

Killearn Road Improvements

Town of Washington, NY

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Accelerating success.



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Agenda

1. Overview
2. Findings
3. Recommendations
4. Alternatives
5. Costs/Funding
6. Discussion
7. Oak Summit Road Culvert Update

Section 01

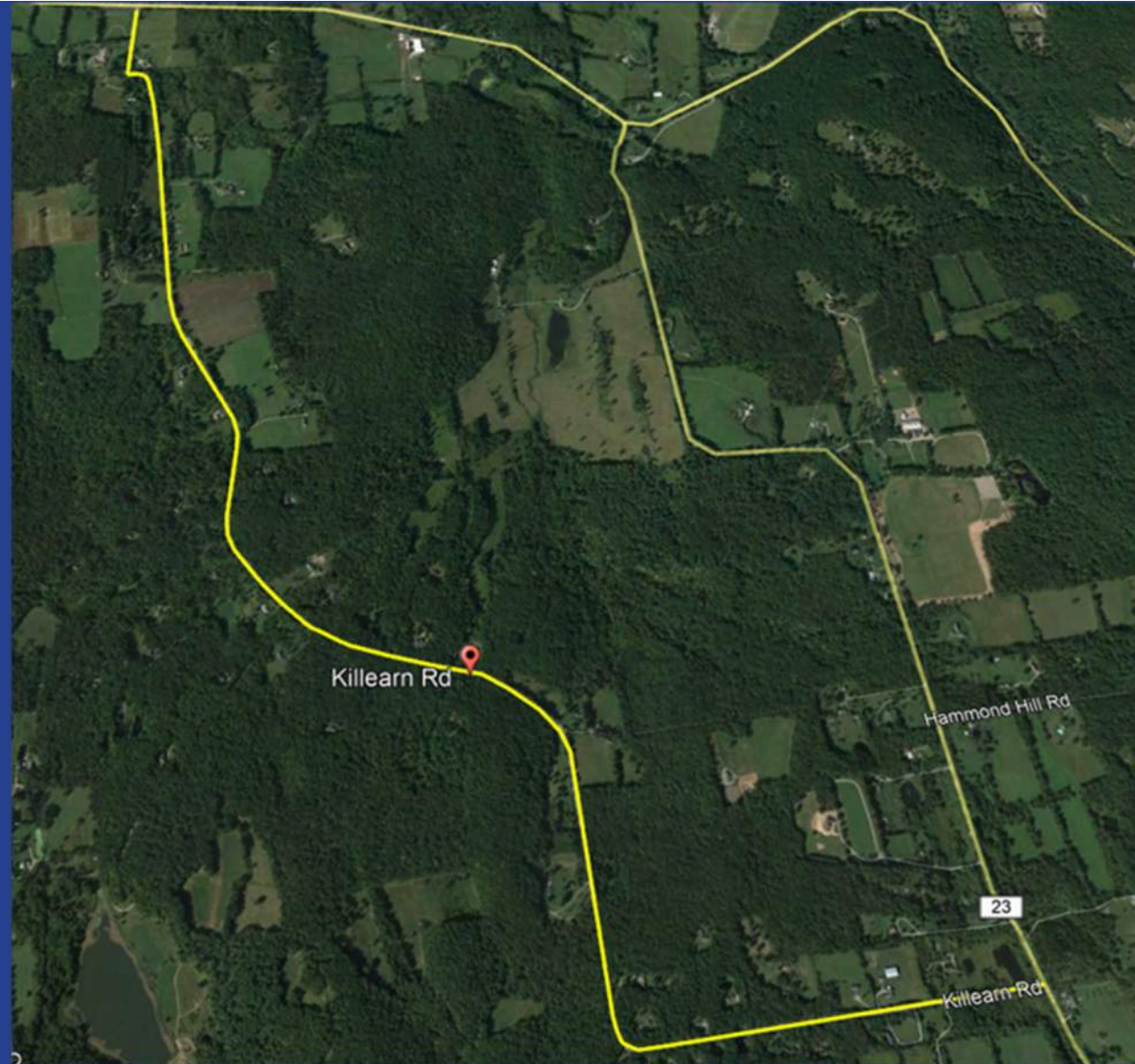
Overview



Overview

Project Limits

- 3.29 miles
- Assumed 49.5' ROW width
- One of 20+- Gravel roads in Town
- Southern section on Town Line with Union Vale
- Properties fronting on road:
 - 55 Tax Parcels in Washington
 - 10 Tax Parcels in Union Vale
- Multiple Site Visits between Spring – Fall 2022



