BUILDING A MULTIMODAL FUTURE IN CHARLOTTE

CONNECTING REAL ESTATE DEVELOPMENT AND TRANSPORTATION DEMAND MANAGEMENT

Bloomberg Philanthropies | American Cities Climate Challenge | City of Charlotte

Technical Advisory Panel Report | JUNE 2021

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ULI Charlotte

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INTRODUCTION

ULI - The Urban Land Institute

The Urban Land Institute (ULI), established in 1936, has more than 45,000 members from more than 80 countries. ULI is one of America's most respected sources of information and knowledge on urban planning, growth, and development.

ULI is a nonprofit research and educational organization. Its mission is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. To encourage an open exchange of ideas and sharing of experiences, ULI membership crosses a variety of backgrounds and professions representing the entire spectrum of land-use and development disciplines in private enterprise and public service. Among its members are developers, builders, property owners, investors, architects, public officials, planners, brokers, appraisers, attorneys, engineers, financiers, academics, and students.

ULI Charlotte

ULI Charlotte is a District Council of the Urban Land Institute. The District Council offers ULI services and benefits at a regional level. The mission of ULI Charlotte is to complete the ULI experience at a local and regional level through education, research, and the exchange of ideas and experiences.

One service provided by ULI Charlotte is the Technical Assistance Panel (TAP) program. TAP panelists are volunteer members who seek to further the objectives of ULI and make authoritative information available to those seeking knowledge regarding the long-term use of urban land.

Support Provided By

Support for this program was provided by the Bloomberg Philanthropies American Cities Climate Challenge, the Urban Land Institute's Center for Sustainability and Economic Performance, and the NRDC (Natural Resources Defense Council).

In 2019, the City of Charlotte became one of twenty-five cities to participate in the Bloomberg Philanthropies American Cities Climate Challenge. The initiative aims to accelerate and deepen U.S. cities' efforts to create the greatest climate impact and to showcase the benefits – such as good jobs, cleaner air, and cost savings – that climate solutions bring.

About the Bloomberg Philanthropies American Cities Climate Challenge

The Bloomberg Philanthropies American Cities Climate Challenge is a $70 million program that empowers twenty-five of the largest U.S. cities to implement near-term climate goals and become primary drivers of progress toward meeting America's pledge for the Paris Climate Agreement. Participating cities have committed to specific policy and practice actions that will allow them to achieve ambitious carbon reduction goals.

The Climate Challenge provides technical expertise to participating cities to facilitate the development and passage of high impact policies, provide training for senior leadership, offer technical assistance, and plan

activities to enable citizen and stakeholder engagement for community buy-in.

ULI's Center for Sustainability and Economic Performance partnered with the NRDC to facilitate the engagement of ULI members in activities related to the American Cities Climate Challenge. ULI Charlotte received a grant from ULI's Center for Sustainability and Economic Performance to assemble this Technical Advisory Panel (TAP) and provide guidance to the city of Charlotte on land use and transportation policies.

TECHNICAL ASSISTANCE PANEL (TAP) PROGRAM

Program Description

The ULI Charlotte Technical Assistance Panel (TAP) program is an extension of the national ULI Advisory Services program. ULI's Advisory Services panels provide strategic advice to clients (public agencies, nonprofit organizations, or nonprofit developers) on complex land use and real estate development issues. The program links clients to the knowledge and experience of ULI and its members.

Since 1947, ULI has harnessed the technical expertise of its members to help communities solve land use, development, and redevelopment challenges. More than 700 panels have been convened in 12 countries.

TAPs include extensive preliminary briefings followed by a two-day intensive working session in the client's community. This TAP took place remotely via online video conferencing with staff members and stakeholders due to the COVID-19 pandemic. A detailed briefing package and guided discussion was provided by the client to each TAP participant before the working sessions. Travel restrictions prevented ULI panelists from being in Charlotte, but they received a briefing from city staff and used maps and other digital materials to become familiar with the community. ULI panelists used digital tools to interview stakeholders and address questions proposed by the client about a specific development issue or policy barrier in a defined geographic area. The product of these sessions is a community presentation and final report, which highlights the panel's responses and provide a diverse set of ideas and suggestions.

ACKNOWLEDGMENTS

Committee Chair

ULI Charlotte's TAP Committee is chaired by Dave Malcolm of The McAdams Company. The committee is responsible for the marketing, review, and implementation of the Technical Assistance Panels. When a TAP is engaged, the committee selects volunteer members of ULI that most appropriately fit the engagement objectives.

TAP Panelists

Members of ULI were selected to provide a wide variety of experiences. Full biographical sketches are included in the appendix to this report. Panelists for the City of Asheville study were:

Panel Chair

Craig Lewis
Principal
Callison RTKL

Land Use and Zoning Consultant

Panelists

Justin Schor
Principal
Wells + Associates

Transportation Consultant

Tom Yardly
Vice President, Area Planning & Development
MASCO (Medical Academic & Scientific Community Organization)
Longwood Medical & Academic Area, Boston, MA

Chief Planner

Program Support/Management

Theresa Salmen
Executive Director
ULI Charlotte

Program Manager

Trey Akers
Senior Planner
Town of Davidson, NC

Technical Writer

ASSIGNMENT OVERVIEW

Project Scope

The City of Charlotte Department of Transportation (CDOT) asked the ULI Charlotte District Council to conduct a TAP to assist in exploring and expanding the use of Transportation Demand Management (TDM) practices throughout the rapidly growing metropolitan region.

TAP panelists reviewed briefing materials, met with key stakeholders, performed research, and provided guidance on strategies that the city, its regional partners, and the private sector could more effectively use to understand and utilize TDM within regulatory frameworks, as well as in partnership with the development community.

Transportation Demand Management (TDM) refers to programs that promote transit, walking, bicycling, carpooling, ridesharing, telecommuting and other options to increase accessibility and reduce dependence on single-occupancy vehicle travel. TDM efforts can reduce congestion, reduce parking demand, and reduce travel costs at the individual and community level. Successful TDM programs expand mobility choices for residents, commuters and visitors.

As outlined in the Project Briefing Memorandum provided to the TAP panelists by the CDOT, the TAP project included a clear purpose and intended outcomes. Specifically, the memo identified the following:

- **Purpose:** Expand the role of TDM to support Charlotte's growth and create a more multimodal future.

- **Goal:** Identify the opportunities and challenges of applying TDM tools and measures in Charlotte within the context of land use patterns and the land development process.

- **Outcomes:**
  >> Suggestions on education and capacity building in the local development community on appropriate TDM tools and best practices.
  >> Recommendations on appropriate TDM strategies, policies, tools, and next steps for implementation in Charlotte.

The TAP began addressing each of these project components, including education and capacity building, through its stakeholder interviews. This report organizes the panelists' findings and offers direction in pursuing a successful TDM agenda throughout the Charlotte region.

Background & Issues

Charlotte remains in a prolonged growth period, a boom driven by a highly successful long-term job recruitment strategy, bundled with favorable weather and significant quality of life amenities. This prospect has propelled staggering growth – a 161.8% population increase since 1980 – eclipsed only by Austin, Texas's 200.4% growth rate over the same period when comparing peer cities.[1] This growth

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1   As identified in the Charlotte Future 2040 comprehensive planning effort (State of Mobility Report – Charlotte 2020, Pg. 35).

presents several challenges and opportunities related to housing, transportation, environment, social, and other spheres.

The State of Mobility Report – Charlotte 2020, prepared by the Charlotte Department of Transportation as part of the ongoing development of the Strategic Mobility Plan, acknowledges that Charlotte finds itself at a "critical moment" in its history. Accordingly, the SMP links transportation directly to the city's prosperity: "Our mobility investments can do more to expand prosperity throughout our city. We must identify investments that connect people to jobs, move goods and services, strengthen businesses, and support the needs of daily life." (State of Mobility Report – Charlotte 2020, Pg. 2). TDM offers a suite of tools to help address Charlotte's traffic congestion, infrastructure and mobility needs, and access challenges.

Charlotte lacks a comprehensive approach to TDM, specifically, an overarching regulatory framework, benchmarking/tracking protocols, and coordinated policies to implement TDM consistently in development projects. Despite these existing conditions, the time is ripe for change:

- In the public sector, the city is updating its Traffic Impact Study Review Process (TIS Review Process) as part of the development of the Unified Development Ordinance (UDO).

- In the private sector, many developers are exploring TDM's tools as potential amenities to provide product distinction, attract/secure investment, and deliver competitive advantage principally to reduce the demand for costly parking facilities.

Together, these efforts offer the chance to create a shared understanding of the role TDM can play, provide the tools available for implementation, and establish coordination to realize both public and private benefits through Charlotte's development.

