



Draft TDM Program

City of Madison Department of Transportation
Plan Commission meeting May 13, 2021

MADISON DEPARTMENT



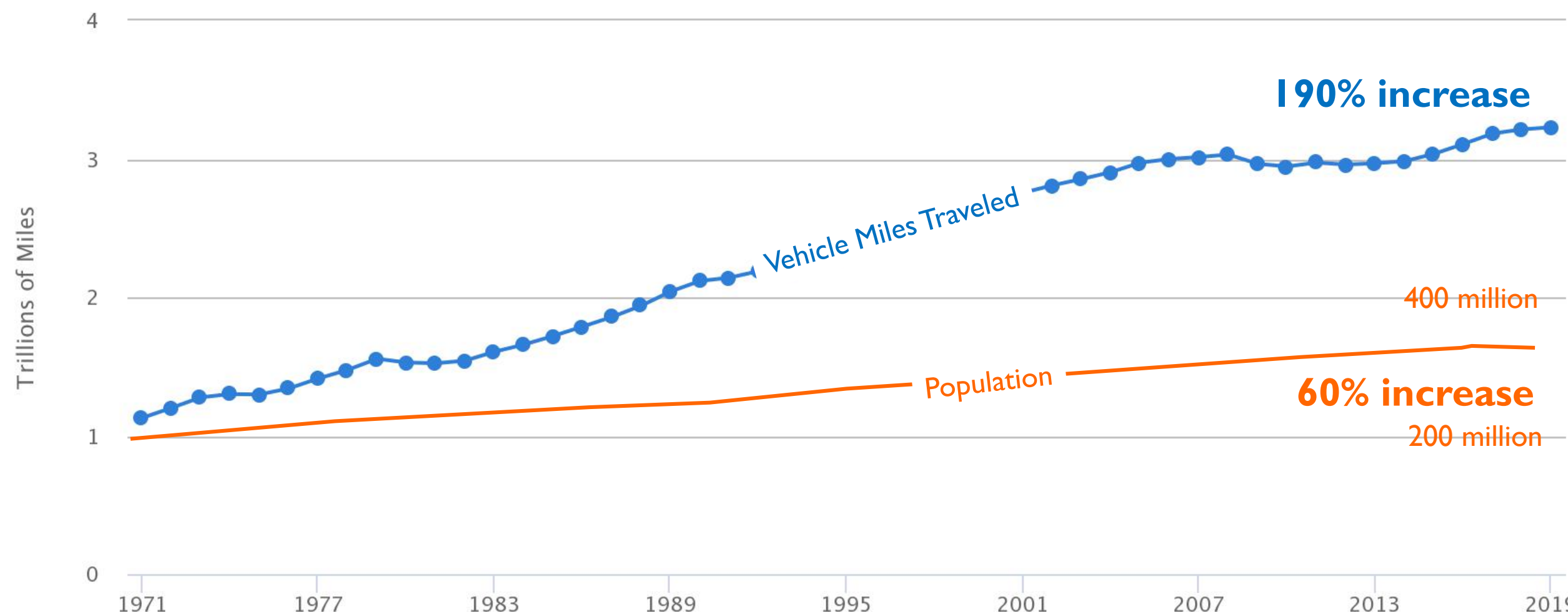
OF TRANSPORTATION



State
Smart Transportation
Initiative

Practical Solutions to Move America Forward

Annual Vehicle Miles Traveled in the United States

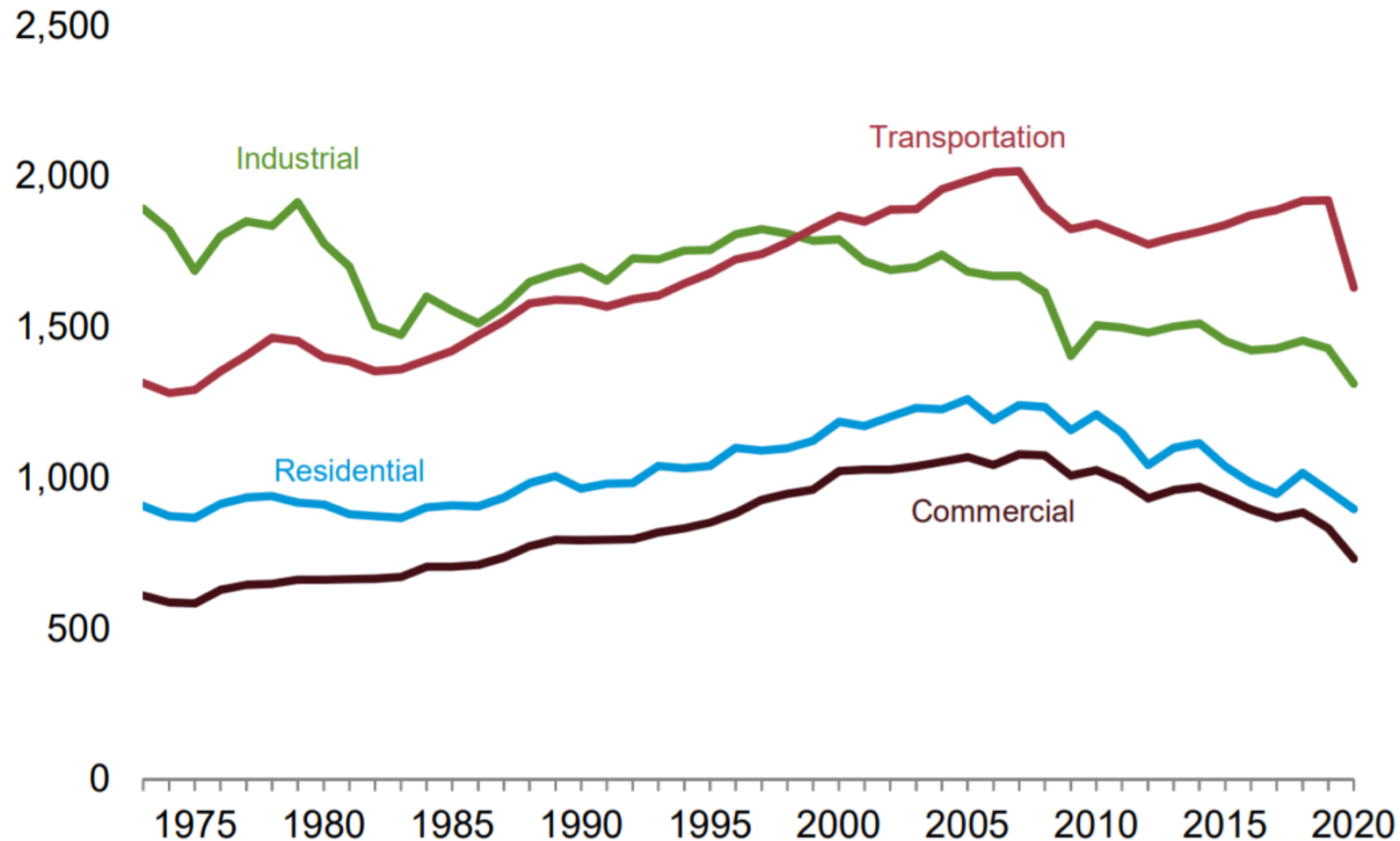


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Carbon Dioxide Emissions by Sector

