

**Envisioning the Future:
*Creative Approaches to Transportation Corridors***

Wednesday, Sept. 14, 2022

By Dr. Dan Marriott, PhD.,
Associate Professor of Landscape Architecture, Penn State

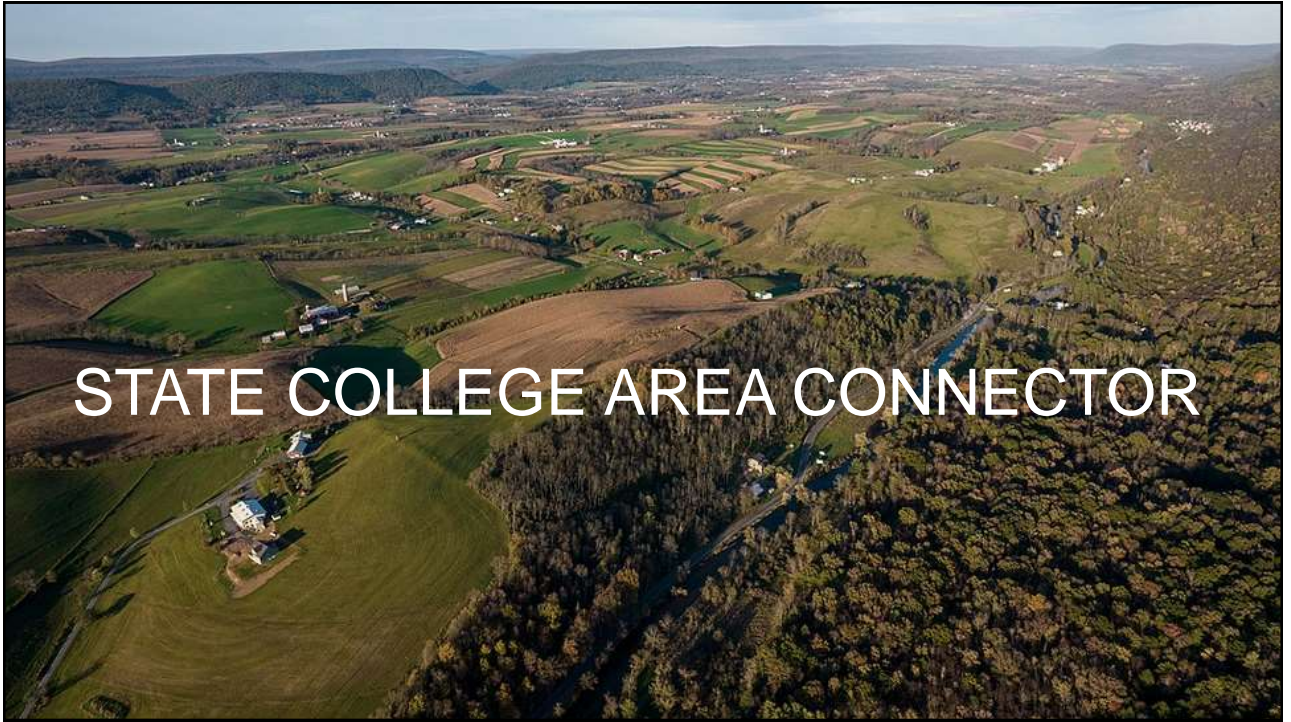
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STATE COLLEGE AREA CONNECTOR

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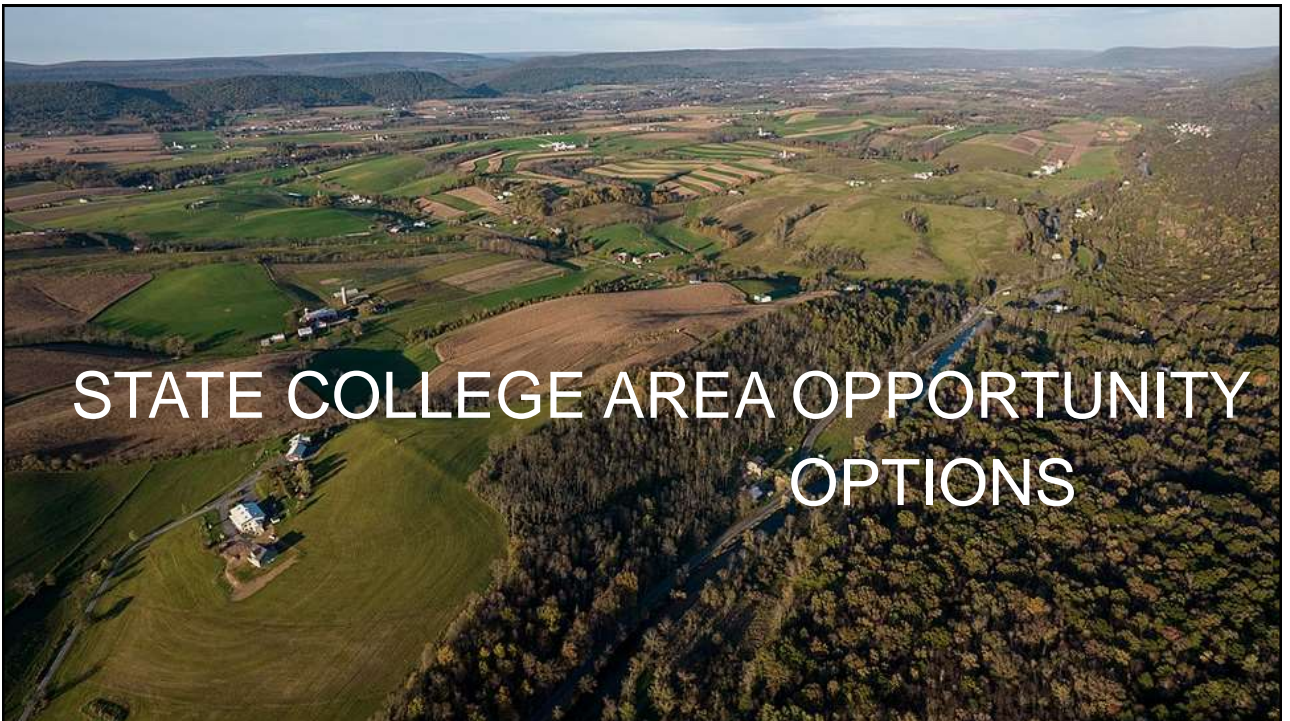


STATE COLLEGE AREA CONNECTOR

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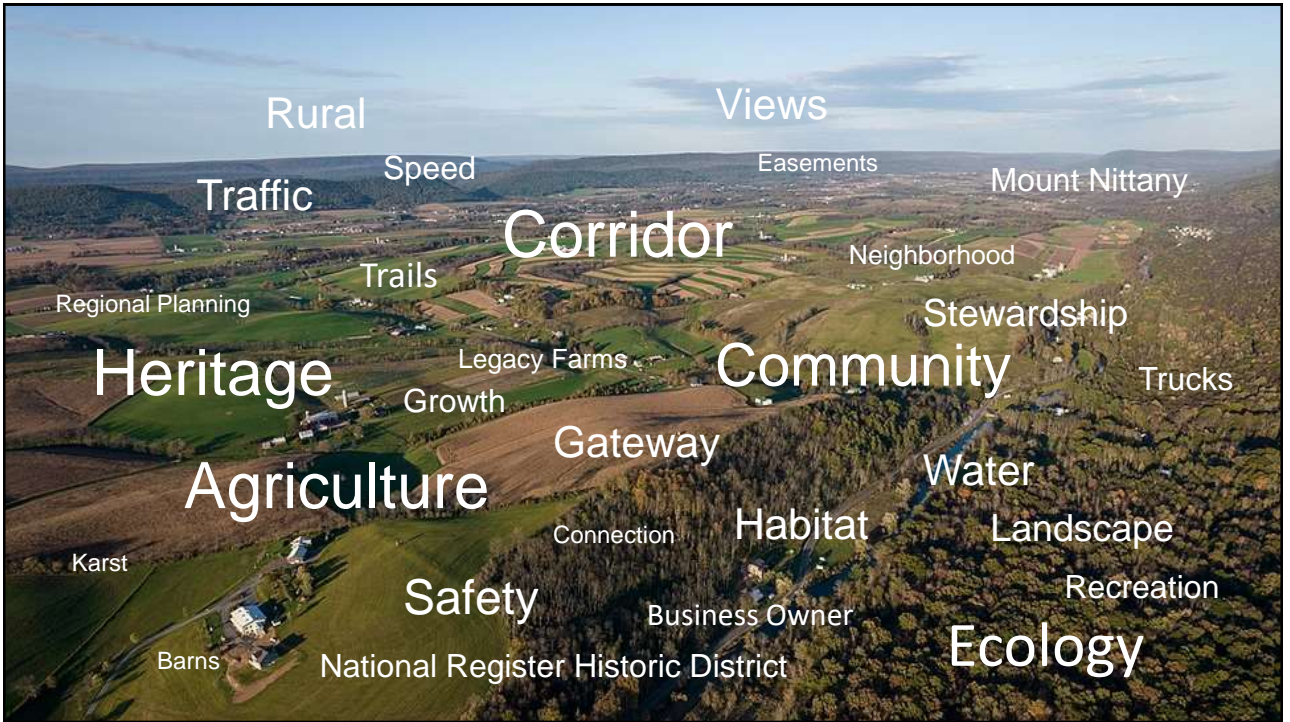
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PennDOT

