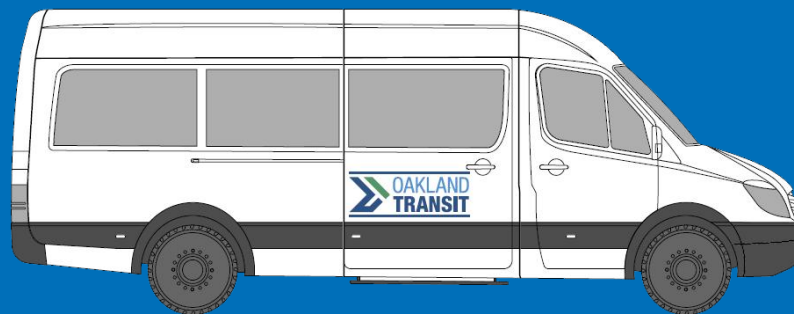




Partnering to Build Transit-Friendly Communities

March 2024 Planners Gathering



Agenda

- What Do We Mean By “Transit”?
- What’s New with Transit in Oakland County?
- Lessons Learned
- How to Partner Moving Forward

What Do We Mean By “Transit”?



What Do We Mean By “Transit”?

Demand Response



Community Transit

Prebooked door-to-door or curb-to-curb service within a designated area



Microtransit

On-demand app-based rideshare service with pickups and drop-offs at locations assigned by the technology (like Uber/Lyft)



ADA Paratransit

Prebooked curb-to-curb service with pickups and drop-offs within 3/4-miles of bus stops for those unable to use fixed route due to a disability (ADA certification required)



Fixed Route

Schedule-based service with pickups and drop-offs at designated bus stops

The “Modes” of Transit

What Do We Mean By “Transit”?

Demand Response



Door-to-Door

Driver physically assists the rider get between the door of the location and the vehicle



Virtual Stop-to-Virtual Stop

Technology assigns the rider a location to walk to for pickup/drop-off to keep vehicles on the most efficient route



Curb-to-Curb

Driver picks up and drops off the rider at the curb of the location (no assistance to the door)



Bus Stop

Location is marked with a signpost where a fixed route can pickup or drop off passengers

Pickup and Drop-Off

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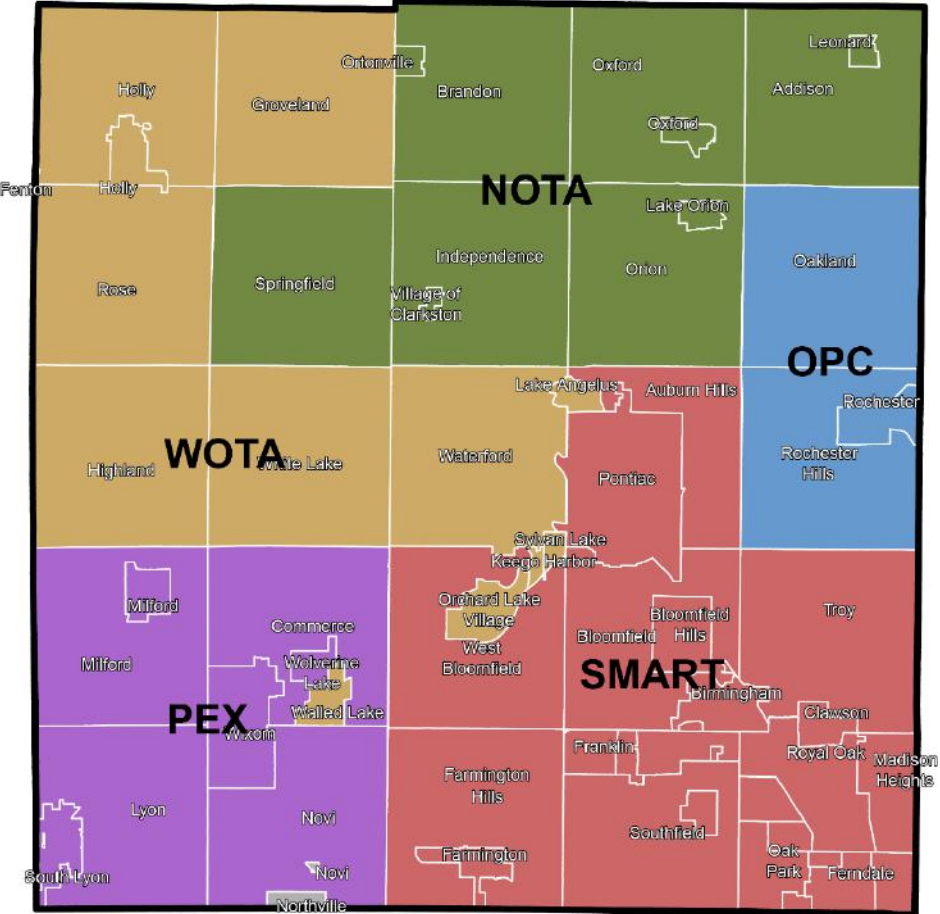


Fixed Route

Schedule-based service with pickups and drop-offs at designated bus stops

- SMART Connector
- SMART Community Partnership Programs (Birmingham NEXT)
- NOTA
- WOTA
- OPC
- People's Express

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*Novi to join PEX July 2024

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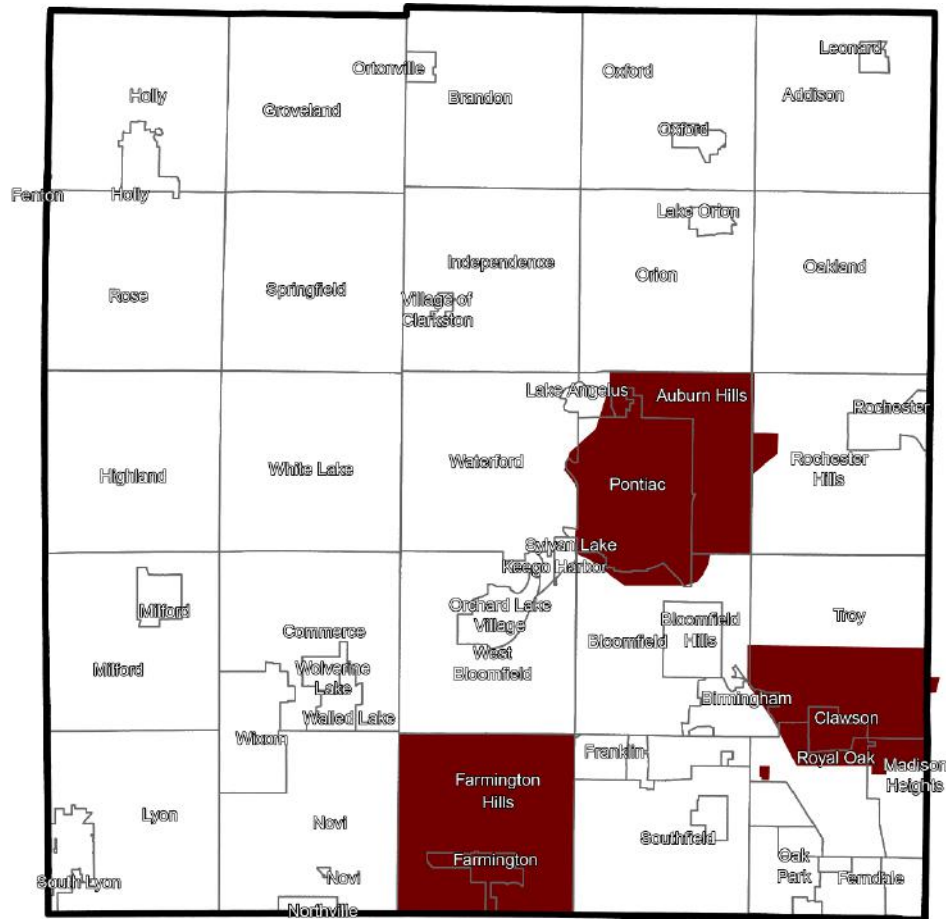
Fixed Route

Schedule-based service with pickups and drop-offs at designated bus stops

SMART Flex

- Pontiac / Auburn Hills
- Troy / Clawson
- Farmington / Farmington Hills

What Do We Mean By “Transit”?