Total [a] by End-Use Sector [b], 1973–2020

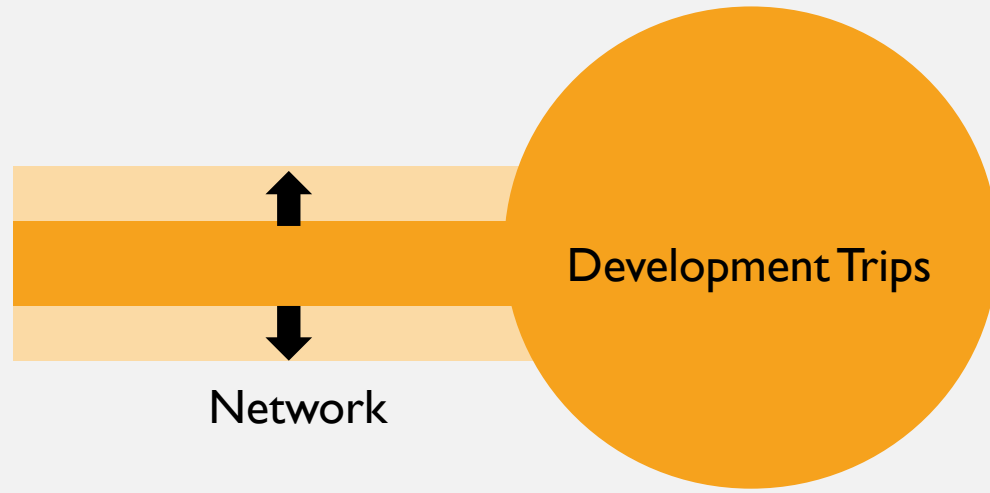


WHAT IS TRANSPORTATION DEMAND MANAGEMENT?

A package of policies and strategies designed to increase transportation system efficiency and shift travel patterns to reduce the number and length of single-occupancy vehicle (SOV) trips.

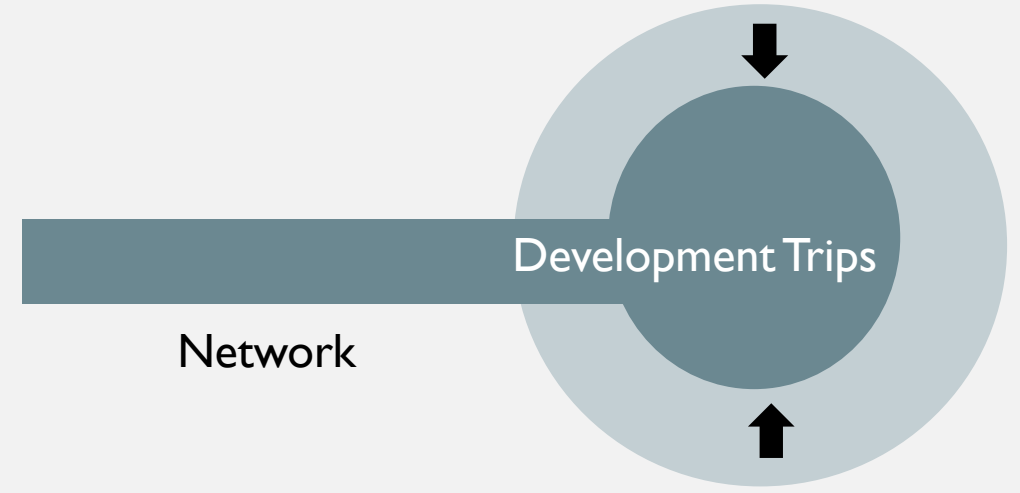


Traditional



Increase network capacity to accommodate trips

TDM



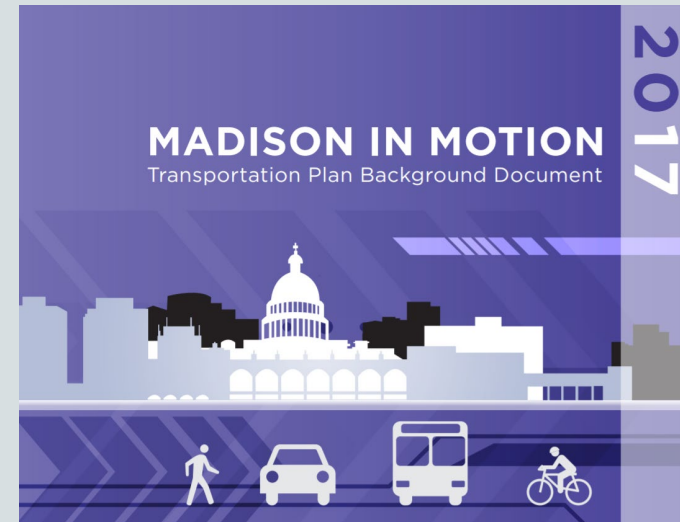
Reduce trips to accommodate network

Aligned with City Plan strategies



Strategy 5 Action:

c) Facilitate the creation of transportation management associations and implementation of **TDM strategies to serve high-intensity development** at Activity Centers and along major transit corridors.



Priority Recommendations:

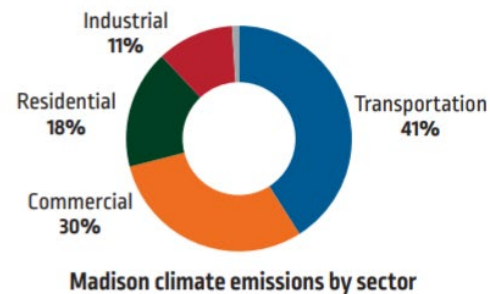
11. Develop a prototype TMA in Madison, at an appropriate area of the city, to organize individual employers and **administer TDM initiatives**.

12. Evaluate employer-based **TDM measures to increase the use of alternatives to the SOV** and reduce the need for parking.

Aligned with Sustainability Vision



Climate change threatens our health, our economy, our environment, and our quality of life. Simply put, it is one of the greatest threats of our time, and we all need to do our part to fix it. Madison is ready to do its part. We know that making a big dent in our emissions will mean doing things a little differently. Luckily, changing our ways comes with a lot of benefits – cleaner air and water, lower asthma rates, lower energy bills, less flooding, and more jobs. Madison is ready to step up and build a better economy and community for our future.



#3 Continue to invest in transit and other low-carbon transportation modes

- Charge forward by constructing a bus rapid transit system with clean electric buses
- Continue improving and expanding Metro routing to provide fast, frequent service
- **Require new development to incorporate features that help future residents and workers get around without a car**
- Construct bike lanes and bike paths to eliminate barriers and reach unserved areas
- Keep improving our street crossing to improve access and connectivity for walking

TDM in Madison's land use regulations

Conditional Use

Give consideration to TDM measures and participation in a transportation management association (TMA).

Planned Development District

A TDM plan may be required to resolve traffic and parking concerns. It should include measurable goals, strategies, and actions to encourage travelers to use alternatives to driving alone, especially at congested times of day.

