

DURHAM • CHAPEL HILL • CARRBORO

DCHC

METROPOLITAN PLANNING ORGANIZATION

PLANNING TOMORROW'S TRANSPORTATION

Congestion Management Process

Yanping Zhang

Jaehoon Kim

Overview

Congestion Management Process (CMP) is the federal requirement,

- ❑ Providing the up-to-date data and performance measures of Transportation System
- ❑ Developing and accessing strategies for congestion mitigation

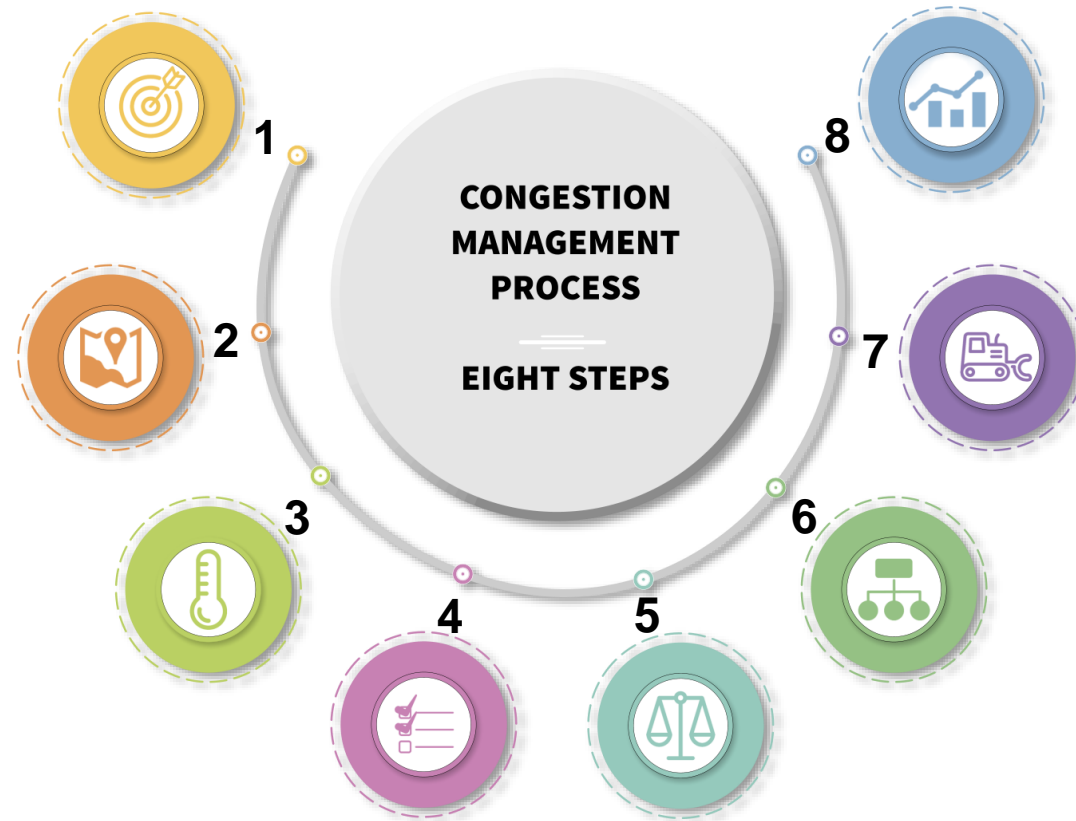
CMP Cycle and FHWA's Suggestion

- ❑ 4-year Cycle, Same as Metro Transportation Plan (not the 2-year cycle of Transportation Improvement Program)
 - ❖ 2020 – 2023 CMP (Ongoing, using the data from 2019-2022)
 - ❖ 2015 – 2019 CMP
 - ❖ 2011 – 2014 CMP