Questions for the Panel

In preparing for the TAP exercise, CDOT asked the ULI panel to consider the following questions:

1. **Effectiveness:** What are the most effective TDM tools/measures for Charlotte?

2. **Application:** Where are the places and uses in Charlotte best suited for implementing TDM measures?

3. **Parking:** Is TDM a viable tool to reduce/limit parking demand in Charlotte?

4. **Neighborhoods:** Is TDM a tool for neighborhoods concerned with the lack of off-street parking in new developments creating spillover into neighborhoods?

THE TAP PROCESS

Foundation Webinar

ULI Charlotte hosted a webinar for the development community: Easing Gridlock by Connecting Development & Transportation Demand Management. The Thursday, June 10, webinar provided an overview of Charlotte's planning

efforts, touched on shifting demographics and trends/preferences in housing and mobility, discussed how TDM can help build a multimodal future, and analyzed case studies of TDM strategies. Presenters included Christopher Forinash, of Nelson\Nygaard, a transportation consultant working on Charlotte's planning

initiatives; Justin Schor, of Wells + Associates, a consultant specializing in TDM and a ULI TAP panelist for this project; and Jay Corbalis, of JBG Smith Companies, a developer/investment group with experience implementing TDM. A link to the webinar and a copy of the slides are in Appendix C.

Sponsor & Panel Instructions

The ULI panelists assembled Monday, June 14, via the virtual meeting platform Zoom for introductions to CDOT staff. Panelists and staff discussed the Project Briefing Memorandum, background information about planning efforts including the Strategic Mobility Plan, and aspirations for the TAP process. We are grateful for the participation of key stakeholders via Zoom since in-person meetings were restricted due to the COVID-19 pandemic.

Stakeholder Interviews

Panelists convened two stakeholder groups via Zoom the morning of Tuesday, June 15. The first group comprised real estate, planning, and development professionals from the local/regional community with experience managing varied residential and commercial projects in urban and suburban contexts. The second group included CDOT and other government staff responsible for transportation planning, policy drafting, and ordinance implementation.

Panel Work Session

After completing the stakeholder interviews, panelists gathered via Zoom later in the morning to debrief and discuss feedback received. After a lunch break, panelists gathered to discuss potential recommendations, collaborate on research, assign tasks, and prepare the presentation.

Panel Work Session & Presentation

Panelists gathered via Zoom in the afternoon June 15 to present their key findings and recommendations as part of a summary presentation. The public presentation began at 5 p.m., and panelists discussed the purpose of the TAP exercise, feedback received, and potential avenues for CDOT to consider. After presenting their findings and recommendations, panelists fielded questions and comments.

Report Preparation & Release

This TAP report was prepared under the leadership of ULI Charlotte and offers a summary of the activities during the program, key findings, and panel recommendations.

LIST OF STAKEHOLDERS

The panel conducted two sets of stakeholder input sessions on June 15, 2021. Invitations to stakeholders were extended and arranged through the sponsor. Interviewees included city and other government staff, along with real estate, planning, and development professionals from the local/regional community. The groups offered their perspectives on existing land use and market conditions, barriers or uncertainties surrounding TDM, and opportunities to leverage TDM investments for public and private benefit. Panelists led each discussion, with each participant recognized and encouraged to speak through the general roundtable format that followed.

Stakeholders Interviewed

Stakeholder Group 1: Real Estate & Development Professionals

Eric Applefield | Grubb Properties

Nate Doolittle | Land Design

Randy Goddard | Design Resource Group

Erik Johnson | White Point Partners

Rachel Krenz | Ram Realty Group

Matt Lucarelli | Beacon Partners

Laura Reid | Kimley Horn

John Schick | Wells & Associates

Stakeholder Group 2: City of Charlotte & Government Partners

Julian Burton | City of Charlotte Department of Transportation

Robyn Byers | City of Charlotte Department of Transportation

Aaron Cook | City of Charlotte Department of Transportation

David Harrison | City of Charlotte Department of Transportation

Jason Lawrence | Charlotte Area Transit System

Jerrel Leonard | Charlotte Regional Transportation Planning Organization

Ed McKinney | City of Charlotte Department of Transportation

Tracy Newsome | City of Charlotte Department of Transportation

Felix Obregon | City of Charlotte Department of Transportation

Johanna Quinn | City of Charlotte Department of Transportation

Courtney Schultz | Charlotte Area Transit System

David Smith | City of Charlotte Department of Transportation

STAKEHOLDER INPUT

Interviews with the two stakeholder groups provided ULI panelists with valuable insights. The list below summarizes the primary issues raised by participants and organizes them according to theme. Although representing sometimes divergent public versus private sector perspectives, each group recognizes the current ad hoc approach as inadequate, desires decisions grounded in grounded date, and views TDM as a promising toolkit for use in the Charlotte region moving forward.

Key Issues Identified By Stakeholders

Overall Summary:

- *Based on the stakeholder sessions, the city's leading developers exhibited a high degree of knowledge of the TDM.*
- *Newer projects are unbundling parking, and higher-density housing near existing light-rail stations is growing in demand.*
- *There is an appetite for more Complete Streets projects, which would provide much needed multimodal infrastructure.*
- *Stakeholders believe that Charlotte – both the city and the region – lacks a coordinated approach to TDM.*

Topics/Themes:

Parking

- **Status:** It's necessary but expensive, demand is steady.

- **Competitive Asset:** In both quantity and convenience, still required/expected to remain competitive.

- **Pricing:** Starting to unbundle from rent (multifamily).

- **Creative Approaches:** Increase street parking ("manage curb space"), utilize district-based parking (none currently).

Existing "TDM"

- **Ad Hoc, Project by Project:** Inconsistent, unpredictable, frustrating, ineffective.

- **Ordinances:** Need improvement; can create greater predictability about the expectations for TIS.

- **Management:** No connection between development reviews and post-occupancy compliance.

- **Data:** Lack of TDM data showing effectiveness is a hurdle to advancement of TDM in Charlotte, both for policy makers and the development community at large.

- **Staffing:** Lack of staffing at the city level is a challenge for implementing and monitoring TDM programs.

Infrastructure

- **Coordination Needed:** Infrastructure, inter-governmental (NCDOT)/regional cooperation (some major employers already addressing).

- **Network Gaps/Piecemeal Approach:** Overarching challenge to potential effectiveness of TDM programs is a lack

> "The decision to locate closer to denser areas has given suburban office a level of comfort with lower [parking] ratios."

of multimodal infrastructure and dependence on individual private projects to fund network improvements. This piecemeal approach doesn't complete municipal infrastructure or protect/enhance private investment.

- **Poor Safety:** Gaps in multi-use paths and bike lanes, and poor state of repair expose people on scooters and bikes to unsafe conditions.

- **Auto-Centric:** Predominant pattern, non-auto travel is inconvenient (CLT is a hub/spoke system).

Flexibility

- **Evolving Patterns:** Post-pandemic commuting still an unknown, areas are urbanizing inconsistently (e.g., South Blvd. streetscape and bike lane gaps).

- **Context Matters:** Not every location is the same (Uptown vs. Ballantyne); the types of tools implemented depend on building type and tenant mix – whether tenants' actions are based on lifestyle choice (residential) vs. commuter behavior (office).

- **Incremental Strategies:** Short-term tools are important, but must then adapt over time (i.e. once a high-density suburban office park becomes transit-served, the TDM approaches should evolve).

- **Development Community:** Inconsistent support, interest and understanding of TDM across the development community.

QUESTIONS

The project memo posed four questions for the panelists. The following sections include panelists' responses. Note: Panelists reordered the first two questions – shifting Application (the "where?") in front of Effectiveness (the "what/how?") – to first show connections to the City of Charlotte's existing/in-progress planning efforts. Ultimately, TDM's effectiveness depends, in part, on the extent to which it is shown to align with the city's Comprehensive Plan, UDO, and SMP, as well as other initiatives.

Question 1: Application

Where are the places and uses in Charlotte best suited for implementing TDM measures?

Initial efforts should focus on areas with existing, connected transportation infrastructure, higher densities, and less reliance on single-occupancy vehicle travel. These areas have more potential for mode shift.

As identified in the stakeholder interviews, the context in which a certain TDM tool or program is applied proves important. For example, strategies to connect residents in South End to a rail station 0.5 miles away are not necessarily different from connecting office workers in Ballantyne to a place to eat lunch or use local retail. Also important are the terms used to identify where TDM should occur. Specifically, the terms should clearly correspond to the city's adopted plans and policies.

