

Options to address slope/roadway deficiencies along Old Frederick Road

Between Frederick Road and
Bryans Mill Way



Location Map

Area of concern is approximately 1,000 LF of Old Frederick btwn Frederick Road and Bryans Mill Way

Existing Conditions and Alternatives



Spann Mechanical Heating & Plumbing

Benway Ct

Bryans Mill Way

Old Frederick Rd

Old Frederick Rd

Oella Ave

Stardust Ct

Starhill Ln

Maryland Council For Special Equestrians...

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Old Frederick Rd

Frederick Rd

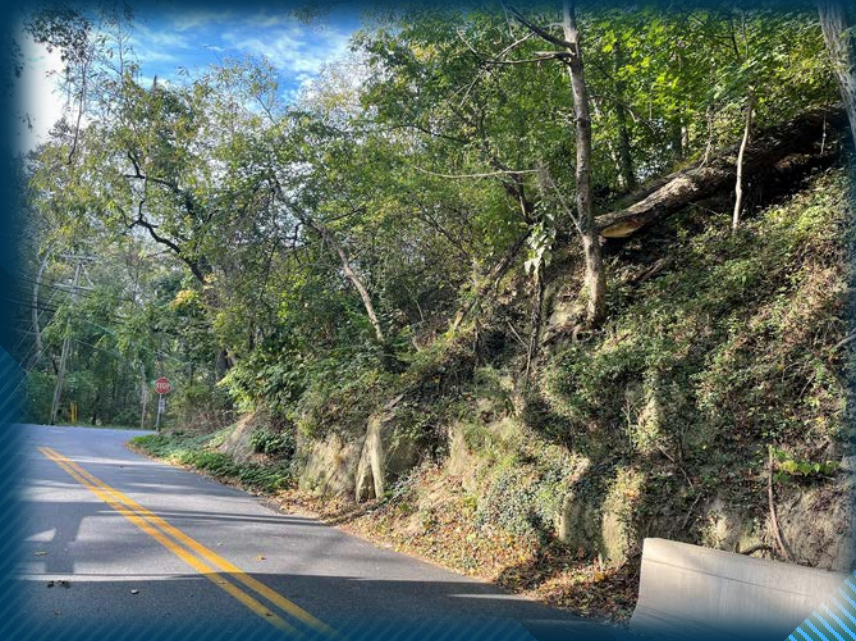
Old Frederick Rd & Frederick Rd...

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Old Frederick (looking south towards Frederick Road)



Old Frederick at Frederick Road stop sign (looking south)

Background and Alternatives

Existing Conditions

- In 2018, an extreme rainfall event was documented in this area (8 inches of rainfall in approx. 2 hours) causing marked erosion and sloughing of vegetation along the 25' high (+/-) hillside. The existing slope varies from 0.7:1 to 1.25:1 with many visible areas of exposed rock formation.
- Baltimore County installed temporary F-shaped ("Jersey") barrier at toe of slope to prevent fallen debris from entering the roadway. Ongoing monitoring in the area by the Bureau of Highways helps ensure public safety is not compromised.

Alternatives

- Permanent road closure along affected segment of Old Frederick
- Retaining walls, engineered slopes or soil nailing. Typically, slopes steeper than 2:1 require slope reinforcement (geo-grid) or engineered structural wall.
- Convert Old Frederick to one-way directional movement in this segment of Old Frederick.
- Doing nothing was considered but given the possibility of continued erosion or failure of the slope, fallen trees and/or other vegetation, this option was not recommended.

Examples of Modular Block Wall and Soil Nailing Alternatives



Impacts of Temporary or Permanent Closure



Emergency Response

Recreation and Parks

Traffic/Detour

Emergency Response



Feedback was solicited from the Fire Department (Safety, Dispatch and Emergency Operations) who have indicated that their services would not be impacted by the closure since their vehicles do not utilize this corridor during any emergency responses. Additionally, access to water supply would not be an issue. Thus, emergency services are not anticipated to be affected by the closure.

