

**Session 7:****CONTEXT SENSITIVE SOLUTIONS  
AND MDOT HIGHWAY  
PROJECT CATEGORIES**

M-119, Emmet County, MI

This session also has a very simple message: CSS can be applied to all categories of highway projects.

In Session 5 we reviewed how the National Environmental Policy Act (NEPA) and CSS were comparable processes. We noted that 90% of all MDOT projects were categorically excluded from requiring an Environmental Impact Statement as part of the project development process. Most categorical exclusions are either 3R projects or 4R projects on existing alignment. These types of projects typically preserve an existing transportation function.

Let's examine how CSS relates to these types of projects.



## MDOT 3R Projects

### Resurfacing, Restoration, Rehabilitation

- Preserves a transportation function
- Improves mobility, safety, capacity
- Alternatives more constrained
- Mitigating impacts more constrained
- Design flexibility required
- CSS is beneficial

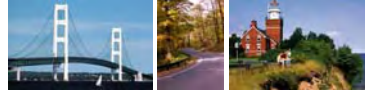


US-23 drawbridge, Cheboygan, MI

Nearly 80% of the projects in Michigan are 3R projects, either resurfacing, restoration, or rehabilitation. 3R projects typically preserve an existing transportation function. They can improve mobility, safety, or capacity. Since it is an existing facility, alternatives are usually very constrained and it is difficult to mitigate adverse impacts. Utilizing design flexibility gives designers more latitude in arriving at a context-sensitive solution.

3R projects can occur anywhere on Michigan's highway system. They can be part of the National Highway System or not. On NHS routes they can be on limited access routes (freeways) or free access routes (non-freeways) in either urban or rural locations. For Non-NHS routes, only free access (non-freeway) routes are considered in both urban and rural locations.

Typical 3R projects include resurfacing; widening lanes or shoulders; adding passing lanes; making minor realignments and minor changes to profile; improving traffic operations and safety; establishing minor roadside facilities; and rehabilitating bridges.



## MDOT 4R Projects

Reconstruction  
on Existing Alignment  
Original Construction  
on New Alignment

- Improves mobility, safety, capacity
- Adds a transportation function
- Alternatives less constrained
- Mitigating impacts less constrained
- Design flexibility required less often
- CSS is beneficial



TH 61 Scenic Byway, MN



I-94/US-24 Wayne County, MI

New construction or significant reconstruction are considered 4R projects, few of which are undertaken annually in Michigan. 4R projects generally add a new transportation function, or greatly improve mobility, safety, and capacity. Typical 4R projects include new routes, new alignments or profiles of old routes, adding lanes with additional right-of-way, creating new interchanges, and significantly changing the access an existing facility. New bridge projects are typically 4R.

Alternatives for 4R projects are typically less constrained than for 3R projects, and mitigating adverse impacts is easier. With a 3R project, occurring within an existing right of way, designers may have only a matter inches in which to accommodate transportation improvements. With a 4R project, on the other hand, more space typically means more options. For example, a road with bike lane that barely fits into a tight downtown corridor instead may be located north or south of town.

When a 4R project is occurring on an existing alignment, however, constraints will be similar to those of 3R projects

4R projects can occur anywhere on Michigan's highway system, either part of the National Highway System or not. On NHS routes they can be on limited access routes (freeways) or free access routes (non-freeways) in either urban or rural locations.

Although design flexibility may be required less often with 4R projects, it is still an important tool for the designer.



## Conclusion

CSS Must Be Applied To All Highway Project Types:

- 3R and 4R
- NHS and Non-NHS
- Limited Access and Free Access
- Urban and Rural Settings



CSAH 21, Washington County, MN



US-10 at Eastman Road, Midland, MI

In Michigan, CSS will be applied to all project types, both 3R and 4R. It will be applied to both NHS routes and non-NHS routes. Both limited access highways and free access highways will use CSS principles in both urban and rural settings. It will be used everywhere, on any type of project.

The tradeoffs inherent in a 3R project are much more exacting than on a 4R project. On a 3R project, feet and inches matter. Design flexibility is crucial. To avoid a problem on 4R projects, it may be possible to simply move the alignment a couple hundred feet. Although design flexibility may still be useful, it may not be as necessary.