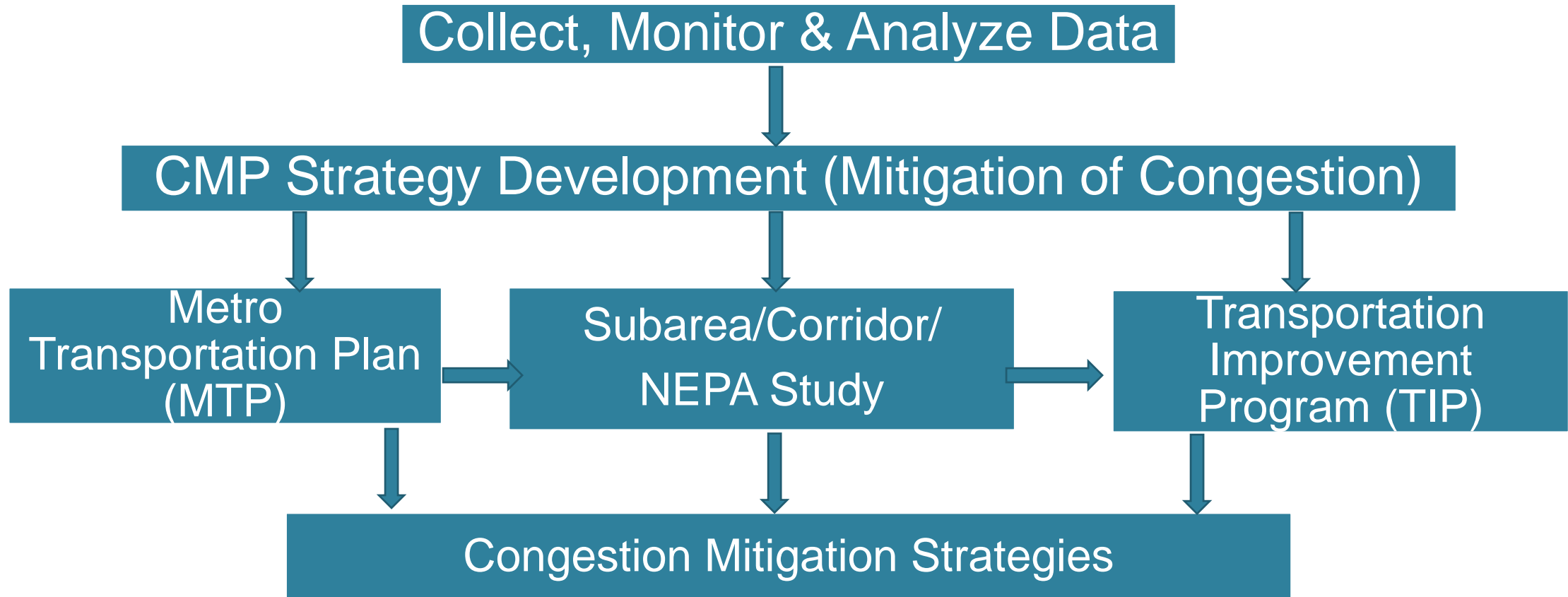
- ❑ Federal Highway Administration suggests DCHC MPO to have the data collection and measures for a 2-year Cycle instead the 4-year cycle.

Congestion Management Process Steps

1. Develop Objectives
2. Define Study Areas
3. Performance Measures
4. Collect, Monitor & Analyze Data
5. Evaluation of Problems
6. Selection of Strategies
7. Program Implementation
8. Evaluate Strategies



Integration with Planning Process



Data Collection 1

❑ Traffic Count Data Collection

- ❖ Spring 2021, Completed
- ❖ Average Daily Traffic: 819 Locations
- ❖ Turning Movement Count: 184 Locations
- ❖ Non-Motorized – Bike and Pedestrian: 175 Locations

❑ Travel Time/Speed Data

- ❖ Data Source: Regional Integrated Transportation Information System (RITIS)
- ❖ National Performance Management Research Data Set (NPMRDS)
- ❖ Historical Data and Analysis Applications available.

Data Collection 2

❑ Accident (Crash) Data

- ❖ Data Source: NCDOT, Obtained the 2018-2021 data

❑ Transit Data

- ❖ Automated Passenger Counter (APC) Data
- ❖ General Transit Feed Specification (GTFS) Data
- ❖ National Transit Database (NTD)