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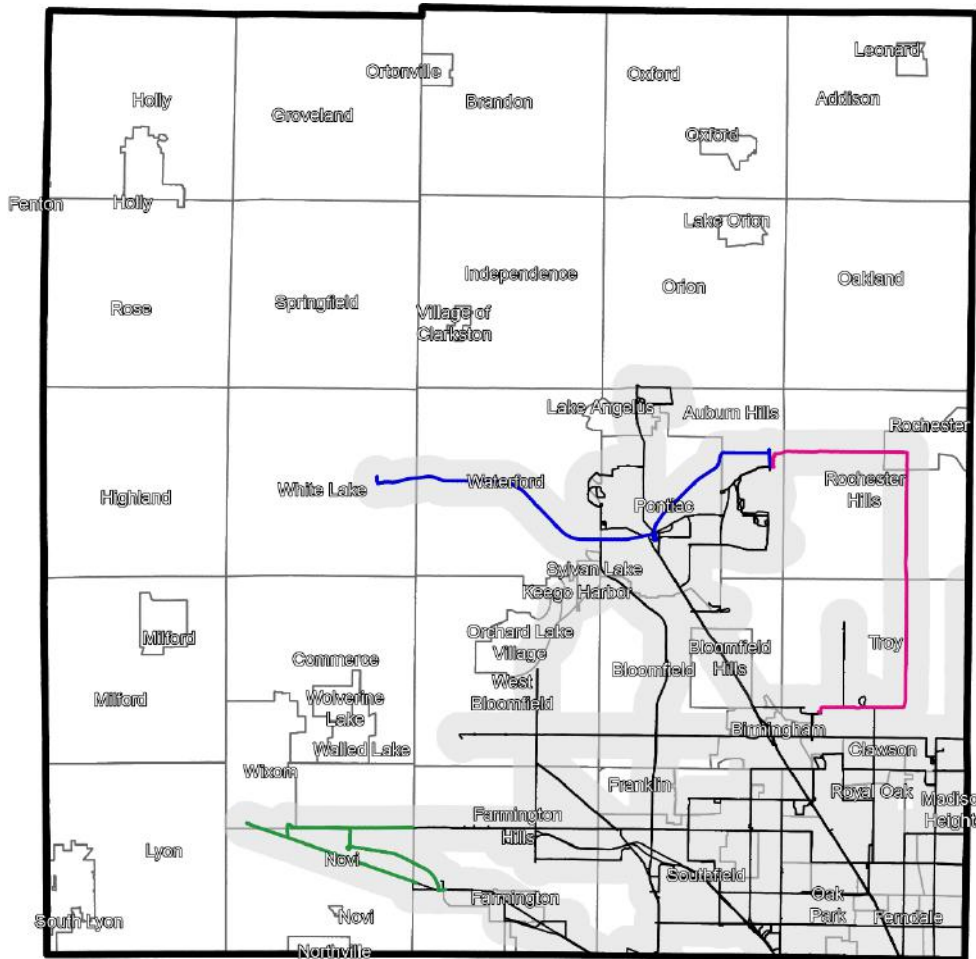


Fixed Route

Schedule-based service with pickups and drop-offs at designated bus stops

- SMART Fixed Route
- SMART ADA

What Do We Mean By “Transit”?



ADA Paratransit

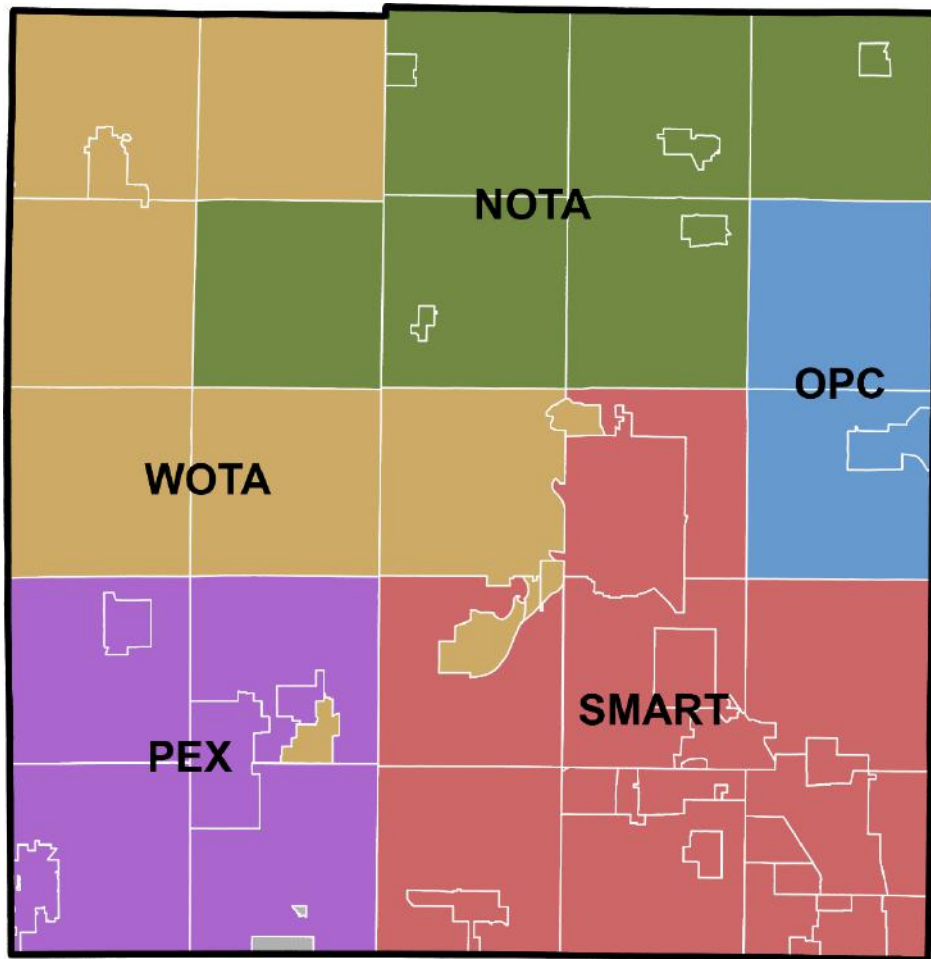
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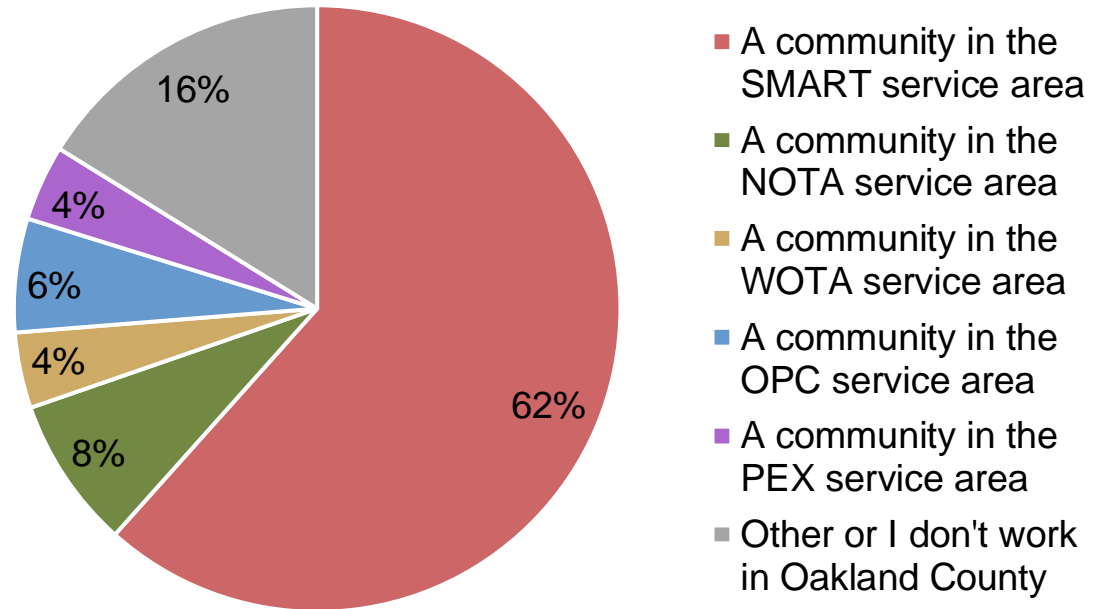
Schedule-based service with pickups and drop-offs at designated bus stops

- Existing
- Sept 2023
- Apr 2024
- June 2024

Poll: What public transit service area do you work in?



Attendee Responses

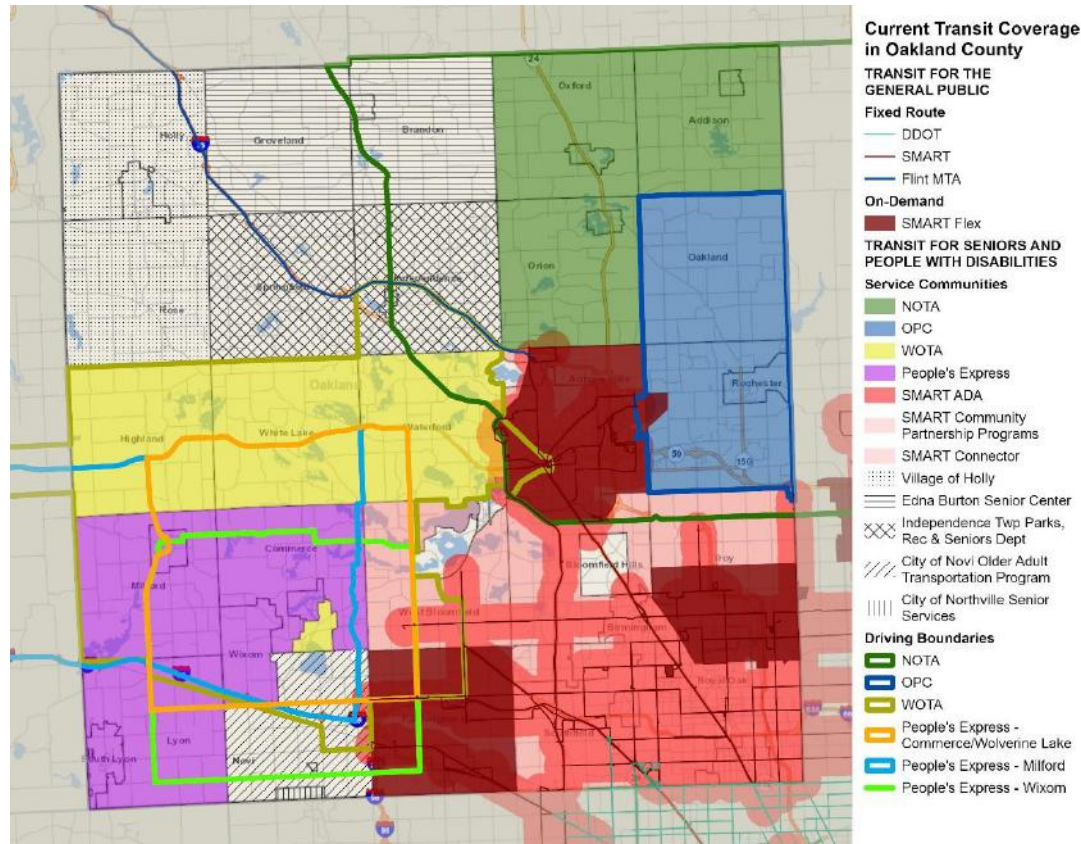


What's New with Transit in Oakland County?