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Connector

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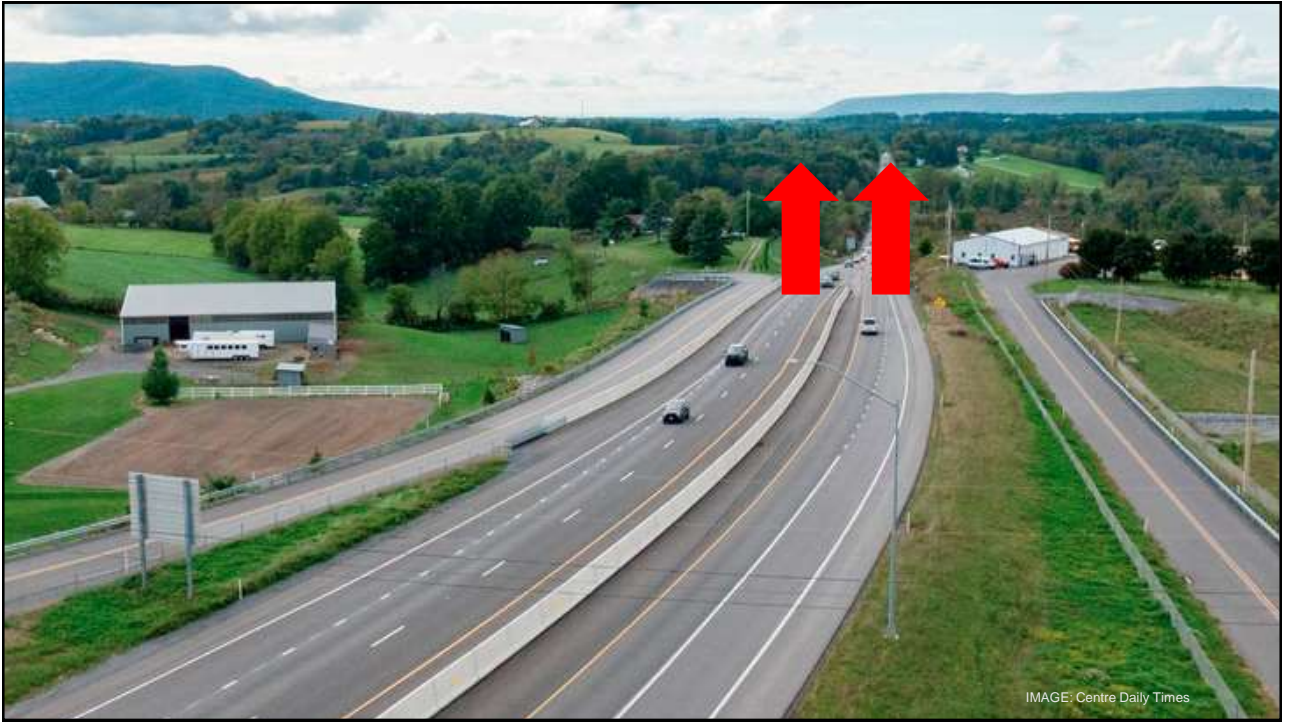
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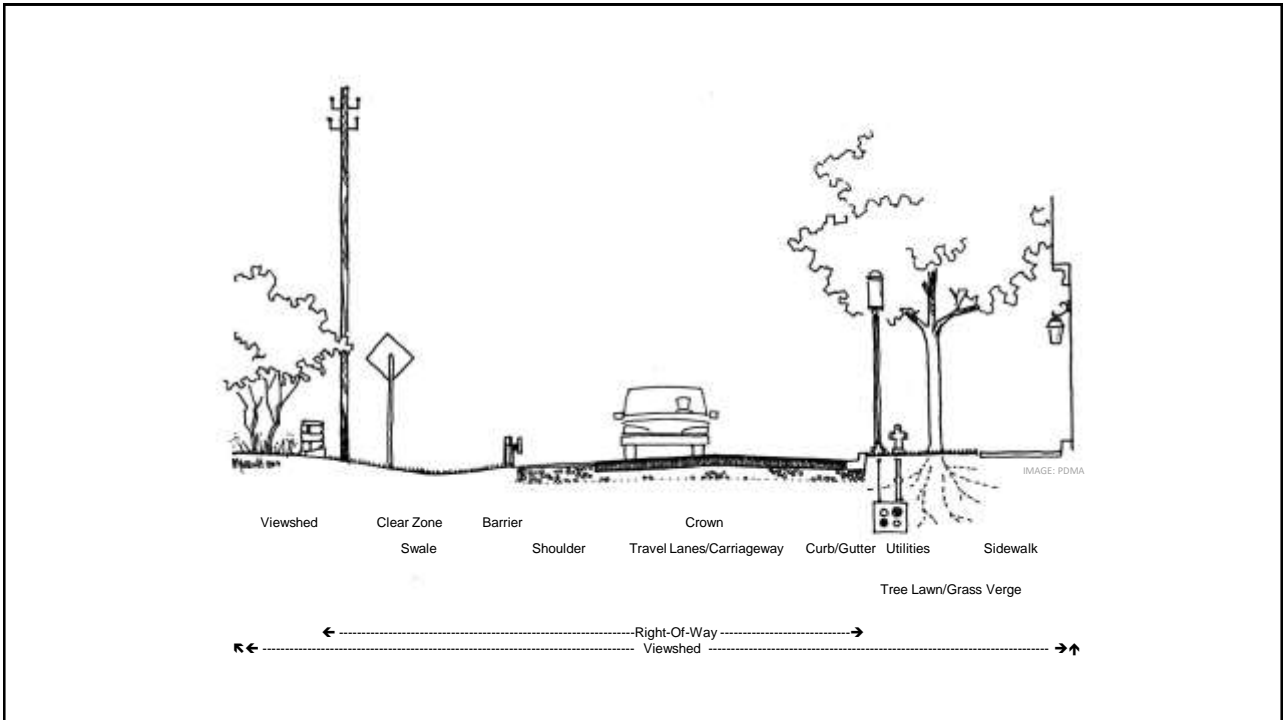
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Safety

Speed

Limited-access

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IMAGE: Paul Daniel Marriott

SAFETY

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IMAGE: Library of Congress

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IMAGE: Paul Daniel Marriott

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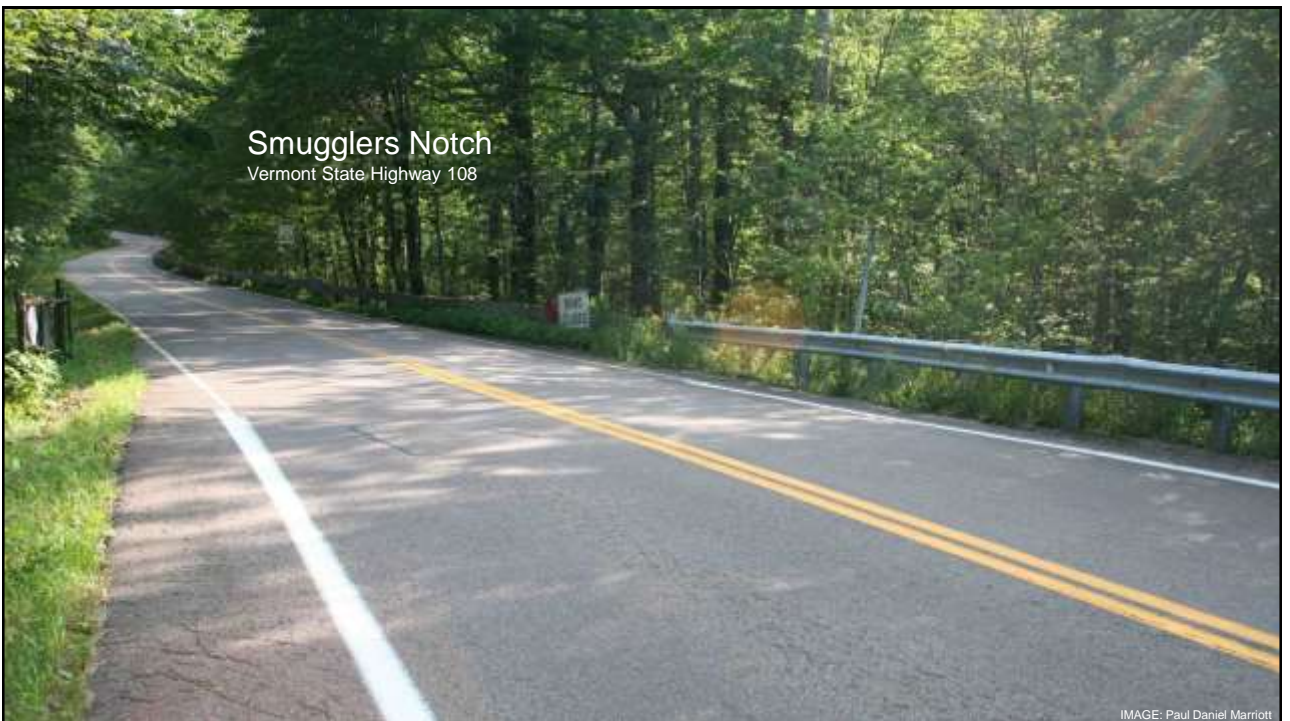
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Historic National Road
US Route 40, Pennsylvania



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Whose safety?