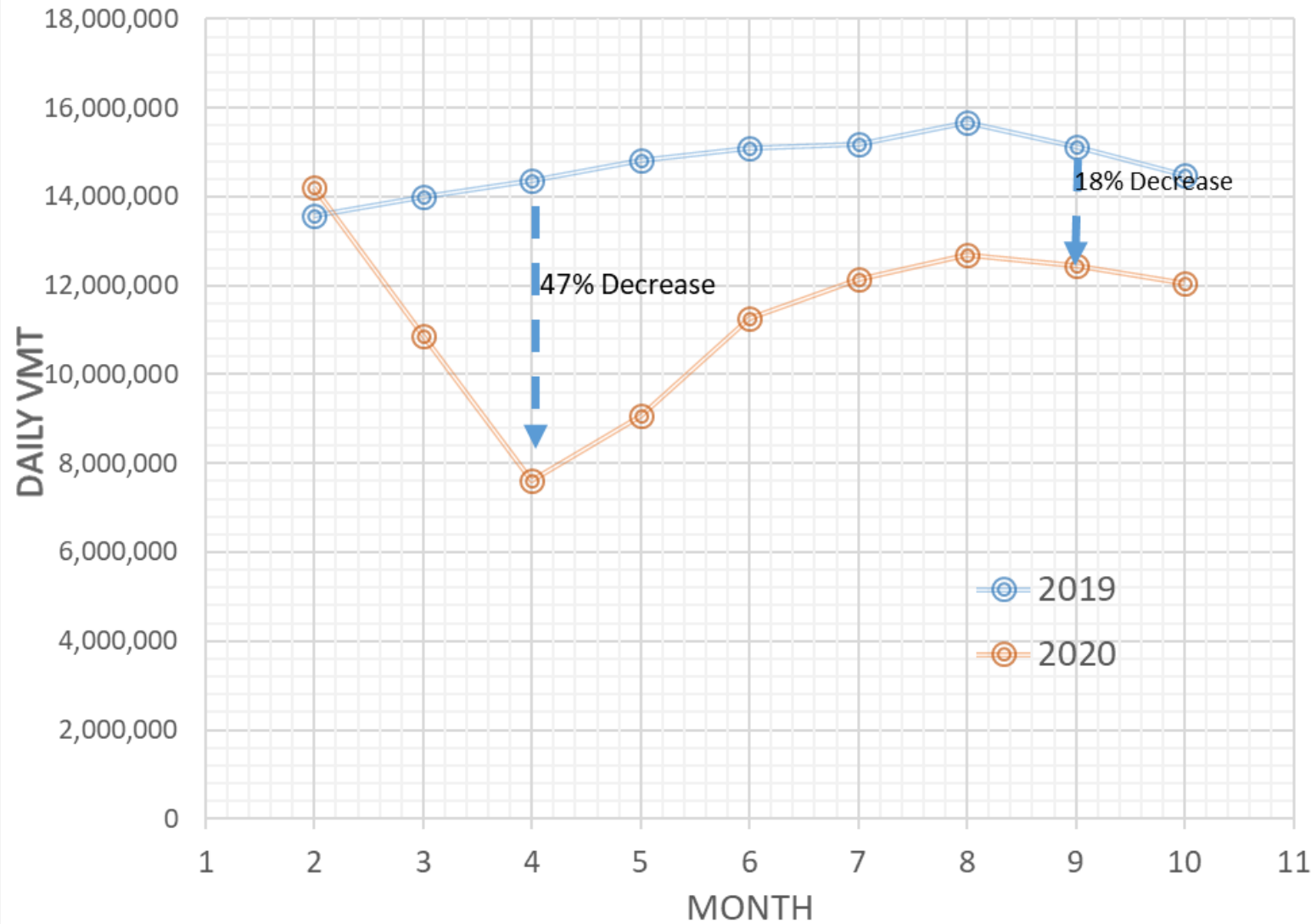
❑ Other Related Data

- ❖ Streetlight Data – Big Data for Mobility
- ❖ Socioeconomic Data: Census, Bureau of Transportation Statistics
- ❖ Network Data

Draft CMP Work Plan

- ❑ CMP Sub-Committee, Mar., 2022
- ❑ Goals/Objectives and CMP networks, June, 2022
- ❑ Collecting Data from Partner Agencies, Sept., 2022
- ❑ Congestion identification and Problem Evaluation, Dec., 2022
- ❑ Hiring Consultants
 - ❖ Joint development of the Congestion Mitigation Strategy
 - ❖ CMP Report
- ❑ CMP Report due by the end of June 2023