Aligning with the 2040 Comprehensive Plan Place Types, this report recommends the following locations as best suited for TDM measures:

As the descriptions to the right indicate, these are generally classified as mixed-use and cohesive – districts with specific higher densities and access

Place Type	Specific Location
Community Activity Center	TOD Areas
Regional Activity Center	Uptown SouthPark Ballantyne River District
Campus	Atrium Main Campus UNC Charlotte University Research Park
Innovation Mixed-Use	North End

CAMPUS
- Campuses are a relatively cohesive group of buildings and public spaces that are all serving one institution such as a university, hospital, or office park.

INNOVATION MIXED-USE
- Innovation Mixed-Use places are vibrant areas of mixed-use and employment, typically in older urban areas, that capitalize on Charlotte's history and industry with uses such as light manufacturing, office, studios, research, retail, and dining.

COMMUNITY ACTIVITY CENTER
- Community Activity Centers are mid-sized mixed-use areas, typically along transit corridors or major roadways, that provide access to goods, services, dining, entertainment, and residential for nearby and regional residents.

REGIONAL ACTIVITY CENTER
- Regional Activity Centers are large, high-density mixed-use areas, typically along transit corridors or major roadways, that provide access to goods, services, dining, offices, entertainment, and residential for regional residents and visitors.

to varied transportation services. They are often organized around transportation networks, though large-scale campus settings offer the opportunity to integrate TDM strategies into their standardized contexts.

Question 2: Effectiveness

What are the most effective TDM tools/measures for Charlotte?

Before answering this question, the city and development community must first conduct a targeted program to measure existing travel characteristics for land use types. This should focus on a spectrum of development types in locations where TDM can be piloted. The SMP addresses this topic, but only at a broad, community-wide level.[2] In practice, this means that the city – in partnership with CATS, additional municipal government entities, and the development community – must decide which metrics to measure, develop a data collection methodology and gather the data. Then when TDM programs are implemented, effectiveness can be measured by comparing them to the baseline metrics. This need not be a years-long effort; a few months data gleaned from select buildings/sites in each of the Place Types identified will be sufficient to create a foundation for initial decision-making.

The results of the TDM pilot programs will help inform a citywide TDM framework, policy and, ultimately, a regulation. This might be a toolkit

Sample Baseline TDM Metrics/Approaches

- Tenant/resident travel surveys
- Parking occupancy
- Cordon counts (good for campuses)

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2   See State of Mobility Report, Travel Patterns & More, Pg. 12

based on land use and transportation characteristics so different communities can choose from parts based on proven effectiveness. This approach should be forged through a consensus-based process among the aforementioned partners. Regardless of which approach a site selects (or regulatory ordinance requirements for a building, site, or Place Type), this report asserts that ongoing monitoring and reporting of data must be part of he framework.

See Appendix A for a collection of resources showcasing tools/programs that Charlotte may consider exploring further.

Question 3: Parking

Is TDM a viable tool (in Charlotte) to enable development to reduce/limit parking?

The simple answer: Yes! As with Question 2, however, it matters how you get to this answer. TDM on its own will not succeed in achieving significant parking reductions. Rather, TDM is a necessary companion to a progressive parking policy. For example, many cities are rejecting the traditional higher parking ratios typically found in suburban settings. Instead, they are drastically reducing parking ratios to better reflect aspirations for lower levels of car ownership and driving. The ratios alone are purely regulatory and will not incent behavior change. However, combined with a TDM program and multi-modal infrastructure, lower parking ratios will incent behavior change, even if only modestly initially.

TDM has proven its viability in several cities and places across the nation – including those experiencing high-growth similar to that of Charlotte. This includes cities as different as Austin, Texas, and Ithaca, New York, and ranging from Seattle, Washington, and San Francisco, California, on the West Coast, to Minneapolis,

Minnesota, and Madison, Wisconsin, in the Midwest, to Atlanta, Georgia, in the Southeast and Boston, Massachusetts, in the Northeast. In each case, TDM policies have been adopted and implemented.

TDM's success depends on both public and private sector participation. This ranges from collaboration on data gathering and standards drafting to implementation and monitoring. Perhaps most importantly, it depends on the ability to clearly demonstrate results. Based on the stakeholder interviews, the panelists believe that the opportunity to pilot TDM and show that it works is at hand: Charlotte already contains both willing developers and existing entities such as CATS and the university implementing TDM. CATS already conducts employer outreach to promote and provide TDM assistance, with employers such at the university and healthcare providers implementing TDM programs for their constituents.

In the private sector, several developers shared various strategies they've used to reduce parking demand, such as charging for parking permits, using shared use vehicles such as Zip car, and encouraging enhanced bicycle facilities and shared bicycles. CATS has worked with major employers for years to encourage the use of transit through discounted monthly passes and ride matching/van pools. Additionally, the university has employed strategies such as a bike and e-scooter program, free transit with all 49er cards and Zipcar sharing through its Parking and Transportation Services (PaTS) program (https://pats.uncc.edu/sites/pats.uncc.edu/files/media/PaTS_Guide.pdf). Coordinating a framework for these efforts should be one of the city's chief aims. As described in the key recommendations, this framework can begin with the city of Charlotte's approaches but should also involve key area partners – potentially leading to a region-wide framework for implementing TDM.

Question 4: Neighborhoods

Is TDM a tool for concerned neighborhoods (lack of off-street parking spilling into neighborhoods)?

TDM is a tool for neighborhoods concerned about potential impacts from spillover parking and congestion generated by new, higher density developments. For cases in which parking ratios are reduced, TDM programs provide incentives for tenants and/or residents to travel by modes other than single-occupancy vehicles, such as car shares, CATS, bicycles, or e-scooters. Affordable, convenient, and safe access to transit, car share, bike share and multimodal infrastructure is vital for TDM to be most effective in residential areas. Residential parking permits is an option to help manage parking demands in neighborhoods with limited off-street parking and curb space. It also would be beneficial to identify opportunities for targeted, low-cost tactical improvements to select spaces or corridors to improve multimodal options, such as expanded sidewalks with bicycle and scooter docking stations. If using a district-based parking program, profits generated from parking revenues can be invested in TDM programs. This might include traditional behavior-change programs and modest capital expenditures on striping for bike lanes, enhanced crosswalk design, and sidewalk completion/expansion/enhancement. Through the development approval process, TDM can be positioned as one way to reduce the neighborhood impacts of new development.

KEY RECOMMENDATIONS

These recommendations build on the feedback received and ideas discussed throughout this report. The intention is to provide guidance on next steps that the city of Charlotte can take to build a successful TDM framework. The first step is getting support from key partners. Ultimately, the program's success lies with the ability to connect TDM to existing citywide transportation and quality of life goals, to develop a flexible program tailored to Charlotte's unique land use and transportation infrastructure, and to document progress using performance metrics. The program must be adjusted over time based on initial results of pilot programs.

1. **Establish Citywide TDM Policy and Goals:** The city should clearly connect TDM to adopted policies, current planning efforts, and aspirational outcomes.

    a. Link to Citywide Aspirations: Make clear TDM is an essential ingredient to meeting the city's sustainability, quality of life and other goals already documented through extensive outreach.

    b. Link to Citywide Policies: Tie initial TDM framework, policies, and goals to existing adopted and in-progress planning documents.

2. **Designate Point of Contact:** The city should designate a point of contact to manage the TDM effort, including coordination with stakeholders and policy developers. This might require updating an existing job description to add TDM responsibilities or creating a new position.