- Motorist
- Bicyclist
- Pedestrian
- Farm machinery
- Wildlife
- Visitor
- Commuter

37

Are safety policies applied consistently?

- Based on Functional Classification
- Based on ALL user groups
- Based on other segments of the roadway

Are flexible options considered?

- Context Sensitive Solution
- Design Exceptions from FHWA

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IMAGES: Paul Daniel Marriott

SPEED

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IMAGE: Paul Daniel Marriott

Traffic Calming
Netherlands
30km – 20mph

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43

Whose speed?

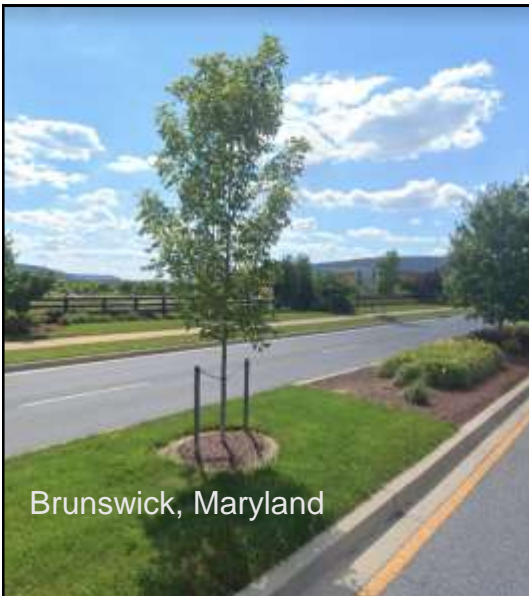
- Thru traffic
- Trucks
- Local residents

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Is speed uniform along corridor or variable?

- Open rural district
- Commercial area
- Residential area

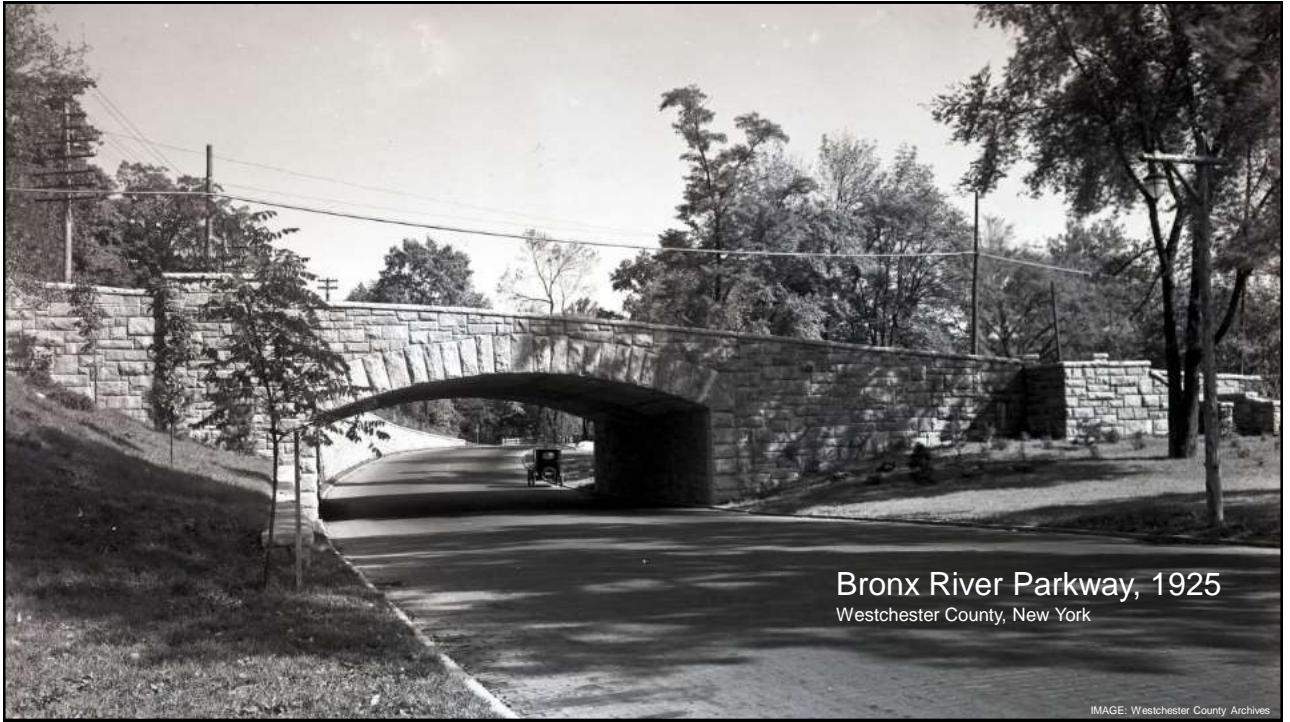
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IMAGES: Paul Daniel Marriott

LIMITED - ACCESS

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What is purpose of limited-access?

- Speed
- Safety
- Travel time
- Congestion management

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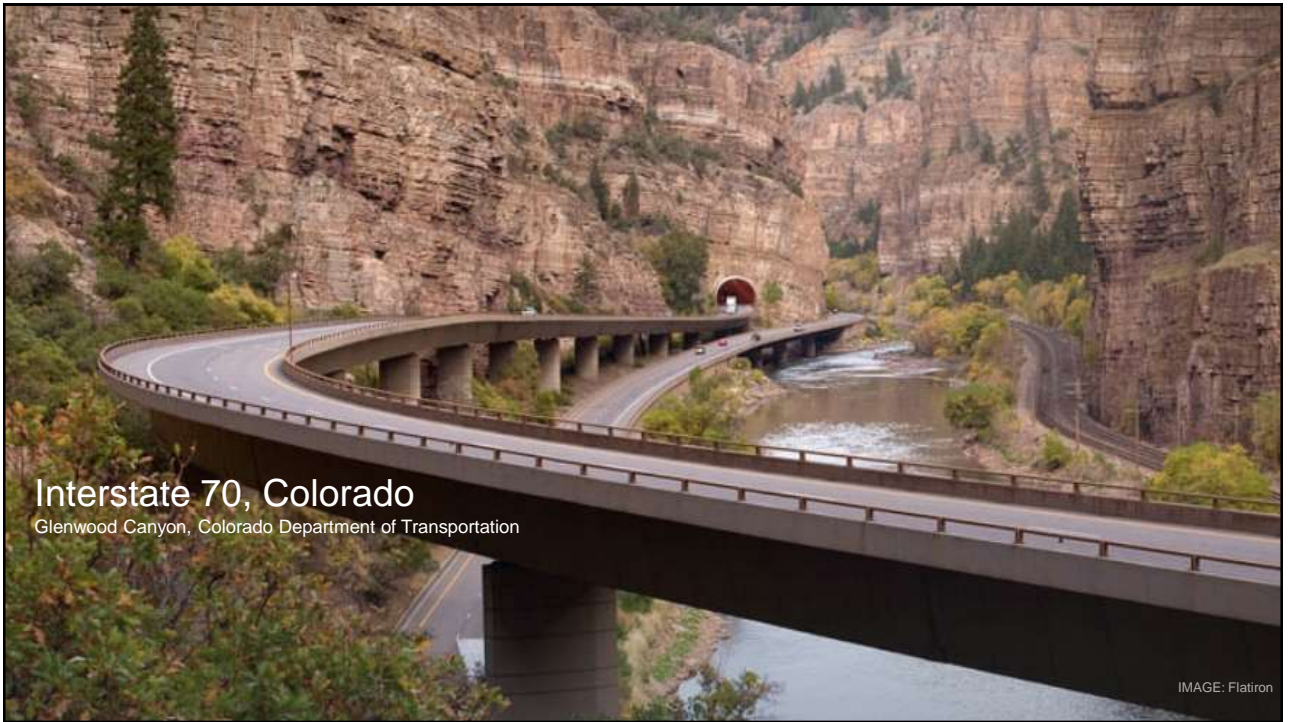
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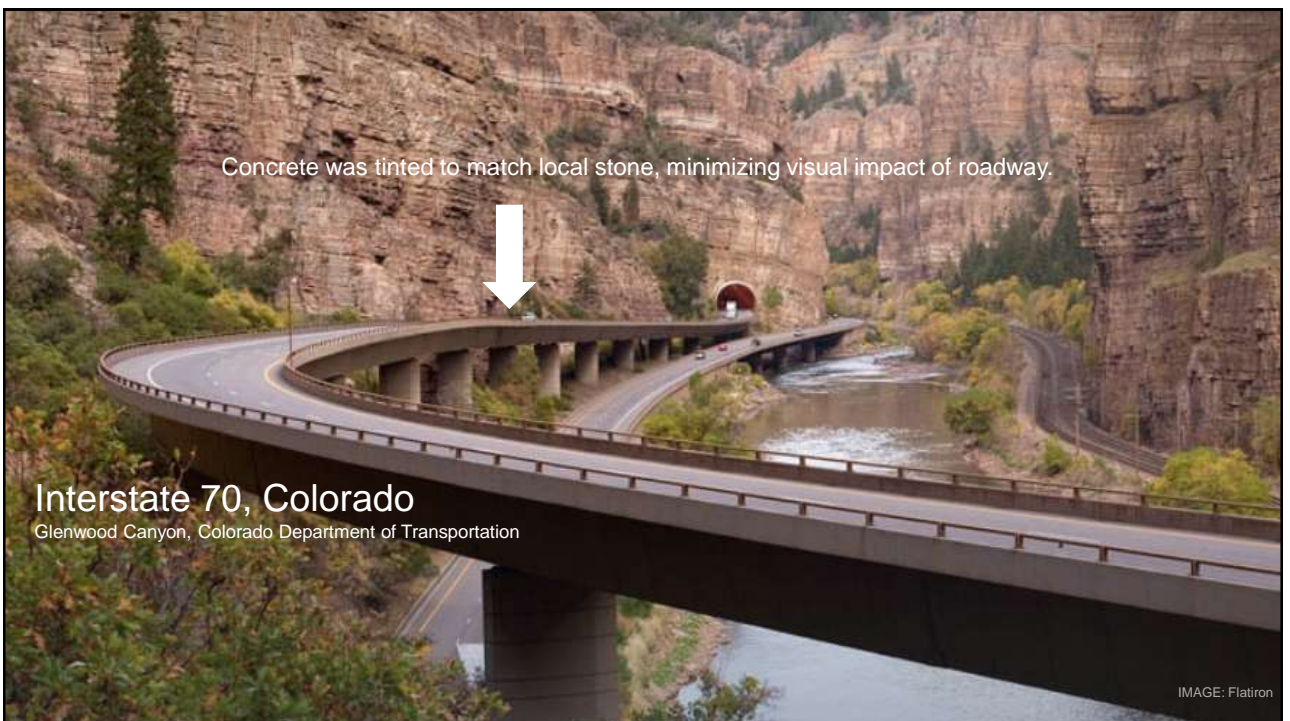
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US Route 1, Virginia