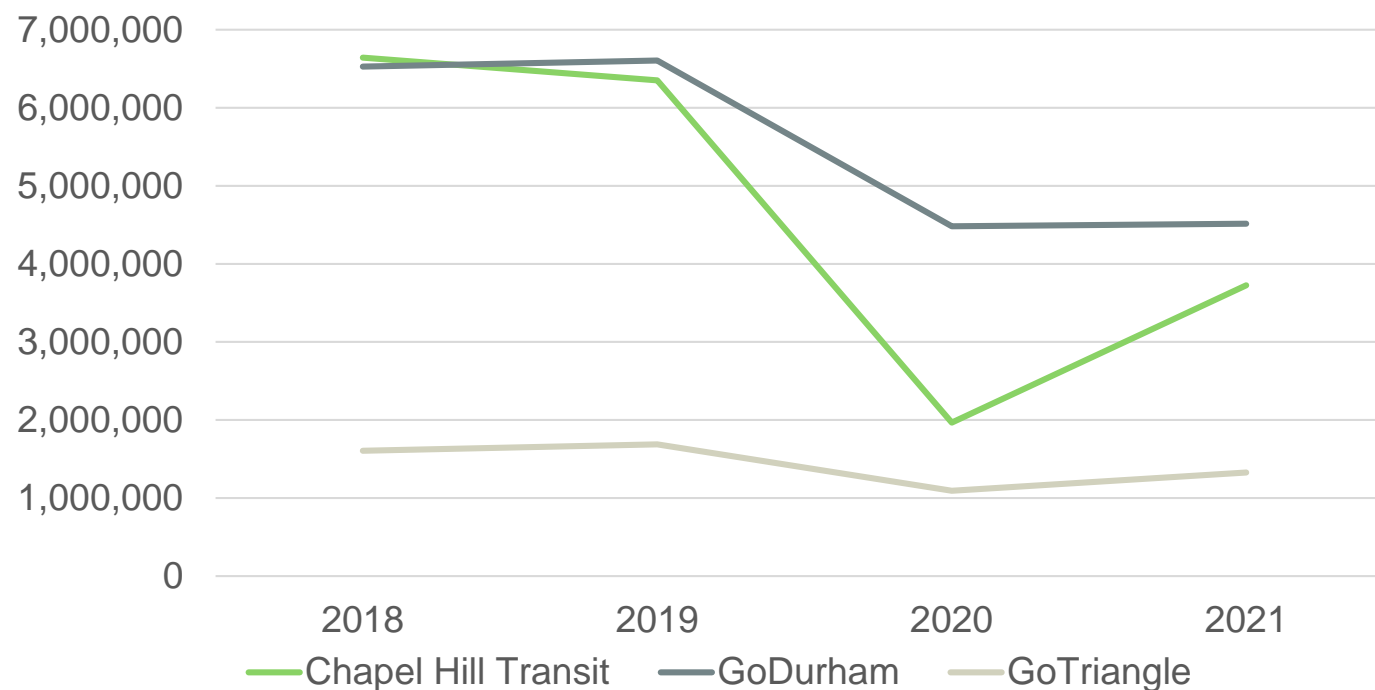
System Measure 1 – Vehicle Miles Traveled (VMT)