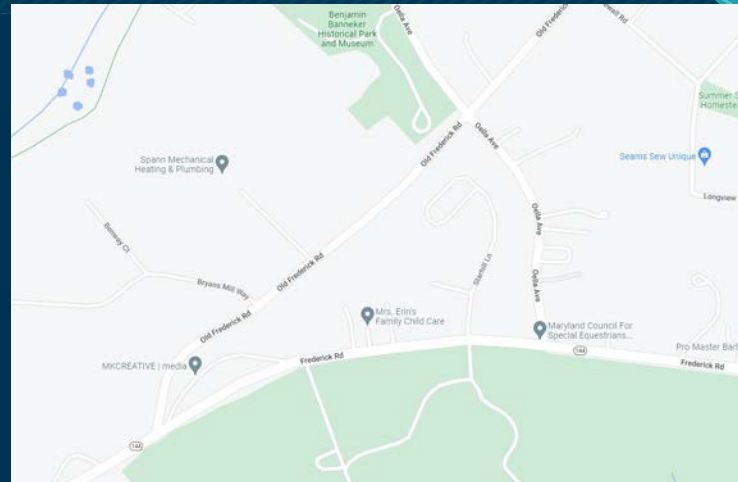
Recreation and Parks



Baltimore County Recreation and Parks maintains a marked trail at the top of the slope which was recently realigned further north of Old Frederick Road.

No impacts to this trail are anticipated if Old Frederick Road is temporarily or permanently closed in this area.

Traffic/Detour



As part of any closure (temporary or permanent), eastbound vehicles on Frederick Rd would have to use Oella Avenue for access to Bryans Mill Way; a nominal increase to travel times (approx. 0.75 mi).

Possible delays and operations at nearby intersections* were analyzed via critical lane analysis to check whether there would be adverse impacts to the level of service (LOS) if a closure were implemented. The analysis indicated that LOS would remain 'A' for each intersection based on 2021 and 2041 volumes for the AM and PM peak periods.

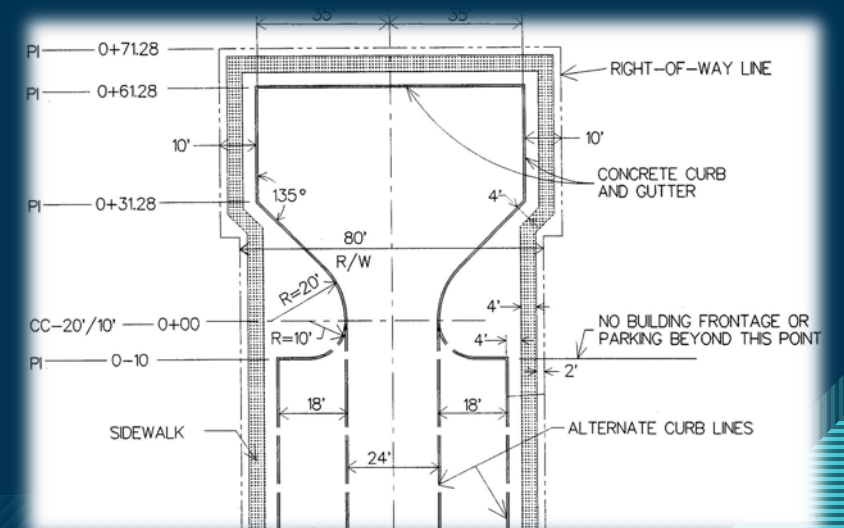
*Frederick at Oella/Frederick at Old Frederick and Oella at Old Frederick

Alternative Summary

Option	No Build	Road Closure	Soil Nailing	Modular Segmental Block Wall	Convert Old Fred. to One-Way Movement
Estimated cost	\$0	\$450,000	\$850,000	\$1,300,000	\$250,000-\$400,000
Remarks	Repair costs have not been estimated if the slope were to fail, but they would likely be significant. Slope stability would remain compromised	Costs include: installation of T-turnaround or cul-de-sac, removal of existing asphalt and minor drainage improvements	Reinforcement nails drilled into the slope with steel mesh or concrete facia. Would require temporary road closure and detour	Keystone type retaining wall. Soil conditions (rock) make option cost prohibitive. Would require temporary road closure and detour	Most logical movement to be determined (ie one-way northbound or southbound). Single lane would allow for wider paved area for vehicles
Estimated duration	N/A	6-8 months after closure approval	12-18 months*	12-18 months*	12-18 months*
			*incl. design and construction	*incl. design and construction	*incl. design and construction

Requirements needing to be met for permanent closure

1. Application for closure submitted to Office of Real Estate Compliance (package needs to include notice, plat and description);
2. Review of application by various County offices;
3. Hearing scheduled before the Chief Administrative Officer (CAO) or their designee;
4. Public notice of intent to close road is required for three successive weeks (via newspaper and certified mailings);
5. If closure were approved, asphalt to be removed and T-turnaround installed along with installation of stable, downstream conveyance of runoff from slope



Thank You and Open for Q&A

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Benjamin Banneker Historical Park and Museum