3. **Identify/Recruit Interested Parties:** The city should create a defined stakeholder group

to establish baseline metrics, identify tools, and generate a TDM policy/regulatory framework

Three potential stakeholder groups are:

a. Public Sector: CDOT, CRTPO, CATS, CCCOG Staff

b. Private Sector: Developers, Planning/ Transportation Consultants, Real Estate Professionals, Corporations, and others deploying TDM strategies

c. Institutions: Higher-Education and Healthcare Providers

4. **Establish Baseline Data Set:** The city should undertake the following steps to create a set of performance indicators based on local data:

    a. Identify Metrics: Work with the stakeholder group, including developers, to identify metrics to help assess the effectiveness of TDM programs in different land use contexts in the city of Charlotte. Metrics may include trip generation, TDM program participation levels, facility surveys, and mode shift and parking occupancy such as garage gate and/or cordon counts. All should be easily measurable and identify a consistent schedule for measurement that considers time of day, season, and other factors. A survey component is also recommended in this post COVID landscape for building occupants to express their commuting preferences, such as number of days working from home compared to going to the office. Insights gained through surveys – though qualitative – serve as attitudinal barometers and can be used to improve TDM programs.

b. Set Targets:

    i. Work with the stakeholder group, including developers, to set initial targets. For example, a 2.5% reduction in total vehicle trips compared to the ITE value for this use/building size. Targets may be adjusted over time based on performance indicators.

    ii. Explicitly link the targets in the ongoing development of the Strategic Mobility Plan (SMP) and other adopted/in progress planning documents using existing terminology such as the Travel Patterns & Mode categories, outlined in the State of the Mobility Report, Pg. 12), as well as desired outcomes such as air quality and access to mobility options. Additionally, until TDM data is collected identify recognized comparison sources such as US Census data, the ITE Trip Generation Manual, or other sources.

c. Designate TDM Study Areas/Candidates:

    i. With partners in the private and non-profit institutional campus sectors, generate a list of buildings and sites to serve as testbeds for pilot TDM programs. Include development projects in the pipeline, along with existing corporations institutions already doing TDM. Also consider any municipal entities already implementing or able to track this data among their employees.

    ii. Classify buildings, sites, and areas using the 2040 Comprehensive Plan Place Types. Ensure that the selected data sources represent each of the recommended Place Types and include a variety of residential, commercial, municipal, and institutional uses.

d. Collect Initial Data, Analyze + Share Results:

    i. Perform initial data gathering and reporting over a 3- to 6-month period calibrated to reflect the new normal travel conditions.

        >> Consider using city resources to assist with data-collection/survey efforts in the development community; this will help build trust and a sense of shared responsibility while providing public and private sector groups with needed information.

    ii. Synthesize results and present to the stakeholder group, soliciting initial observations.

    iii. Summarize the findings and share with the city council, developer community, and additional stakeholders such as NCDOT.

5. **Develop + Implement TDM Program Elements:** Work with the stakeholder group, including developers, to create the most effective TDM framework for Charlotte that addresses the different urban and more suburban typologies and varying degrees of access to multimodal transportation choices. TDM program elements include overall TDM policies, regulations and specific TDM tools.

a. Review + Organize Program:

    i. Examine peer cities' successes/challenges; review additional case studies.

        >> Explore the use of district-based approaches for TDM implementation in large, master-planned developments and in existing contexts. Work within existing or new Municipal Services District authority to incorporate a TDM TMA component.

        >> Examine use of progressive parking policies/reduction measures and work to include recommended measures in

an updated Policy/Regulatory Framework (see below).

ii. Create a TDM toolkit listing planning-level costs, potential for mode shift, monitoring requirements and an explanation of overall benefits.

iii. Classify tools/approaches based on land use and access to multimodal transportation options (for example Place Types).

b. Select Measurement Tools: Decide on performance measurement tools to be used in each context.

>> Ensure that monitoring and reporting data is a program requirement.

c. Establish Policy/Regulatory Framework:

i. Draft clear ordinance standards and protocols to implement TDM.

>> Establish clear guidance on data collection to generate uniform data sets from which reliable conclusions can be drawn.

>> Include compatible parking reduction policies as part of proposed changes.

ii. Integrate standards into the updated Traffic Impact Study process.

iii. Adopt/codify the standards in the UDO.

6. **Assess Progress, Adapt Standards:** Consolidate and review data annually, measuring progress and revising standards as needed. Additionally, adapt standards for changed contexts as needed. For example, once a new light rail station is opened or bus service arrives, adjust the TDM strategies for the specific building, site, and area.

APPENDICES

Appendix A: Resources

Book: Schor, Justin B. and Tallis, Federico. *Building a Multimodal Future: Connecting Real Estate Development and Transportation Demand Management to Ease Gridlock*. Urban Land Institute, 2019.

Government: Fairfax County, VA

- Transportation Demand Management Overview: Provides the basis for TDM, describes program elements, and links to resources and programs.

- TDM Toolkit for Developers: Lists "Participation Levels," outlines trip reduction goals, and shares resources including the TDM Guidelines and Annual Report Template.

- Fairfax County Commuter Services: Includes a brief overview of TDM, lists program requirements, and connects commuters to resources.

Non-profit Organization: MASCO – Boston, MA

https://www.masco.org/

MASCO (Medical Academic and Scientific Community Organization) is a non-profit organization located in the Longwood Medical and Academic Area (LMA) in Boston, Massachusetts. Founded nearly 50 years ago, MASCO's mission is to drive collaborative solutions enabling Longwood to be an innovative hub of health are, research, and education. MASCO's membership includes 22 prominent institutions in Longwood, including three Harvard-affiliated teaching hospitals, three Harvard graduate schools, and 16 other colleges, universities, cultural institutions, and medical centers.

MASCO members employ 68,000 workers, educate 27,000 students, and treat 2.8 million patients each year. Longwood is now one of the highest concentrations of jobs in Boston, with jobs growing at twice the rate of Massachusetts, and remains one of the city's busiest and most dynamic neighborhoods.

Rapid growth in such a small area led to the creation of MASCO to serve as the convening organization for the institutions in Longwood and to address their shared challenges, such as land use, transportation, and congestion. Today, MASCO serves as the preeminent organization for planning and advocating for people who need to access to Longwood, while also providing some of the transportation services necessary to move into and around Longwood safely and efficiently. MASCO also creates ways for member institutions to collaborate around

shared development and access goals, and provides other shared services.

MASCO is the area's state-designated Transportation Management Association (TMA), known as CommuteWorks, which has successfully reduced private, single occupancy vehicle use among employees in the LMA, with the shared goal of addressing transportation, air quality, and commuter issues for decades. Established in 1989, CommuteWorks serves as the TMA for the LMA. Historically, it has received CMAQ funding, though now it is funded fully by MASCO.

Key TDM programs include an emergency ride home program, and incentive programs for walkers, bicyclists, carpoolers, and those interested in switching from driving alone to public transportation. CommuteWorks also sponsors commuter events, bike safety classes, new employee orientations and a district wide commuter benefits program through Ride Amigos. In the past year alone, CommuteWorks has facilitated 1,900 non-drive-alone trips for a total of 8,077 miles and 6,383 pounds of CO2 reduced. Pre-pandemic, almost half of LMA employees commuted by transit, compared to just a third of Boston residents generally, aided by millions of dollars in member-funded annual MBTA pass subsidies.

Appendix B: Biographies

Panel Chair: Craig Lewis, FAICP, LEED AP, CNU-A
Planning, Urban Design, and Smart Mobility Consultant
Principal, Callison RTKL

Craig Lewis is the North American practice leader for planning, landscape, and urban design with CallisonRTKL. For more than 25 years, he has been infusing an inter-disciplinary approach to building vibrant, urban, walkable places across North America that are more livable, equitable, and sustainable. His international, award-winning work spans the range of city building to include planning, urban design, placemaking, transit/transportation, form-based codes, and smart mobility. He is a fellow with the American Institute of Certified Planners (FAICP), a LEED (Leadership in Energy and Environmental Design) Accredited Professional, an accredited member of the Congress for the New Urbanism (CNU-A), and an original signatory on the Charter of the New Urbanism. He is the chair of the ULI Curtis Global Infrastructure Initiative and is a board member for ULI Charlotte.

Panelist: Justin Schor
Transportation Consultant
Principal, Wells + Associates

Justin Schor is a principal with Wells + Associates, leading the market research and planning efforts for the company's real estate-focused mobility management practice. He has over two decades of forward-thinking Transportation Demand Management (TDM) experience, helping manage access and mobility, along with traffic congestion and parking demand in communities all over the United States. His skills include researching, planning, developing, and implementing award-winning transportation solutions.

Justin works extensively with real estate property owners, asset managers and property managers to assess and understand how to cost-effectively enhance the tenant transportation experience at their properties, making them more competitive with leasing and rent rates. His clients have included multifamily residential properties, transit-oriented developments, office properties, major medical facilities, transportation management associations, and major commercial and retail developments.

He combines his first-hand marketing and outreach experience with extensive knowledge in transportation planning at the development, downtown, regional, and state levels. These skills and expertise give Justin a unique ability to confidently identify, plan and recommend transportation strategies that are practical, measurable and have a high return on investment (ROI). That ROI can come in the form of reduced parking construction costs, increased rent rates, enhanced occupancy rates, trip reduction regulatory compliance, and green building certification.

Justin was influential in crafting the alternative transportation credit standards for the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification. He is also the co-author of development of transportation policies and systems that discourage gridlock and foster greater choice.