Employment Campus District

Requirement of master plan for any rezoning submittal which needs to have a TDM Plan with measurable goals, strategies, and actions to encourage non-SOV trips.

Mixed Use Center District

City Traffic Engineer may require a traffic impact analysis (TIA) to determine the impacts of the District. A TDM plan may be required to resolve traffic and parking concerns.

Big-box Retail

Single retail business establishments of or over 40,000 sq. ft. with 100 or more full-time employees are required to have a TDM Plan or participate in a TMA.



Current TDM challenges

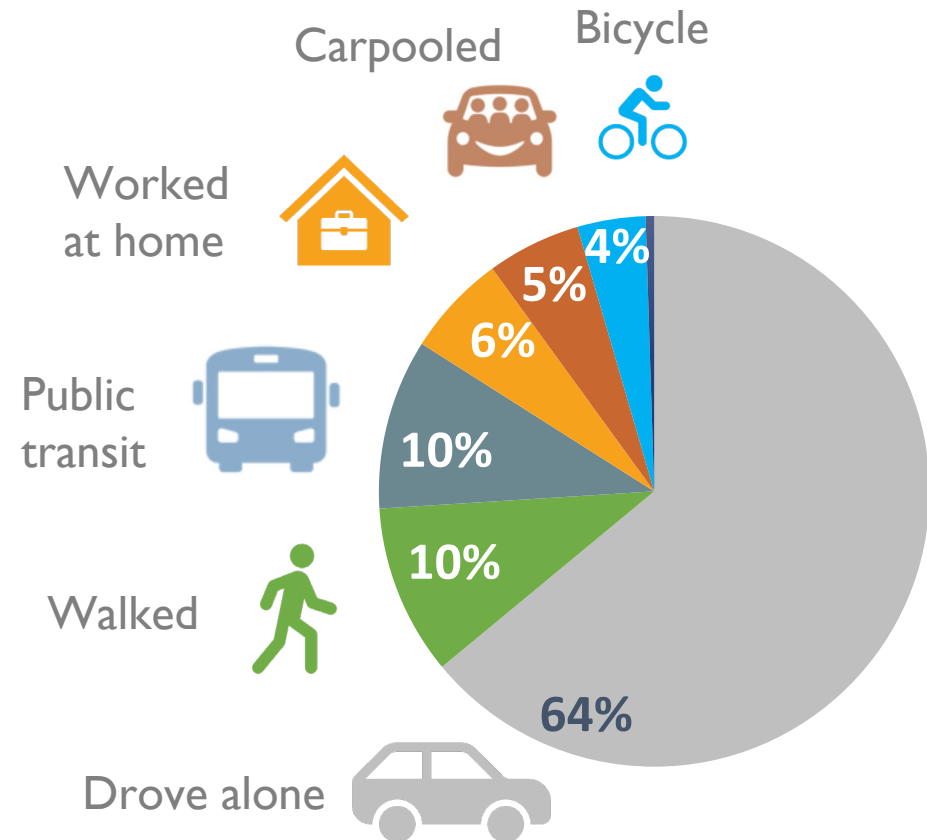
- Madison has been requesting/requiring some form of TDM and transportation impact mitigation through the development review process for over 20 years.
- Its application has been uneven.
- Developers are unsure what TDM measures may be required.
- Plan Commission and Council members struggle to determine how many TDM measures are enough to warrant approval – leading to prolonged discussions.
- Environment of uncertainty for developers and policy makers.

What would a TDM program do?

Roughly two-thirds of work-related commute trips in Madison are SOV trips.

TDM policies can shift travel patterns to reduce the number and length of SOV or drive-alone trips by encouraging alternative ways of commuting and limiting new car travel.

Means of transportation to work in Madison



Source: ACS 2019 1-year

Purpose & community benefits

- Limit negative traffic impacts such as emissions, noise and congestion, by improving sustainable transportation choices, infrastructure, and services.
- Also proactively address localized issues of public health and safety, livability and multimodal access.

Mitigate vehicle
miles traveled
(VMT)



Support equitable
transportation
options



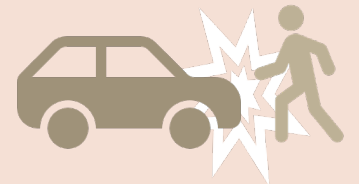
Reduce congestion,
travel delay, noise
and air emissions



Support TOD and
infill



Address public
safety impacts



Advantages of the proposed citywide TDM program



CONSISTENCY – Uniform requirements across Madison with requirements based on project size and proposed parking capacity.



CHOICE – A menu with a range of TDM measures, from installing wayfinding signs to providing a land use mix.



CLARITY – Straightforward requirements and measure options through a simple online tool.



CREDIT – Projects are acknowledged for meeting existing city requirements such as providing bicycle parking and pedestrian access.



CONVENIENCE – Streamlined approval process for new or expanding buildings, that minimizes the need for external assistance.



COMMUNICATION – Traffic-reducing elements of a project are summarized for the public and policymakers.

TDM programs reviewed

Seattle targets all employers through its successful program and has achieved the SOV rate of 48%.

Seattle, WA

Portland, OR

TDM applies to new commercial and residential development or redevelopment and requires TDM plans based on #parking spaces

Cambridge has a parking based TDM program that has been very effective in reducing drive alone trips from 55% in 1990 to 39% in 2018.

Cambridge, MA

Boston, MA

San Francisco, CA

San Jose, CA

Santa Monica, CA

Los Angeles, CA

Pasadena, CA

Boulder, CO

Denver, CO

Austin, TX

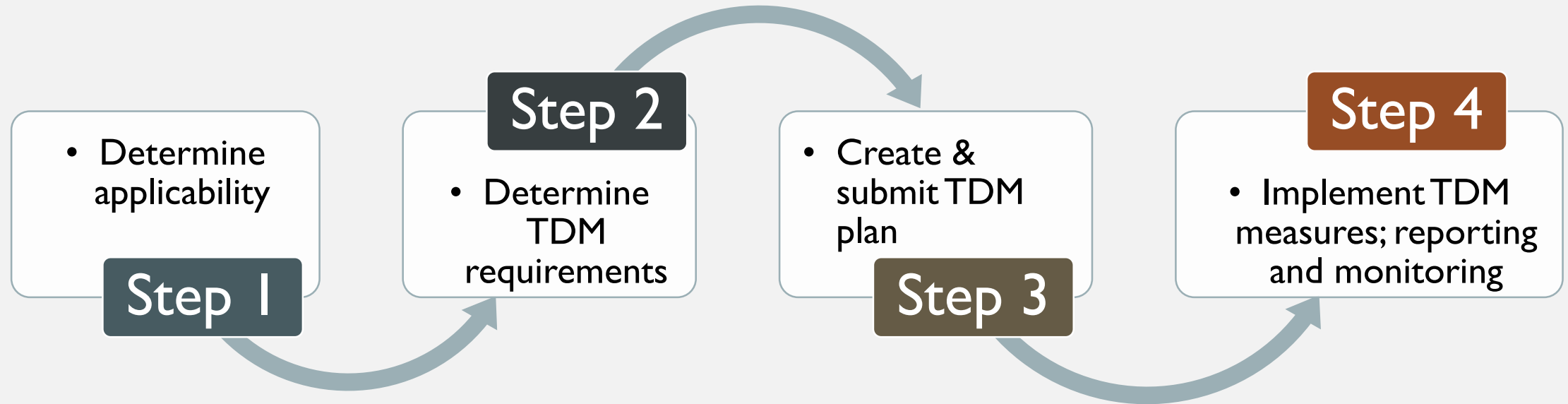
Arlington County, VA

San Francisco has a land use and parking-based program that targets VMT reduction. Developers can determine requirements through a user-friendly online TDM tool.