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Not all roads are created equal.

- DOT Philosophy
- Landscape Architecture
- Context Sensitive Solutions
 - Land use and Zoning
- Community Engagement

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IMAGE: Paul Daniel Marriott

INTERSTATE 70, MARYLAND

67



IMAGE: Paul Daniel Marriott

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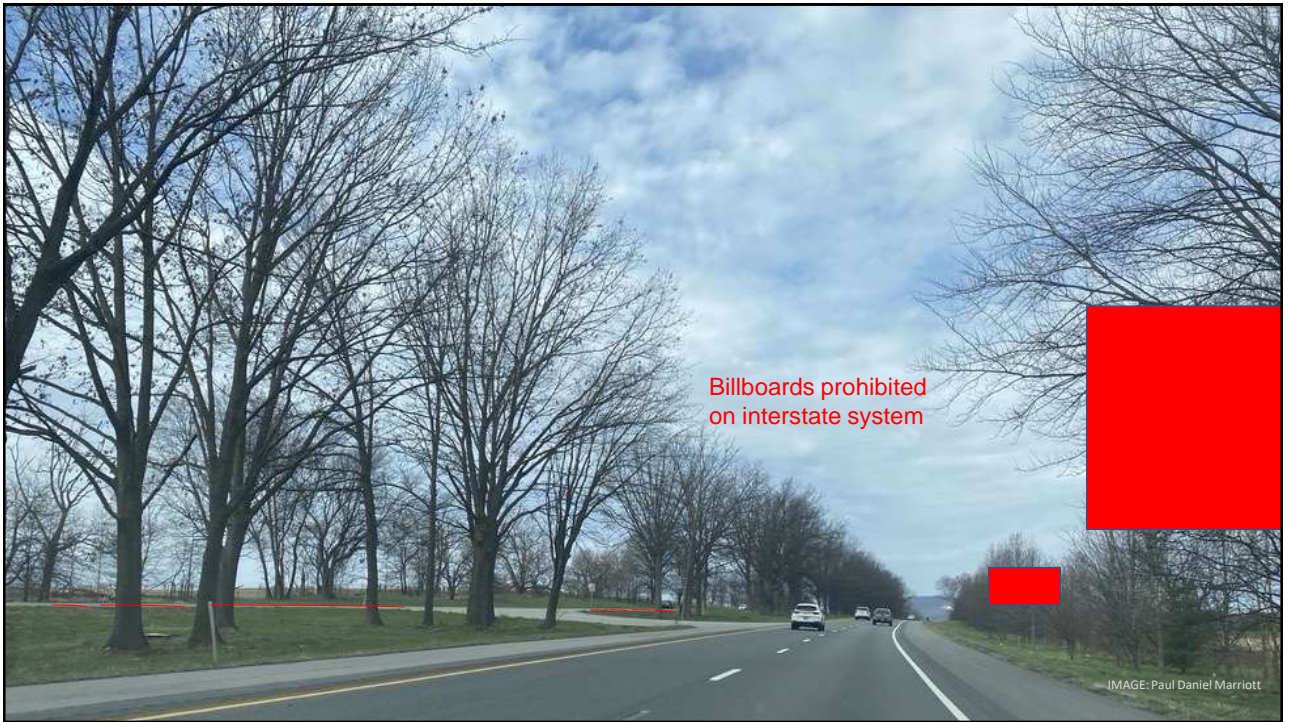
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INTERSTATE 70, PENNSYLVANIA

74



IMAGE: Paul Daniel Marriott

75



IMAGE: Paul Daniel Marriott

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INTERSTATE 99, PENNSYLVANIA

83



IMAGE: Paul Daniel Marriott

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US ROUTE 322, PENNSYLVANIA

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US ROUTE 322, PENNSYLVANIA

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INTERSTATE 83, PENNSYLVANIA

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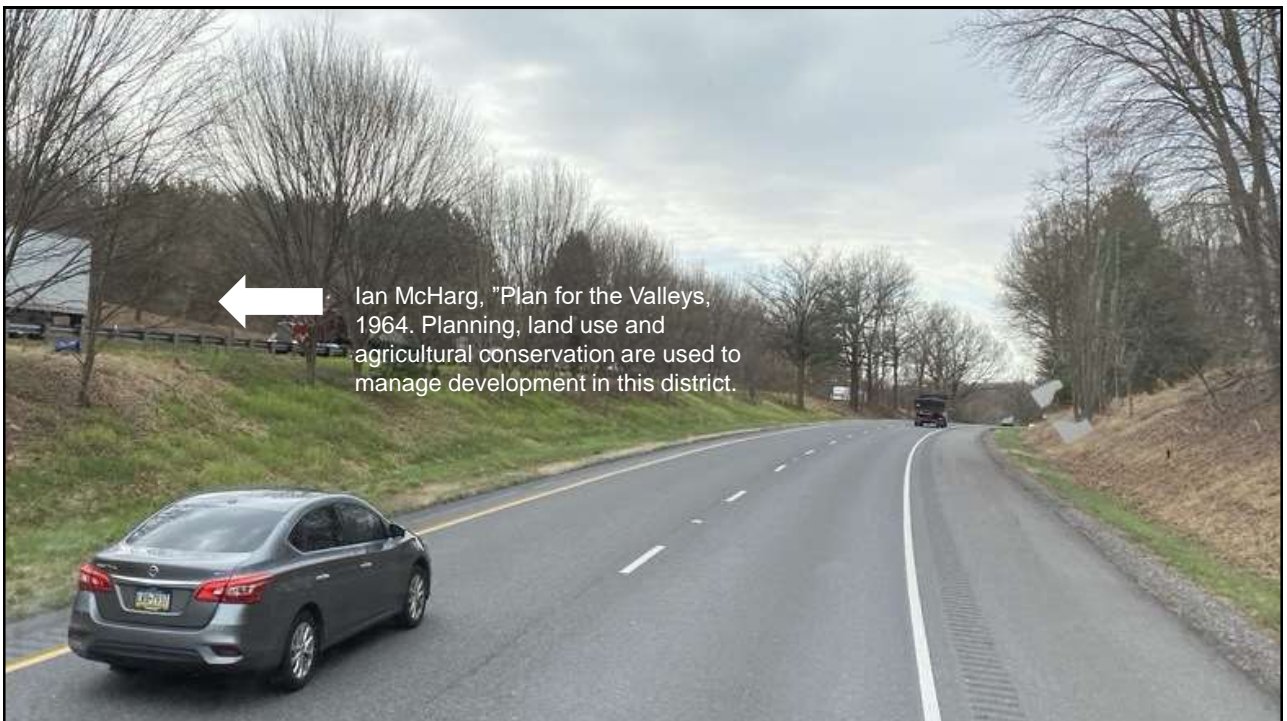