Panelist: Tom Yardley
Chief Planner
Vice President of Area Planning & Development, MASCO

With 23 years of experience in planning, Tom Yardley holds broad expertise in both urban and transportation planning, and he is nationally recognized for his work. He is vice president of area planning and development at MASCO, conducting long-range planning and development studies. He also manages the implementation of projects in building development, transportation, energy and infrastructure, housing, workforce development, open space, and transportation demand management. As a principal with Stantec from 2017 to 2020, Tom specialized in parking and transportation demand management, higher education, hospitals, corporate campus planning, public outreach, and comprehensive mobility plans. During his time at Stantec, Tom led an extensive initiative for Louisiana State University to incentivize multimodal transportation, as well as a major transportation and parking initiative at Ohio State University, one of the largest universities in the nation. Prior to joining Stantec, Tom was at Nelson/Nygaard, where he was responsible for projects for large and complex institutions, including Partners HealthCare, Boston University, White Plains Hospital, and University of Massachusetts at Lowell.

Panelist: Trey Akers
Technical Writer
Senior Planner, Town of Davidson, NC

A design-oriented planner, Trey's background includes extensive work on stakeholder engagement, policy drafting/development, and sustainable metric creation, evaluation, and implementation.

Appendix C: Foundation Webinar Slides

On Thursday, June 10, ULI Charlotte hosted a webinar for the development community: Easing Gridlock by Connecting Development & Transportation Demand Management. The webinar provided an overview of Charlotte's planning efforts; touched on shifting demographics as well as trends/preferences in housing and mobility; discussed how TDM plans to help build a multimodal future; and analyzed case studies of TDM strategies. Presenters included Christopher Forinash, of Nelson\Nygaard, a transportation consultant working on Charlotte's planning initiatives; Justin Schor, of Wells + Associates, a consultant specializing in TDM and a ULI TAP panelist for this project; and Jay Corbalis, of JBG Smith Companies, a developer/investment group with experience implementing TDM. A link to the webinar is available at https://charlotte.uli.org/building-a-multimodal-future-in-charlotte/.

ULI Charlotte

Easing Gridlock by Connecting Development & Transportation Demand Management

CHRISTOPHER FORINASH, Nelson\Nygaard
JUSTIN SCHOR, Wells + Associates
JAY CORBALIS, JBG SMITH

THURSDAY, JUNE 10, 2021

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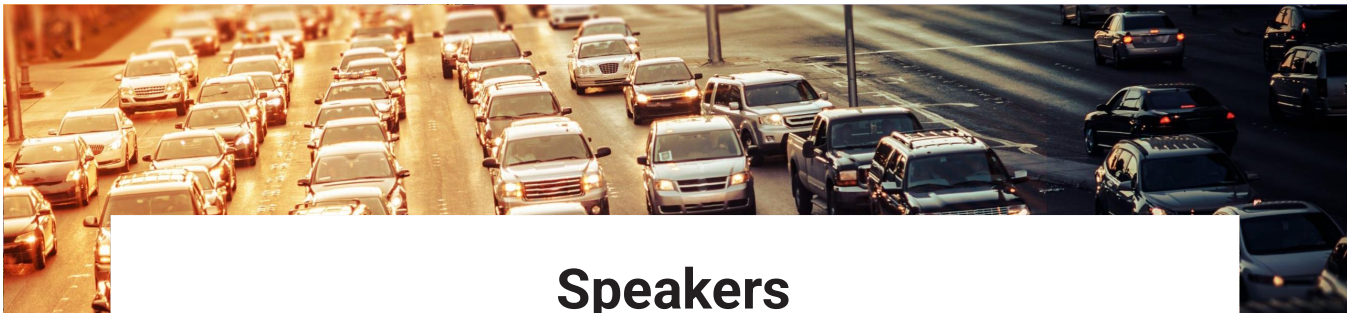
Speakers

Christopher Forinash

Principal
Nelson\Nygaard

Justin Schor

Principal
Wells + Associates

Jay Corbalis

Vice President of Public Affairs
JBG SMITH

Christopher Forinash
Nelson\Nygaard

What could TDM mean for Charlotte?

ULI Charlotte: Easing Gridlock by Connecting Development & TDM

Christopher Forinash, Principal
June 10, 2021

So, anything going on in Charlotte with development, planning, or transportation these days?

SO, ANYTHING GOING ON IN CHARLOTTE WITH DEVELOPMENT, PLANNING, OR TRANSPORTATION THESE DAYS?

- Charlotte Future 2040 Comprehensive Plan … under development for 2+ years, in front of Council
- Unified Development Ordinance (UDO) … TOD Districts adopted 2019, remainder in development
- Charlotte MOVES Task Force … recommended transformational mobility network investments late 2020

SO, ANYTHING GOING ON IN CHARLOTTE WITH DEVELOPMENT, PLANNING, OR TRANSPORTATION THESE DAYS?

Meanwhile, development continues apace, in Uptown, TOD districts, and well beyond.

- City and region continue to attract new residents and businesses

- Increasing demand for living closer-in, near walkable streets and transit and greenways

- Demand for conventional suburban development remains … but evolves
  - o Outdated, inflexible minimums require too much parking in most contexts
  - o Traffic Impact Study methods aren't capable of understanding multimodal travel
  - o Traffic mitigations rigidly require expanding roads

TDM is cheaper and more effective. Oh, and it helps create places that align with our stated values.

Photo Credit: Nelson Nygaard, via Nearmap
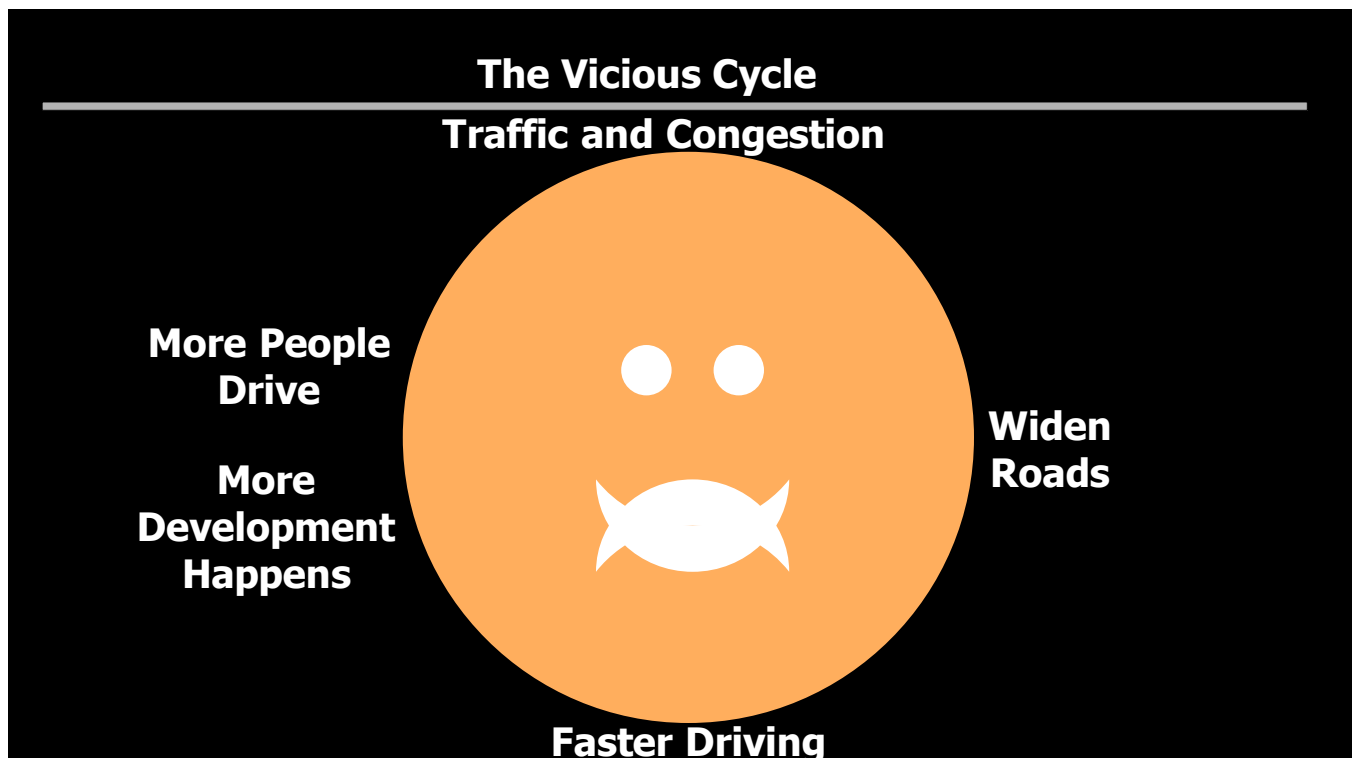
MOBILITY BEYOND EXPANDING ROADS

Goal: Safe and Equitable Mobility

• Mobility that serves everyone

• Gets them to where they want to go safely, conveniently, and affordably

• Gives them choices

• Meets other goals and values

How does it happen?