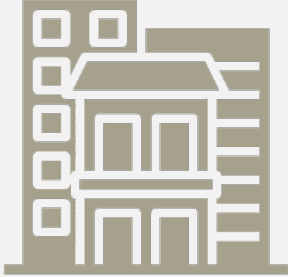
Denver introduced a new TDM ordinance in Spring 2021 that applies to new developments. Measures and SOV target rates are required based on land use, size, location, and access to high-capacity transit.

Arlington has a longstanding and comprehensive program. TDM for developments is administered as part of the site plan review process. The county saw a VMT reduction of 38% from 2008-2014.

Madison's proposed TDM process

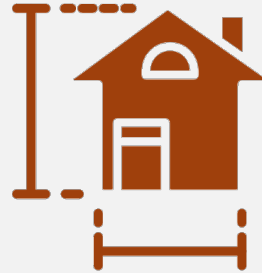


Factors that determine TDM requirements



Land use(s)

Requirements and measures vary across residential and non-residential uses (employment, commercial, institutional).



Development size

Requirements are proportional to the development size, i.e., number of residential units or non-residential floor area.



Proposed parking

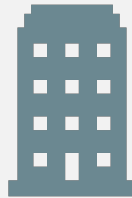
Requirements also depend on parking capacity. Higher parking ratios mean more TDM requirements.

STEP I: Land use categories



Residential

Proposed developments with 10 or more dwelling units (DU).



Employment

Offices, service centers, industrial uses and other employment uses with 10,000 sq. ft. or more floor area.



Commercial

Retail, food services, recreational and entertainment uses.



Institutional

Hotels, educational uses (high schools and above), health and other facilities.

Exemptions:

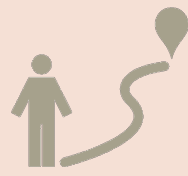
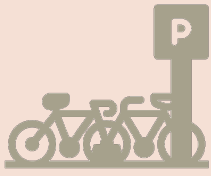
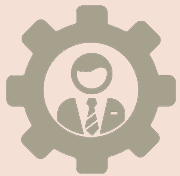
- Residential uses with <10 DU; Affordable housing (via credit of up to 10 points)
- Employment uses with <10,000 sq. ft. gross area
- Commercial and institutional uses with <10 proposed parking space; or with < 40,000 sq.ft floor area and proposed parking <1.25 times the parking minimum
- Developments with approved campus master plans (institutional or employment)
- Daycares, elementary and middle schools, public facilities/services and places of worship

Step 2: Example of TDM requirements

	Small	Low-Medium	Medium	High-Medium	Large
Residential	10-25 DU	26-50 DU	51-100 DU	101-150 DU	> 150 DU
Employment/Office	10,000 - 25,000 sf	25,001 - 50,000 sf	50,001 - 100,000 sf	100,001 - 150,000 sf	> 150,000 sf
Parking Stalls per dwelling unit (DU) or 500 sq. ft. of non-residential floor area	Mitigation points required				
< 0.5	5	8	10	12	15
0.5 - 0.99	10	12	15	18	20
1.0 - 1.49	15	18	20	22	25
1.5 - 1.99	20	22	25	28	30
2.0 - 2.5	25	28	30	32	35
2.5 +	30	32	35	38	40

Step 3: Creating a TDM plan

- Choose TDM measures from a menu with 35 options (and various sub-options).
- There are six primary categories shown alongside. The first category includes three basic measures, required for all projects.



- A seventh category provides some miscellaneous options to achieve points.



Basic Measures
B-1 to B-3



Active Transportation
AT-1 to AT-8



High-occupancy vehicles
HOV-1 to HOV-7



Information & Communication
IC-1 to IC-3



Parking Management
P-1 to P-4



Land-use + Location
LU-1 to LU-6

Step 3: TDM Menu (draft)

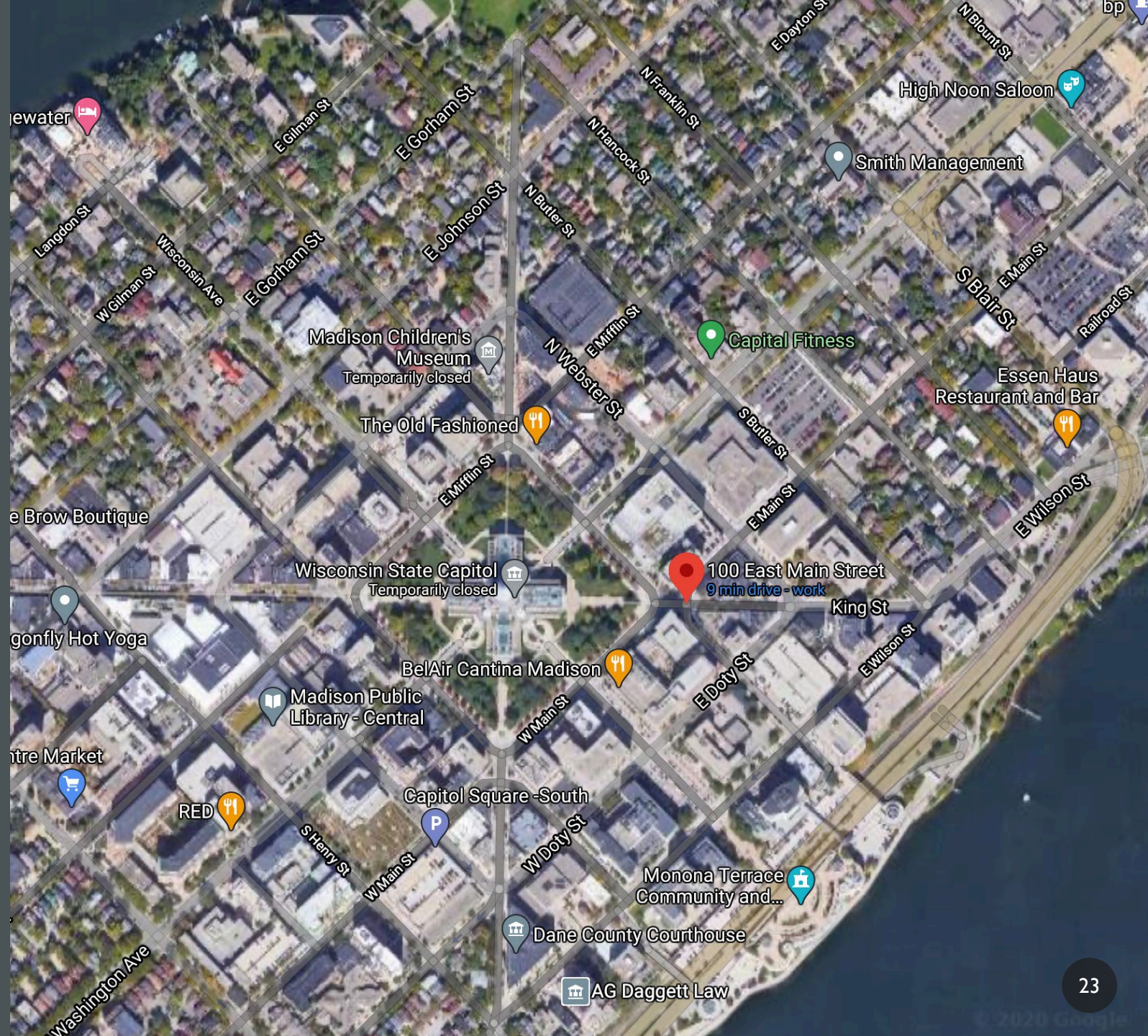
- Each measure is worth points ranging from one to ten.
- Points depend on efficacy in reducing vehicle travel, documented best practices, and contextual relevance for Madison.
- Sub-options may earn different points based on the level of implementation and/or conditions being met.

