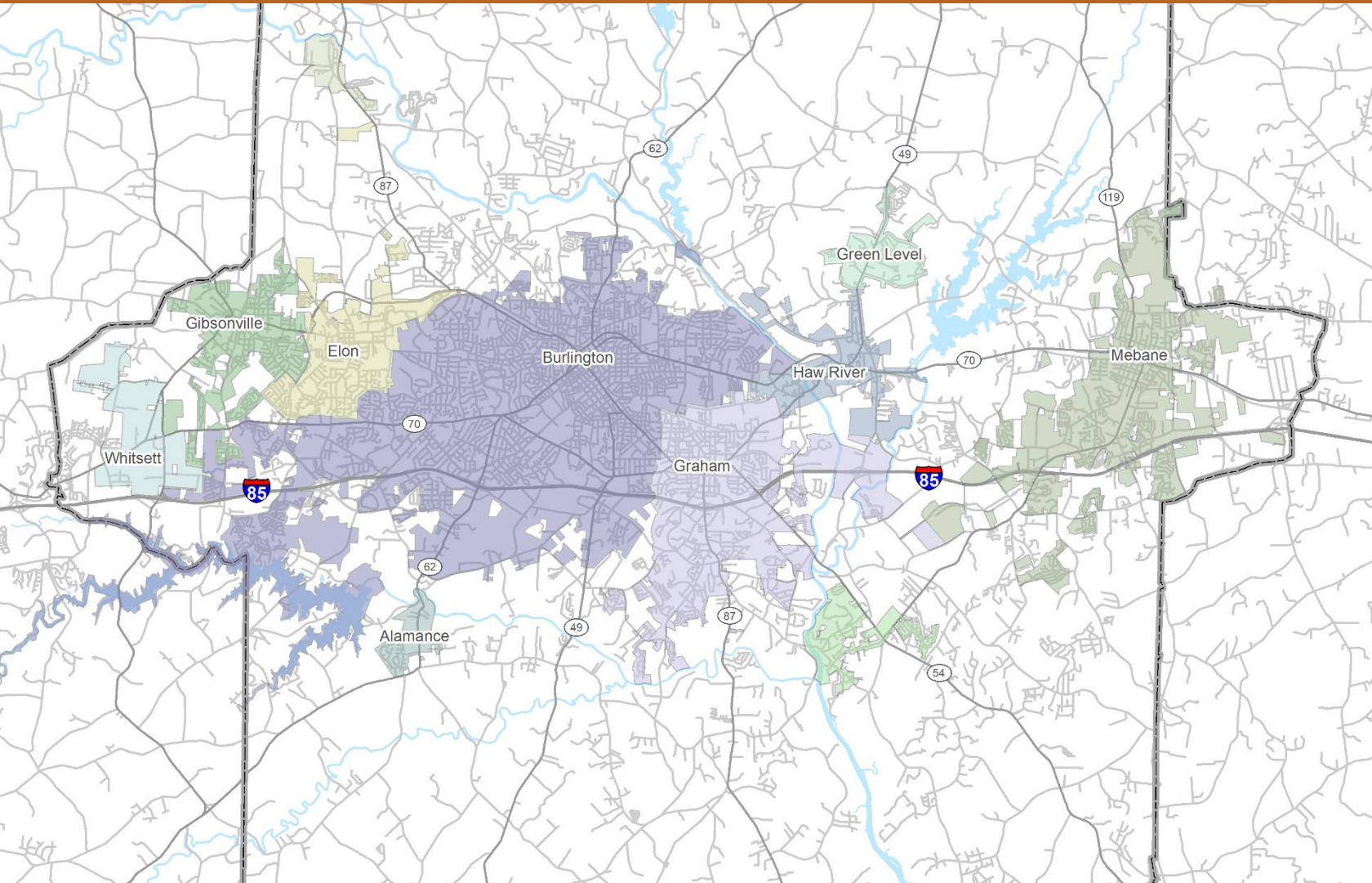


# Burlington - Graham Metropolitan Planning Organization Transportation Demand Management (TDM) Program

October 2021



Burlington - Graham Metropolitan Planning Organization (BGMP)

234 E. Summit Avenue

Burlington, NC 27215

(336) 513-5418



## A RESOLUTION

### ENDORISING THE PIEDMONT AUTHORITY FOR REGIONAL TRANSPORTATION AND BURLINGTON – GRAHAM METROPOLITAN PLANNING ORGANIZATION TRANSPORTATION DEMAND MANAGEMENT INITIATIVES

A motion was made by TAC member Carissa Graves-Hunter and seconded by Mary Beth Murphy for adoption of the resolution below, and upon being put to a vote was duly adopted on this 19<sup>th</sup> day of October, 2021.

