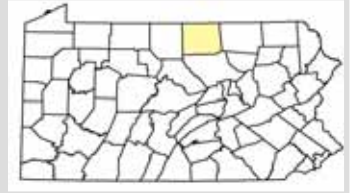


Worksite in Focus

Tioga State Forest Francis Leetonia Road

2/2006



Project Overview:

Francis Leetonia Road is located in the southwestern corner of Tioga County in the Tioga State Forest. The land has been used for sustainable timber harvesting and recreation since 1955. This forestry road was located directly adjacent to Kramer Run, a tributary to Francis Branch of Slate Run. Both streams are classified as "Exceptional Value (EV)" streams. Due to its proximity to the road, the stream would spill onto the road surface during medium and high flow events. As a result, this road required constant maintenance and created a chronic pollution impact on the stream. The road also contained a hairpin turn (see *Fig. 1*) that was difficult for larger vehicles (log trucks, emergency vehicles, etc) to maneuver.

Project Considerations:

Stabilizing the existing roadway (shown in *Photo 1*) would have been costly and difficult to maintain due to frequent flooding. Working with the Bureau of Forestry, the Center decided to retire a 3,600 foot section of the existing road and replace it with an 800 foot section of new road located away from the stream corridor. This approach eliminates a dangerous hairpin turn, separates the road and the stream, and greatly reduces future maintenance costs.

Project Facts

Project:	Francis Leetonia Road
Project Owner:	Tioga State Forest
Watershed:	Francis Branch of Slate Run (EV)
Project Length:	800 ft (~ 3,600 ft of road retired)
Date Completed:	June 2005

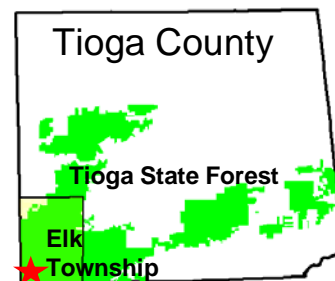
Cost Summary

Site Preparation	\$11,000
New Road Placement	\$33,000
Old Road Retirement	\$15,000
Total Project Cost:	\$59,000

For More Information:

The Center for Dirt and Gravel Road Studies
(814) 865-5355 www.dirtandgravelroads.org

Tioga State Forest: District 16 (570)-724-2868



Before: Existing Road



Photo 1

After: Retired Road



Photo 2

Photo 1: Note close proximity of the road to Kramer Run. This created recurring problems with road flooding and stream pollution.

Photo 2: The now-retired road has been seeded and mulched. Photo was taken just 2 months after site completion.

Creating new roadbed: Approximately 800 ft. of new roadbed was laid out away from Kramer Run. The new road segment was located in such a way as to bypass the hairpin turn and connect with the original road (see *Fig. 1 below*). Tree and vegetation removal was performed by the Bureau of Forestry (*photo 3*). Stumps were removed and placed on the new road bank for additional soil stabilization. The new roadbed was created utilizing a cut and fill technique (*photo 4*). The roadbed had traditional crown built into it before the driving surface material was placed (*photo 5*). Five cross-pipes and two grade breaks were added to control drainage.

Retiring old roadbed: Approximately 3,600 ft. of the old roadbed was retired (*Photo 1*). All pipes were removed and gradebreaks were added to the roadbed to control runoff. Natural drainage conditions were restored where possible. The former roadway was chisel plowed with the toothed bucket of the excavator to encourage re-vegetation. Pipe trenches were left open and trees were felled across the former roadway to make it unattractive as a trail, except for foot travel (*Photo 2*).

Re-vegetation: All disturbed areas, including the retired roadway, were seeded, limed and mulched. Mulch rates were kept as low as possible to encourage native vegetation to reseed.

Project Results: Before the project, Francis Leetonia Road contributed significant sediment to Kramer Run due to its extremely close proximity to the stream. Through relocation of the new roadway and retirement of the old roadway, these negative impacts have been eliminated. In addition, the total road length was reduced by 2,400 feet and the hairpin turn was removed; thereby reducing maintenance and allowing easier access to the area by larger vehicles.



Photo 3



Photo 4



Photo 5

Photo 3-5: This sequence of photos shows the placement of 800' of new road that replaced the 3,600' of old road in photos 1 & 2. These pictures were taken while standing on Francis road and looking at the new section of Francis-Leetonia road.

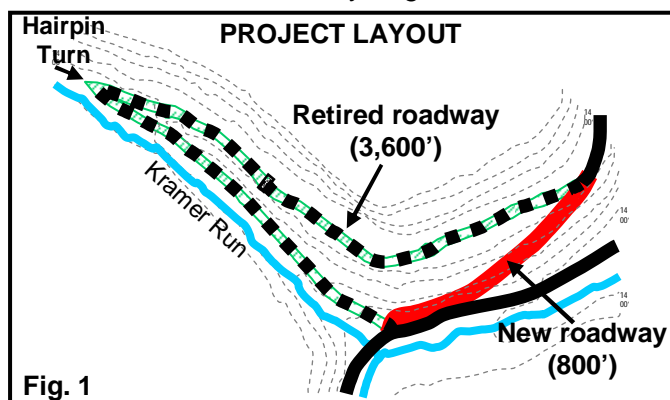


Fig. 1

Site Map & Directions:
From Route 44 north entering Potter County, turn right onto Francis Rd. Continue approx. 6 miles. Project begins at intersection of Francis Rd. and Francis-Leetonia Rd.