• The City plans and creates the mobility network (with developer contributions)

• Make sure it serves everyone, for most destinations, with real choices

• But providing the network is only part of what's needed

• Help people learn about, try, and maybe adopt a range of ways to meet their mobility needs

GOAL 5: SAFE AND EQUITABLE MOBILITY

Charlotte will provide safe and equitable mobility options for all travelers regardless of age, income, ability, race, where they live, or how they choose to travel. An integrated system of transit, bikeways, sidewalks, shared-use paths, and streets will support a sustainable, connected, prosperous, and innovative network that connects all Charlotteans to each other, jobs, housing, amenities, goods, services, and the region.

What is TDM and how can it help?

Transportation demand management (TDM) strategies include:

Services	Infrastructure	Parking Management	Multimodal Subsidies	Education
• Car-Share parking • Special event transit service • On-site child care	• Off-site active transportation improvements • Transit station/ stop investment • Bicycle storage and showers • Pedestrian and cyclist wayfinding	• Unbundled parking • Parking cash-out • Preferential parking for carpooling • Parking fees/ paid parking	• Visitor discounts to avoid peak period trips • Subsidize transit passes • Car-share or bike-share membership discounts	• New resident/ employee welcome kits • Information kiosks, transit screens, or websites • Trip planning assistance • TDM program branding and messaging
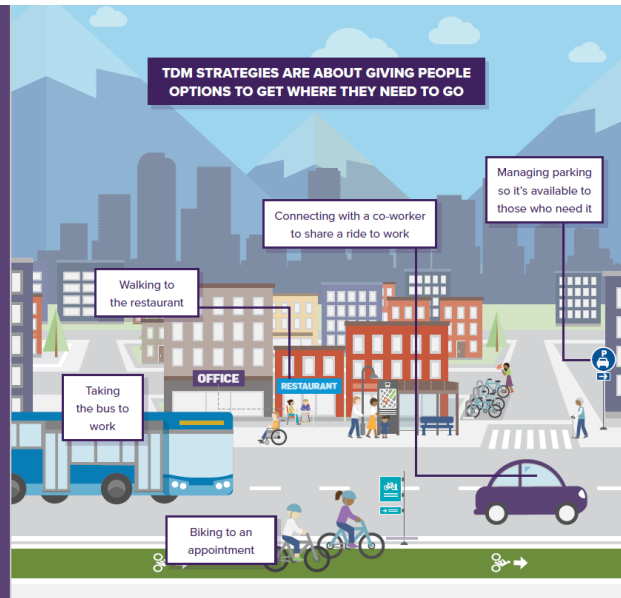
TDM STRATEGIES ARE ABOUT GIVING PEOPLE OPTIONS TO GET WHERE THEY NEED TO GO

- Managing parking so it's available to those who need it
- Connecting with a co-worker to share a ride to work
- Walking to the restaurant
- Taking the bus to work
- Biking to an appointment

TDM STRATEGIES BENEFIT BY HELPING:

✓ **Attract and retain tenants**
Provide easy and affordable travel options they want

✓ **Reduce congestion and traffic gridlock**
Spend less time sitting in traffic and get where you need to go on time

✓ **Promote sustainability**
Lower greenhouse gas emissions with fewer vehicle trips

✓ **Improve public health**
Get more people walking, biking, and breathing clean air

✓ **Enhance equity**
Reduce transportation costs and increase access to local destinations to support a thriving economy

✓ **Decrease development costs**
Lower the cost of construction with unbundled parking; pass the savings on to tenants

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What is TDM and how can it help?

Transportation demand management (TDM) strategies include:

It's NOT just developers! The City, region, transit agency, BIDs, neighborhood associations, employers, building owners and managers, … ALL have a role to play in providing and supporting mobility options for everyone.

Services	Infrastructure	Parking Management	Multi…	
• Car-Share parking • Special event transit ser…	• Off-site active transportati… impr…			

TDM STRATEGIES ARE ABOUT GIVING PEOPLE OPTIONS TO GET WHERE THEY NEED TO GO

- Biking to an appointment

TDM STRATEGIES BENEFIT BY HELPING:

✓ **Attract and retain tenants**
Provide easy and affordable travel options they want

✓ **Reduce congestion and traffic gridlock**
Spend less time sitting in traffic and get where you need to go on time

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Lower greenhouse gas emissions with fewer vehicle trips

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Get more people walking, biking, and breathing clean air

✓ **Enhance equity**
Reduce transportation costs and increase access to local destinations to support a thriving economy

✓ **Decrease development costs**
Lower the cost of construction with unbundled parking; pass the savings on to tenants

14

TO HELP EXPLAIN, LET'S INTRODUCE FIVE CHARACTERS
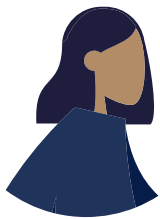
Renter Renee

Homeowner Harriet

Shopkeeper Shauna

Developer Danielle
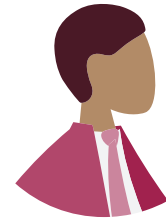
Planner Pamela

A BALANCED APPROACH WOULD HELP

	Renter Renee	Homeowner Harriet	Shopkeeper Shauna	Developer Danielle	Planner Pamela
1 Increase housing affordability and reduce construction costs	👍	👍	👍	👍	👍
2 Give new flexibility to small business owners who want to use their off-street parking for other uses	👍	👍	👍	👍	👍
3 Support economic growth	👍	👍	👍	👍	👍
4 Reduce our emissions and make walking, biking, and transit more appealing	👍	👍	👍	👍	👍

HOW TDM WORKS

Planner Pamela provides a menu of tools designed to make it easier to walk, bike, and take transit

GUIDE

Renter Renee and Homeowner Harriet feel more empowered to walk, bike, and take transit

Developer Danielle chooses tools from the menu for her new development

Shopkeeper Shauna chooses tools for her new store

HOW TDM WORKS

Planner Pamela provides a menu of tools designed to make it easier to walk, bike, and take transit

GUIDE

Subsidized Transit Passes

Protected Bike Parking

Street Traffic Calming

Developer Danielle chooses tools from the menu for her new development

Shopkeeper Shauna chooses tools for her new store

Renter Renee and Homeowner Harriet know about their choices and feel empowered to walk, bike, and take transit

THE MENU WOULD INCLUDE TOOLS LIKE …

Subsidized Transit Passes

★ ★ ★ ★

$ $ $ $

Protected Bike Parking

★ ★

$ $

Street Traffic Calming

★ ★ ★

$ $ $ $ $

Even before the pandemic, our shopping and work patterns were changing

For example, Homeowner Harriet was increasingly …

Using ride hail

Shopping online

Working from home

Prioritizing experiences over things

Even though she has a car, she uses it less often for shopping, visiting friends, and getting to the office
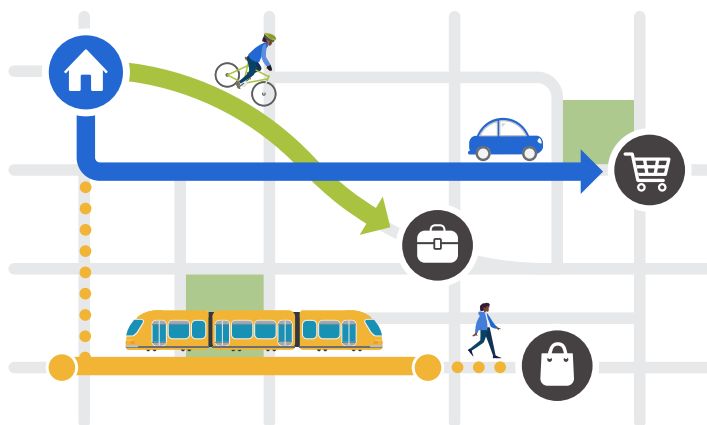
Shopkeeper Shauna sees these trends …

… and wants to attract people like Harriet with a better customer experience by converting part of her parking lot into a patio