Section 02

Findings



Findings

Points of Concern

Major issue

- DRAINAGE

Additional Issues

- Wear and Tear
- Geometric Limitations
- Soil Conditions
- Structural Deficiencies



Findings Drainage



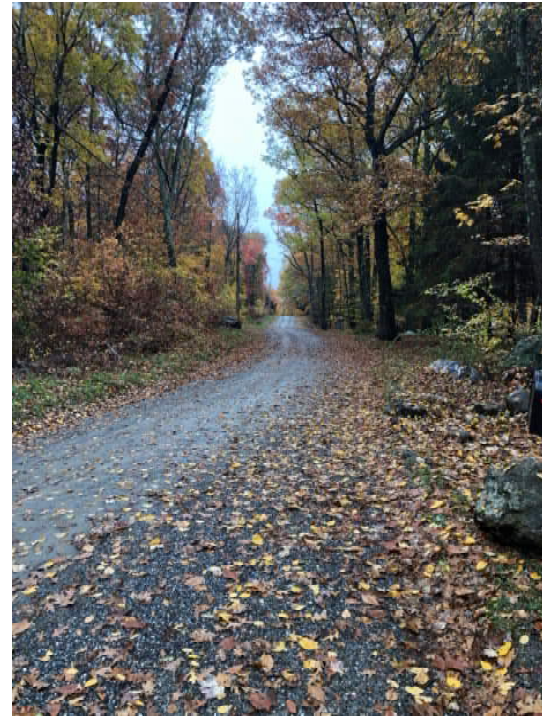
Findings

Wear and Tear

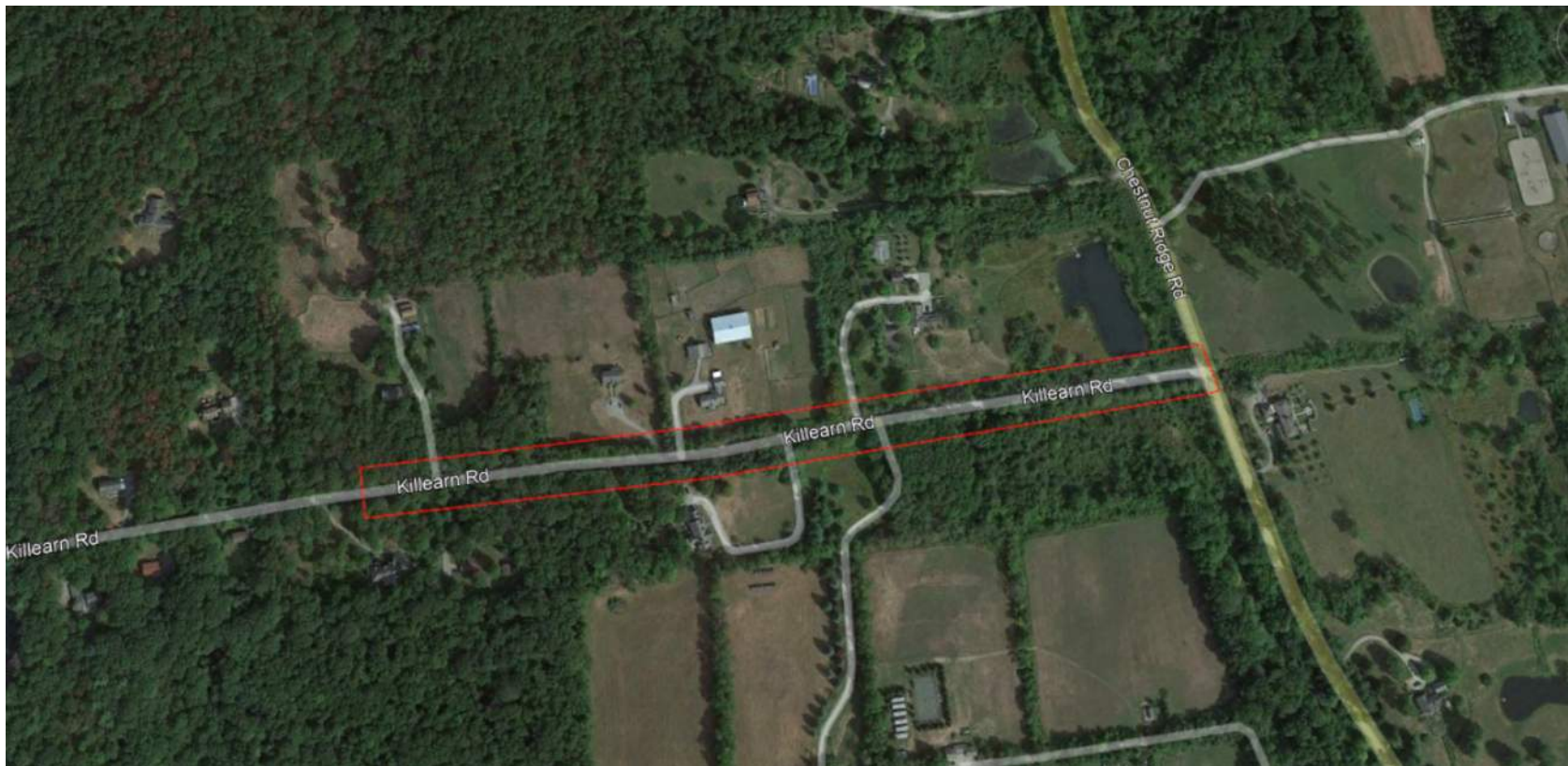


Findings

Geometric Limitations



Soil Conditions



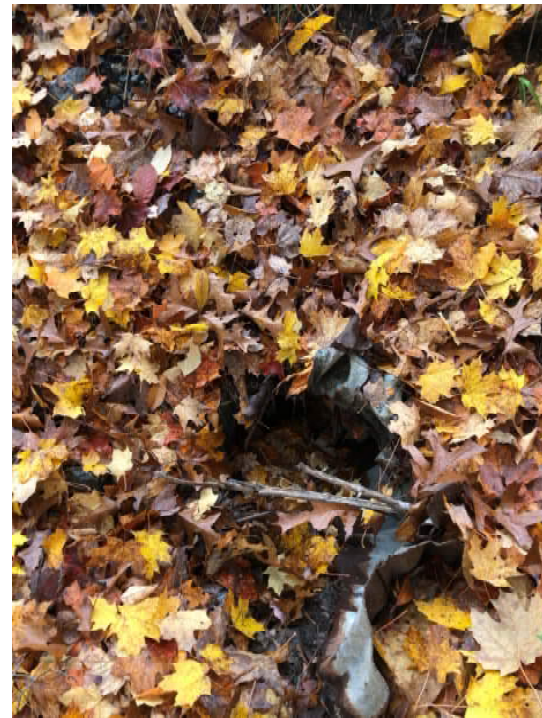
Soil Conditions

Table 3 – Results of Soil Borings B-13 through B-15

Boring Number	Boring Depth	Gravel Road Section Depth	N Subgrade (Blow Count)	Subgrade Condition	% Fines in Subgrade Soils	Depth to Refusal
B-13	4-ft	8 Inches	28	Firm	47.3%	N/A
B-14	4-ft	24 inches	16	Medium	73.0%	N/A
B-15	2.5-ft	24 inches	N/A	Bedrock	24.3%	2.5-Ft

Findings

Structural Deficiencies



Findings

Structural Deficiencies



Findings Other Issues



Section 03

Recommendations



Recommendations

- Consider all repair/reconstruction alternatives
 - Select One (1) Alternative for Construction
- Survey – Right-of-way & Topo
- Traffic Study
- Design & Build Chosen Alternative
- Post & Permit Road



Section 04

Project Alternatives



Project Alternatives

Depending on available funding, CED proposed five (5) alternatives to be considered:

1. ALTERNATIVE 1 – BASIC REPAIRS
2. ALTERNATIVE 2 – DRAINAGE DITCHES
3. ALTERNATIVE 3 – MILL & FILL WITH DRAINAGE IMPROVEMENTS
4. ALTERNATIVE 4 – RECONSTRUCTION – GRAVEL ROAD
5. ALTERNATIVE 5 – RECONSTRUCTION – ASPHALT ROAD