INTERSTATE 83, MARYLAND

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101



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IMAGE: Paul Daniel Marriott

103



IMAGE: Paul Daniel Marriott

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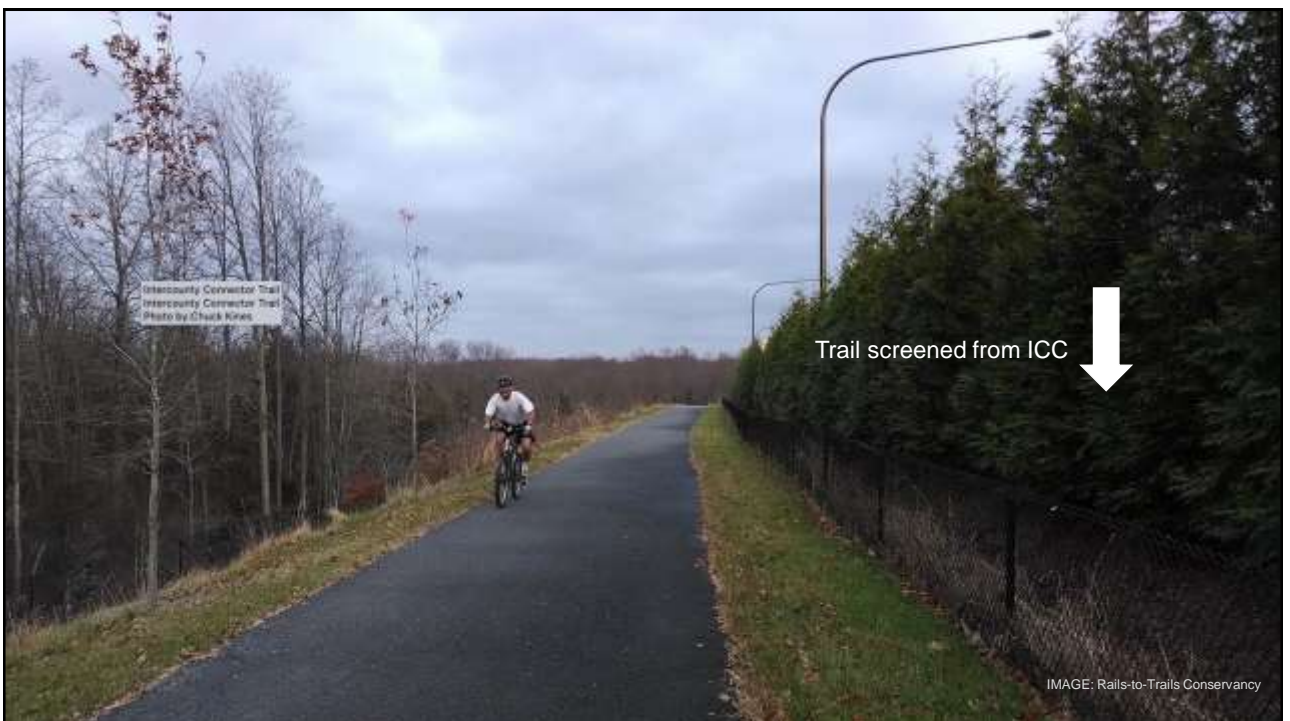
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ICC – Intercounty Connector, Maryland Route 200

Awards:

FHWA 2012 Exemplary Environmental Initiatives Award

Selected its “innovative wildlife passages.” FHWA noted the Maryland State Highway Administration demonstrated a “commitment to environmental stewardship and ecosystem-based approaches.”

AASHTO 2012 America’s Transportation Awards, “Top 10” Finalist

Maryland Chapter, ASLA, 2016 Honor Award

Parsons with Floura Teeter, Landscape Architects. The ASLA award jury commented that, “the project provides a template, case study, and example of an ecologically sensitive road corridor that all should follow. Just Brilliant!”

For additional information:

AA Roads

<https://www.aaroads.com/guides/md-200-west/#gallery-29>

Maryland State Highway Administration, Wildlife Crossings

<https://roads.maryland.gov/mdotsha/pages/Index.aspx?PagelId=334>



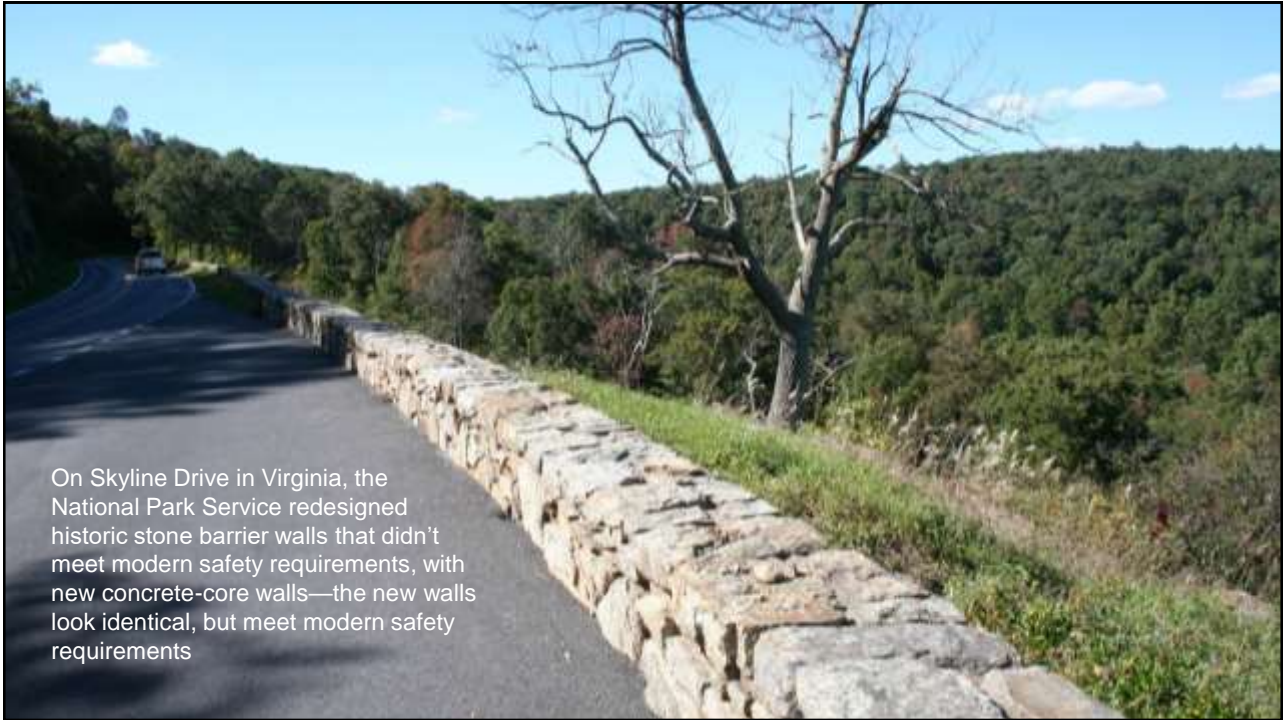
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PDM+A Photo

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PDM Photo

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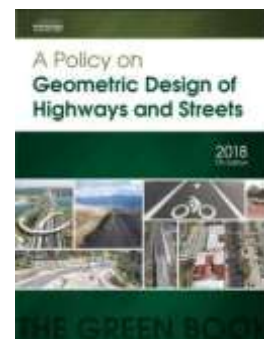
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American Association of State Highway and
Transportation Officials —AASHTO

AASHTO Green Book



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Many states and localities have adopted the AASHTO Green Book for use as the basis of their state guidelines with no change. However, the intent of the AASHTO Green Book is that **individual states, cities, and counties have the freedom to develop their own design guidelines and processes based on sound engineering principles that reflect local conditions and needs** as well as the needs of the highway users. For such agencies, the design criteria in the AASHTO Green Book can be a starting point or Benchmark.

...The AASHTO Green Book is thus a guide, a reference, and a basis for the development of an agency's guidelines. **Terrain, climate, culture and values**, and driving habits differ across the nation; what is good and acceptable in one location may not be satisfactory or practical in another.

--A Guide to Achieving Flexibility in Highway Design, p. 8, (emphasis added)

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--A Guide to Achieving Flexibility in Highway Design, p. 8, (emphasis added)

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AASHTO
Federal Highway Administration – FHWA
State and Tribal DOTs

Functional Classification

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Freeway

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Arterial

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Federal Highway Administration

*If a proposed project...involves a historic facility or **is located in an area of historic or scenic value**, the Secretary (of Transportation) may approve such project ...if such project is designed to standards that allow for the preservation of such historic or scenic value and such project is designed with mitigation measures to allow preservation of such value and ensure safe use of the facility.*

(Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Section 1016(a))

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Federal Highway Administration

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IMAGE: Cultural Landscape Foundation

It is the Department's policy that the Merritt Parkway should receive special treatment.... It is the Department's responsibility to maintain this crucial transportation artery as a **safe and efficient roadway** while also **preserving and enhancing** it as an important State **scenic, cultural, and historic resource**."

—Emil Frankel, Commissioner ConnDOT

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IMAGE: Paul Daniel Marriott

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IMAGE: Paul Daniel Marriott

Consider both horizontal alignment (side to side)
and vertical alignment (up and down)
—this is how people "read" the landscape.