What's New with Transit in Oakland County?

Until last year:



What's New with Transit in Oakland County?



Before the Countywide Millage:

- Communities with no transit whatsoever and communities with service for seniors and people with disabilities only
- Limited service areas and disconnect between transit providers
- Varying fare structures, hours of operation, etc.

Result: Confusing and uncoordinated trip-making

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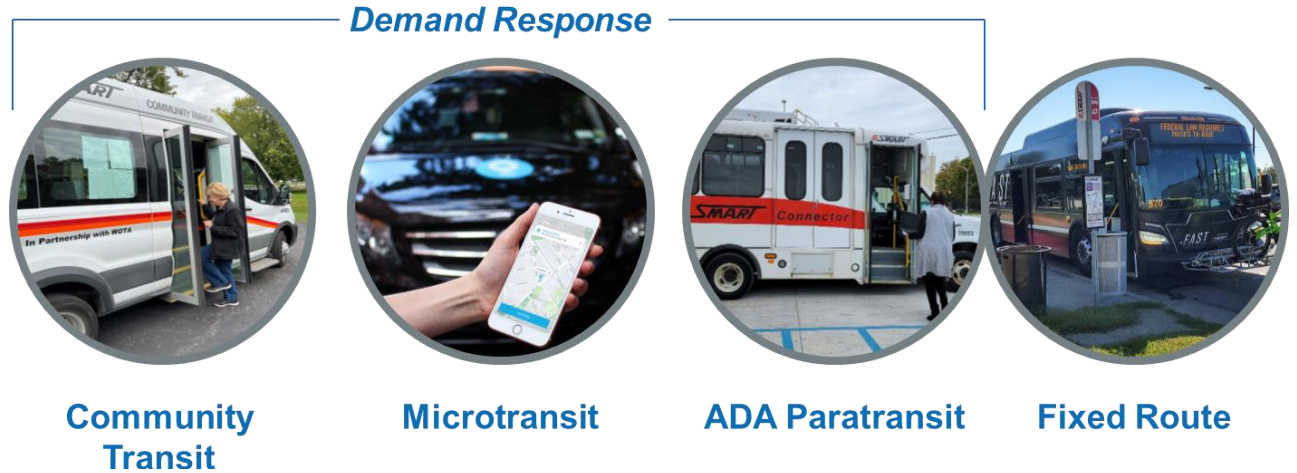
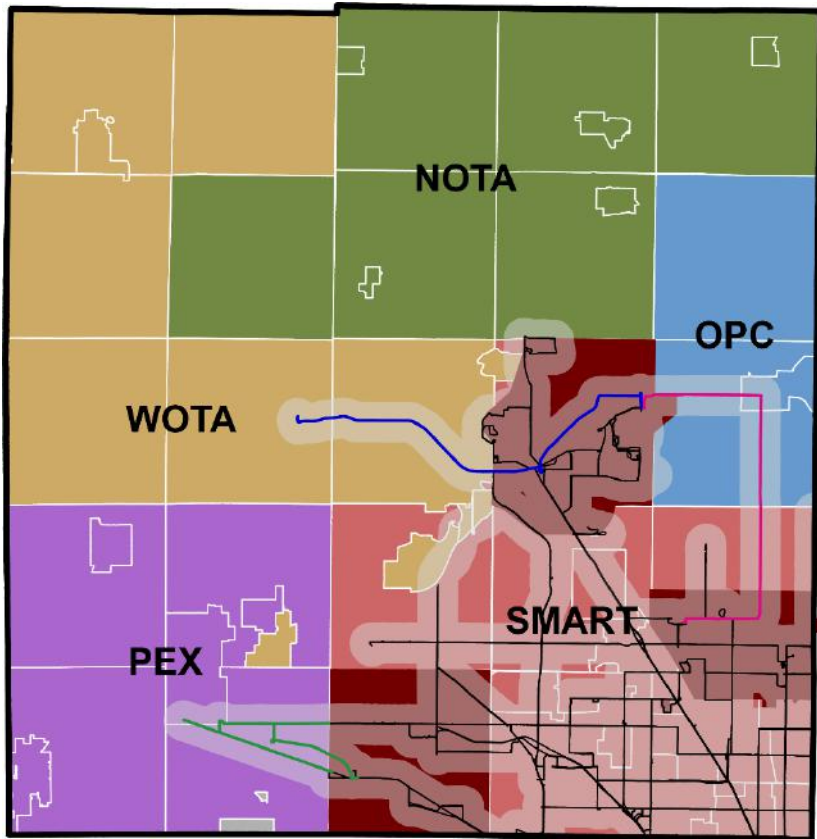
After the Countywide Millage:

- New Transit Division within Economic Development alongside Planning
- Working towards all communities covered with general public service
- Expanding service areas and coordinating services amongst the different transit providers
- Unifying fare structures, hours of operation, etc.

Result: Working towards seamless and easy-to-understand trip-making

What's New with Transit in Oakland County?

Today:



From 2022-2023...

Demand Response gained:

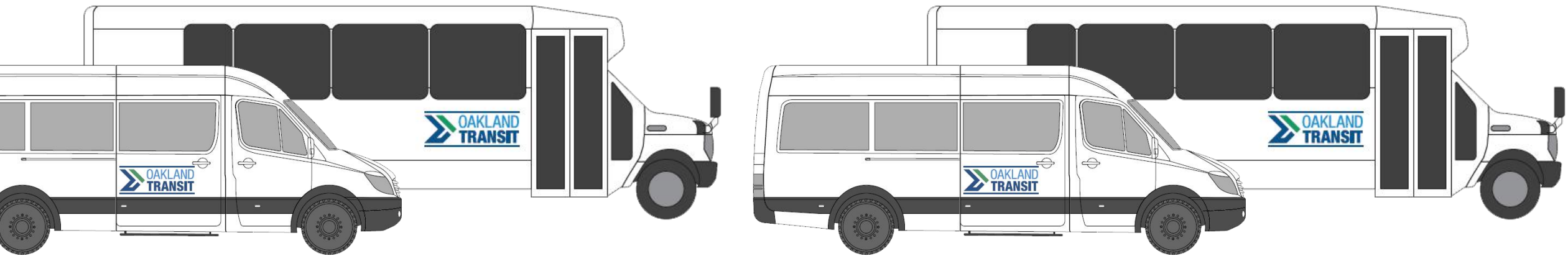
- **40** new vehicles
- **163** new staff
- **24%** more trips
(microtransit grew **43%**)

Fixed Route gained:

- **96** new drivers
- **3** extended routes
- **68** new bus stops
- **8%** more trips

Question of the Day:

As transit service is enhanced and expanded, **what can your community do** to accommodate more riders and more transit vehicles?





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DEMAND RESPONSE
CONSIDERATIONS

SIGNIFICANCE OF DEMAND RESPONSE SERVICE

- Provided an estimated **245,777 rides in Oakland County** in 2023 (SMART, NOTA, WOTA, OPC, and People's Express combined)
- Maintains residents' **independence** and helps them **affordably reach critical destinations every day** (grocery shopping, medical appointments, senior centers, and more)



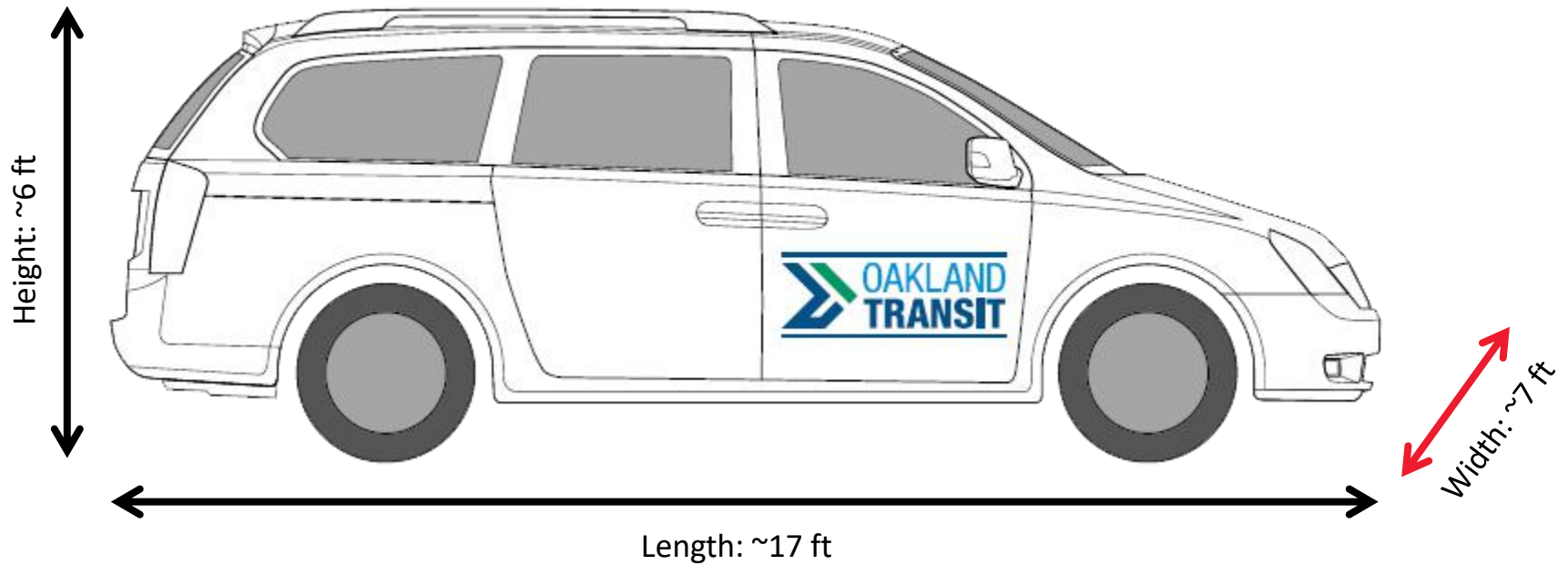
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DEMAND RESPONSE VEHICLES