**Data Source: Streetlight Data
(Adjusted)**

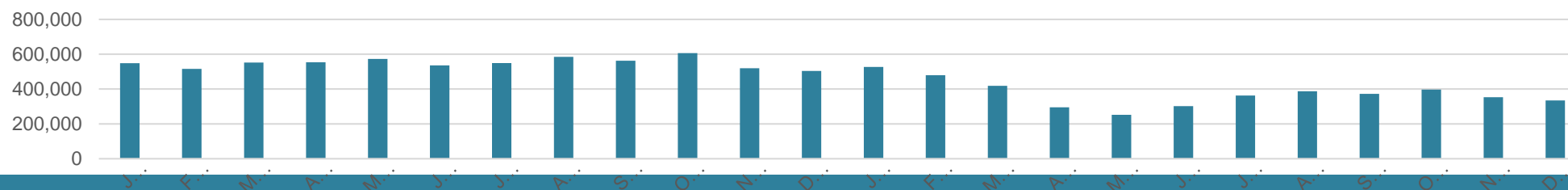
System Measure 2 – Transit Ridership

Annual Ridership - Fixed Routes



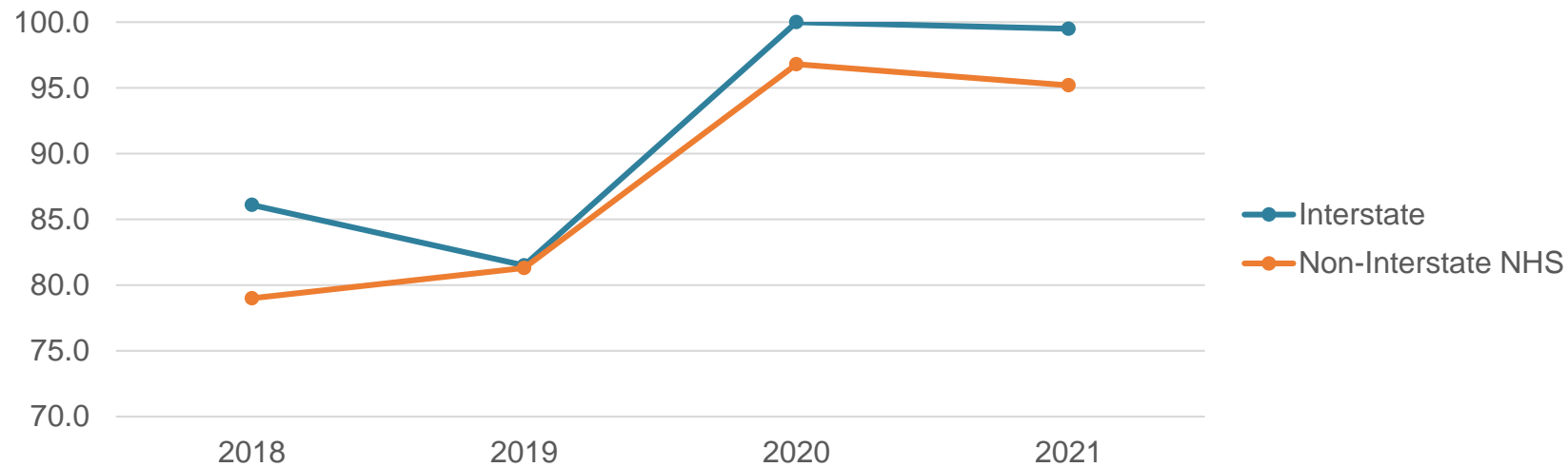
Changes to 2019 (%)	2020	2021
Chapel Hill Transit	-69%	-41%
GoDurham	-32%	-32%
GoTriangle	-35%	-21%

GoDurham - Monthly Ridership, 2019-2020

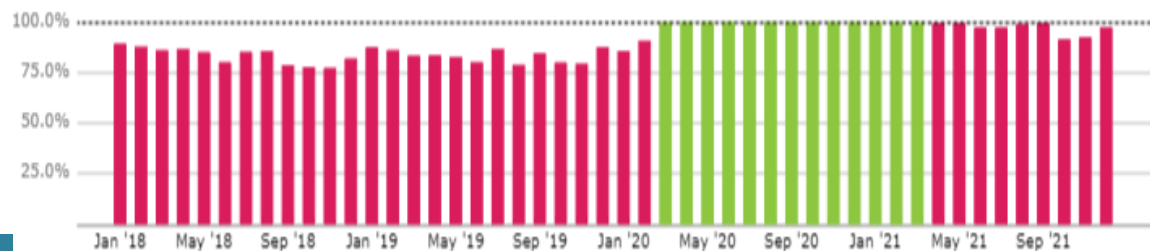


Mobility Measure 1 - Percent of Travel Time Reliability

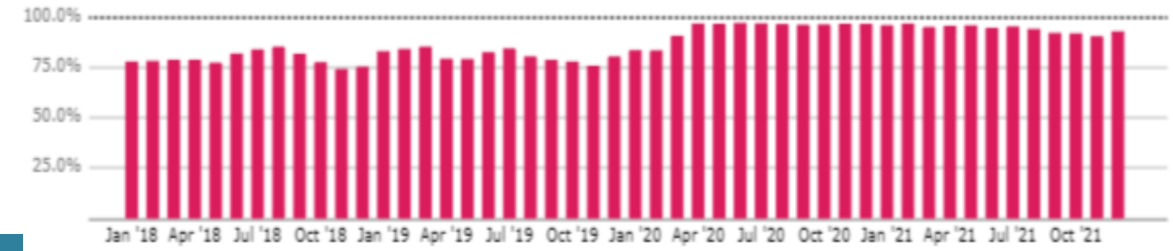
Annual Level of Travel Time Reliability (LOTTR)



