To:	Transportation Committee
From:	Rob Aloise, Principal Transportation Engineer
	Jennifer Carrier, Director of Transportation Planning
Date:	April 13, 2018
Subject:	Transportation Performance Measures and Target Setting
	Pavement and Bridge Conditions

This memorandum provides an update on the Connecticut Department of Transportation's (CTDOT) efforts to comply federally required Transportation Performance Measures and Target Setting for Pavement and Bridge conditions.   As a reminder, CTDOT must set 2-year and 4-year targets by May 20, 2018 for the twelve (12) FHWA performance measures, 6 of which relate to pavement and bridge conditions (summarized below). After CTDOT establishes targets, CRCOG has 180 days (until November 11, 2018) to either adopt/support each CTDOT target, or set our own.

Pavement and Bridge Conditions Performance Measures

1. Percentage of Pavements on the Interstate System in Good condition
2. Percentage of Pavements on the Interstate System in Poor condition
3. Percentage of Pavements on the non-Interstate NHS in Good condition
4. Percentage of Pavements on the non-Interstate NHS in Poor condition
5. Percentage of NHS Bridges classified as in Good condition
6. Percentage of NHS Bridges classified as in Poor condition

CTDOT recently met with all regions to discuss progress they made in assessing pavement and bridge conditions, the attached tables show the results. In general, CTDOT uses dTIMs, developed by Deighton Associates, as their asset management system. The program encompasses strategic planning components with maintenance, operations and capital investment decision-making aspects. Originally dTIMs was used for pavement management however, in late 2013; bridges were added to the system. Major revisions were made to the program in 2017. <u>CRCOG can schedule a conference call between CTDOT and the Transportation Committee (TC) to understand the dTIMS program and performance measure results in more detail if the TC is interested.</u>

As it relates to CTDOT's Pavement Management System, it consists of three major components: a system to regularly collect highway condition data; a computer database (ROADWARE Vision) to process, sort, and store the collected data, and dTIMS to evaluate repair or preservation strategies and suggest cost-effective projects to maintain highway conditions.

As it relates to CTDOT's Bridge Management System, they begin with the current status of the bridge, account for programmed work and adjust for predicted decay. Major bridges are analyzed individually by engineers and spreadsheets and all other structures are analyzed by dTIMS. Bridge inputs to dTIM include current bridge condition data, deterioration curves, scheduled projects, treatments and costs, budgets, time spans, inflation and discount rates.

CRCOG will continue to work with CTDOT as they develop performance targets for pavement conditions and bridges, keeping the committee updated.

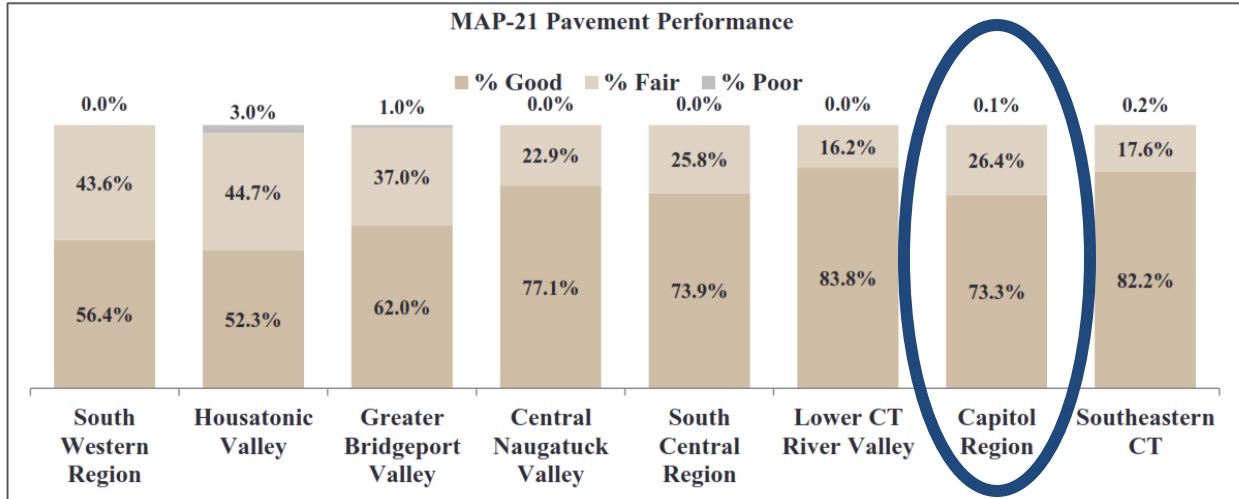**Table 1: Percentage of Pavements on the Interstate System in Good/Poor condition**