Minivan

- Only requires a Chauffeur's License to operate
- Wheelchair accessible carries up to 3 passengers, ramp on side or rear (side is preferred for safety)
- Non-wheelchair accessible carries up to 5 passengers
- Turning radius of ~20 ft



Community
Transit



Microtransit

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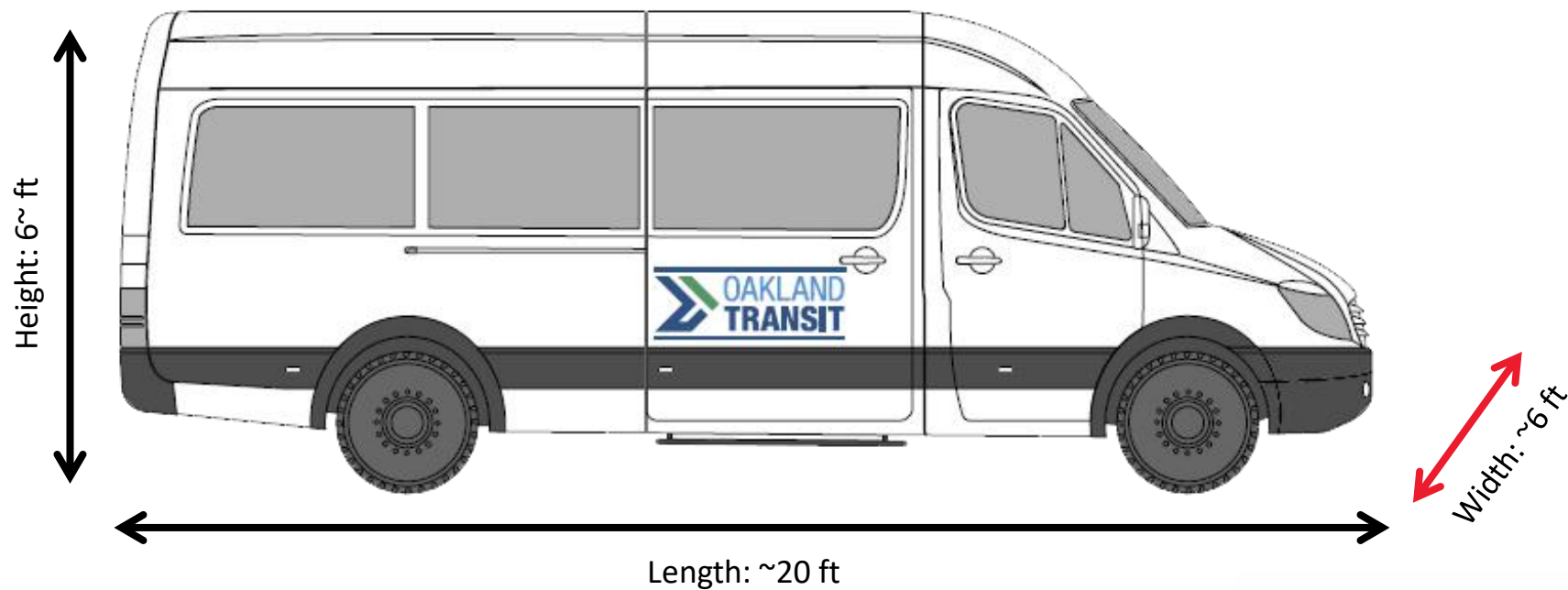


**Community
Transit**

DEMAND RESPONSE VEHICLES

Transit Van

- Only requires a Chauffeur's License to operate
- Wheelchair accessible carries up to 7 passengers, ramp on side or rear (side is preferred for safety)
- Non-wheelchair accessible carries up to 9 passengers
- Turning radius of ~20 ft



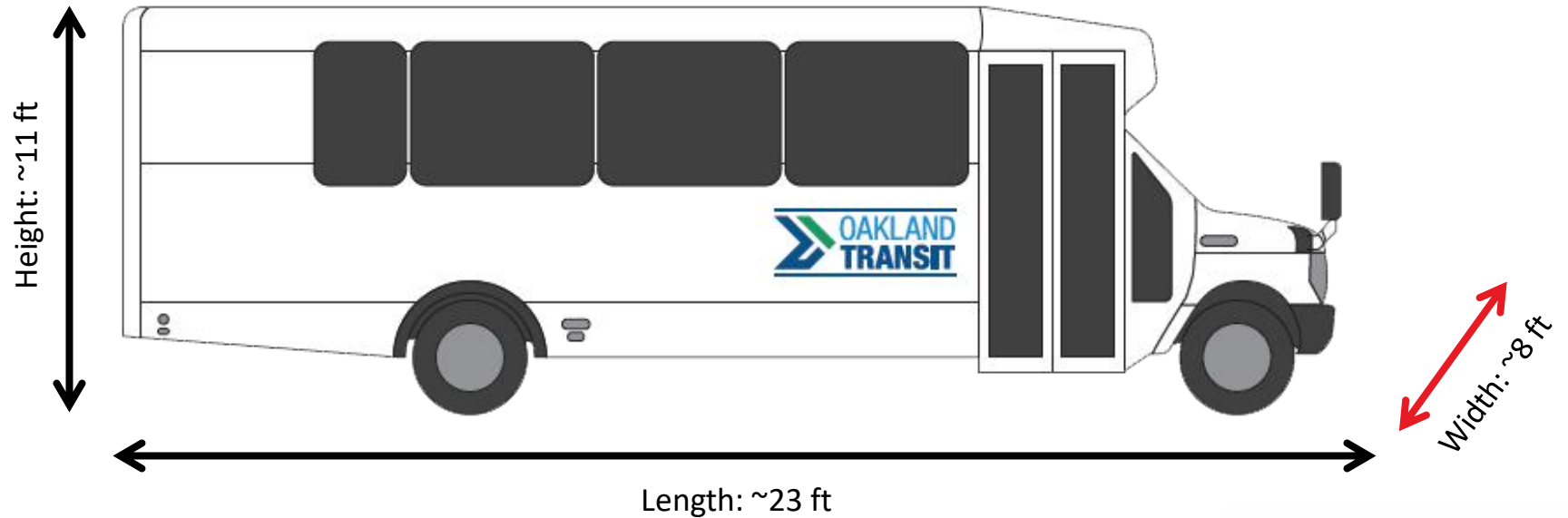
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DEMAND RESPONSE VEHICLES

Cutaway (Small Bus)

- Only requires a Chauffeur's License to operate (15 or fewer people on the vehicle), requires a Commercial Driver's License if more than 15 people on board
- Equipped with wheelchair ramp on side or rear (side is preferred for safety)
- Carries up to ~20 passengers
- Turning radius of ~28 ft



**Community
Transit**



**ADA
Paratransit**

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OPERATING CONSIDERATIONS

- **Reversing:** Transit vehicles have larger turning radii as well as many and large blind spots, making backing up a challenging and often unsafe maneuver. Pull-through circulation patterns that do not require transit vehicles to back up are best practice.
- **Passenger loading/unloading:** A significant share of demand response riders use mobility devices that require transit vehicles to deploy a lift or ramp for people to get on/off. Ensuring that pickup/drop-off locations have ample space and adequate protection from surrounding traffic for these deployments is essential.



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CHALLENGE: NAVIGATING PARKING LOTS



Location: Northwest Detroit
Dialysis - Lahser Satellite Center

Problems:

- Tight space between car lines
- No space to turn around without unsafely backing up
- Vehicle must stop on Lahser Road to let passenger out

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SUCCESS STORY: DEDICATED SPACE IN PARKING



Location: DaVita Romulus Dialysis Center

Problems:

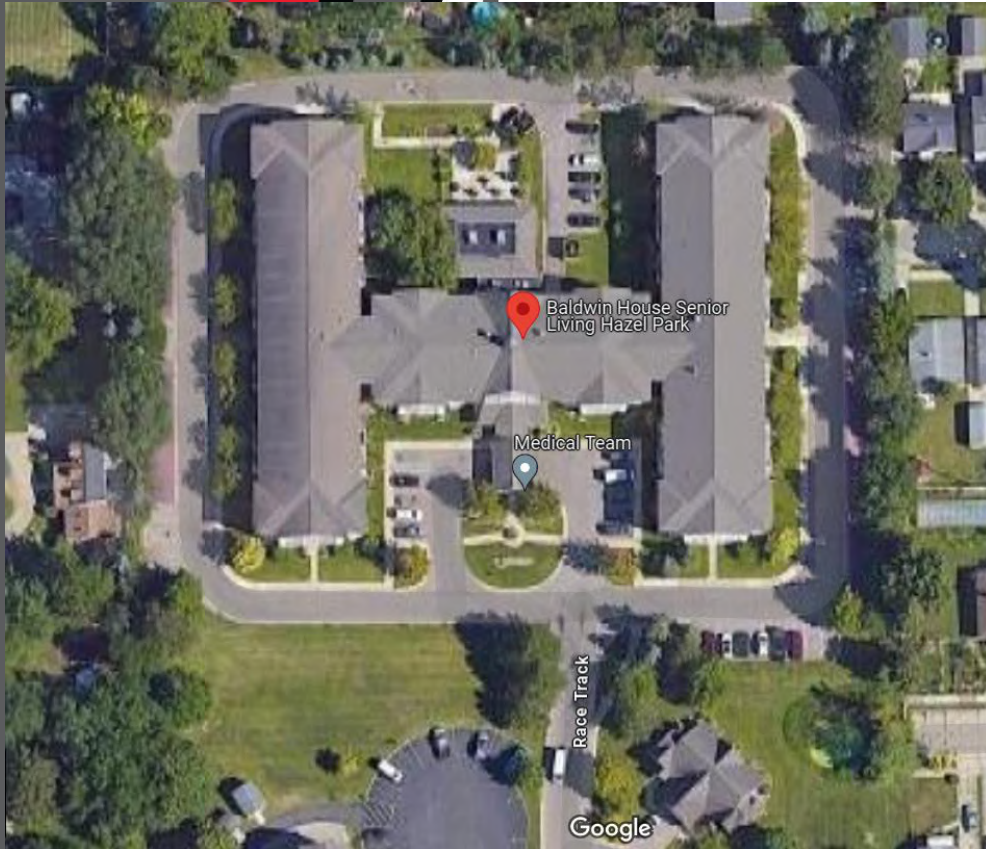
- Constrained parking lot
- Dropping riders off on the main road is dangerous

Solution: Blocked off parking spots and painted the yellow area to establish a safe place for a vehicle to turn around on the property

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CHALLENGE: OVERHANGS



Location: Baldwin House in Hazel Park

Drivers may not go under any overhangs unless clearly marked as being above the vehicle height

Problem: Vehicles cannot pull into the circle drive due to the overhang being too low

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CHALLENGE: LACK OF SHOULDERS



Location: Residence on Inkster Rd
in Farmington Hills

SMART drivers avoid pulling into residential driveways in order to avoid backing up into the street

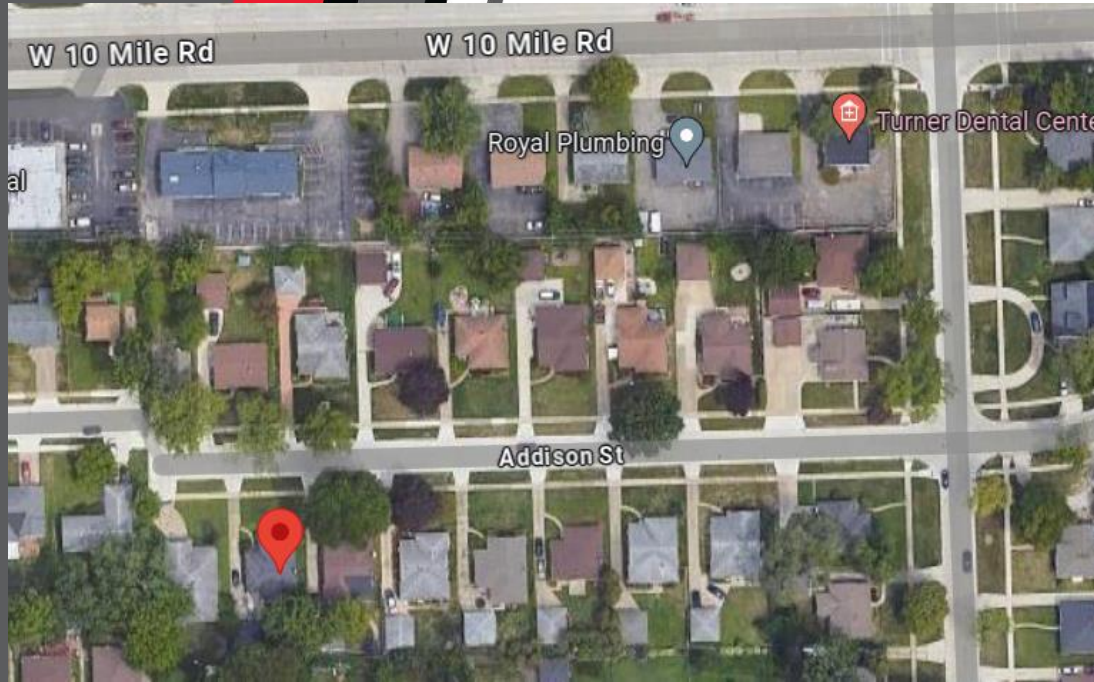
Problems:

- Driver must stop vehicle on the main road and deploy the wheelchair lift
- High-volume and high-speed traffic driving around the vehicle
- Safety concerns for both the passenger and driver

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CHALLENGE: DEAD-END STREETS



Location: Addison St in Southfield

SMART drivers avoid pulling into residential driveways in order to avoid backing up into the street

Problem: A wheelchair user at the end of the street is unable to get door-to-door services due to the dead-end street



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CHALLENGE: UNPAVED/UNMAINTAINED ROADS



Location: Halsted Rd north of 14 Mile Rd in West Bloomfield

Problem: Unpaved roads that do not undergo regular grading increase maintenance costs to vehicles due to increased wear and tear on each vehicle

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FIXED ROUTE CONSIDERATIONS

SIGNIFICANCE OF FIXED ROUTE SERVICE

- SMART provided an estimated **4,616,188 rides** throughout its **service area** in 2023
- Gets people to their **everyday needs affordably** and keeps residents who are unable to drive **active, engaged, and independent** in their communities
- When well-integrated into a community, it can also **combat traffic congestion, reduce pollution, reduce unhealthy inactivity** (built-in walking), and **spur development**



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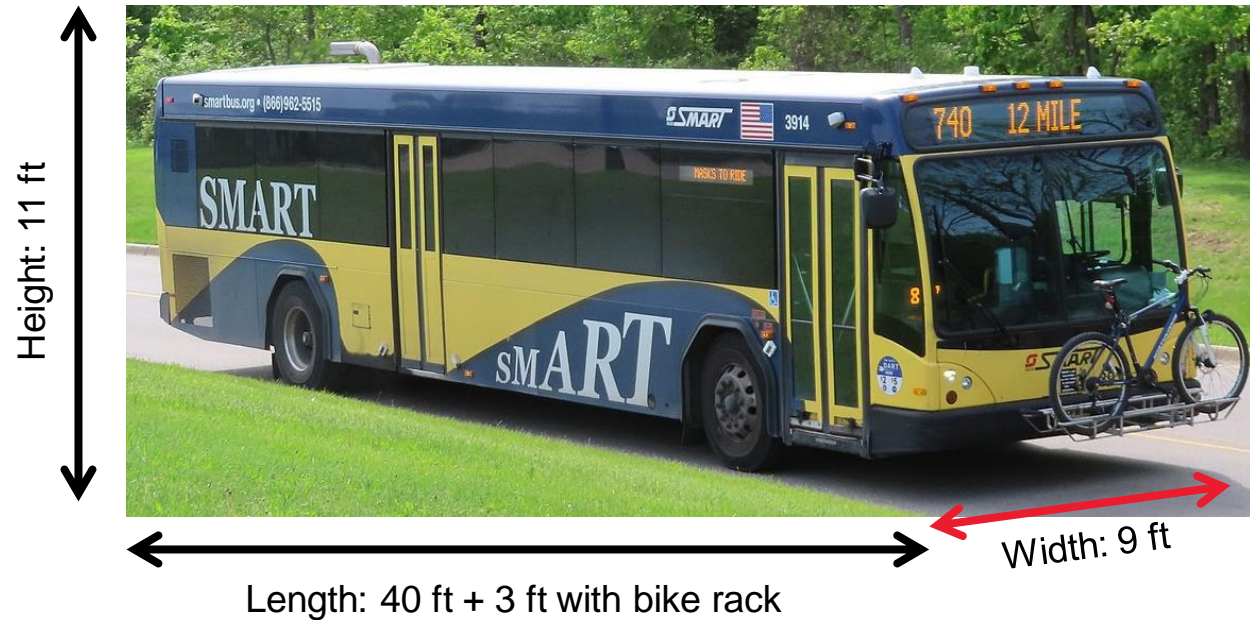


Fixed Route

FIXED ROUTE VEHICLES

Standard Fixed Route Bus

- Requires a Commercial Driver's License to operate
- Can "kneel" and deploy ramp
- Carries up to ~50 passengers (some standing) and up to 2 bicycles
- Turning radius of ~43 ft





Fixed Route

FIXED ROUTE VEHICLES

Articulated Fixed Route Bus

- Requires a Commercial Driver's License to operate
- Can "kneel" and deploy ramp
- Carries up to ~80 passengers (some standing) and up to 2 bicycles
- Turning radius of ~44 ft



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COLLABORATION WITH LOCAL LEADERS & THE PUBLIC

- Involving community members and local leaders in the planning process from the start results in the best outcome
- Transit providers hearing directly from community members influences how service changes are planned
- Continuous feedback loop between transit planners and communities results in adjustments that improve access, safety, and reliability of service