**WHEREAS,** Transportation Demand Management (TDM) is a method by which alternative transportation to work (biking, walking, public transit, or telework) can be encouraged in order to manage the impacts on the transportation network, reduce environmental impacts of driving, and limit stress associated with commuting to work during the peak periods; and

**WHEREAS,** the North Carolina Department of Transportation Integrated Mobility Division has provided funding to the Piedmont Authority for Regional Transportation (PART) to support TDM activities in the region; and

**WHEREAS,** the Burlington – Graham Metropolitan Planning Organization (BGMPO) has developed a TDM plan and partnered with PART to implement TDM program activities throughout the Triad; and

**WHEREAS,** the BGMPO proposes to be a sub-recipient of PART's TDM grant funding.

**NOW, THEREFORE, BE IT RESOLVED** by the Burlington – Graham Metropolitan Planning Organization that the Transportation Advisory Committee endorses the Piedmont Authority for Regional Transportation Triad Transportation Demand Management application for grant funding and implementation of the Burlington – Graham Metropolitan Planning Organization and Piedmont Authority for Regional Transportation related Transportation Demand Management activities.

**CERTIFICATE:** The undersigned certifies that the foregoing is a true and correct copy of a resolution adopted by the voting members of the TAC on October 19, 2021.

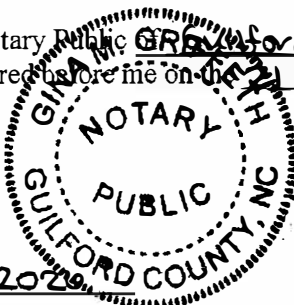
Leonard Williams, Chair  
Transportation Advisory Committee

STATE of: North Carolina

COUNTY of ~~Alamance~~ Guilford

I, Gina M. Griffith, Notary Public Guilford County, North Carolina do hereby certify that Leonard Williams personally appeared before me on the 19th day of October 2021 to affix his signature to the foregoing document.

Gina M. Griffith  
Notary Public



My Commission expires: 9-26-2029

# Burlington – Graham Metropolitan Planning Organization Transportation Demand Management Program

## OVERVIEW

This document provides an outline of the Burlington – Graham Metropolitan Planning Organization (BGMPO) Transportation Demand Management (TDM) program and initial strategies BGMPO will implement over the next five years.

## WHAT IS TDM?

Transportation networks are designed to provide a certain level of capacity. The amount of capacity filled by users is the demand placed on the network. Severe traffic congestion occurs when the demand exceeds the capacity of a given corridor or network. In such cases, the traditional transportation management approach across the United States has been to increase network capacity (i.e. build new roads, widen existing roads). This is typically only a temporary solution.<sup>1</sup> In most cases, the additional lanes or new roads are quickly filled through land use decisions triggered by the increased capacity.



Transportation Demand Management (TDM) is an approach that focuses on reducing or reallocating transportation demand either in space or time.<sup>2</sup> This is accomplished through the integrated application of programs, policies and strategies that can reduce the number of single-occupancy vehicle (SOV) trips. Such initiatives may include prioritizing other transportation modes (public transit, carpooling, vanpooling, active transportation), implementing systemic land use or parking policy enhancements, encouraging changes to the schedule and location of employment (telework or alternative work schedules), and promoting incentives for employers and employees.<sup>3</sup>

## WHY NOW?

MPOs are federally mandated public organizations responsible for conducting transportation planning activities in urbanized areas (UZAs) with populations over 50,000. The BGMPO (see *Figure 1* on p. 7) is in central North Carolina, approximately 60 miles west of Raleigh and 25 miles east of Greensboro and consists of the following jurisdictions:

- Cities of Burlington, Graham and Mebane
- Towns of Elon, Gibsonville, Haw River, Whitsett, Green Level

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- Village of Alamance
- Counties of Alamance, Guilford and Orange

The major transportation facilities within the study area are I-85/40 and US 70.