Measure Category	Code	TDM Measures	Points
Basic	B-1	Assign a TDM coordinator	1
	B-2	Provide pedestrian path to sidewalk for continuous access	1
	B-3	Provide bike parking as required by city standards	1
Active Transportation	AT-1	Enhanced access to bike parking (segregated, indoor parking)	1-2
	AT-2	No drive aisle crossing - provide direct pedestrian access	1
	AT-3	Develop or fund off-site bike infrastructure	2-8
	AT-4	Provide bike user facilities (lockers, maintenance station, etc.)	1-3
	AT-5	Provide a shared fleet of bikes for on-site residents/employees	2
	AT-6	Install a bike share station or offer discounted memberships	1-5
	AT-7	Develop or fund off-site pedestrian infrastructure	2-8
	AT-8	Develop or fund traffic calming measures	2
High Occupancy Vehicles	HOV-1	Offer vanpool options or shuttle service to employees/residents	3-5
	HOV-2	Provide car share parking or memberships, or a shared fleet of cars	1-4
	HOV-3	Implement an Emergency Ride Home program for employees	1
	HOV-4	Pay for cab or Transportation Network Company rides to BRT	2
	HOV-5	Provide discounted transit passes to employees/residents	2-8
	HOV-6	Build or fund off-site transit facilities	1-8
	HOV-7	Implement transit measures for patrons/visitors/students	2
Information & Communication	IC-1	Promote and inform residents/employees about non-SOV options	1-4
	IC-2	Install multimodal wayfinding signs	1
	IC-3	Install and operate a real-time bus/shuttle/vanpool arrival screen	1
Land Use + Location	LU-1	Provide affordable housing	1-10
	LU-2	Location efficiency determined by walk score (use online tool)	1-5
	LU-3	Provide two or more land uses on-site	2-6
	LU-4	Establish on-site or locate within 1/4 mile of a daycare facility	2
	LU-5	Provide other trip-reducing facility such as on-site food service	1
	LU-6	Located within a quarter mile of all-day bus service	3
Parking Management	P-1	Implement a priced parking program	3-10
	P-2	Have a shared parking agreement with nearby land uses	2
	P-3	Contract with an off-site parking supplier (e.g. city garage)	1
	P-4	Provide free or preferentially sited parking for carpool vehicles	2
Others	O-1	Delivery-related measures (on-site storage, pick-up/drop-off area)	1
	O-2	Pay in-lieu fee to permanently achieve any number of points	
	O-3	Join a Transportation Management Association	1
	O-4	Provide other innovative measures, not listed here	1-4

HYPOTHETICAL PROJECTS

HYPOTHETICAL PROJECT I

- **Property:** 100 block of E. Main Street
- **Use:** Office
- **Floor area:** 110,000 sq. ft.
- **Proposed parking:** 220 stalls
- **Parking ratio:** 1 stall/500 sq. ft.
- **Project Size:** High-Medium
- **Point target:** 22



TDM Requirements: Employment

	Small	Low-Medium	Medium	High-Medium	Large
Employment uses	10,000 - 25,000 sf	25,001 - 50,000 sf	50,001 - 100,000 sf	100,001 - 150,000 sf	150,000+ sf
Parking Stalls per 500 square feet (sf)	Mitigation points required				
< 0.5	5	8	10	12	15
0.5 - 0.99	10	12	15	18	20
1.0 - 1.49	15	18	20	22	25
1.5 - 1.99	20	22	25	28	30
2.0 - 2.5	25	28	30	32	35
2.5 +	30	32	35	38	40

Hypothetical Project I – TDM measures

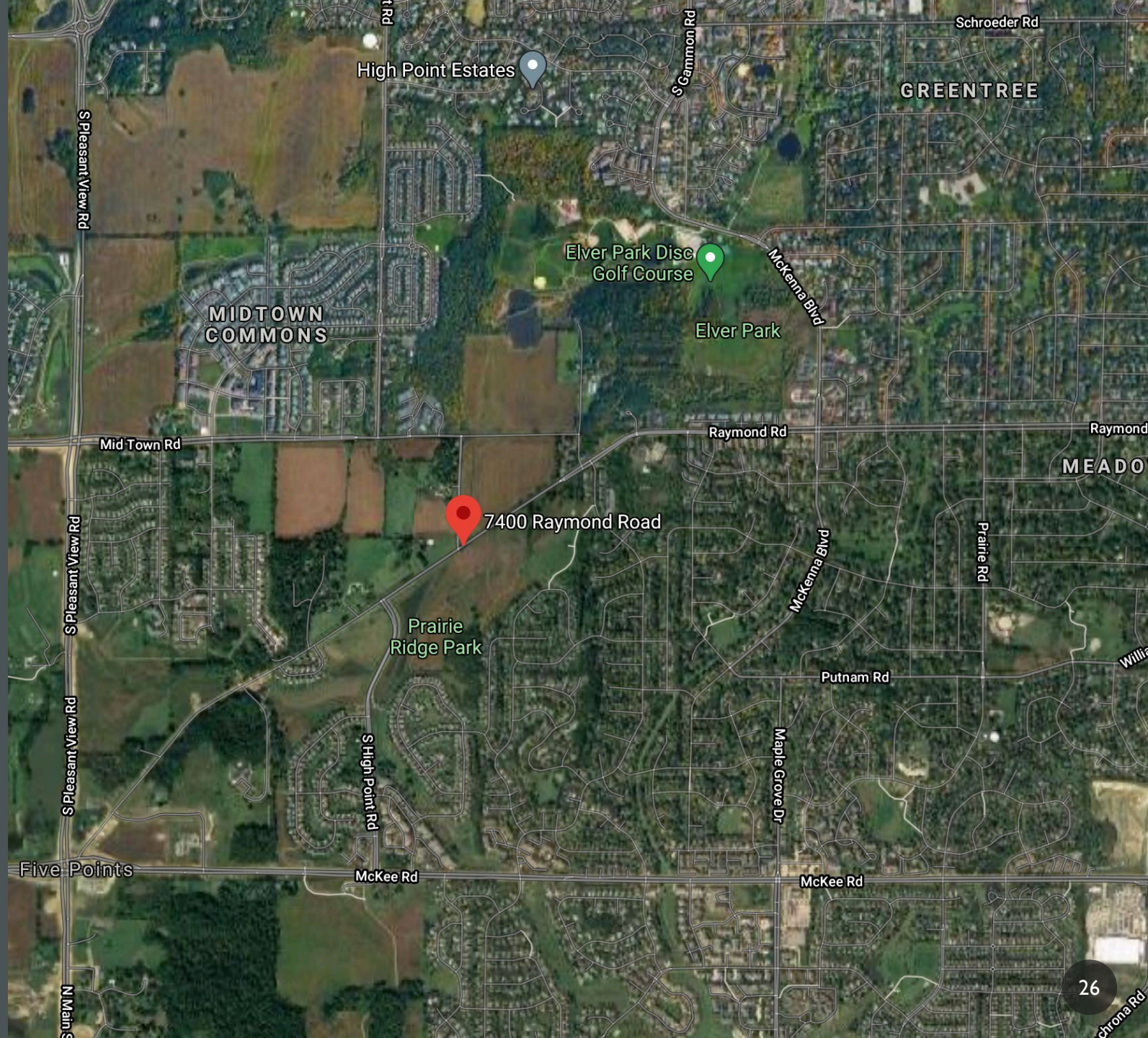
Basic & location-based TDM measures	Points
Base points	3
<i>B-1 Designate a TDM coordinator</i>	<i>1</i>
<i>B-2 Bike Parking – city standards</i>	<i>1</i>
<i>B-3 Pedestrian access</i>	<i>1</i>
Location Efficiency (Walk score is 95+)	5
All-day transit service (within quarter mile)	3
TOTAL	11