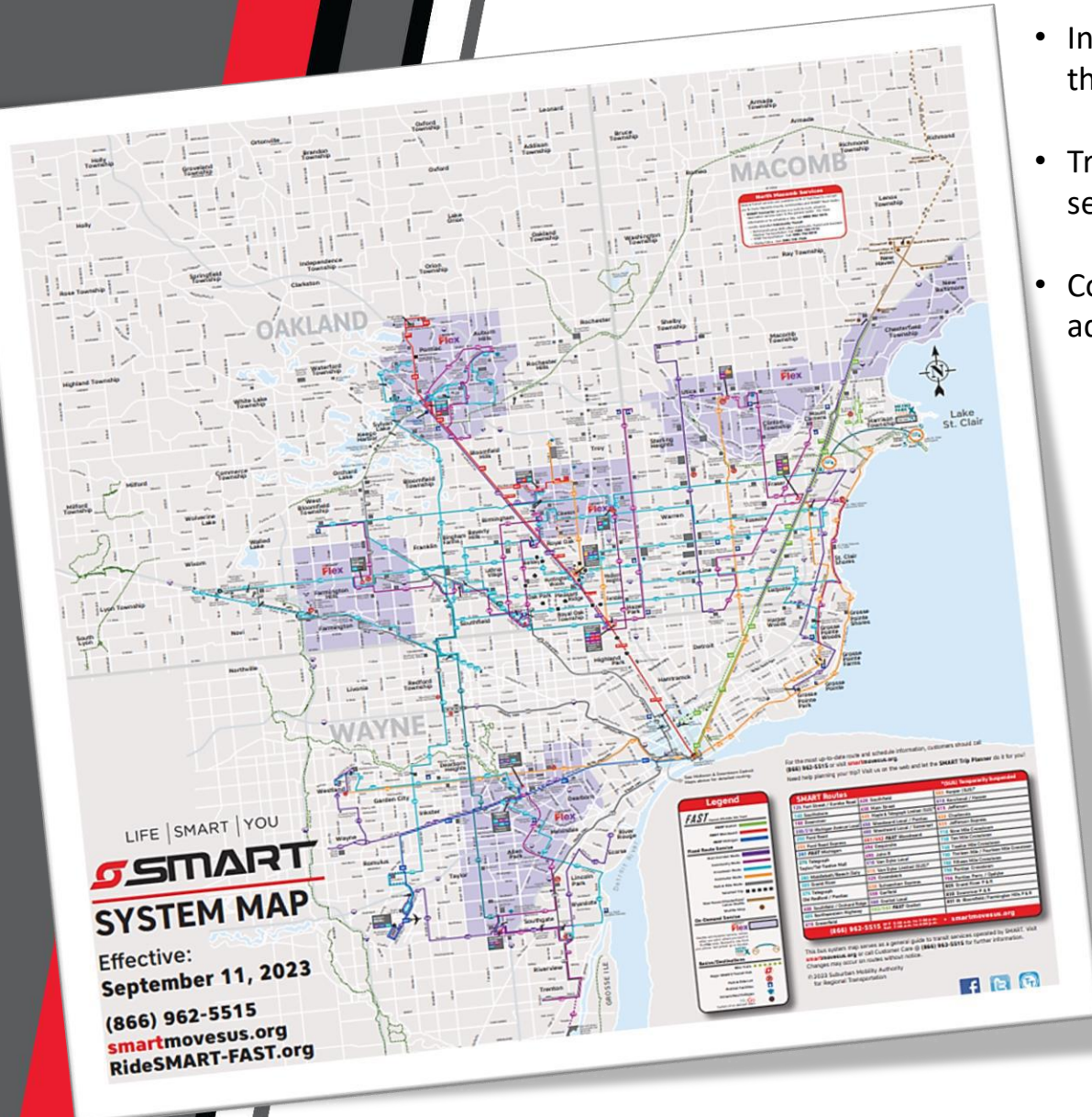


Image: Public hearing for planned service changes in spring 2023, Berkley City Hall

TRANSIT PATRON SAFETY & ACCESS

- Street lighting!
- Americans with Disabilities Act (ADA) compliant sidewalk (minimum width, maximum slope, proper curb ramps)
- Connecting keywalks from existing sidewalks to road curb for accessible boarding and ADA-compliant shelter/bench pads at high ridership/major transfer bus stops
- Signalized crosswalks should be implemented at major crossing points where no traffic signal is present
 - Pedestrian Hybrid Beacon (PHB)



Image: SMART FAST Bus stop on Woodward Ave in Royal Oak with ADA-compliant keywalk, pad, and boarding point.



Image: PHB Pedestrian crossing near bus stop on Huron St in Ann Arbor

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ROADWAY DESIGN & BUS ACCESSIBILITY

- Roadways used by transit vehicles should be designed to allow for their length, height, weight, and turning radii
- Long wheelbases of buses require bus-only left turn signage on boulevard intersections (turning exemptions)
- Boarding bulbs to allow passenger boarding while bus stays in traffic lane (improved safety & traffic flow)
- Roadway paving material capable of supporting transit bus weight and minimizing wear on transit vehicles
- Ideal minimum roadway design: one traffic lane in each direction with turn lane in middle. Bus and passenger boarding/alighting safest when bus does not leave lane of travel (bus pulling into turn lane=increased risk of accident)



Image: Boarding bulb on W McNichols Rd in Detroit



Image: Bus-only left turn signage on boulevard in Southfield



Image: 40-foot SMART buses. Articulated buses are 60 feet in length. Weight ranges from 25,000-70,000 pounds.

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ROADWAY DESIGN & BUS ACCESSIBILITY

- Buses require a turning radius of approximately 20-30 feet
- Bikeways and parking lanes create additional space for buses to turn
- Intersection design must balance transit turns with pedestrian and cyclist safety
- Curb radii should be designed tightly to reduce pedestrian crossing distance yet allow for smooth bus turning

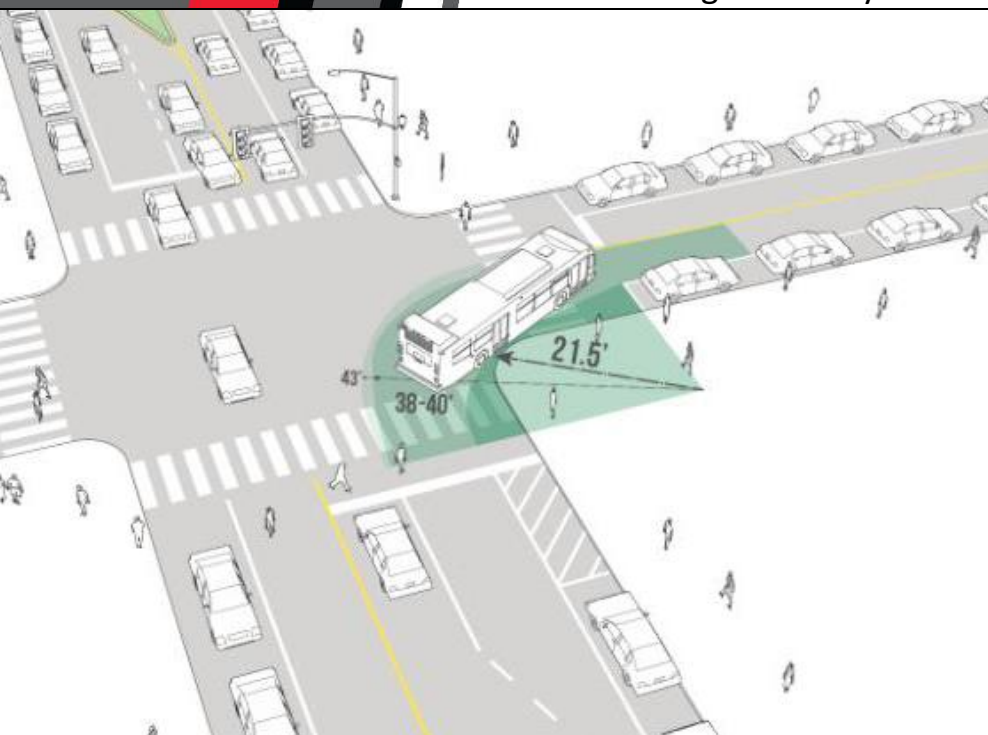


Image: 40-foot bus minimum turning radius, National Assoc. of City Transportation Officials

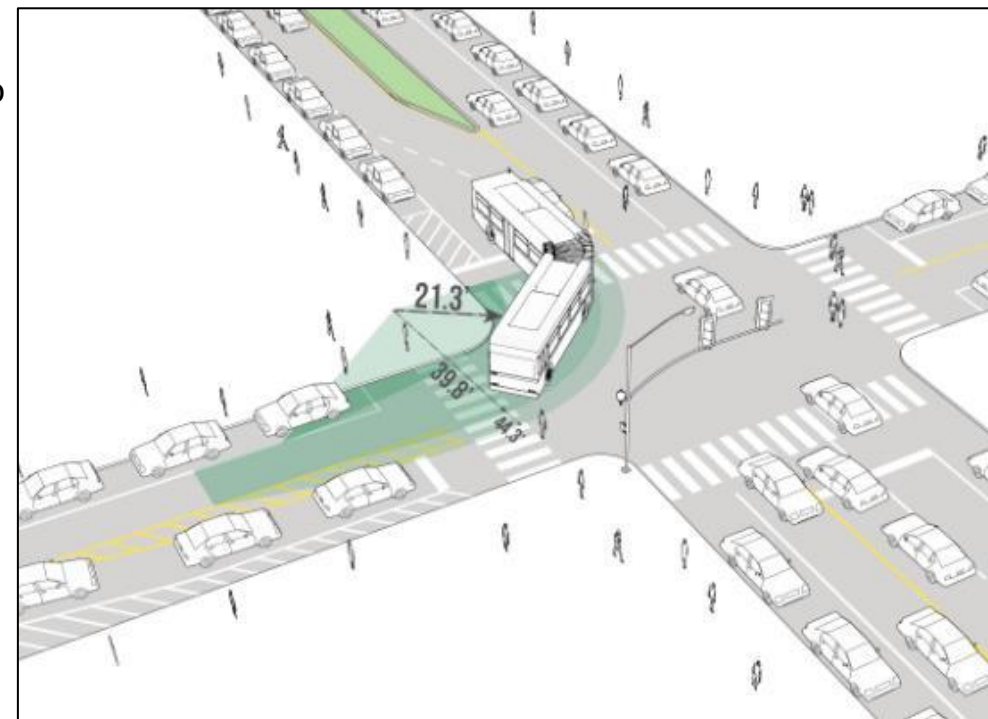


Image: 60-foot articulated bus minimum turning radius, National Assoc. of City Transportation Officials