MAP-21 Pavement Performance

■ % Good ■ % Fair ■ % Poor

	South Western Region	Housatonic Valley	Greater Bridgeport Valley	Central Naugatuck Valley	South Central Region	Lower CT River Valley	Capitol Region	Southeastern CT
% Poor	0.0%	3.0%	1.0%	0.0%	0.0%	0.0%	0.1%	0.2%
% Fair	43.6%	44.7%	37.0%	22.9%	25.8%	16.2%	26.4%	17.6%
% Good	56.4%	52.3%	62.0%	77.1%	73.9%	83.8%	73.3%	82.2%

Table 2: Percentage of Pavements on the non-Interstate NHS in Good/Poor condition

MAP-21 Pavement Performance

■ % Good ■ % Fair ■ % Poor

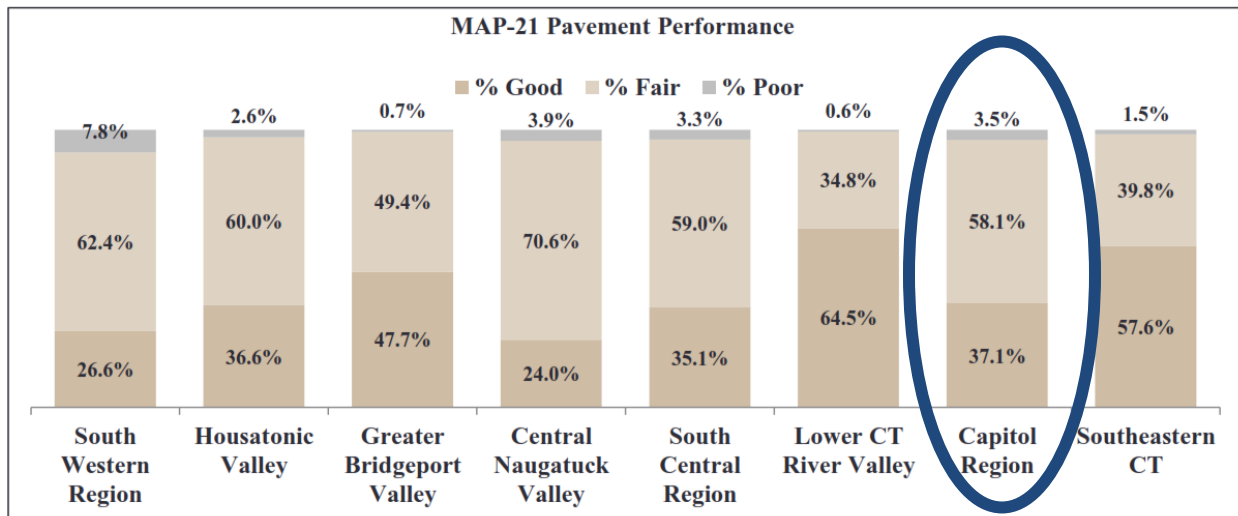|	South Western Region	Housatonic Valley	Greater Bridgeport Valley	Central Naugatuck Valley	South Central Region	Lower CT River Valley	Capitol Region	Southeastern CT
% Poor	7.8%	2.6%	0.7%	3.9%	3.3%	0.6%	3.5%	1.5%
% Fair	62.4%	60.0%	49.4%	70.6%	59.0%	34.8%	58.1%	39.8%
% Good	26.6%	36.6%	47.7%	24.0%	35.1%	64.5%	37.1%	57.6%

Table 3: Percentage of NHS Bridges classified as in Good/Poor condition

MPO	NHS-NBI Bridges (Deck Area - ft^2)	Locally Owned NHS-NBI Bridges	FAST Act National Performance Management Measures	
			% Good (by deck area)	% Poor or % Structurally Deficient (by deck area)
1 - South Western	2,183,450	0	3.3%	19.1%
2 - Housatonic Valley	920,157	2	22.0%	7.4%
3 - Northwest Hills (RPO)	273,510	0	22.7%	10.0%
5 - Central Naugatuck Valley	1,917,348	1	9.7%	34.2%
7 - Greater Bridgeport Valley	3,765,462	0	24.8%	6.3%
8 - South Central Region	4,014,609	4	42.8%	6.0%
10 - Capitol Region	8,567,699	5	13.6%	15.7%
11 - Lower CT River Valley	1,418,300	2	11.0%	16.2%
13 - Southeastern CT	2,832,830	0	7.4%	23.0%
15 - Northeastern CT (RPO)	377,273	0	15.3%	12.6%
TOTAL	26,270,638	14	18.1%	14.9%