

Project name:
NCDOT Infra-Bragg

Project ref:

To:
Carey Barr

From:
Jimmy Hamrick

CC:

Date:
June 26, 2019

Memorandum

Subject: NCDOT Infra-Bragg

Per your request, I have prepared a crash summary and crash reduction analysis for the various routes included within this project in the vicinity of Fort Bragg in North Carolina. This project includes multiple routes that serve traffic in and around the Base. The project scope includes modernization of roadways to improve features such as drainage, pavement rehabilitation, pavement/shoulder widening, shoulder clearing/mowing, signage upgrades, guardrail upgrades and pavement resurfacing.

Raw crash data for this analysis was provided by the Onyx Group and included a tabular listing by segment as well as GIS based maps of crash locations. NCDOT was consulted concerning the crash reduction factors for a scope including pavement resurfacing. The NCDOT provided a crash reduction factor for road modernization that is intended to capture improvements similar to the scope of this project. The provided factor is a planning level factor used to help inform decisions at the project planning stage concerning safety benefits.

The methodology used to capture crash benefits included applying the crash reduction factor for roadway modernization to the existing crash history provided by the Onyx Group to yield crashes per year reduced. The crash history included 3.5 years of data beginning April, 2015 and ending September, 2018. The attached table summarizes the crash reductions by segment and in total.

Thanks for allowing me to assist in this effort. If you have questions or need to discuss anything, please let me know.

Crash Reduction Summary (crashes per year)						
	Crash Severity					
	K	A	B	C	PDO	Total
Segment 1						
Existing	0.0	0.0	0.6	0.0	5.1	5.7
Crash Reduction	0.0	0.0	0.1	0.0	1.0	1.1
Segment 2						
Existing	0.0	0.3	0.0	0.0	4.6	4.9
Crash Reduction	0.0	0.1	0.0	0.0	0.9	1.0
Segment 3						
Existing	0.0	0.3	1.1	0.3	1.7	3.4
Crash Reduction	0.0	0.1	0.2	0.1	0.3	0.7
Segment 4						
Existing	0.0	0.0	0.3	0.3	0.6	1.1
Crash Reduction	0.0	0.0	0.1	0.1	0.1	0.2
Segment 5						
Existing	0.0	0.3	0.6	0.3	4.6	5.7
Crash Reduction	0.0	0.1	0.1	0.1	0.9	1.1
Segment 6						
Existing	0.3	0.3	2.9	2.3	14.9	20.6
Crash Reduction	0.1	0.1	0.6	0.5	3.0	4.1
Segment 6						
Existing	0.0	0.0	0.0	0.0	1.4	1.4
Crash Reduction	0.0	0.0	0.0	0.0	0.3	0.3
Segment 8						
Existing	0.0	0.0	0.0	0.0	0.9	0.9
Crash Reduction	0.0	0.0	0.0	0.0	0.2	0.2
Segment 9						
Existing	0.0	0.9	2.3	0.0	18.6	21.7
Crash Reduction	0.0	0.2	0.5	0.0	3.7	4.3
Segment 10						
Existing	0.0	0.0	0.0	0.0	0.9	0.9
Crash Reduction	0.0	0.0	0.0	0.0	0.2	0.2
Segment 11						
Existing	0.0	0.0	0.0	0.0	1.1	1.1
Crash Reduction	0.0	0.0	0.0	0.0	0.2	0.2
Project Totals						
Existing	0.3	2.0	7.7	3.1	54.3	67.4
Crash Reduction	0.1	0.4	1.5	0.6	10.9	13.5