ROADWAY DESIGN & BUS ACCESSIBILITY

- Traffic calming tradeoffs (narrowing roadways for pedestrian accessibility creates challenges for buses)
- Curbside transit-only lanes in areas where congestion frequently occurs or roadway narrows
- Transit flow is not impacted by heavy and slow-moving auto traffic
- Right turns must be considered with this type of lane. Center transit lane allows wider berth for turns

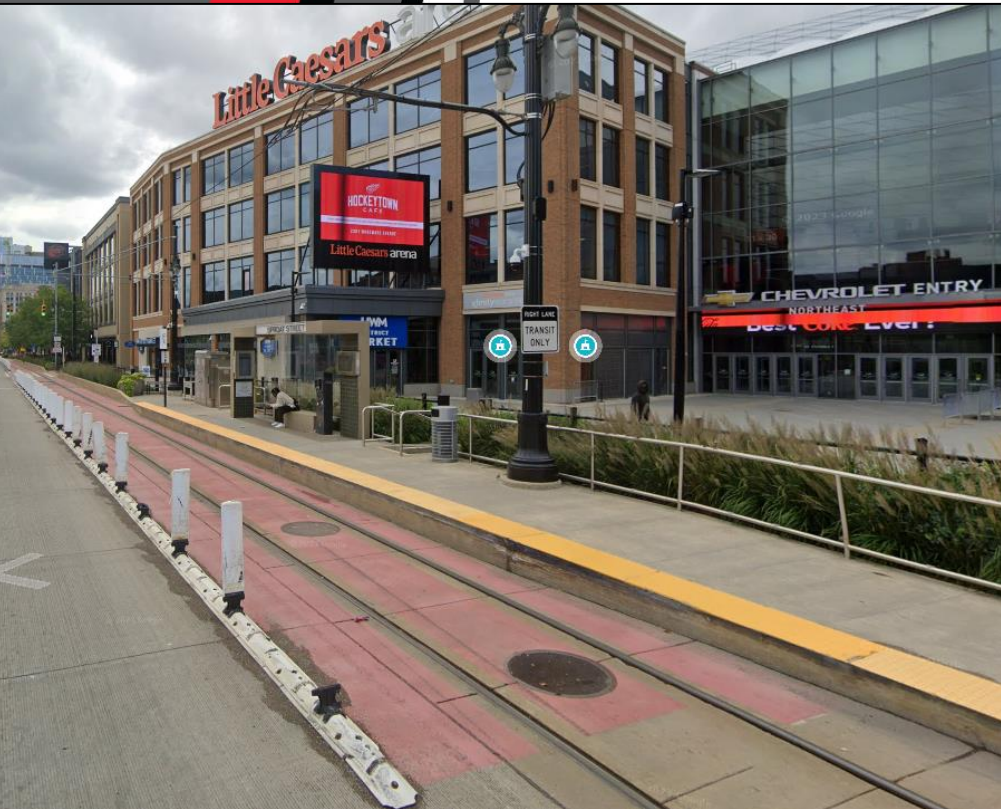


Image: Transit-only travel lane on Woodward Ave in front of arena

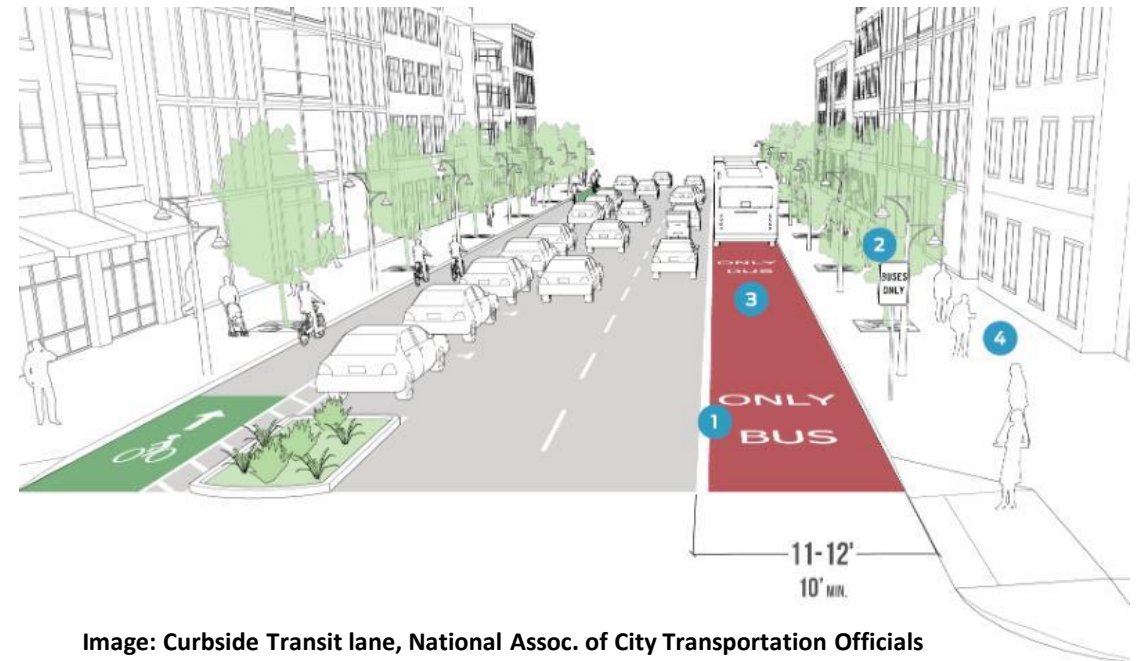


Image: Curbside Transit lane, National Assoc. of City Transportation Officials

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PARK & RIDE

- Free parking on the urban periphery for commuters to avoid congested roadways and downtown parking fees
- SMART works with MDOT & municipalities to provide amenities such as shelters, benches, real-time arrival signage, etc.
- Improves mobility and provides alternatives for commuters
- Low-impact environmental design considerations: stormwater management, solar powered LED lighting, etc.



Image: MDOT/SMART Redford Park and Ride on Schoolcraft Rd/I-96



Image: Patrons boarding SMART bus

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BUS LAYOVERS

- Reliable layover locations are an integral part of fixed route success
- Operators must have a safe location to take a break at the end of their route
- Access to restrooms is a must, the option to purchase food and drink is ideal
- Transit schedulers and planners work with community leaders, local businesses, and organizations to secure each and every layover location



Image: SMART fixed route bus laying over



Image: SMART operator, William, on the Gratiot Ave fixed route bus

PUBLIC / PRIVATE PARTNERSHIPS

- Municipalities, agencies, and business owners can provide tremendous help in advocating for layovers, park and rides, and optimize pick up and drop off locations
- There are 76 unique communities in the SMART service area, and we must collaborate effectively with each of them to deliver the best service possible to the public



Image: Patrons boarding a SMART express bus to Detroit at Metro Airport



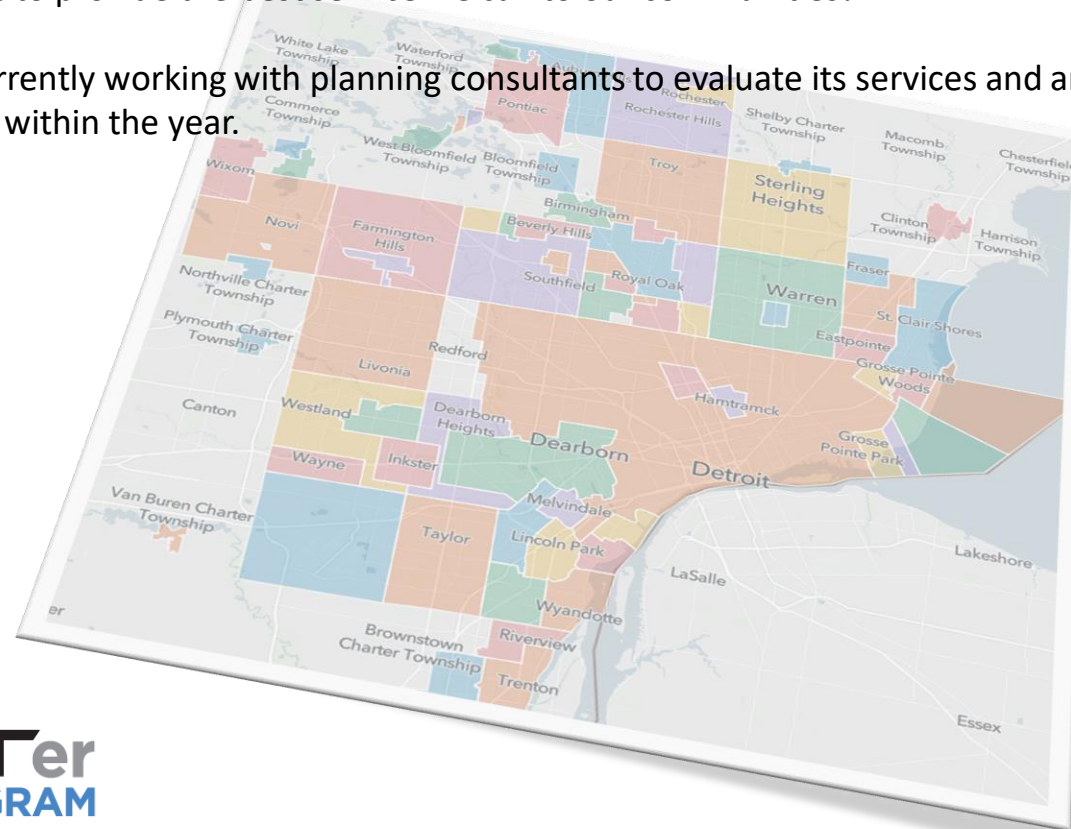
Image: SMART fixed routes with $\frac{3}{4}$ ADA service area

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WHAT CAN PLANNERS DO?