Not so fast: parking minimums!
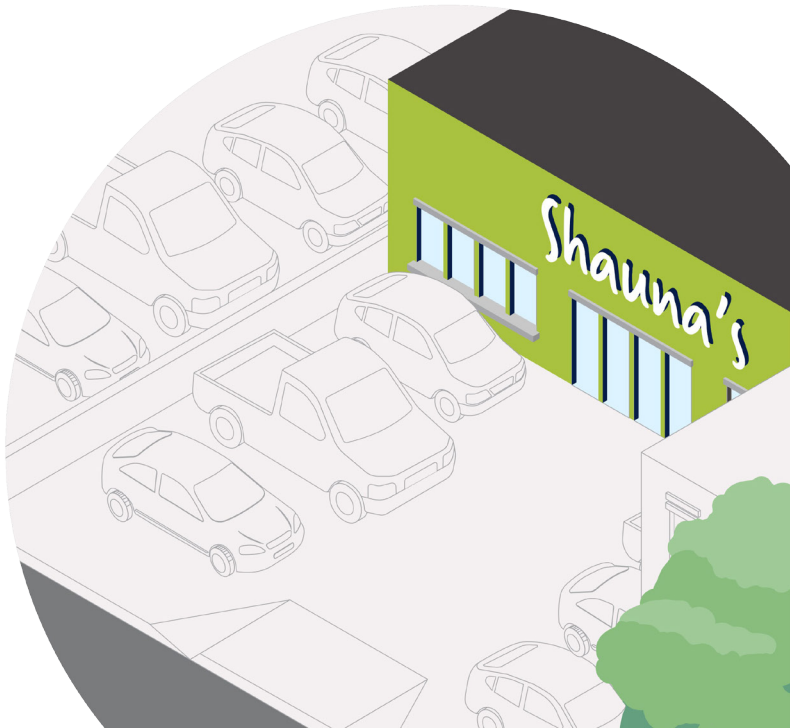
YOUR ROLE IN CHANGE

- The TDM approach and tools aren't just for new development

- TDM is a tool for universal mobility

- You can influence policy changes to work best for you …

- … while helping you contribute to the overall vision

- Charlotte's peers are:
    o Striving to meet broader, values-based goals
    o Using TDM aggressively
    o In conjunction with TIS changes
    o Typically implementing a menu-based TDM approach
    o **Marketing the mobility benefits of their projects**

Thank You

Chris Forinash
cforinash@nelsonnygaard.com

Market Demand for Less Car Use
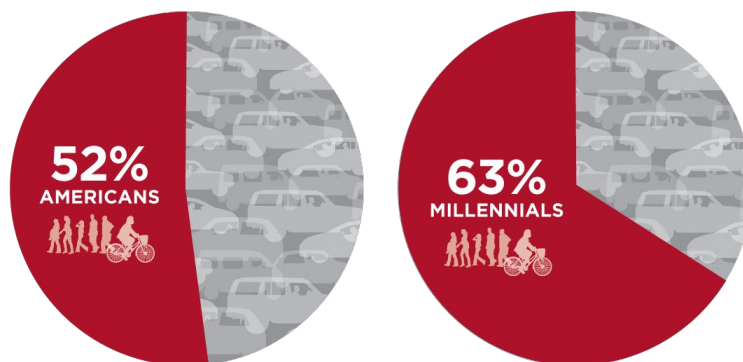
Responding to Demand

The Challenge
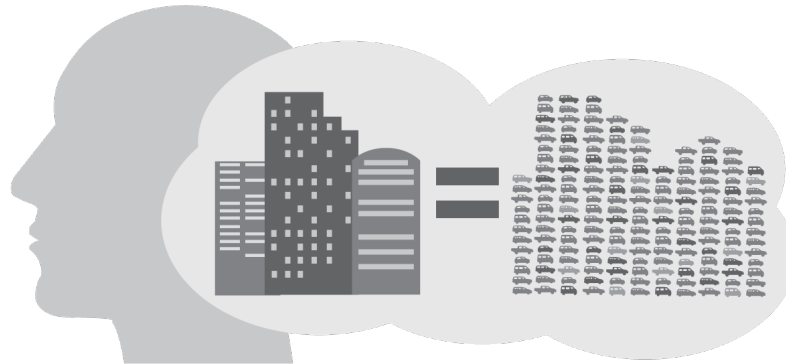
The Solution

The Role of Development in that Solution

- Buildings have people
- People generate traffic
- Reducing traffic requires engaging people in those buildings

Engaging Development in that Solution

Communities leverage permitting or rezoning process to require new developments to provide TDM

Making TDM Worthwhile: Increase Revenue

INCREASED DENSITY

GREATER FLEXIBILITY WITH LAND USES

LESS STRINGENT SETBACKS

Making TDM Worthwhile: Decrease Costs

Decreased road capacity enhancements

Reduced need for **traffic signals**

Ability to **bring a project to market quicker** because of **reduced time constructing parking**

Minimized parking construction **costs**

A more **expedient** and **predictable** development process

Where is this happening now?
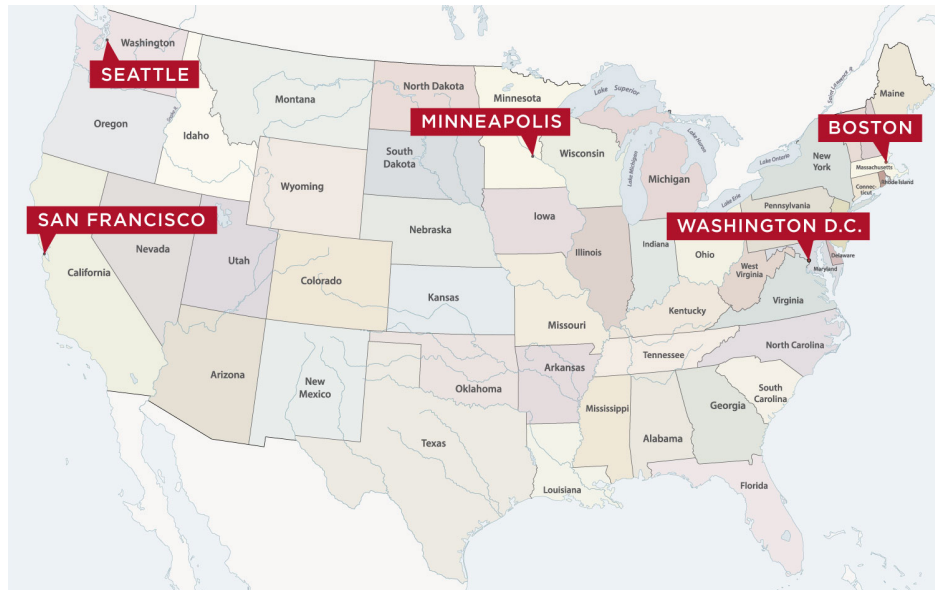
Steps for Establishing a TDM Policy in Your Community

STEP 1:

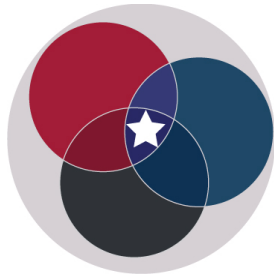Understand How the TDM Policy Fits into
the Planning Fabric of the Community

STEP 2:

Identify Where the
TDM Policy Should Apply
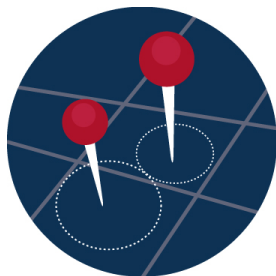
STEP 3:

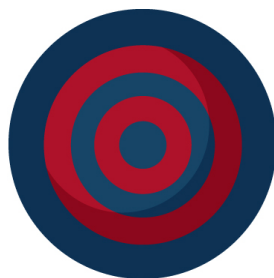## Determine the Types of Developments that Should Comply with the TDM Policy

STEP 4:

Select an Appropriate Metric to Quantify Site-Based Success

STEP 5:

Set the Appropriate Goal to Quantify Site-Based Success

STEP 6:

Establish How the TDM Policy Will Be Monitored

STEP 7:

Determine Appropriate TDM Strategies
for Properties Affected by the TDM Policy

STEP 8:

Determine Whether a
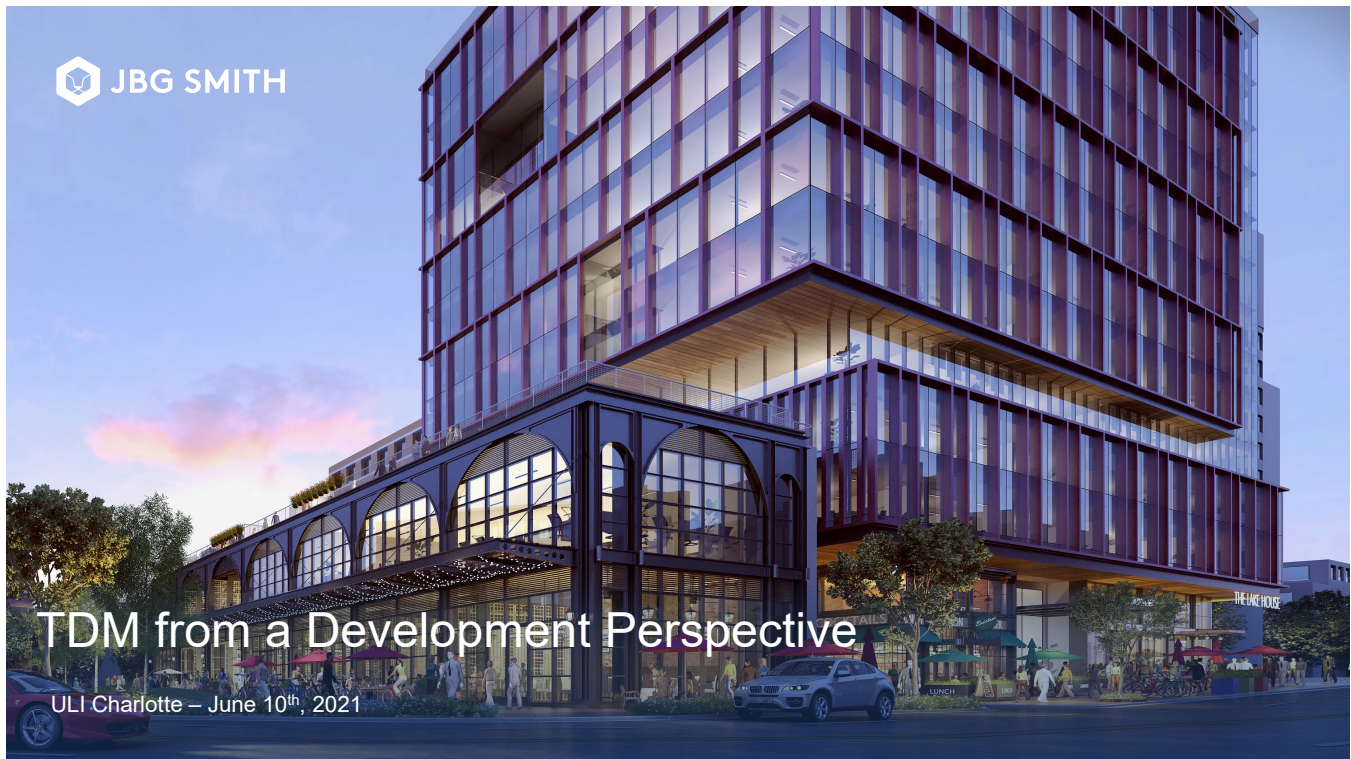TDM Plan is Required

STEP 9:

Decide on a Enforcement Mechanism
to Ensure TDM Policy Compliance

Jay Corbalis
JBG SMITH Properties

TDM from a Development Perspective

ULI Charlotte – June 10th, 2021

JBG SMITH AT A GLANCE

OPERATING PORTFOLIO		UNDER-CONSTRUCTION		NEAR-TERM DEVELOPMENT
COMMERCIAL SF	MULTIFAMILY UNITS	COMMERCIAL SF	MULTIFAMILY UNITS	
11.1M	5,999	274K	161	5.6M SF

FUTURE DEVELOPMENT PIPELINE	WEIGHTED AVERAGE LEASE TERM	TOTAL ENTERPRISE VALUE[1]
10.0M SF	6.1 YEARS	$6.7B

	WALK SCORE	NET DEBT/TOTAL ENTERPRISE VALUE[1]
1900 N Street	83	32.0%
	METRO-SERVED	NET DEBT/ANNUALIZED ADJUSTED EBITDA[2]
	97%	9.2x

(1) Total Enterprise Value is based on the closing price per share of $31.27 as of December 31, 2020.
(2) Adjusting for estimates of the amounts management believes to be attributable to the COVID-19 pandemic, we believe our Net Debt/Annualized Adjusted EBITDA wo have been 6.5x. On a trailing 12-month basis, our Net Debt/Adjusted EBITDA was 8.4x.
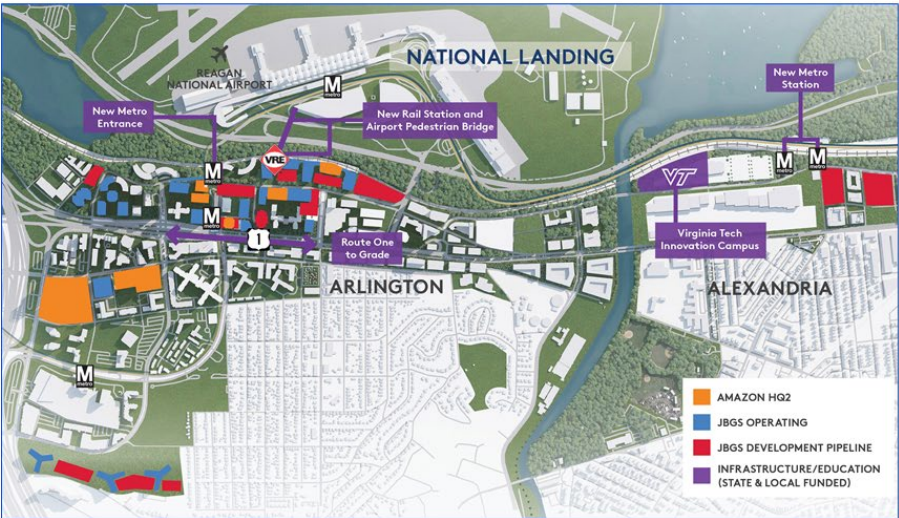
JBGS' Portfolio
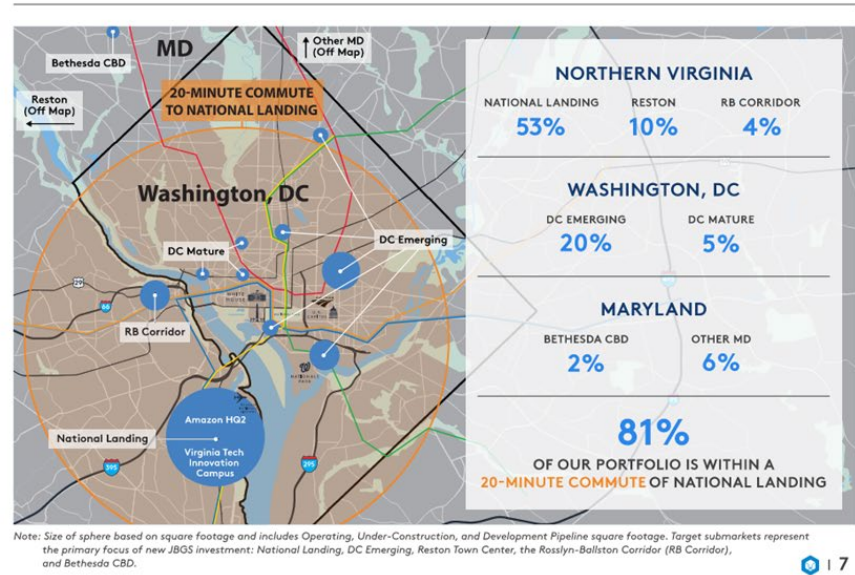
JBG SMITH in National Landing

- 6m SF of operating assets + 7.2m SF development pipeline

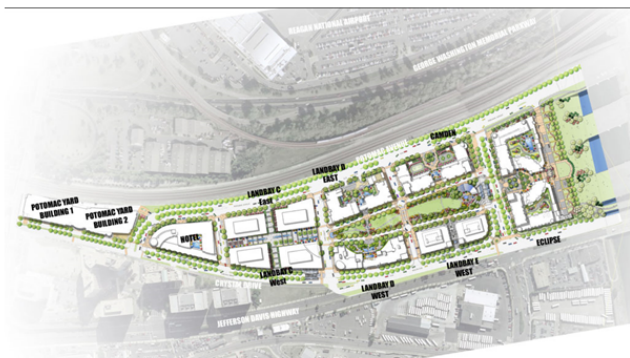- Development partner on Amazon's HQ2 and VT's Innovation Campus

TDM: County-led Approach

1770 Crystal Drive

JBG SMITH

- $.06/sf/year, or $16k
- Transportation information displays in lobby
- Dedicated car/vanpool spaces
- Bike parking/facilities
- Performance monitoring

TDM: Developer-led Approach

JBG SMITH

- Between $.2 and $.3/sf/year
- Administered by the property owners via transportation management association
- Required to meet specific transportation goals re: mode share and passengers per vehicle.
- Specific activities determined by TMA, annual reporting required.

Perspective

- Tangible activities/investments
- Involvement in decision making
- Goals>process
- Finding the right scale

JBG SMITH

QUESTIONS?

ULI Charlotte

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