Code	Hypothetical TDM measures	Points
	Basic & location-based points earned	11
HOV-5	Offer discounted transit passes to employees	4
IC-1	Marketing & information (<i>employee orientation & promotional campaign</i>)	<i>1</i>
IC-2	Multimodal wayfinding signage	1
P-1	Parking cash out (<i>for employees</i>)	5
	TOTAL	22

* Potential ongoing costs

HYPOTHETICAL PROJECT 2

- **Property:** 7400 block of Raymond Road
- **Use:** Residential (20% affordable)
- **No. of DUs:** 100
- **Proposed parking:** 150 stalls
- **Parking:** 1.5 stall/DU
- **Project Size:** Medium
- **Point target:** 25



TDM Requirements: Residential

	Small	Low-Medium	Medium	High-Medium	Large
Residential uses	10-25 DU	26-50 DU	51-100 DU	101-150 DU	150+ DU
Parking Stalls per dwelling unit (DU)	Mitigation points required				
< 0.5	5	8	10	12	15
0.5 - 0.99	10	12	15	18	20
1.0 - 1.49	15	18	20	22	25
1.5 - 1.99	20	22	25	28	30
2.0 - 2.5	25	28	30	32	35
2.5 +	30	32	35	38	40

Hypothetical Project 2 – TDM measures

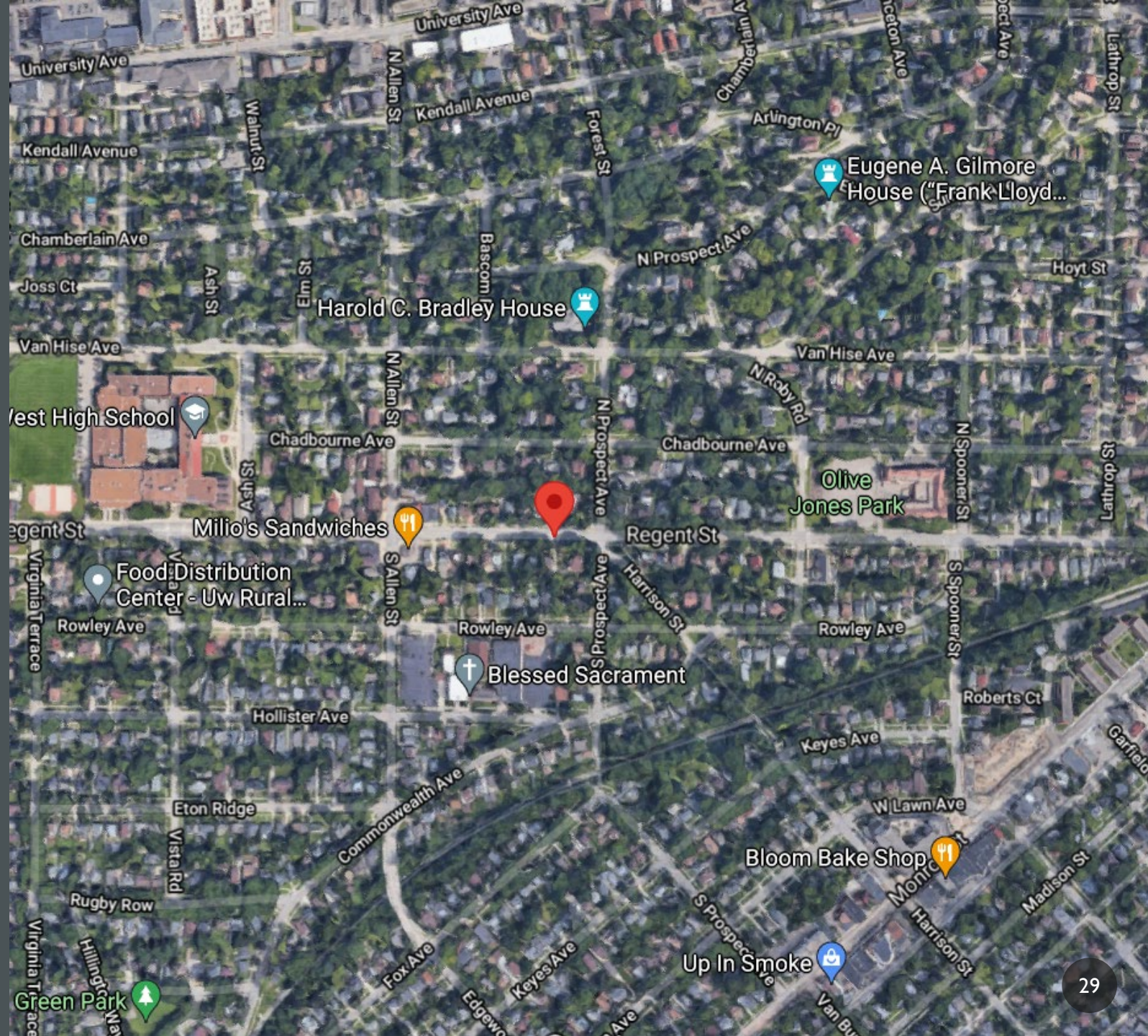
Basic & land use-based TDM measures	Points
Base points	3
<i>B-1 Designate a TDM coordinator</i>	1
<i>B-2 Bike Parking – city standards</i>	1
<i>B-3 Pedestrian access</i>	1
Affordable housing (20%)	2
TOTAL	5

