJ and National Registers of Historic Places 1977)
- An assessment of project effects, as required by Section 106 of the National Historic Preservation Act, was conducted for the Waterloo Village Historic District
- An Application for Project Authorization (required by the NJ Register of Historic Places Act) was completed and approved
 - Color treatments for headwalls on Waterloo Village side of project



Next Steps

- Project Next Steps:

- Review Comments from this Public Information Center
 - Comment Resolution Summary to be posted to NJDEP website
- Complete Plans and Environmental Permitting
- Coordinate with NJDOT Local Aid District 1 for authorization of construction funds
- Advance project to Construction

- Anticipated Project Schedule:

- | | |
|----------------------------------|--------------------|
| • Final Design Phase | Summer – Fall 2023 |
| • Anticipated Construction Start | Summer 2024 |

Questions & Open Discussion

**Please use the chat box
to ask questions or provide comments**

You may also submit questions & comments after the meeting through
Thursday, June 1, 2023

Use contact information below

(Meeting summary will be posted on NJDEP Website)

<https://dep.nj.gov/njfw/conservation/waterloo-road-amphibian-crossing-project/>



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Endangered and Nongame Species Program

NJDEP Fish and Wildlife

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Similar project: Assunpink Turtle Tunnels

Note: Waterloo Road project will have a closed top (no grates within the roadway) and different fencing type due to habitat at Waterloo Road site)