Spann Mechanical Heating & Plumbing

Summer Sky Homestead

Seams Sew Unique

Mrs. Erin's Family Child Care

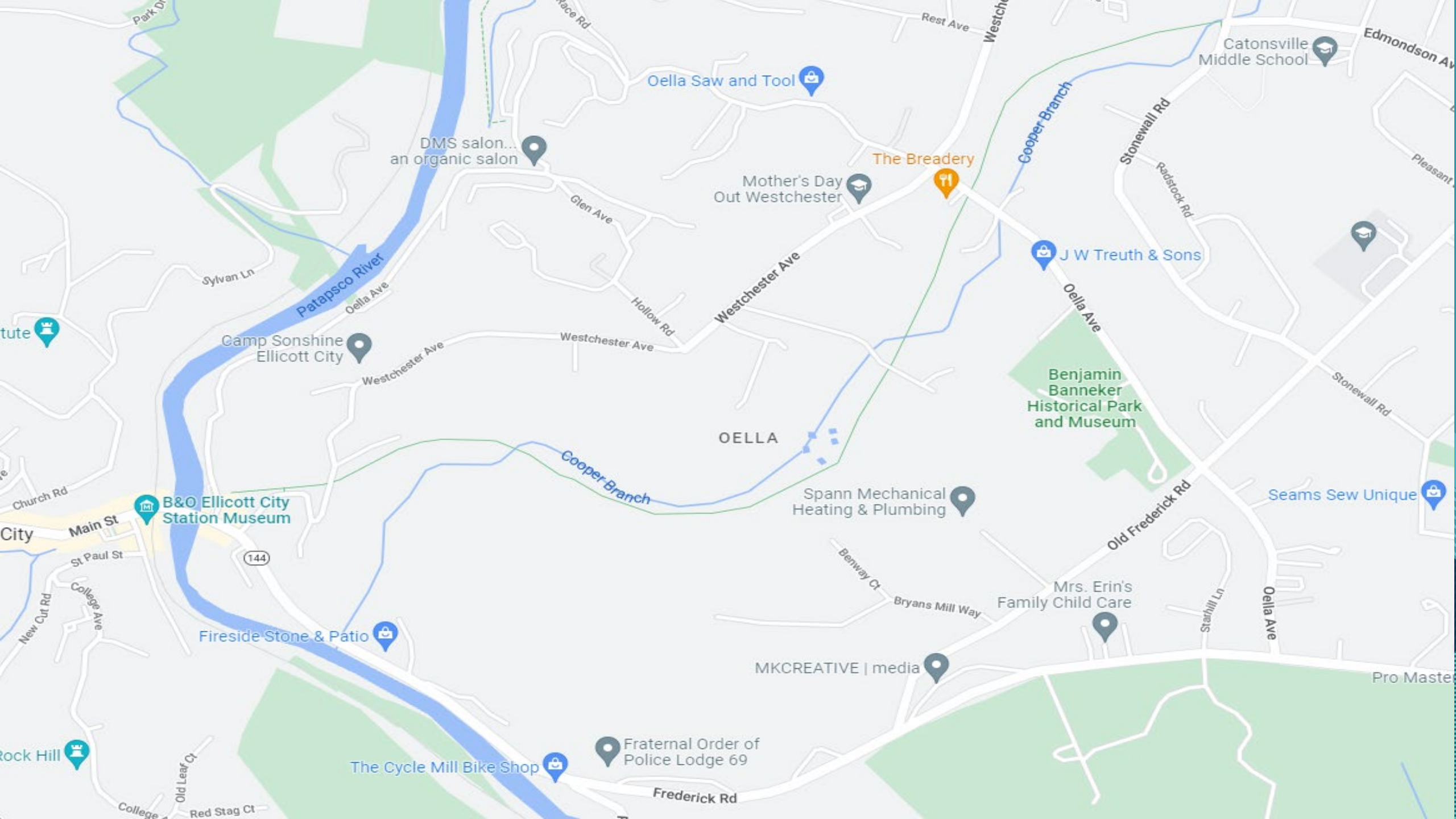
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Pro Master Barber

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Oella Saw and Tool

DMS salon...
an organic salon

The Breadery

Mother's Day
Out Westchester

J W Treuth & Sons

Camp Sunshine
Ellicott City

OELLA

Benjamin
Banneker
Historical Park
and Museum

Spann Mechanical
Heating & Plumbing

Seams Sew Unique

B&O Ellicott City
Station Museum

Mrs. Erin's
Family Child Care

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Fraternal Order of
Police Lodge 69

The Cycle Mill Bike Shop

Fireside Stone & Patio



Old Federal Way

SPEED
LIMIT
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