Code	Hypothetical TDM measures	Points
	Basic & land use-based points earned	5
AT-1	Enhanced access to bike parking (<i>both options</i>)	2
AT-3	Off-site bike/pedestrian infrastructure	4
AT-4	Bike user facility (<i>maintenance station</i>)	1
AT-8	Traffic calming measures	2
HOV-2	Car share; <i>Option A: Shared fleet of cars for residents</i>	4
IC-1	Marketing and information (<i>welcome packet to residents</i>)	1
IC-2	Multimodal wayfinding signage	1
P-1	Priced parking – unbundled parking	5
	TOTAL	25

* Potential ongoing costs

HYPOTHETICAL PROJECT 3

- **Property:** 2100 block of Regent Street
- **Use:** Commercial
- **Floor area:** 20,000 sq. ft. (grocery store)
- **Proposed parking:** 65
- **Ratio of proposed parking to parking minimum:** 1.30
- **Project Size:** Small
- **Point target:** 12



TDM Requirements: Commercial

	Small	Low-Medium	Medium	High-Medium	Large
Commercial uses	< 40,000 sf	40,001 - 100,000 sf	100,001 - 150,000 sf	150,001 -200,000 sf	> 200,000 sf
Ratio of proposed parking to use-specific parking minimum (PM)	Mitigation points required				
Under PM	no TDM	8	10	12	15
1.00 - 1.24 times PM	no TDM	12	15	18	20
1.25 - 1.49 times PM	12	15	18	20	22
1.50 - 1.74 times PM	15	18	20	22	25
1.75 - 2 times PM	18	20	22	25	28
2+ times PM	20	22	25	28	30

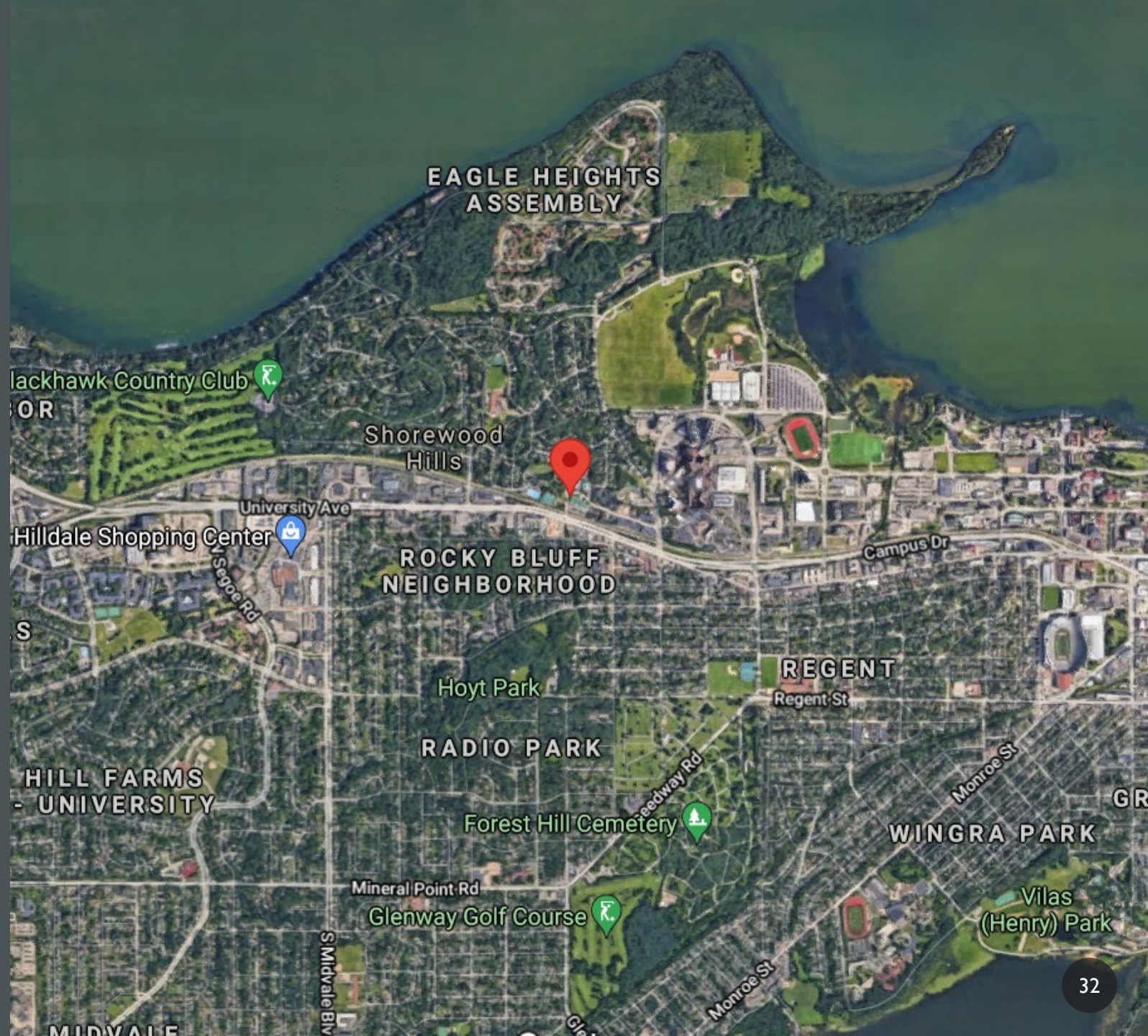
Hypothetical Project 3 – TDM measures

Basic & location based TDM measures	Points
Base points	3
<i>B-1 Designate a TDM coordinator</i>	1
<i>B-2 Bike Parking – city standards</i>	1
<i>B-3 Pedestrian access</i>	1
Location efficiency	1
All-day transit service (within quarter mile)	3
TOTAL	7

Code	Hypothetical TDM measures	Points
	Basic & location-based points earned	7
AT-2	No drive aisle crossing	1
AT-6	Offer bike share memberships to employees	2
IC-3	Real time arrival screen for transit	1
O-1	Delivery measure (<i>non-motorized deliveries or a multi-stop delivery service</i>)	1
	TOTAL	12

HYPOTHETICAL PROJECT 4

- **Property:** 2900 block of University Ave
- **Use:** Residential + commercial
- **Retail Floor area:** 10,000 sf
- **No. of DUs:** 50
- **Proposed parking:** 110
(residential – 70; retail – 40)
- **Residential parking ratio:** 1.4
stalls/DU
- **Ratio of proposed parking to
parking minimum:** 1.60



TDM Requirements: Both uses

Residential

	Small	Low-Medium	Medium	High-Medium	Large
Parking Stalls per DU	10-25 DU	26-50 DU	51-100 DU	101-150 DU	150+ DU
< 0.5	5	8	10	12	15
0.5 - 0.99	10	12	15	18	20
1.0 - 1.49	15	18	20	22	25
1.5 - 1.99	20	22	25	28	30
2.0 - 2.5	25	28	30	32	35
2.5 +	30	32	35	38	40

Commercial

	Small	Low-Medium	Medium	High-Medium	Large
Ratio of proposed parking to PM	< 40,000 sf	40,001 - 100,000 sf	100,001 - 150,000 sf	150,001 - 200,000 sf	> 200,000 sf
Under PM	No TDM	8	10	12	15
1.00 - 1.24		12	15	18	20
1.25 - 1.49	12	15	18	20	22
1.50 - 1.74	15	18	20	22	25
1.75 - 2	18	20	22	25	28
2+	20	22	25	28	30

Hypothetical Project 4 – TDM measures

Note that while mixed use requires more points – TDM measures are counted twice.