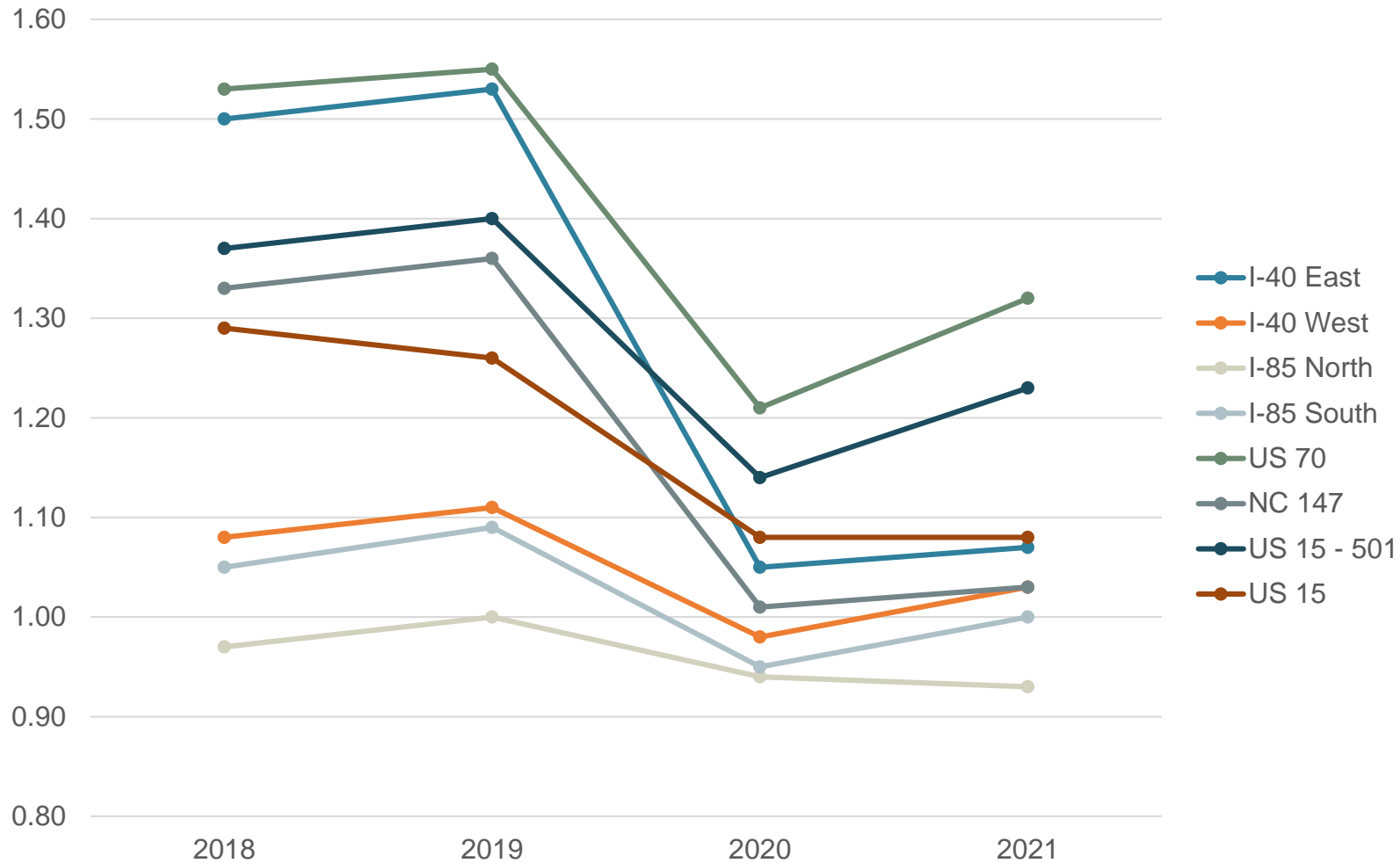
Monthly Interstate LOTTR



Monthly Non-Interstate NHS LOTTR



Mobility Measure 2 - Travel Time Index by Major Corridors



Data Information

- 2018 to 2021
- Weekday
- PM Peak Hours
- 4:30 PM to 6:30 PM

Questions?

Yanping Zhang, yanping.zhang@durhamnc.gov