The population within the BGMPPO is growing rapidly. From 2010 – 2020, the total population in Alamance County increased by 13.4 percent.<sup>4</sup> This growth has been distributed unevenly throughout the region. Some towns and cities, such as Mebane and Gibsonville, grew at much faster rates (Table 1).

The population growth has led to increased demand on roads and major corridors in the region. The average annual daily traffic (AADT) along I-40 passing through Burlington increased from approximately 112,000 vehicles in 2010 to 130,000 in 2020, an increase of approximately 16 percent.<sup>5</sup> Other major corridors and routes have experienced increased usage rates, particularly on the urban periphery surrounding the core cities of Burlington, Graham, Mebane, Elon and Gibsonville (see Table 1). This increased road usage is projected to continue over the next 20 years, straining the capacity of the existing transportation network. The demand is expected to exceed the road capacity for numerous corridors across the region. This problem is compounded by recent budgetary pressure at the state level reducing the funding available for costly roadway projects that expand functional capacity.

**Table 1. 2010 – 2020 Population Change in BGMPPO Jurisdictions**

County/City/Town	2010 Population	2020 Population	Percent Change
Alamance County	151,131	171,415	13.4%
Orange County	133,986	148,696	11.2%
Guilford County	489,589	541,299	10.8%
Village of Alamance	951	988	3.9 %
Burlington	50,042	57,303	14.7 %
Elon	9,419	11,336	20.4 %
Gibsonville	6,410	8,920	39.2 %
Graham	14,153	17,157	21.2 %
Green Level	2,100	3,152	50.1 %
Haw River	2,298	2,252	-2.0 %
Mebane	11,393	17,797	56.2 %
Whitsett	590	584	-1.0 %

As an alternative to increasing capacity on the regional roadway network, a TDM approach seeks to reallocate the demand (usage) of the road network through innovative programs and policies. This document outlines TDM strategies the BGMPPO may implement over the next five years.

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**Table 1: Average Annual Daily Trips (AADT) along Major Corridors in BGMPO from 2009 – 2019**

Route	Trip Recording Location (Between Road A & B)	2009 AADT	2019 AADT	% Increase
University Dr	US 70 and Rural Retreat Rd	16000	22500	40.6 %
University Dr	Manning Ave & N Williamson Ave	7500	10500	40.0 %
NC 119	I-40 & Trollingwood Hawfields Rd	9100*	22000	141.8 %
Trollingwood Hawfields Rd	I-40 & NC 119	5400	10000	85.2 %
NC 54	I-40 & Woody Dr	16000	19500	21.8 %
US 70	University Dr & Springwood Church Rd	11000	14000	27.3 %
Huffman Mill Rd	I-40 & University Dr	18000	22500	25.0 %
Maple Ave	Anthony Rd & Hanford Rd	12000	16000	33.3 %
Mebane Oaks Rd	I-40 & Cameron Ln	21000	30500	45.2 %

\*2009 AADT unavailable. Data collected from 2007.

## PRO TRANSIT REGION

Transit (also known as public transportation, mass transit and urban transit) includes various transportation services such as vanpools, buses, commuter rail, etc. Transit fills an important role throughout the BGMPO region by providing efficient, affordable, and equitable transportation and basic mobility for non-drivers and can be a catalyst for efficient land use development. The BGMPO region currently served by six public and private transit agencies:

- **ACTA** – The Alamance County Transportation Authority provides transportation for general purpose trips, medical trips and almost any non-emergency trip destination by reservation to Alamance County residents.
- **Elon Express** – Elon University provides free shuttle service to all Elon students, faculty, staff and community members.
- **GoTriangle** – GoTriangle operates regional bus and shuttle service, paratransit services, ride matching and vanpools; provides commuter resources and an emergency ride home program; and serves the BGMPO region through its Orange-Durham Express route.
- **Link Transit** – The City of Burlington provides paratransit and free fare fixed route bus system serving Burlington, Gibsonville and Alamance Community College.
- **Orange County Public Transportation** – Orange County provides transit and micro-transit service to the BGMPO region via its Orange - Alamance Connector service to Mebane (western Orange County).
- **PART** – The Piedmont Authority for Regional Transportation services Winston-Salem, Greensboro, Chapel Hill and a number of other towns in the Piedmont Triad region with



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express and fixed route service. In cooperation with Link Transit, Orange County Public Transportation and other transit partners, PART is working to develop a Real-time Bus Passenger Information System procurement that covers numerous technologies including technology for micro-transit.

Despite recent expansions in service and free or reduced fares, transit trips make up a small percentage of the total number of trips made in the BGMPO region. However, due to an aging population, rising fuel prices, increasing roadway improvement costs, and rapid growth and development, increased interest in walkability, municipal leaders can make a commitment to become a “Pro Transit Region”—a region that prioritizes investments in transit and active mobility.

### ALIGNMENT WITH REGIONAL AND STATE PROGRAMS

The North Carolina Department of Transportation (NCDOT) operates a state-wide TDM program that provides funding for TDM programs and strategies. Five agencies in North Carolina are authorized to receive and distribute this funding to local TDM partners and initiatives. PART is the state-authorized distributor of TDM funding for the Piedmont Triad region that includes the BGMPO planning area. These funds were previously dedicated primarily to the regional vanpool program operated by PART. In 2021, PART invited local partners and stakeholders, including BGMPO, to identify local TDM strategies that could be incorporated into a Triad TDM Plan. A more robust TDM program with prescribed strategies and performance measures will help increase the pool of TDM funding available for local partners. The BGMPO TDM Initiative outlines the local TDM strategies and implementation opportunities that can be integrated into the Triad TDM Plan.

### BGMPO TDM INITIATIVES

This section highlights a comprehensive list of TDM strategies developed that can be easily achieved with the BGMPO region. Please reference *Strategy Prioritization* on p. 7 for a prioritized subset of TDM strategies recommended for development over the 5-year time horizon of this document.

#### Train Station Connectivity Study

The BGMPO adopted a Train Station Connectivity Plan in 2017 that assessed multimodal connectivity to the Amtrak Burlington Station. The TDM recommendations include exploring the possibility of a rail service app, creating dedicated parking for transportation network companies (e.g., Uber/Lyft, taxi), and partnering with Elon University to market rail services to students. The BGMPO can work with the City of Burlington to discuss and help support the implementation of plan recommendations.

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Figure 2. Amtrak Burlington Station

### **Regional Intermodal Transit Center**

Link Transit plans to develop a regional transit center that would serve the regional transit providers. Funding has been allocated to develop a feasibility study that would assess site requirements. The BGMPO will support the study and anticipated development of the intermodal transit center through dedicated staff time and stakeholder feedback.

### **Park & Ride Lot Expansion**

The BGMPO region has two Park & Ride lots in Alamance County with transit service connections to Guilford and Orange counties. The Park & Ride lots are located at Alamance Regional Medical Center in Burlington and the Cone Health Urgent Care in Mebane. BGMPO is currently funding the Mebane Park & Ride relocation study. Relocation of existing lot is needed due to parking constraints.

### **Micro-Transit**

Micro-transit is a technology-enabled transit service that typically uses shuttles or vans to provide on-demand or fixed-route service for short trips. Micro-transit is particularly useful for helping transit users complete the first-or-last mile of their journey, helping make door-to-door transit service a reality. Orange County Public Transportation is currently experimenting with a micro-transit pilot program that will serve Hillsborough and portions of Mebane and Chapel Hill. Expanding micro-transit service in the BGMPO should be a consideration as the region continues to grow and densify.

### **Highway Safety Program**

The BGMPO formed its Highway Safety Program (HSP) in October 2020 to spread awareness of traffic safety and change public attitudes and behaviors to reduce crash rates in the region. The first project of the HSP is development a Highway Safety Plan which will identify contributing factors to crashes and propose regional strategies to improve traffic safety, working toward the goal of zero traffic fatalities by 2050.