Project Alternatives

Alternative 1 – Basic Repairs

- Necessary repair areas determined by the Town and CED.
- Repairing and improving the existing roadway section in limited areas
- Repair areas include:
 - Gravel surface rutting
 - Settlement at existing culvert crossings
 - Embankment erosion
 - Culvert repair/replacements
 - All potholes, rills and erosion encountered on the road by spot-filled and compacted with a 10-ton roller.
 - Applying a layer of topping stone placed along the entire road and graded with crown.
 - Posting a weight limit on the road and establish a permitting process for larger vehicles

Project Alternatives

Alternative 2 – Drainage Ditches

- Install drainage ditches along majority of roadway length, on each side
- Key to roadway's life cycle and operation
- Can lead to improved site and roadway conditions, while minimizing actual roadway repairs
- Helps to prevent future deterioration of the existing gravel road



Project Alternatives

Alternative 3 – Mill and Fill with Drainage Improvements

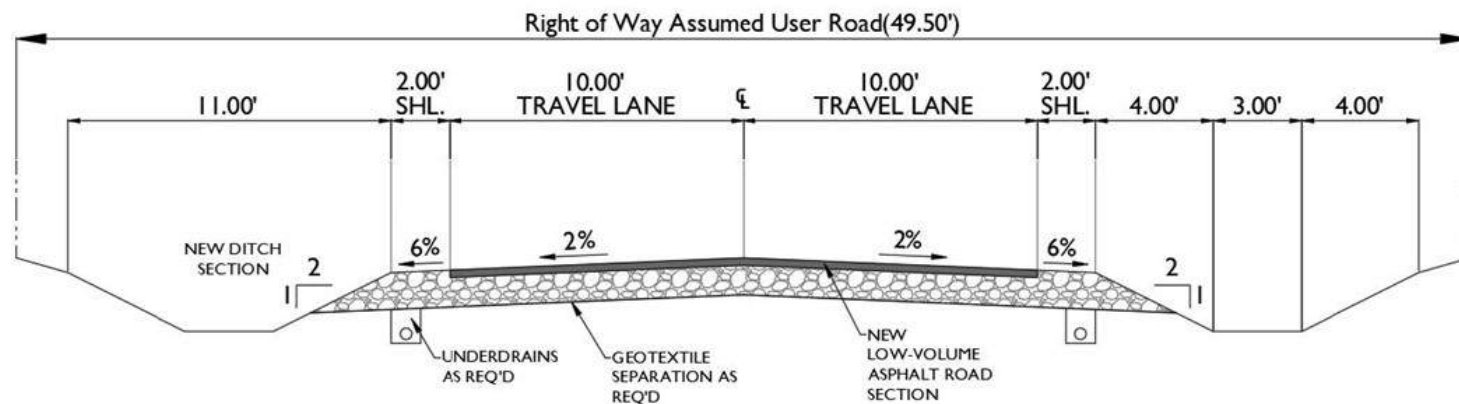
- Gravel reclamation
- Revitalize the existing road without full reconstruction
- Uniformly compacts and reuses material already in the road section, reduces new material needed
- Most useful for portions of road experiencing collapse or failure



Project Alternatives

Alternative 5 – Paved Road Reconstruction

- Two (2) - 10ft Wide Travel Lanes – 2ft Wide shoulders
- Redefines crown and dimensions of roadway
- Install new drainage ditches



Costs & Funding

Costs

Table 4 - Project Costs						
Activities		Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
Construction Costs	Highway	\$132,171	\$466,152	\$1,279,534	\$2,245,101	\$5,244,457
	Field Change Item (5%)	\$6,609	\$23,308	\$63,977	\$112,255	\$262,223
	Mobilization (4%)	\$0	\$0	\$51,181	\$89,804	\$209,778
Total Construction Costs		\$138,780	\$489,459	\$1,394,692	\$2,447,160	\$5,716,458
Design Contingency (10%)		\$13,878	\$48,946	\$139,469	\$244,716	\$571,646
Construction Inspection (10%)		\$0	\$0	\$139,469	\$244,716	\$571,646
Total Alternative Costs		\$152,658	\$538,405	\$1,673,631	\$2,936,592	\$6,859,750

Costs & Funding

Funding

- **NYSDEC's Water Quality Improvement Project (WQIP)**
- **Multimodal Project Discretionary Grant (MPDG)**
- **Infrastructure Investment and Jobs Act**
- **Bonding**
- **Discretionary Spending**



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Questions?