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IMAGE: Paul Daniel Marriott

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IMAGE: Paul Daniel Marriott

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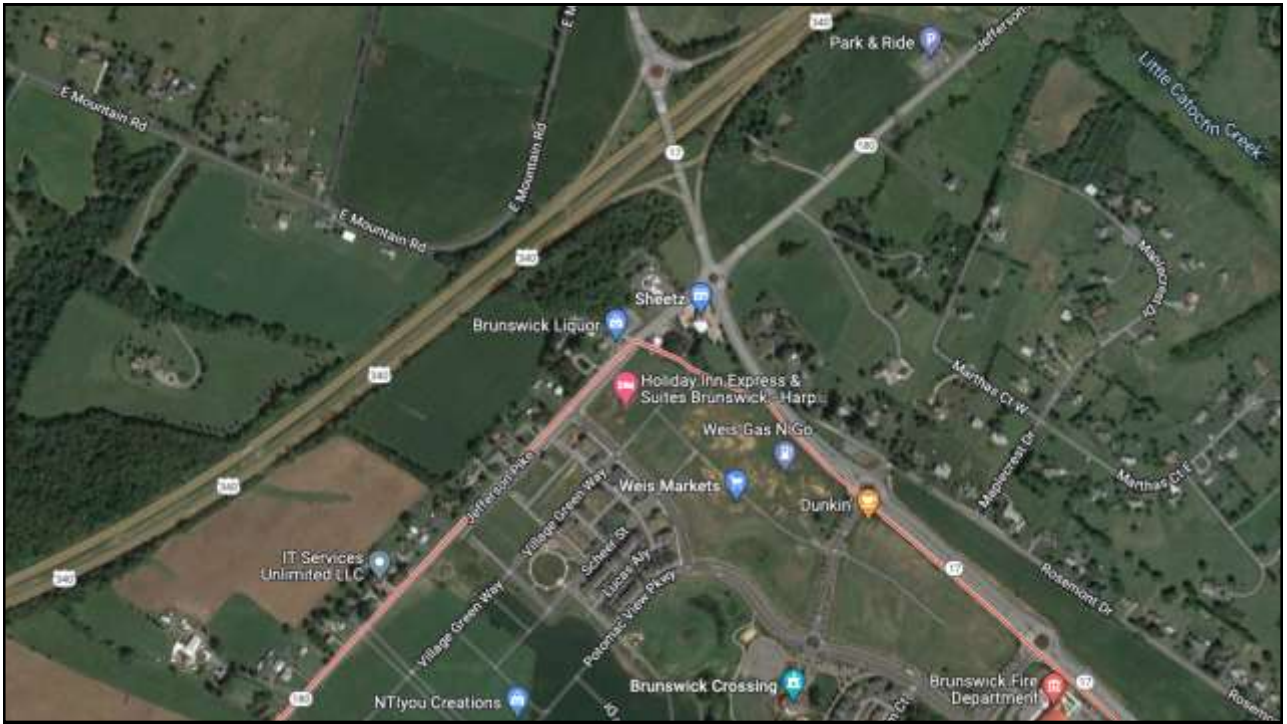
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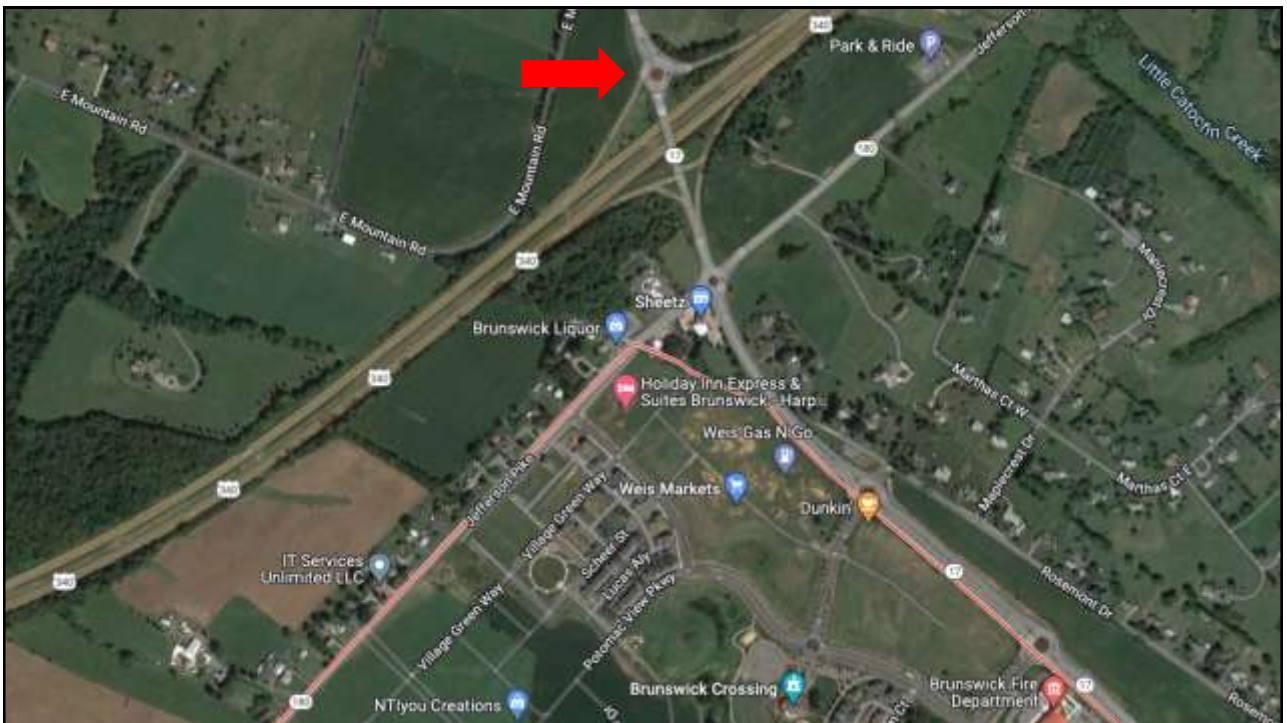
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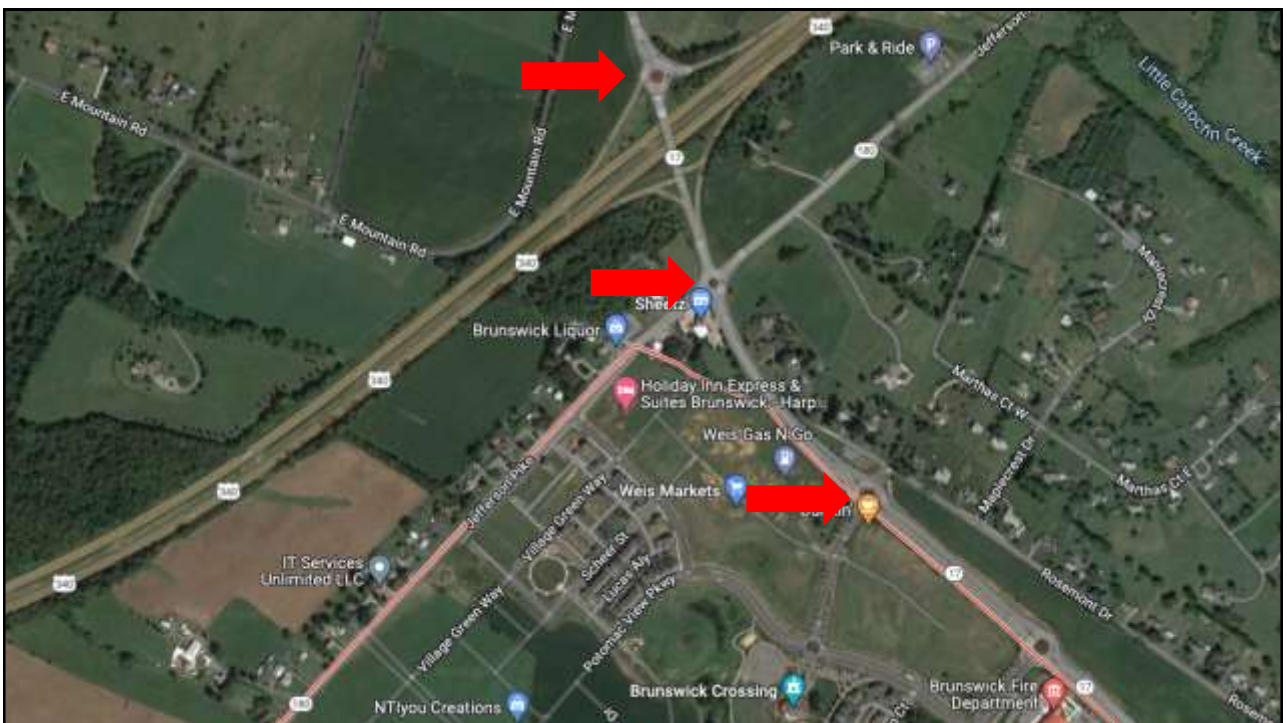