### Targeted Marketing Campaigns

Securing the proactive support of large employers and their communication chains is integral to a successful TDM program. The BGMPO will work with large employers in the region to spread awareness of commuting alternatives. Virtual engagement opportunities, such as employer-hosted webinars, may also be used to engage with employees throughout the region.

### Employer Recognition Programs

Two programs, Best Workplaces for Commuters (BWC) and Commute Friendly NC, recognize employers for supporting and implementing TDM strategies. Some of the strategies include subsidizing transit/vanpool passes, funding an employee shuttle, or expanding telework policies. The Best Workplace for Commuters (BWC) is a national membership program that is better suited for large employers. Some of the large employers in the BGMPO—LabCorp, Elon University, ACC, Honda, and the City of Burlington—may be well positioned to obtain BWC designation. Beyond national recognition, member employers also receive technical assistance, training, and opportunities for information exchange. Commute Friendly NC is another program that recognizes businesses across the state of North Carolina for TDM efforts. It has less stringent requirements than BWC and may be more attainable for some employers. Whether BWC or Commute Friendly NC, BGMPO will work with employers to receive recognition for expanding their portfolio of commuter benefits.



### Circulator Routes

Circulator bus service is a short-distance mode of transit that moves along a one-directional route around a high-density area of development, such as a downtown or shopping centers. They are often used to connect into high-attraction tourist sites or historic neighborhoods. The cities of Graham and Mebane have plans to develop transit circulator routes serving their local downtowns. BGMPO will support transit agencies and partner cities to develop circulator routes in the region.

### Land Use Policies

A successful TDM program should also consider land use policies that can incentivize alternative commute patterns and behavior. TDM-friendly land use policies generally fall under a few specific areas: Parking (parking maximum requirements, parking pay-outs for employees); zoning (TOD overlay districts; higher density allowances); and development regulations (transportation impact fee waivers). When developing its Metropolitan Transportation Plan (MTP), the BGMPO established a Land Use Subcommittee. The purpose of the subcommittee is to identify future transportation



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deficiencies and impacts as a result of growth and recommend development strategies such as TDM policies.

### TDM FUNDING RESOURCES

PART is the state-designated agency through whom TDM funding is distributed across the Triad region. However, there are other funding revenue streams that the BGMPO can identify and facilitate access for local communities across the region. These funds may be generated through membership dues, public or private grants, or fee-for-service systems. Developing an MPO TDM program that more clearly identifies strategies can make the MPO more competitive in the TDM project funding identification and selection process.

#### Transportation Management Association (TMA) Development

A Transportation Management Association (TMA) is “an organized group applying carefully selected approaches to facilitating the movement of people and goods within an area.”<sup>6</sup> They were originally formed with the intent to alleviate localized traffic congestion through the marketing of alternative transportation options. TMAs are exclusively targeted toward a limited geographical area, such as a downtown district, major shopping center, or a business park, that experiences or induces considerable traffic. TMAs can be formed and managed by a variety of organizations, including MPOs, educational institutions, or employer districts. Potential TMA hotspots could include downtown Burlington, Elon University, or the NC Commerce Park area. BGMPO will help identify traffic congestion hot spots and potential partners that can represent the individual TMAs.

### STRATEGY PRIORITIZATION

The BGMPO and its regional partners do not have the resources to undertake all the TDM strategies identified above. The BGMPO will work with its Land Use Subcommittee to prioritize strategies, identify performance measures and an implementation scheduling based on funding.

The BGMPO staff has identified a few TDM strategies that have a higher probability of implementation over the next five years (see Table 3). Some strategies, such as the Mebane Park & Ride lot relocation or development of a targeted marketing campaign, in partnership with PART, could be implemented more quickly. This list is a starting point for further discussion and refinement of the prioritization schedule.