Code	TDM measures	Resi.	Comm.
B-I-3	Basic points	3	3
	B-1 Designate a TDM coordinator		
	B-2 Bike Parking – city standards		
	B-3 Pedestrian access		
LU-2	Location efficiency	3	1
LU-3	Mixed use development (points for on-site retail use)	3	
LU-6	All-day transit service (within quarter mile)	3	3
AT-6	Bike share; <i>Option B: Offer discounted memberships to all employees and households</i>	2	2
	<i>Option C: Located within quarter mile of a bike share station</i>	1	1
AT-7	Build off-site pedestrian infrastructure	2	2
IC-1	Marketing and information <i>Option C: financial incentives for sustainable transportation</i>		1
IC-2	Multimodal wayfinding signage	1	1
	TOTAL	18	15



Step 1: Search or Click on the Map

Enter an address or parcel here or click on the map below.

Search

Step 2: Choose Land Use Categories



☒ RETAIL ?



☐ OFFICE ?



☐ RESIDENTIAL ?



☐ OTHER ?

SAN FRANCISCO TDM TOOL

Project Location
Address

Street Address:

Assessors Block/Lot:

Transportation Analysis Zone Number:

Unintended Parking Consequences

- Residents or patrons of the development could use street parking instead of development parking.
- The availability of street parking reduces the impetus to use non-motorized transportation modes and diminishes the effectiveness of the TDM program.
- Neighboring residents may oppose a good development out of fear of losing on-street parking availability.



Possible Interim Parking Policy Measures

- Limit RP3 permits to spaces available.
- Make it easier to proactively implement RP3/RPO
- Transition from RP3 to RPO (extends effective hours)
- Limit parking permits to vehicles registered at the address



Comments from Development Community

- Like the transparency and predictability of the program.
- Like the ability to make choices and buy points if needed.
- Make differentiation between upfront costs (capital) and ongoing costs (operational). Ongoing costs are harder.
- The HOV category of points (operational) is difficult. How do they make operational expense commitments on behalf of tenants and remain competitive?
- How would a multi-stage development work where parking is built in first phase?

Comments from Development Community

- How much cost would this add to a project?
 - Should the point value be more closely linked to the cost of the measure?
- Should healthcare be exempted?
- Not enough credit given to urban core projects (or too much credit given to urban core projects).
- Should affordable housing or income restricted units get more points?
- Should there be points for density (e.g., units/acre)?
- Can the City provide resources on how to implement measures (ex: transit boards)



Comments from Development Community

- Need to make this robust enough to change transportation habits, but not drive development out of Madison.
- Can mitigation points made invalid from factors outside of their control be grandfathered in?
- Tenants and banks have minimum parking standards. This program allows that but requires increased mitigation. This appeared to be good because it makes it mainly a business decision.



SPECIFIC QUESTIONS FOR THE BOARD/COMMISSION

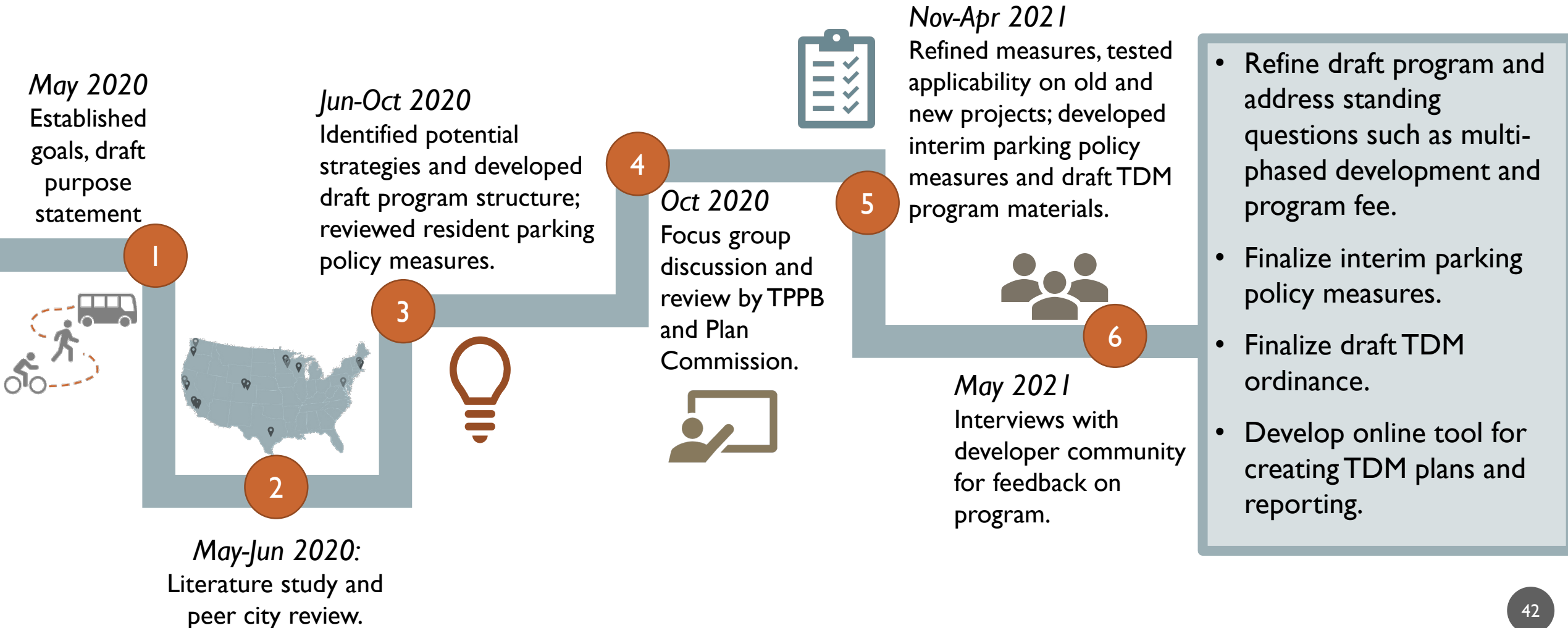
Should interim parking policy measures be considered with implementation of TDM?

Are we hitting the right scale, e.g., all developments? Should smaller developments be exempt?

How should minor modifications on large parcels be handled? (E.g., West Towne Mall)

How should phased developments be handled?

Next Steps: TDM and parking



THANK YOU!