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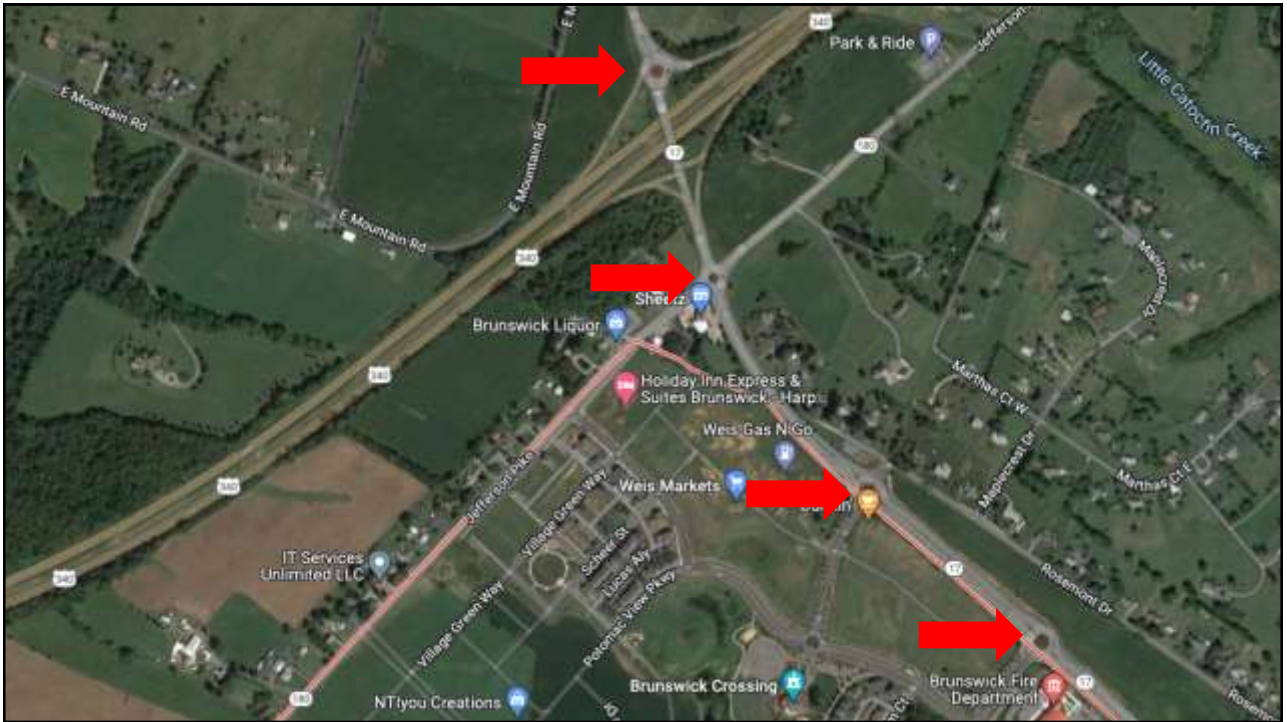
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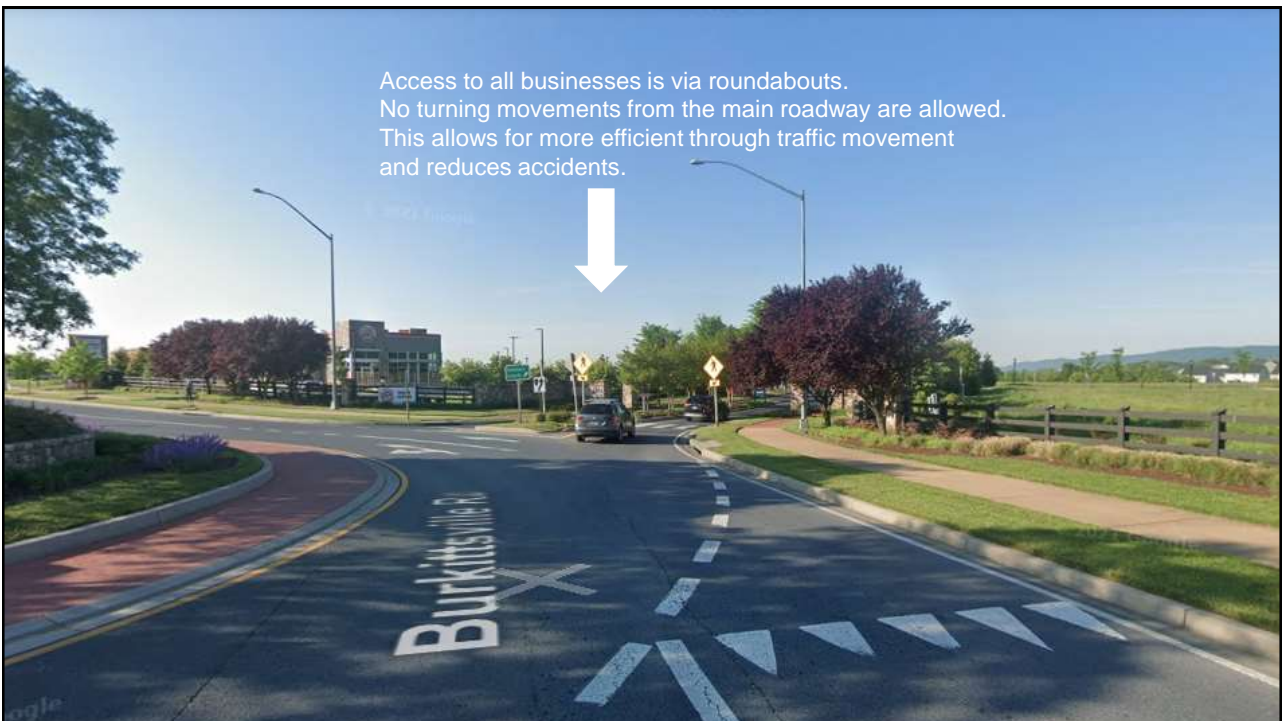
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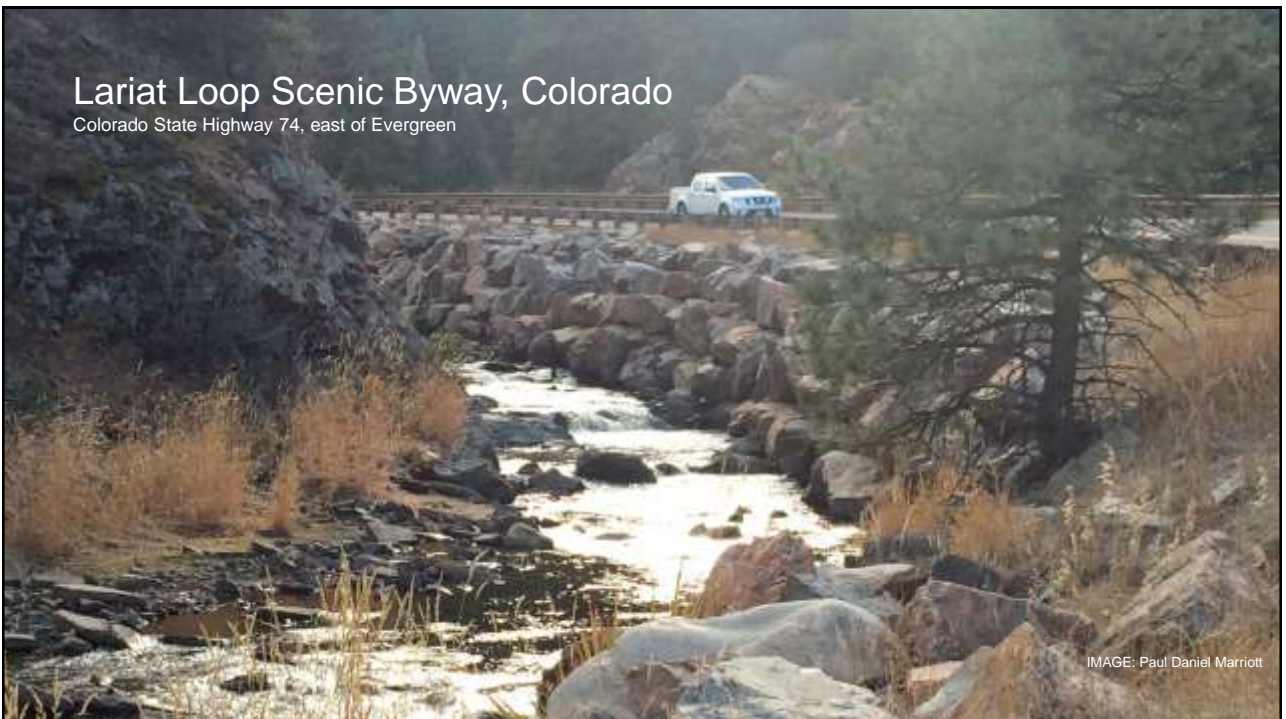
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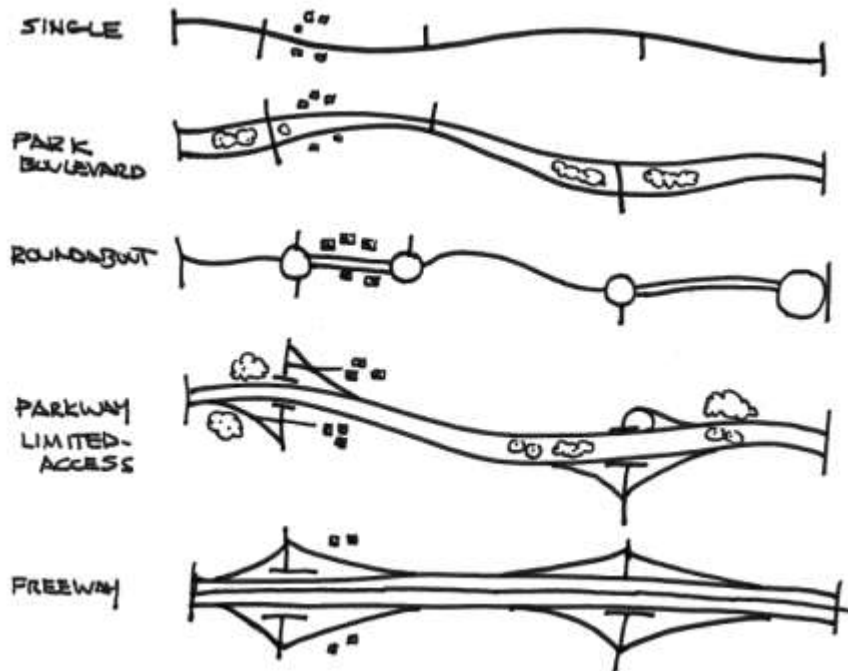
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IMAGE: Centre Daily Times