**Table 3. Strategy Prioritization 2021-2025**

Strategy	Performance Metric	Target
2021 - 2022		
Train Connectivity Study	Implement two recommendations from the Burlington Train Station Connectivity Study	Met/Not Met

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Highway Safety Program	Development of Highway Safety Plan	Met/Not Met
	Cross-promote national safety calendar events	One marketing activity per quarter
Park & Ride Lot Expansion	Completion of Mebane Park & Ride Lot Relocation Study	Met/Not Met
2023 - 2025		
Transportation Management Association	Identify and help establish two TMAs across the region	Met/Not Met
Micro-Transit	Evaluate performance of Orange County pilot program	Met/Not Met
Workplace Recognitions/Designations	Develop outline of BWC or Commute Friendly NC designation	Met/Not Met
Commuter Surveys	Conduct a commuter survey of large employers in BGMPO	Met/Not Met
Telework Policies	Compile listing of businesses with telework policies	Met/Not Met

### PUBLIC ENGAGEMENT

The BGMPO will actively market the Triad TDM programming and policies throughout the region to increase awareness and public participation. Opportunities for engagement will include BGMPO TCC and TAC meetings, website, employer sponsored events, and online interactive events..

### IMPLEMENTATION

#### Program Team and Stakeholders

One of the first steps in building the BGMPO TDM Program is to identify strategic partners and stakeholders and collectively define their role in the program. The BGMPO TCC and TAC will provide executive feedback and guidance in developing the TDM program. Other standing subcommittees, such as the transit and land use subcommittees, will also be a valuable source for detailed discussion, vision-framing and program prioritization. The BGMPO will look to PART to take the lead and for advocacy and funding. The involvement of community stakeholders and partners will be critical to successful implementation.

#### TDM Funding

The North Carolina DOT is the primary source of funding for TDM programming. PART is the authorized distributor of TDM funds for the Piedmont Triad region, which covers the BGMPO. TDM funds can be used to cover a variety of program costs, including salaries, fringe benefits, office supplies, marketing and other program related items. BGMPO will determine how these funds can

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best be allocated, either directly or by regional partners (such as TMAs) to support TDM strategies and policies in the BGMPO region. The BGMPO will also evaluate other funding opportunities, including public, private and non-profit, to augment state TDM funding.

### Future Planning

This document is a subset of the Regional TDM Plan that outlines some general TDM strategies and preliminary steps BGMPO can take to build a robust TDM Program tailored to the specific needs and interests of the BGMPO region. Depending on the degree of buy-in and enthusiasm by regional partners for the TDM Program, the BGMPO may consider developing a comprehensive TDM Plan that can provide a more detailed analysis and recommendations.

### Evaluation

BGMPO will evaluate on an annual basis the implementation of TDM measures across the region. The findings of this evaluation will be reported to the TCC, TAC, and any corresponding subcommittees. This performance review will coincide with the annual performance report to PART, the authorized distributor of state TDM funds for the Triad region. The BGMPO may decide to make changes to its selected strategies, performance measures, and prioritization schedule based on the evaluation results.

## SOURCES

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<sup>1</sup> Federal Highway Administration. “Transportation Demand Management.”  
[https://ops.fhwa.dot.gov/plan4ops/trans\\_demand.htm](https://ops.fhwa.dot.gov/plan4ops/trans_demand.htm)

<sup>2</sup> Colorado Department of Transportation. “How to Create a TDM Plan.”  
[https://www.codot.gov/programs/innovativemobility/assets/copy\\_of\\_cdod-how-to-create-a-tdm-plan.pdf](https://www.codot.gov/programs/innovativemobility/assets/copy_of_cdod-how-to-create-a-tdm-plan.pdf)

<sup>3</sup> Mobility Lab. <https://mobilitylab.org/2018/07/27/what-is-transportation-demand-management-actually/>

<sup>4</sup> United States Census County Summary Tables. 2020.

<sup>5</sup> North Carolina Department of Transportation. “NCDOT Annual Average Daily Traffic (AADT) Mapping Application.” <https://www.arcgis.com/apps/webappviewer/index.html?id=5f6fe58c1d90482ab9107ccc03026208>

<sup>6</sup> Mobility Lab. <https://mobility.tamu.edu/mip/strategies-pdfs/travel-options/technical-summary/Transportation-Management-Associations-4-Pg.pdf>