- Include the considerations we have discussed in corridor plans and master plan updates for your communities
- Establish relationships and lines of communication with SMART, DDOT, and community transit providers when working with MDOT, county road commissions, and local planners on streetscape and construction projects
- Reach out when you believe bus service or bus stops in your community need attention. We have lots of useful data on ridership, routing, and amenities. Our team of planners and schedulers work together with bus operations and local communities to provide the best service we can to our communities!
- SMART is currently working with planning consultants to evaluate its services and amenities. New transit design manual forthcoming within the year.



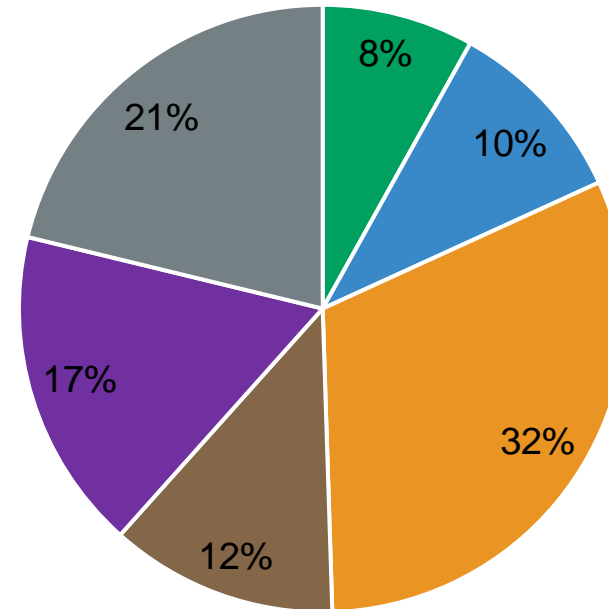
How to Partner Moving Forward



Poll: What is the #1 way that transit providers can improve public transportation and build partnerships with your community/agency?



Attendee Responses

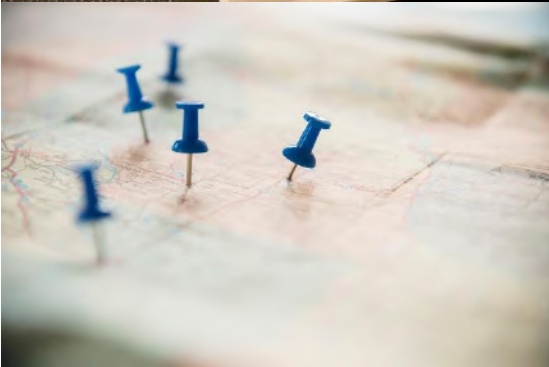


- Coordinate on where bus stops are located
- Improve bus stop amenities and/or maintenance at bus stops
- Improve service (frequency, reliability, etc.)
- Communications, marketing, and promotion with residents and businesses
- Participate in community planning processes
- Improve access to transit stops (safety improvements, walking/biking infrastructure)

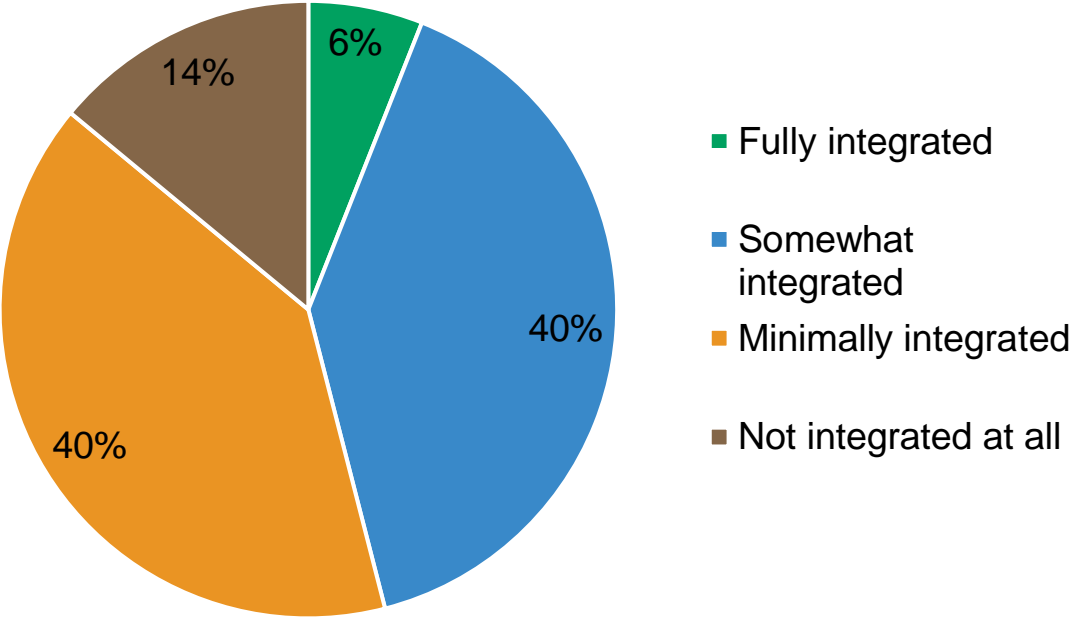
Best Practice: Integrate Transit into Existing Processes

- Site plan reviews
- Master planning
- Corridor planning and design
- Capital improvement planning
- Construction
- Maintenance
- [Model Ordinance Language](#)
- [Sample Site Plan Review Checklist](#)

Poll: How well would you say transit is integrated into your community's planning and site plan review processes?



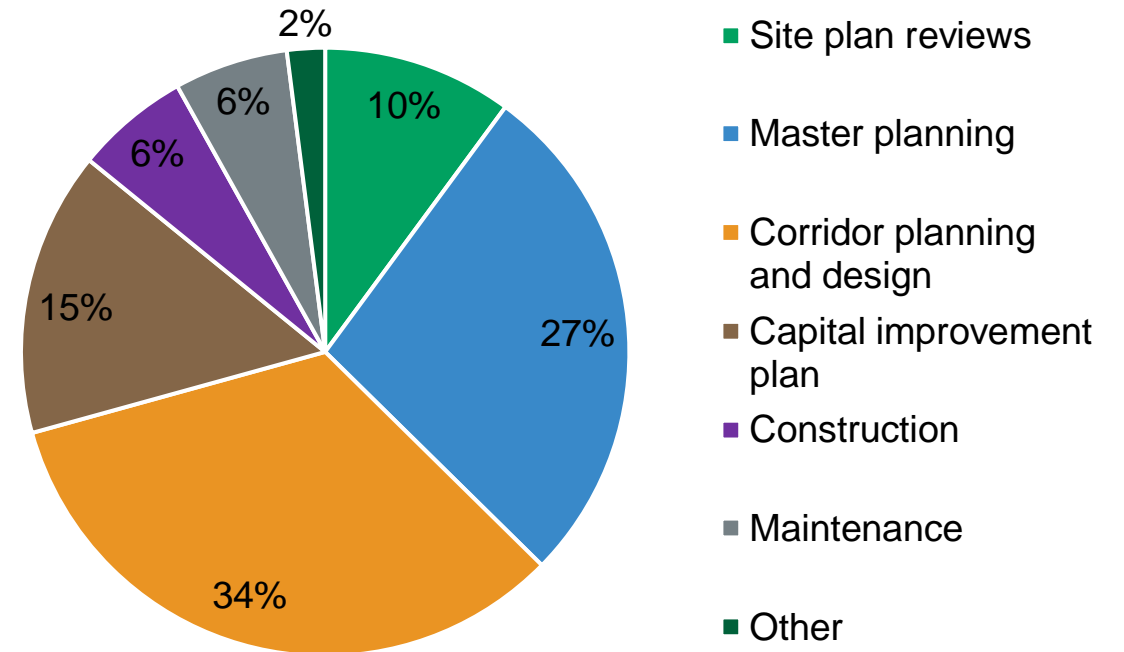
Attendee Responses



Poll: Which process in your community needs the most work to better integrate transit?



Attendee Responses



Best Practice: Fill Sidewalk Gaps and Keep Sidewalks in Good Condition



Refer to last month's Planners Gathering: [Sidewalk System Maintenance Programs](#)

Funding:

- Tax Capture Authorities
- [Active Transportation Infrastructure Investment Program](#)
- [Safe Streets for All](#)
- [Safe Routes to School](#)
- [Transportation Alternatives Program \(TAP\)](#)
- ...and more (full funding matrix [here](#))
- **COMING SOON:** Oakland County Access to Transit Program

Best Practice: Make Bus Stops Better



Funding:

- Tax Capture Authorities
- [Adopt-a-Stop Program](#)
- **COMING SOON:** Oakland County Access to Transit Program

COMING SOON:

Bus Stop Inventory and Design Standards Manual

Best Practice: Keep in Touch!



OakGov.com/OaklandTransit

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SMARTbus.org

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Best Practice: Keep in Touch!



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Q&A