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Connector?

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Ask Safety Questions:

What is the functional classification of the road?

Was the proposed project generated as a response to a particular safety or capacity issue?

If safety, what records/sources indicated an unsafe situation?

What standards were applied when determining the design of the facility/project? Citation?

How are these standards consistent with other applications?

SHOW ME THE MATH!

Research:

Similar roads in your region.

Accident records.

New technologies/strategies for safety.

Federal/DOT/Tribal/Local offices—seek the best answer.

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COLORADO DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE MANUAL, 2014



- Create consistency throughout the state and within roadway corridors.
- Elegant aesthetics is a result of well thought out and integrated engineering and consistent application of design principles to create a single project.
- **Create the roadway secondary to its environment.**
- Create the roadway character in response to the overall landscape, or design zone, of a place. Avoid random changes in road segments or changing responses based on specific local conditions or piecemeal project construction.
- Consider important viewsheds that include:
 - (a) the view from the road user's perspective and
 - (b) the view of the road from the resident or adjacent community's perspective.

(PAGE 88)

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FURTHER READING

"A New Approach to Road Building, *Public Roads*, July/August 2003

<https://highways.dot.gov/public-roads/julyaugust-2003/new-approach-road-building>

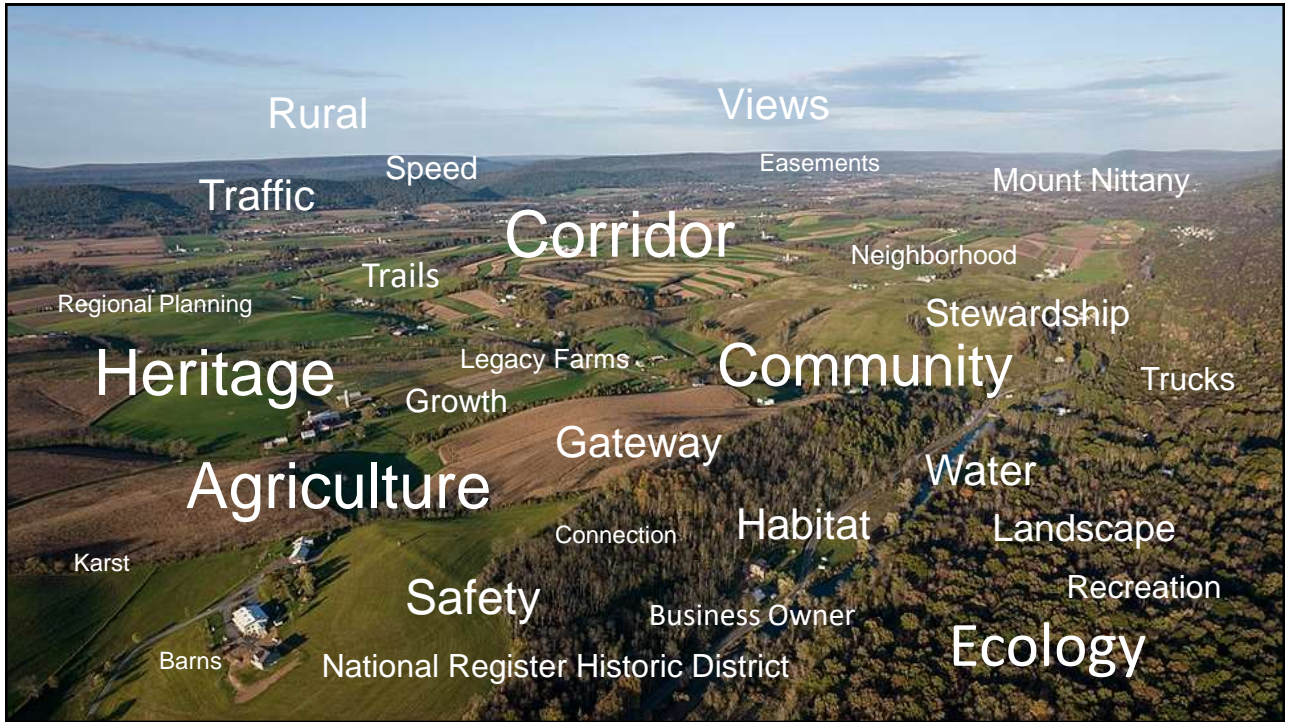


Flexibility in Highway Design, AASHTO, 2004

https://www.google.com/books/edition/A_Guide_for_Achieving_Flexibility_in_Hig/flJZ961hDsEC?hl=en&gbpv=1&pg=PP1&printsec=frontcover

Visit www.historicroads.org

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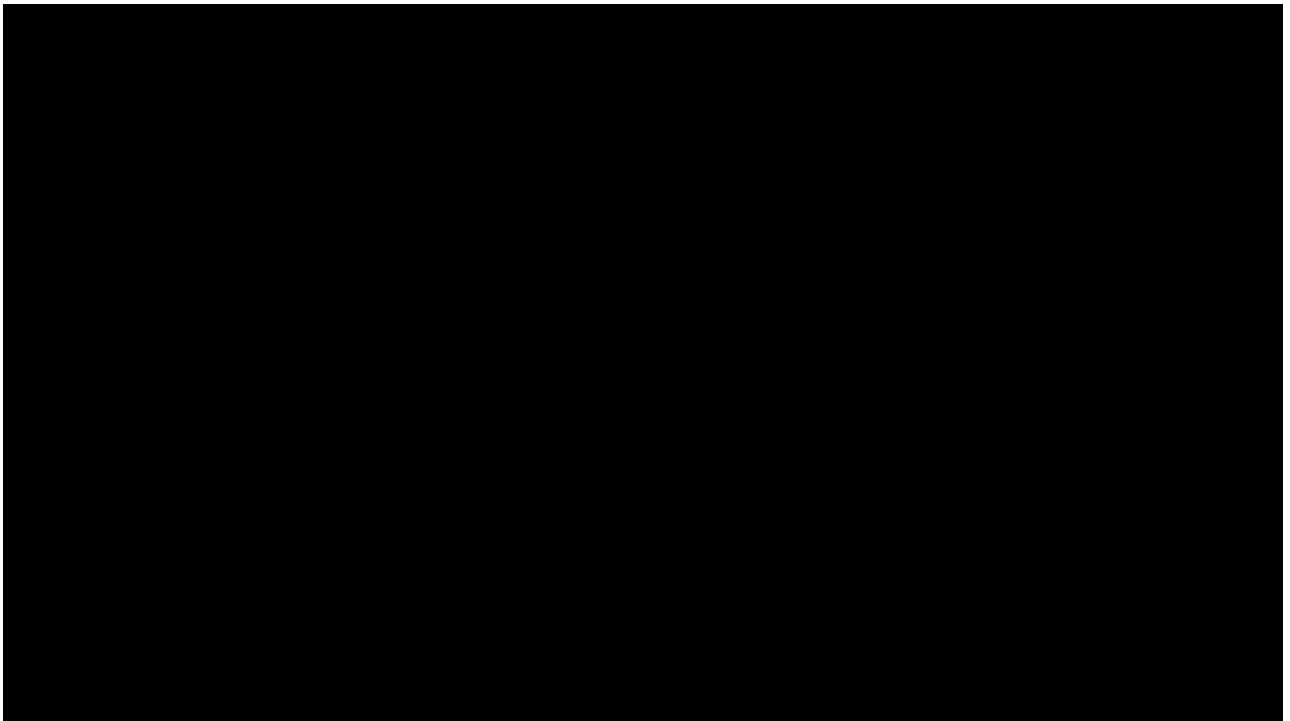
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